

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

d o o r s o f
d i s t i n c t i o n

d i s t i n c t i v e d e s i g n
d i s t i n c t i v e q u a l i t y
d i s t i n c t i v e s e r v i c e





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www.karonadoor.com

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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: FSC, No-added Urea, Recycled
- ✓ 20, 45, 60, and 90 minute fire rated doors
- ✓ Jamb 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 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**



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

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

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**



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

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

**INTERIOR
FRENCH
DOORS**



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

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

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.

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



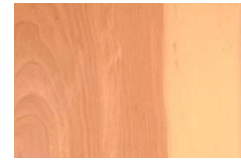
Clear Alder



Knotty Alder



White Ash



Natural Birch



White Birch



Cherry



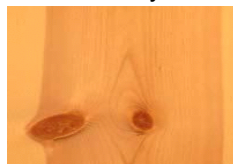
Hickory



Mahogany



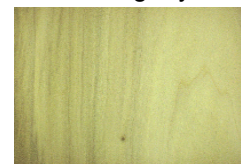
Maple



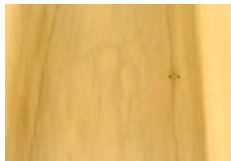
Knotty Pine



White Pine



Paint Grade Poplar



Stain Grade Poplar



White Poplar



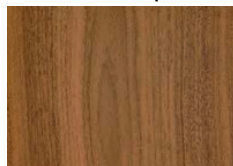
Quartered Red Oak



Red Oak



Rift Cut Red Oak



Walnut



Quartered White Oak



White Oak

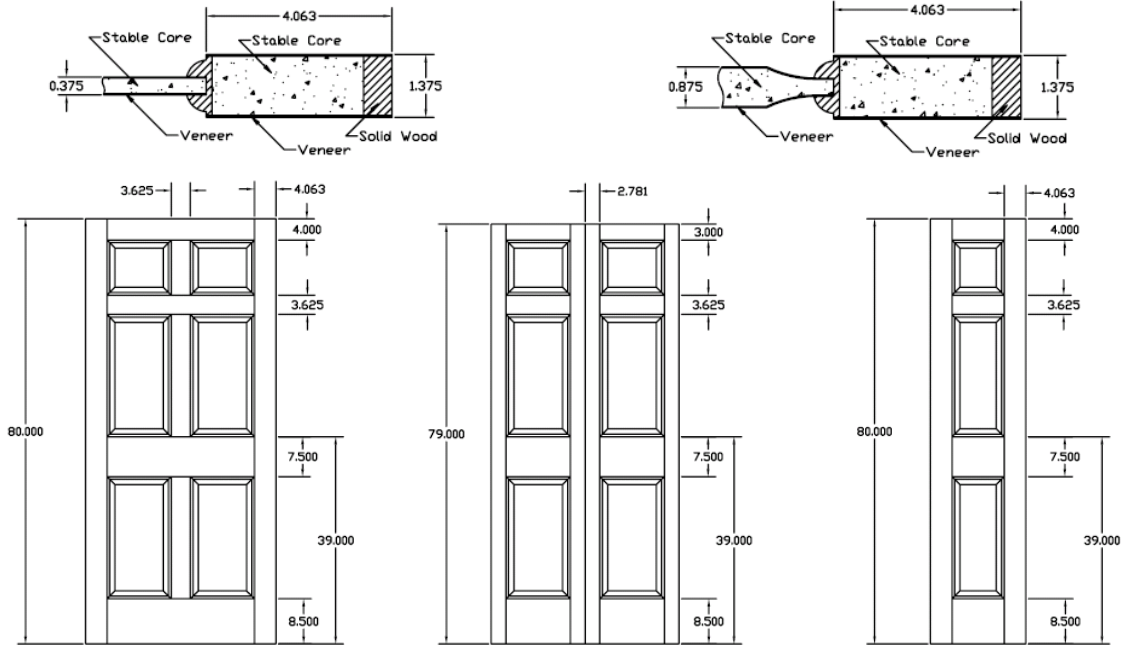
Standard options not shown: VG Fir, Qtr. Cherry, MDF

OTHER SPECIES AVAILABLE UPON REQUEST, CALL FOR QUOTE



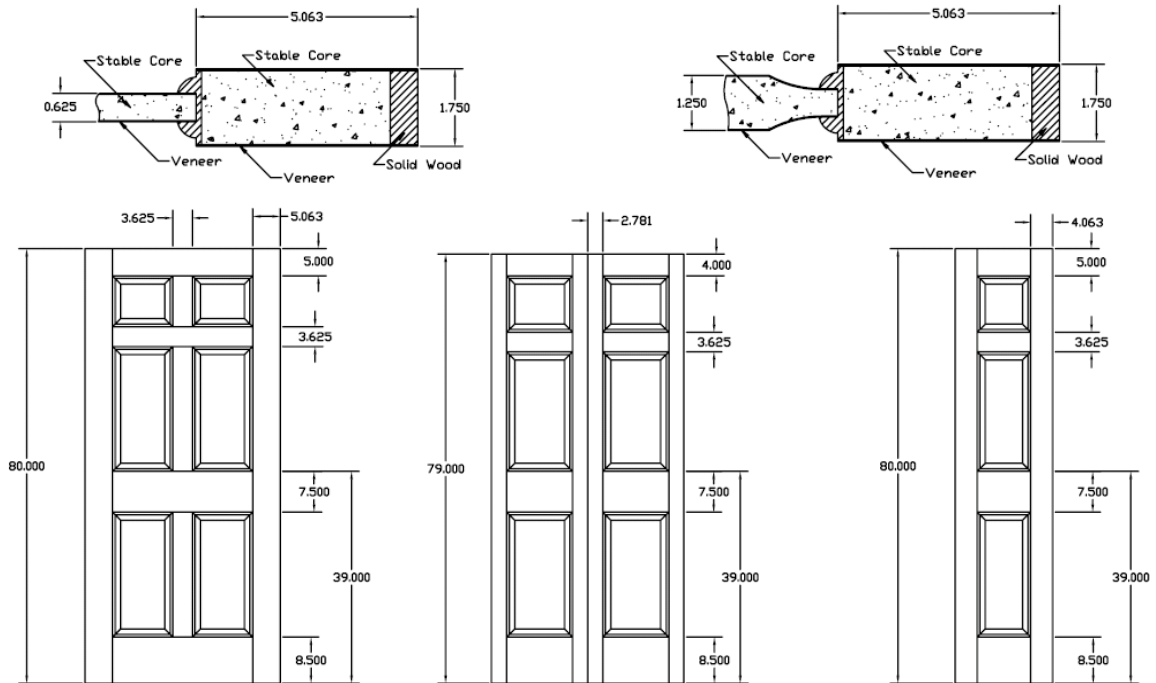
DOOR STANDARD DIMENTIONS

DESIGNER LINE CONSTRUCTION 1 3/8"



* 2.781 INCH IN STILES FOR DOORS 12 - 15 INCHES IN WIDTH

DESIGNER LINE CONSTRUCTION 1 3/4"



* 2.781 INCH IN STILES FOR DOORS 12 - 15 INCHES IN WIDTH



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-3 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>
Std Raised (P5)	Mitered Rim-Band
Std Raised (flat back) (P5)	MDF
Std Flat (P6)	Veneered
Std Step	
Custom Raised (CS15882)	
Custom Raised (CS18636) (P1)	<u>Features</u> V-Groove
Custom Raised (CS19010) (P2)	Molding
Custom Raised (CS18637) (P3)	
Custom Raised (CS18638) (P4)	

Other custom profiles are available – tooling charges may apply.



LOUVER OPTIONS

Profiles



Standard 1-1/8"



Plantation 2"



Plantation 3"



Plantation Stagger



Chevron Standard



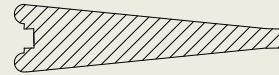
Plantation Chevron



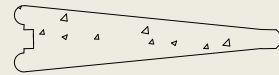
False

Other custom profiles are available – tooling charges may apply.

Construction




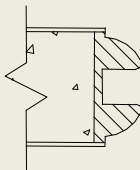


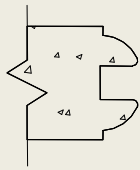


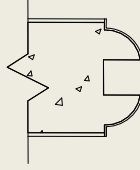


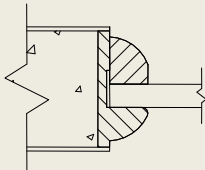
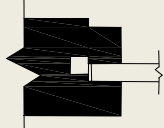

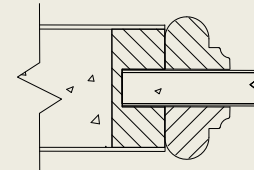




Solid Wood



MDF



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 [^]	



















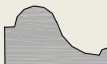















[^] Available in 1-3/8 thickness only.

^{^^} 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.

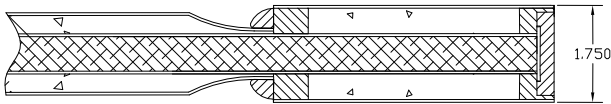


FIRE DOOR OPTIONS & RESTRICTIONS									
All dimensions are in inches unless otherwise indicated.		20 Minute Neutral		20 Minute Positive		45/60 Minute Positive		90 Minute Positive	
		Min	Max	Min	Max	Min	Max	Min	Max
Door Single (Cat A&B)	Width	na	48	na	48	na	48	na	48
	Height	na	108	na	96	na	96	na	96
	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								
Fire Treated EB-Pair Req'd?		Yes	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									
						Rev. 005	12/3/12	8012A31	

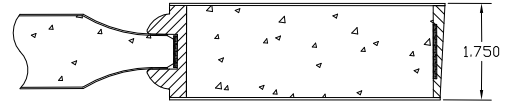


FIRE DOOR CROSS-SECTION EXAMPLES

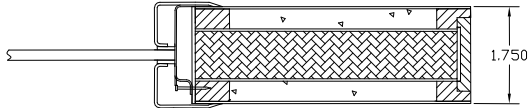
Continuous Core
45/60/90 Minute



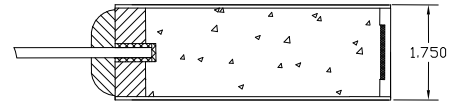
Positive Pressure
20 Minute



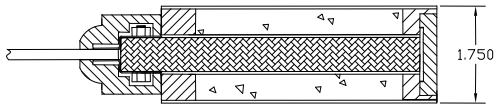
Continuous Core
90 Minute Glass



Positive Pressure Glass
20 Minute



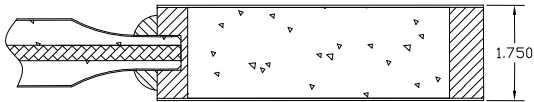
Continuous Core
45/60 Minute Glass



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	
Crystal Ice	1/8	24 x 48 max
Deltra Frost	5/32	
Flemish	5/32	
Glue Chip	1/8	
Leaf	1/8	
Obscured (Pinhead) Beveled	3/16	
Quarter Reed	1/4	
Rain	3/16	
Reeded	1/4	
Seedy Baroque	1/8	
Thin Reeded	5/32	
Velour	1/4	
V-Groove	1/4	
Water	1/4	24 x 24 max
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	Yes See Door List of Models	Yes	Yes	Yes	Yes

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

Section 08212 -Stile and Rail Wood Doors

This Section uses the term “Architect.” Change this term to match that used to identify the design professional as defined in the General and Supplementary Conditions.

Verify that Section titles referenced in this Section are correct for this Project’s Specifications; Section titles may have changed.

PART 1 - General

1.1 Summary

A. This Section includes the following:

1. Interior stile and rail wood doors.
2. Interior fire-rated stile and rail wood doors.
3. Interior fire-rated wood door frames.
4. **[Shop primed] [Factory finished]** stile and rail wood doors.
5. **[Shop primed] [Factory finished]** wood door frames.
6. Factory machining stile and rail wood doors for hardware.
7. Factory machining wood door frames for hardware.

B. Related Sections include the following:

1. Division 1 Section “LEED Requirements” for additional LEED requirements.
2. Division 6 Section “**[Finish Carpentry] [Interior Architectural Woodwork]**” for wood door frames.
3. Division 8 Section “Glazing” for glass vision panels in stile and rail wood doors.

1.2 Submittals

A. Product Data: For each type of door.

Delete first paragraph below if not required or revise to suit Project.

B. Shop Drawings: Indicate location, size, and hand of each door; elevation of each kind of door; construction details not covered in Product Data; and other pertinent data.

First paragraph below assumes manufacturer’s standard-size Samples are acceptable. Revise to suit Project.

C. Samples: For each species and finish required.

D. LEED Submittals:

Retain subparagraph below if wood products are required for LEED Credit 5.1 and 5.2; coordinate with requirements selected in Part 2.

1. Credits EQ 5.1: Regional Materials: 10%

2. Credits EQ 5.2: Regional Materials 20%

Retain subparagraph below if low-emitting materials are required for LEED Credit EQ 4.4; coordinate with requirements selected in Part 2 for composite wood materials and adhesives.

3. Credit EQ 4.4: Adhesive and composite wood materials manufacturers' product data indicating urea-formaldehyde content.

Retain subparagraph below if low-emitting materials are required for LEED Credit EQ 7; coordinate with requirements selected in Part 2 for composite wood materials and adhesives.

4. Credit EQ 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

1.3 Quality Assurance

- A. Quality Standard for Doors of Stock Design and Construction: Comply with WDMA I.S.6A, “Industry Standard for Architectural Stile and Rail Doors.”
- B. Quality Standard for Doors of Special Design and Construction: Comply with WDMA I.S. 6A, “Industry Standard for Architectural Stile and Rail Doors.”

Delete paragraph below if no fire-rated doors.

- C. Fire-Rated Wood Doors and Wood Frames: Doors and Frames that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction.
 1. Test Pressure: [Test at atmospheric pressure] [After 5 minutes into the test, the neutral pressure level in furnace shall be established at 40 inches (1000 mm) or less above the sill]

Second option below is based on positive-pressure testing requirement in the International Building Code and in the Uniform Building Code. Choose only one option.

Test Pressure: [Test at atmospheric pressure] [After 5 minutes into the test, the neutral pressure level in furnace shall be established at 40 inches (1000 mm) or less above the sill].

Delete paragraph below if no glass in doors or sidelites. Decorative glass may not be required to comply with below.

- E. Safety Glass: Provide products complying with testing requirements in 16 CFR 1201, for Category II materials, unless those of Category I are expressly indicated and permitted.

1.4 Project Conditions

- A. Environmental Limitations: 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 the remainder of the construction period.

1.5 Warranty

- A. Special 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 have warped (bow, cup or twist) more than ¼" (6.4mm) in a 42-by-84 inch (1067-by-2134 mm) section.
 - 1. Warranty shall be in effect during the following period of time from date of Substantial Completion:
 - a. Interior Doors: [Five years] [Life of Installation]

PART 2 - Products

2.1 Manufacturers

Edit this Article with other Part 2 articles in which manufacturers and products are named. See Division 1 Section "Product Requirements" for an explanation of the terms "Available Manufacturers," "Manufacturers," and "Basis-of-Design Product" and the effect these terms have on "Comparable Product" and "Product Substitution" requirements.

- A. In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection:
 - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the manufacturers specified.

2.2 Materials

- A. Assemble doors, including components, with minimum WDMA Type II adhesives.
Retain paragraph below if low-emitting materials are required for LEED Credit EQ 4.4.
- B. Provide doors made with adhesives that do not contain urea-formaldehyde resins.
- C. Provide interior doors made with composite wood products that have urea-formaldehyde emission levels below the published maximums in the ANSI A208.1-latest edition Particleboard standard.

2.3 Stile and Rail Doors of Stock Design and Construction

- A. Manufacturers:
 - 1. Karona Inc
 - 2. Marshfield Door Systems
 - 3. Oshkosh Architectural Door

Indicate WDMA design groups and panel design designations or a manufacturer's name and model numbers preceded by "Basis of Design Product" on Drawings or in schedules or insert here.

B. Interior Doors:

1. WDMA Grade for Transparent Finish: **[Custom]**.
2. WDMA Grade for Opaque Finish: Custom.

Retain one species in subparagraph below for transparent-finished doors or revise by inserting another species. Delete if no transparent-finished doors. Verify availability with manufacturers.

3. Wood Species and cut for Transparent Finish: [**<Insert species>**] **[Plain sawn]** **[Quarter sawn]** **[Rift]**

Retain subparagraph below if opaque-finished doors are required; revise if a particular species is desired and available.

4. Wood Species for Opaque Finish: Manufacturer's standard mill option species and cut for stiles and rails; with panels of same species or wood-based composite materials.
5. Size, Layout and Thickness: As shown on Drawings.

2.4 Stile and Rail Doors of Special Design and Construction

A. Manufacturers

1. Karona Inc.
2. Marshfield Door Systems
3. Oshkosh Architectural Door

B. Construction, General:

1. Grade of Doors for Transparent Finish: **[Custom]**.
2. Grade of Doors for Opaque Finish: Custom

Options in subparagraph below are examples only. If retaining subparagraph, select one option and possibly revise it, or insert another species and cut.

3. Wood Species and Cut for Transparent Finish: [**<Insert species>**] **[Plain sawn]** **[Quarter sawn]** **[Rift]**
4. Wood Species for Opaque Finish: Manufacturer's standard mill option species and cut for stiles and rails; with panels of same species or wood-based composite materials.
5. Size, Layout and Thickness: As shown on Drawings.

C. Door Construction for Transparent Finish - Interior:

1. Stile and Rail Construction: Veneered (minimum 1/16" before sanding), structural engineered core, edgebands same species as face veneer.

2. Raised-Panel Construction: **[Veneered, shaped, engineered core shaped membrane pressed panel (3-ply veneer)] [Veneered, wood-based panel product with butt jointed, raised rims made from matching clear lumber (rim-banded)]**
3. Flat-Panel Construction: Veneered, engineered panel product.

D. Door Construction for Opaque Finish - Interior:

1. Stile and Rail Construction: Veneered, structural engineered core, edgebands compatible species to face veneer.
2. Raised-Panel Construction: Shaped, engineered core material: **[with veneer] [without veneer]**
3. Flat-Panel Construction: **[Veneered with closed grain hardwood veneer on wood-based panel product] [Medium-density fiberboard].**

E. Interior Doors:

Retain one raised-panel thickness in subparagraph below or delete subparagraph if no raised panels.

1. Raised-Panel Thickness: **[Manufacturer’s standard, but not less than 1-1/2 inches for 2-1/4 inch (57 mm) thick doors, 1-1/8 inches (29 mm) for 1-3/4 inch (44 mm) thick doors, and 3/4 inches (19 mm) for 1-3/8 inch (35 mm) thick doors] [<insert thickness>]**

Retain one flat-panel thickness in subparagraph below or delete subparagraph if no flat panels.

2. Flat-Panel Thickness: [Manufacturer’s standard, but not less than 5/8 inches (16 mm) for 2-1/4 inch (57 mm) thick doors, 5/8 inches (16 mm) for 1-3/4 inch (44 mm) thick doors, and 1/4 inch (6 mm) for 1-3/8 inch (35 mm) thick doors][<insert thickness>]

Interior Fire-Rated Doors (20-Minute Rating): Fire-rated doors with 1-3/4-inch- (44-mm-) thick stiles and rails and veneered [flat panels not less than 5/8 inch (16 mm) thick] [raised panels not less than 1-1/8 inches (29 mm) thick], complying with requirements indicated for interior doors.

Delete paragraph above and below if no fire-rated doors. Indicate door rating on Drawings or in schedules.

3. Interior Fire-Rated Doors (45 and 60 Minute Ratings) can be either “true” stile and rail, or “continuous core” stile and rail: Fire-rated doors are 1-3/4-inch (44-mm) thick complying with requirements indicated for interior doors.

Interior Fire-Rated Doors (90 Minute Rating) can be either “true” stile and rail, or “continuous core” stile and rail: Fire-rated doors are 1-3/4-inch (44-mm) thick (continuous core) or 2-1/4-inch (57-mm) thick, (continuous core or true stile and rail) complying with requirements indicated for interior doors.

2.5 Fire-Rated Wood Door Frames

A. Manufacturers

1. Karona Inc.
2. Approved Equal

B. Construction, General:

Options in subparagraph below are examples only. If retaining subparagraph, select one option and possibly revise it, or insert another species and cut.

1. Wood Species and Cut for Transparent Finish: [~~Insert species~~] **[Plain sawn] [Quarter sawn] [Rift]**
2. Wood Species for Opaque Finish: Manufacturer's standard mill option paint grade species.
3. Hourly fire rating: As shown on Drawings.
4. Jamb depths: As shown on Drawings.

2.6 Fabrication

- A. Fabricate stile and rail wood doors in sizes indicated for Project site fitting.
- B. Factory fit doors to suit frame-opening sizes indicated. Comply with clearance requirements of referenced quality standard for fitting. **[Comply with requirements in NFPA 80 for fire-rated doors.]**
- C. Factory machine doors for hardware that is not surface applied.
- D. Glazed Openings: Glaze doors at factory with glass of type and thickness indicated, complying with Division 8 Section "Glazing." Glaze doors using solid wood moldings for non fire-rated and 20 minute fire-rated. For 45 and 60 minute fire-rated doors, compression glazed construction with applied wood stops. (See manufacturer details)

Retain paragraph above or first paragraph below. Usually retain above for stock doors and for custom doors made by door manufacturers.

- E. Transom and Side Panels: Fabricate panels to match adjoining doors in materials, finish, and quality of construction.

2.7 Shop Priming

Delete this Article if factory-finished doors are required. Factory fitting and machining are required to minimize damage to shop-primed doors. Retain one or both paragraphs below.

- A. Doors for Opaque Finish: Shop apply **[one coat] [two coats]** of wood primer specified in Division 9 Section "Painting" to faces, edges and tops and bottoms of doors.

2.8 Factory Finishing

Delete this Article if factory finishing is not required. Factory finishing can be used to help comply with LEED Credit EQ 4.2, which limits VOC content of paints and coatings used within building.

- A. Finish wood doors at factory **[that are indicated to receive transparent finish. Field finish wood doors indicated to receive opaque finish]**.
- B. Grade: **[Premium] [Custom]**.

- C. Interior Finish: Manufacturer's standard interior finish with performance requirements comparable to WDMA [TR-2 catalyzed lacquer]
- D. Staining Specify stain color unless clear finish is required. Consult Karona for availability of custom stain colors. A minimum 8" x 8" physical sample is required for custom color matching.

PART 3 - Execution

3.1 Installation

- A. Install wood doors to comply with manufacturer's written instructions and with referenced quality standard, and as indicated.

Delete subparagraph below if no fire-rated wood doors.

1. Install fire-rated doors in corresponding fire-rated frames according to NFPA 80.

Delete first paragraph and subparagraphs below if all doors are factory fitted.

- B. Job-Fitted Doors: Align and fit doors in frames with uniform clearances and bevels as indicated below; do not trim stiles and rails in excess of limits set by manufacturer or as permitted with fire-rated doors. Machine doors for hardware. Seal cut surfaces after fitting and machining.

