

Stile and Rail Details

Wood Door Technical Manual

| | |
|---|-------|
| Introduction | 2 |
| Standard Elevations | 3 |
| Standard Panel Raises | 9 |
| Standard Sticking | 10 |
| Standard Veneer Options | 12 |
| Non-Rated Specifications | 13 |
| 20-Minute Fire Rated Specifications | 14 |
| 45-Minute Fire Rated Specifications | 16 |
| 60-Minute Fire Rated Specifications | 17 |
| 90-Minute Fire Rated Specifications | 18 |
| Alternative Stile and Rail Construction | 19 |
| Factory Finishing | 20 |
| Color Matching Procedures | 21 |
| Field Finishing | 22-23 |
| Machining Options | 24 |
| Concealed Vertical Rods (CVR) | 25 |

Introduction

Stile and Rail Details

Wood Door Technical Manual

July, 2017

Introduction

A large number of doors are offered in our brochure, but over half of our manufacturing projects are totally custom in nature. This allows you to assist your clients with options for exclusive designs.

We deal in many commercially available wood species to meet your most demanding clients.

Because all doors are built to order, we can provide you and your customers the flexibility that distinctive designs demand. Our products and services include:

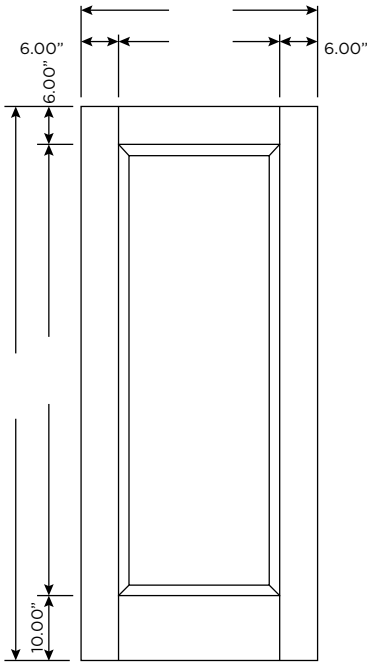
- Construction and pre-finishing according to ANSI/WDMA I.S.-6A latest version quality grades and finish types
- Pre-machining for hardware, saving on-site time and expense
- Corner samples for your approval
- Positive pressure tested 20 through 90-minute fire rated doors and frames
- Green Architecture: Our banded and veneered cores are from sustainable forests and are certified through SCS for their recycled and recovered content
- 20 Minute fire rated true divided light

Standard Elevations

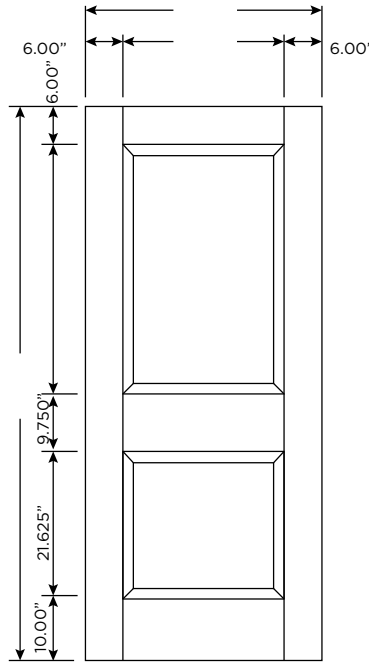
Stile and Rail Details

Wood Door Technical Manual

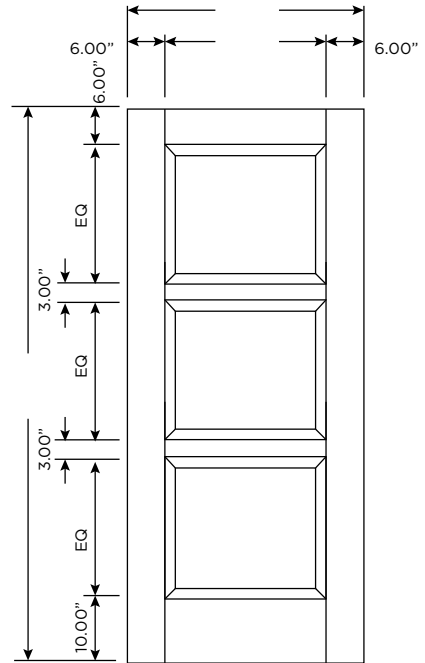
July, 2017



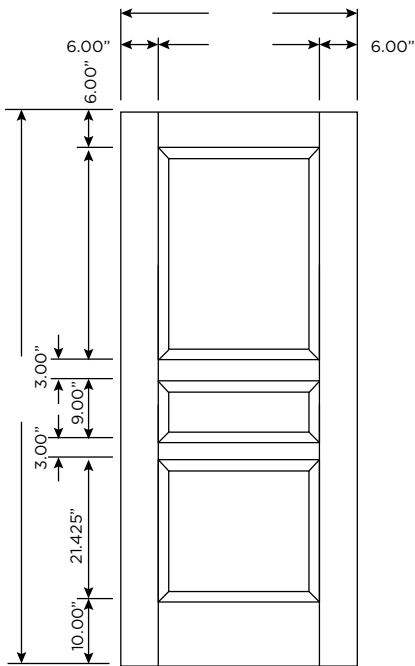
1 Panel 20 45 60 90



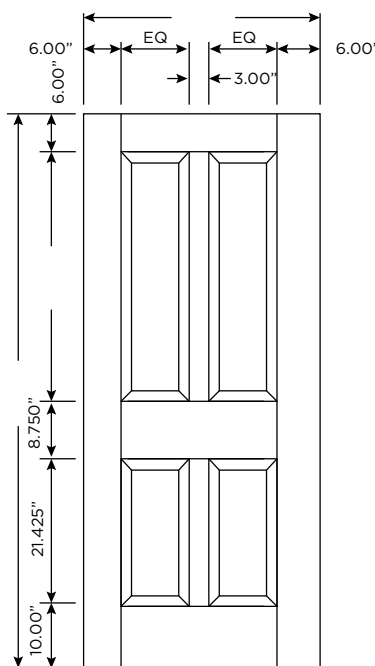
2 Panel 20 45 60 90



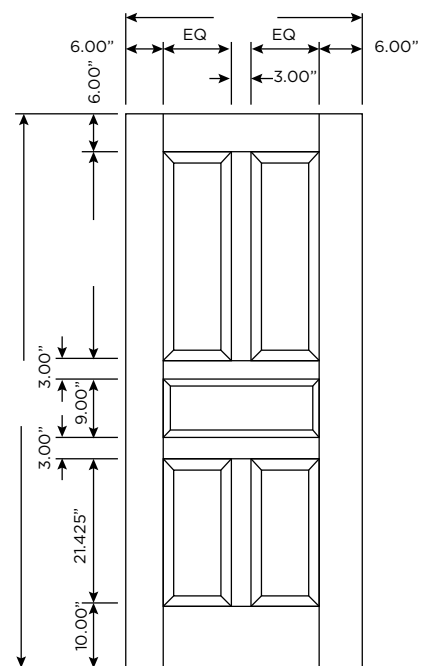
3 Equal Panel 20 45 60 90



3 Panel 20 45 60 90



4 Panel 20 45 60 90



5 Panel 20 45 60 90

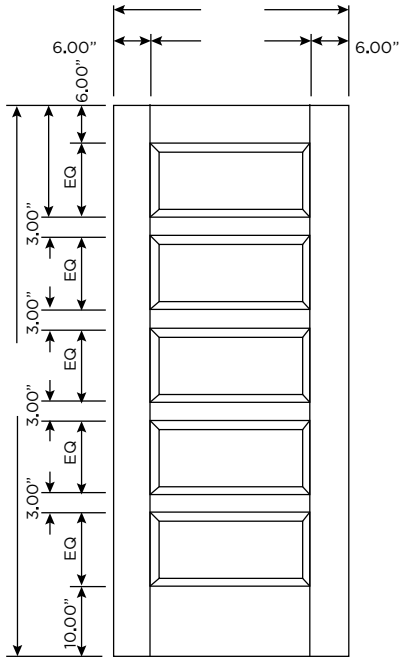
Fire-ratings in minutes available in addition to non-rated. Doors on this page all have a temperature rise rating of 250° F.

