

City of Biddeford
Historic Preservation Commission
March 08, 2023 4:00 PM City Hall Council Chambers & Zoom
<https://biddeford.zoom.us/j/98435284216?pwd=UUREUTJzd3hUM1p4VDMzbllieFZmUT09>
Webinar ID 984 3528 4216; Passcode 267967

Status: Historic Preservation Commission, Wednesday, March 8, 2023, 4:00 in the City Council Chambers & via Zoom

1. Adjustments to the Agenda

2. Consent Agenda

- 2.1. Approval of Meeting Minutes from February 8, 2023
[020823-Draft.pdf](#)

3. New Business

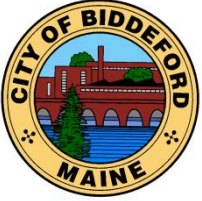
- 3.1. 2023.05 Public Hearing to review a request by Seth & Rachel Harkness to make exterior repairs and alterations to the building located at 5 Alfred Street (Tax Map 38, Lot 400) in the MSRD-1 Zone.

1. [2023.05 HPC 5 Alfred Street SR.pdf](#)
2. [Application 5 Alfred Street - Harkness.pdf](#)
3. [Proposed work - 5 Alfred Street narrative.pdf](#)
4. [Drawings - 5 Alfred Street.pdf](#)
5. [5 Alfred, second story windows, front.pdf](#)
6. [Andersen 400 Series Brochure.pdf](#)
7. [Stern Cetlin - Part 2 SHPO review.pdf](#)
8. [Stern Cetlin Part 2 SHPO review Amendment.pdf](#)
9. [5 Alfred Street - North elevation.JPG](#)
10. [5 Alfred Street - Main Entrance.JPG](#)
11. [5 Alfred Street Storefront.JPG](#)
12. [5 Alfred Street - East elevation.JPG](#)
13. [5 Alfred Street.JPG](#)
14. [Re 5 Alfred St. Rachael Harkness.pdf](#)

- 3.2. 2023.06 HPC Public Hearing to review a project by True Storage LLC to make exterior alterations at 32-40 Main Street, Building 36, (Tax Map 71, Lot 10-5) in the MSRD-3 Zone.

1. [2023.06 HPC 32 - 40 Main St Bldg 36 SR.pdf](#)
2. [Application Building 36 True Storage.pdf](#)
3. [Certificate of Appropriateness Project Description.pdf](#)
4. [Drawings Building 36 True Storage.pdf](#)
5. [Signage Cube Smart.pdf](#)

4. Adjourn



CITY OF BIDDEFORD

Planning and Development Department

Brad Favreau
Economic Development Coordinator
205 Main Street
P.O. Box 58six
Biddeford, ME 04005
(207)-282-7119 or (207)-28four-
9115

HPC MEETING
February 8, 2023
4:00
(DRAFT)

In attendance: Jeff Cabral (Chair), Leah Schaffer, Erin Ware, Julie Larry & James Flint
Staff Members: Brad Favreau & Nan Whitten

Roll Call/Declaration of Quorum/Voting Members

Voting Members: Schaffer, Ware, Larry & Flint

(Chair opened meeting at 4:06 PM)

1. Adjustment to the Agenda

2. Consent Agenda

Approval of Meeting Minutes from January 12, 2023

MOTIONS: 4:08 PM

Schaffer: Motion to approve the Meeting Minutes from January 12, 2023

Larry: Second

Motion passed unanimously 4-0 (Schaffer, Ware, Larry & Flint in favor)

3. Unfinished Business

3.1 2023.01 HPC-Public Hearing for John Laliberte-Bush Watson to construct mixed use Buildings and remodel commercial building at 30 Upper Falls Road.

- **Michael Barton of Bush Watson, Ryan Senatore of RSAA & Brandon of Mitchell & Associates represented the applicant.**
- **Mr. Senatore gave an updated power point presentation of the buildings built and or remodeled.**
- **The applicant revised the siding and removed the lap banding after listening to the HPC.**
- **10 Upper Falls Road has been more broken up to make it more attractive from the outside.**
- **The commercial windows on the first floor have been raised so that the residents can have more privacy.**
- **The applicant added more detail on the base for a nicer presentation.**
- **The renovations are being completed with the assistance of a Historic Restoration Expert.**
- **Members of the Board asked about some of the landscaping changes such as the flowering crab trees. The landscapers are trying to keep as many of the existing trees as possible but some of them are so diseased they will have to pull them.**

MOTIONS: 4:29 PM

Ware-Motion- To approve Certificate of Appropriateness for Bush Watson for redevelopment of Upper Falls Road, comprising three distinct mixed use buildings on the North side of the street, based on materials and assertions submitted, and conditioned on that all permits must be obtained from Code Enforcement prior to beginning any work..

Larry-Second

Motion passed unanimously 4-0 (Schaffer, Ware, Larry & Flint in favor)

4. New Business

4.1. 2023.02 HPC Public Hearing to review a project by Peter Lavoie to construct a Multi-family residential structure at 69 Elm Street (Tax Map 40, Lot 57) in the MSRD3 Zone.

- Peter Lavoie represented himself along with Chris Delano from Delano Architecture.
- This proposal is for a 3-story, 14-Unit residential structure.
- This building is adjacent to 1 Upper Falls Road and is 50% of its size.
- There is a roof top deck.
- The stair windows are inset with a panel below it, the other windows are flush.
- The Commission talked about how it makes a good statement in marrying up the industrial with the residential in a modern way. It meets the design standards and has a good relationship with the 3-decker buildings in the area. It presents a good balance in the neighborhood.

MOTIONS: 5:00 PM

Larry-Motion- To approve Certificate of Appropriateness for Peter Lavoie to construct a new residential building at 69 Elm Street, based on materials and assertions submitted, and conditioned that all permits must be obtained from Code Enforcement prior to beginning any work.

Schaffer-Second

Motion passed unanimously 4-0 (Schaffer, Ware, Larry & Flint in favor)

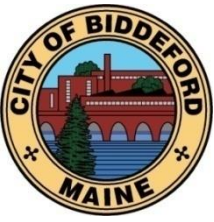
5. Other Business

- The members of the Commission agreed that the checklist on the application should be revised.
 - Brad to bring revised application next meeting.
 - The Commission talked about the 2024 Budget.
 - Julie Larry made a motion that the Commission apply for a CLG Grant for Design Guidelines.
 - Leah Schaffer seconded
- Motion passed unanimously 4-0 (Schaffer, Ware, Larry & Flint in favor)**
- Erin Ware and Julie Larry will conduct a survey of the Tattle Corner area.

Meeting adjourned at 5:20 PM

These minutes are summary and are not to be verbatim. Archived meetings are viewable on the City's website: www.biddefordmaine.org.

DRAFT



CITY OF BIDDEFORD

PLANNING DEPARTMENT

2023.05

205 Main Street PO Box 586 Biddeford, ME 04005 (207) 284-9115

HISTORIC PRESERVATION COMMISSION REPORT

TO: The Biddeford Historic Preservation Commission

FROM: Brad Favreau, Economic Development Coordinator

MEETING DATE: Wednesday March 8, 2023, 4 PM

RE: **Item 4.1: 2023.05 HPC Review for Seth and Rachael Harkness** to make exterior alterations at 5 Alfred Street, Tax Map 38, Lot 400, in the MSRD-1 Zone.

1. INTRODUCTION

The building at 5 Alfred Street, named the Stern & Cetlin Block, has long recognized by the bright yellow awning wrapping the corner of the building and advertising the former business located there. The new owner of the building has proposed to rehabilitate the building, and has applied for Historic Preservation Certification. The work described in the application has been found to meet the Secretary of the Interior's Standards for Rehabilitation, provided conditions some are met.

2. PROJECT DATA/INFORMATION

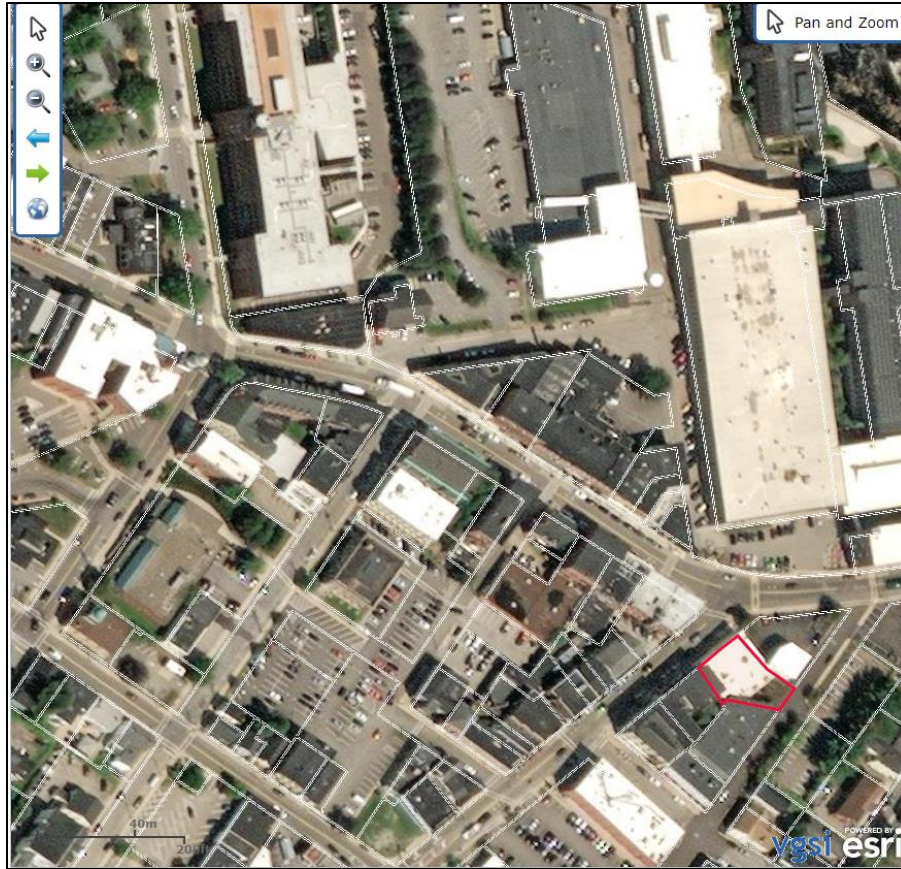
	SUBJECT	DATA/INFORMATION
1.	Applicant:	Seth and Rachael Harkness 25 Summer Street Portland ME 04102 seth.harkness@gmail.com
2.	Owner of Property:	Same as Above
3.	Agent:	N/A
4.	Engineer/Architect:	Caleb Johnson Studio
4.	Project Location:	5 Alfred Street
5.	Project Tax Map #/Lot #:	Tax Map 38, Lot 400
6.	Existing Zoning:	MSRD-1
7.	Overlay Zoning:	Biddeford Saco Mills Historic District
8.	Existing Use:	Commercial
9.	Contributing Structure?	Yes
10.	Proposed Use:	Mixed-use
11.	Uses in the Vicinity:	Mixed-use
12.	Parcel Size:	.20 acres
13.	Front Setback Required:	None
14.	Side Setbacks Required:	None
15.	Rear Setback Requires:	None
16.	Height Requirements:	Minimum 2 stories or 26 feet; max 60 feet
17.	LDR Attachment A: Fess Paid:	Yes
18.	Historic Preservation Commission Review History:	March 8, 2023 Meeting Date. Posted March 1, 2023; Mail Notices to all abutters within 100' Sent 9 notices March 1, 2023.

3. EXISTING CONDITIONS

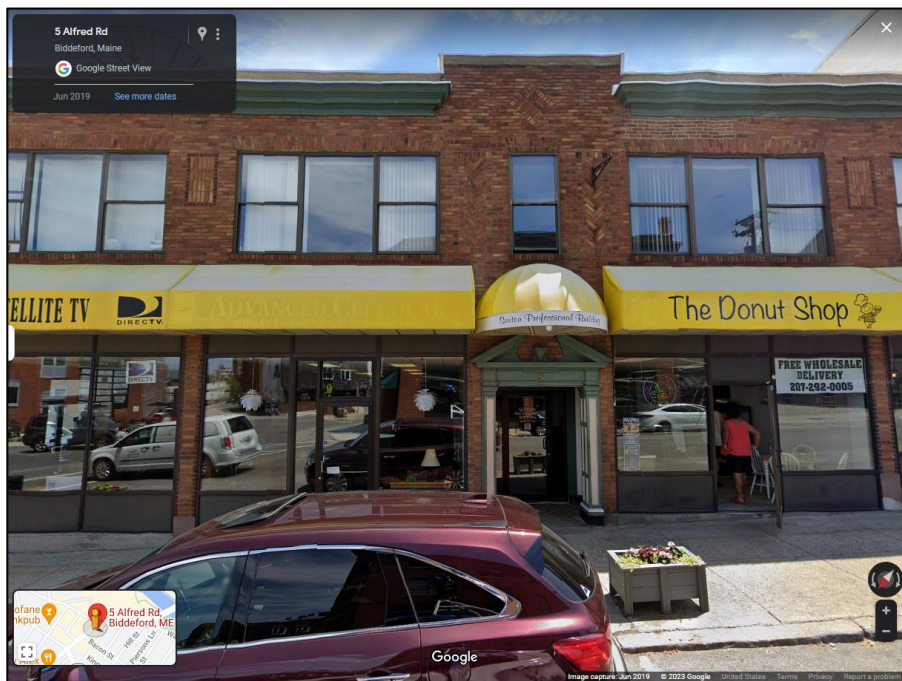
The project building is located at the highly visible corner of Main Street and Alfred Street, across Main Street from Pepperell Mill Center. Currently there are three storefronts (four bays) at street level with eight office spaces on the second floor.

The building was constructed circa 1930 according to the narrative of the National Register of Historic Places Registration Form (2009). The description in this narrative reads:

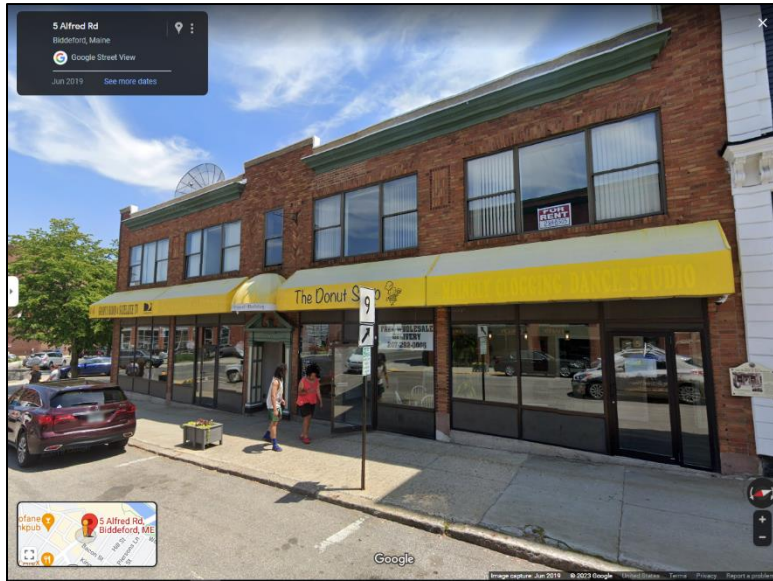
Located next to a parking lot at the intersection of Main and Alfred streets, this two-story brick commercial building has a concrete foundation and a flat roof. The first level is divided into four storefronts, each with display windows topped by metal panels. The center bay has an entrance with a broken pediment and elaborate surround. The second level has tripartite windows in each of the five bays except the center, which has a single one-over-one lite, double hung metal sash window. The stepped parapet, typical of simple twentieth century Classical Revival commercial buildings, is capped by stone.



Source: "5 Alfred Street." <https://gis.vgsi.com/BiddefordMEMap/?pid=4403>. Accessed February 22, 2023.



Source: "5 Alfred Street." [5 Alfred Rd - Google Maps](#). Image date June 2019. Accessed February 22, 2023.



Source: "5 Alfred Street." [5 Alfred Rd - Google Maps](#). Image date June 2019. Accessed February 22, 2023

4. PROJECT PROPOSAL

This project proposes to rehabilitate the front façade of the building at 5 Alfred Street to historic standards, using a faded newspaper photo as reference. This image is shown on the title page of the architectural drawing set. This rehabilitation includes:

- Remove existing storefronts; replace with new aluminum storefront units with new recessed entries. Doors will be aluminum framed. (Drawings A-001 and A-101.)
- At the left corner of the northeast façade, a new door will be installed to open onto the interior tiled wall "York Lunch" advertisement to the left of the opening.
- Transom above storefront is proposed to be "Aquatex" or similar architectural [opaque] glass, with an Insulating Glass Unit (IGU) outer pane.
- Below storefront glazing will be marble veneer.
- Center Entrance will be solid wood door with sidelites.
- Existing upper level vinyl windows will be removed, replaced by aluminum-framed windows. At four large openings, fenestration will comprise one center fixed unit flanked by double hung units. (Drawings A-001 and A-101.)
- Masonry will receive re-pointing and repairs, as needed.
- Metal coping at the parapet top will be removed to expose existing stone. (Drawing A-001 and A-101).
- Existing windows at the rear of the building (facing Foss Street) will be removed and replaced by Andersen Series 400 vinyl clad wood windows.

5. PUBLIC COMMENT

The notice was posted on the city website on March 1, 2023. Four abutter notice were sent on March 1, 2023.

As of March 1, 2023, no Public Comments had been received regarding the proposed project.

6. STAFF REVIEW:

A. REVIEW STANDARDS: Article XV (Historic Preservation Ordinance),

Section 13. Evaluation standards for certificate of appropriateness.

A. Reconstruction and alterations.

1. A building or structure classified as an historic landmark or located within an historic district, or any part thereof, or any appurtenance related to such structures, including but not limited to walls, fences, light fixtures, steps, paving and signs, shall not be reconstructed or altered unless a certificate of appropriateness has been issued for such activity. No certificate of appropriateness for a structure or building identified as contributing to the district shall be issued unless the proposed activity is found to preserve or enhance a building's or structures historical or architectural character. No certificate of appropriateness shall be issued for a noncontributing structure or building unless the proposed activity is complementary to the historic character of surrounding structures and buildings and meets the intent of this ordinance.

2. The standards and requirements in the United States Secretary of the Interior's Standards of Rehabilitation as well as the following factors shall be considered when reviewing applications for reconstruction or alteration of buildings or structures subject to review under this ordinance:

a. Every reasonable effort shall be made to use a property for its historic purpose and in a way which will require minimum alteration to the structure and its environment;

b. Rehabilitation work shall not destroy the distinguishing qualities nor character of the structure and its environment. The removal or alteration of any historic material or architectural features should be avoided;

c. Deteriorated architectural features should be repaired rather than replaced, wherever possible. In the event that replacement is necessary, the new material should match the material being replaced in composition, design, texture and other visual qualities. Repair or replacement of missing architectural features should be based on physical or pictorial evidence rather than on conjectural designs or the availability of different architectural features from other buildings;

d. Distinctive stylistic features or examples of skilled craftsmanship which characterize historic structures and often predate the mass production of building materials shall be treated with sensitivity;

e. Changes which may have taken place in the course of time are evidence of the history and development of the structure and its environment, and these changes shall be recognized and respected;

f. All structures shall be recognized as products of their own time. Alterations to create an earlier appearance shall be discouraged;

g. Contemporary design for additions to existing structures shall be encouraged if such design is compatible with the size, scale, material and character of the neighborhood, the structure or its environment; and,

h. Wherever possible, new additions or alterations to structures shall be done in such a manner that if they were to be removed in the future the essential form and integrity of the original structure would be unimpaired.

The applicant applied for Historic Preservation Certification (state tax credit) for two phases of rehabilitation:

- **Phase 1 – Remodel existing second floor offices into housing units, remove existing incompatible awning, replace roof, and install rooftop heat pumps. Approved August 9, 2022, with conditions.**
- **Phase 2 – (Amendment) Rehabilitate existing store fronts based on historic image, described above in Section 4 Project Proposal. Approved December 22, 2022, conditioned on SHPO review of mortar repointing.**

See Historic Preservation Certification Application and Amendment for further details (Project Number 45321.)

7. STAFF RECOMMENDATION

If the Board approves the project, Staff recommends doing so with the following minimum Conditions of Approval:

1. *All permits must be obtained from Code Enforcement prior to beginning any work.*
2. *Other* _____.

8. SAMPLE MOTIONS

A. Motion to approve Certificate of Appropriateness for Seth and Rachael Harkness to make exterior alterations to the building at 5 Alfred Street, based on materials and assertions submitted, and conditioned on the following:

1. *All permits must be obtained from Code Enforcement prior to beginning any work.*
2. _____

B. Motion to deny the Certificate of Appropriateness for Seth and Rachael Harkness to make exterior alterations to the building at 5 Alfred Street, based on the following:

1. _____
2. _____

C. Motion to table the Certificate of Appropriateness for Seth and Rachael Harkness to make exterior alterations to the building at 5 Alfred Street, based on the following:

1. _____
2. _____



CITY OF BIDDEFORD PLANNING DEPARTMENT

HISTORIC PRESERVATION COMMISSION APPLICATION FOR A CERTIFICATE OF APPROPRIATENESS

Applicant's/Owner's Information:

Applicant's Name: Seth and Rachael Harkness
Applicant's Address: 25 Summer Street
Applicant's Phone(s): 207.939.2774 / 207.409.7322
Applicant's E-mail: seth.harkness@gmail.com

Applicant's Legal Interest in the Property:

☒ Owner ☐ Purchase and Sale ☐ Tenant - Lease/Rental Agreement

Owner's Name: Seth and Rachael Harkness
Owner's Address: 25 Summer Street
Owner's Phone(s): 207.939.2774 / 207.409.7322
Owner's E-mail: seth.harkness@gmail.com

Representative(s) - Agent, Engineer, Architect, and/or Contractor Information:

Agent's Name: Caleb Johnson Studio
Agent's Address: 110 Exchange Street, 2nd Floor, Portland, ME 04101
Agent's Phone(s): 207-283-8777
Agent's E-mail: jjirele@calebjohnsonstudio.com

Attach separate pages where multiple representatives are involved.



CITY OF BIDDEFORD PLANNING DEPARTMENT

Project Information:

Project Address: 5 Alfred Street, Biddeford, Me 04005

Project Zone: MSRD1 Property Map & Lot Number(s): 38/400

Existing Use of Property:

☐ Residential ☐ Commercial ☒ Mixed Use ☐ Industrial ☐ Institutional

COMMISSION Full Review Project Activities \$275.00 Fee (check all that apply):

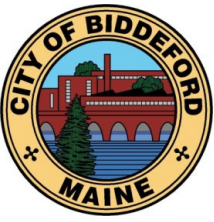
Alterations and Repair

- ☒ Removal and/or replacement of architectural detailing (for example porch spindles and columns, railings, windows and window moldings, and cornices)
- ☐ Installation or replacement of siding
- ☐ Porch replacement or construction of new porches
- ☐ Installation or replacement of either roofing or gutters when they are a significant and integral feature of the structure
- ☐ Alteration of accessory structures such as garages
- ☐ Other: Removal of modern facades, storefronts will be restored to original style

Additions and New Construction

- ☐ New Construction
- ☐ Building additions, including rooftop additions, dormers or decks
- ☐ Construction of accessory structures
- ☐ Installation of exterior access stairs or fire escapes
- ☐ Installation of antennas and satellite receiving dishes
- ☐ Installation of solar collectors
- ☐ Rooftop mechanicals (e.g., HVAC)

Other: _____



CITY OF BIDDEFORD PLANNING DEPARTMENT

Moving and Demolition

- ☐ Moving of structures or objects on the same site or to another site
- ☐ Any demolition or relocation of a landmark contributing and/or contributing structure within a district
- ☐ Other: _____

SUBCOMMITTEE Review Project Activities \$50.00 Fee (check all that apply):

Alterations and Repair

- ☒ Masonry work, including repointing, sandblasting, chemical cleaning, painting where the masonry has never been painted, or conversely, removal of paint where the masonry historically has been painted
- ☐ Other: _____

Signage and Exterior Utilities

- ☐ Installation or alteration of any exterior sign, awning, or related lighting
- ☐ Exterior lighting where proposed in conjunction with commercial and institutional signage or awnings
- ☐ Exterior utilities, including mechanical, plumbing, and electrical, where placed on or near clearly visible facades
- ☐ Other: _____

Note: In cases where the project is minor in nature, the Planning Department may determine that even if the activity qualifies for full Commission review it would be more appropriate to have it delegated to Subcommittee review.