1. Clearances: Provide 1/8 inch (3.2 mm) at heads, jambs, and between pairs of doors. Provide 1/8 inch (3.2 mm) from bottom of door to top of decorative floor finish or covering. Where threshold is shown or scheduled, provide 1/4 inch (6.4 mm) from bottom of door to top of threshold.

Delete first subparagraph below if no fire-rated wood doors or if factory fitted.

- a. Comply with NFPA 80 for fire-rated doors.

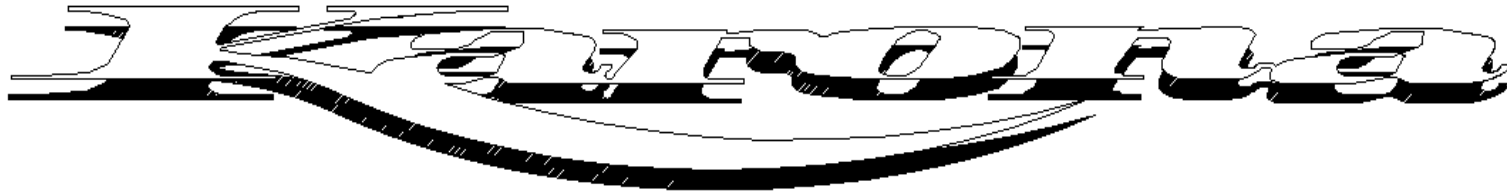
2. Bevel non-fire-rated doors 1/8 inch in 2 inches (3-1/2 degrees) at lock and hinge edges.

Subparagraph above is standard bevel. Delete subparagraph below if no fire-rated doors or if factory fitted. Fire-rated doors with more than 20-minute rating can only be trimmed to a limited extent because of narrow wood edges of stiles and rails.

3. Bevel fire-rated doors 1/8 inch in 2 inches (3-1/2 degrees) on lock edge; trim stiles and rails only to extent permitted by labeling agency.

- C. Factory-Fitted Doors: Align in frames for uniform clearance at each edge.

End of Section 08212



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

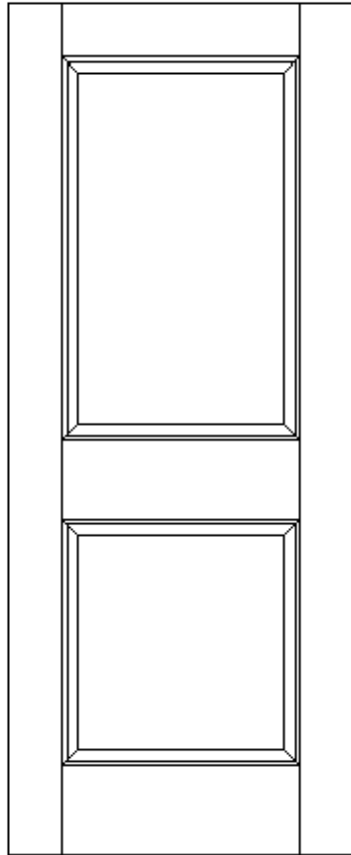
PAGES 20-45

JAMBS

PAGE 44

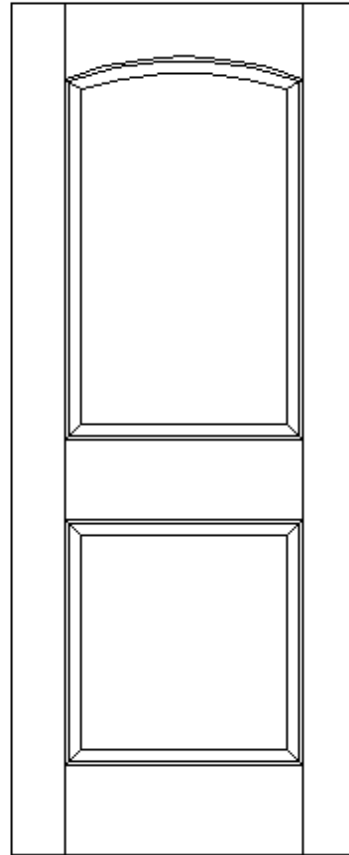


Doors of Distinction



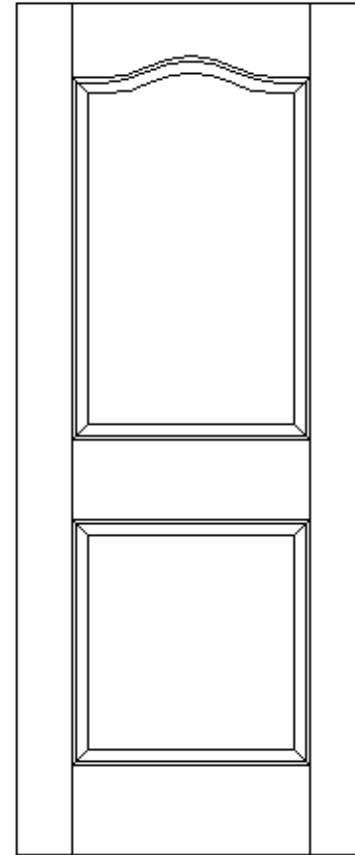
K

SQUARE TOP, SQUARE PANEL



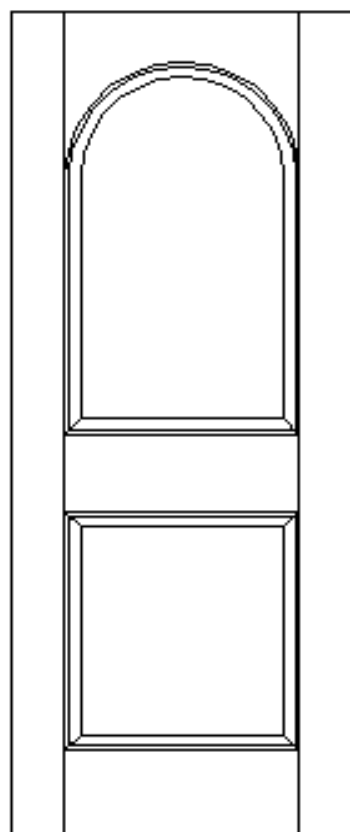
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SQUARE TOP, ARCH PANEL



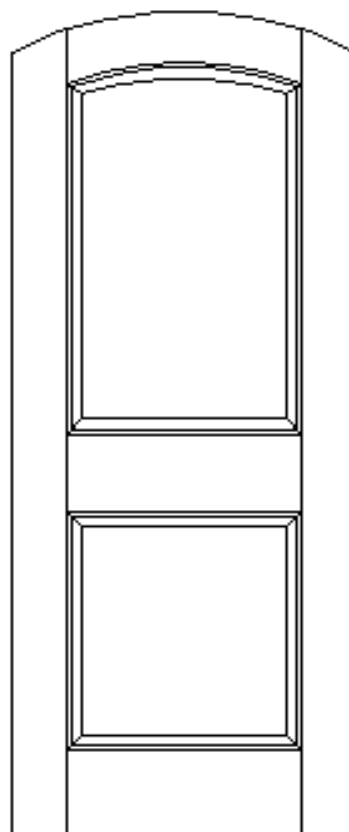
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SQUARE TOP, LAFAYETTE PANEL



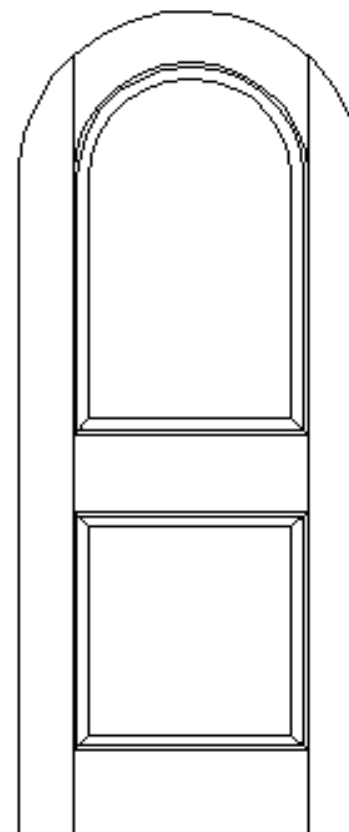
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SQUARE TOP, RADIUS PANEL



AA

ARCH TOP, ARCH PANEL

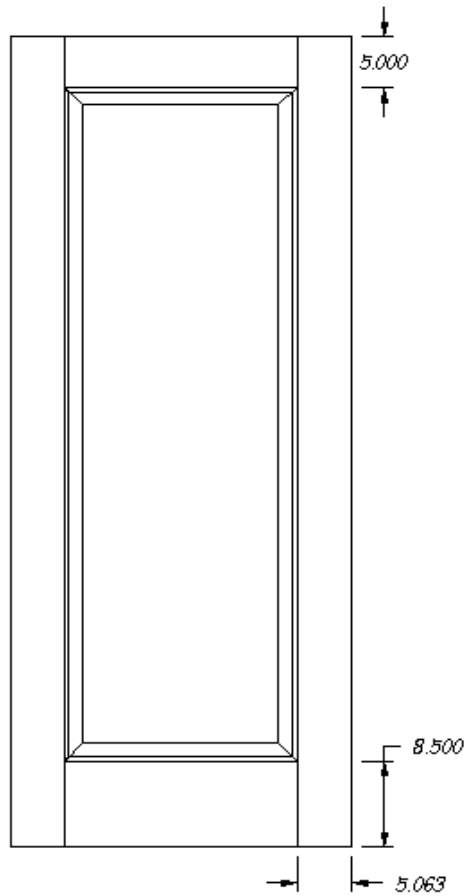


RR

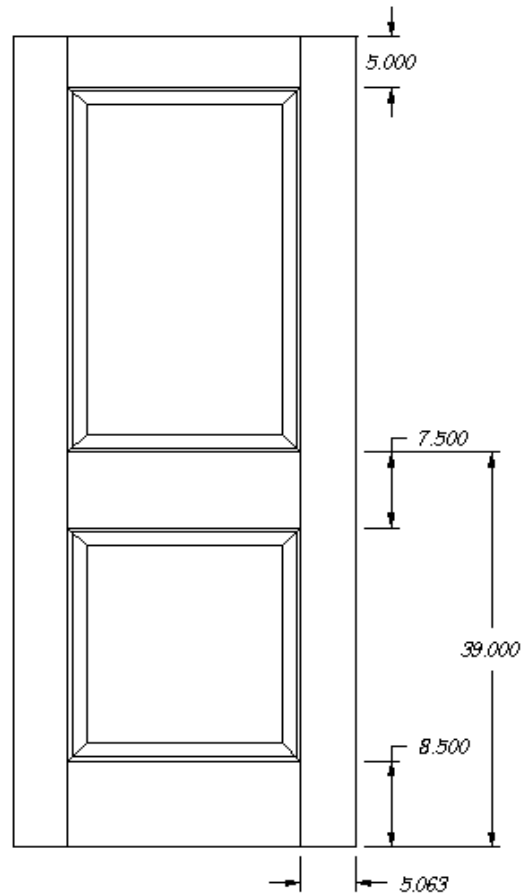
RADIUS TOP, RADIUS PANEL



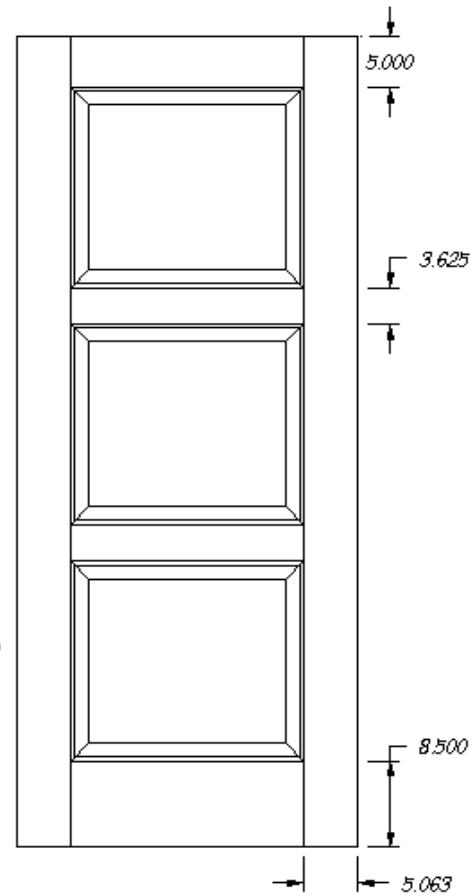
ALL DOORS ARE ALSO AVAILABLE WITH FLAT PANELS OR GLASS.



K-6000



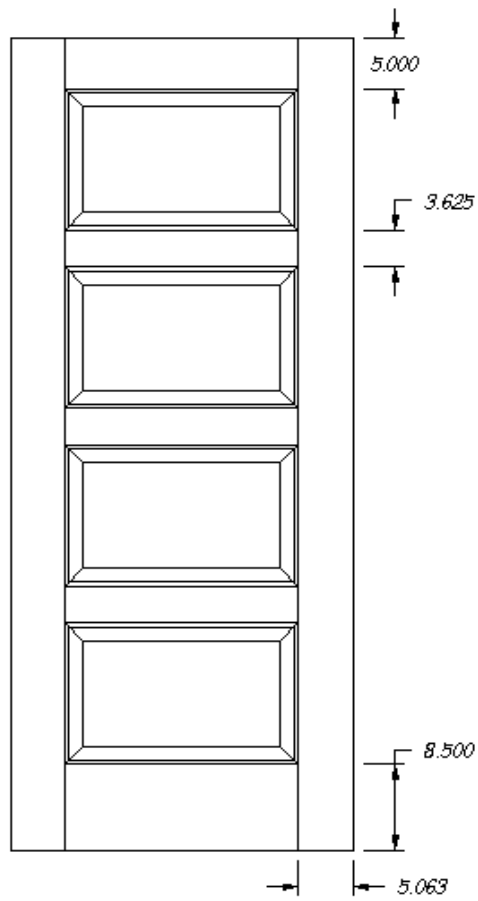
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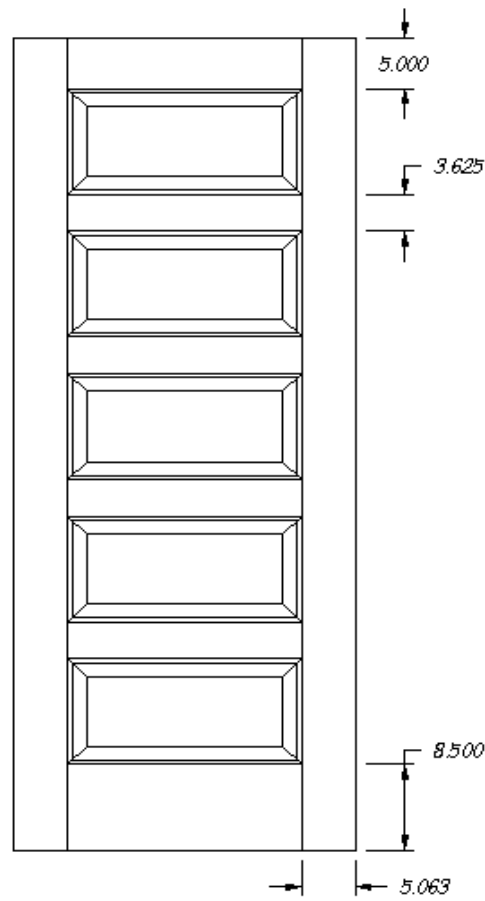
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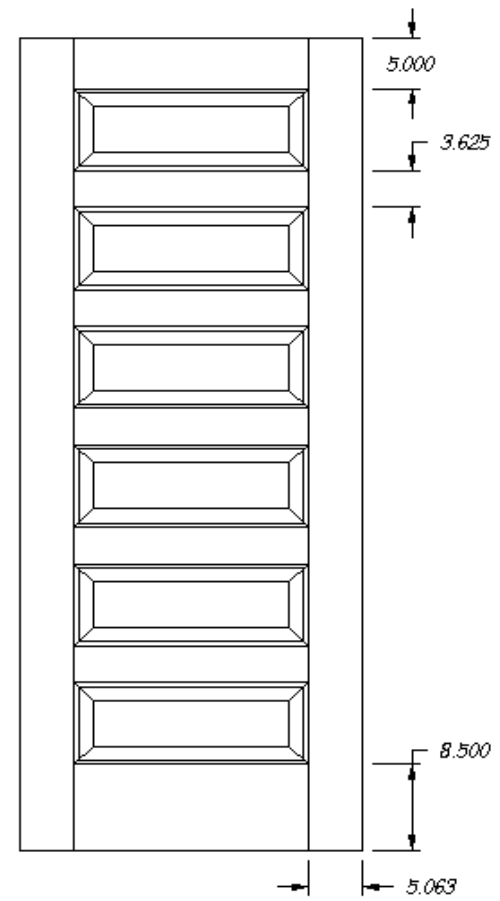
ALL DOORS ARE ALSO AVAILABLE WITH FLAT PANELS OR GLASS.



K-3040



K-3050

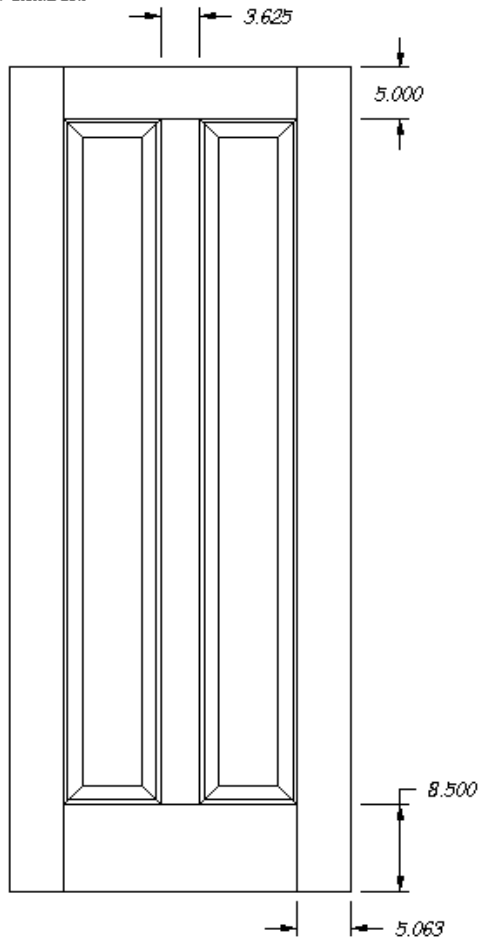


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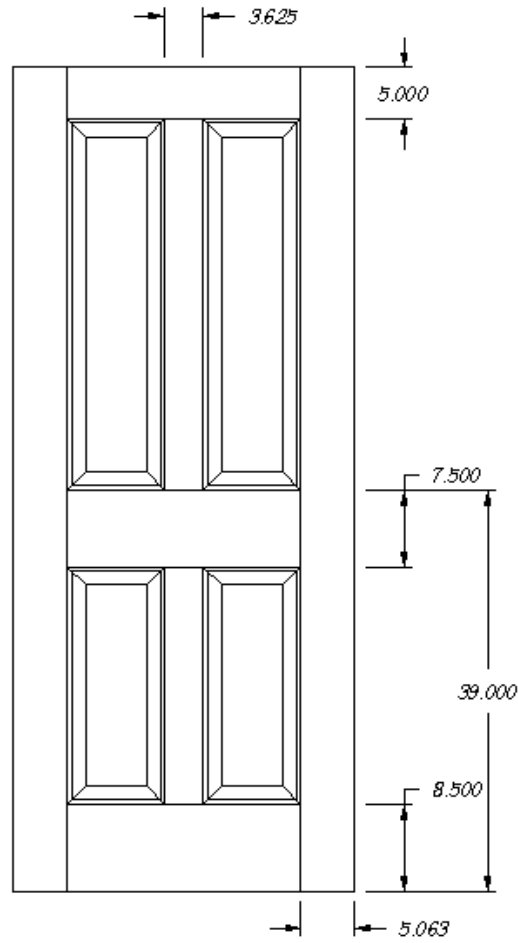


ALL DOORS ARE ALSO AVAILABLE WITH FLAT PANELS OR GLASS.