Standard Elevations

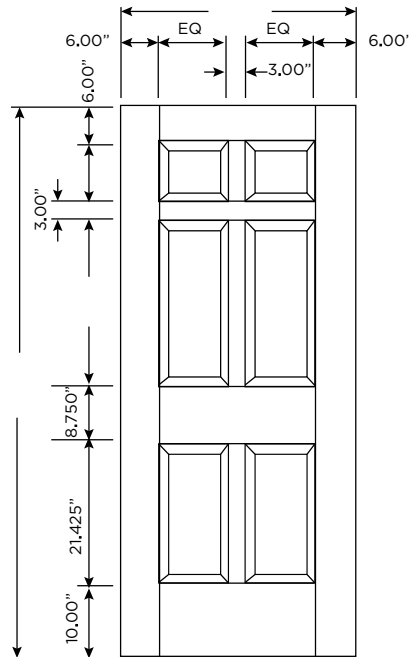
Stile and Rail Details





Wood Door Technical Manual

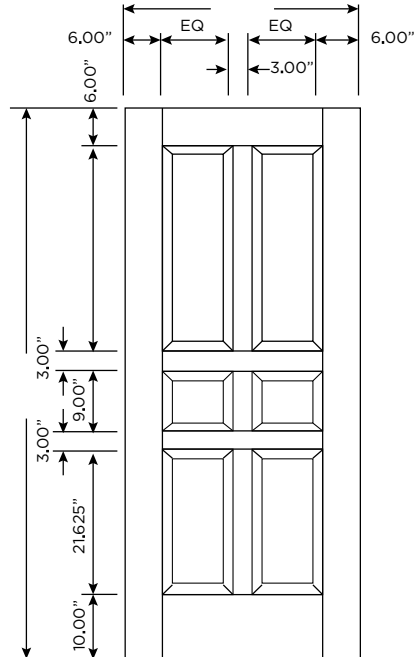
July, 2017







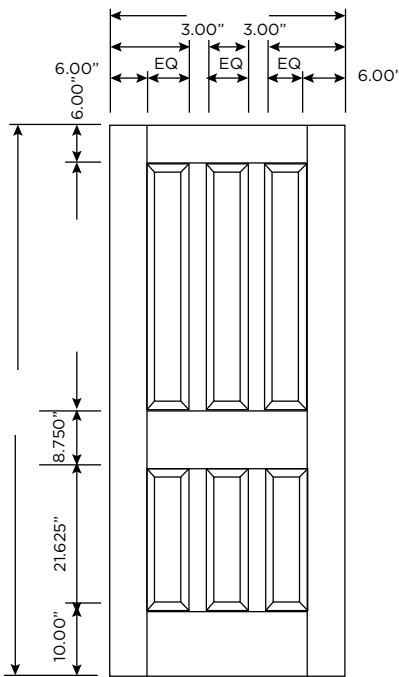
5 Horizontal Panels    







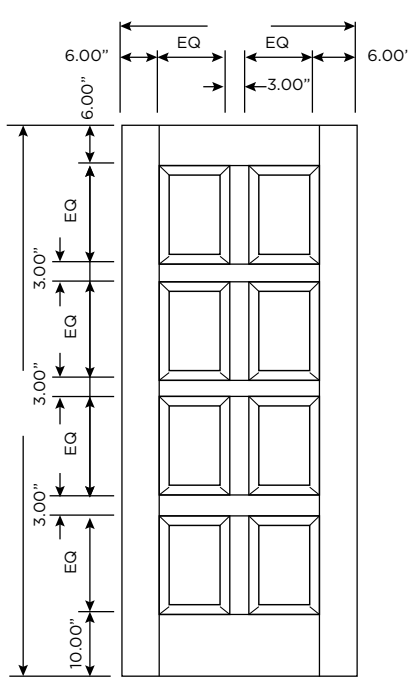
6 Panel Colonial    







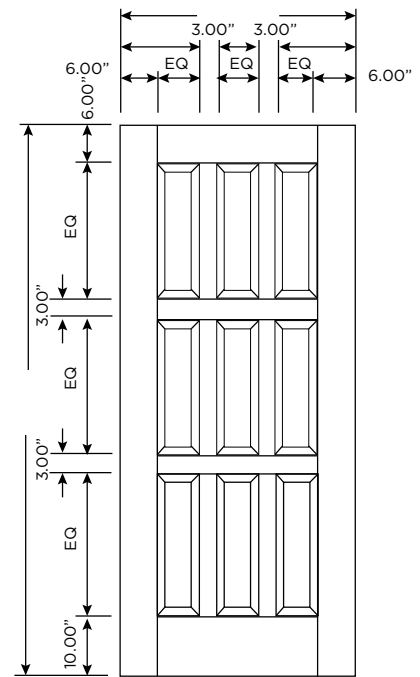
6 Panel (2x3)    




6 Panel (3x2)    



6 Panel (2x3)    



9 Panel    

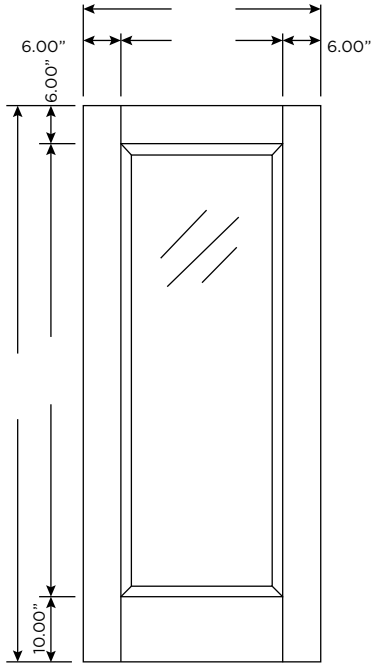
 Fire-ratings in minutes available in addition to non-rated. Doors on this page all have a temperature rise rating of 250° F.