Note: Your project may also require a building permit. Please call the Code Enforcement Office (284-9236) to make this determination.

CITY OF BIDDEFORD
PLANNING DEPARTMENT

Submittal Information Checklist:

- ☒ Required Application Fee: If full Commission review is required - \$275.00
If Subcommittee review is required – \$50.00
- ☒ Completed Application Form
- ☒ Description of Proposed Activity
- ☒ Photographs of the building involved as well as adjacent buildings
- ☒ Samples of materials proposed for use in the activity
- ☒ Drawings (i.e., exterior elevations) and/or plans to illustrate the proposed activity for which the certificate is being applied for, including lettering styles (if applicable)

Signature of applicant: _____

Date: _____

Signature of
property owner (Required): _____

Date: _____

DESCRIPTION OF PROPOSED WORK TO 5 ALFRED STREET

The work proposed for 5 Alfred Street, known historically as the Stern & Cetlin Block, will be a historic rehabilitation of the facade completed to the National Parks Service's Historic Rehabilitation Standards. The scope of the exterior renovation includes, 4 new storefronts, the replacement of all façade and rear upper windows, and spot masonry repair. Please see attached rehabilitation plans from architect Caleb Johnson.

All construction and rehabilitation plans and proposed materials have been approved for the Historic Preservation Certification Application by the National Parks Service.

Stern & Cetlin Block Rehabilitation

5 Alfred Street Biddeford ME 04005

GENERAL NOTES:

- Contractor will review all drawings and specifications and confirm any unclear information with the Architect before proceeding. Sheets are not to be separated when distributed to subcontractors in order to maintain contextual information.
- Contractor is responsible for the construction of a complete weather tight building within the scope of the construction documents. If contractor feels conformance with the construction documents is in conflict with this goal he shall discuss conflicts with Architect.
- Contractor is responsible for coordinating and supervising all sub-contractors. Workmanship standards shall be those generally accepted for high-end construction. Contractor warranties all work for a minimum of one year from final completion of job. Other explicit warranties may be in addition to above.

PROJECT ARCHITECT
Caleb Johnson Studio
110 Exchange Street, 2nd Floor
Portland, ME 04101
207-283-8777

OWNER:
Seth Harkness
seth.harkness@gmail.com
(207) 939-2774

CONTRACTOR:
TBD

Point of Contact:
Jason Jirele
jjirele@calebjohnsonstudio.com
207-956-5169

SYMBOL LEGEND

--- PROPERTY LINE
--- REF STORY ELEVATION
--- REF

FLOOR HEIGHT
A --- GRID LINE
1 --- BUILDING SECTION MARKER
Drawing Number
A-301 --- Sheet Number
1 --- WALL SECTION MARKER
Drawing Number
A-303 --- Sheet Number
--- ELEVATION MARKER
Drawing Number
--- Sheet Number
--- DETAIL MARKER
Drawing Number
--- Sheet Number
--- INTERIOR ELEVATION MARKER
Drawing Number
--- Sheet Number
--- DIMENSION LINE
--- BREAK LINE
--- CEILINGS
Height above reference floor

PROJECT TAGS

Refer to Schedules

Door
DOOR TAG
Window
WINDOW TAG
Wall
WALL TAG
Tagged Fixture
PLUMBING TAG
Tagged Fixture
EQUIPMENT TAG
Finish Tag
Surface Material

Room Marker
BEDROOM
Room Name
202
Room Number
1 sq ft
Net Interior Area

COMMON ABBREVIATIONS

ABV	Above	HT	Height
ACT	Acoustic Ceiling Tile	HM	Hollow Metal
AD	Area Drain	HORIZ	Horizontal
ADJ	Adjustable	HWH	Hot Water Heater
AF	Above Finished Floor	IBC	International Building Code
ALUM	Aluminum	ID	Inside Diameter
ALT	Alternate	IECC	International Energy Conservation Code
APPROX	Approximate	INSUL	Insulation
ANOD	Anodized	INT	Interior
BLDG	Building	IRC	International Residential Code
BLKG	Blocking	MAX	Maximum
B.O.	Bottom of	MECH	Mechanical
BLKHD	Bulkhead	MIN	Minimum
CAB	Cabinet	MISC	Misc
CIP	Cast in Place	MO	Masonry Opening
CEO	Code Enforcement Officer	MTL	Metal
CFCI	Contractor Furnished, Contractor Installed	MUBEC	Maine Uniform Building and Energy Code
CLG	Clear	NIC	Not in Contract
CLR	Concrete Masonry Unit	OC	On Center
CMU	Column	OFCI	Owner Furnished, Contractor Installed
COL	Concrete	PCC	Pre-Cast Concrete
CONC	Continuous	PLUMB	Plumbing
CONT	Carpet	PLY	Plywood
CPT	Ceramic Tile	PNT	Paint
CTR	Center	PT	Pressure-Treated
DBL	Double	PSF	Pounds per square foot
DIA	Diameter	PSI	Pounds per square inch
DIM(S)	Dimension(s)	RBR	Rubber
DN	Down	REF	Reflected Ceiling Plan
DR	Door	REQ	Required
DW	Dishwasher	RM	Room
DWG	Drawing	SIM	Similar
EA	Each	SPEC	Specified or Specification
EL	Elevation	SPK	Sprinkler
ELEC	Elevator	SS	Stainless Steel
ELEV	Edge of Slab	STC	Sound Transmission Coefficient
EQ	Equal	STL	Steel
ETR	Existing to Remain	STRUCT	Structural
EQUIP	Equipment	TELE	Telephone
EXT	Exterior	TO	Top of
FA	Fire Alarm	TOS	Top of Slab/Structure
FAP	Fire Annunciator Panel	TOFF	Top of Finish Floor
FD	Floor Drain	TYP	Typical
FE	Fire Extinguisher	UNO	Unless Noted Otherwise
FEC	Fire Extinguisher Cabinet	VIF	Verify in Field
FH	Fire Hydrant	W	With
FLR	Floor	WD	Wood
FT	Feet		
GA	Gauge		
GAL	Gallon		
GALV	Galvanized		
GL	Glass		
GYP	Gypsum Board		
GWB	Gypsum Wall Board		

MATERIAL LEGEND

Brick - Elevation
Brick - Section
Concrete - Block
Concrete - CIP
Earth
Gravel
Gypsum
Insulation - Batt
Insulation - Rigid
Metal - Aluminum
Metal - Steel
Not in Contract
Plywood
Vegetation
Wood - End Grain

PROPOSED ELEVATION AFTER REHABILITATION



PHOTOS OF EXISTING PROPERTY

PART 2 REVISIONS
01-26-2023

PROJECT NARRATIVE

Replacement of exterior metal storefront and windows in downtown Biddeford. No load bearing structural work is proposed and remaining uses on the ground level are to remain unchanged. Interior work to be limited to incidental work associated with the proposed storefront and recessed commercial entries.

QUICK BUILDING STATS

PID:	4403
Construction Type:	III-B (IBC) / III-000 (NFPA)
Stories:	2
Occupancy Type:	Mixed-Use Primary: B / Business Secondary: R-2 / Multi-Family
Building Height:	26'-0" +/- to top of roof
Floor Area:	2nd Floor: 4,891sf 1st Floor: 5,766 sf
Gross Building Area:	10,657sf total gross area

SHEET INDEX	SHEET NAME
G-000	COVER SHEET
A-001	DEMO ELEVATION AND PLAN
A-101	PROPOSED ELEVATION AND PLAN
A-121	PROPOSED ELEVATIONS AND PLAN W/O NOTES
A-501	DETAILS - STOREFRONT
A-502	DETAILS - 2ND FLR WINDOWS

LOCATION MAP



HISTORICAL PHOTO OF BUILDING OPENING
FROM BIDDEFORD DAILY JOURNAL, 1924

CALEB JOHNSON
STUDIO



CHANGES THIS ISSUE:	DESCRIPTION
ID	

SUBMISSIONS:	DATE	DESCRIPTION
ISSUE	9/2/23	FOR CONSTRUCTION SET
ISSUE	1/26/23	PART 2 REVISIONS

CONSULTANT:

CJS PROJECT LEAD:
JJ
DATE OF ISSUE:
1/26/23
PROJECT STATUS:
Preliminary Design

Stern & Cetlin Block Rehabilitation
5 Alfred Street Biddeford ME 04005
Seth Harkness

COVER SHEET

G-000

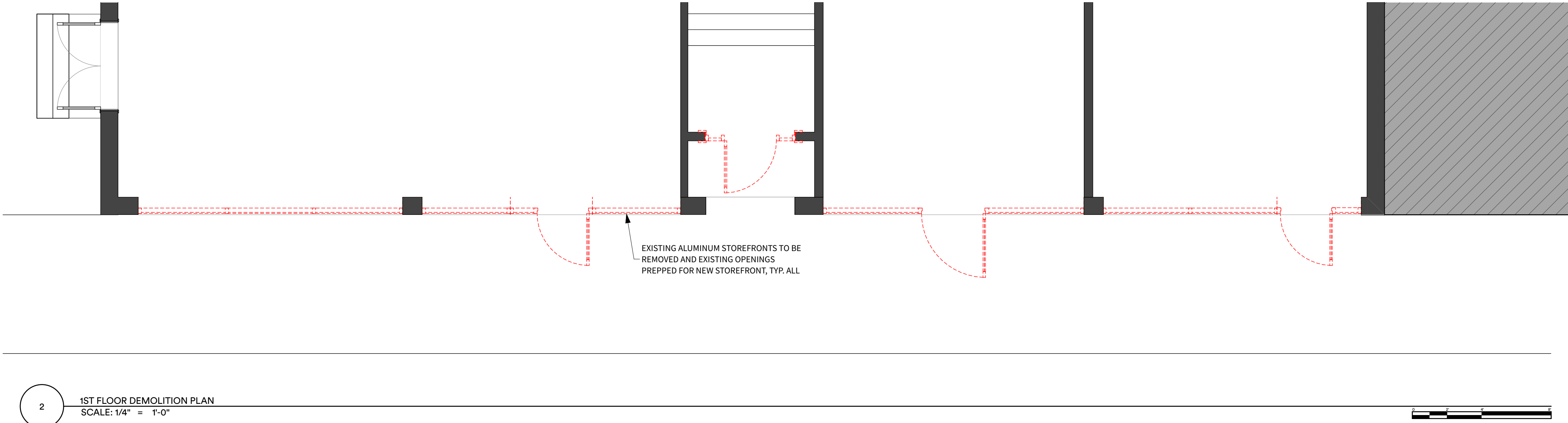
DEMOLITION PLAN LEGEND

Wall to be Demolished

Existing Wall to Remain

Window/Storefront to be Demolished

Door to be Demolished



DOOR SCHEDULE							
ID	Nominal W x H Size	Door Material	Glazing	Frame Material	Door/Frame Finish	Hardware	Notes
100	3'-0"x8'-0"	ALUM	1'-6" Sidelite	Aluminum			
101	3'-0"x8'-0"	ALUM	(2) 1'-6" Sidelites	Aluminum			
102	3'-0"x7'-0"	WD	(2) 1'-1" Sidelites	HM			Door and Sidelites to fit within existing door opening
103	3'-0"x8'-0"	ALUM	(2) 1'-6" Sidelites	Aluminum			
104	3'-0"x7'-0"	ALUM	(2) 1'-6" Sidelites	Aluminum			
ETR	5'-0"x6'-8"						

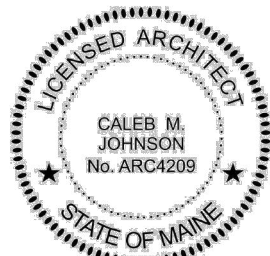
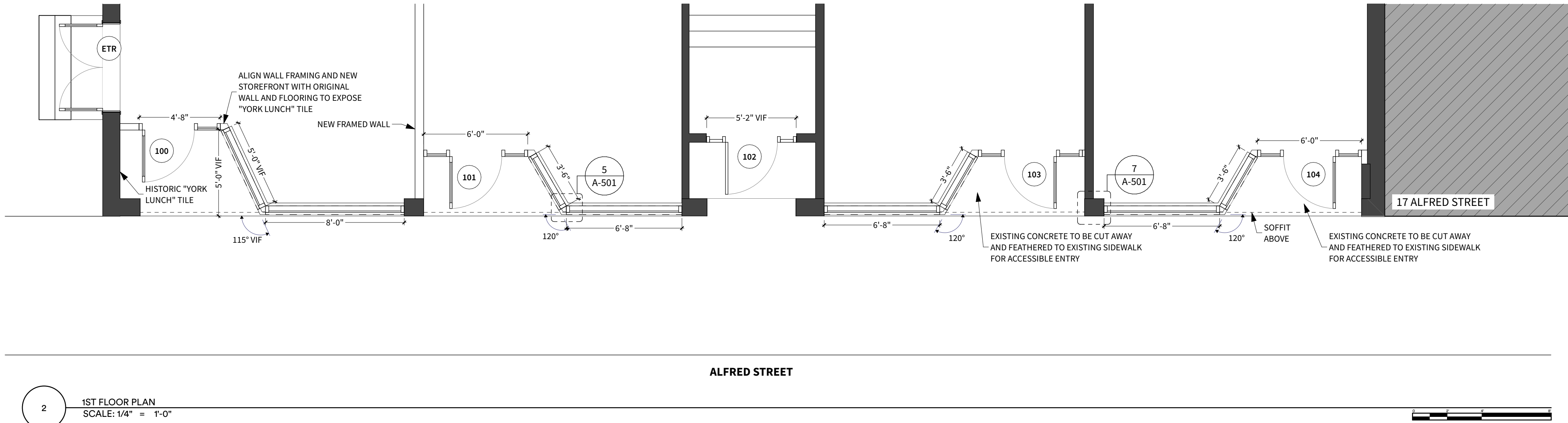
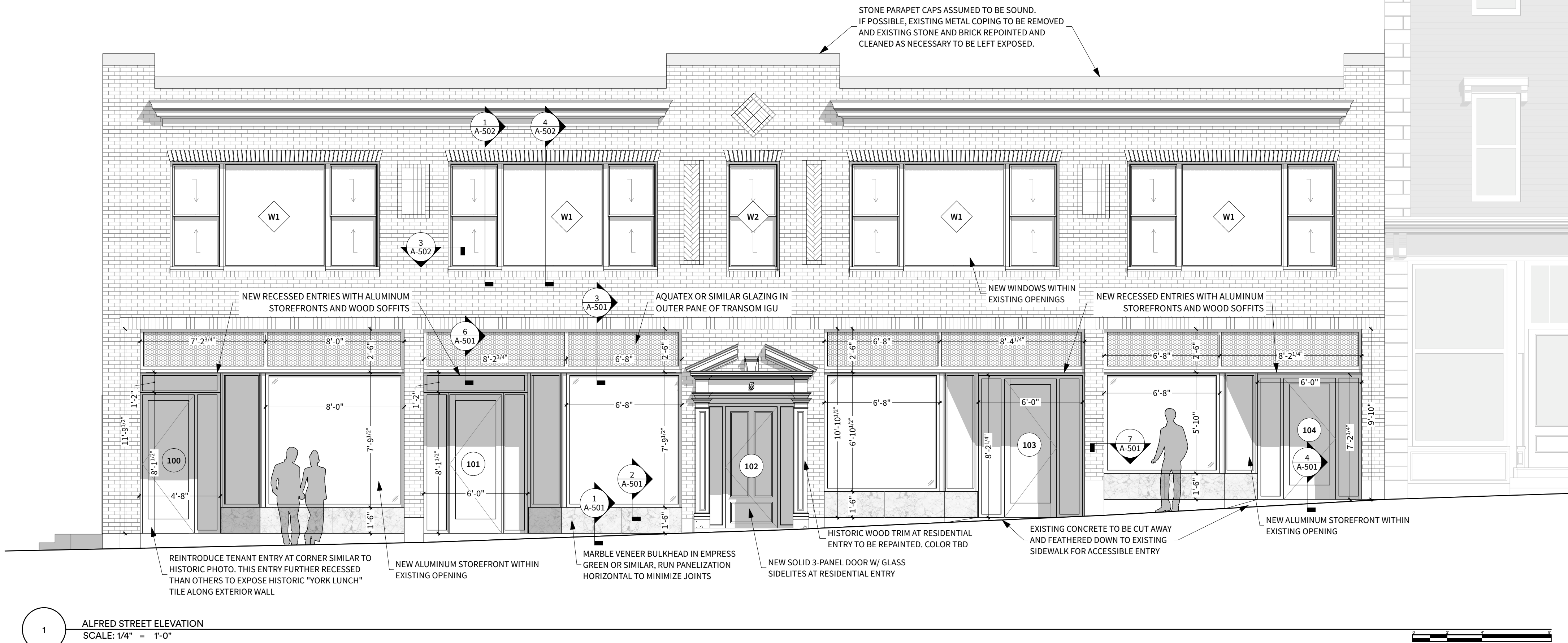
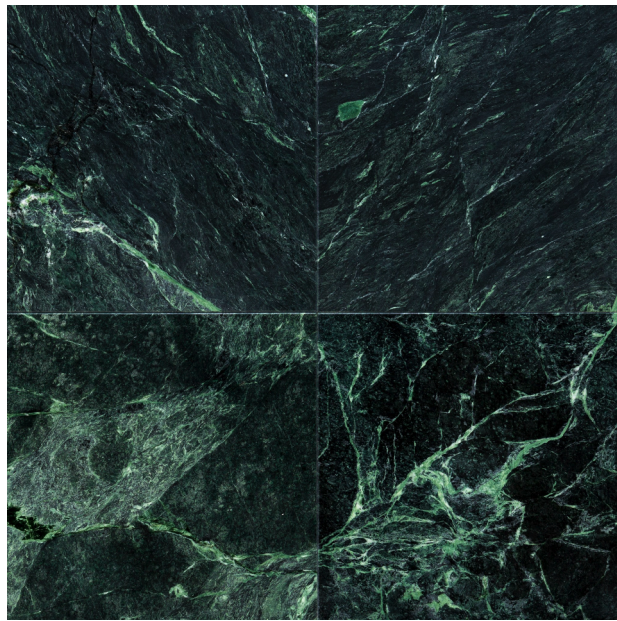
WINDOW SCHEDULE							
ID	Qty	Window Type	Width (Nom)	Height (Nom)	Sill Height	Manufacturer	Notes
W1	4	(2) Double Hungs w/ Fixed Center	12'-0" ^{1/2"}	6'-3" ^{1/2"}	2'-6" ^{1/2"}	Series 400 - Universal Windows	
W2	1	Double Hung	3'-0"	6'-3" ^{1/2"}	2'-6" ^{1/2"}	Series 400 - Universal Windows	

STOREFRONT, DOOR, & WINDOW GENERAL NOTES

1. Due to the scope of work being isolated to exterior storefront & window replacement, a life safety analysis has been excluded. No reconfiguration of existing interior space is proposed.
2. All new elements are to utilize existing openings. Contractor to verify all dimensions in field.
3. Provide safety glazing where required.

DOOR ELEVATIONS					
Element ID	100	101	102	103	104
Elevation View					
Style	Full Light Storefront Door w/ 18" Sidelite	Full Light Storefront Door w/ (2) 18" Sidelites	3-Panel Solid Wood Door w/ (2) 13" Sidelites	Full Light Storefront Door w/ (2) 18" Sidelites	Full Light Storefront Door w/ (2) 18" Sidelites

STOREFRONT FINISHES BASIS OF DESIGN



CHANGES THIS ISSUE:	
ID	DESCRIPTION

SUBMISSIONS:		DESCRIPTION	ISSUE NUMBER CHANGE NUMBER
01	DATE: 9/2/22	FOR CONSTRUCTION SET	
02	DATE: 1/26/23	PART 2 REVISIONS	

CJS PROJECT LEAD:
JJ
DATE OF ISSUE:
1/26/23
PROJECT STATUS:
Preliminary Design

CONSULTANT:

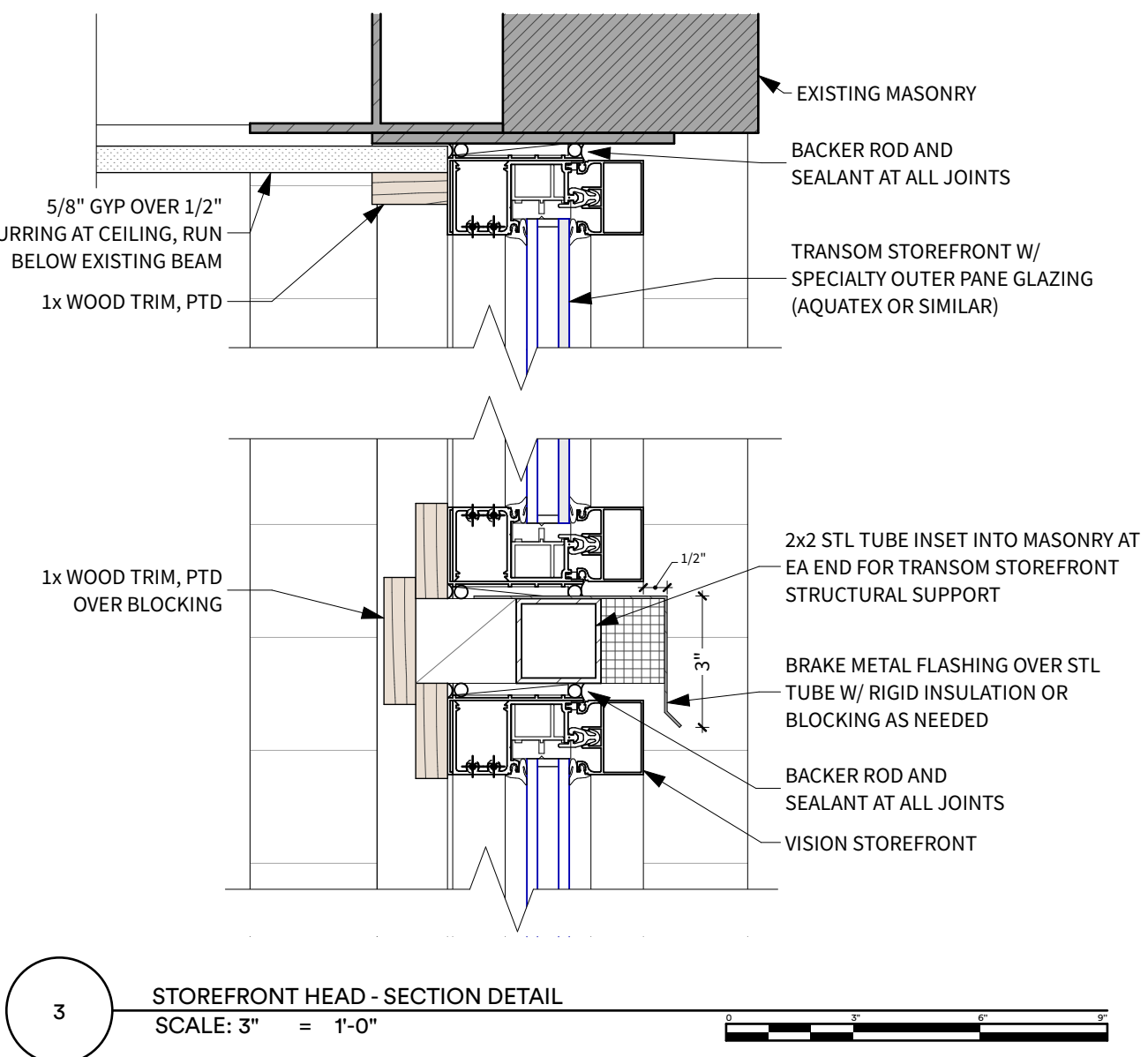
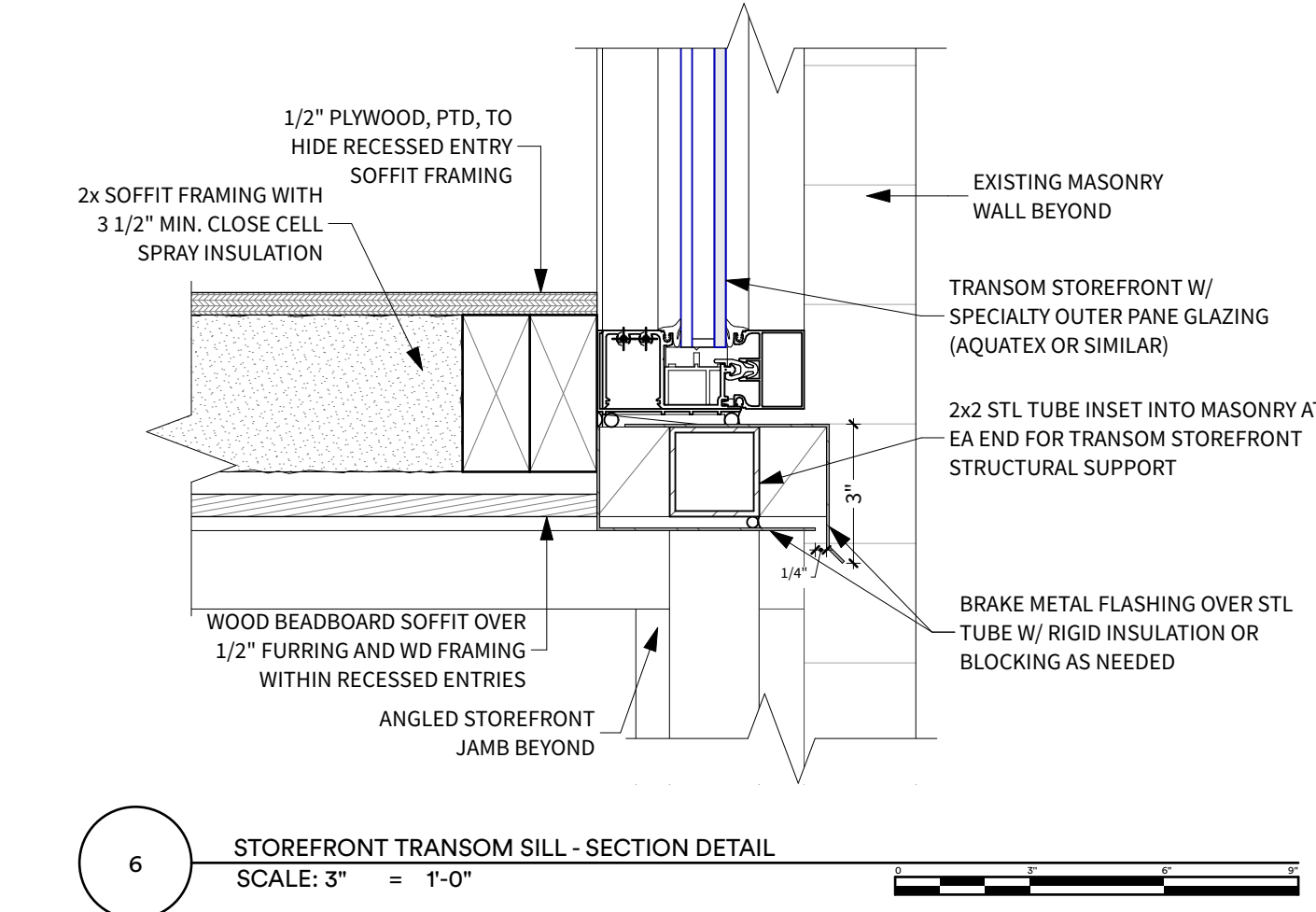
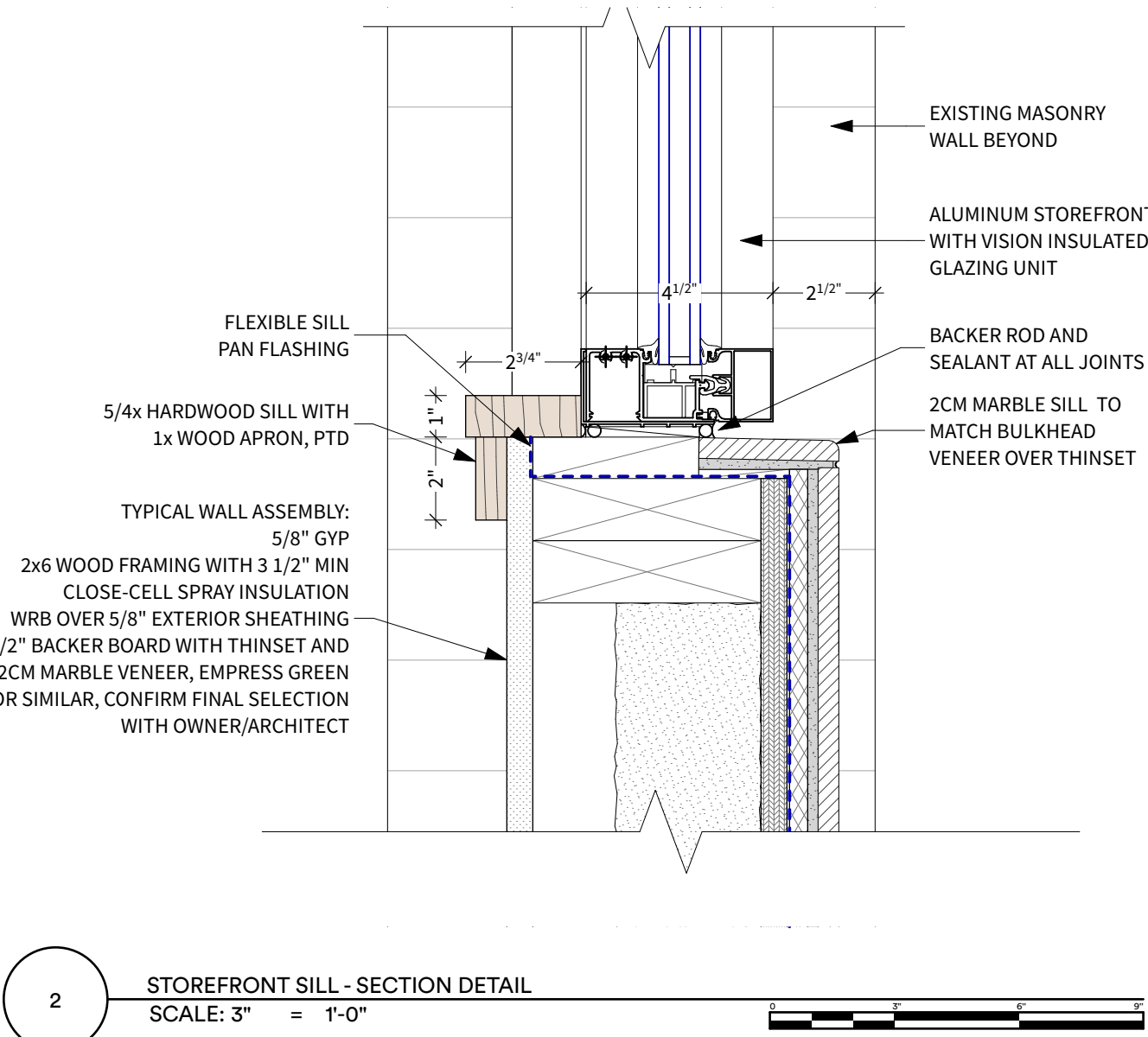
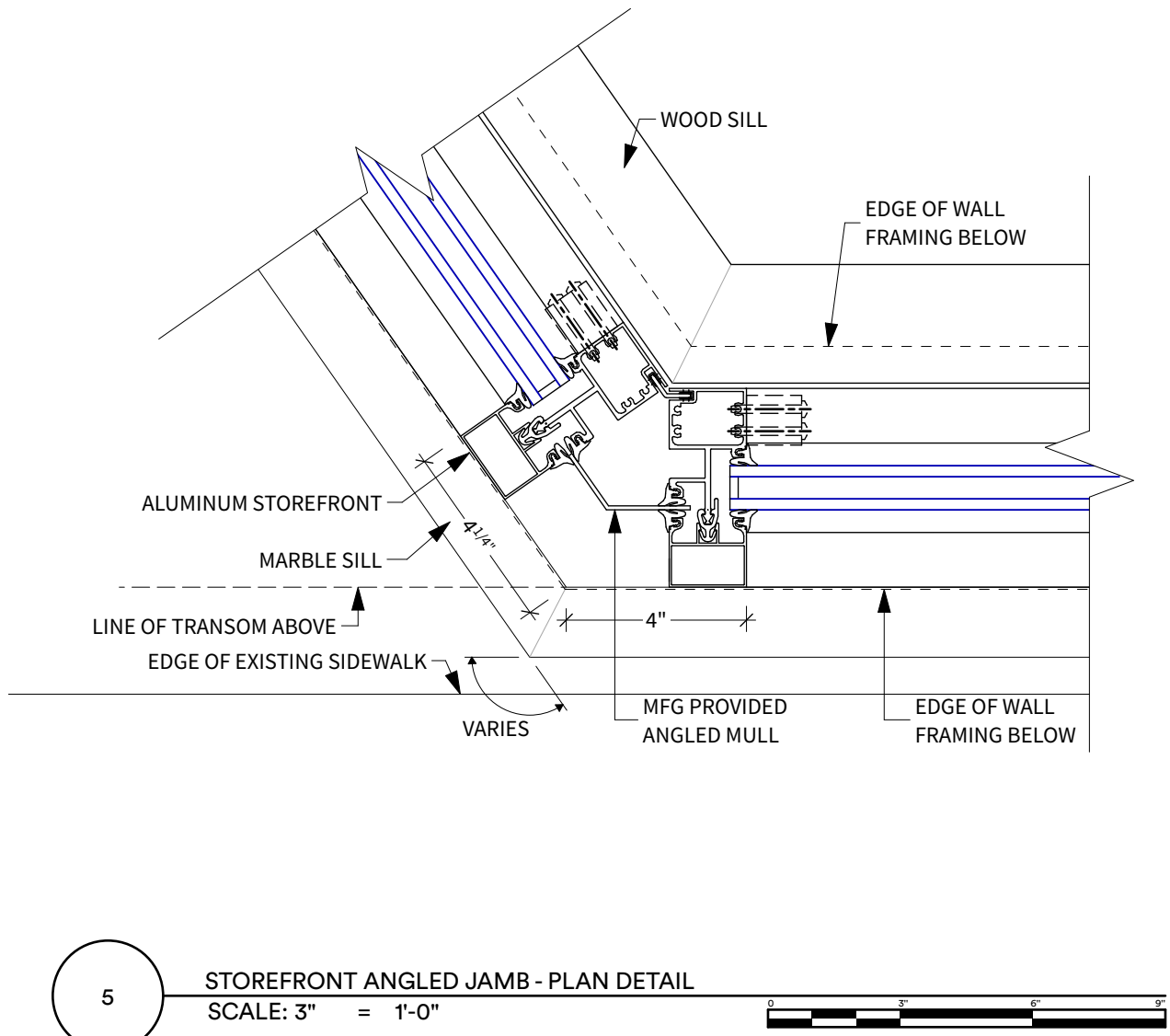
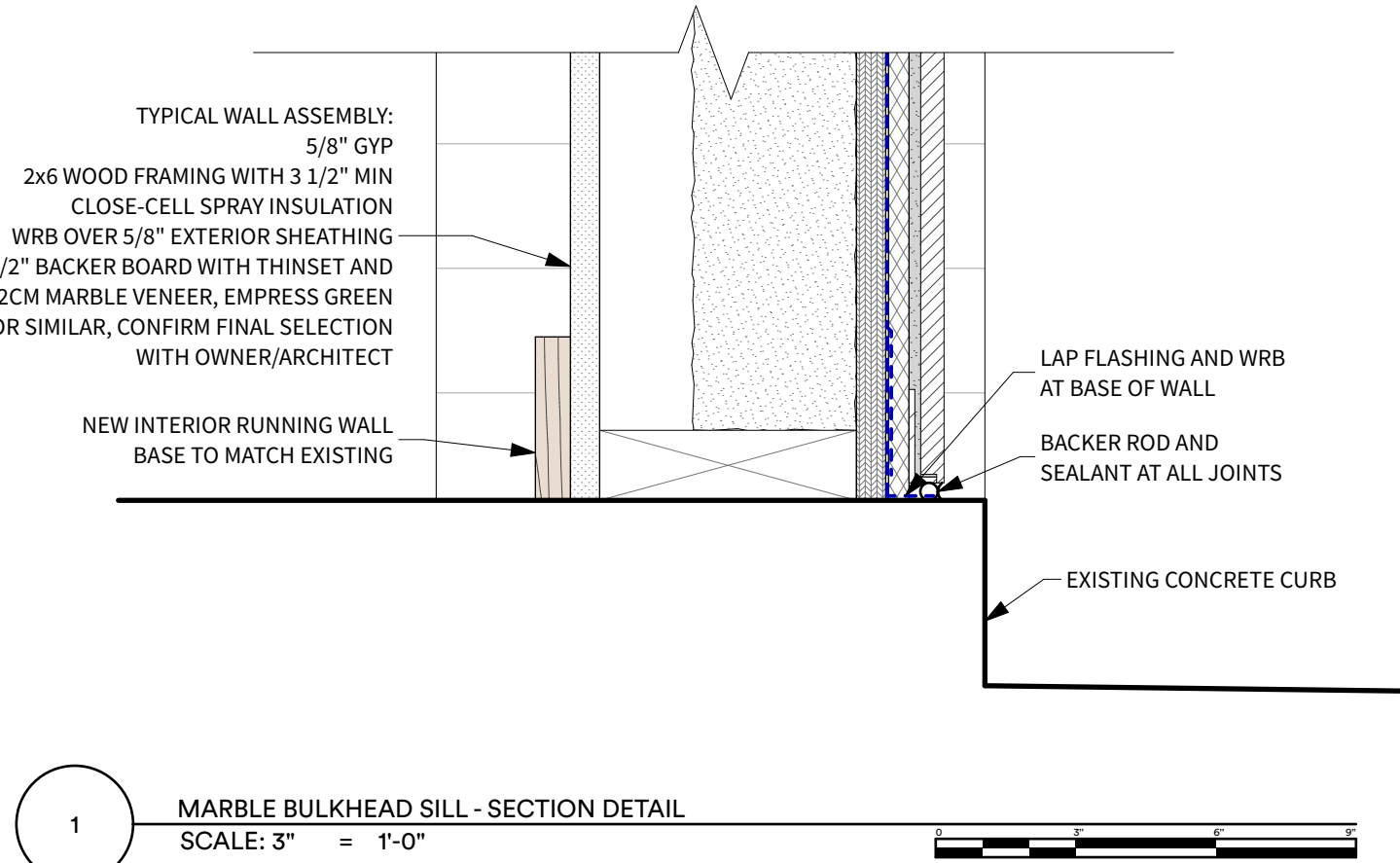
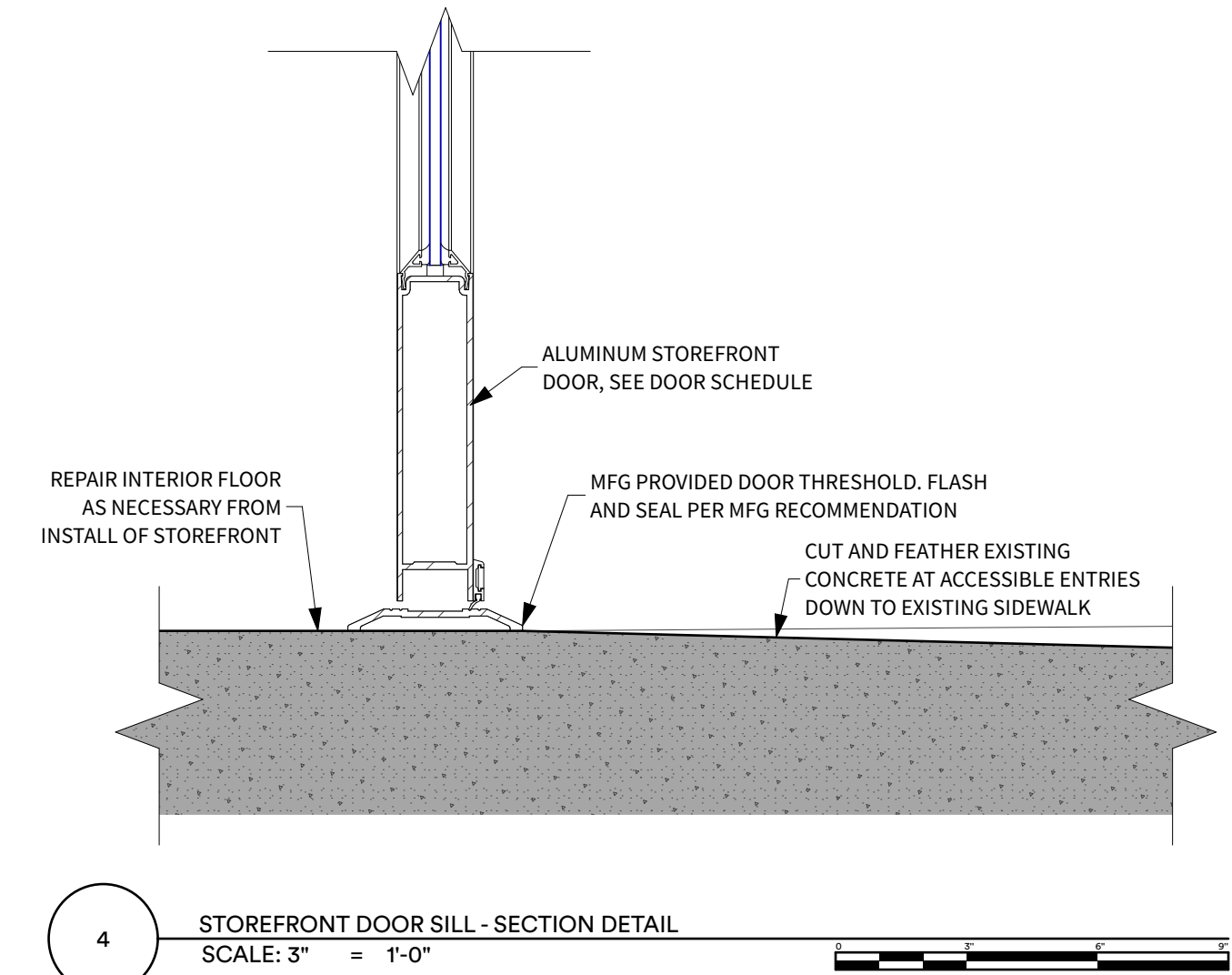
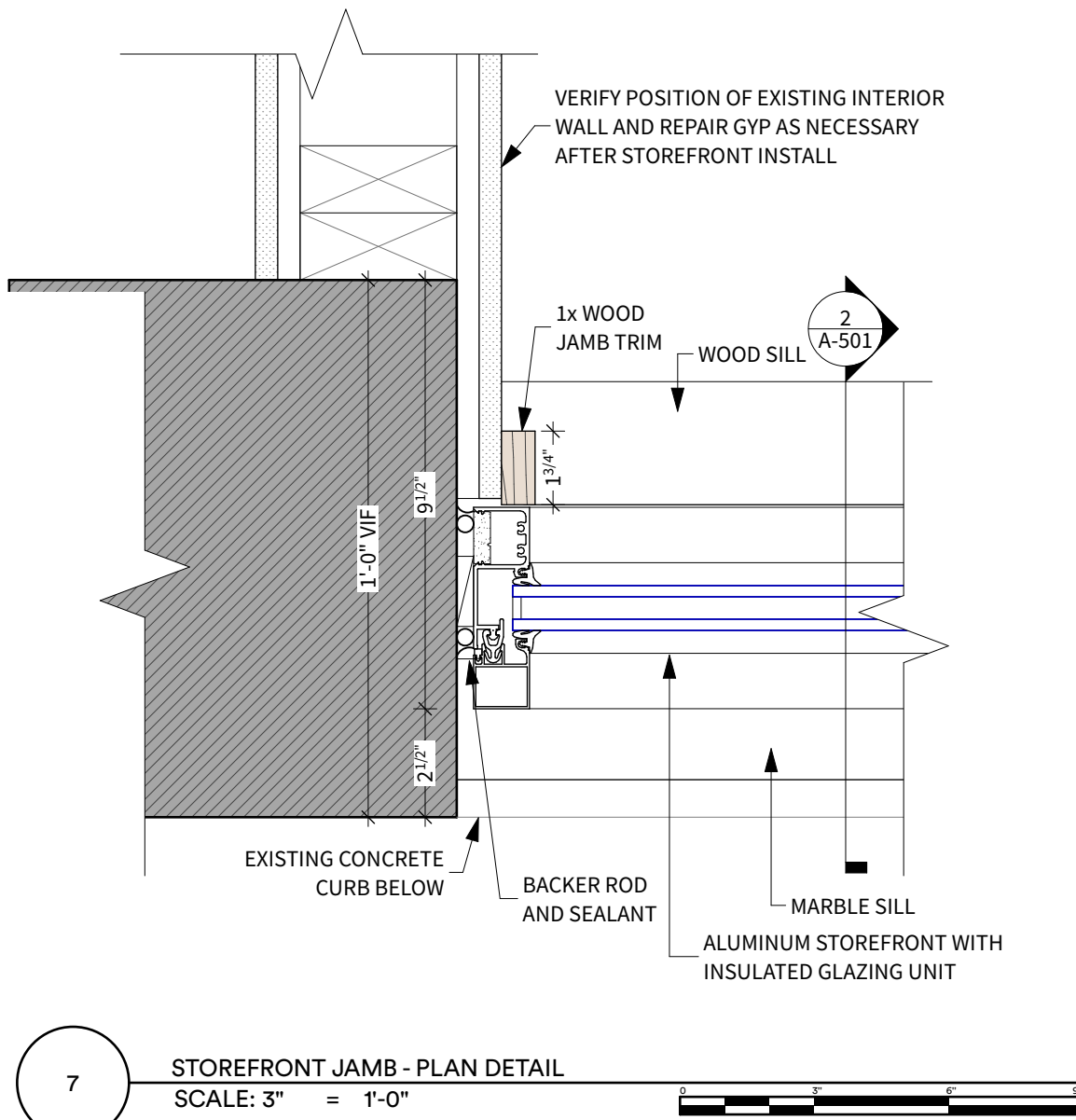
Stern & Cetlin Block Rehabilitation
5 Alfred Street Biddeford ME 04005
Seth Harkness