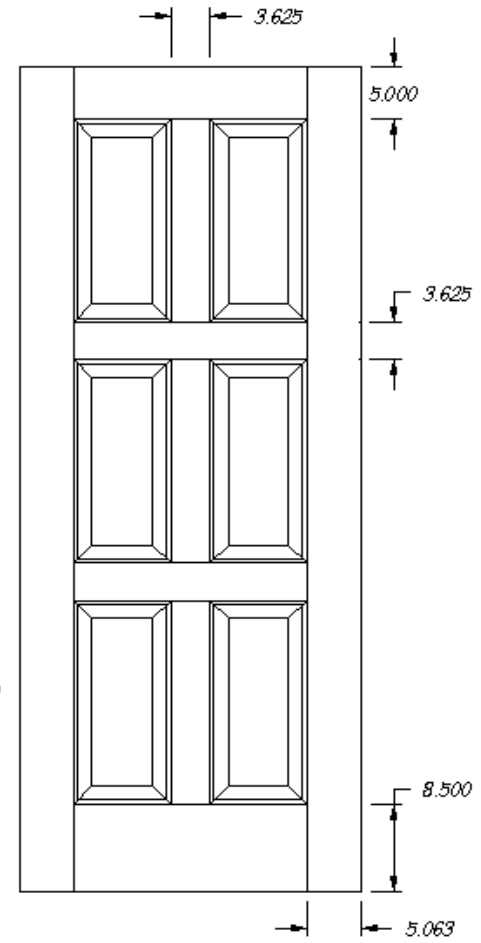
Doors of Distinction



K-5020



K-5400

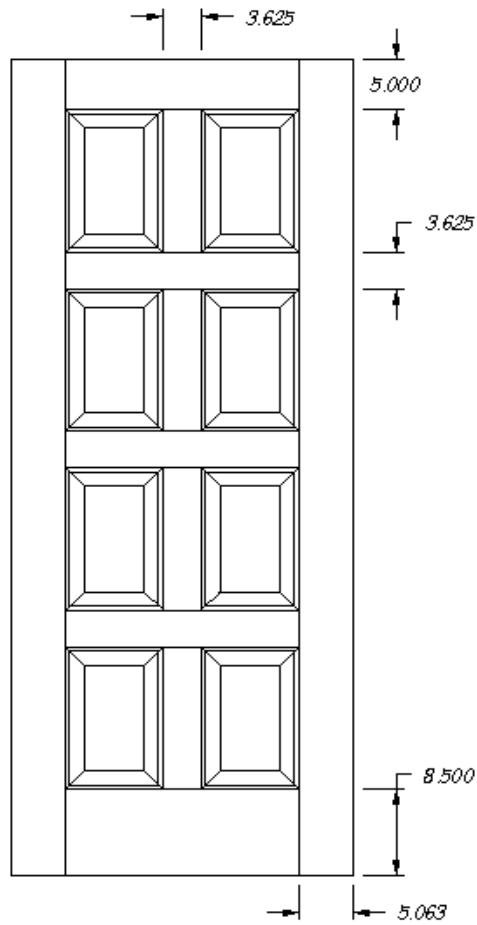


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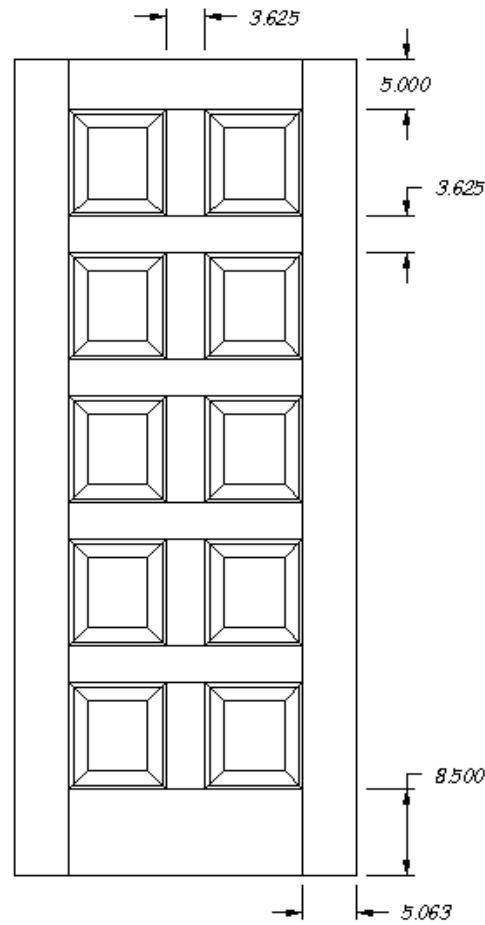


Doors of Distinction

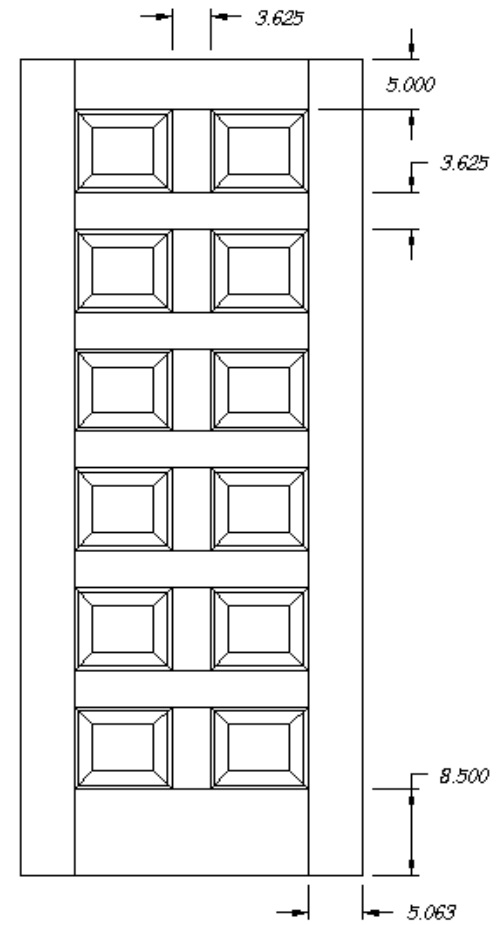
ALL DOORS ARE ALSO AVAILABLE WITH FLAT PANELS OR GLASS.



K-5810



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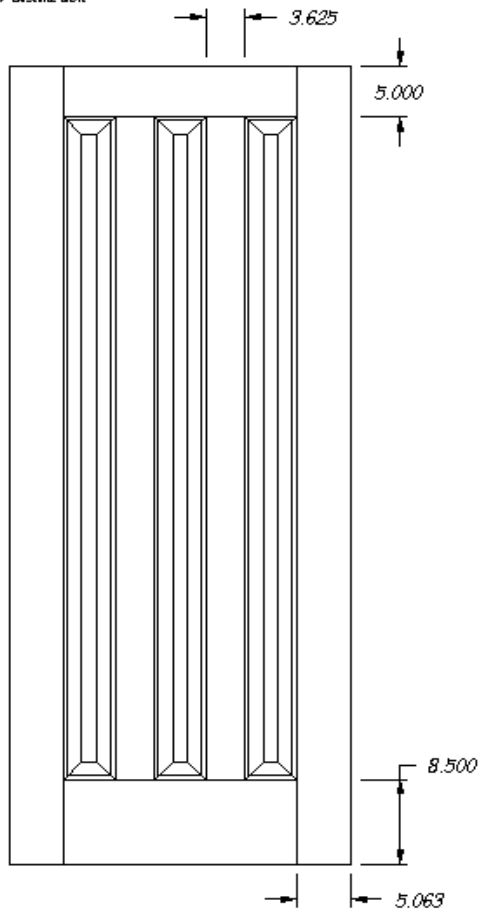


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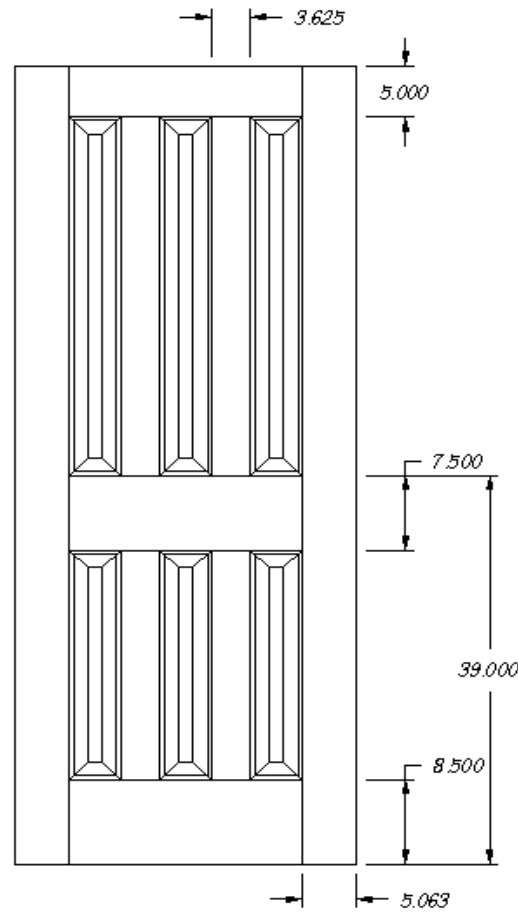


ALL DOORS ARE ALSO AVAILABLE WITH FLAT PANELS OR GLASS.

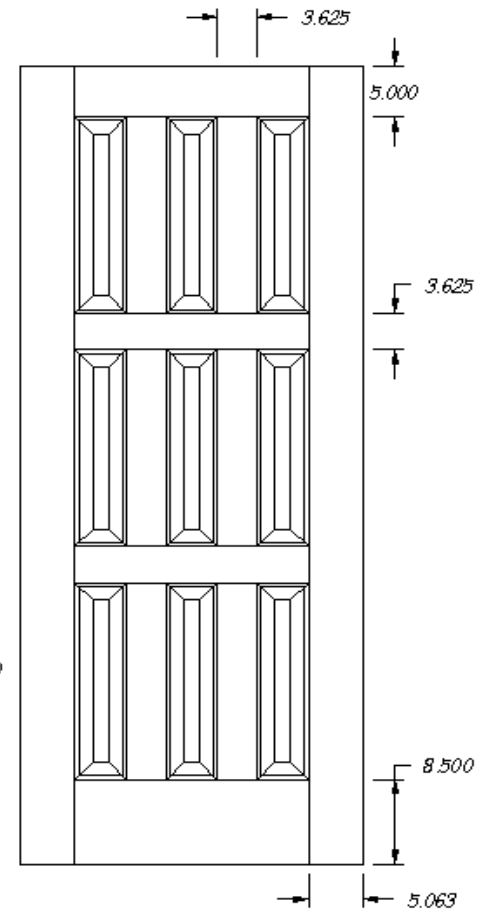
Doors of Distinction



K-3030



K-3060

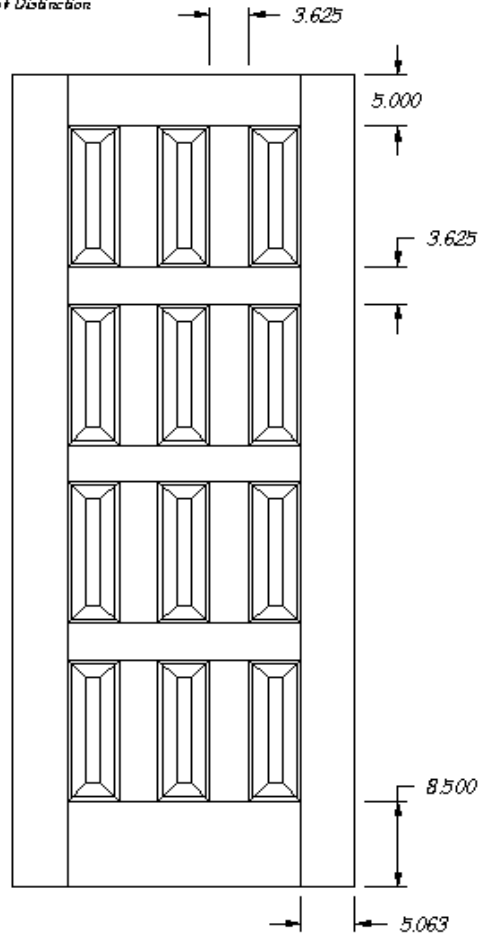


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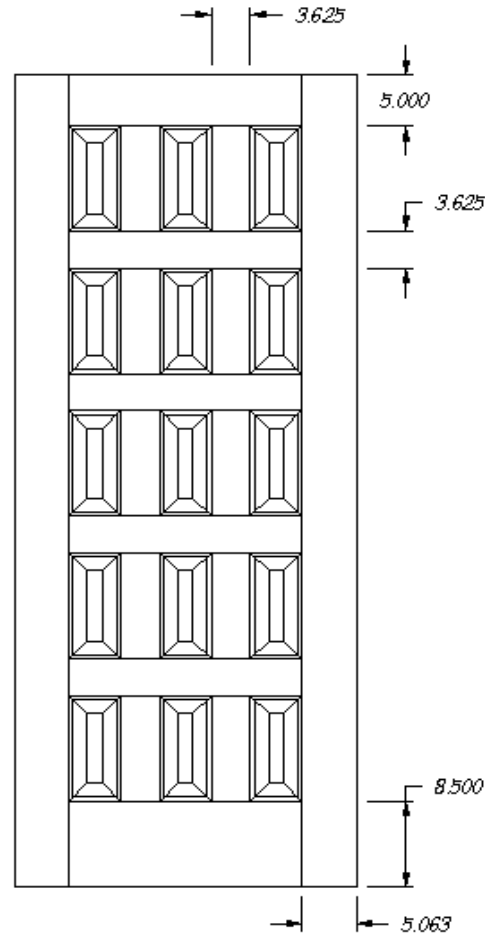


ALL DOORS ARE ALSO AVAILABLE WITH FLAT PANELS OR GLASS.

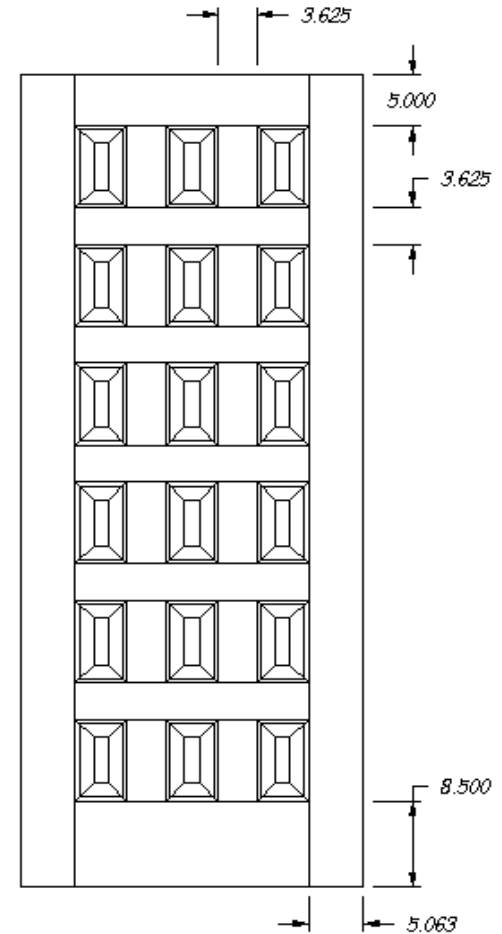
Doors of Distinction



K-3120



K-5930

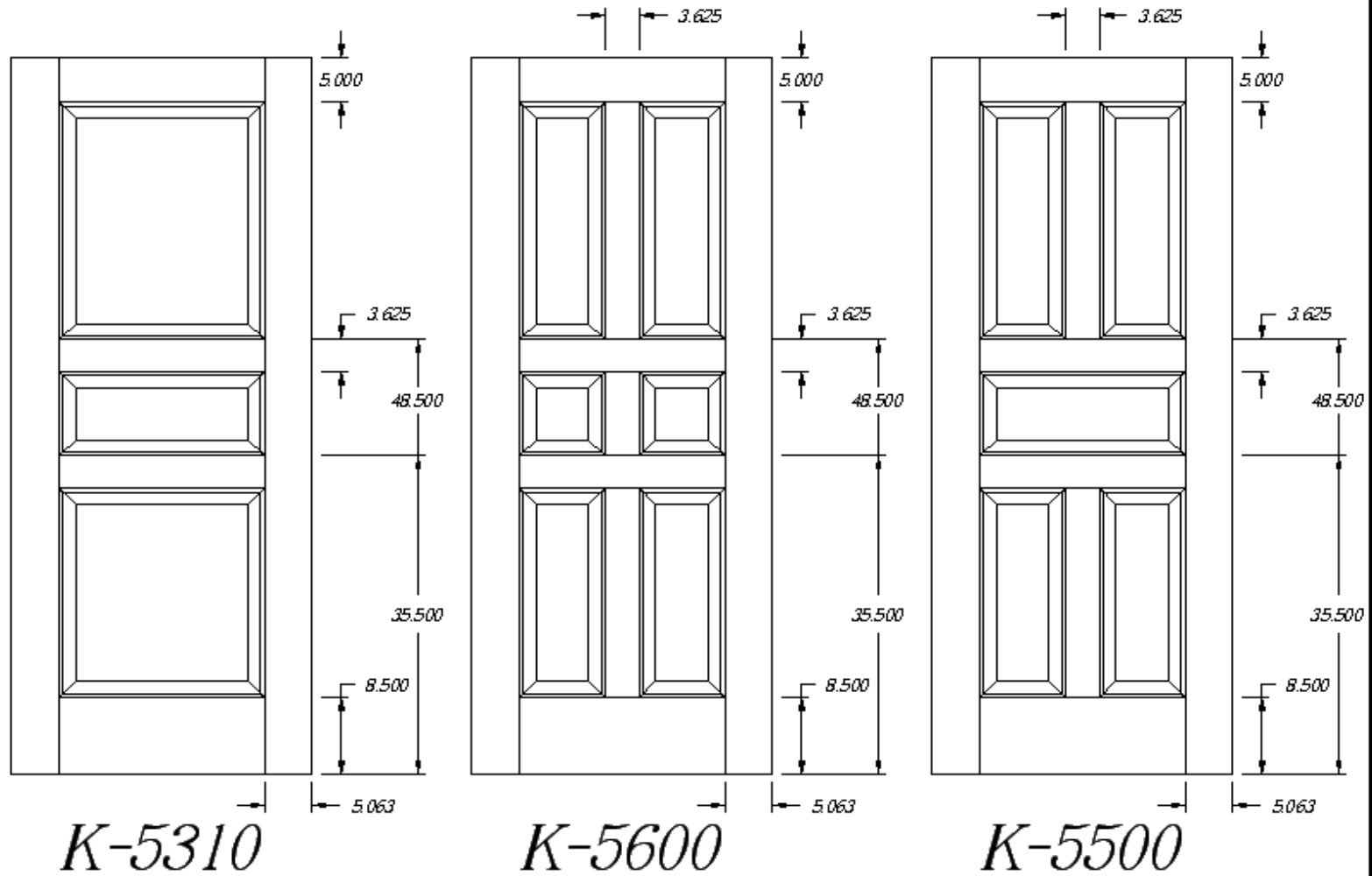


K-3180



Doors of Distinction

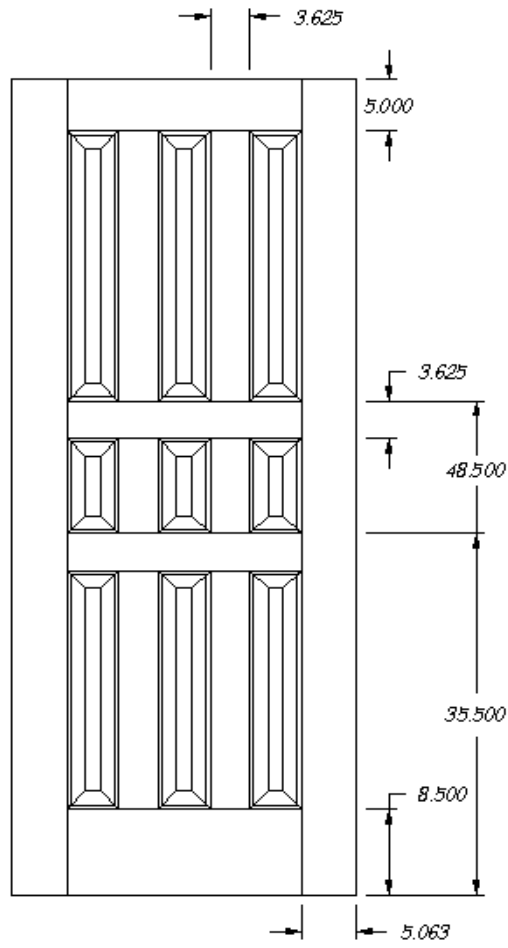
ALL DOORS ARE ALSO AVAILABLE FLAT WITH PANELS OR GLASS.



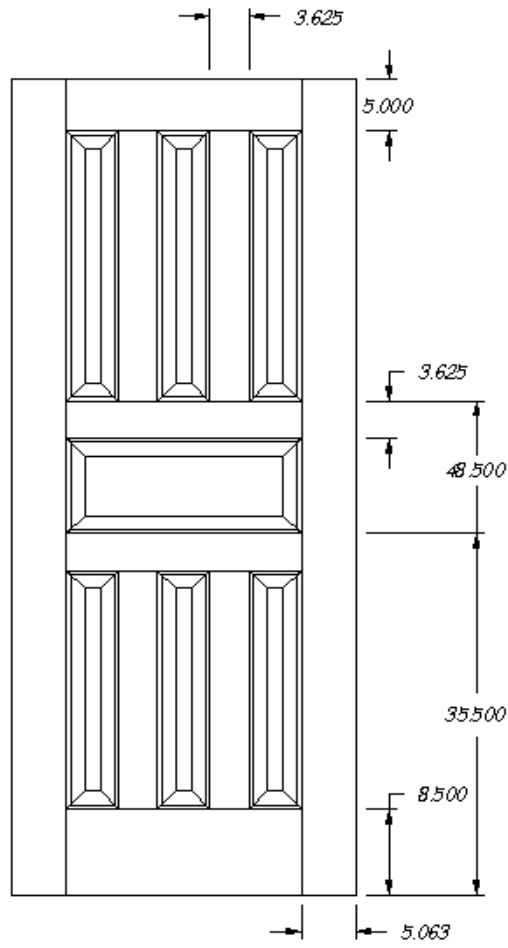


Doors of Distinction

ALL DOORS ARE ALSO AVAILABLE WITH FLAT PANELS OR GLASS.



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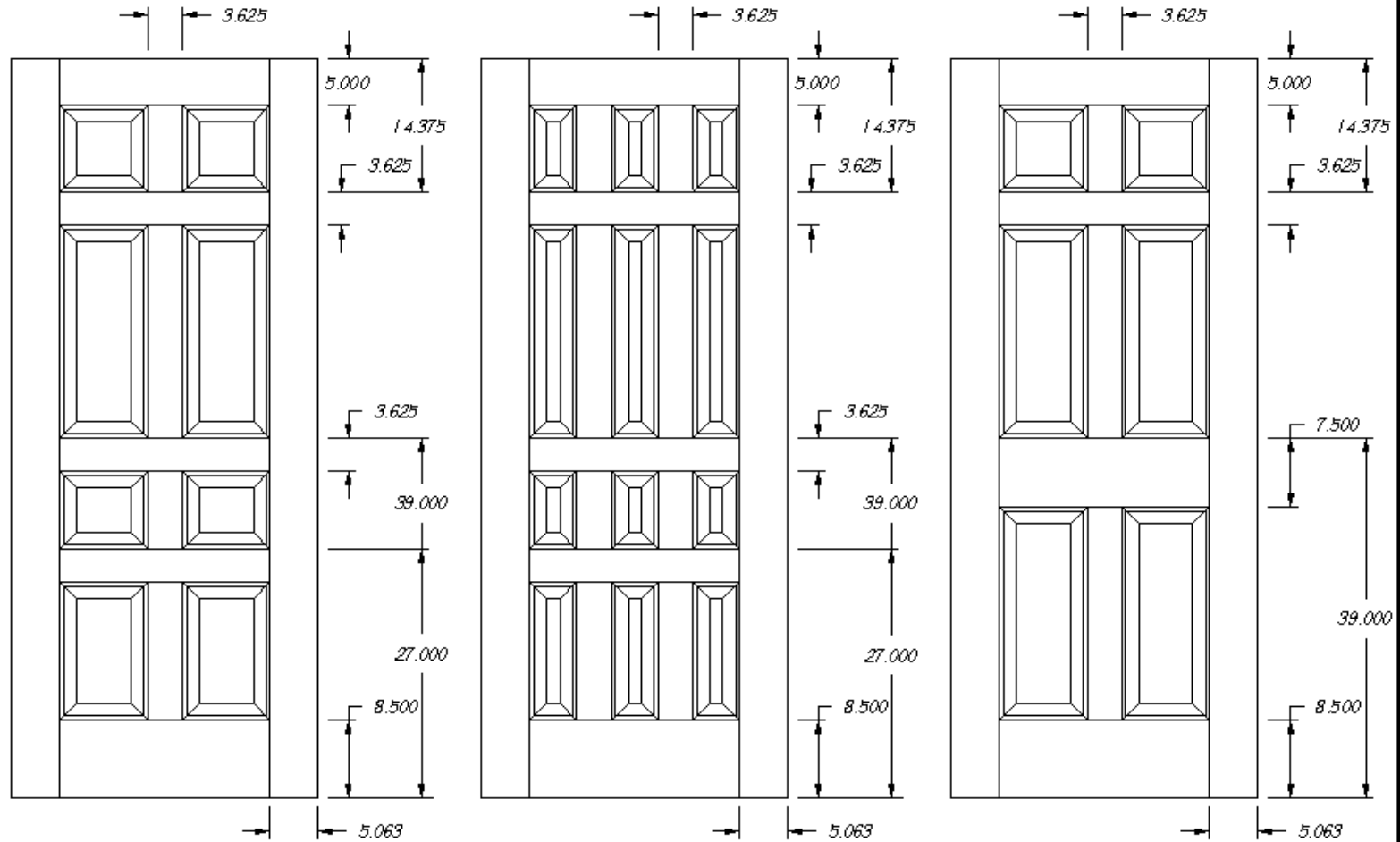


K-3070



ALL DOORS ARE ALSO AVAILABLE WITH FLAT PANELS OR GLASS.