Standard Elevations

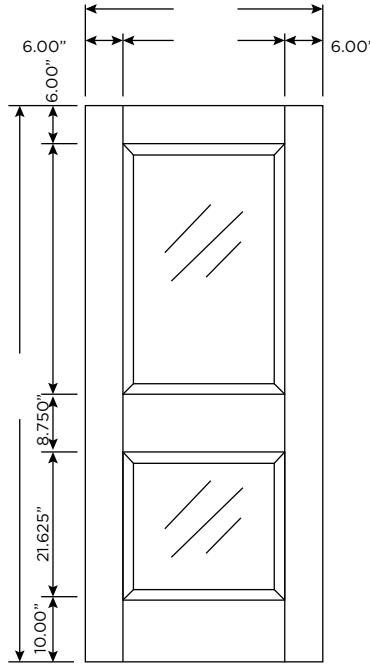
Stile and Rail Details

Wood Door Technical Manual

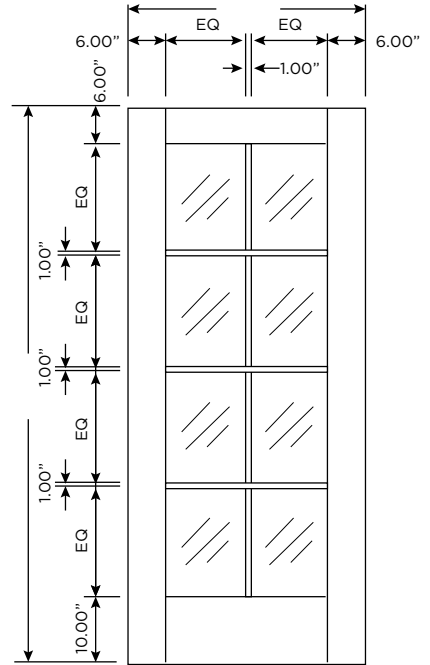
July, 2017



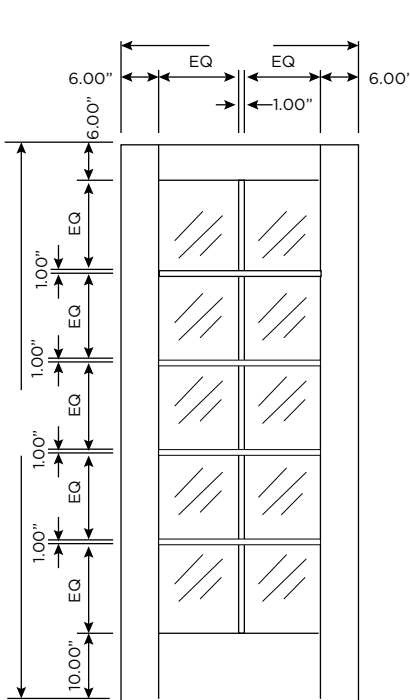
1 Light 20



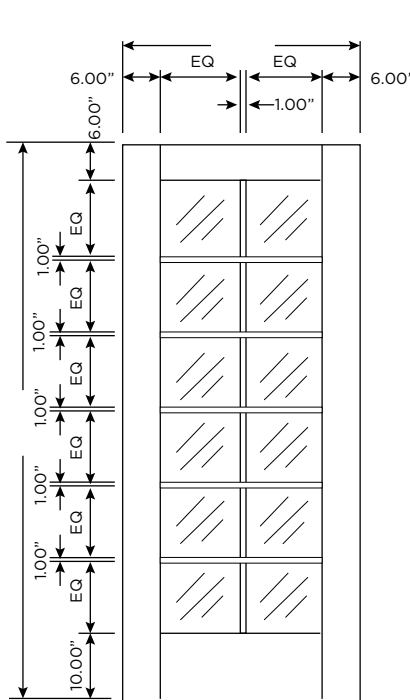
2 Light 20



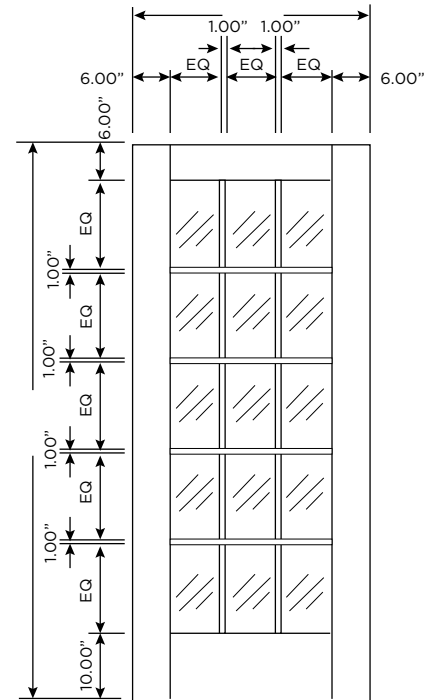
8 Light 20



10 Light 20



12 Light 20



15 Light 20

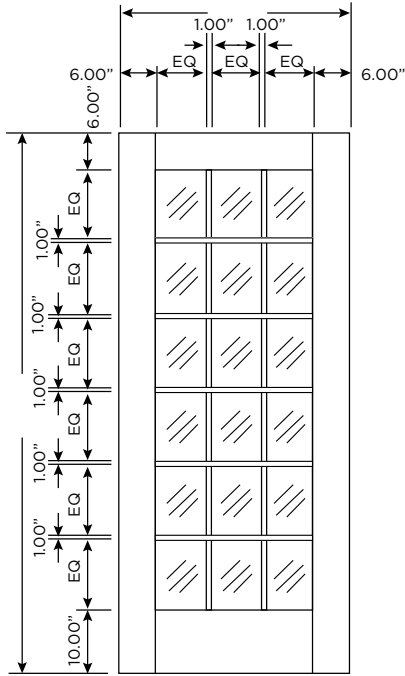
Fire-ratings in minutes available in addition to non-rated. Doors on this page all have a temperature rise rating of 250° F.

Standard Elevations

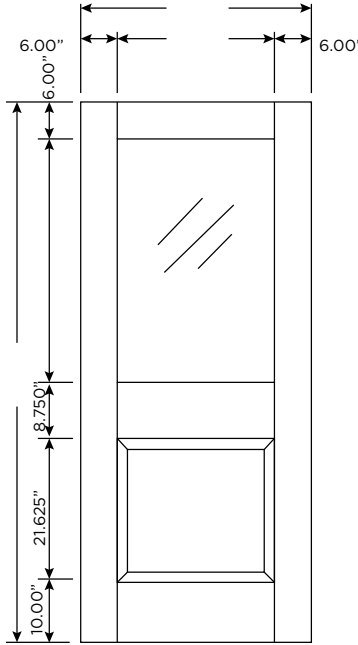
Stile and Rail Details


Wood Door Technical Manual

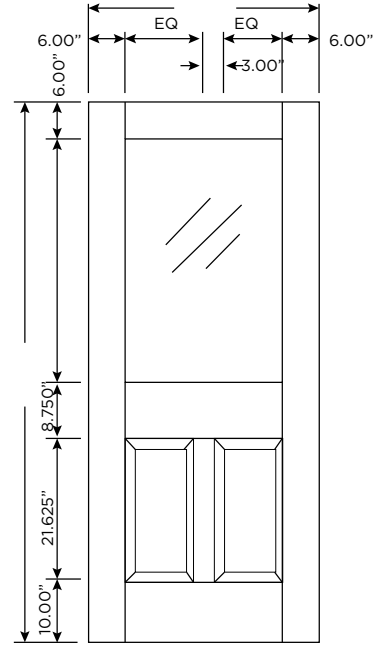
July, 2017



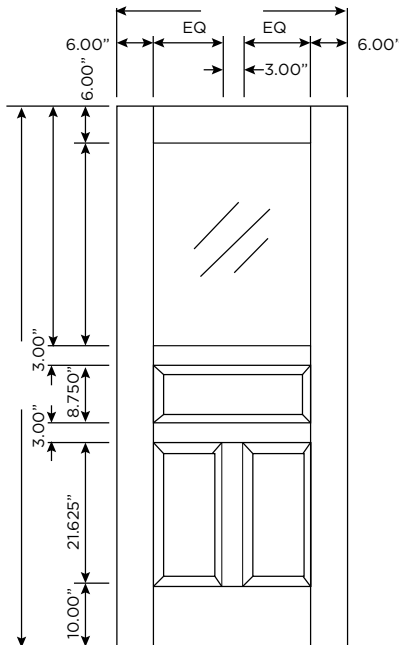
18 Light 



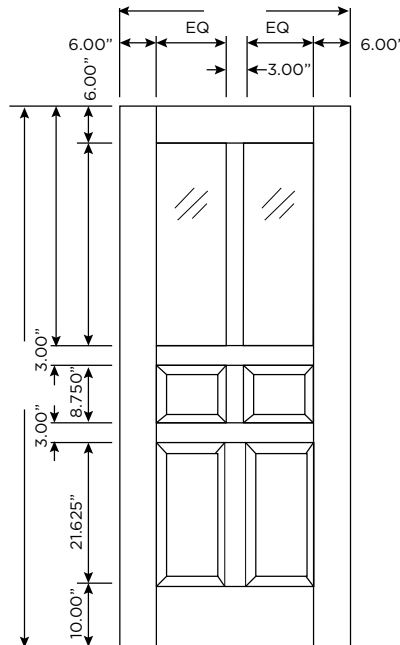
1 Light 1 Panel 



1 Light 2 Panel 



1 Light 3 Panel 



2 Light 4 Panel 

Note: 45, 60, and 90 minute doors require metal or veneer wrapped metal lite kits (not true-divided lite) which will decrease the illustrated division of 1" to .75"

60 and 90 minute doors with more than 100 sq. in. clear view area of glazing will carry a temperature rise rating in excess of 650°F.

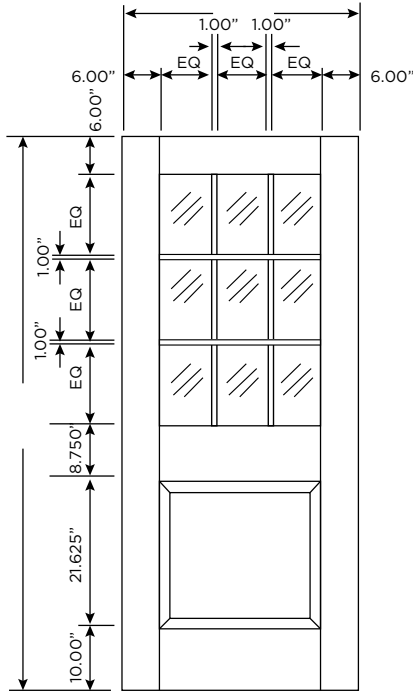
 Fire-ratings in minutes available in addition to non-rated.