PROPOSED ELEVATION AND PLAN

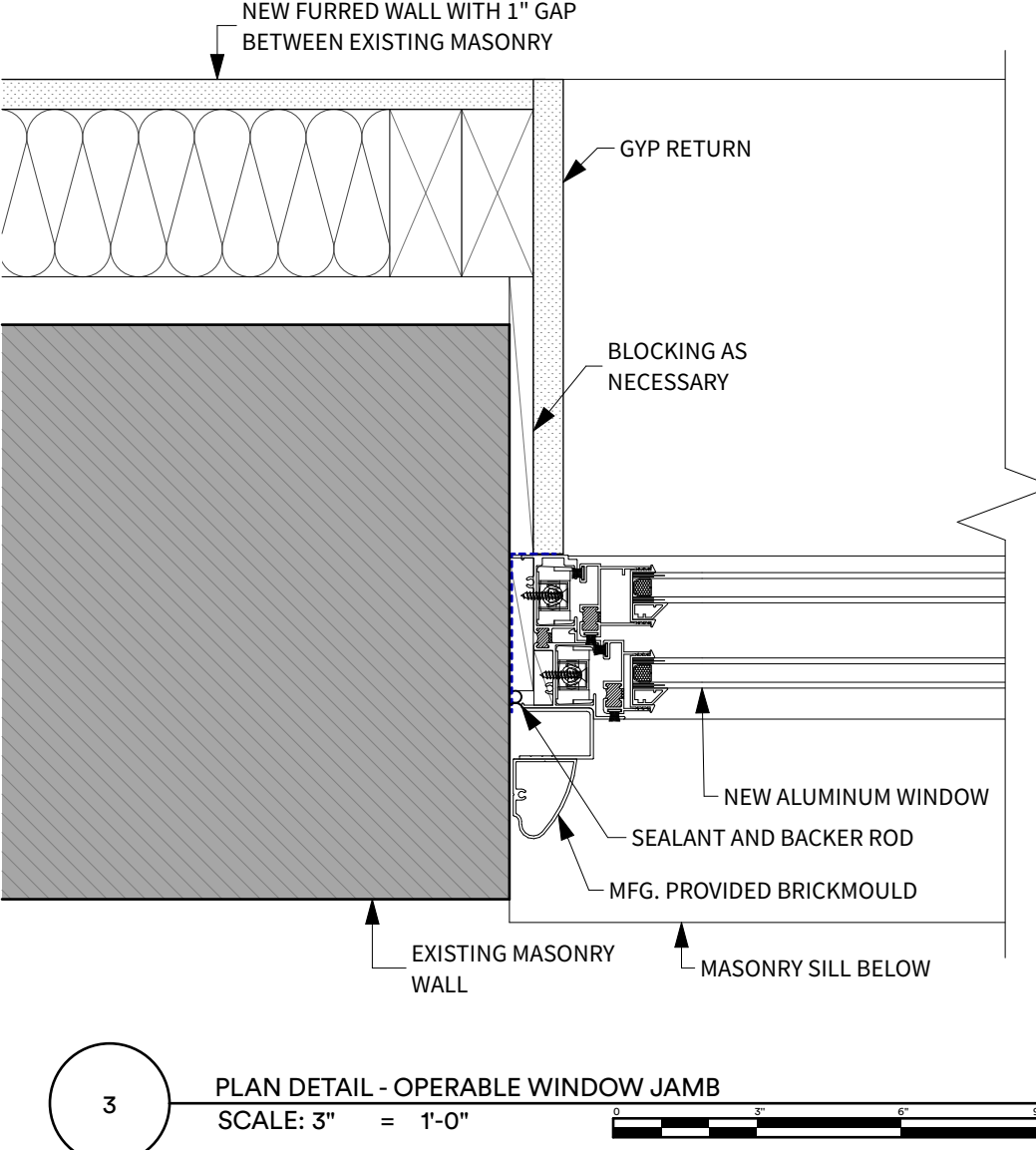
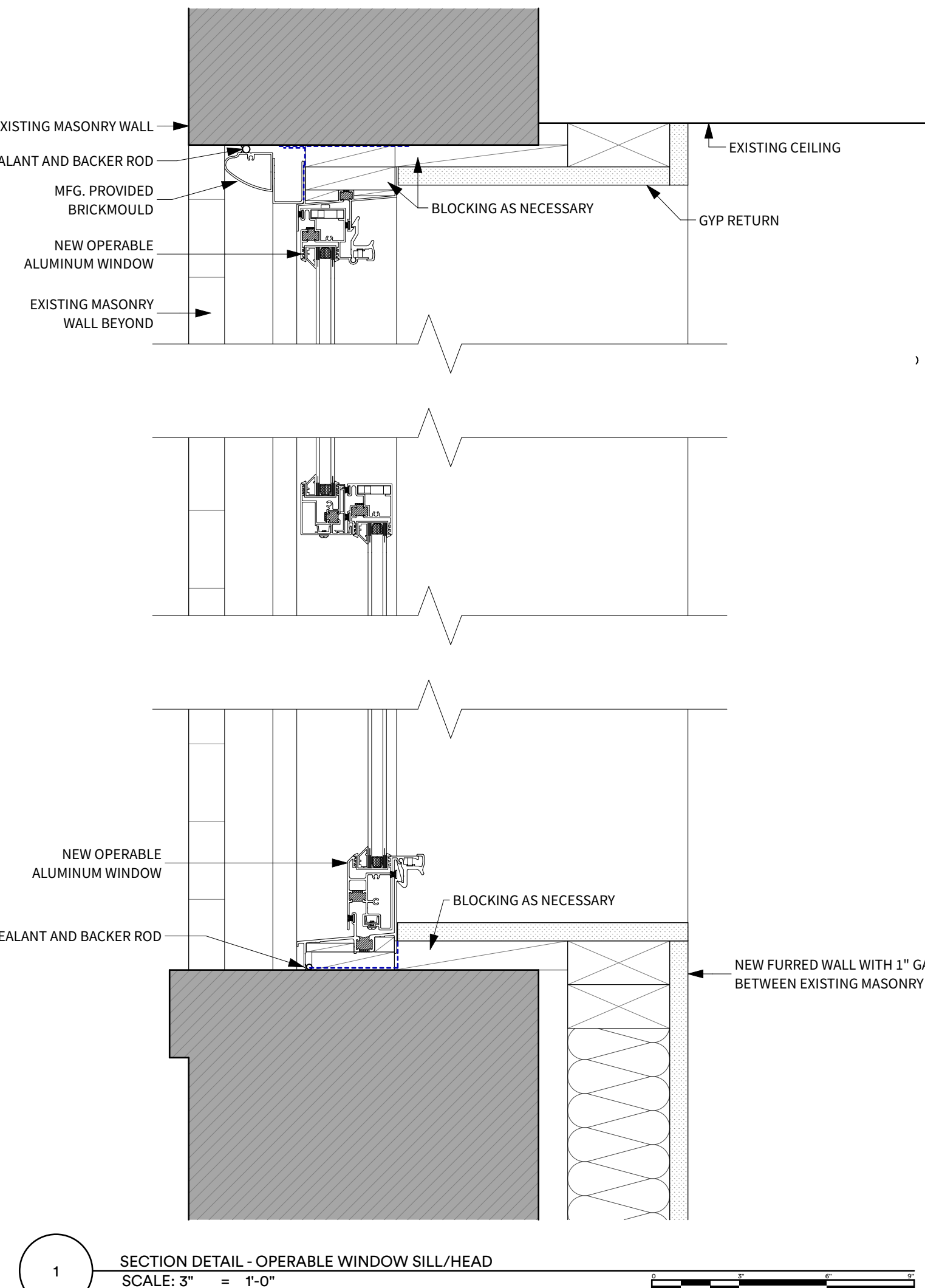
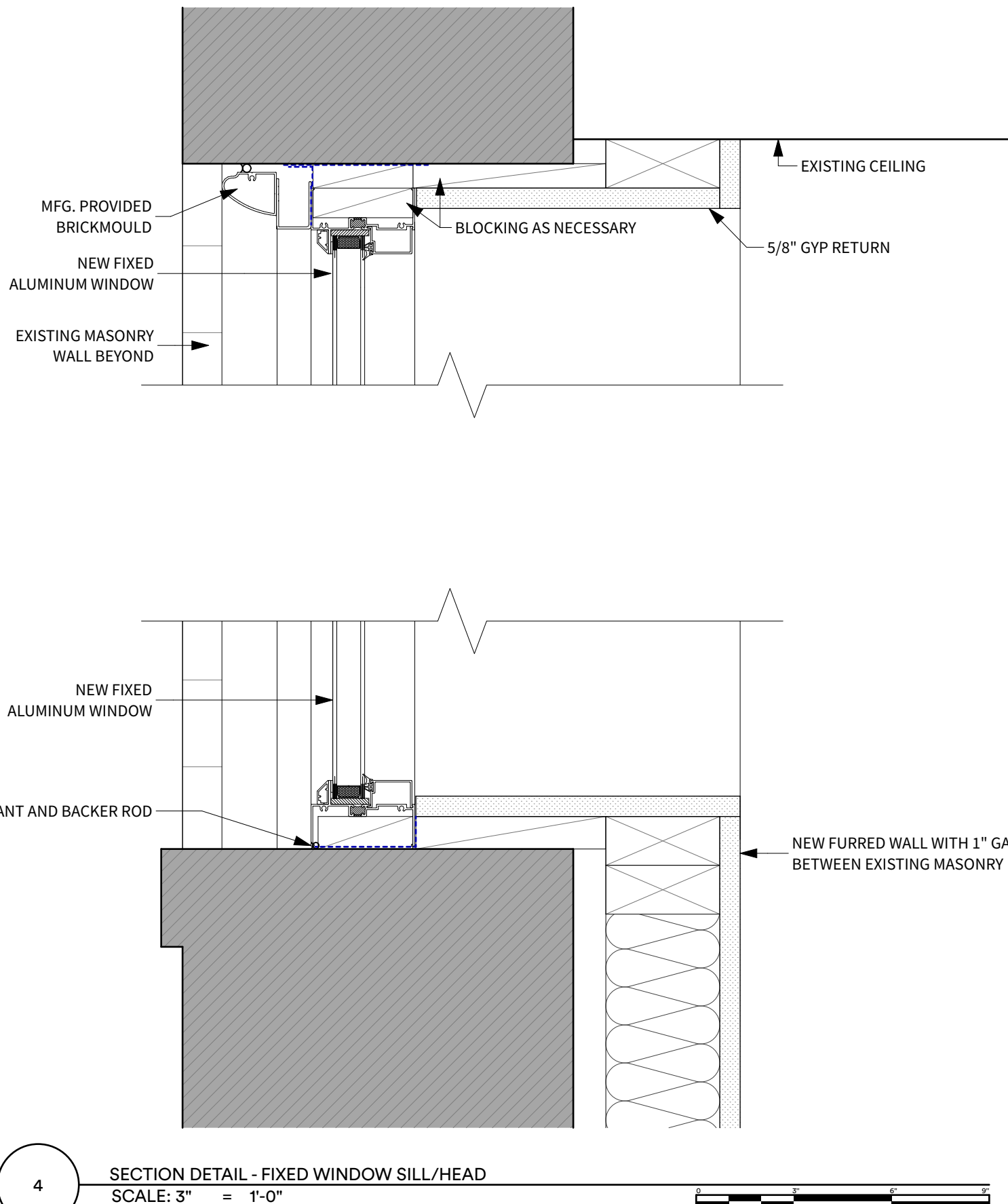
A-101



- DETAIL NOTES**
1. CJS has made best efforts to make these drawings as accurate as possible to existing conditions. Contractor is to verify all dimensions and existing conditions in field and consult with Owner and Architect where field conditions require further review or additional details.
 2. Contractor to provide shop drawings for Architect/Owner review prior to fabrication.
 3. Basis of design color for storefront system is bronze powdercoat. Contractor to provide RAL color selection chart from selected manufacturer for final selection.
 4. Steel tube sizing to be confirmed by fabricator to meet load requirements of transom storefront for length of existing opening. CJS to work with fabricator if sizing of steel needs to change for additional structural capacity.

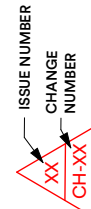


- DETAIL NOTES**
1. CJS has made best efforts to make these drawings as accurate as possible to existing conditions. Contractor is to verify all dimensions and existing conditions in field and consult with Owner and Architect where field conditions require further review or additional details.
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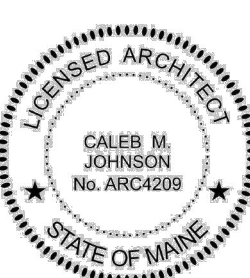


SUBMISSIONS:		DATE
ISSUE	DATE	
01	2/9/23	
02	2/9/23	

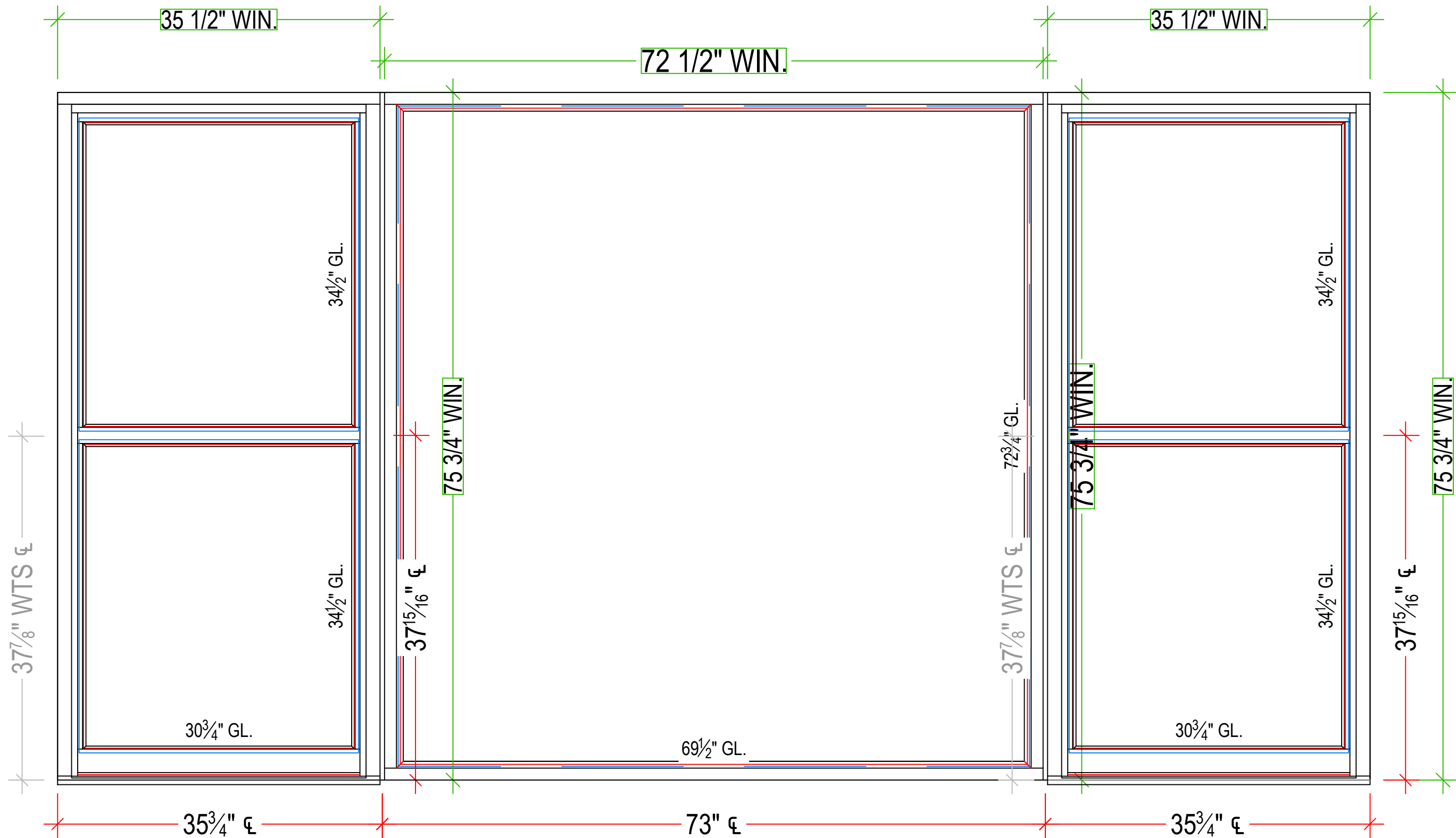
FOR CONSTRUCTION SET	
DESCRIPTION	DATE
FOR PARTITIONS	



CHANGES THIS ISSUE:	
ID	DESCRIPTION



HARDWARE: AUTO-LOCK FULL LENGTH POLE OPERATED ANTI BOW PINS SCREEN TYPE: N/A MESH TYPE: N/A TRIM TYPE: NA MULLION TYPE: MULEXT-700-018 MULCLP-700-016 MULCVR-562 PANNING PART NUMBERS: HEAD WRAP 1 : JAMBS WRAP 1: SILL WRAP 1 : HEAD WRAP 2 : JAMBS WRAP 2: SILL WRAP 2 : BALANCES: TOP SASH: BLOCK & TACKLE BOTTOM SASH: BLOCK & TACKLE	SETH HARKNESS- 5 ALFRED WINDOW FINISH SPEC: AAMA-2603 NAME: DURACRON COLOR/ CODE: BLACK GLAZING SCHEDULE GL1 1" OVERALL IG 1/8" ANNEALED RLE-7036 (EXT.) 3/4" AIR SPACE 90% ARGON FILLED 1/8" ANNEALED CLEAR (INT.) GL2 SIMULATED DIVIDED LIGHT SET UP	CUSTOMER: RICH EXTERIOR SOLUTIONS PO BOX 943 PORTLAND, ME 04104 PH: (207) 772-9822 SHIPPING ADDRESS: SETH HARKNESS-5 ALFRED 123 GRAY RD FALMOUTH, ME 04105 PH: (207) 650-0835 SPECIAL PARTS LIST: NO: DATE: A. B. C. D. E. F.	UNIVERSAL WINDOW AND DOOR, LLC. 303 Mechanic Street Marlborough, MA 01752 800-633-0108 508-481-2850 www.universalwindow.com PROJECT: SETH HARKNESS- 5 ALFRED ORDER 106685 REVISION # 5/20/2022 DATE OF ISSUE 3:26 PM TIME OF ISSUE ALEXISW DRAWN BY: DRAWING NUMBER C1
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RICH EXTERIOR SOLUTIONS- SETH HARKNESS - 5 ALFRED
ORDER 106685
WINDOW TYPE 1
(4) REQ'D THUS

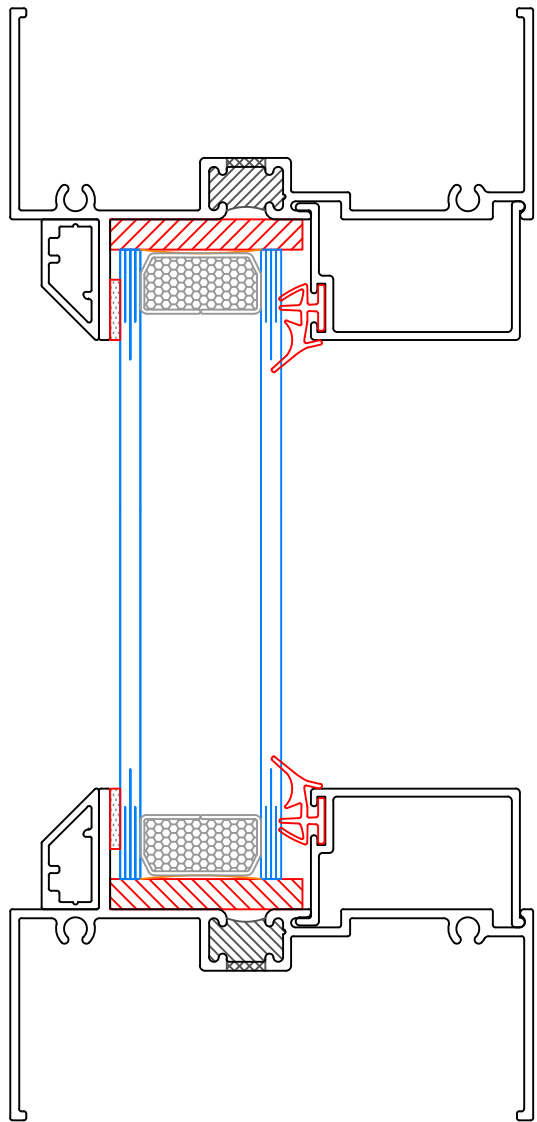
A.	B.	C.	D.
REVISION #			

DWG #
W1

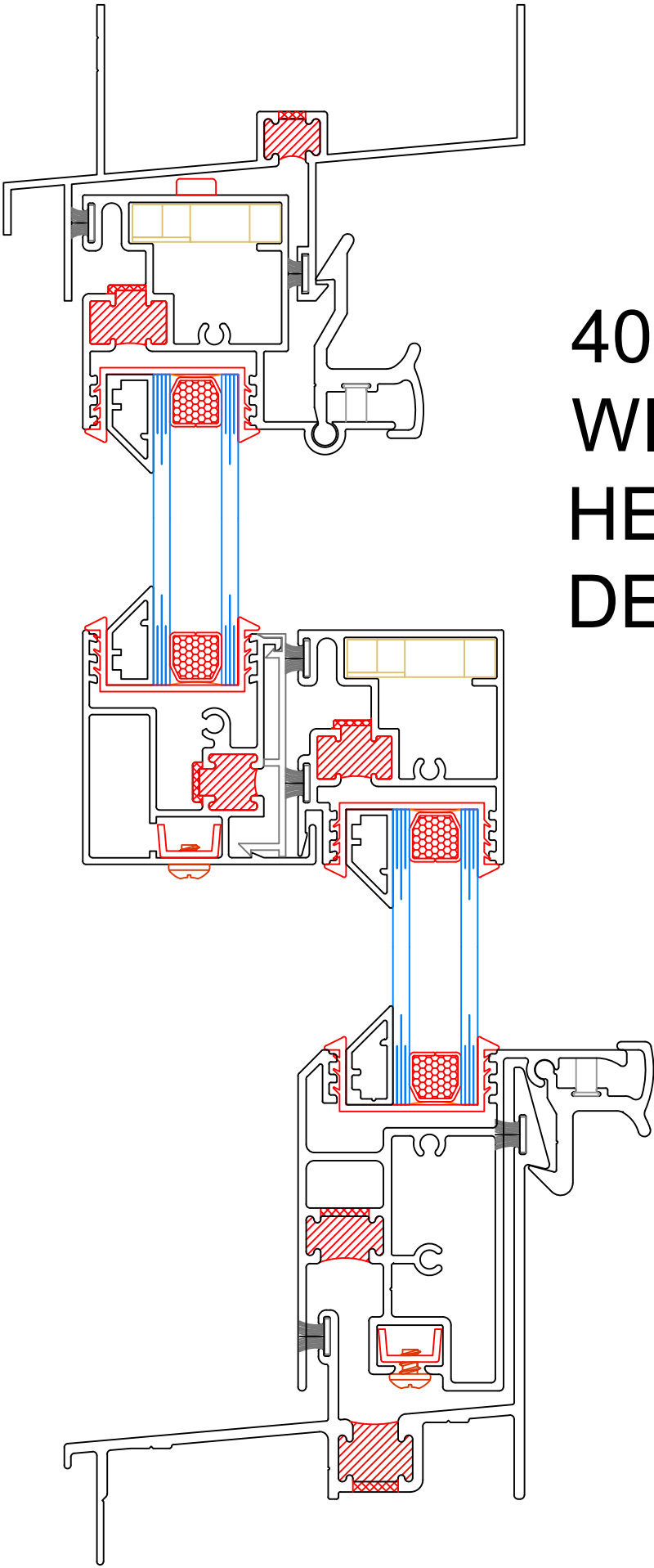
PROJECT NAME	CUSTOMER NAME
SETH HARKNESS - ALFRED ORDER 106685	RICH EXTERIOR SOLUTIONS

5/20/2022
DATE
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TIME OF ISSUE

UNIVERSAL WINDOW AND DOOR, LLC.
333 Mechanics Street
Norfolk, MA 01908
800.633.2018 508.441.2989
www.universalwindow.com



FXD WINDOW
HEAD & SILL
DETAIL



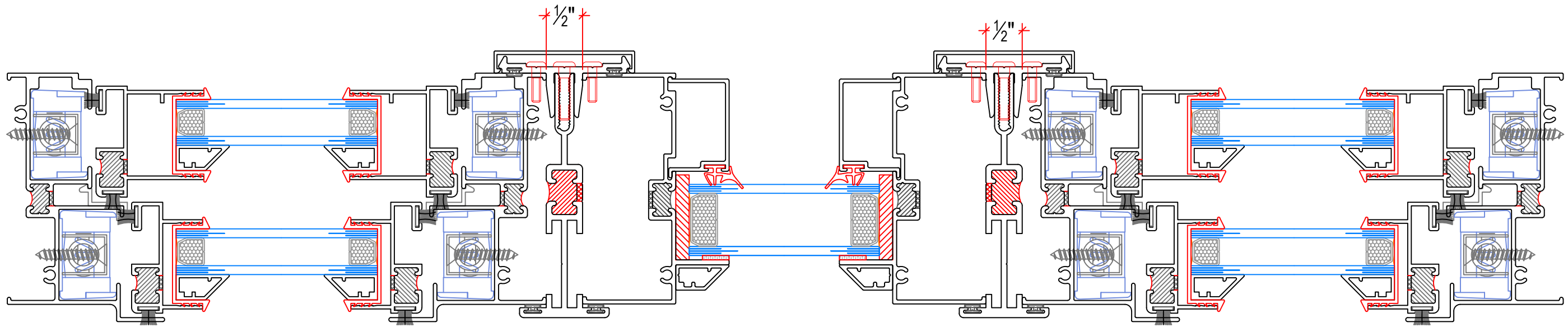
400 DH
WINDOW
HEAD & SILL
DETAIL

A.	B.	C.	D.
REVISION #			
DWG #			
D1			

PROJECT NAME	CUSTOMER NAME
SETH HARKNESS - ALFRED ORDER 106685	RICH EXTERIOR SOLUTIONS

5/20/2022
DATE
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TIME OF ISSUE