Doors of Distinction



K-3080

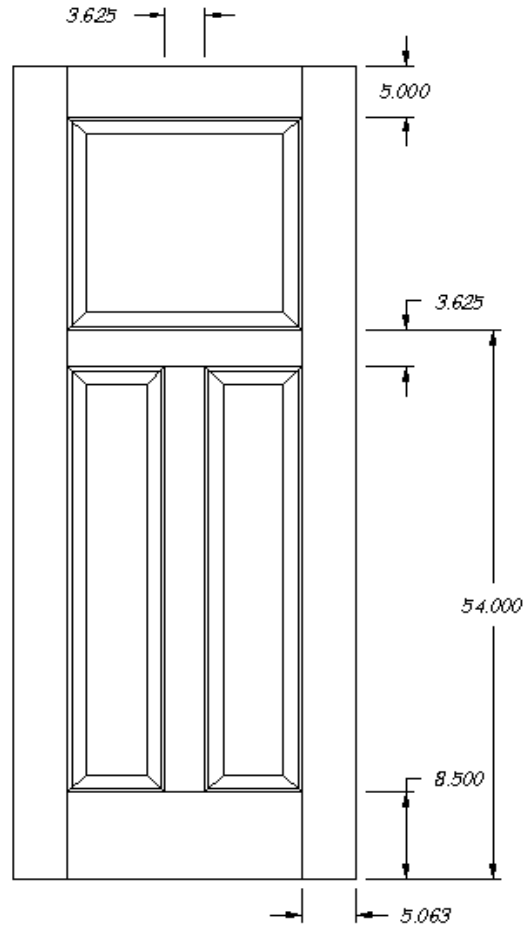
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K-5610

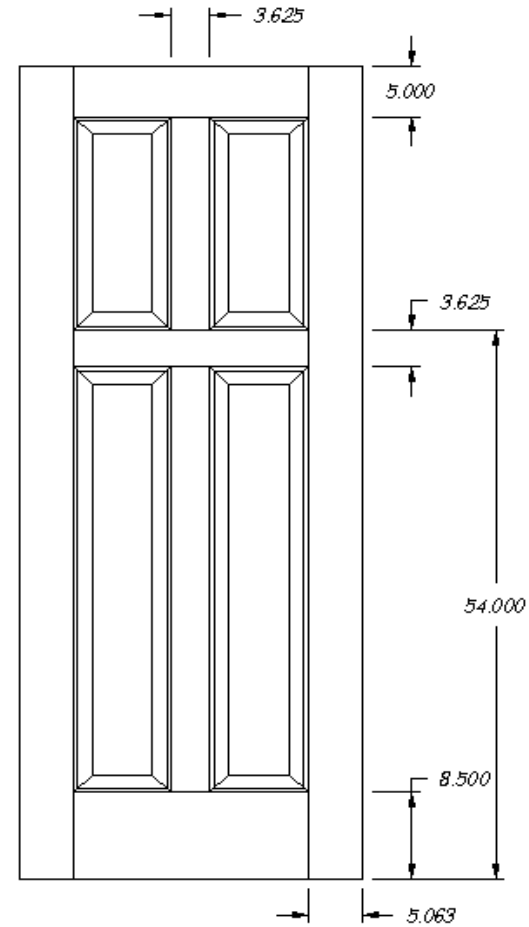


Doors of Distinction

ALL DOORS ARE ALSO AVAILABLE WITH FLAT PANELS OR GLASS.



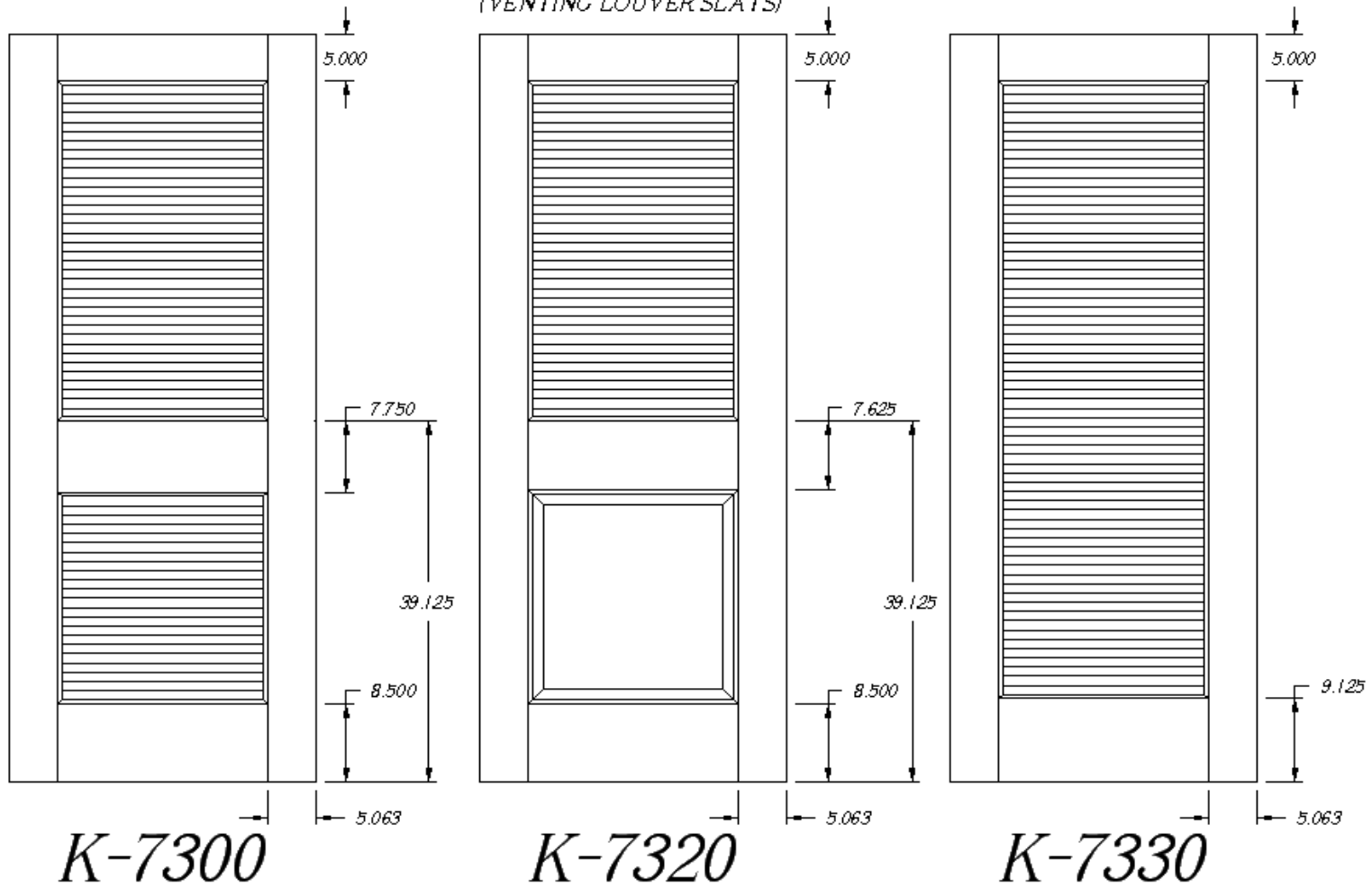
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K-5410



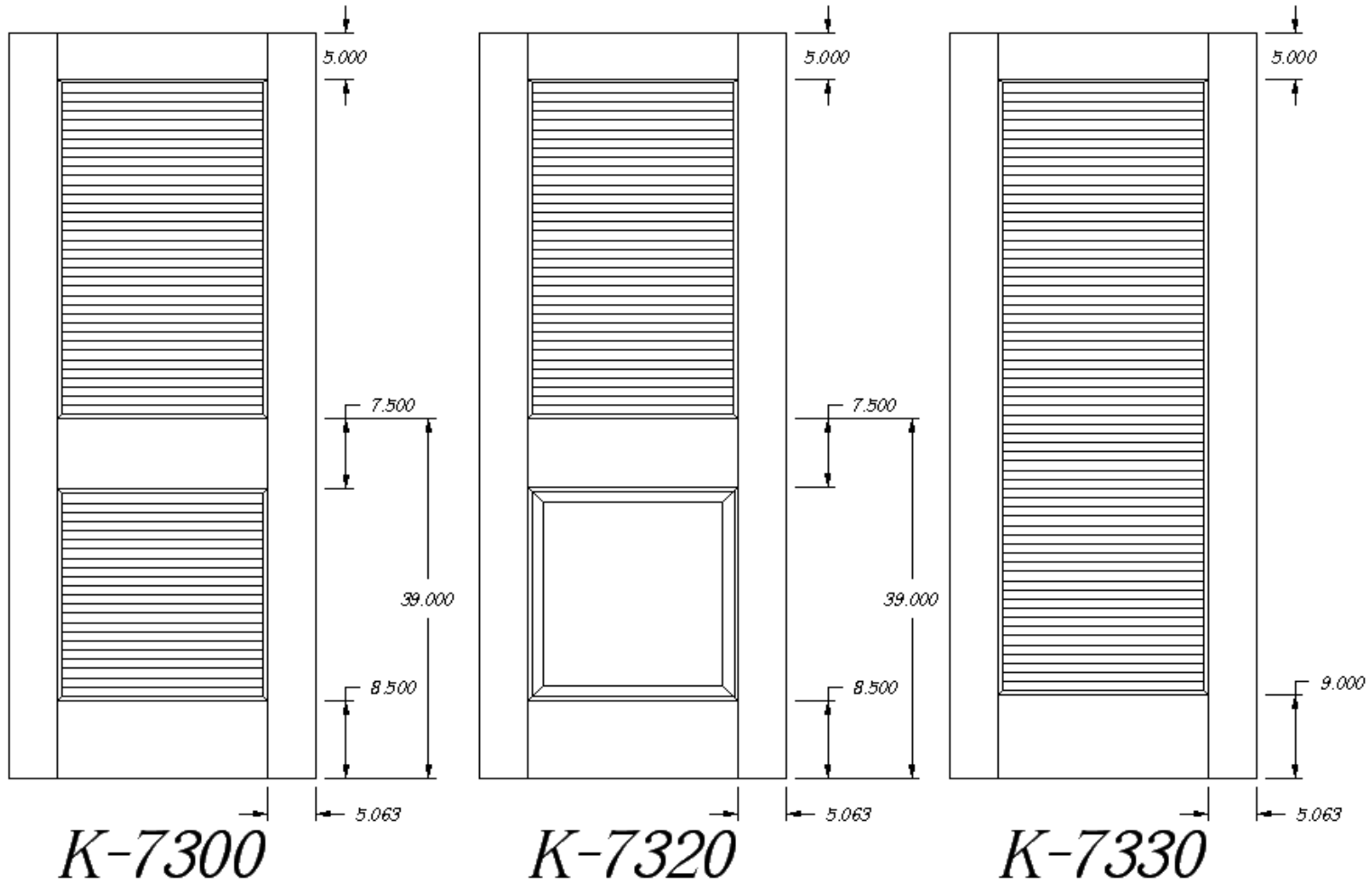
FACTORY REQUIRES LOUVER OPENING TO END WITH 7/8" MEASUREMENT.
FACTORY RECOMMENDS ANTI-SAG BAR ON DOORS WIDER THAN 30",
INCLUDED ONLY IF REQUESTED.
(VENTING LOUVER SLATS)





Doors of Distinction

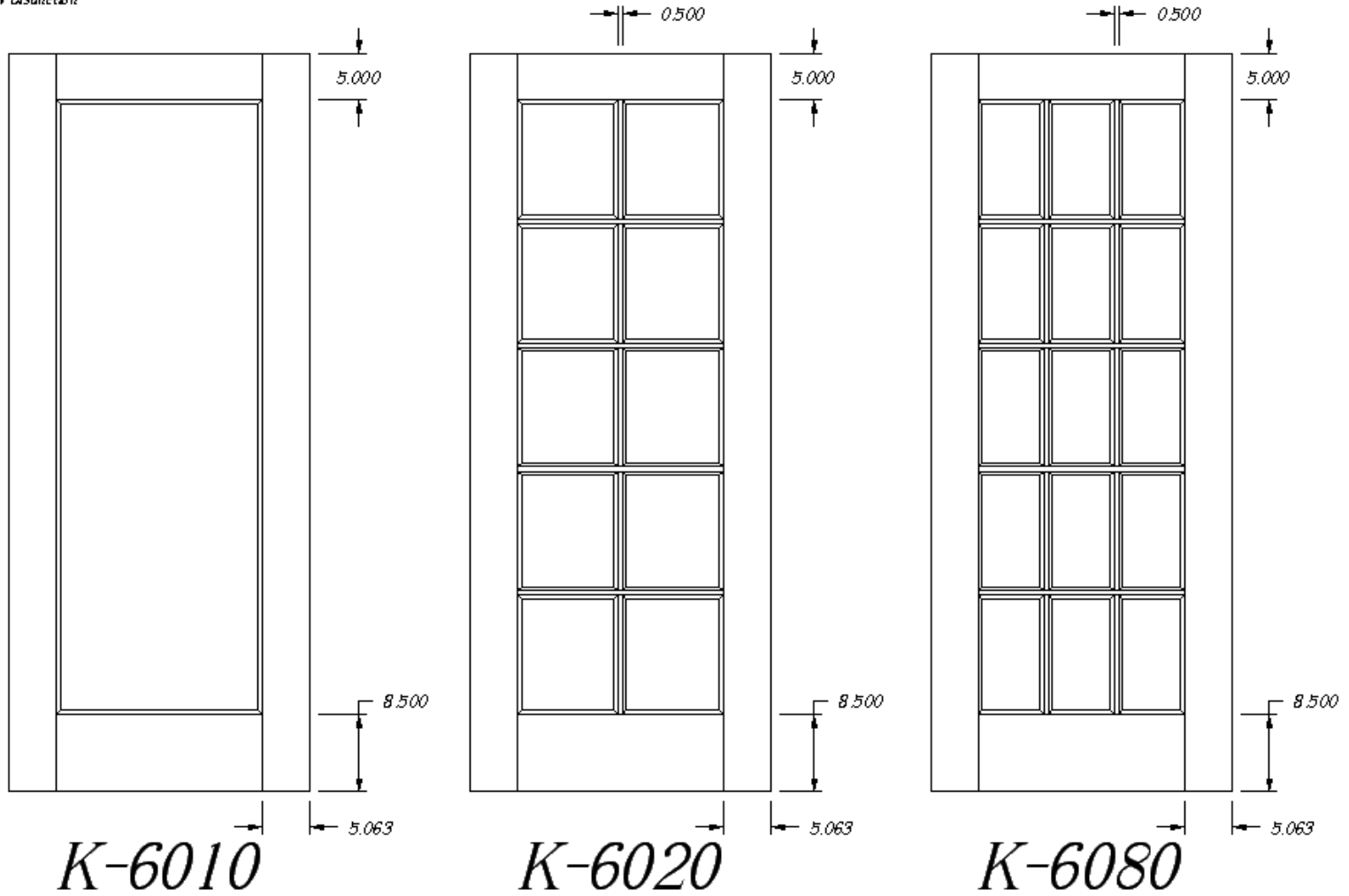
FACTORY REQUIRES CHEVRON OPENING TO END WITH A WHOLE NUMBER.
(NONVENTING CHEVRON LOUVERS)





Doors of Distinction

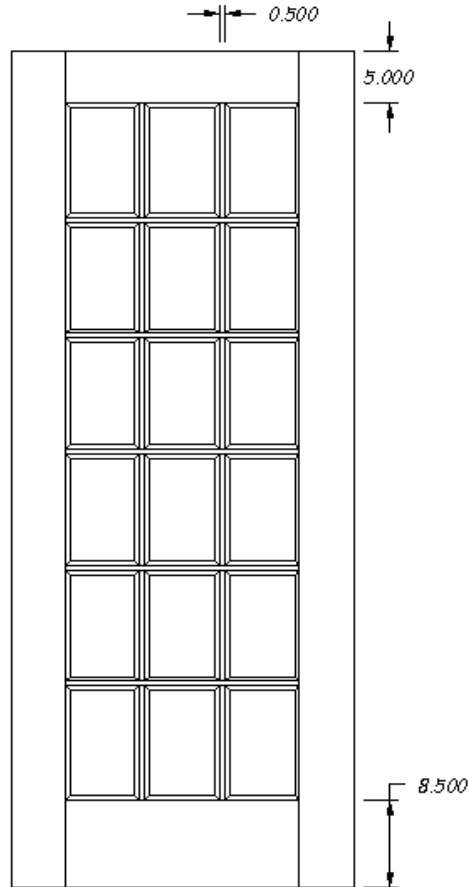
AVAILABLE IN CLEAR TEMPERED, BEVELED, V-GROOVE,
WHITE HUE OPAQUE AND INSULATED.



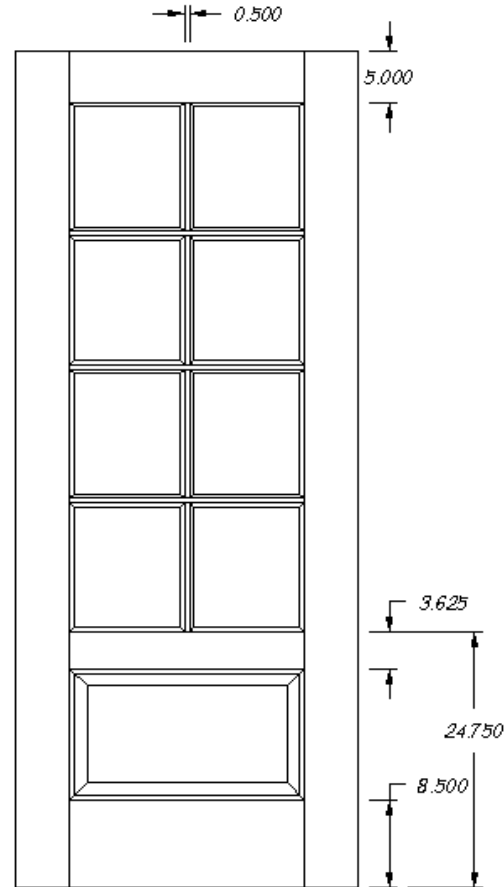


Doors of Distinction

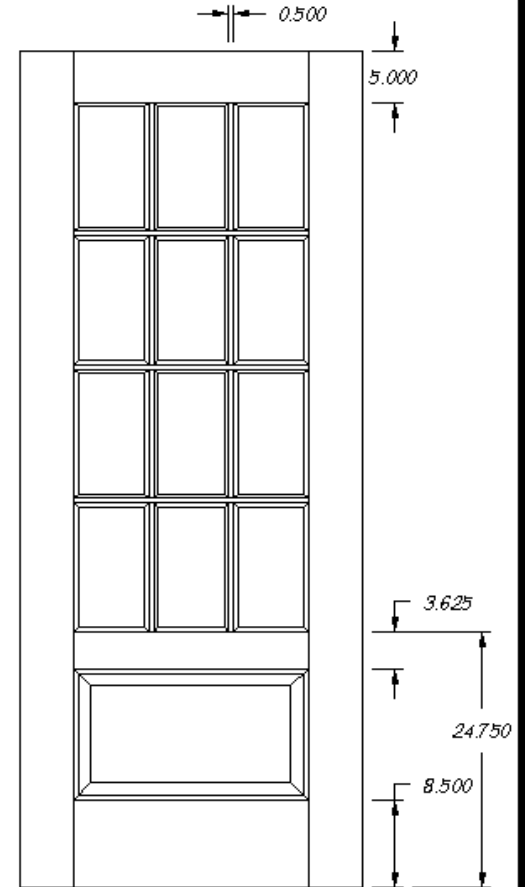
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WHITE HUE OPAQUE AND INSULATED.