Standard Elevations

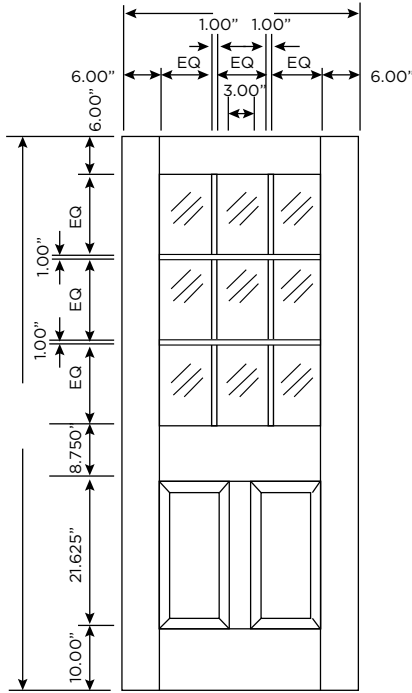
Stile and Rail Details

Wood Door Technical Manual

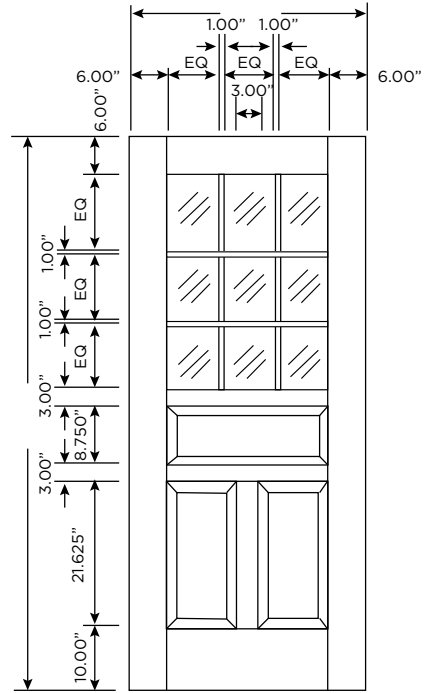
July, 2017



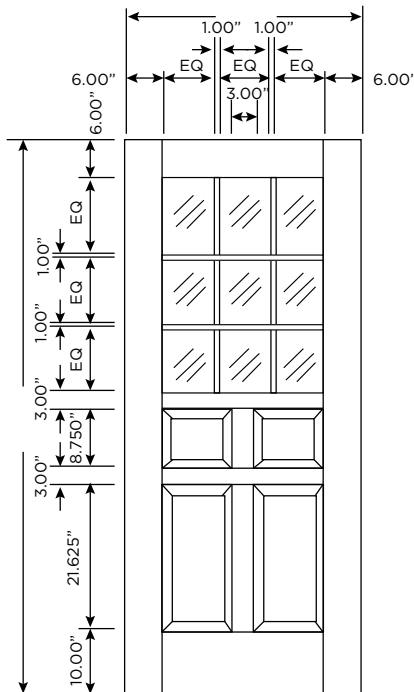
9 Light 1 Panel



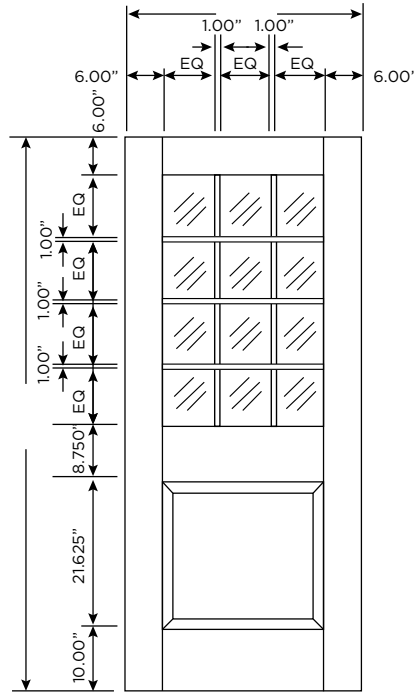
9 Light 2 Panel



9 Light 3 Panel



9 Light 4 Panel



12 Light 1 Panel



Note: 45, 60, and 90 minute doors require metal or veneer wrapped metal light kits (not true-divided light) which will decrease the illustrated division of 1" to .75"

Metal grills, such as the ones shown on this page, are not available with wood veneer.

60 and 90 minute doors with more than 100 sq. in. clear view area of glazing will carry a temperature rise rating in excess of 650° F.



Fire-ratings in minutes available in addition to non-rated.

Louver Doors

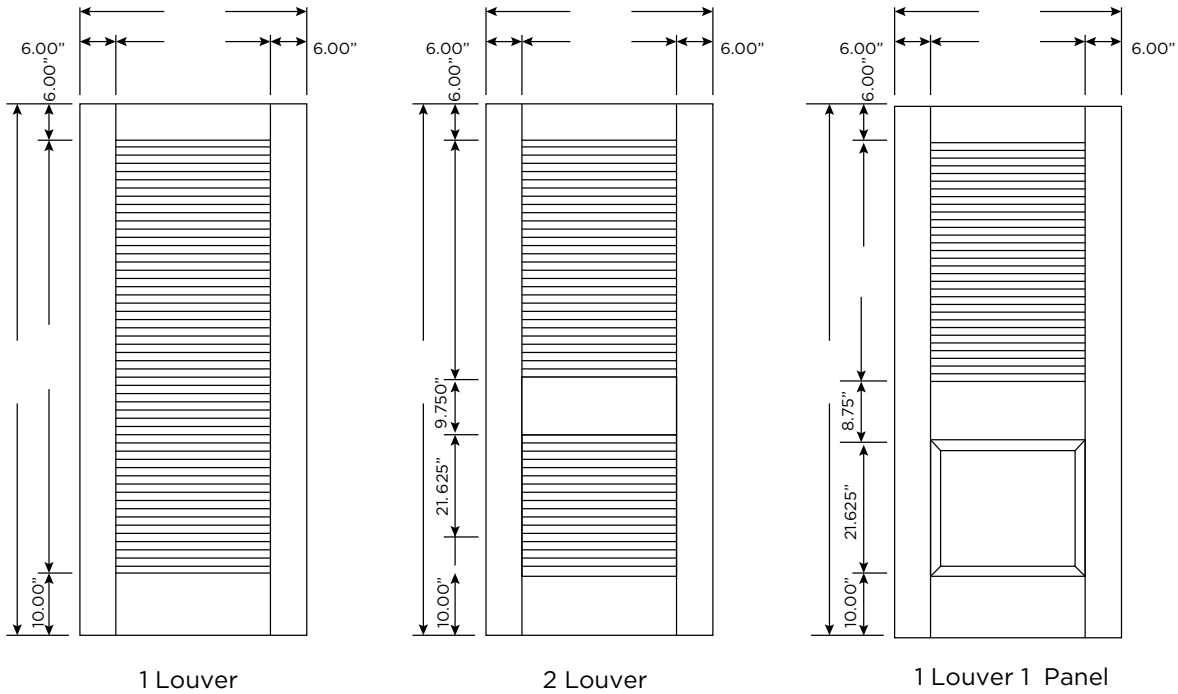
Stile and Rail Details

Wood Door Technical Manual

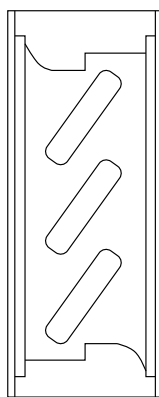
July, 2017

Louver Doors

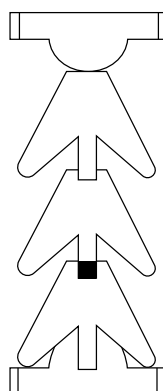
Our meticulous attention to detail is embodied in our louver doors. The quality of louver doors can vary greatly between manufacturers, but you can always be assured of the consistent high-quality craftsmanship of Masonite Architectural Wood Doors.



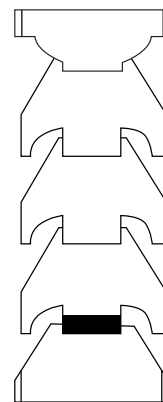
We offer standard slat louvers that allow for ventilation and some light as well as two types of privacy louvers: chevron and sargent. Chevron louvers are sharply angled to allow some ventilation and limited light if requested. Our exclusive sargent louvers, designed by our very own Ben Gemmill, feature the privacy benefits of the chevron louver with the look of traditional slat louvers.



Slat



Sargent
(Maiman Exclusive)