UNIVERSAL WINDOW
AND DOOR, LLC.
330 Mechanics Street
North Andover, MA 01855
802.633.0108 508.441.2789
www.universalwindow.com



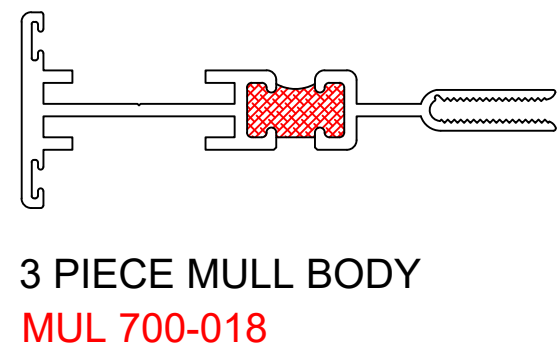
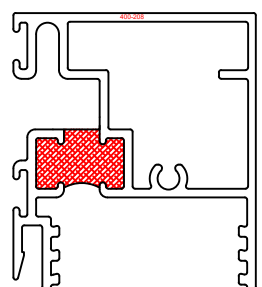
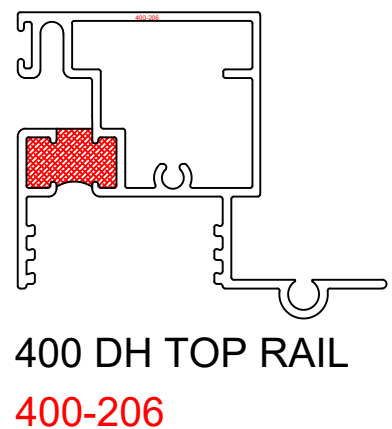
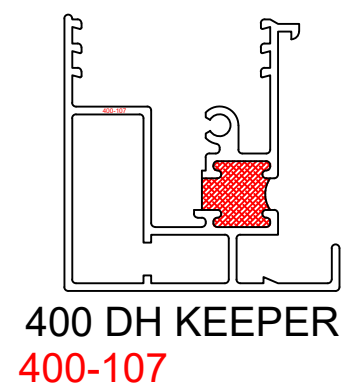
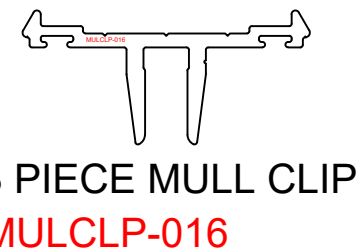
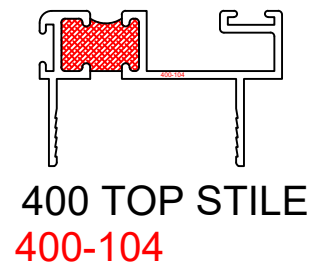
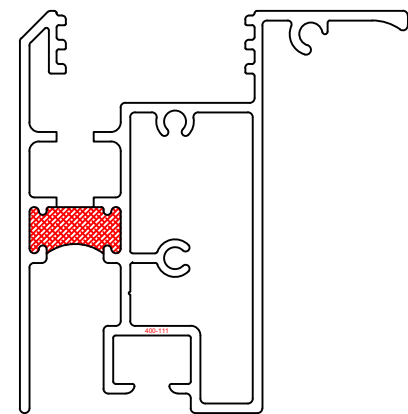
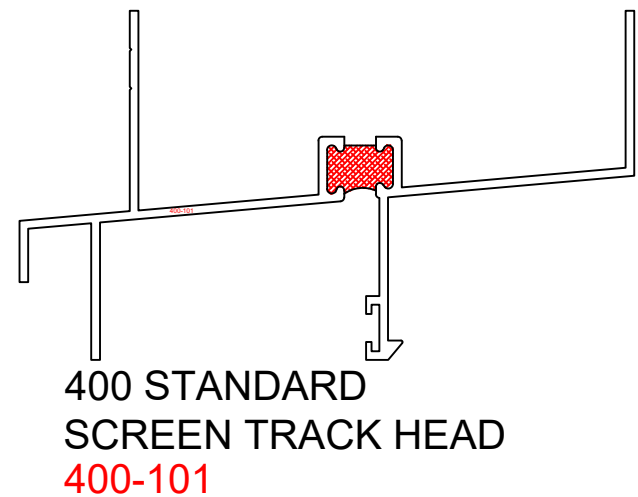
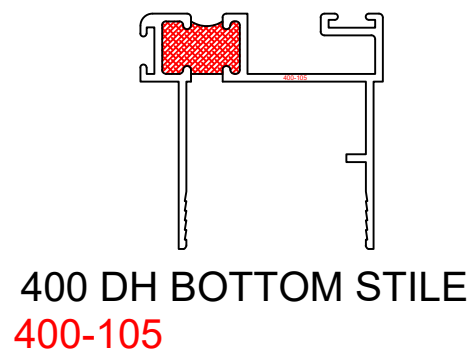
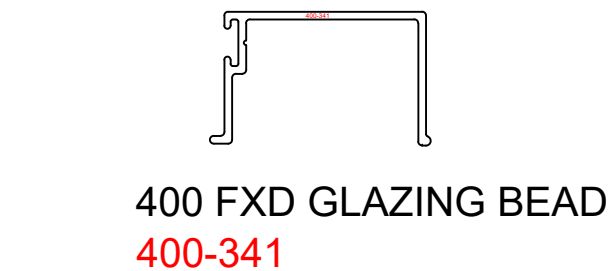
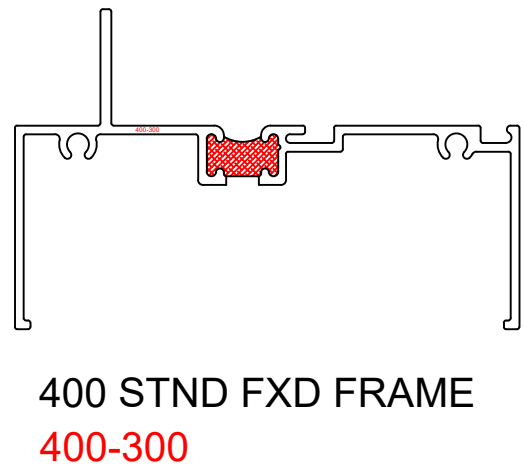
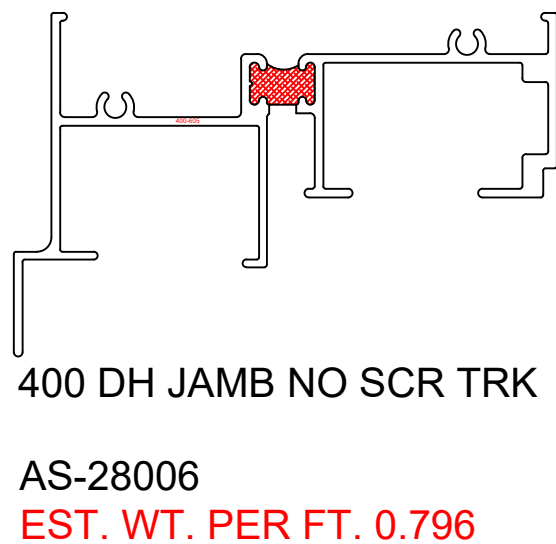
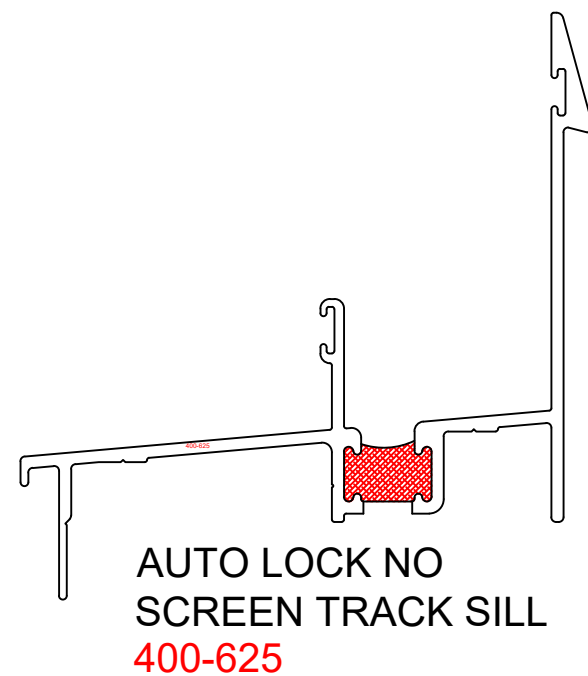
JAMB DETAIL

A.	B.	C.	D.
REVISION #			
DWG #			
D2			

PROJECT NAME	CUSTOMER NAME
SETH HARKNESS - ALFRED ORDER 106685	RICH EXTERIOR SOLUTIONS

5/20/2022
DATE
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330 Mechanics Street
North Attleboro, MA 01937
800.633.0108 508.481.2789
www.universalwindow.com



400 SERIES



*2020 Andersen brand survey of U.S. contractors.

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For warranty information, visit andersenwindows.com/warranty.



Andersen Corporation, including its subsidiaries, has been named a 2021 ENERGY STAR Partner of the Year – Sustained Excellence Award winner, the highest honor given by ENERGY STAR, for continued leadership in protecting the environment through superior energy efficiency achievements.



"ENERGY STAR" is a registered trademark of the U.S. Environmental Protection Agency.



AMERICA'S MOST LOVED BRAND OF WINDOWS & DOORS.*

You want to give your customers a home they love, and we're here to make that easy for you. That's why we're proud to offer you products that rate #1 in quality and performance,** and to be the #1 trusted and recommended window and door brand† by pros.

400 SERIES PRODUCTS

Our most popular choice with homeowners and the windows contractors trust the most! Easy to install, low maintenance and with fewer callbacks, the 400 Series can be your go-to for pretty much any project.

*2020 Andersen brand surveys of U.S. contractors, builders and realtors.

**2020 Andersen brand surveys of U.S. contractors, builders and architects.

†2020 Andersen brand survey of U.S. contractors.

RELIABLE & ENERGY EFFICIENT

As our best-selling products, the 400 Series product line offers a distinct blend of design, reliability and trade confidence. Designed for easy installation for replacement, remodel or new construction projects, 400 Series products feature our Perma-Shield® exterior cladding that revolutionized the window industry. They're also backed by our renowned limited warranty and the largest service network in the industry.

ENERGY-SAVING GLASS FOR ANY CLIMATE

Andersen makes windows and patio doors with options that make them ENERGY STAR® v. 6.0 certified throughout the United States.

Visit andersenwindows.com/energystar for more information and to verify that the product with your glass option is certified in your area.



RIGOROUSLY TESTED

The exclusive Andersen Perma-Shield system gives our windows and doors a tough, protective shell that safeguards the wood inside. It repels water, resists dents* and stays beautiful for years.

LOW MAINTENANCE, NEVER NEEDS PAINTING

The Perma-Shield exteriors on Andersen 400 Series windows and doors offer superior weather resistance and are virtually maintenance free.



OPTIONS FOR THE HARSHTEST WEATHER

400 Series windows with Stormwatch® Protection meet building code requirements in coastal areas.** Products with Stormwatch Protection are energy efficient, resist the effects of salt water, and stand up to hurricane-force winds and wind-borne debris.** For details, visit andersenwindows.com/coastal.



QUALITY SO SOLID, THE WARRANTY IS TRANSFERABLE*

Many other window and door warranties end when a home is sold, but our coverage – 20 years on glass, 10 years on non-glass parts – transfers from each owner to the next. And because it's not prorated, the coverage offers full benefits year after year, owner after owner. So it can add real value when you decide to sell your home.

OWNER2OWNER® LIMITED WARRANTY

BUILT FOR YEARS TO COME*

Our products are built strong to last long.* We use the right materials in the right places, including solid wood, fiberglass and our own Fibrex® composite material. These give our windows and doors superior strength, stability and long-term beauty.

KEEPS THE WEATHER OUT

Our weather-resistant construction and careful selection of weatherstrip by product type seals out drafts, wind and water whatever the weather.

*Visit andersenwindows.com/warranty for details.

**See your local code official for code requirements in your area.

"ENERGY STAR" is a registered trademark of the U.S. Environmental Protection Agency.

REPLACEMENT SOLUTIONS

Homeowners and realtors agree that Andersen products increase the value of a home by at least 10%*. So you're not just replacing their windows, you're upgrading their home.

INSERT WINDOWS



400 Series Woodwright® Double-Hung Insert Windows

The classic, traditional style of Woodwright full-frame windows in a time-saving insert.



400 Series Tilt-Wash Double-Hung Insert Windows

Our best-selling double-hung windows in an insert for easy replacement.

REPLACEMENT WINDOWS



400 Series Replacement Casement & Awning Windows

Available without an installation flange for easy window replacement from inside or outside. Feature predrilled, through-the-jamb installation holes for quick installation.

Our insert and replacement windows include flat self-hanging shims, backer rod, installation screws and complete instructions.



CUSTOM-SIZE FULL-FRAME WINDOWS

When the existing window frame is rotted or deteriorated, or you're modifying the size or shape of the existing window opening, our full-frame double-hung, casement, awning and specialty windows are available in custom sizes to fit your project.



CUSTOM-SIZE PATIO DOORS

Whether you need a hinged or gliding patio door for replacement, Andersen has a number of custom-size options to fit your project.



*2020 Andersen brand surveys of U.S. realtors and homeowners.

OVERALL BEST-IN-CLASS AMONG CONTRACTORS

FOR CLAD WOOD WINDOWS.*



*2020 Andersen brand survey of U.S. contractors.

PRODUCT OVERVIEW



Double-Hung Windows

Choose Woodwright® double-hung windows that replicate the look of traditional architecture or our best-selling tilt-wash double-hung windows that are extremely energy efficient. Both are available as full-frame or insert windows, and can be part of bay window combinations. Coordinating picture and transom windows are also available.



Woodwright full-frame windows come in a variety of shapes.



Our **Narroline® double-hung window conversion kit** can upgrade Andersen® Narroline double-hung windows to tilt-wash windows.



Specialty Windows

A collection of stylish shapes to help distinguish a home's style or create a delicate accent.



Complementary specialty windows offer 35 additional shapes and custom sizes.



Casement & Awning Windows

Casement and awning windows are energy efficient, and are built with our low-maintenance Perma-Shield® cladding. Available for new construction or replacement, as integral twin or triple units, or as part of bay or bow window combinations. Coordinating picture and transom windows are also available.

Complementary casement windows come in a variety of shapes and in French casement options.



Gliding Windows

Superior energy efficiency, reliable performance and uncommon beauty. Both sash on our gliding windows open for improved ventilation.



Frame any Frenchwood patio door with **Frenchwood patio door sidelights and transoms.**

Frenchwood® Gliding & Hinged Inswing Patio Doors

Wide wood profiles provide the authentic craftsmanship of traditional French doors, and our Perma-Shield exterior cladding protects the unit and offers low maintenance. Add blinds-between-the-glass to conveniently control light and privacy. To learn more about other traditional- and contemporary-style Andersen door options, visit andersenwindows.com/doors.



Complementary curved top patio doors, including Springline™ and arch hinged doors, are handcrafted and complement our 400 Series products.



EXTERIOR & INTERIOR OPTIONS

Our Perma-Shield® exterior cladding system, a time-tested Andersen innovation, offers low maintenance and durability while also providing an attractive appearance. The interiors of all 400 Series windows and patio doors are available in unfinished stain-grade pine or with a long-lasting, low-maintenance white finish. Select windows are also available with a dark bronze or black finish. 400 Series Woodwright® windows and Frenchwood® patio doors are also available with unfinished maple or oak interiors.

EXTERIOR COLORS**



White

Canvas

Sandtone

Terratone

Dark Bronze

Forest Green

Black

INTERIOR OPTIONS**



Pine

Maple

Oak

White

Dark Bronze†

Black†



Design your window at
andersenwindows.com/design-tool

*Visit andersenwindows.com/warranty for details.

**Some products are not available in all colors or wood species. See your Andersen supplier for details.

†Products with dark bronze and black interiors have matching exteriors; excludes complementary products.

Printing limitations prevent exact replication of colors and finishes. See your Andersen supplier for actual color and finish samples.

EXTERIOR TRIM SYSTEM

Add curb appeal with Andersen® exterior trim. Our trim is made with Fibrex® composite material, an environmentally smart composite that contains 40% pre-consumer reclaimed wood fiber by weight. For details, see page 175.

Time saving and cost effective



No nail holes, no visible fasteners, no painting

Innovative attachment strip

Independent of water management system for easy installation

Style that gets noticed

Our wide trim profiles overlap the window frame to create clean lines without visible sealant joints. Mitered brick mould corners and butt joints on flat casing profiles reflect traditional corner joints.



Sandtone window with cocoa bean trim



Visit andersenwindows.com/exteriortrim to learn more.

EXTERIOR COLORS

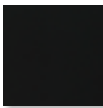


Printing limitations prevent exact duplication of colors. See your Andersen supplier for actual color samples.

WINDOW HARDWARE

Window hardware* enhances the overall design of a window and harmonizes with a home’s décor. That’s why we offer a broad range of hardware styles and finishes.

HARDWARE FINISHES

					
Antique Brass	Black	Bright Brass	Brushed Chrome	Distressed Bronze	Distressed Nickel
					
Gold Dust	Oil Rubbed Bronze	Polished Chrome	Satin Nickel	Stone	White

*Hardware is sold separately, except standard lock and keeper for double-hung windows.
Printing limitations prevent exact replication of finishes. See your Andersen supplier for actual finish samples.
Distressed bronze and oil rubbed bronze are “living” finishes that will change with time and use.



Caseament & Awning Windows



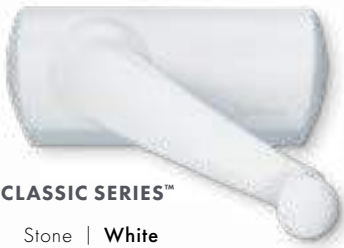
CONTEMPORARY FOLDING

Black | Bright Brass | Gold Dust | Oil Rubbed Bronze
Satin Nickel | Stone | White



TRADITIONAL FOLDING

Antique Brass | Black | Bright Brass | **Distressed Bronze**
Distressed Nickel | Gold Dust | Oil Rubbed Bronze
Satin Nickel | Stone | White



CLASSIC SERIES™

Stone | **White**



ESTATE™

Antique Brass | Bright Brass | Brushed Chrome
Distressed Bronze | Distressed Nickel | Oil Rubbed Bronze
Polished Chrome | Satin Nickel

Folding handles avoid interference with window treatments.

Gliding Windows



Antique Brass | Black | Bright Brass
Brushed Chrome | Distressed Bronze
Distressed Nickel | Oil Rubbed Bronze
Polished Chrome | Satin Nickel
Stone | White

Woodwright® Double-Hung Windows



Standard Lock & Keeper

Antique Brass | **Black** | Bright Brass | Brushed Chrome | Distressed Bronze
Distressed Nickel | Gold Dust | Oil Rubbed Bronze | Polished Chrome
Satin Nickel | Stone | White

Tilt-Wash Double-Hung Windows



Standard Lock & Keeper

Black | **Gold Dust** | Stone | White

Stone is standard with natural interior units.
White comes with prefinished white interiors.
Other finishes optional.



Optional Lock & Keeper

ESTATE™

Antique Brass | **Bright Brass**
Brushed Chrome | Distressed Bronze
Distressed Nickel | Oil Rubbed Bronze
Polished Chrome | Satin Nickel

Bold name denotes finish shown.

Optional Estate lock and keeper is available only for 400 Series tilt-wash double-hung windows.
Estate lock and keeper reduces the clear opening height by 19/32" (15). Check with local building code officials to determine compliance with egress requirements.
Optional sash lifts shown on page 48 for Woodwright windows and page 76 for tilt-wash windows.

Hardware is sold separately, except standard lock and keeper for double-hung windows.

Dimensions in parentheses are in millimeters.

Printing limitations prevent exact replication of finishes. See your Andersen supplier for actual finish samples.

Distressed bronze and oil rubbed bronze are "living" finishes that will change with time and use.

PATIO DOOR HARDWARE

Patio door hardware* is available in a variety of designs to match virtually any style. Anvers®, Yuma®, Newbury®, Covington™, Encino® and Whitmore® hardware options feature solid drop-forged brass for added strength, while Albany and Tribeca® hardware options are made of diecast zinc with durable powder-coated finishes. Also, look for additional hardware options such as exterior keyed locks and matching hinge finishes in the detailed product sections for each individual patio door.

Gliding

Hinged

Gliding

Hinged

Gliding

Hinged

Gliding

Hinged

ANVERS®

Bright Brass | Oil Rubbed Bronze

Satin Nickel

YUMA®

Distressed Bronze

Distressed Nickel

NEWBURY®

Antique Brass | Bright Brass

Brushed Chrome | **Oil Rubbed Bronze**

Polished Chrome | Satin Nickel

ALBANY

Black | **Gold Dust**

Stone | White

Bold name denotes finish shown.

HARDWARE FINISHES

Antique Brass

Black

Bright Brass

Brushed Chrome

Distressed Bronze

Distressed Nickel

Gold Dust

Oil Rubbed Bronze

Polished Chrome

Satin Nickel

Stone

White

*Hardware sold separately.
 Matching hinges available for inswing patio doors; excludes FSB® hardware.
 Mix-and-match interior and exterior style and finish options are available.
 Bright brass and satin nickel finishes feature a 10-year limited warranty
 Printing limitations prevent exact replication of finishes. See your Andersen supplier for actual finish samples.
 Distressed bronze and oil rubbed bronze are "living" finishes that will change with time and use.



COVINGTON™

Antique Brass | Bright Brass
Oil Rubbed Bronze



ENCINO®

Distressed Bronze
Distressed Nickel



WHITMORE®

Antique Brass | Bright Brass
Oil Rubbed Bronze | Satin Nickel

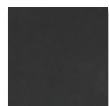


TRIBECA®

Black | Stone | White

FSB® HINGED PATIO DOOR HARDWARE

Durable stainless steel FSB hinged door hardware* features clean lines and a sleek satin finish for a thoroughly modern look. Choose from four styles and two finishes.



Black
Anodized
Aluminum



Satin
Stainless
Steel



1035



1075



1076



1102**

*Hardware sold separately. **FSB style 1102 is not available in black anodized aluminum.
"FSB" is a registered trademark of Franz Schneider Brakel GmbH & Co.

GLASS OPTIONS

Andersen has the glass you need to get the performance you want. From SmartSun™ glass with HeatLock® coating that’s ENERGY STAR® certified in all climate zones* to PassiveSun® glass that helps heat homes in northern areas, there’s an option for every climate, project and customer. Check with your supplier for selections that meet ENERGY STAR requirements in your area.

GLASS		ENERGY		LIGHT	
		U-Factor How well a product prevents heat from escaping.	Solar Heat Gain Coefficient How well a product blocks heat caused by sunlight.	Visible Light Transmittance How much visible light comes through a product.	UV Protection How well a product blocks ultraviolet rays.
Low-E4®	Outstanding overall performance for climates where both heating and cooling costs are a concern.	● ● ● ○	● ● ● ○	● ● ● ○	● ● ● ○
Low-E4 with HeatLock® Coating	Applied to the room-side surface, it reflects heat back into the home and improves U-Factor values.	● ● ● ●	● ● ● ○	● ● ● ○	● ● ● ○
SmartSun™	Thermal control similar to tinted glass, with visible light transmittance similar to Low-E4 glass.	● ● ● ○	● ● ● ●	● ● ● ○	● ● ● ●
SmartSun with HeatLock Coating	Applied to the room-side surface, it reflects heat back into the home and improves U-Factor values.	● ● ● ●	● ● ● ●	● ● ○ ○	● ● ● ●
Sun	Outstanding thermal control in southern climates where less solar heat gain is desired.	● ● ● ○	● ● ● ●	● ○ ○ ○	● ● ● ○
PassiveSun®	Ideal for northern, passive solar construction applications where solar heat gain is desired.	● ● ● ○	● ○ ○ ○	● ● ● ○	● ● ● ○
PassiveSun with HeatLock Coating	Applied to the room-side surface, it reflects heat back into the home and improves U-Factor values.	● ● ● ○	● ○ ○ ○	● ● ● ○	● ● ● ○
Clear Dual-Pane	High visibility with basic thermal performance.	● ○ ○ ○	○ ○ ○ ○	● ● ● ●	○ ○ ○ ○

Center of glass performance only. Ratings based on glass options as of May 2021. Visit andersenwindows.com/energystar for ENERGY STAR map and NFRC total unit performance data.