K-3600



K-3580

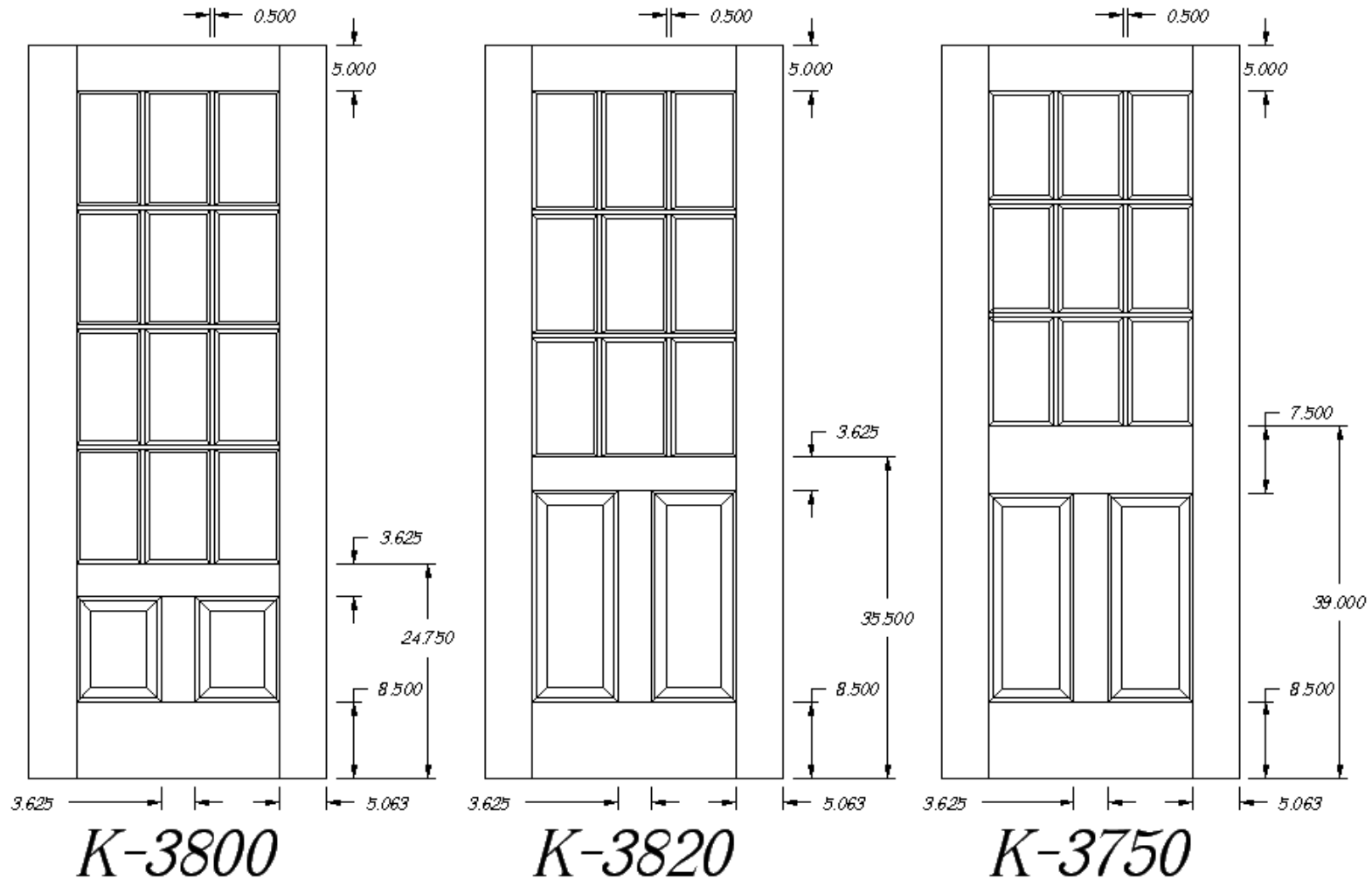


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Doors of Distinction

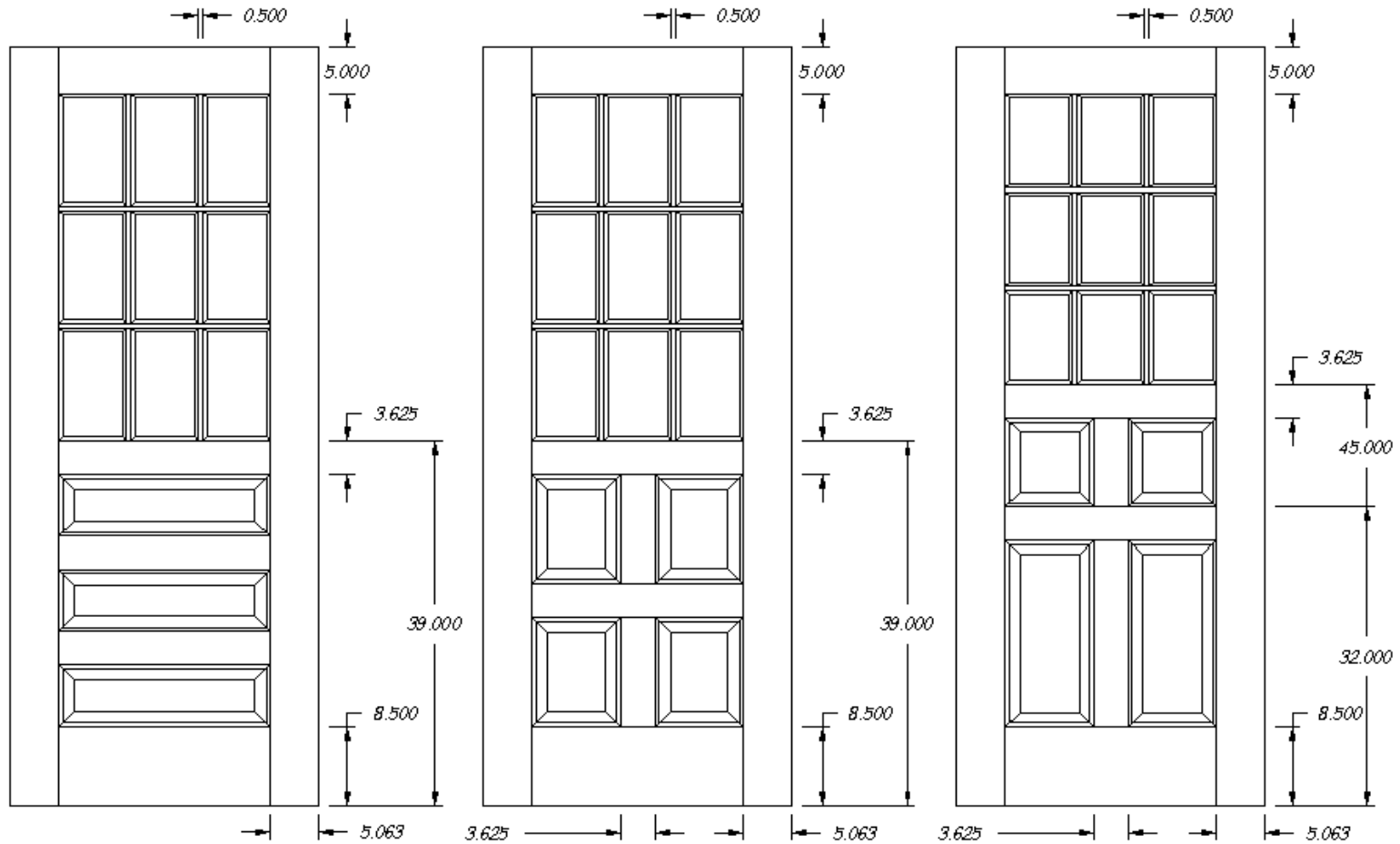
AVAILABLE IN CLEAR TEMPERED, BEVELED, V-GROOVE,
WHITE HUE OPAQUE AND INSULATED.





Doors of Distinction

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



K-3830

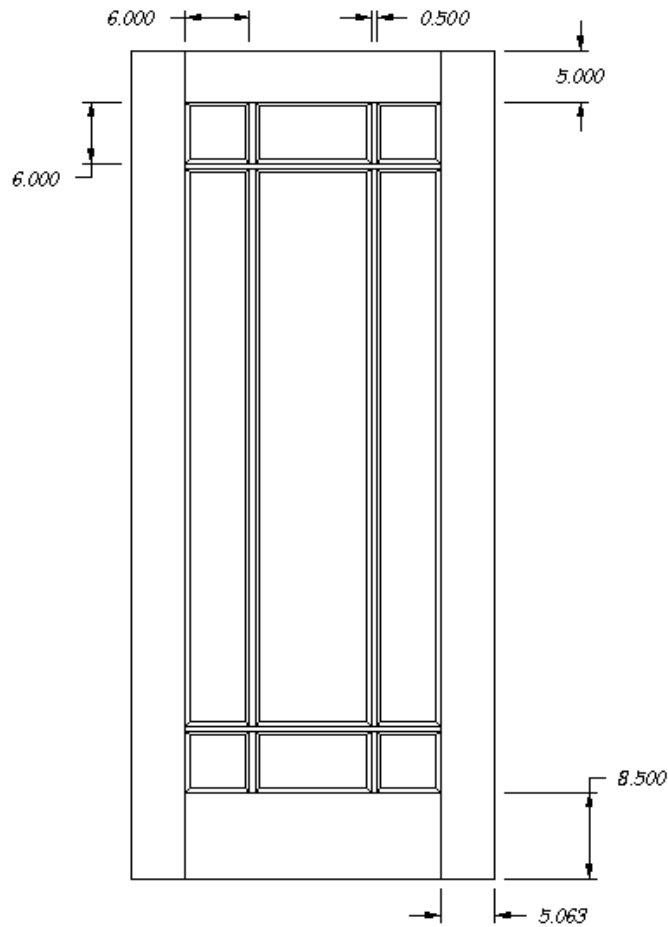
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K-6510



Doors of Distinction

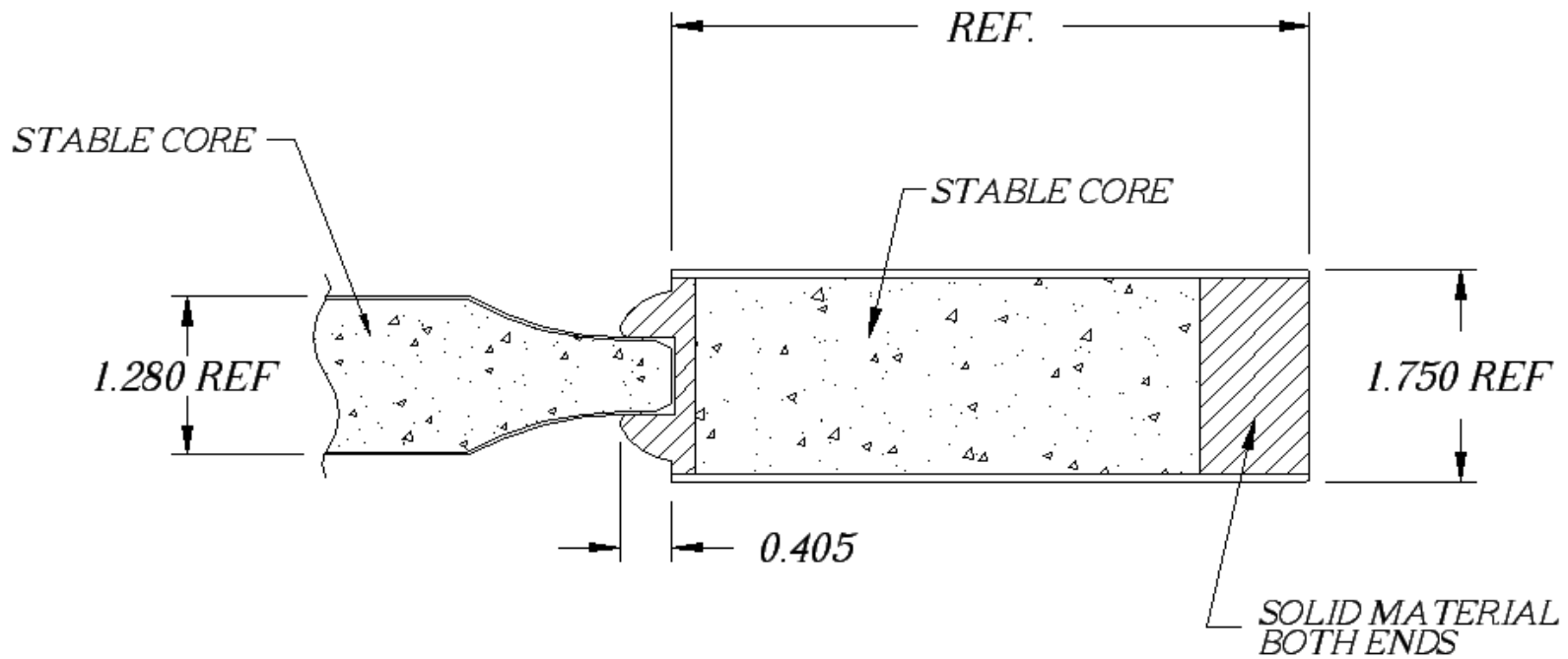
AVAILABLE IN CLEAR TEMPERED, BEVELED, V-GROOVE,
WHITE HUE OPAQUE AND INSULATED.