Chevron

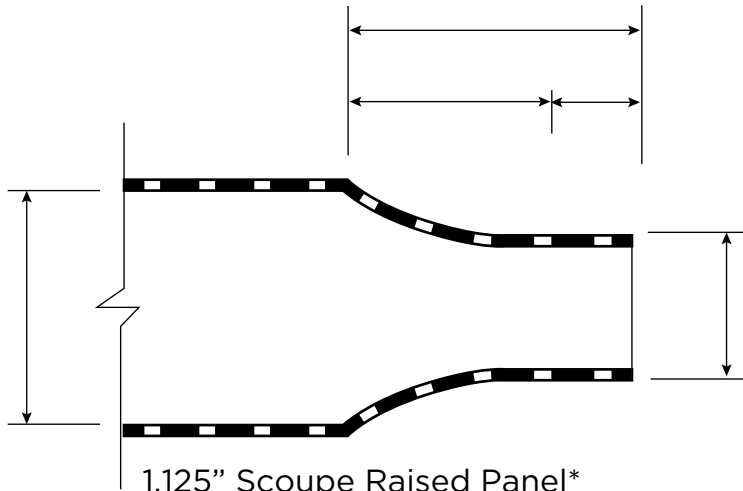
Standard Stile and Rail Panel Options

Stile and Rail Details

Wood Door Technical Manual

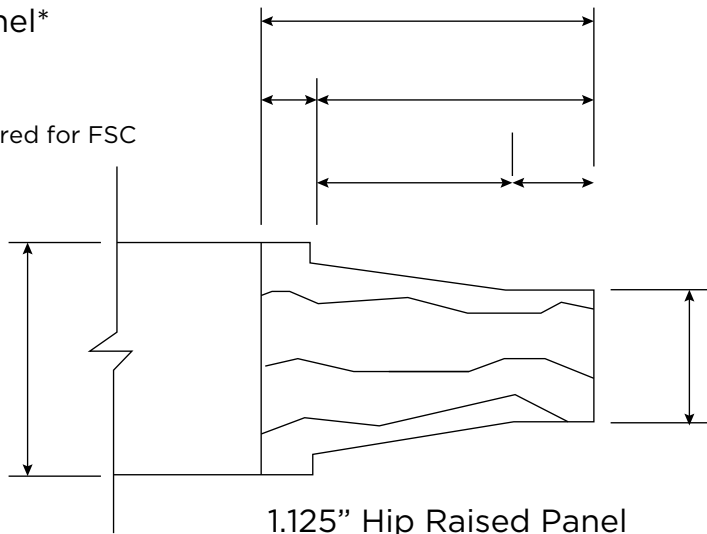
July, 2017

Stile and Rail French Sticking Options

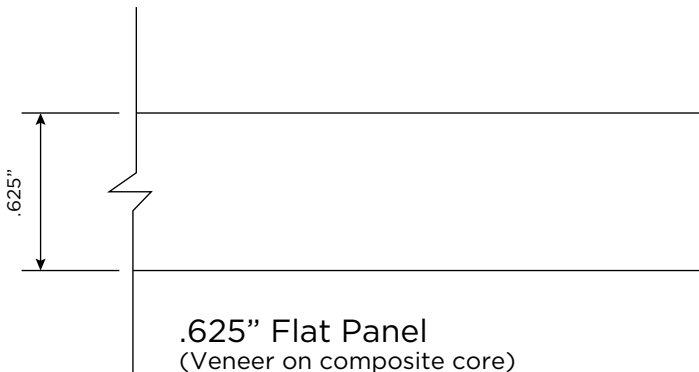


1.125" Scoupe Raised Panel*
(membrane press panel)
Maiman standard custom grade

* rim banded scoupe panel required for FSC



1.125" Hip Raised Panel
(Rim banded panel)
Maiman standard premium grade



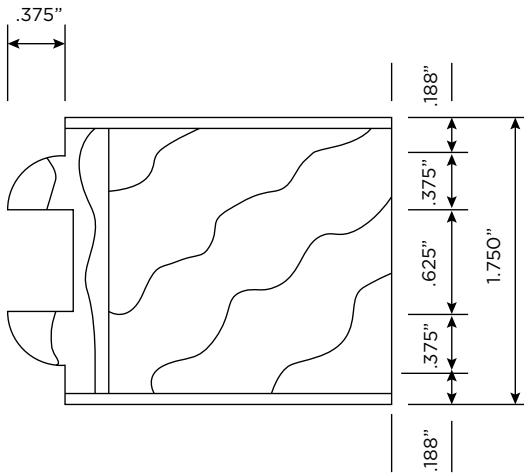
.625" Flat Panel
(Veneer on composite core)

Standard Stile and Rail Sticking Options

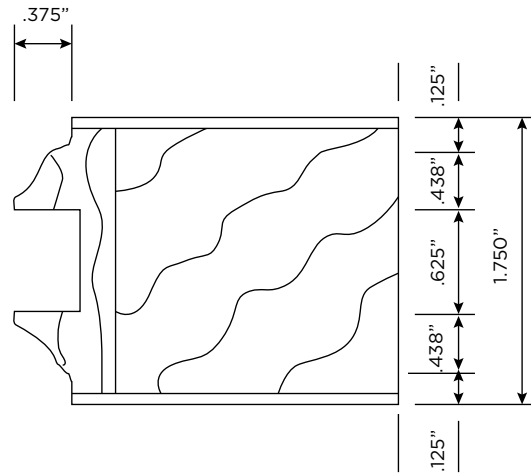
Stile and Rail Details

Wood Door Technical Manual

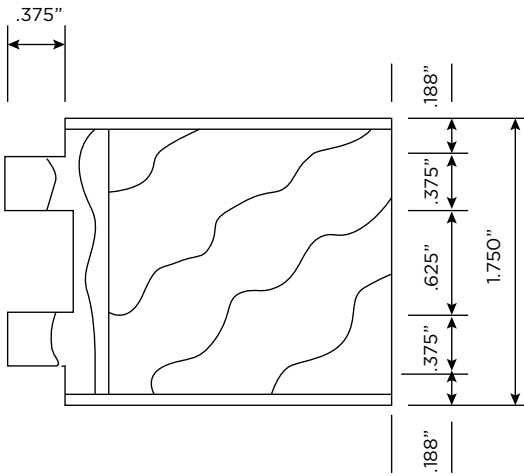
July, 2017



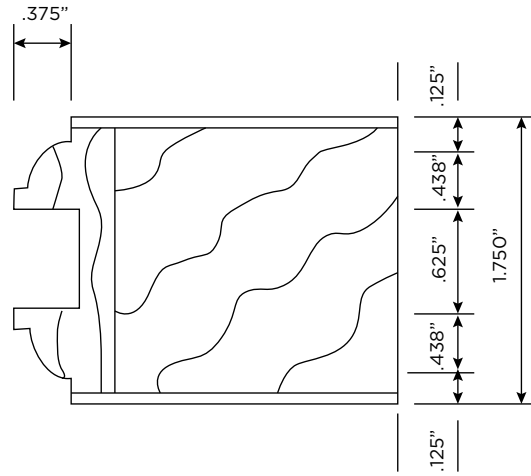
.375" Quarter Round Sticking



.375" Ogee Sticking



.375" Square Sticking



.375" Ovolo Sticking

Standard Veneer Options

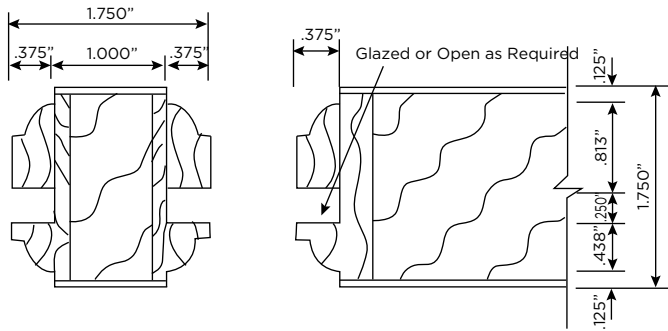
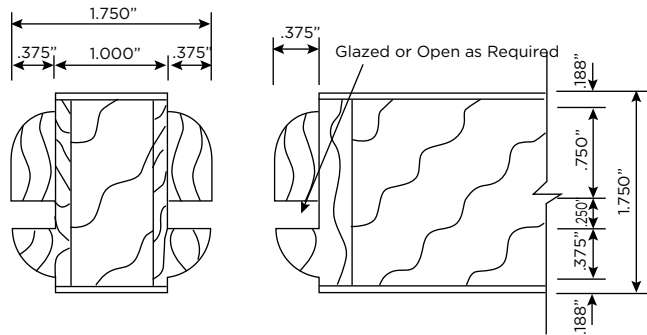
Stile and Rail Details

Wood Door Technical Manual

July, 2017

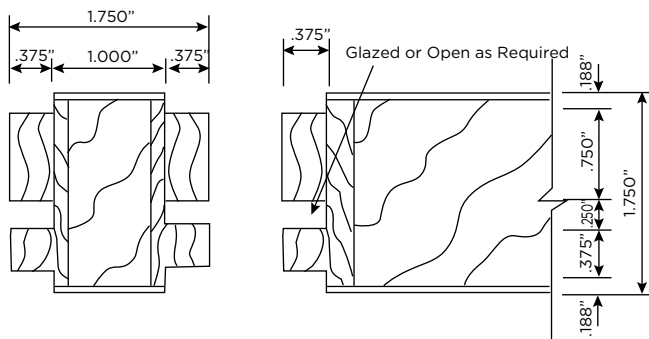
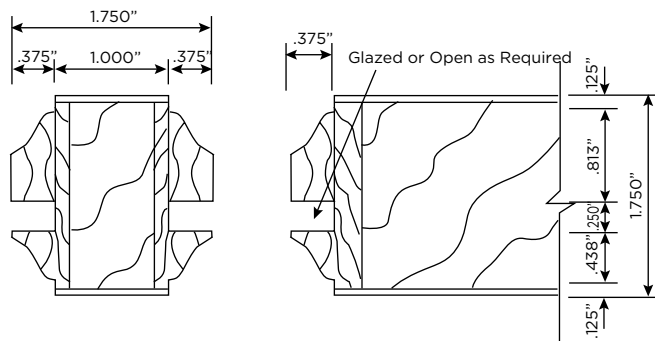
Stile and Rail French Sticking Options

.375" Quarter Round Sticking



.375" Ovolo Sticking

.375" Ogee Sticking



.375" Square Sticking

Veneer Options

Stile and Rail Details

Wood Door Technical Manual

July, 2017

We offer a wide and diverse range of veneers for your custom projects.