HEATLOCK TECHNOLOGY

Applied to the room-side glass surface, HeatLock coating reflects heat back into the home for improved performance.

STORMWATCH® PROTECTION

Most Andersen 400 Series windows are available with impact-resistant glass and structural upgrades to meet the tough building codes of hurricane-prone coastal areas. See your local code official for specific requirements.



ADDITIONAL GLASS OPTIONS

Tempered safety glass is standard on patio doors and required for larger window sizes.

Laminated glass is available for added strength, enhanced security and sound control.

Patterned glass lets in light while obscuring vision and adds a unique, decorative touch. Cascade and Reed patterns can be ordered with either a vertical or horizontal orientation.



ART GLASS

With art glass panels from Andersen, you can add interest, create focal points and make your work stand out. See page 173 or visit andersenwindows.com/artglass for more information.

TIME-SAVING FILM

We protect our products during delivery and construction with translucent film on the glass that peels away for a virtually spotless window.

For more details on our glass options, visit andersenwindows.com/glass.



*Andersen 400 Series products only with SmartSun glass with HeatLock coating (argon gas blend), no grilles, no capillary breather tubes. Excludes patterned/textured glass. "ENERGY STAR" is a registered trademark of the U.S. Environmental Protection Agency.



BLINDS-BETWEEN-THE-GLASS

Conveniently located between the panes of insulated glass, and protected from dust and damage for long-lasting protection, blinds-between-the-glass is available on 400 Series Frenchwood® gliding or hinged inswing patio doors. Available in white, and can be ordered with any exterior door color with a pine or prefinished white interior.



GLASS SPACER OPTIONS

Black or white glass spacers are now available as a standard offering on select products, in addition to stainless steel glass spacers, to provide more ways to customize project designs and achieve a contemporary style. Colored glass spacers blend in with the color of the window or door for a sleek design, or serve as a shadow line.

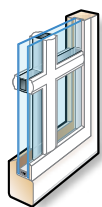
Add full divided light grilles, and the grille spacer bar between the glass will match the selected glass spacer color.



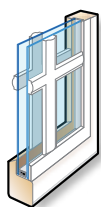


GRILLE OPTIONS

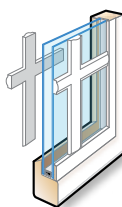
Grille patterns are available in widths and configurations to fit any architectural style or the taste of any customer. We can match virtually any existing grille pattern, and we'll even work with you and your customers to create custom patterns.



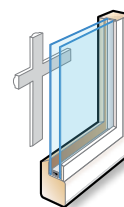
Permanent exterior
Permanent interior
with spacer



Permanent exterior
Permanent interior



Permanent exterior
Removable interior



Removable interior



Finelight
grilles-
between-
the-glass

FULL DIVIDED LIGHT

Permanently applied to the interior and exterior of the window, with a spacer between the glass.

SIMULATED DIVIDED LIGHT

Permanent grilles on the exterior and interior, with no spacer between the glass. We also offer permanent exterior grilles with removable interior grilles.

CONVENIENT CLEANING OPTIONS

Removable interior grilles come off for easy cleaning. Finelight™ grilles-between-the-glass are installed between the glass panes, and feature a contoured profile in 1" (25) and 3/4" (19) widths.

Grille Bar Widths & Patterns



3/4" (19)



7/8" (22)



1 1/8" (29)



2 1/4" (57)

Actual width shown.

Our 2 1/4" (57) width grille can be positioned horizontally across the center of a casement window to simulate the look of a double-hung window.

To see all of the standard patterns available for a specific window or door, refer to the detailed product sections in this product guide.



*7/8" (22), 1 1/8" (29) and 2 1/4" (57) are not available in Finelight grilles-between-the-glass.

Dimensions in parentheses are in millimeters.

INSECT SCREEN OPTIONS

Andersen® TruScene® insect screens provide more than 50% greater clarity than conventional Andersen insect screens for a beautifully unobstructed view. They let in 25% more fresh air*, all while keeping out unwanted small insects.



TRUSCENE INSECT SCREENS

For casement and awning windows, TruScene insect screen frames are available in stone, white, dark bronze, black and natural pine veneer that can be stained to match the window. Insect screen frames for all other windows are installed on the exterior of the window and match the unit's exterior color.



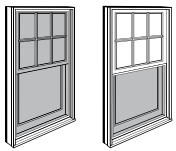
Pine | White | Stone | Dark Bronze | Black

CONVENTIONAL INSECT SCREENS

Conventional insect screen frames are available in white, stone, dark bronze and black for casement and awning windows. Insect screen frames for all other windows and doors are installed on the exterior of the window or door and match the unit's exterior color.

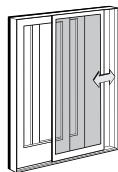
INSECT SCREEN CONFIGURATIONS

Windows

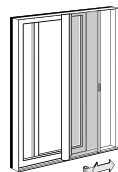


Full insect screens are available for Andersen venting windows. **Half insect screens** are also available for the lower sash of our Woodwright® and tilt-wash double-hung windows.

Gliding Patio Doors

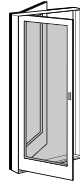


Gliding insect screens are available for two- and four-panel doors.

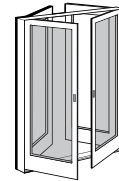


Retractable insect screens are installed on the exterior and opens side to side across the width of the opening. When not in use, it neatly retracts into a small canister. Available for two-panel doors.

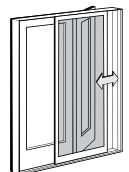
Hinged Inswing Patio Doors



Hinged insect screens are available for single-panel doors.



Double-hinged insect screens are available for two-panel active-passive doors.



Gliding insect screens are available for all two- and three-panel doors.

*TruScene insect screens let in over 25% more fresh air than standard Andersen fiberglass insect screens.

A modern bedroom interior featuring large windows with dark frames and white curtains. A green armchair with a white pillow sits near the windows. A white bed with a black tufted bench at the foot is visible. A large, dark, circular chandelier hangs from the ceiling. The room is bathed in warm, golden light from the setting or rising sun visible through the windows.

THE CLAD WOOD WINDOWS
**MORE CONTRACTORS
WOULD CHOOSE FOR
THEIR OWN HOME.***

*2020 Andersen brand survey of U.S. contractors.

COMPARISON CHART

Use the quick reference chart below to decide which Andersen® 400 Series products best fit your project needs.

		WINDOWS								PATIO DOORS	
FEATURES		Woodwright® Double-Hung Full-Frame	Woodwright Double-Hung Insert	Tilt-Wash Double-Hung Full-Frame	Tilt-Wash Double-Hung Insert	Narroline® Double-Hung Conversion Kit	Casement	Awning	Gliding	Frenchwood® Gliding	Frenchwood Hinged Inswing
Low-Maintenance Exteriors											
	White	●	●	●	●	●	●	●	●	●	●
	Canvas	●	●	●	●		●	●	●		
	Sandtone	●	●	●	●	●	●	●	●	●	●
	Terratone	●	●	●	●	●	●	●	●	●	●
	Dark Bronze	●	●	●	●		●	●	●		
	Forest Green	●	●	●	●		●	●	●	●	●
	Black	●	●	●	●		●	●	●		
Interiors											
	Pine	●	●	●	●	●	●	●	●	●	●
	Maple	●	●							●	●
	Oak	●	●							●	●
	White	●	●	●	●	●	●	●	●	●	●
	Sandtone								●		
	Dark Bronze			●	●		●	●	●		
	Black			●	●		●	●	●		
Easy Cleaning											
Tilt-to-Clean Sash		●	●	●	●	●					
Grilles & Blinds											
Full Divided Light		●	●	●	●	●	●	●	●	●	●
Simulated Divided Light		●	●	●	●	●	●	●	●	●	●
Finelight™ Grilles-Between-the-Glass		●	●	●	●	●	●	●	●	●	●
Removable Interior Grilles		●	●	●	●	●	●	●	●	●	●
Blinds-Between-the-Glass										●	●
High-Performance Glass Additional glass options are available. See page 12 for details. For patio doors, all glass options are tempered.											
Low-E4®		●	●	●	●	●	●	●	●	●	●
Low-E4 SmartSun™		●	●	●	●	●	●	●	●	●	●
Low-E4 Sun		●	●	●	●	●	●	●	●	●	●
Low-E4 PassiveSun		●	●	●	●	●	●	●	●	●	●
Clear Dual-Pane							●	●			
HeatLock® Coating		●	●	●	●	●	●	●	●	●	●
Performance Option											
Stormwatch® Protection		PG upgrade		●			●	●			
Glass Spacers											
Stainless Steel		●	●	●	●	●	●	●	●	●	●
Black or White		●	●	●	●	●	●	●	●	●	●
Standard Sizes											
Minimum Width		1'-9 5⁄8"	1'-4 1⁄2"	1'-9 5⁄8"	1'-9 1⁄4"	Fits Narroline double-hung windows made after 1967	1'-5"	2'-0 1⁄8"	2'-11 1⁄4"	4'-11 1⁄4"	2'-6 1⁄8"
Maximum Width		3'-9 5⁄8"	3'-9 5⁄8"	3'-9 5⁄8"	3'-8 7⁄8"		2'-11 15⁄16"	5'-11 7⁄8"	5'-11 1⁄4"	15'-9"	8'-11 1⁄8"
Minimum Height		3'-0 7⁄8"	2'-3 3⁄4"	3'-0 7⁄8"	3'-0 3⁄8"		2'-0 1⁄8"	1'-5"	1'-10 1⁄4"	6'-7 1⁄2"	6'-7 1⁄2"
Maximum Height		6'-4 7⁄8"	6'-5"	7'-8 7⁄8"	7'-6 5⁄8"		5'-11 7⁄8"	4'-0"	4'-11 1⁄4"	7'-11 1⁄2"	7'-11 1⁄2"
Custom Sizes		●	●	●	●		●	●		●	●

THE WINDOWS
**WITH FEWER
CALLBACKS.***
DESIGNED
FOR EASY
INSTALLATION.



*2020 Andersen brand survey of U.S. contractors.



CASEMENT & AWNING WINDOWS

Alignment Grid	22-23
Tables of Sizes	24-28
Specifications	29-32
Custom Sizes	33
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Joining Details	36
Combination Designs	181
Product Performance	197

CUSTOM SIZING
in 1/8" (3) increments



Dimensions in parentheses are in millimeters.

CASEMENT & AWNING WINDOWS

FEATURES

FRAME

A A seamless one-piece, rigid vinyl frame cover is secured to the exterior of the frame to protect the wood frame from moisture and maintain an attractive appearance while minimizing maintenance.

B The seamless rigid vinyl cover extends 1 3/8" (35) around the perimeter of the unit, creating a flange to help seal the unit to the structure.

C Wood frame members are treated with a water-repellent preservative for long-lasting protection and performance.

D Interior stops are unfinished pine. Low-maintenance prefinished white, dark bronze and black** interiors are also available.

SASH

E Rigid vinyl encases the entire sash – a vinyl weld protects each sash corner for superior weathertightness. It maintains an attractive appearance and minimizes maintenance.

F Wood core members provide excellent structural stability and energy efficiency.

G Vinyl closed-cell foam weatherstrip is factory installed on the perimeter of the sash.

GLASS

H In addition to stainless steel glass spacers, black or white glass spacers are now available to allow the spacer to blend in with the unit color.

I A glazing bead and silicone provide superior weathertightness and durability.

J High-Performance options include:

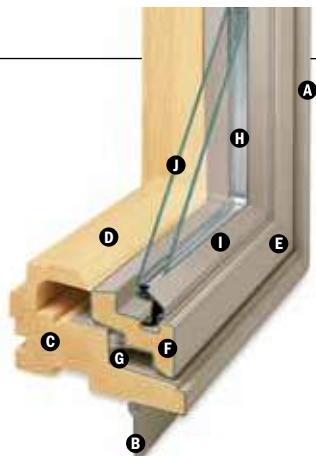
- Low-E4® glass
- Low-E4 HeatLock® glass
- Low-E4 SmartSun™ glass
- Low-E4 SmartSun HeatLock glass
- Low-E4 Sun glass

Tempered and other glass options are available. Contact your Andersen supplier.

A removable translucent film helps shield the glass from damage during delivery and construction, and simplifies finishing at the job site.

Patterned Glass

Patterned glass options are available. See page 12 for more details.



HARDWARE

Smooth Control Hardware System



The smooth control hardware system employs a worm gear drive for easy operation. Units with a wash mode have hinges that move the sash away from the frame to provide easier glass

cleaning. CXW15, CXW155, CXW16 and CXW25 sizes not available with wash mode. Hardware option and finish must be specified. Operator handle and cover sold separately.

Single-Actuation Casement Lock



On casement windows, a single-actuation lock easily releases all locking points on the casement sash while the reach-out action eliminates binding when closing. The lock handle is offered in finishes that coordinate with your specified hardware option.

Awning Sash Locks



Awning sash locks provide an added measure of security and weathertightness. Hardware style and finish options are compatible with Andersen® casement windows to ensure consistency in appearance when used in window combination designs.

StormWATCH[®] PROTECTION

400 Series casement and awning windows are available with Stormwatch® Protection. For more details, visit andersenwindows.com/coastal.

Performance Grade (PG) Upgrades

Performance upgrades are available for select sizes of standard, non-impact casement and awning windows,

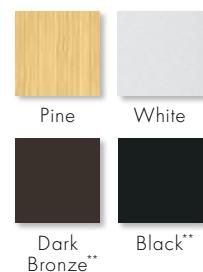
allowing these units to achieve higher performance ratings. Performance Grade (PG) ratings are more comprehensive than Design Pressure (DP) ratings for measuring product performance. Visit andersenwindows.com for up-to-date performance information of individual products. Contact your Andersen supplier for availability.

EXTERIOR & INTERIOR OPTIONS

EXTERIOR COLORS



INTERIOR OPTIONS



HARDWARE OPTIONS Sold Separately



CONTEMPORARY FOLDING

Black | Bright Brass | Gold Dust
Oil Rubbed Bronze | **Satin Nickel**
Stone | White



TRADITIONAL FOLDING

Antique Brass | Black | Bright Brass
Distressed Bronze | Distressed Nickel
Gold Dust | Oil Rubbed Bronze
Satin Nickel | Stone | White

Folding handles avoid interference with window treatments.



CLASSIC SERIES™

Stone | **White**



ESTATE™

Antique Brass | Bright Brass
Brushed Chrome | Distressed Bronze
Distressed Nickel | Oil Rubbed Bronze
Polished Chrome | Satin Nickel

HARDWARE FINISHES



*Visit andersenwindows.com/warranty for details.

**Products with dark bronze and black interiors have matching exteriors.

Dimensions in parentheses are in millimeters.

Printing limitations prevent exact replication of colors and finishes. See your Andersen supplier for actual color and finish samples.

Naturally occurring variations in grain, color and texture of wood make each window one of a kind. All wood interiors are unfinished unless a finish is specified. Distressed bronze and oil rubbed bronze are "living" finishes that will change with time and use.

ACCESSORIES Sold Separately

FRAME

Extension Jamb



Standard jamb depth is 2 7/8" (73). Extension jambs are available in unfinished pine or prefinished white, dark bronze and black. Some sizes may be veneered.

Factory-applied and non-applied interior extension jambs are available in 1/16" (1.5) increments between 4 1/16" (116) and 7 1/8" (181). Extension jambs can be factory applied to either three sides (stool and apron application) or four sides (picture frame casing).

Thick Replacement Extension Jambs

To help preserve original alignment of trim and paint lines in replacement situations, special 1 1/8" (29) thick replacement extension jambs are available. Factory-applied and non-applied extension jambs are available in 1/16" (1.5) increments between 4 1/16" (116) and 7 1/8" (181). Non-applied extension jambs are available in 12' (3658) lineals. Detail on page 34.

Drywall Return Bead



A drywall return bead is available in a narrow or wide dimension with unfinished pine or prefinished white, dark bronze and black interiors. Can be ordered factory applied or in non-applied lineals. Detail on page 34.

HARDWARE

Corrosion-Resistant Components



Corrosion-resistant hinge and operator arm hardware is designed for applications in harsh and corrosive environments such as heavy industrial or coastal areas.*

Window Opening Control Device



A window opening control device is available, which limits sash travel to less than 4" (102) when the window is first opened. Available factory applied, or as a field-applied kit in white, stone and black.

Power Operator for Awning Windows



Awning windows can be ordered with an operator enhanced by PowerAssist™ technology that opens and closes the window with the touch of a button. Easy to install, the 24-volt system features a concealed window power drive, battery backup in case of a power outage and a moisture sensor that automatically closes the window when it rains. A wireless remote control is available (sold separately).

The PowerAssist system is controlled by a wall-mounted console, which includes a power box, battery, touch pad and mounting bracket. Windows can be ordered factory prepped to save time, or they can be ordered as a field kit. Power driver requires field installation. PowerAssist technology eliminates the need for sash locks. Available for windows up to 5' (1524) wide. Not available for units with Stormwatch® Protection or performance upgrades.

SPECIAL USE OPERATOR HANDLES

Available in Classic Series™ design only.

Compact Operator Handle



Specially designed for use in situations where blinds or other window treatments interfere with standard operator handle. Available in white or stone finish.

Easy-Grip Handle

Larger knob makes it easier to grip and operate.

Available in white or stone finish.



Operator Spline Cover



An operator spline cover is an attractive cap that covers the roto operator stud when the handle has been removed to control access or operation of the window. The operator spline cover should not be used on any window designated or intended for emergency escape or rescue. Please consult your local building code official for local egress code requirements.

Metal T-Handle



Our smallest operator handle, the metal T-handle, may make it more difficult for young children (5 and under) to open the window. For more information on child safety, write:

Andersen Corporation
LookOut For Kids® Program
 100 Fourth Avenue North
 Bayport, MN 55003
 Call 800-313-8889 or email
lofk@andersencorp.com.

GLASS

Andersen® Art Glass

Andersen art glass panels come in a variety of original patterns. See art glass section starting on page 173 for more information or visit andersenwindows.com/artglass.

INSECT SCREENS

TruScene® Insect Screens



Andersen TruScene insect screens let in over 25% more fresh air** and provide 50% greater clarity than conventional Andersen insect screens, all while keeping out unwanted small insects. For casement and awning windows, frames are available in white, stone, dark bronze and black, or with pine veneer frame interiors to blend with the wood interior of the window.

Conventional Insect Screens

Conventional insect screens have charcoal powder-coated aluminum screen mesh. Available with frames in white, stone, dark bronze and black.

GRILLES

Grilles are available in a variety of configurations and widths. For casement and awning window grille patterns, see page 34.

EXTERIOR TRIM

Available with Andersen exterior trim. See exterior trim section starting on page 175.

CAUTION:

- Painting and staining may cause damage to rigid vinyl.
- 400 Series windows in Terratone color may be painted any color lighter than Terratone color using quality oil-based or latex paint.
- Do not paint 400 Series windows in white, canvas, Sandtone, dark bronze, forest green or black exterior colors.
- Andersen does not warrant the adhesion or performance of homeowner-applied paint over vinyl or other factory-coated surfaces.
- For vinyl painting instructions and preparation, contact your Andersen supplier.
- Do not paint weatherstrip.
- Creosote-based stains should not come in contact with Andersen products.
- Abrasive cleaners or solutions containing corrosive solvents should not be used on Andersen products.

*Visit andersenwindows.com/warranty for details.

**TruScene insect screens let in over 25% more fresh air than standard Andersen fiberglass insect screens.

Dimensions in parentheses are in millimeters.

CASEMENT & AWNING WINDOWS

Alignment Grid for Standard-Size Casement, Awning, Picture, Transom, Half Circle, Quarter Circle and Arch Windows

	1'-5"	1'-8 1/2"	2'-0 1/8"	2'-4 3/8"	2'-7 1/2"	2'-9 3/4"	2'-11 15/16"	3'-4 3/4"	3'-4 13/16"	4'-0"				
Specialty	(432)	(521)	(613)	(721)	(800)	(857)	(913)	(1035)	(1037)	(1219)				
See the specialty window section starting on page 117 for these and other specialty shapes and sizes.			   	   	 		   			  				
Transom														
1'-0" (305)									 	 				
Awning														
1'-5" (432)														
1'-8 1/2" (521)														
2'-0 1/8" (613)														
2'-4 3/8" (721)														
2'-7 1/2" (800)														
2'-11 15/16" (913)														
3'-4 3/4" (1035)														
Casement, Awning and Picture														
2'-0 1/8" (613)														
2'-4 3/8" (721)														
2'-11 15/16" (913)														
3'-4 13/16" (1037)														
4'-0" (1219)			 				 						 	
4'-4 13/16" (1341)														
4'-11 7/8" (1521)							 		 					
5'-4 13/16" (1646)														
5'-11 7/8" (1826)			   				   		 		 			

* Dimensions in parentheses are in millimeters.

* Actual height of 4'-11 13/16" (1519).

** Actual height of 5'-11 5/8" (1819).

4'-4 13/16" (1341)	4'-8 1/2" (1435)	4'-11 7/8" (1521)	5'-1" (1549)	5'-2 3/4" (1594)	5'-4 13/16" (1646)	5'-11 5/8" (1819)	5'-11 7/8" (1826)	7'-0 5/8" (2149)

Similar jamb profiles enable these standard-size windows to be combined in multiple combinations. Custom-size windows are also available.

Window widths and heights shown. See individual size charts for additional dimensions.

In addition to venting configurations shown, other standard configurations are available.

* Dimensions in parentheses are in millimeters.

CASEMENT & AWNING WINDOWS

Table of Casement and Transom Window Sizes

Scale 1/8" (3) = 1'-0" (305) – 1:96

Window Dimension	1'-5"	1'-8 1/2"	2'-0 1/8"	2'-4 3/8"	2'-7 1/2"	2'-11 15/16"	2'-9 3/4"	3'-4 3/4"	4'-0"	4'-8 1/2"
	(432)	(521)	(613)	(721)	(800)	(913)	(857)	(1035)	(1219)	(1435)
Minimum Rough Opening	1'-5 1/2"	1'-9"	2'-0 5/8"	2'-4 7/8"	2'-8"	3'-0 1/2"	2'-10 1/4"	3'-5 1/4"	4'-0 1/2"	4'-9"
	(445)	(533)	(625)	(733)	(813)	(927)	(870)	(1048)	(1232)	(1448)
Unobstructed Glass (casement, single sash only)	12 5/8"	16 1/8"	19 3/4"	24"	27 1/8"	31 9/16"	12 5/8"	16 1/8"	19 3/4"	24"
	(321)	(410)	(502)	(610)	(689)	(802)	(321)	(410)	(502)	(610)
Unobstructed Glass (transom, single sash only)	12 3/16"	15 11/16"	19 5/16"	23 9/16"	26 11/16"	31 1/8"	28 15/16"	35 15/16"	43 3/16"	51 11/16"
	(310)	(398)	(491)	(599)	(678)	(791)	(735)	(913)	(1097)	(1313)
CUSTOM WIDTHS – 17" to 84 5/8"										
1'-0"										
1'-0"										
1'-0"										
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1'-0"										

5'-2 3/4" (1594)	5'-11 5/8" (1819)	5'-1" (1549)	5'-11 7/8" (1826)	7'-0 5/8" (2149)
5'-3 1/4" (1607)	6'-0 1/8" (1832)	5'-1 1/2" (1562)	6'-0 3/8" (1838)	7'-1 1/8" (2162)
27 1/8" (689)	31 9/16" (802)	16 1/8" (410)	19 3/4" (502)	24" (610)
57 15/16" (1472)	66 13/16" (1697)	56 3/16" (1427)	67 1/16" (1703)	79 13/16" (2027)

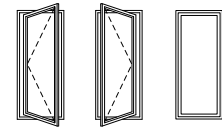
CTR5210	CTR51110	CTR5110	CTR6010	CTR7010
CTR22810	CTR23010	CTR31810	CTR32010	CTR32410

CN32	C32	CW32*
CN325	C325	CW325*
CN33	C33	CW33*
CN335	C335	CW335*
CN34	C34	CW34*
CN345	C345	CW345*
CN35	C35	CW35*

CX23	CXW23
CX235°	CXW235°
CX24°	CXW24°
CX245°	CXW245°
CX25°	CXW25°**



Custom-size windows are available in 1/8" (3) increments. Windows can also be custom sized to match standard sizes ending in a sixteenth of an inch. **Single windows only.** See page 33 for custom sizes and specifications.