K-6090

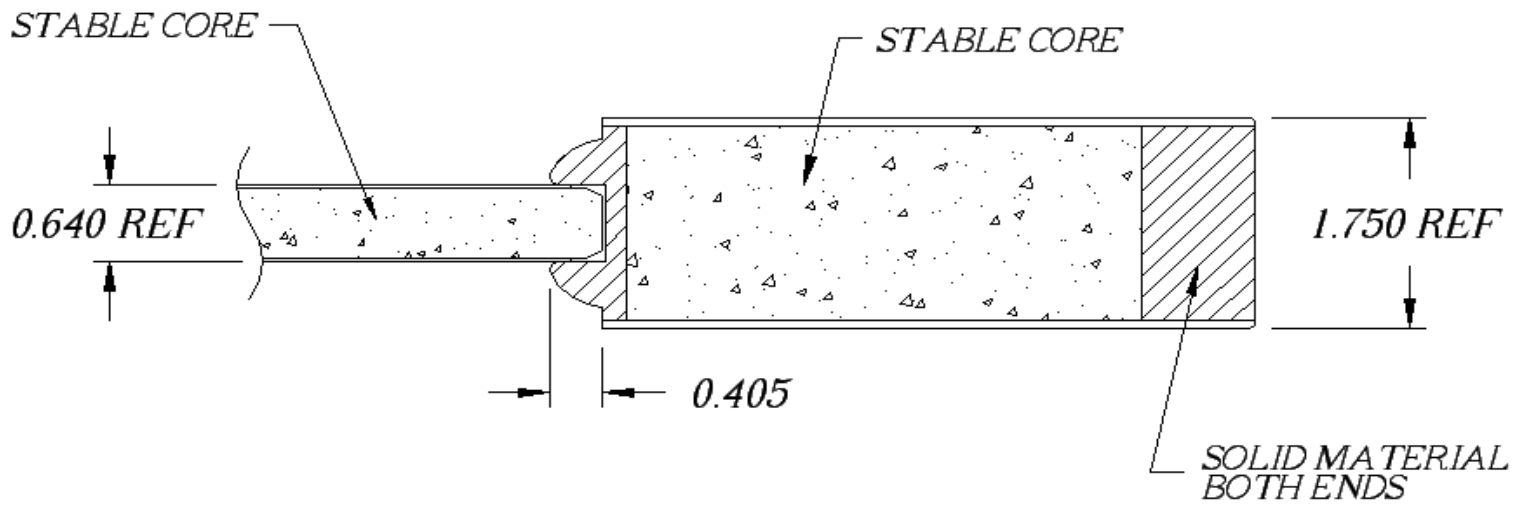


8/4 OVOLO STICKING - RAISED PANEL

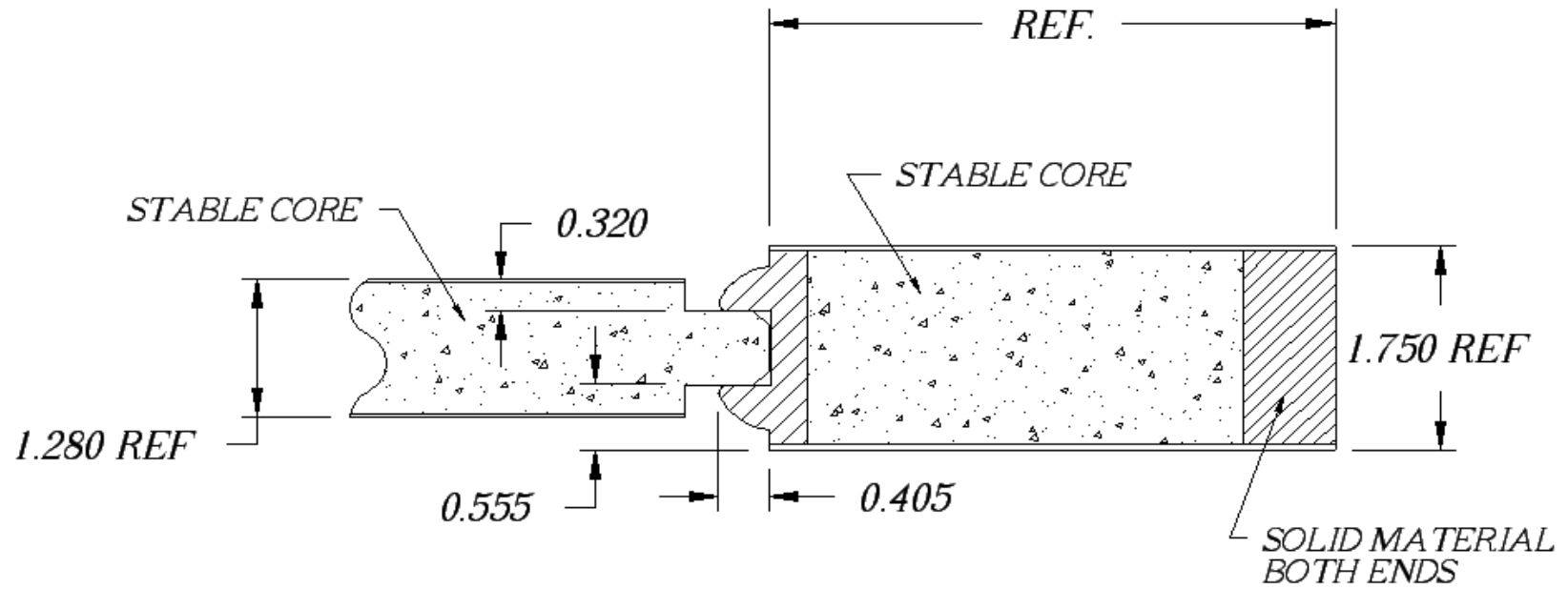




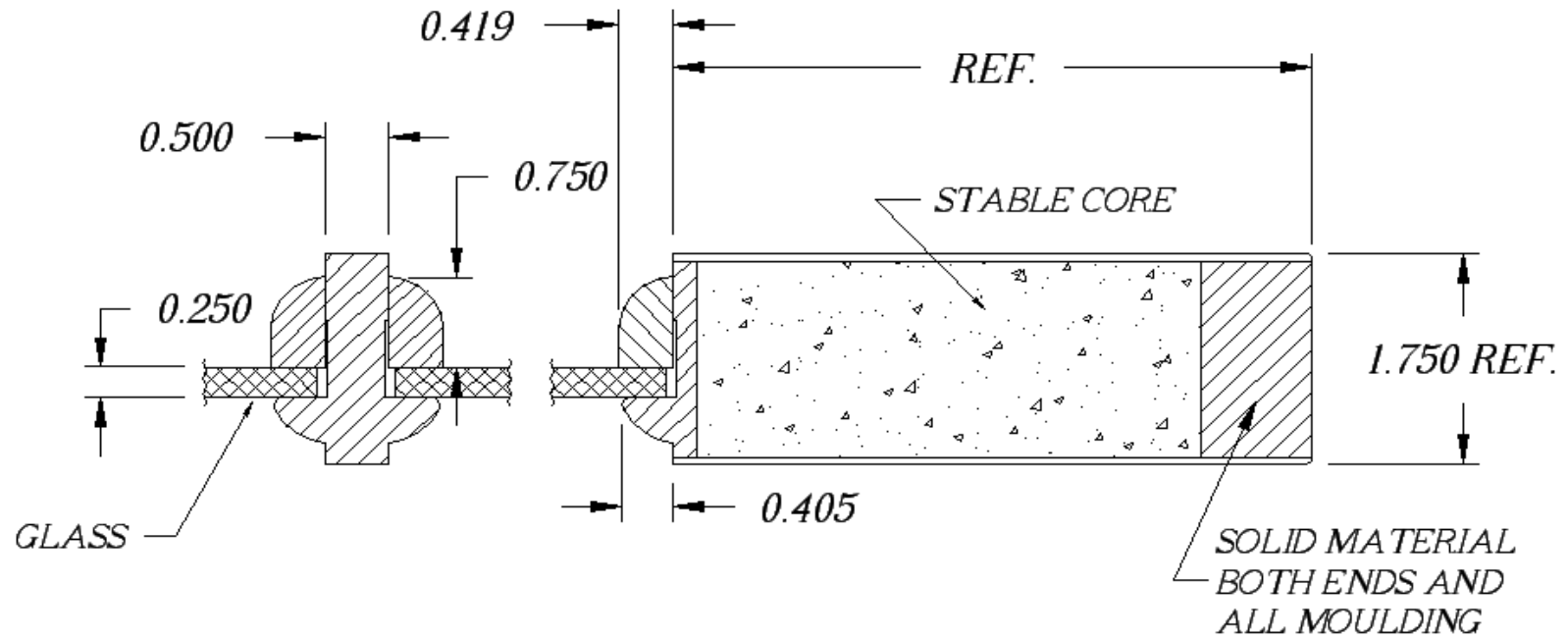
8/4 OVOLO STICKING - FLAT PANEL



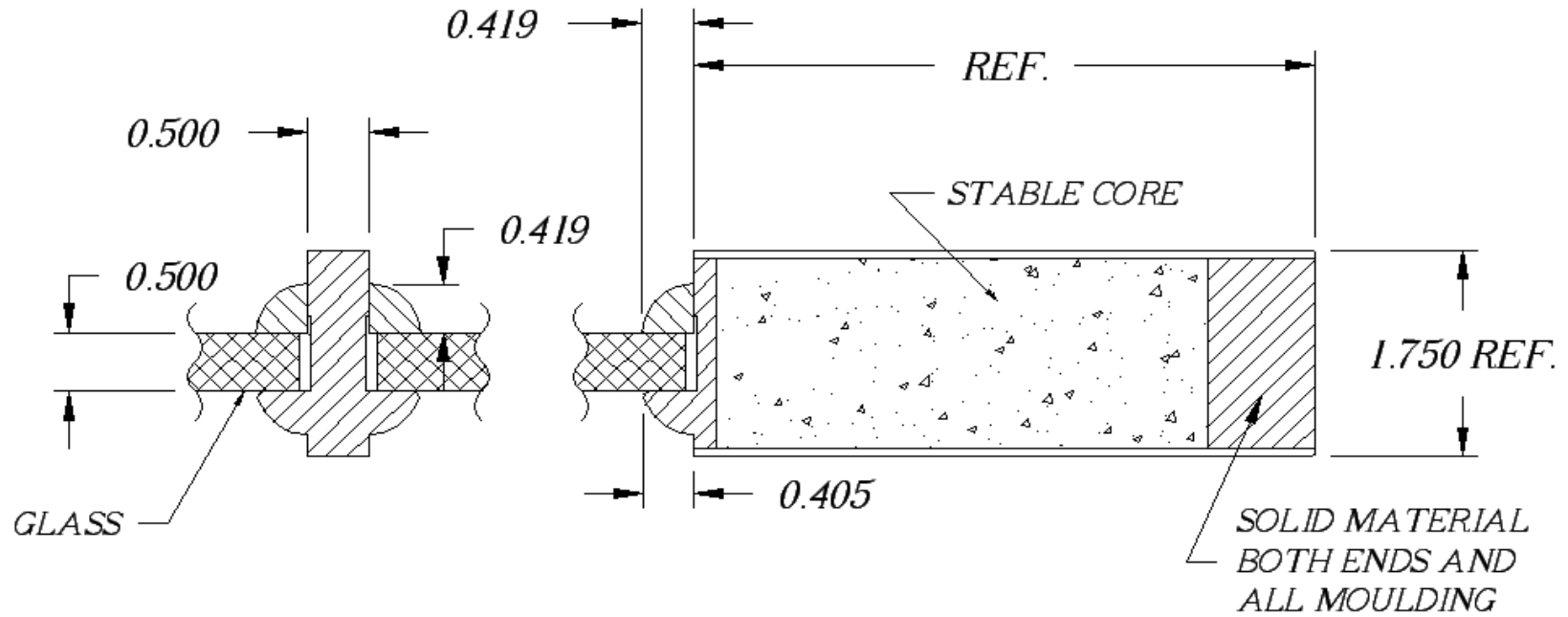
8/4 OVOLO STICKING - STEP PANEL



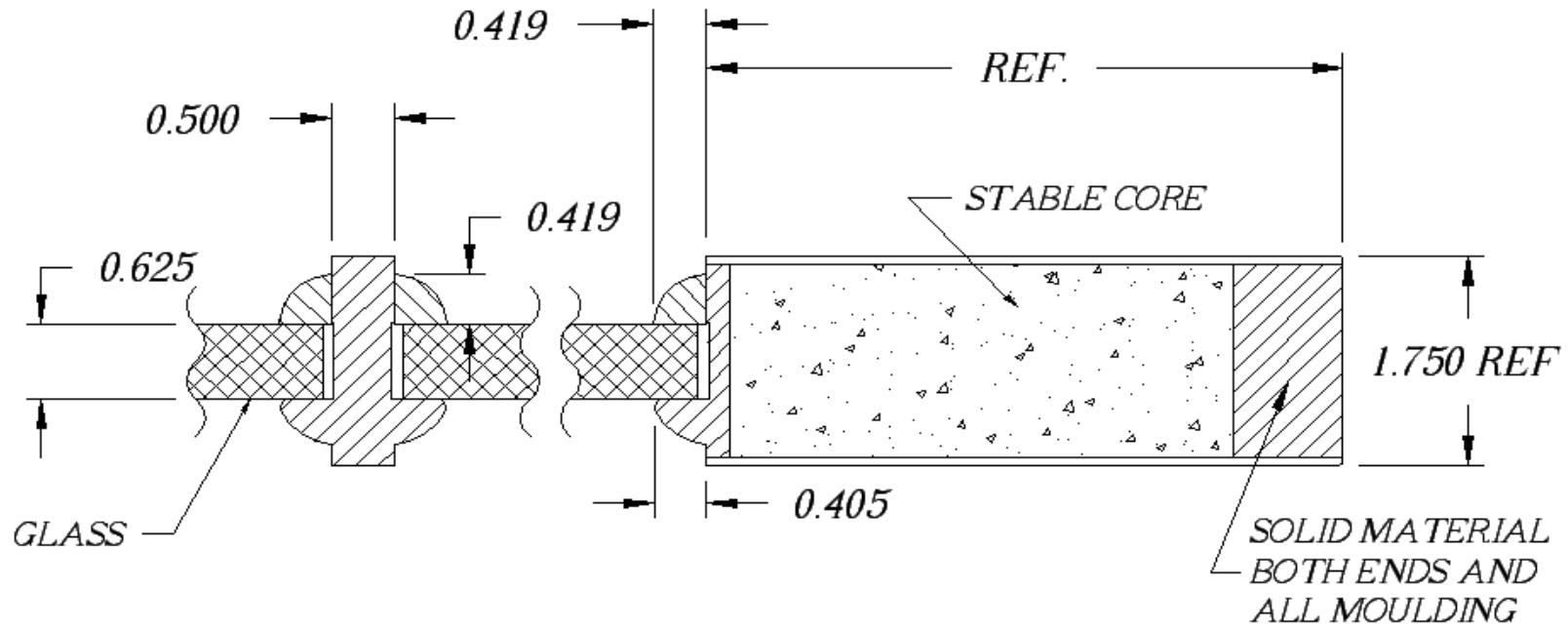
8/4 OVOLO STICKING - 1/4" GLASS



8/4 OVOLO STICKING - 1/2" GLASS

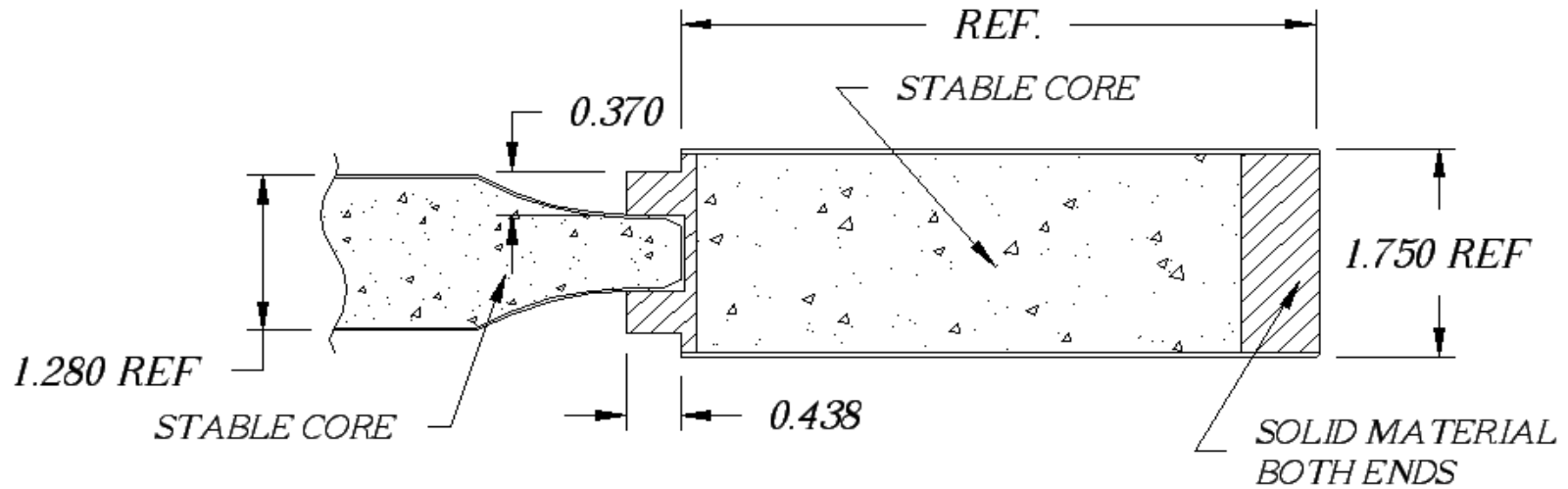


8/4 OVOLO STICKING - 5/8" GLASS

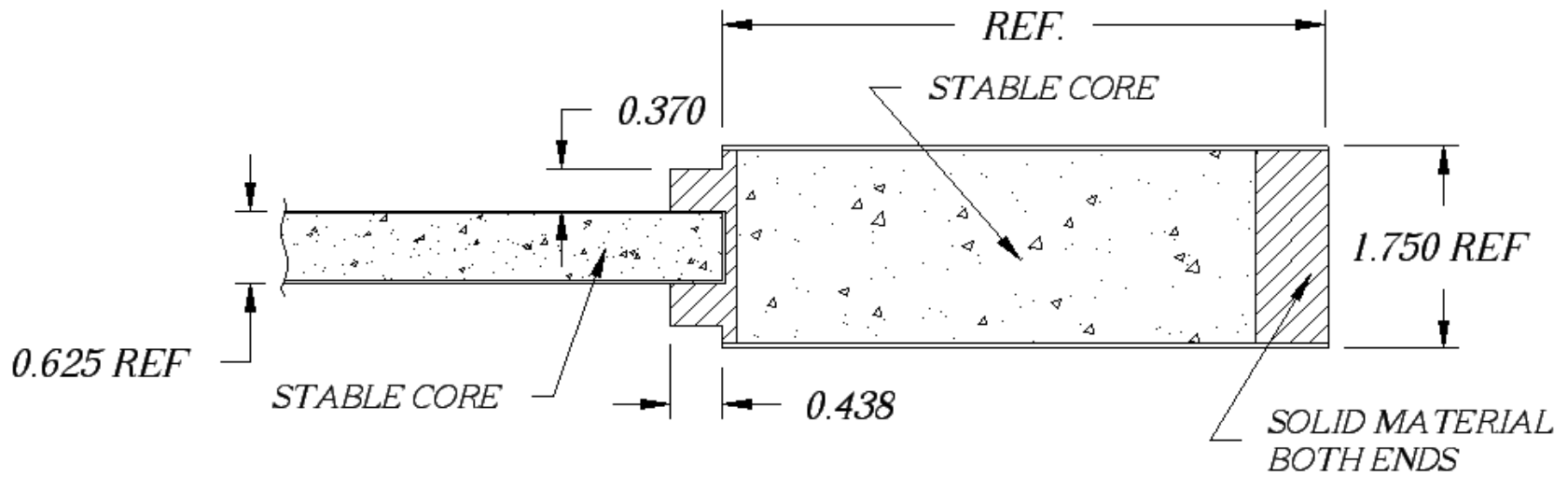




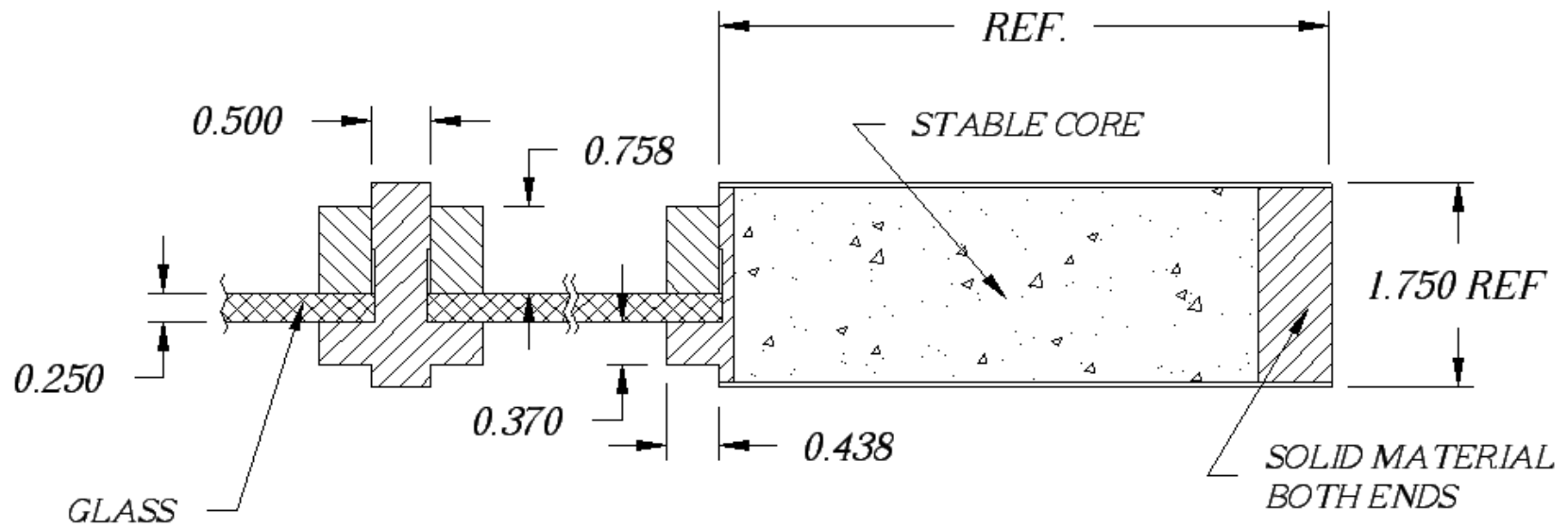
8/4 MISSION STICKING - RAISED PANEL