Please contact us if you are looking for something that is not on this list. We are usually able to get most exotic veneers.

| Select Veneers (Subject to changes and availability) | Cost Relative to Natural Birch (1.00) | Hardness |
|--|---|-----------|
| Quartered Red Oak | 2.00 | Hard |
| Rift Red Oak | 2.00 | Hard |
| Natural Birch | 1.00 | Hard |
| Poplar | 0.85 | Hard |
| White Maple | 2.15 | Very Hard |
| White Birch | 2.20 | Hard |
| Natural Ash | 0.90 | Hard |
| Natural Maple | 1.00 | Very Hard |
| Quartered White Oak | 2.50 | Hard |
| Plain Sliced Red Oak | 0.90 | Hard |
| Plain Sliced White Oak | 1.00 | Hard |
| Knotty Pine | 1.85 | Soft |
| White Pine | 1.10 | Soft |
| White Ash | 1.00 | Hard |
| African Mahogany | 2.25 | Medium |
| Plain Sliced Cherry | 2.35 | Hard |
| Plain Sliced American Walnut | 2.80 | Hard |
| Vertical Grain Fir | 2.50 | Soft |

Standard Veneer Machining

We will use the following standards and these in WDMA I.S.6A-13 to match up panel veneers unless otherwise specified.

Standard Custom Grade

All species and cuts will be running book match, with the exception of rift cut red oak, rift cut white oak and all other quarter cut species, which will be running slip matched.

Standard Premium Grade

All species will be book and balance matched, except rift cut species which will be slip matched to avoid barber-poling.

Please see WDMA I.S. 6A-13 for further details on specifying panel veneer.

Non-Rated Stile and Rail Door Specifications

Stile and Rail Details

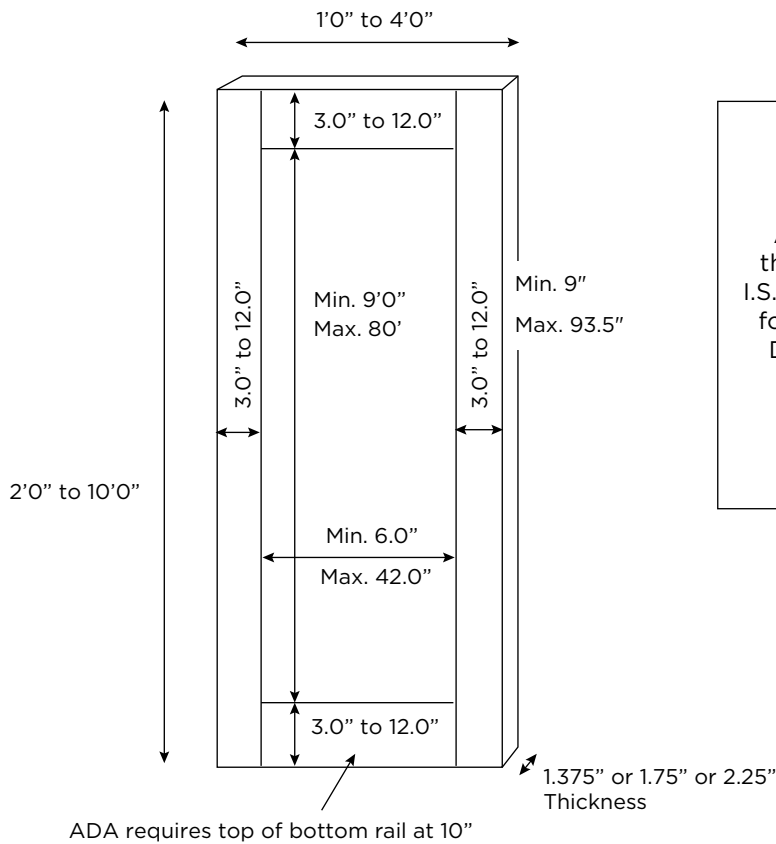
Wood Door Technical Manual

July, 2017

| Non-Rated Standard Stile and Rail Door Specifications | |
|---|--|
| Maximum Door Size | 4'-0" x 10'-0" |
| Minimum Door Size | 1'-0" x 2'-0" |
| Standard Thicknesses Available ¹ | 1.375", 1.75", 2.25" |
| Stiles, Rails, & Mullion Width (face) | Min. 3" – Max. 12" |
| Minimum Length of Any Part | 9" |
| Sticking/Glass Stop Profiles ² | .375" Quarter Round .375" Ovolo .375" Ogee .375" Square |
| Panel Raise Profiles | Scoupe (standard), Hip and Custom Match |
| Panel Size Limits | 6"x9" min, 42"x 93.5" max |

¹ Custom thicknesses available upon request

² Custom sticking profiles available



All doors meet or exceed the following: ANSI/WDMA I.S.6A, 2013-Industry Standard for Architectural Stile & Rail Doors. AWS latest version (AWI section 1400).

20 Minute Stile and Rail Door Specifications

Stile and Rail Details

Wood Door Technical Manual

July, 2017

| 20 Minute Stile and Rail Door Specifications | |
|--|---|
| Neutral and Positive Pressure Categories A & B | |
| Max. single door size | 4-0 x 9-0 |
| Max. paired door size | 8-0 x 9-0 |
| Wood species | White pine or denser |
| Min. door thickness | 1.75" |
| Min. stile width | 5" |
| Min. top rail width | 5" |
| Min. cross rail width | 3" |
| Min. mullion width | 3" |
| Min. bottom rail width | 5" * |
| Max. panel size | 38" x 93.5" |
| Min. raised panel thickness | 1.125" |
| Min. flat panel thickness | .625" |
| Min. dist. between panels or lights and panels | 3" |
| Max. light area | See page 28 and 29 in the Architectural Accessories Section |
| Max. transom height | 36" |
| Max. transom width | 48" |
| Conc. vert. rods-6" stiles ^{1 2} | Yes |
| Various profiles | Yes |
| Meeting stile edges | Metal edges and astragals not required |
| Raceways/door bottoms | Yes |
| Concealed closer arms | Yes |

¹ Refer to page 25 for CVR requirements.

² Not available with positive pressure.

* ADA requires top of bottom rail at 10" above finished floor.

20 Minute Fire Rated True Divided Light Stile and Rail Details Wood Door Technical Manual

July, 2017

All standard sticking options and lighted elevations are available. The following will apply with a Stile & Rail wood bead 20-minute light kit.

Glazing Options

Clear Glass will be 1/4" PyroEdge-20 (Refer to Arch. Accessories page 28-29 for maximum clear view area).

Maximum size for 20 minute "French" door lights will be 12-1/2" x 24-1/2" (cutout size) for no limit of lights.

Refer to Architectural Accessories section page 28 and 29 for maximum clear view areas.

Glass Types:

- 1/4" PyroEdge-20
- 1/4" Superlite 1-20
- 3/16" Firelite NT
- 1/4" Fireglass 20
- 5/16" Firelite Plus
- 1/4" Pyroswiss

With 3" minimum cross or lock rails, maximum single cutout size will be larger, per sizes above. Larger combinations are available with 3" rails rather than 1" bars and muntins.

Additional 20-Minute Glazing Notes:

Stile & Rail doors may be used in combination with fire rated glazing and metal or wood veneered metal light kits, as necessary. Consult factory for particulars, such as minimum 6" stiles and top rails with metal light kits or that multiple lights with metal or wood light kits may be used if separated by 3" mullions or cross rails.

45 Minute Stile & Rail Door Specifications

Stile and Rail Details

Wood Door Technical Manual

July, 2017

| 45 Minute Stile & Rail Door Specifications Neutral and Positive Pressure Categories A & B | | |
|--|--|--|
| | Neutral Pressure | Positive Pressure |
| Max. single door size | 3-6 x 9-0 | 3-6 x 9-0 |
| Max. paired door size | 7-0 x 9-0 | 7-0 x 8-0 |
| Wood species | All | All |
| Min. door thickness | 1.75"-raised panel | 1.75"-raised panel |
| Min. stile width | 5" | 5.5" |
| Min. top rail width | 5" | 5" |
| Min. cross rail width | 3" | 3" |
| Min. mullion width | 3" | 3" |
| Min. bottom rail width | 9" * | 9" * |
| Max. Flat Panel Size | 32" x 93.5" | 32" x 93.5" |
| Max. Raised Panel Size | 32" x 93.5" | 32" x 93.5" |
| Min. Raised Panel Thickness | 1.125" | 1.125" |
| Min. Flat Panel Thickness ¹ | 1.125" with 2.25" stiles and rails | 1.125" with 2.25" stiles and rails |
| Min. Dist. Between Panels or Lights and Panels | 3" | 3" |
| Max. Light Area | Refer to page 28 and 29 of the Architectural Accessories section | Refer to page 28 and 29 of the Architectural Accessories section |
| Max. Transom Height | 36" | 36" |
| Max. Transom Width | 42" | 36" |
| Concealed Vertical Rods ² | Available with 6" stiles | Not Available |
| Meeting Stile Edges | #59FS smoke & fire mortised astragal ³ | #59FS smoke & fire mortised astragal ³ |
| Raceways/Door Bottoms | Yes | Yes |
| Temp. Rise @ 30 min. | 250° F | 250° F |
| Concealed overhead closer arm only: | Norton 7900 or LCN 2010 models only as approved | |

¹ 1.75" thick door available; please call for details. See alternate construction on page 19.