Left Right Stationary

Choose left, right or stationary as viewed from the exterior. In addition to venting shown in table, other standard configurations are available for single, twin and triple windows. Transom (CTR) windows are stationary only.

Twin and triple windows shown have one continuous outer frame.

Transom (CTR) windows can be used over casement or awning windows, and may be rotated 90° and used as a sidelight with casement, awning or picture windows.

Grille patterns shown on page 34.

*"Window Dimension" always refers to outside frame-to-frame dimension.

**"Minimum Rough Opening" dimensions may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See pages 210-211 for more details.

• Dimensions in parentheses are in millimeters.

◊ Meet or exceed clear opening area of 5.7 sq. ft. or 0.53 m², clear opening width of 20" (508) and clear opening height of 24" (610) with appropriate hinge specified. See tables on pages 29-30.

* Meet clear opening width of 20" (508) using hinge with wash mode and control bracket (bracket can be pivoted for cleaning position) and meet clear opening width of 22" (559) using hinge for widest clear opening.

** Available with straight-arm operators (hinged for widest clear opening) only.

CASEMENT & AWNING WINDOWS

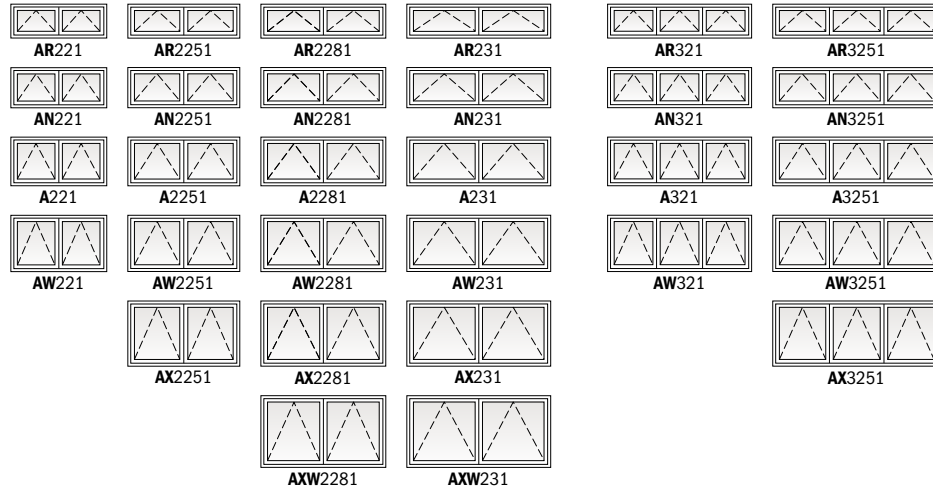
Table of Awning Window Sizes

Scale 1/8" (3) = 1'-0" (305) – 1:96

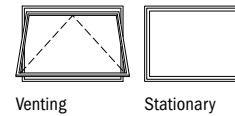
Window Dimension	2'-0 1/8" (613)	2'-4 3/8" (721)	2'-7 1/2" (800)	2'-11 15/16" (913)	3'-4 13/16" (1037)	4'-0" (1219)	4'-4 13/16" (1341)	4'-11 7/8" (1521)	5'-4 13/16" (1646)	5'-11 7/8" (1819)
Minimum Rough Opening	2'-0 5/8" (625)	2'-4 7/8" (733)	2'-8" (813)	3'-0 1/2" (927)	3'-5 3/8" (1051)	4'-0 1/2" (1232)	4'-5 3/8" (1356)	5'-0 3/8" (1534)	5'-5 3/8" (1660)	6'-0 3/8" (1832)
Unobstructed Glass (single sash only)	19 5/16" (491)	23 9/16" (598)	26 11/16" (678)	31 1/8" (791)	36" (914)	43 3/16" (1097)	48" (1219)	55 1/16" (1399)	60" (1524)	67 1/16" (1703)
CUSTOM WIDTHS – 24 1/8" to 71 7/8"										
CUSTOM HEIGHTS – 17" to 35 15/16"										
										
										
										
										
CUSTOM HEIGHTS – 35 7/8" to 48" venting only										
CUSTOM WIDTHS – 24 1/8" to 48" venting only										
CUSTOM HEIGHTS – 35 7/8" to 48" venting only										
										
CUSTOM WIDTHS – 59 7/8" to 71 7/8" stationary only										
CUSTOM HEIGHTS – 31 1/2" to 35 15/16" stationary only										

- * "Window Dimension" always refers to outside frame-to-frame dimension.
- * "Minimum Rough Opening" dimensions may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See pages 210-211 for more details.
- * Dimensions in parentheses are in millimeters.

4'-0" (1219)	4'-8 1/2" (1435)	5'-2 3/4" (1594)	5'-11 5/8" (1826)	5'-11 7/8" (1826)	7'-0 5/8" (2149)
4'-0 1/2" (1232)	4'-9" (1448)	5'-3 1/4" (1607)	6'-0 1/8" (1832)	6'-0 3/8" (1838)	7'-1 1/8" (2162)
19 5/16" (491)	23 9/16" (598)	26 11/16" (678)	31 1/8" (1703)	19 5/16" (491)	23 9/16" (598)



Custom-size windows are available in 1/8" (3) increments. Windows can also be custom sized to match standard sizes ending in a sixteenth of an inch. **Single windows only.** See page 33 for custom sizes and specifications.



Choose venting or stationary. **AXW551 and AXW61** windows are stationary only. In addition to venting shown in table, other standard configurations are available for twin, triple and stacked windows.

Twin, triple and stacked windows shown have one continuous outer frame.

Awning windows must be installed to vent as shown, and should not be rotated and used as a hopper.

Transom (CTR) windows (shown on pages 24-25) can be used over casement or awning windows, and may be rotated 90° and used as a sidelight with casement, awning or picture windows.

Grille patterns shown on page 34.

• "Window Dimension" always refers to outside frame-to-frame dimension.
 • "Minimum Rough Opening" dimensions may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See pages 210-211 for more details.
 • Dimensions in parentheses are in millimeters.

CASEMENT & AWNING WINDOWS

Table of Picture and Transom Window Sizes

Scale $\frac{1}{8}"$ (3) = 1'-0" (305) – 1:96

Unit Dimension	2'-11 $\frac{15}{16}"$ (913)	3'-4 $\frac{13}{16}"$ (1037)	4'-0" (1219)	4'-4 $\frac{13}{16}"$ (1341)	4'-11 $\frac{7}{8}"$ (1521)	5'-4 $\frac{13}{16}"$ (1646)	5'-11 $\frac{7}{8}"$ (1826)
Minimum Rough Opening	3'-0 $\frac{1}{2}"$ (927)	3'-5 $\frac{3}{8}"$ (1051)	4'-0 $\frac{1}{2}"$ (1232)	4'-5 $\frac{3}{8}"$ (1356)	5'-0 $\frac{3}{8}"$ (1534)	5'-5 $\frac{3}{8}"$ (1660)	6'-0 $\frac{3}{8}"$ (1838)
Unobstructed Glass	31 $\frac{1}{8}"$ (791)	36" (914)	43 $\frac{3}{16}"$ (1097)	48" (1219)	55 $\frac{1}{16}"$ (1399)	60" (1524)	67 $\frac{1}{16}"$ (1703)

CUSTOM WIDTHS – 36" to 71 $\frac{7}{8}"$						
1'-0" (305)	PTR3010	PTR3510	PTR4010	PTR4510	PTR5010	PTR5510
1'-0 $\frac{1}{2}"$ (318)						PTR6010
7 $\frac{3}{16}"$ (183)						
CUSTOM WIDTHS – 35 $\frac{15}{16}"$ to 59 $\frac{7}{8}"$						
2'-11 $\frac{15}{16}"$ (913)	P3030	P3530	P4030	P4530	P5030	
3'-4 $\frac{13}{16}"$ (1037)	P3035	P3535	P4035	P4535	P5035	P5530
3'-5 $\frac{3}{8}"$ (1051)						P6030
36" (914)						
4'-0" (1219)	P3040	P3540	P4040	P4540	P5040	P5535
4'-0 $\frac{1}{2}"$ (1232)						P6035
43 $\frac{3}{16}"$ (1097)						
4'-4 $\frac{13}{16}"$ (1341)	P3045	P3545	P4045	P4545	P5045	P5540
4'-5 $\frac{3}{8}"$ (1356)						P6040
48" (1219)						
4'-11 $\frac{7}{8}"$ (1521)	P3050	P3550	P4050	P4550	P5050	P5545
5'-0 $\frac{3}{8}"$ (1534)						P6045
55 $\frac{1}{16}"$ (1399)						
5'-4 $\frac{13}{16}"$ (1646)	P3055	P3555	P4055	P4555	P5055	P5550
5'-5 $\frac{3}{8}"$ (1660)						P6050
60" (1524)						
5'-11 $\frac{7}{8}"$ (1826)	P3060	P3560	P4060	P4560	P5060	
6'-0 $\frac{3}{8}"$ (1838)						
67 $\frac{1}{16}"$ (1703)						



Custom-size windows are available in $\frac{1}{8}"$ (3) increments. Windows can also be custom sized to match standard sizes ending in a sixteenth of an inch. See page 33 for custom sizes and specifications.

Picture (P) and transom (PTR) windows may be rotated 90° to align with casement or awning windows.

Grille patterns shown on page 34.

* "Window Dimension" always refers to outside frame-to-frame dimension.
 * "Minimum Rough Opening" dimensions may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See pages 210-211 for more details.
 * Dimensions in parentheses are in millimeters.

Casement Window Opening and Area Specifications

Window Number	Clear Opening Area		Clear Opening in Full Open Position			Glass Area Sq. Ft./ (m ²)	Vent Area		Top of Subfloor to Top of Inside Sill Stop Inches/(mm)	Overall Window Area Sq. Ft./ (m ²)
	Hinge for Widest Clear Opening Sq. Ft./ (m ²)	Hinge with Wash Mode Sq. Ft./ (m ²)	Hinge for Widest Clear Opening Inches/(mm)	Hinge with Wash Mode Inches/(mm)	Height Inches/(mm)		Hinge for Widest Clear Opening Sq. Ft./ (m ²)	Hinge with Wash Mode Sq. Ft./ (m ²)		
CR12	—	1.0 (0.09)	—	7 5/16" (186)	19 1/4" (489)	1.7 (0.16)	—	1.5 (0.14)	60 9/16" (1538)	2.8 (0.26)
CR125	—	1.2 (0.11)	—	7 5/16" (186)	23 7/16" (595)	2.0 (0.19)	—	1.8 (0.17)	56 3/8" (1432)	3.3 (0.31)
CR13	—	1.6 (0.15)	—	7 5/16" (186)	31 1/16" (789)	2.7 (0.25)	—	2.4 (0.22)	48 3/4" (1238)	4.2 (0.39)
CR135	—	1.8 (0.17)	—	7 5/16" (186)	35 15/16" (913)	3.1 (0.29)	—	2.7 (0.25)	43 7/8" (1114)	4.8 (0.45)
CR14	—	2.2 (0.20)	—	7 5/16" (186)	43 1/8" (1095)	3.8 (0.35)	—	3.3 (0.31)	36 11/16" (932)	5.7 (0.53)
CR145	—	2.4 (0.22)	—	7 5/16" (186)	47 15/16" (1218)	4.2 (0.39)	—	3.6 (0.33)	31 7/8" (810)	6.2 (0.58)
CR15	—	2.8 (0.26)	—	7 5/16" (186)	55" (1397)	4.8 (0.45)	—	4.2 (0.39)	24 13/16" (630)	7.1 (0.66)
CR155	—	3.1 (0.29)	—	7 5/16" (186)	59 15/16" (1522)	5.2 (0.48)	—	4.5 (0.42)	19 7/8" (505)	7.7 (0.72)
CR16	—	3.4 (0.32)	—	7 5/16" (186)	67" (1702)	5.9 (0.55)	—	5.1 (0.47)	12 13/16" (325)	8.5 (0.79)
CR23	—	1.6 (0.15)	—	7 5/16" (186)	31 1/16" (789)	5.4 (0.50)	—	4.7 (0.44)	48 3/4" (1238)	8.4 (0.78)
CR235	—	1.8 (0.17)	—	7 5/16" (186)	35 15/16" (913)	6.3 (0.59)	—	5.4 (0.50)	43 7/8" (1114)	9.6 (0.89)
CR24	—	2.2 (0.20)	—	7 5/16" (186)	43 1/8" (1095)	7.6 (0.71)	—	6.5 (0.60)	36 11/16" (932)	11.3 (1.05)
CR245	—	2.4 (0.22)	—	7 5/16" (186)	47 15/16" (1218)	8.4 (0.78)	—	7.3 (0.68)	31 7/8" (810)	12.4 (1.15)
CR25	—	2.8 (0.26)	—	7 5/16" (186)	55" (1397)	9.6 (0.89)	—	8.3 (0.77)	24 13/16" (630)	14.2 (1.32)
CR255	—	3.1 (0.29)	—	7 5/16" (186)	59 15/16" (1522)	10.5 (0.98)	—	9.1 (0.85)	19 7/8" (505)	15.4 (1.43)
CR26	—	3.4 (0.32)	—	7 5/16" (186)	67" (1702)	11.7 (1.09)	—	10.2 (0.95)	12 13/16" (325)	17.0 (1.58)
CN12	—	1.5 (0.14)	—	10 13/16" (275)	19 1/4" (489)	2.2 (0.20)	—	1.9 (0.18)	60 9/16" (1538)	3.4 (0.32)
CN125	—	1.8 (0.17)	—	10 13/16" (275)	23 7/16" (595)	2.6 (0.24)	—	2.3 (0.21)	56 3/8" (1432)	4.0 (0.37)
CN13	—	2.3 (0.21)	—	10 13/16" (275)	31 1/16" (789)	3.5 (0.33)	—	3.1 (0.29)	48 3/4" (1238)	5.1 (0.47)
CN135	—	2.7 (0.25)	—	10 13/16" (275)	35 15/16" (913)	4.0 (0.37)	—	3.6 (0.33)	43 7/8" (1114)	5.8 (0.54)
CN14	—	3.2 (0.30)	—	10 13/16" (275)	43 1/8" (1095)	4.8 (0.45)	—	4.3 (0.40)	36 11/16" (932)	6.8 (0.63)
CN145	—	3.6 (0.33)	—	10 13/16" (275)	47 15/16" (1218)	5.4 (0.50)	—	4.8 (0.45)	31 7/8" (810)	7.5 (0.70)
CN15	—	4.1 (0.38)	—	10 13/16" (275)	55" (1397)	6.2 (0.58)	—	5.5 (0.51)	24 13/16" (630)	8.5 (0.79)
CN155	—	4.5 (0.42)	—	10 13/16" (275)	59 15/16" (1522)	6.7 (0.62)	—	6.0 (0.56)	19 7/8" (505)	9.2 (0.86)
CN16	—	5.0 (0.47)	—	10 13/16" (275)	67" (1702)	7.5 (0.70)	—	6.7 (0.62)	12 13/16" (325)	10.2 (0.95)
CN22	—	1.5 (0.14)	—	10 13/16" (275)	19 1/4" (489)	4.4 (0.41)	—	3.8 (0.35)	60 9/16" (1538)	6.8 (0.63)
CN225	—	1.8 (0.17)	—	10 13/16" (275)	23 7/16" (595)	5.2 (0.48)	—	4.6 (0.43)	56 3/8" (1432)	8.0 (0.74)
CN23	—	2.3 (0.21)	—	10 13/16" (275)	31 1/16" (789)	7.0 (0.65)	—	6.2 (0.58)	48 3/4" (1238)	10.2 (0.95)
CN235	—	2.7 (0.25)	—	10 13/16" (275)	35 15/16" (913)	8.0 (0.74)	—	7.2 (0.67)	43 7/8" (1114)	11.5 (1.07)
CN24	—	3.2 (0.30)	—	10 13/16" (275)	43 1/8" (1095)	9.7 (0.90)	—	8.6 (0.80)	36 11/16" (932)	13.6 (1.26)
CN245	—	3.6 (0.33)	—	10 13/16" (275)	47 15/16" (1218)	10.7 (0.99)	—	9.6 (0.89)	31 7/8" (810)	15.0 (1.39)
CN25	—	4.1 (0.38)	—	10 13/16" (275)	55" (1397)	12.3 (1.14)	—	11.0 (1.02)	24 13/16" (630)	16.9 (1.57)
CN255	—	4.5 (0.42)	—	10 13/16" (275)	59 15/16" (1522)	13.4 (1.25)	—	12.0 (1.12)	19 7/8" (505)	18.4 (1.71)
CN26	—	5.0 (0.47)	—	10 13/16" (275)	67" (1702)	15.0 (1.39)	—	13.4 (1.25)	12 13/16" (325)	20.3 (1.89)
CN32	—	1.5 (0.14)	—	10 13/16" (275)	19 1/4" (489)	6.6 (0.61)	—	3.8 (0.35)	60 9/16" (1538)	10.2 (0.95)
CN325	—	1.8 (0.17)	—	10 13/16" (275)	23 7/16" (595)	7.8 (0.73)	—	4.6 (0.43)	56 3/8" (1432)	12.0 (1.12)
CN33	—	2.3 (0.21)	—	10 13/16" (275)	31 1/16" (789)	10.5 (0.98)	—	6.2 (0.58)	48 3/4" (1238)	15.3 (1.42)
CN335	—	2.7 (0.25)	—	10 13/16" (275)	35 15/16" (913)	12.0 (1.12)	—	7.2 (0.67)	43 7/8" (1114)	17.4 (1.62)
CN34	—	3.2 (0.30)	—	10 13/16" (275)	43 1/8" (1095)	14.4 (1.34)	—	8.6 (0.80)	36 11/16" (932)	20.4 (1.90)
CN345	—	3.6 (0.33)	—	10 13/16" (275)	47 15/16" (1218)	16.2 (1.51)	—	9.6 (0.89)	31 7/8" (810)	22.5 (2.09)
CN35	—	4.1 (0.38)	—	10 13/16" (275)	55" (1397)	18.6 (1.73)	—	11.0 (1.02)	24 13/16" (630)	25.5 (2.37)
CN355	—	4.5 (0.42)	—	10 13/16" (275)	59 15/16" (1522)	20.1 (1.87)	—	12.0 (1.11)	19 7/8" (505)	27.6 (2.57)
CN36	—	5.0 (0.47)	—	10 13/16" (275)	67" (1702)	22.5 (2.09)	—	13.4 (1.24)	12 13/16" (325)	30.6 (2.84)
C12	2.5 (0.23)	1.9 (0.18)	18 5/16" (465)	14 7/16" (367)	19 1/4" (489)	2.6 (0.24)	2.5 (0.23)	2.4 (0.22)	60 9/16" (1538)	4.0 (0.37)
C125	3.0 (0.28)	2.4 (0.22)	18 5/16" (465)	14 7/16" (367)	23 7/16" (595)	3.2 (0.30)	3.0 (0.28)	2.9 (0.27)	56 3/8" (1432)	4.7 (0.44)
C13	4.0 (0.37)	3.1 (0.29)	18 5/16" (465)	14 7/16" (367)	31 1/16" (789)	4.3 (0.40)	4.0 (0.37)	3.9 (0.36)	48 3/4" (1238)	6.0 (0.56)
C135	4.6 (0.43)	3.6 (0.33)	18 5/16" (465)	14 7/16" (367)	35 15/16" (913)	4.9 (0.46)	4.6 (0.43)	4.5 (0.42)	43 7/8" (1114)	6.8 (0.63)
C14	5.5 (0.51)	4.3 (0.40)	18 5/16" (465)	14 7/16" (367)	43 1/8" (1095)	5.9 (0.55)	5.5 (0.51)	5.4 (0.50)	36 11/16" (932)	8.0 (0.74)
C145	6.1 (0.57)	4.8 (0.45)	18 5/16" (465)	14 7/16" (367)	47 15/16" (1218)	6.6 (0.61)	6.1 (0.57)	6.0 (0.56)	31 7/8" (810)	8.8 (0.82)
C15	7.0 (0.65)	5.5 (0.51)	18 5/16" (465)	14 7/16" (367)	55" (1397)	7.5 (0.70)	7.0 (0.65)	6.9 (0.64)	24 13/16" (630)	10.0 (0.93)
C155	7.6 (0.71)	6.0 (0.56)	18 5/16" (465)	14 7/16" (367)	59 15/16" (1522)	8.2 (0.76)	7.6 (0.71)	7.5 (0.70)	19 7/8" (505)	10.9 (1.01)
C16	8.5 (0.79)	6.7 (0.62)	18 5/16" (465)	14 7/16" (367)	67" (1702)	9.2 (0.86)	8.5 (0.79)	8.4 (0.78)	12 13/16" (325)	12.0 (1.12)
C22	2.5 (0.23)	1.9 (0.18)	18 5/16" (465)	14 7/16" (367)	19 1/4" (489)	5.2 (0.48)	5.0 (0.46)	4.8 (0.45)	60 9/16" (1538)	8.0 (0.74)
C225	3.0 (0.28)	2.4 (0.22)	18 5/16" (465)	14 7/16" (367)	23 7/16" (595)	6.4 (0.59)	6.0 (0.56)	5.8 (0.54)	56 3/8" (1432)	9.4 (0.87)
C23	4.0 (0.37)	3.1 (0.29)	18 5/16" (465)	14 7/16" (367)	31 1/16" (789)	8.5 (0.79)	7.9 (0.73)	7.8 (0.73)	48 3/4" (1238)	12.0 (1.12)
C235	4.6 (0.43)	3.6 (0.33)	18 5/16" (465)	14 7/16" (367)	35 15/16" (913)	9.9 (0.92)	9.2 (0.86)	9.0 (0.84)	43 7/8" (1114)	13.6 (1.26)
C24	5.5 (0.51)	4.3 (0.40)	18 5/16" (465)	14 7/16" (367)	43 1/8" (1095)	11.8 (1.10)	11.0 (1.02)	10.8 (1.00)	36 11/16" (932)	16.0 (1.49)
C245	6.1 (0.57)	4.8 (0.45)	18 5/16" (465)	14 7/16" (367)	47 15/16" (1218)	13.1 (1.22)	12.2 (1.13)	12.0 (1.12)	31 7/8" (810)	17.6 (1.64)
C25	7.0 (0.65)	5.5 (0.51)	18 5/16" (465)	14 7/16" (367)	55" (1397)	15.1 (1.40)	14.0 (1.30)	13.8 (1.28)	24 13/16" (630)	20.0 (1.86)

*Top of Subfloor to Top of Inside Sill Stop" is calculated based upon a structural header height of 6'-10 1/2" (2096).
 • Dimensions in parentheses are in millimeters or square meters.