8/4 MISSION STICKING - FLAT PANEL

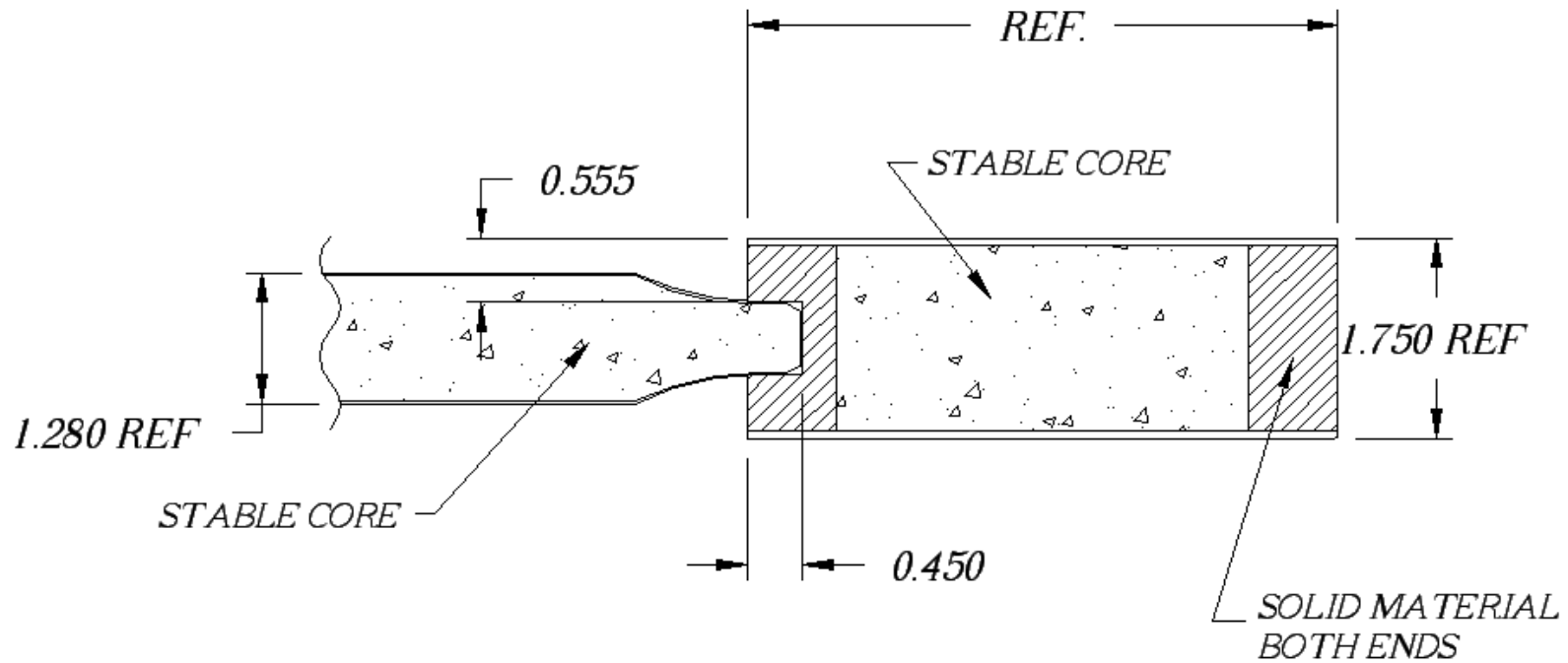


8/4 MISSION STICKING - 1/4" GLASS



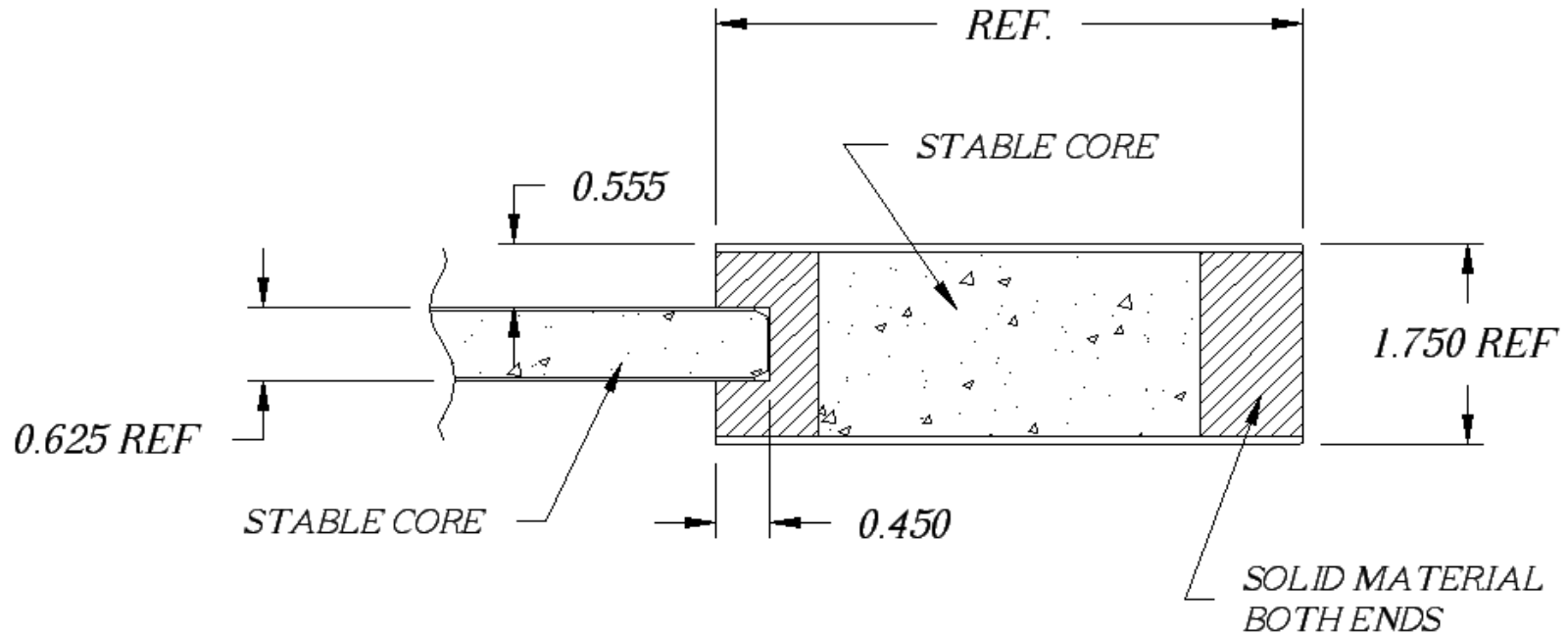


8/4 SQUARE STICKING - RAISED PANEL

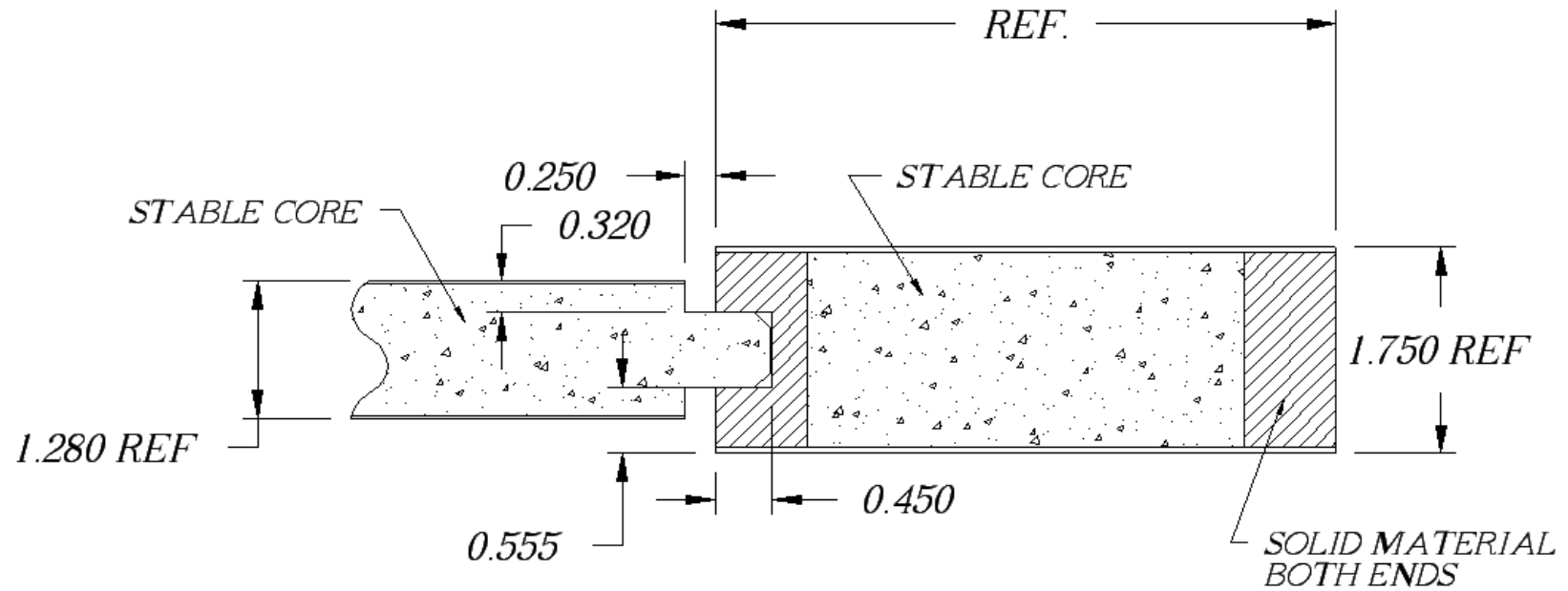




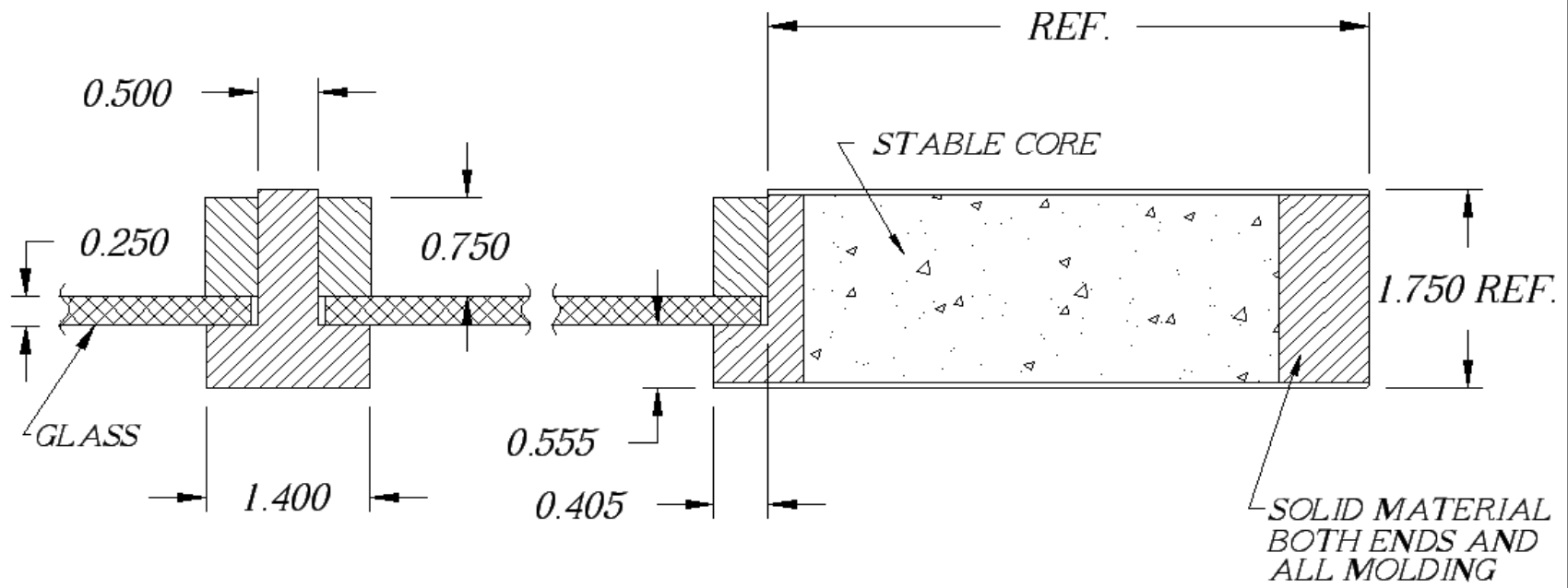
8/4 SQUARE STICKING - FLAT PANEL



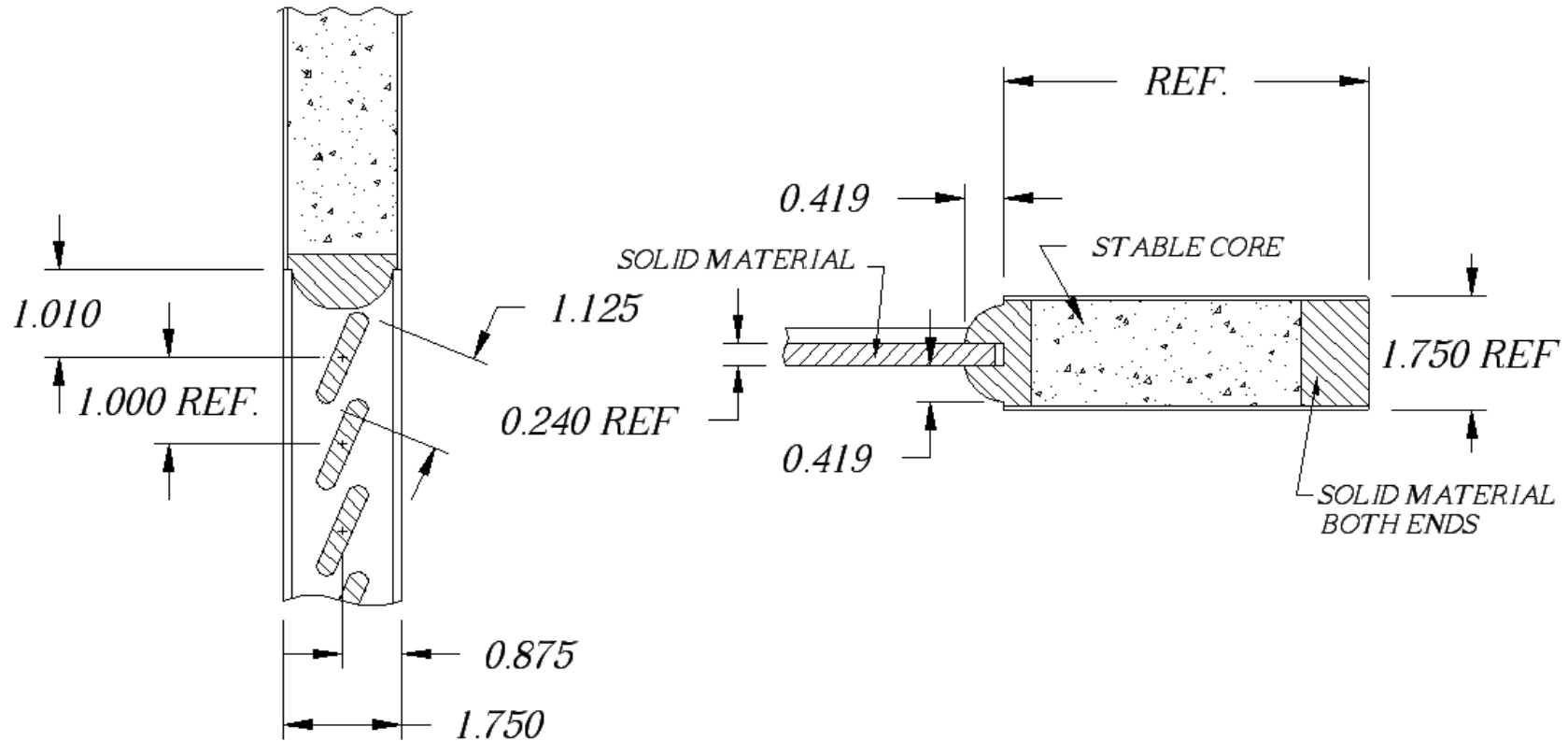
8/4 SQUARE STICKING - STEP PANEL



8/4 SQUARE STICKING - 1/4" GLASS

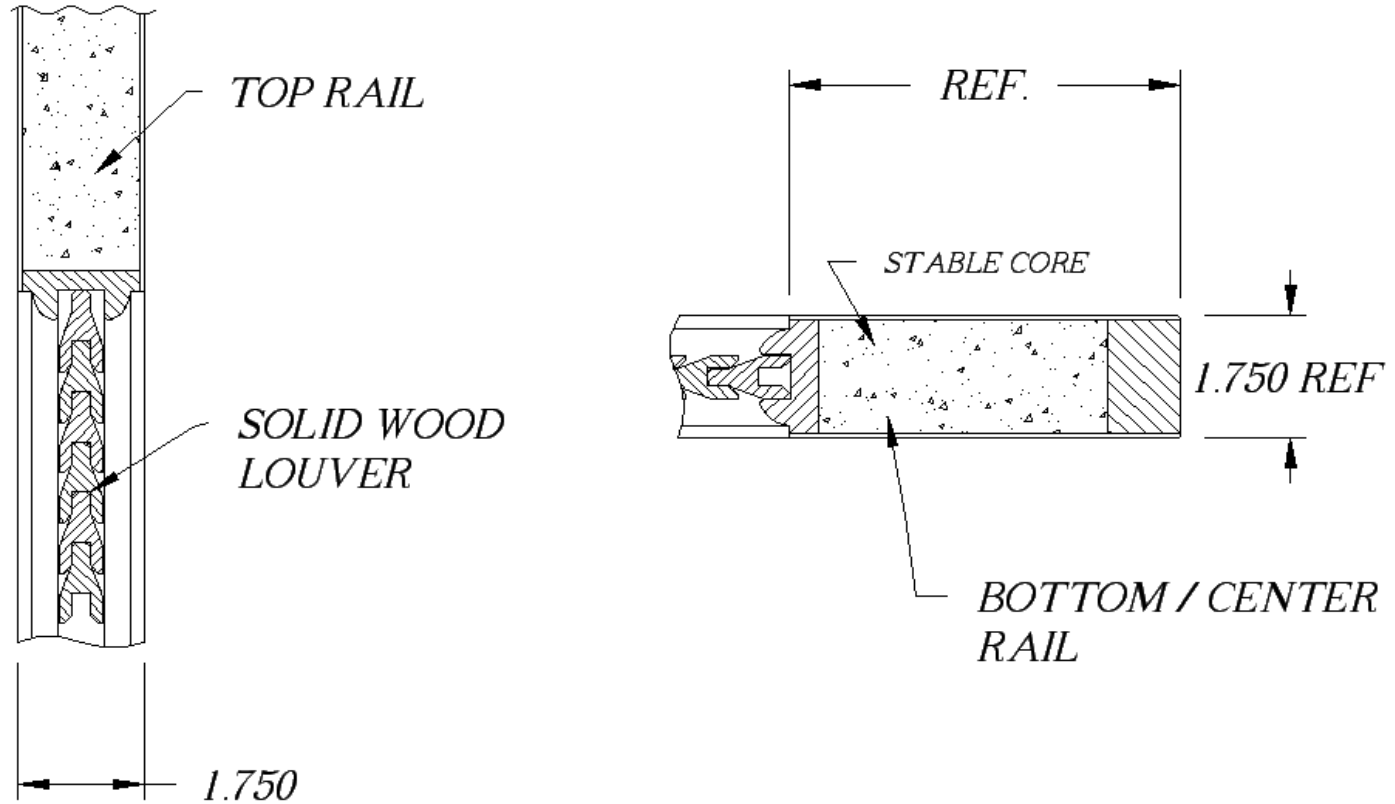


8/4 OVOLO STICKING - LOUVERS



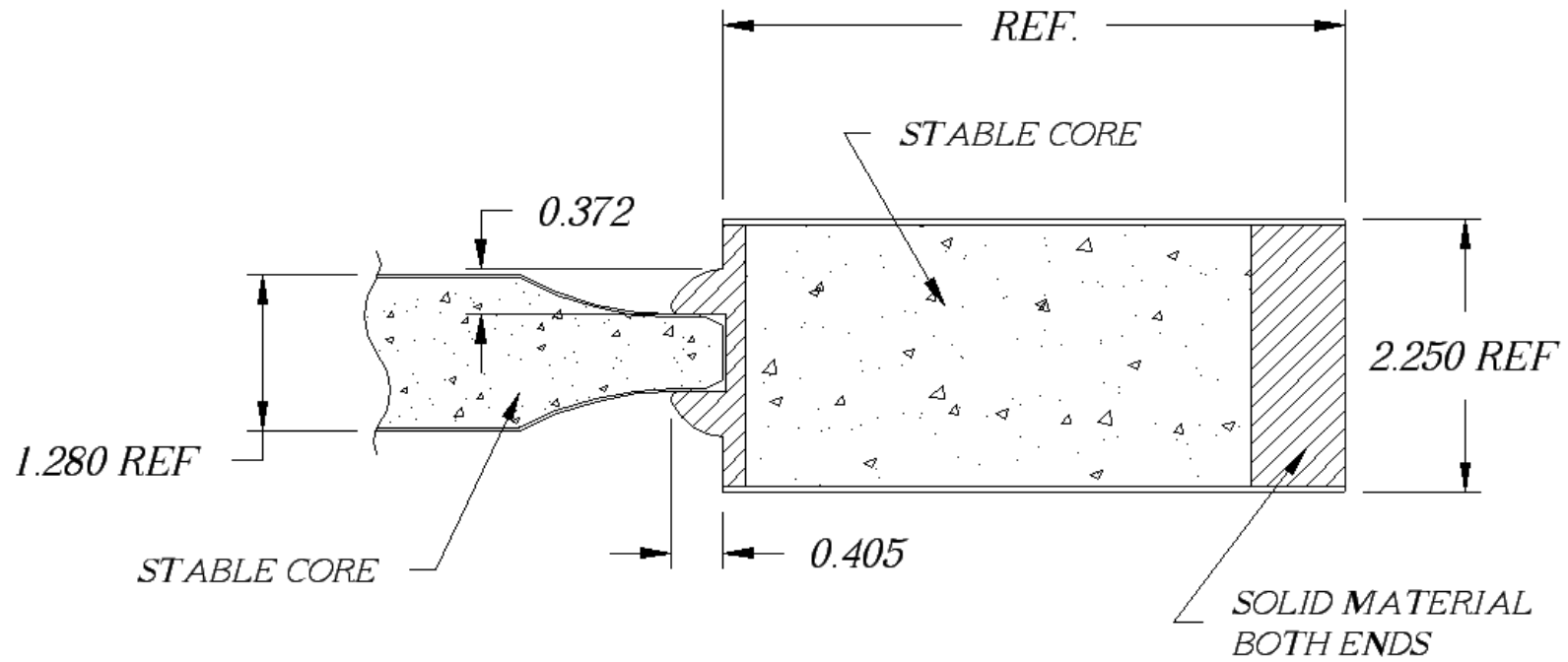


8/4 OVOLO STICKING - CHEVRON LOUVERS (NONVENTING)