² Refer to page 25 for CVR requirements.

³ Doors over 8' 0" tall require metal edges.

* ADA requires top of bottom rail at 10" above finished floor.

60 Minute Stile & Rail Door Specifications

Stile and Rail Details

Wood Door Technical Manual

July, 2017

| 60 Minute Stile & Rail Door Specifications Neutral and Positive Pressure Categories A & B | | |
|--|--|--|
| | Neutral Pressure | Positive Pressure |
| Max. single door size | 3-6 x 9-0 | 3-6 x 9-0 |
| Max. paired door size | 7-0 x 9-0 | 7-0 x 8-0 |
| Wood species | All | All |
| Min. door thickness | 1.75"-raised panel | 1.75"-raised panel |
| Min. stile width | 5" | 5.5" |
| Min. top rail width | 5" | 5" |
| Min. cross rail width | 3" | 3" |
| Min. mullion width | 3" | 3" |
| Min. bottom rail width | 9" * | 9" * |
| Max. Flat Panel Size | 32" x 93.5" | 32" x 93.5" |
| Max. Raised Panel Size | 32" x 93.5" | 32" x 93.5" |
| Min. Raised Panel Thickness | 1.125" | 1.125" |
| Min. Flat Panel Thickness ² | 1.125" with 2.25" stiles and rails | 1.125" with 2.25" stiles and rails |
| Min. Dist. Between Panels or Lights and Panels | 3" | 3" |
| Max. Light Area | Refer to page 28 and 29 of the Architectural Accessories section | Refer to page 28 and 29 of the Architectural Accessories section |
| Max. Transom Height | 36" | 36" |
| Max. Transom Width | 42" | 36" |
| Concealed Vertical Rods ³ | Available with 6" stiles | Not Available |
| Meeting Stile Edges | #59FS smoke & fire mortised astragal ⁴ | #59FS smoke & fire mortised astragal ⁴ |
| Raceways/Door Bottoms | Yes | Yes |
| Temp. Rise @ 30 min. | 250° F | 250° F |
| Concealed overhead closer arm only | Norton 7900 or LCN 2010 models only as approved | |

² 1-3/4" thickness available. See alternate construction on page 19.

³ Refer to page 25 for CVR requirements.

⁴ Doors over 8' 0" tall require metal edges.

* ADA requires top of bottom rail at 10" above finished floor.

90 Minute Stile & Rail Door Specifications

Stile and Rail Details

Wood Door Technical Manual

July, 2017

| 90 Minute Stile & Rail Door Specifications Neutral and Positive Pressure Categories A & B | | |
|--|--|--|
| | Neutral Pressure | Positive Pressure |
| Max. single door size | 3-6 x 9-0 | 3-6 x 9-0 |
| Max. paired door size | 7-0 x 9-0 | 7-0 x 8-0 |
| Wood species | All | All |
| Min. door thickness | 2.25" Only | 2.25" Only |
| Min. stile width | 5" | 5.5" |
| Min. top rail width | 5" | 5" |
| Min. cross rail width | 3" | 3" |
| Min. mullion width | 3" | 3" |
| Min. bottom rail width | 9" * | 9" * |
| Max. Flat Panel Size | 32" x 93.5" | 32" x 93.5" |
| Max. Raised Panel Size | 32" x 93.5" | 32" x 93.5" |
| Min. Raised Panel Thickness | 1.625" | 1.625" |
| Min. Flat Panel Thickness | 1.125" | 1.125" |
| Min. Dist. Between Panels or Lights and Panels | 3" | 3" |
| Max. Light Area ¹ | Refer to page 28 and 29 of the Architectural Accessories section | Refer to page 28 and 29 of the Architectural Accessories section |
| Max. Transom Height | 36" | 36" |
| Max. Transom Width | 42" | 36" |
| Conc. Vert. Rods-6" Stiles ² | Yes | N/A |
| Meeting Stile Edges | #59FS smoke & fire mortised astragal ³ | #59FS smoke & fire mortised astragal ³ |
| Raceways/Door Bottoms | Yes | Yes |
| Temp. Rise @ 30 min. | 250° F | 250° F |
| Maximum size of closer prep: | depth: 1-15/32", width: 1-5/16", length 23-3/4" ** | |

¹ 100sq. in. maximum for temperature rise rating.

² Refer to page 25 for CVR requirements.

³ Doors over 8' 0" tall require metal edges.

* ADA requires top of bottom rail at 10" above finished floor.

**Maximum depth of cut out on door face to allow arm to swing 5/16"

Alternative Stile and Rail Construction

Stile and Rail Details

Wood Door Technical Manual

July, 2017

| Neutral and Positive Pressure | | | | | | | | |
|--|-----------|---------|-----------|---------|-----------|---------|------------------|---------------------------|
| | 45 Minute | | 60 Minute | | 90 Minute | | | |
| | Singles | Pairs | Singles | Pairs | Singles | Pairs | Singles | Pairs |
| Size | 3'6" X 8' | 7' x 8' | 3'6" X 8' | 7' x 8' | 3'6" X 8' | 7' x 8' | 4' x 10' | 8' x 10' |
| Min. Stile Width | 5" | 5" | 5" | 5" | 5" | 5" | 5" | 5" |
| Min. Rail Width ¹ | 4.5" | 4.5" | 4.5" | 4.5" | 4.5" | 4.5" | 4.5" | 4.5" |
| Min. Stile/Rail Thickness | 1.75" | 1.75" | 1.75" | 1.75" | 1.75" | 1.75" | 2 1/4" | 2 1/4" |
| Min. Flat Panel Thickness | .625" | .625" | 0.625" | .625" | .625" | 0.875" | 1.4125" | 1.4125" |
| Min. Raised Panel Thickness | 1.125" | 1.125" | 1.125" | 1.125" | 1.125" | 1.625" | 1.875" | 1.875" |
| Max. Panel Size | 32 x 87 | 32 x 87 | 32 x 87 | 32 x 87 | 32 x 87 | 32 x 87 | See Note 2 Below | See Note 2 Below |
| Glazing --3/16" ceramic ^{3 4} | 1296 | 1296 | 1235 | 1235 | 1216 | 1216 | No | No |
| Radius Top Doors Max. Radius = .55 x Door Width | Yes | No | Yes | No | Yes | No | No | No |
| Overhead Concealed Closer Arm Only ⁵ | Yes | Yes | Yes | Yes | Yes | Yes | No | No |
| Mortised Auto Flush Bolts | Yes | Yes | Yes | Yes | Yes | Yes | No | No |
| CVR | | Yes | | Yes | | No | | No |
| Wire Raceways | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Concealed Auto. Door Bottoms 1" wide x 1.75" deep | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Special Hardware | | | | | | | | 4 Point Latching Required |

¹ ADA Requires 10" bottom rail

² Two panel or multi-panel only - 6" mid rail required

³ Approved metal light kit

⁴ Max. 100 sq. in. for 250 degree temperature rise

⁵ Arm cut out max. size - 17-5/16" x 1-1/4" x 1-3/8"

Stile and Rail Factory Finishing

Stile and Rail Details

Wood Door Technical Manual

July, 2017

Masonite Architectural Wood Doors can match almost any color available. We match every door to your specifications so you are not limited to a list of common finishes.

The two types of transparent finishing systems we use are TR-2 Catalyzed Lacquer and TR-6 Catalyzed Polyurethane as defined in the WDMA I.S. 6-A quality standard.

| Report Card Comparison of Available ANSI/WDMA I.S. 6-A Finish System Adapted from AWI 7th Edition Quality Standards | | |
|---|---------------------|------------------------|
| Transparent System Code | TR-2 (AWS System 2) | TR-6 (AWS System 11) |
| Finish System Type | Catalyzed Lacquer | Catalyzed Polyurethane |
| General Durability | C | A |
| Finish Clarity | A | D |
| Finished Surface Flexibility | C | B |
| Stain Resistance | A | A |
| Heat Resistance | A | A |
| Moisture Resistance | B | A |
| Solvent Resistance | B | A |

Ratings are subjective judgments based on the general performance of generic products.

The TR-2 system has the advantage of lower cost, good strength, reliability, is easy to repair and will be an excellent finish choice for the majority of interior applications.

The TR-6 system has a higher solids content than the TR-2 which can effect its finish clarity, but it is also very hard and durable with one of the highest chemical and wear resistance ratings available. However, the TR-6 finish is also more difficult to repair than the TR-2. Additionally, off-gassing emissions are not a concern because it does not occur after the finish has completely cured. TR-6 is available in interior applications and required in all exterior applications.