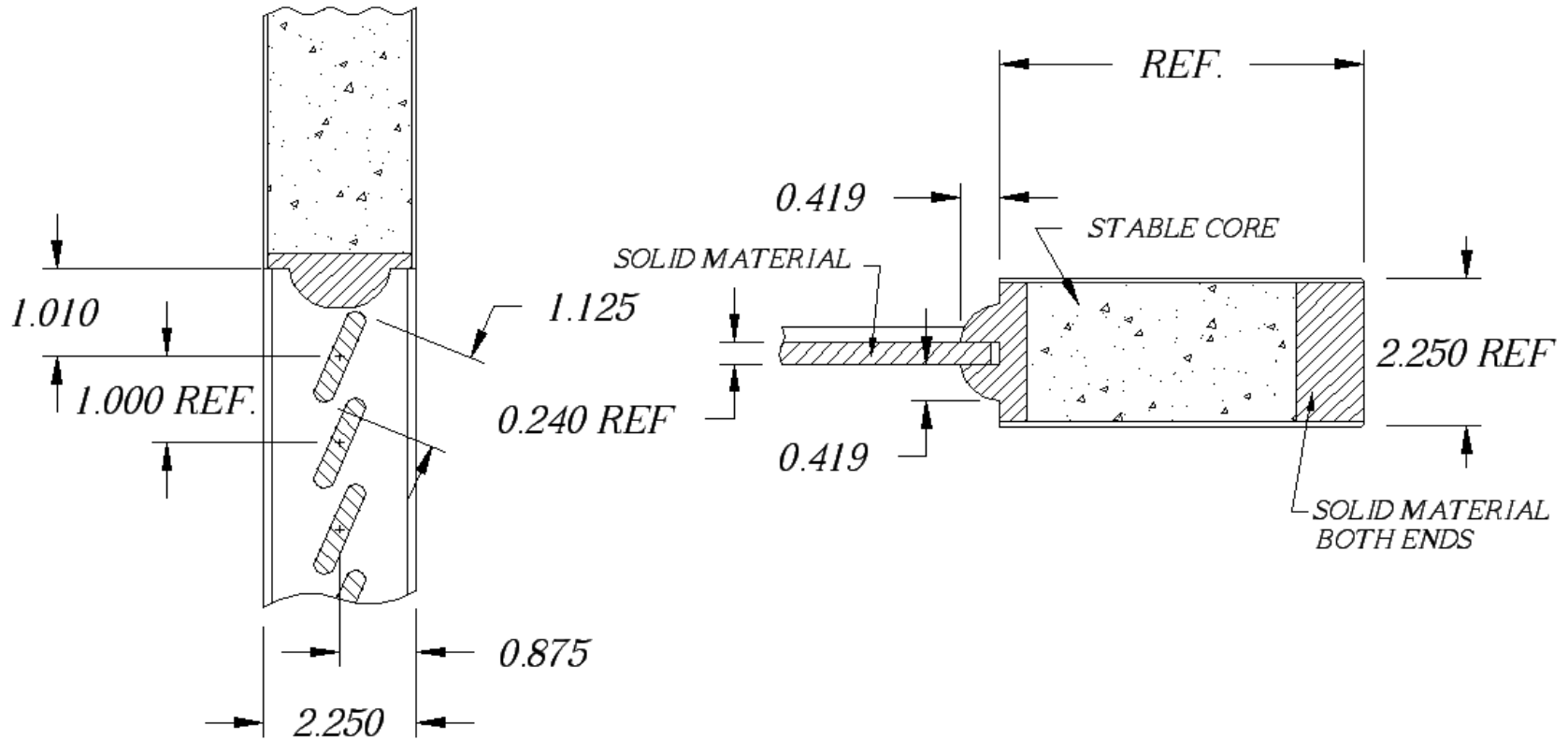


10/4 OVOLO STICKING - RAISED PANEL



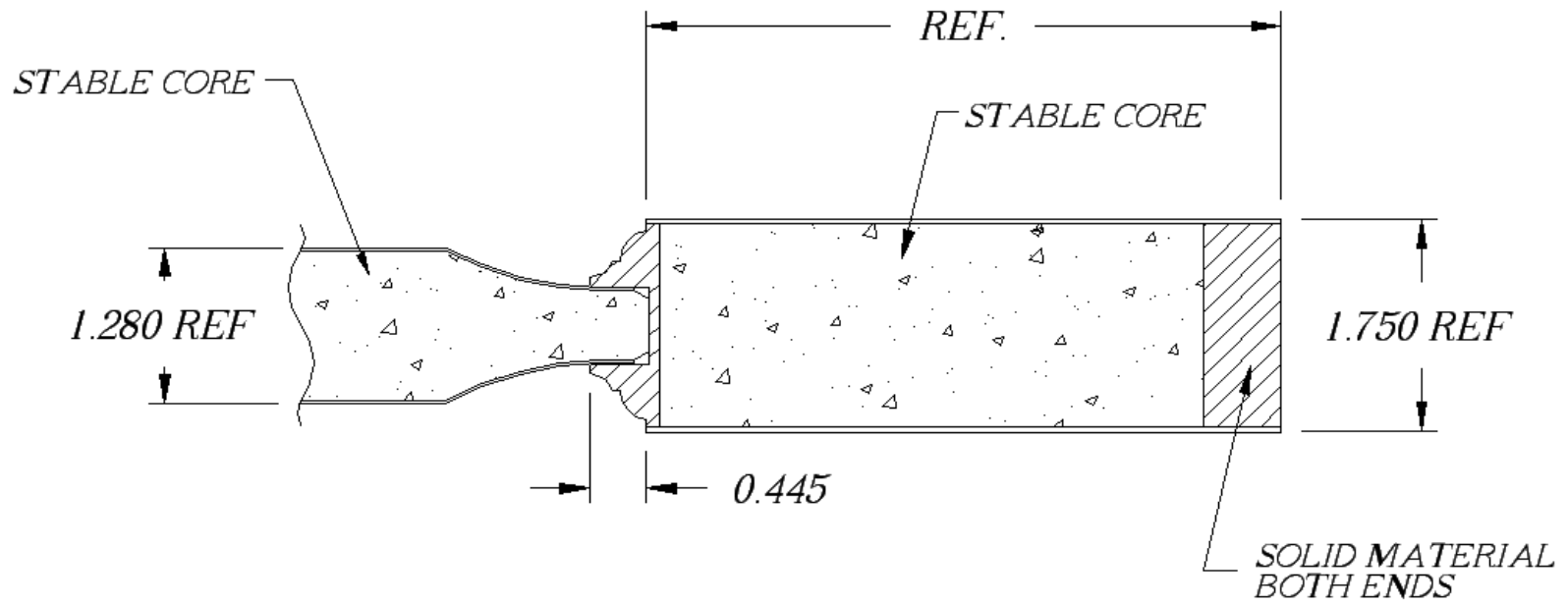


10/4 OVOLO STICKING - LOUVERS

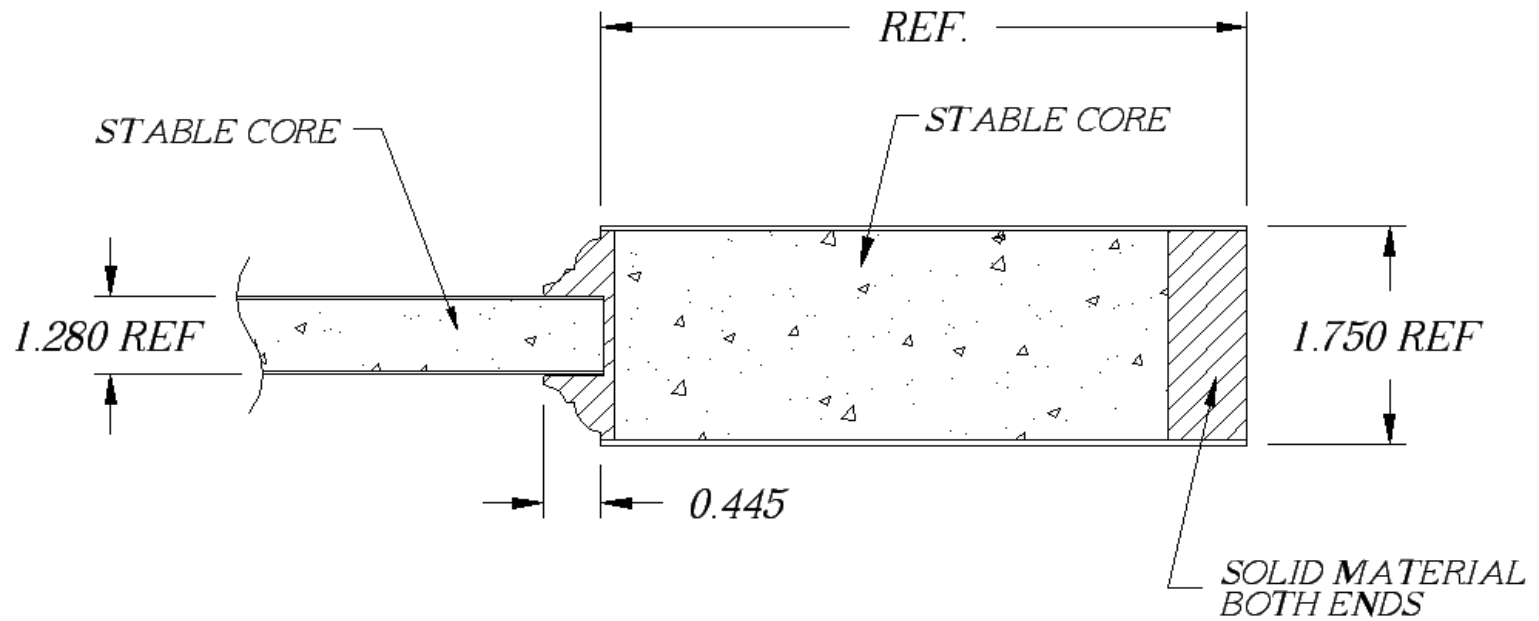




8/4 CLASSIC STICKING - RAISED PANEL

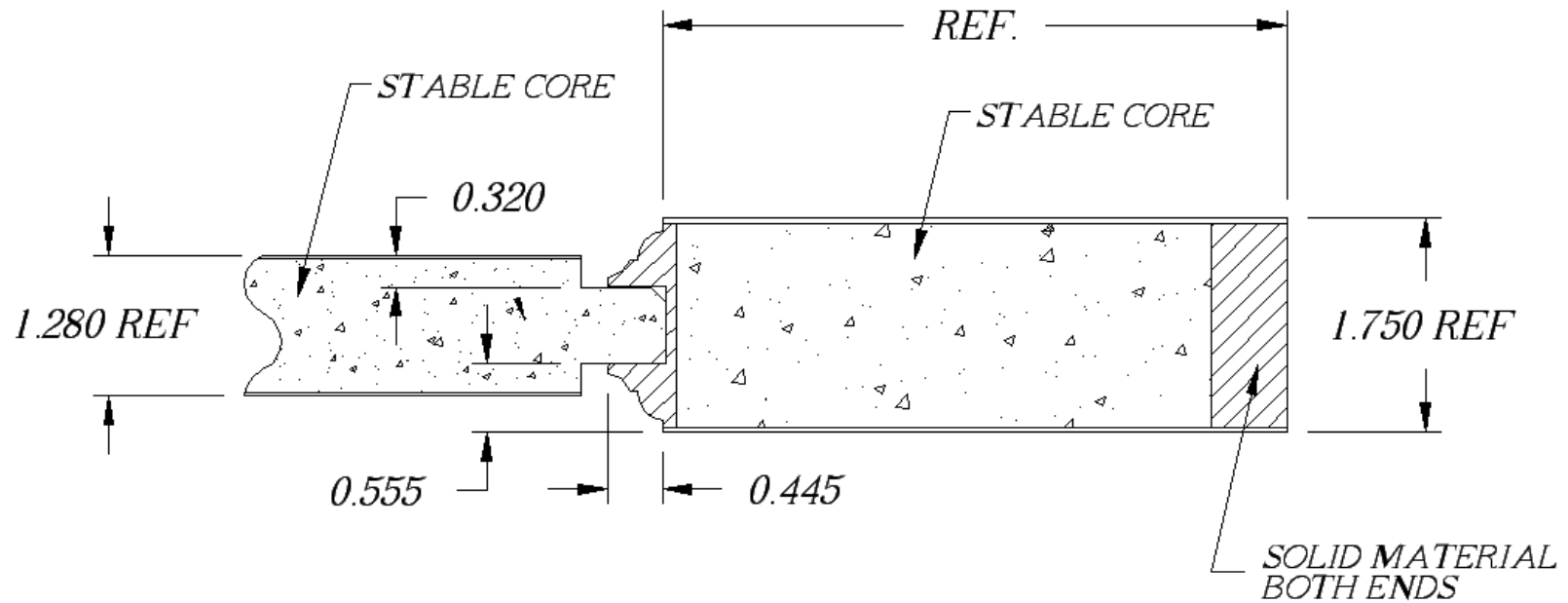


8/4 CLASSIC STICKING - FLAT PANEL

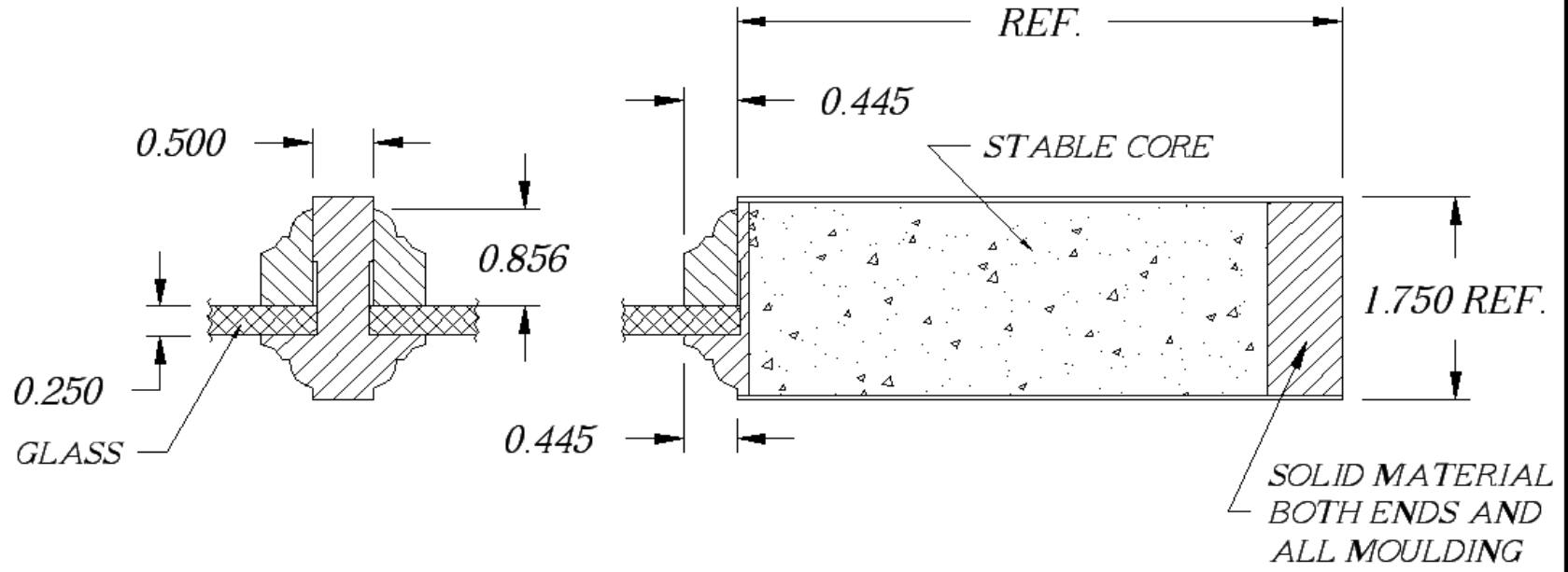




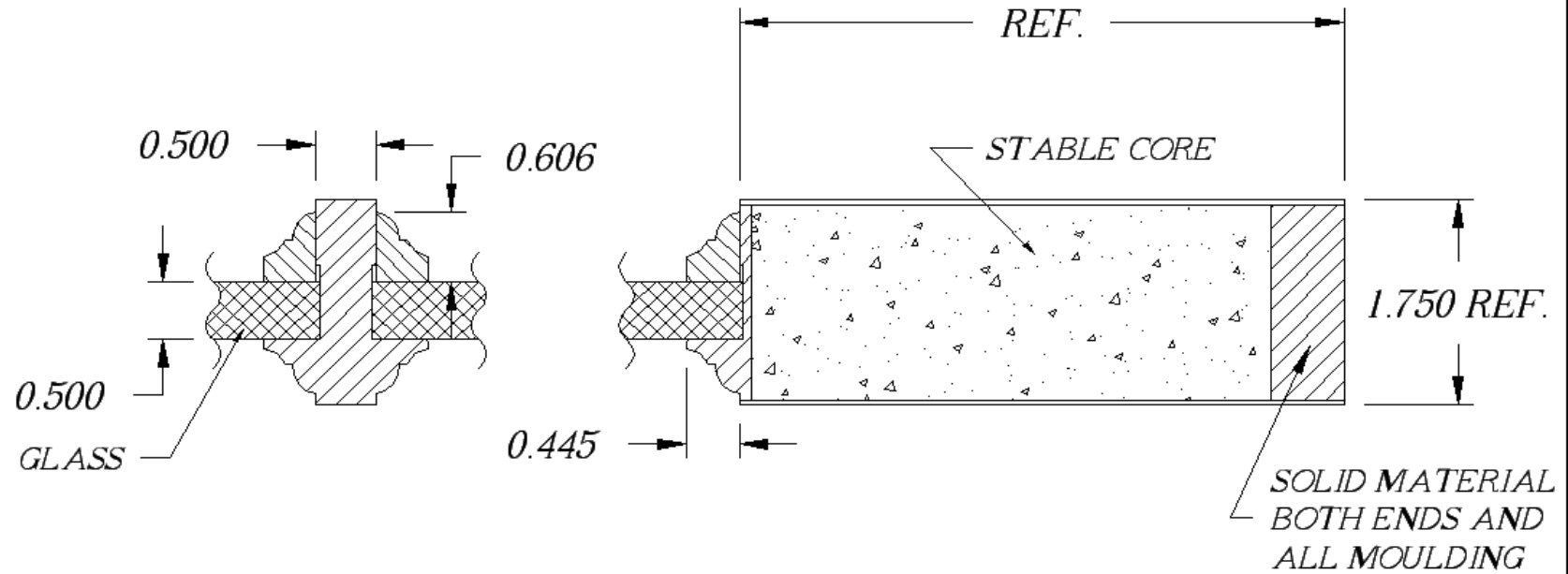
8/4 CLASSIC STICKING - STEP PANEL



8/4 CLASSIC STICKING - 1/4" GLASS

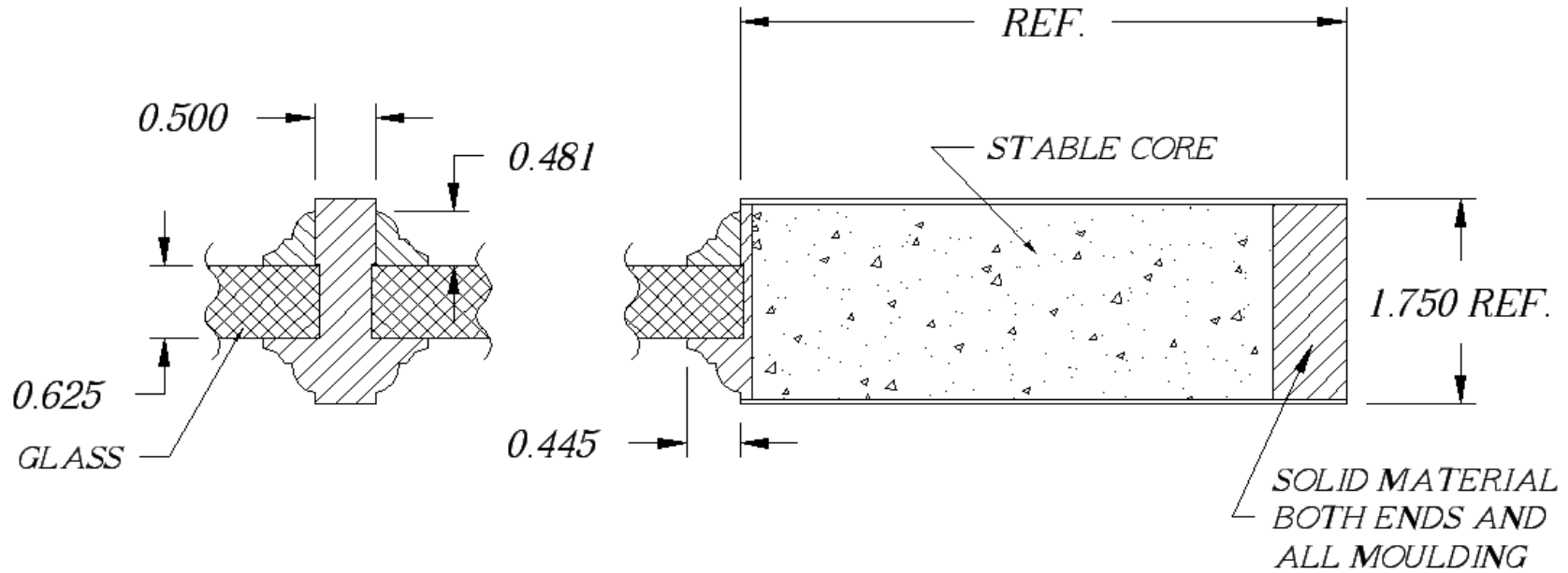


8/4 CLASSIC STICKING - 1/2" GLASS

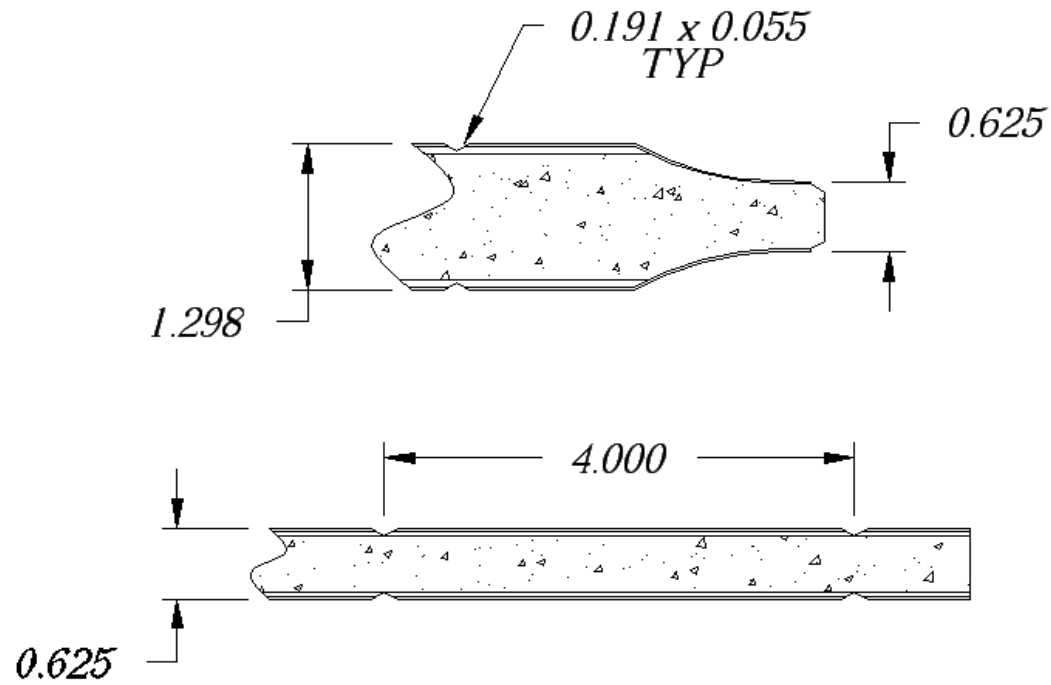




8/4 CLASSIC STICKING - 5/8" GLASS



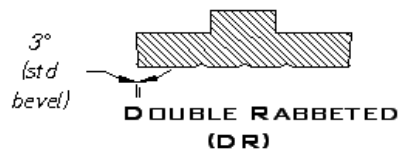
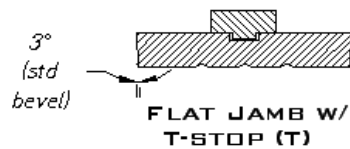
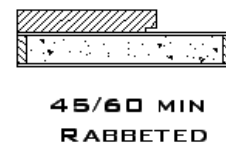
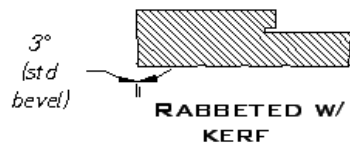
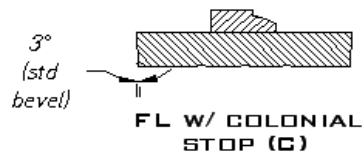
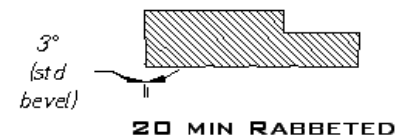
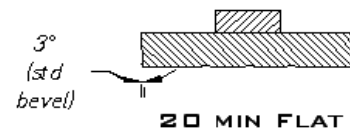
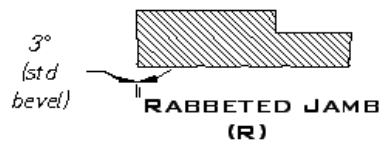
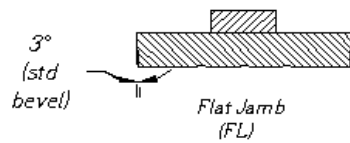
8/4 - V-GROOVE PANELS





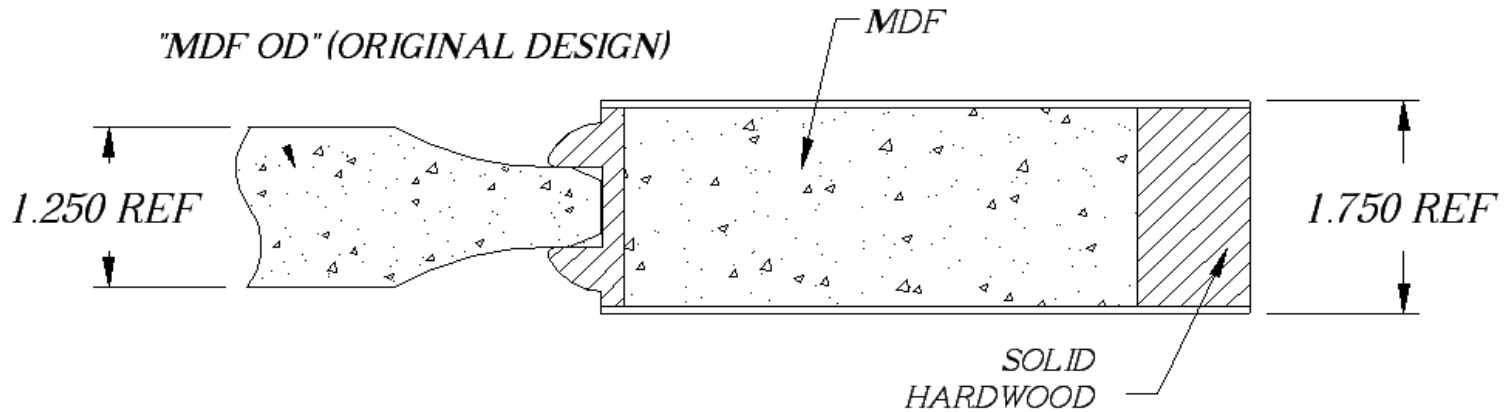
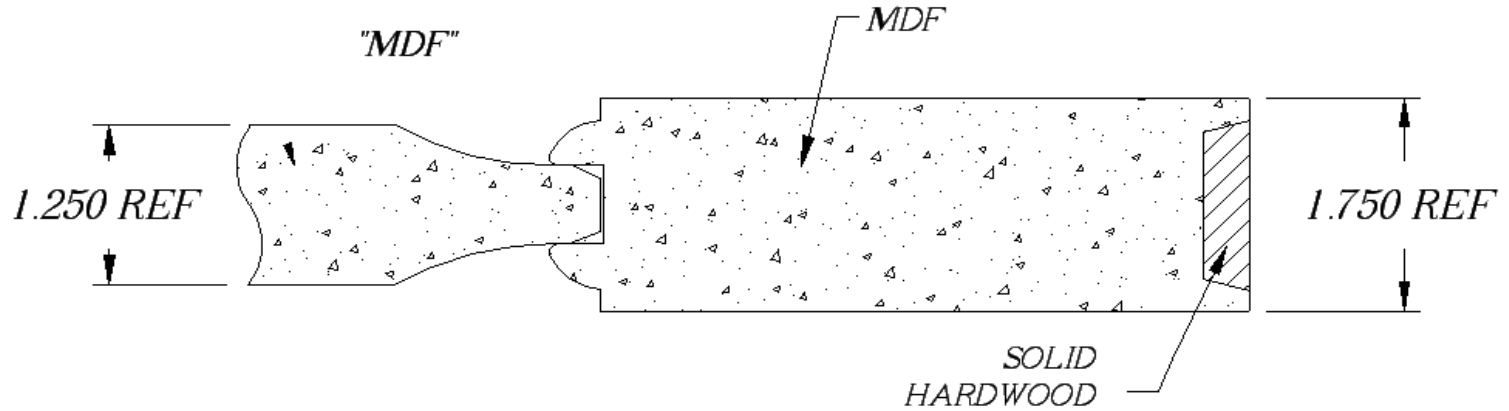
Doors of Distinction

JAMB OPTIONS





8/4 OVOLO STICKING - RAISED PANEL MDF CONSTRUCTION OPTIONS





Doors of Distinction

traditional | contemporary | custom

4100 Karona Ct, Caledonia, MI 49316
Phone: (800) 829-9233 Fax: (616) 554-3902

www.karonadoor.com

Date Required: _____ Company: _____ Contact: _____ Email: _____ Address: _____ City/State/Zip: _____	Date Requested: _____ Phone: _____ Fax: _____ Job Name: _____ Ship to: _____
---	---

Species: _____ Cut: PS <input type="checkbox"/> QTR <input type="checkbox"/> RIFT <input type="checkbox"/>
Sticking: Ovolo <input type="checkbox"/> Ogee <input type="checkbox"/> Mission <input type="checkbox"/> Square <input type="checkbox"/> Classic <input type="checkbox"/>
Panel Type: Raised <input type="checkbox"/> Flat <input type="checkbox"/> Step <input type="checkbox"/> Rim-banded <input type="checkbox"/> Other <input type="checkbox"/>
Environmental: NAUF <input type="checkbox"/> FSC <input type="checkbox"/>
Glass Type: Clear <input type="checkbox"/> Obsc <input type="checkbox"/> W.H.O. <input type="checkbox"/> Beveled <input type="checkbox"/> Other <input type="checkbox"/>
Finish: Prime <input type="checkbox"/> ^{2X} Prime <input type="checkbox"/> Clear <input type="checkbox"/> Stain <input type="checkbox"/>

SIZE				DESCRIPTION			MACHINING														OTHER	
Qty	Width	Height	Thick	Model Number/Door Style	EXT	Fire Rating	Prefit/Mark	Butts	Strike	Cyl	Dead Bolt	Mortise Lock	Flush-bolt	CVR	Exit Device	E.P.T.	Race-ways	Dutch Cut	Veneer Banding	Viewer	Special Notes	



traditional | contemporary | custom
stile & rail doors

Prefit and Premachined Door Schedule

ORDER NUMBER

PAGE NUMBER

DOOR TYPE

SPECIES

FRAME OPENING SIZE

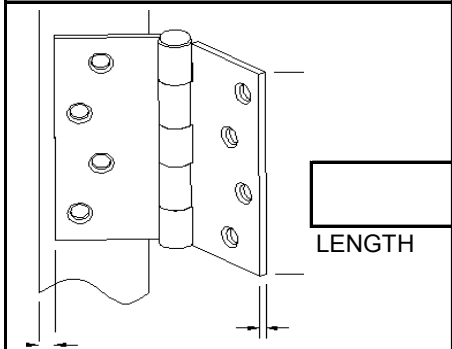
Width X Height X Thickness

PREFIT DOOR SIZE

X X

HINGES RADIUS SQUARE

MANUFACTURER NO./TEMPLATE



BACKSET GAUGE

TOP OF DOOR TO TOP OF HINGE:

1st Hinge

2nd Hinge

3rd Hinge

4th Hinge

LOCK

MANUFACTURER NO.

TEMPLATE NO.

LOCK TYPE: *(check one)*

Cylindrical:

Mortise:

Other:

TOP OF DOOR TO CENTERLINE OF LOCK:

BACKSET:

LATCH PLATE

See Template

1-1/8" x 2-1/4"

1" x 2-1/4"

1-1/8" x 7/8"

1" Hole

7/8" Hole

STRIKES

1-1/8" x 2-3/4"

1-1/8" x 2-1/2"

4-7/8" ASA

2 -1/4"

JAMB TYPE: *(if provided by Karona)*

Flat (square) or (colonial)

Single Rabbeted

Double Rabbeted

Kerf

BEVEL STILES

NONE HINGE

BOTH LOCK

Removable stop is inside unless noted

FIRE RATING

20 NP SINGLE 60 PP

20 NP PAIR 90 PP SINGLE

20 PP 90 PP PAIR

45 PP

EXIT DEVICE

TOP OF DOOR TO CENTER OF:

LOCK DEVICE

FRONT BACKSET

CYLINDER

MFG NO & TRIM TEMPLATE

GLASS THICKNESS *(if applicable)*

1/8" 1/2" OTHER

1/4" 5/16" OPEN

3/16" 3/8"

TYPE:

OTHER HARDWARES/NOTES

HOLDER/STOP/ROLLER LATCH

Template #	Location

FLUSH BOLT TEMPLATE

STRIKE -- SIZE: TYPE:

TEMPLATE:

DOOR NUMBER	SWING	JAMB DEPTH <i>(if provided by Karona)</i>
TOTAL DOORS		

DOOR NUMBER	SWING	JAMB DEPTH <i>(if provided by Karona)</i>
TOTAL DOORS		

LEFT HAND LH

RIGHT HAND RH

LEFT HAND REVERSE LHR

RIGHT HAND REVERSE RHR



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 _____	State _____	Zip Code _____	Loan Account Number _____



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 accessed 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 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 “light bar” or “glass bar”. 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 “glass bead.”

Bedding: Glazing whereby a thin layer (approx. 3/16”) of putty or bedding compound is placed in the glass rabbet, the glass inserted and pressed into this bed, glazier’s 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 “front” of “main” 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; “stile and rail” door.

F. **Rim Door:** Consists of stiles and top and bottom rails and usually containing a single or divided glass light(s); “store” 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) or 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 "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.