Color Matching Procedures

Stile and Rail Details

Wood Door Technical Manual

July, 2017

Original samples supplied by the customer will be matched as closely as possible in a range of shades. Some color variations may occur due to natural characteristics found in wood such as a difference in grain and texture.

Lighting is also a very important factor when evaluating a sample for overall appearance. When viewed under different types of lighting, such as incandescent, fluorescent, and natural sunlight, one may see a change in appearance due to the different reflective properties of each. This phenomenon is called metamerism. Samples shall be viewed under actual installed lighting conditions.

Finished control samples shall be protected from light so that no change in color will occur from the time the sample is made to when it is used to check the appearance conformity of the end product.

With these factors in mind, we attempt to produce a finish which will be a pleasing blend of color and tone throughout the entire project. Our experts take care and pride to ensure that every door has a look of charm and distinction.

Samples

Masonite Architectural Wood Doors will submit 5 samples of finish color for the customer's approvals. The customer is required to sign the back of one of the samples and return it, keeping the other four for your records. Ship date will not be assigned until signed samples are returned.

Priming

We can provide interior and exterior primed products, each consisting of 1 or 2 coats of primer, which can be sanded between coats (upon request).

Doors which have normal MDF (Medium Density Fiberboard) panels will require a specifically formulated high solids primer. This primer has hiding and filling properties that will help minimize the lifting of fibers which can occur in the panel raise.

Finishing Limitations

An end product is only as good as its beginnings. For example, if a custom grade door is specified with a premium grade finish, it is still a custom grade door. Staining may lessen the gap between custom and premium, but not always.

All doors pre-finished by Masonite Architectural Wood Doors custom and premium grade, are hand-sanded prior to finishing to remove any cross grain scratches and to better achieve a uniform color throughout the door.

Field Finishing

Stile and Rail Details

Wood Door Technical Manual

July, 2017

Maiman Stile and Rail Doors

Like any piece of fine furniture, wood doors need proper finishing and periodic maintenance to keep it performing its best. For a long-lasting, beautiful door, please follow the instructions as outlined in the appropriate section below. Failure to follow care & finishing recommendations will void the door's warranty.

Factory finishing is usually specified for high quality work where a superior appearance and performance of the finish is desired. Benefits of factory finishing include consistency, control of film thickness, environmental compliance, and curing/drying of the finish in a controlled atmosphere. Its use assumes a maximum degree of manufacture preparation so that site installation can be performed with a minimum amount of cutting, fitting, and adjustment to facilitate project completion.

Field finishing is typically specified when there is not a demand for specific need for a superior appearance and is not necessarily part of the woodwork contract. This would normally be specified in the painting specification section. The finisher/painter is responsible for examining and accepting the woodwork as supplied prior to the commencement of finishing. The finisher/painter is responsible for meeting or exceeding the control sample for surface performance characteristics (such as color, texture and sheen), including proper surface preparation, shading and blending of color and other requirements as defined or referenced in the project specifications or finish documents.

CAUTION: Masonite Architectural Wood Doors cannot evaluate all the available paints and stains, nor the customers' specific application requirements. Your coating supplier should know of suitable finish systems that give satisfactory results in your region. It is highly recommended that top quality finishes be selected, and the application instructions on the container or technical information be followed explicitly.

Interior Doors

Maiman Stile and Rail interior doors are offered in two finish options as designated by WDMA (Window and Door Manufacturers Association) including TR2/OP2 (Catalyzed Lacquer) and TR6 (Catalyzed Polyurethane). Factory finished interior doors receive a lifetime warranty for manufacturers defects.

Unfinished interior doors do not carry any finish warranty, only manufacturer's warranty for construction of the door. Per warranty instructions, all unfinished Maiman doors must be finished within 14 days receipt.

If you have purchased unfinished doors, you can choose from a wide variety of stain or paint possibilities. Reputable finish suppliers can provide a broad selection of color chips to demonstrate the look you can achieve when staining wood doors.

Refinishing Factory Finished Interior Doors

Refer to the technical data sheets, product data sheets or specification sheets of your preferred finish supplier for exact preparation, process and finishing instruction on the product you intend to use for compatibility and application.

Field Finishing

Stile and Rail Details

Wood Door Technical Manual

July, 2017

Field Finishing Interior Doors

General guidelines are provided through WDMA's Job Site Information bulletin. It is recommended that this document be printed and used as a general reference for site finishing. Refer to the technical data sheets, product data sheets or specification sheets of your preferred finish supplier and material for exact preparation, process and finishing instruction on the product you intend to use for compatibility and application.

Exterior Doors

Masonite Architectural Wood Doors apply only TR6 (Catalyzed Polyurethane) finishes to factory finished exterior doors. Factory finished exterior doors carry a 1 year warranty for factory finish, provide all conditions are met with regard to the Exterior Warranty.

CAUTION: Avoid EXTERIOR WOOD DOORS finished in a dark color that will absorb heat when exposed to direct sunlight or without adequate overhead soffit protection.

Refinishing Factory Finished Exterior Doors

Factory finished exterior doors require continued care and maintenance to insure continued performance and aesthetics. It is recommended that a yearly inspection (twice a year in coastal areas) be performed to review structural and aesthetic issues that may have changed in the previous year due to exterior conditions on the site. Refer to the technical data sheets, product data sheets or specification sheets of your preferred finish supplier for exact preparation, process and finishing instruction on the product you intend to use for compatibility and application to the original factory finish applied.

Field Finishing Exterior Doors

Refer to the technical data sheets, product data sheets or specification sheets of your preferred finish supplier and material for exact preparation, process and finishing instruction on the product you intend to use for compatibility and application for EXTERIOR APPLICATION.

Machining Options

Stile and Rail Details

Wood Door Technical Manual

July, 2017

| | Non-Rated | 20 Minute | | | 45 Minute | | | 60 Minute | | | 90 Minute | | |
|----------------------------------|-----------|-----------|-----|-----|-----------|-----|-----|-----------|-----|-----|-----------|-----|-----|
| | | Pressure | | | Pressure | | | Pressure | | | Pressure | | |
| | | Neutral | PPB | PPA | Neutral | PPB | PPA | Neutral | PPB | PPA | Neutral | PPB | PPA |
| Mortise Lock | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK |
| Card Reader | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK |
| Thru-Bolts | N/R | N/R | N/R | N/R | N/R | N/R | N/R | N/R | N/R | N/R | N/R | N/R | N/R |
| Combination Lock | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK |
| Cylinder Lock | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK |
| Concealed Vertical Rod | OK | OK | | | OK | | | OK | | | OK | | |
| Door Bottom | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK |
| Concealed Door Closer - Arm Only | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK |
| Flush Cup Pull | OK | | | | | | | | | | | | |
| Finger Pull | OK | | | | | | | | | | | | |
| Pivot Hinges-Top & Bottom | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK |
| Intermediate Pivot | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK |
| Invisible Hinge | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK |
| Mortise Dead Bolt | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK |
| Mortise Exit Device | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK |
| Mortise Flush Bolt | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK |
| Viewer | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK |
| Raceway | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK |
| Rim Exit Device | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK |
| Roller Latch | OK | | | | | | | | | | | | |
| Wood Bead Light Kit | OK | OK | OK | OK | OK* | OK* | OK* | OK* | OK* | OK* | OK* | OK* | OK* |
| 1.375" Thickness | OK | | | | | | | | | | | | |
| 1.75" Thickness | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK |
| 2.25" Thickness | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK |

Standard pre-machining for all doors includes: 3 hinge preps with prefit and beveled prep for cylinder lock.

OK - Available
N/R - Not required, though available

* With approved light kit and glazing

20, 45, 60, and 90 Minute Fire Rated and Non-Rated Openings

Stile and Rail Details

Wood Door Technical Manual

July, 2017

Criteria for stile and rail doors, fire rated and non-rated pairs, with concealed vertical rod

Specifications for 20, 45, 60 Minute Doors and Non-Rated:

- 5" steel edges at meeting stiles (optional veneer wrapped)
- Minimum stile width: 6" (face dimension)
- Optional stile and rail thickness: 1-3/4" or 2-1/4"
- Hardware must be approved for use in wood and wood & plastic covered composite fire doors
- 20, 45, and 60 minute = Underwriters Laboratories (UL) rating USA and Underwriters' Laboratories of Canada (UL Canada)

Specifications for 90 Minute Doors:

- 5" steel edges at meeting stiles (optional veneer wrapped)
- Minimum stile width: 6" (face dimension)
- Minimum stile and rail thickness: 2-1/4"
- Hardware must be approved for use in wood and wood & plastic covered composite fire doors
- 90 minute = Underwriters Laboratories (UL) rating USA and Underwriters' Laboratories of Canada (UL Canada)