continued on next page

CASEMENT & AWNING WINDOWS

Casement Window Opening and Area Specifications *(continued)*

Window Number	Clear Opening Area		Clear Opening in Full Open Position			Glass Area Sq. Ft./ (m ²)	Vent Area		Top of Subfloor to Top of Inside Sill Stop Inches/(mm)	Overall Window Area Sq. Ft./ (m ²)
	Hinge for Widest Clear Opening Sq. Ft./ (m ²)	Hinge with Wash Mode Sq. Ft./ (m ²)	Hinge for Widest Clear Opening Inches/(mm)	Hinge with Wash Mode Inches/(mm)	Height Inches/(mm)		Hinge for Widest Clear Opening Sq. Ft./ (m ²)	Hinge with Wash Mode Sq. Ft./ (m ²)		
C255	7.6 (0.71)	6.0 (0.56)	18 5/16" (465)	14 7/16" (367)	59 15/16" (1522)	16.4 (1.52)	15.3 (1.42)	15.0 (1.39)	19 7/8" (505)	21.6 (2.01)
C26	8.5 (0.79)	6.7 (0.62)	18 5/16" (465)	14 7/16" (367)	67" (1702)	18.4 (1.71)	17.1 (1.59)	16.8 (1.56)	12 13/16" (325)	24.0 (2.23)
C32	2.5 (0.23)	1.9 (0.18)	18 5/16" (465)	14 7/16" (367)	19 1/4" (489)	7.8 (0.73)	5.0 (0.46)	4.8 (0.45)	60 9/16" (1538)	12.0 (1.12)
C325	3.0 (0.28)	2.4 (0.22)	18 5/16" (465)	14 7/16" (367)	23 7/16" (595)	9.6 (0.89)	6.0 (0.56)	5.8 (0.54)	56 3/8" (1432)	14.1 (1.31)
C33	4.0 (0.37)	3.1 (0.29)	18 5/16" (465)	14 7/16" (367)	31 1/16" (789)	12.8 (1.19)	7.9 (0.73)	7.8 (0.73)	48 3/4" (1238)	17.9 (1.66)
C335	4.6 (0.43)	3.6 (0.33)	18 5/16" (465)	14 7/16" (367)	35 15/16" (913)	14.8 (1.38)	9.2 (0.86)	9.0 (0.84)	43 7/8" (1114)	20.4 (1.90)
C34	5.5 (0.51)	4.3 (0.40)	18 5/16" (465)	14 7/16" (367)	43 1/8" (1095)	17.7 (1.64)	11.0 (1.02)	10.8 (1.00)	36 11/16" (932)	24.0 (2.23)
C345	6.1 (0.57)	4.8 (0.45)	18 5/16" (465)	14 7/16" (367)	47 15/16" (1218)	19.7 (1.83)	12.2 (1.13)	12.0 (1.12)	31 1/8" (810)	26.4 (2.45)
C35	7.0 (0.65)	5.5 (0.51)	18 5/16" (465)	14 7/16" (367)	55" (1397)	22.6 (2.10)	14.0 (1.30)	13.8 (1.28)	24 13/16" (630)	29.9 (2.78)
CW12*	3.0 (0.28)	2.5 (0.23)	22 9/16" (573)	18 11/16" (475)	19 1/4" (489)	3.2 (0.30)	3.0 (0.28)	3.0 (0.28)	60 9/16" (1538)	4.8 (0.45)
CW125*	3.7 (0.34)	3.0 (0.28)	22 9/16" (573)	18 11/16" (475)	23 7/16" (595)	3.9 (0.36)	3.7 (0.34)	3.6 (0.33)	56 3/8" (1432)	5.6 (0.52)
CW13*	4.9 (0.46)	4.0 (0.37)	22 9/16" (573)	18 11/16" (475)	31 1/16" (789)	5.2 (0.48)	4.9 (0.46)	4.8 (0.45)	48 3/4" (1238)	7.1 (0.66)
CW135 0*	5.7 (0.53)	5.1 (0.47)	22 9/16" (573)	20" (508)	36 3/8" (924)	6.0 (0.56)	5.7 (0.53)	5.5 (0.51)	43 7/8" (1114)	8.0 (0.74)
CW14 0*	6.8 (0.63)	6.0 (0.56)	22 9/16" (573)	20" (508)	43 1/8" (1095)	7.2 (0.67)	6.8 (0.63)	6.6 (0.61)	36 11/16" (932)	9.5 (0.88)
CW145 0*	7.5 (0.70)	6.7 (0.62)	22 9/16" (573)	20" (508)	47 15/16" (1218)	8.0 (0.74)	7.5 (0.70)	7.3 (0.68)	31 1/8" (810)	10.4 (0.97)
CW15 0*	8.6 (0.80)	7.6 (0.71)	22 9/16" (573)	20" (508)	55" (1397)	9.2 (0.86)	8.6 (0.80)	8.4 (0.78)	24 13/16" (630)	11.8 (1.10)
CW155 0*	9.4 (0.87)	8.3 (0.77)	22 9/16" (573)	20" (508)	59 15/16" (1522)	10.0 (0.93)	9.4 (0.87)	9.1 (0.85)	19 7/8" (505)	12.8 (1.19)
CW16 0*	10.5 (0.98)	9.3 (0.86)	22 9/16" (573)	20" (508)	67" (1702)	11.2 (1.04)	10.5 (0.98)	10.2 (0.95)	12 13/16" (325)	14.2 (1.32)
CW22*	3.0 (0.28)	2.5 (0.23)	22 9/16" (573)	18 11/16" (475)	19 1/4" (489)	6.4 (0.59)	6.0 (0.56)	6.0 (0.56)	60 9/16" (1538)	9.6 (0.89)
CW225*	3.7 (0.34)	3.0 (0.28)	22 9/16" (573)	18 11/16" (475)	23 7/16" (595)	7.8 (0.72)	7.4 (0.69)	7.2 (0.67)	56 3/8" (1432)	11.2 (1.04)
CW23*	4.9 (0.46)	4.0 (0.37)	22 9/16" (573)	18 11/16" (475)	31 1/16" (789)	10.4 (0.97)	9.8 (0.91)	9.6 (0.89)	48 3/4" (1238)	14.1 (1.31)
CW235 0*	5.7 (0.53)	5.1 (0.47)	22 9/16" (573)	20" (508)	36 3/8" (924)	12.0 (1.12)	11.4 (1.06)	11.1 (1.03)	43 7/8" (1114)	16.0 (1.49)
CW24 0*	6.8 (0.63)	6.0 (0.56)	22 9/16" (573)	20" (508)	43 1/8" (1095)	14.4 (1.34)	13.5 (1.25)	13.1 (1.22)	36 11/16" (932)	18.8 (1.75)
CW245 0*	7.5 (0.70)	6.7 (0.62)	22 9/16" (573)	20" (508)	47 15/16" (1218)	16.0 (1.49)	15.0 (1.39)	14.6 (1.36)	31 1/8" (810)	20.8 (1.93)
CW25 0*	8.6 (0.80)	7.6 (0.71)	22 9/16" (573)	20" (508)	55" (1397)	18.3 (1.70)	17.3 (1.61)	16.7 (1.55)	24 13/16" (630)	23.5 (2.18)
CW255 0*	9.4 (0.87)	8.3 (0.77)	22 9/16" (573)	20" (508)	59 15/16" (1522)	20.0 (1.86)	18.8 (1.75)	18.2 (1.69)	19 7/8" (505)	25.6 (2.38)
CW26 0*	10.5 (0.98)	9.3 (0.86)	22 9/16" (573)	20" (508)	67" (1702)	22.3 (2.07)	21.0 (1.95)	20.4 (1.90)	12 13/16" (325)	28.2 (2.62)
CW32*	3.0 (0.28)	2.5 (0.23)	22 9/16" (573)	18 11/16" (475)	19 1/4" (489)	9.6 (0.89)	6.0 (0.56)	6.0 (0.56)	60 9/16" (1538)	14.4 (1.34)
CW325*	3.7 (0.34)	3.0 (0.28)	22 9/16" (573)	18 11/16" (475)	23 7/16" (595)	11.7 (1.09)	7.4 (0.69)	7.2 (0.67)	56 3/8" (1432)	16.8 (1.56)
CW33*	4.9 (0.46)	4.0 (0.37)	22 9/16" (567)	18 11/16" (475)	31 1/16" (789)	15.6 (1.45)	9.8 (0.91)	9.6 (0.89)	48 3/4" (1238)	21.1 (1.96)
CW335 0*	5.7 (0.53)	5.1 (0.47)	22 9/16" (567)	20" (508)	36 3/8" (924)	18.0 (1.67)	11.4 (1.06)	11.1 (1.03)	43 7/8" (1114)	24.0 (2.23)
CW34 0*	6.8 (0.63)	6.0 (0.56)	22 9/16" (567)	20" (508)	43 1/8" (1095)	21.6 (2.01)	13.6 (1.26)	13.1 (1.22)	36 11/16" (932)	28.2 (2.62)
CW345 0*	7.5 (0.70)	6.7 (0.62)	22 9/16" (567)	20" (508)	47 15/16" (1218)	24.0 (2.23)	15.0 (1.39)	14.6 (1.36)	31 1/8" (810)	31.0 (2.88)
CW35 0*	8.6 (0.80)	7.6 (0.71)	22 9/16" (567)	20" (508)	55" (1397)	27.6 (2.56)	17.2 (1.60)	16.7 (1.55)	24 13/16" (630)	35.2 (3.27)
CX125	4.2 (0.39)	3.5 (0.33)	25 11/16" (653)	21 13/16" (554)	23 7/16" (595)	4.4 (0.41)	4.2 (0.39)	4.1 (0.38)	56 3/8" (1432)	6.2 (0.58)
CX13	5.5 (0.52)	4.7 (0.44)	25 11/16" (653)	21 13/16" (554)	31 1/16" (789)	5.9 (0.54)	5.5 (0.52)	5.4 (0.51)	48 3/4" (1238)	7.9 (0.73)
CX135 0	6.4 (0.60)	5.4 (0.51)	25 11/16" (653)	21 13/16" (554)	35 15/16" (913)	6.8 (0.63)	6.4 (0.60)	6.3 (0.59)	43 7/8" (1114)	8.9 (0.83)
CX14 0	7.7 (0.72)	6.5 (0.61)	25 11/16" (653)	21 13/16" (554)	43 1/8" (1095)	8.1 (0.76)	7.7 (0.72)	7.6 (0.70)	36 11/16" (932)	10.5 (0.98)
CX145 0	8.6 (0.80)	7.3 (0.67)	25 11/16" (653)	21 13/16" (554)	47 15/16" (1218)	9.0 (0.84)	8.6 (0.80)	8.4 (0.78)	31 1/8" (810)	11.6 (1.07)
CX15 0	9.8 (0.91)	8.3 (0.77)	25 11/16" (653)	21 13/16" (554)	55" (1397)	10.4 (0.96)	9.8 (0.91)	9.7 (0.90)	24 13/16" (630)	13.1 (1.22)
CX155 0	10.7 (0.99)	9.1 (0.84)	25 11/16" (653)	21 13/16" (554)	59 15/16" (1522)	11.3 (1.05)	10.7 (0.99)	10.5 (0.98)	19 7/8" (505)	14.2 (1.32)
CX16 0	12.0 (1.11)	10.1 (0.94)	25 11/16" (653)	21 13/16" (554)	67" (1702)	12.6 (1.17)	12.0 (1.11)	11.8 (1.09)	12 13/16" (325)	15.7 (1.46)
CX23	5.5 (0.52)	4.7 (0.44)	25 11/16" (653)	21 13/16" (554)	31 1/16" (789)	11.7 (1.09)	11.1 (1.03)	10.9 (1.01)	48 3/4" (1238)	15.7 (1.46)
CX235 0	6.4 (0.60)	5.4 (0.51)	25 11/16" (653)	21 13/16" (554)	35 15/16" (913)	13.6 (1.26)	12.8 (1.19)	12.6 (1.17)	43 7/8" (1114)	17.8 (1.65)
CX24 0	7.7 (0.72)	6.5 (0.61)	25 11/16" (653)	21 13/16" (554)	43 1/8" (1095)	16.3 (1.51)	15.4 (1.43)	15.1 (1.41)	36 11/16" (932)	20.9 (1.94)
CX245 0	8.6 (0.80)	7.3 (0.67)	25 11/16" (653)	21 13/16" (554)	47 15/16" (1218)	18.1 (1.68)	17.1 (1.59)	16.8 (1.56)	31 7/8" (810)	23.0 (2.14)
CX25 0	9.8 (0.91)	8.3 (0.77)	25 11/16" (653)	21 13/16" (554)	55" (1397)	20.7 (1.93)	19.6 (1.82)	19.3 (1.79)	24 13/16" (630)	26.1 (2.42)
CXW13 0	6.5 (0.60)	5.6 (0.53)	30 1/8" (765)	26 1/4" (667)	31 1/16" (789)	6.8 (0.63)	6.5 (0.60)	6.1 (0.57)	48 3/4" (1238)	9.0 (0.84)
CXW135 0	7.5 (0.70)	6.6 (0.61)	30 1/8" (765)	26 1/4" (667)	35 15/16" (913)	7.9 (0.73)	7.5 (0.70)	7.0 (0.65)	43 7/8" (1114)	10.2 (0.95)
CXW14 0	9.0 (0.84)	7.9 (0.73)	30 1/8" (765)	26 1/4" (667)	43 1/8" (1095)	9.5 (0.88)	9.0 (0.84)	8.4 (0.78)	36 11/16" (932)	12.0 (1.12)
CXW145 0	10.0 (0.93)	8.8 (0.82)	30 1/8" (765)	26 1/4" (667)	47 15/16" (1218)	10.5 (0.98)	10.0 (0.93)	9.4 (0.87)	31 7/8" (810)	13.2 (1.23)
CXW15 0**	11.5 (1.07)	—	30 1/8" (765)	—	55" (1397)	12.1 (1.12)	11.5 (1.07)	—	24 13/16" (630)	14.9 (1.38)
CXW155 0**	12.6 (1.17)	—	30 1/8" (765)	—	59 15/16" (1522)	13.1 (1.22)	12.6 (1.17)	—	19 7/8" (505)	16.2 (1.51)
CXW16 0**	14.0 (1.30)	—	30 1/8" (765)	—	67" (1702)	14.7 (1.37)	14.0 (1.30)	—	12 13/16" (325)	17.9 (1.66)
CXW23	6.5 (0.60)	5.6 (0.53)	30 1/8" (765)	26 1/4" (667)	31 1/16" (789)	13.6 (1.26)	13.0 (1.21)	12.2 (0.57)	48 3/4" (1238)	17.9 (1.66)
CXW235 0	7.5 (0.70)	6.5 (0.61)	30 1/8" (765)	26 1/4" (667)	35 5/16" (913)	15.8 (1.47)	15.0 (1.39)	14.0 (0.57)	43 7/8" (1114)	20.3 (1.89)
CXW24 0	9.0 (0.84)	7.9 (0.73)	30 1/8" (765)	26 1/4" (667)	43 1/8" (1059)	19.0 (1.77)	18.0 (1.67)	16.8 (0.57)	36 11/16" (932)	23.9 (2.22)
CXW245 0	10.0 (0.93)	8.7 (0.81)	30 1/8" (765)	26 1/4" (667)	47 15/16" (1218)	21.0 (1.95)	20.0 (1.86)	18.8 (0.57)	31 7/8" (810)	26.3 (2.44)
CXW25 0**	11.5 (1.07)	—	30 1/8" (765)	—	55" (1397)	24.2 (2.25)	23.0 (2.14)	—	24 13/16" (630)	29.8 (2.77)

*Top of Subfloor to Top of Inside Sill Stop" is calculated based upon a structural header height of 6'-10 1/2" (2096).

• Dimensions in parentheses are in millimeters or square meters.

0Meet or exceed clear opening area of 5.7 sq. ft. or 0.53 m²; clear opening width of 20" (508) and clear opening height of 24" (610) with appropriate hinge specified.

**Meet clear opening width of 20" (508) using hinge with wash mode and control bracket (bracket can be pivoted for cleaning position) and meet clear opening width of 22" (559) using hinge for widest clear opening.

**Available with straight-arm operators (hinged for widest clear opening) only.

Awning Window Opening and Area Specifications

Window Number	Clear Opening in Full Open Position				Glass Area Sq. Ft./(m ²)	Vent Area Sq. Ft./(m ²)	Top of Subfloor to Top of Inside Sill Stop Inches/(mm)	Overall Window Area Sq. Ft./(m ²)
	Clear Opening Area Sq. Ft./(m ²)	Width Inches/(mm)	Depth Inches/(mm)					
AR21	0.9 (0.08)	19 1/2" (495)	6 3/8" (162)	1.7 (0.16)	0.9 (0.08)	67 7/16" (1713)	2.8 (0.26)	
AR251	1.1 (0.10)	23 3/4" (603)	6 3/8" (162)	2.0 (0.19)	1.1 (0.10)	67 7/16" (1713)	3.3 (0.31)	
AR281	1.2 (0.11)	26 7/8" (683)	6 3/8" (162)	2.3 (0.21)	1.2 (0.11)	67 7/16" (1713)	3.7 (0.34)	
AR31	1.4 (0.13)	31 5/16" (795)	6 3/8" (162)	2.7 (0.25)	1.4 (0.13)	67 7/16" (1713)	4.2 (0.39)	
AR351	1.6 (0.15)	36 3/16" (919)	6 3/8" (162)	3.1 (0.29)	1.6 (0.15)	67 7/16" (1713)	4.8 (0.45)	
AR41	1.9 (0.18)	43 3/8" (1102)	6 3/8" (162)	3.8 (0.35)	1.9 (0.18)	67 7/16" (1713)	5.7 (0.53)	
AR451	2.1 (0.20)	48 3/16" (1224)	6 3/8" (162)	4.2 (0.39)	2.1 (0.20)	67 7/16" (1713)	6.2 (0.58)	
AR51	2.5 (0.23)	55 1/2" (1410)	6 3/8" (162)	4.8 (0.45)	2.5 (0.23)	67 7/16" (1713)	7.1 (0.66)	
AR551	2.7 (0.25)	60 3/16" (1529)	6 3/8" (162)	5.2 (0.48)	2.7 (0.25)	67 7/16" (1713)	7.7 (0.72)	
AR61	3.0 (0.28)	67 1/2" (1715)	6 3/8" (162)	5.9 (0.55)	3.0 (0.28)	67 7/16" (1713)	8.5 (0.79)	
AR221	0.9 (0.08)	19 1/2" (495)	6 3/8" (162)	3.4 (0.32)	1.7 (0.16)	67 7/16" (1713)	5.6 (0.52)	
AR2251	1.1 (0.10)	23 3/4" (603)	6 3/8" (162)	4.0 (0.37)	2.1 (0.20)	67 7/16" (1713)	6.6 (0.61)	
AR2281	1.2 (0.11)	26 7/8" (683)	6 3/8" (162)	4.6 (0.43)	2.4 (0.22)	67 7/16" (1713)	7.4 (0.69)	
AR231	1.4 (0.13)	31 5/16" (795)	6 3/8" (162)	5.4 (0.50)	2.8 (0.26)	67 7/16" (1713)	8.4 (0.78)	
AR321	0.9 (0.08)	19 1/2" (495)	6 3/8" (162)	5.1 (0.47)	2.6 (0.24)	67 7/16" (1713)	8.4 (0.78)	
AR3251	1.1 (0.10)	23 3/4" (603)	6 3/8" (162)	6.0 (0.56)	3.2 (0.29)	67 7/16" (1713)	9.9 (0.92)	
AN21	0.9 (0.08)	19 1/2" (495)	6 7/16" (164)	2.2 (0.20)	0.9 (0.08)	63 15/16" (1624)	3.4 (0.32)	
AN251	1.1 (0.10)	23 3/4" (603)	6 7/16" (164)	2.6 (0.24)	1.1 (0.10)	63 15/16" (1624)	4.0 (0.37)	
AN281	1.2 (0.11)	26 7/8" (683)	6 7/16" (164)	3.0 (0.28)	1.2 (0.11)	63 15/16" (1624)	4.5 (0.42)	
AN31	1.4 (0.13)	31 5/16" (795)	6 7/16" (164)	3.5 (0.33)	1.4 (0.13)	63 15/16" (1624)	5.1 (0.47)	
AN351	1.6 (0.15)	36 3/16" (919)	6 7/16" (164)	4.0 (0.37)	1.6 (0.15)	63 15/16" (1624)	5.8 (0.54)	
AN41	1.9 (0.18)	43 3/8" (1102)	6 7/16" (164)	4.8 (0.45)	1.9 (0.18)	63 15/16" (1624)	6.8 (0.63)	
AN451	2.2 (0.20)	48 3/16" (1224)	6 7/16" (164)	5.4 (0.50)	2.2 (0.20)	63 15/16" (1624)	7.5 (0.70)	
AN51	2.5 (0.23)	55 1/2" (1410)	6 7/16" (164)	6.2 (0.58)	2.5 (0.23)	63 15/16" (1624)	8.5 (0.79)	
AN551	2.7 (0.25)	60 3/16" (1529)	6 7/16" (164)	6.7 (0.62)	2.7 (0.25)	63 15/16" (1624)	9.2 (0.86)	
AN61	3.0 (0.28)	67 1/2" (1715)	6 7/16" (164)	7.5 (0.70)	3.0 (0.28)	63 15/16" (1624)	10.2 (0.95)	
AN221	0.9 (0.08)	19 1/2" (495)	6 7/16" (164)	4.4 (0.41)	1.7 (0.16)	63 15/16" (1624)	6.8 (0.63)	
AN2251	1.1 (0.10)	23 3/4" (603)	6 7/16" (164)	5.2 (0.48)	2.1 (0.20)	63 15/16" (1624)	8.0 (0.74)	
AN2281	1.2 (0.11)	26 7/8" (683)	6 7/16" (164)	6.0 (0.56)	2.4 (0.22)	63 15/16" (1624)	9.0 (0.84)	
AN231	1.4 (0.13)	31 5/16" (795)	6 7/16" (164)	7.0 (0.65)	2.8 (0.26)	63 15/16" (1624)	10.2 (0.95)	
AN321	0.9 (0.08)	19 1/2" (495)	6 7/16" (164)	6.6 (0.61)	2.6 (0.24)	63 15/16" (1624)	10.2 (0.95)	
AN3251	1.1 (0.10)	23 3/4" (603)	6 7/16" (164)	7.8 (0.73)	3.2 (0.30)	63 15/16" (1624)	12.0 (1.12)	
A21	0.9 (0.08)	19 1/2" (495)	6 1/2" (165)	2.6 (0.24)	0.9 (0.08)	60 5/16" (1532)	4.0 (0.37)	
A251	1.1 (0.10)	23 3/4" (603)	6 1/2" (165)	3.2 (0.30)	1.1 (0.10)	60 5/16" (1532)	4.8 (0.45)	
A281	1.2 (0.11)	26 7/8" (683)	6 1/2" (165)	3.7 (0.34)	1.2 (0.11)	60 5/16" (1532)	5.3 (0.49)	
A31	1.4 (0.13)	31 5/16" (795)	6 1/2" (165)	4.3 (0.40)	1.4 (0.13)	60 5/16" (1532)	6.0 (0.56)	
A351	1.6 (0.15)	36 3/16" (919)	6 1/2" (165)	4.9 (0.46)	1.6 (0.15)	60 5/16" (1532)	6.8 (0.63)	
A41	2.0 (0.18)	43 3/8" (1102)	6 1/2" (165)	5.9 (0.55)	2.0 (0.18)	60 5/16" (1532)	8.0 (0.74)	
A451	2.2 (0.20)	48 3/16" (1224)	6 1/2" (165)	6.6 (0.61)	2.2 (0.20)	60 5/16" (1532)	8.8 (0.82)	
A51	2.5 (0.23)	55 1/2" (1410)	6 1/2" (165)	7.5 (0.70)	2.5 (0.23)	60 5/16" (1532)	10.0 (0.93)	
A551	2.7 (0.25)	60 3/16" (1529)	6 1/2" (165)	8.2 (0.76)	2.7 (0.25)	60 5/16" (1532)	10.9 (1.01)	
A61	3.0 (0.28)	67 1/2" (1715)	6 1/2" (165)	9.2 (0.86)	3.0 (0.28)	60 5/16" (1532)	12.0 (1.12)	
A221	0.9 (0.08)	19 1/2" (495)	6 1/2" (165)	5.2 (0.48)	1.8 (0.16)	60 5/16" (1532)	8.0 (0.74)	
A2251	1.1 (0.10)	23 3/4" (603)	6 1/2" (165)	6.4 (0.60)	2.1 (0.20)	60 5/16" (1532)	9.6 (0.89)	
A2281	1.2 (0.11)	26 7/8" (683)	6 1/2" (165)	7.4 (0.69)	2.4 (0.23)	60 5/16" (1532)	10.6 (0.99)	
A231	1.4 (0.13)	31 5/16" (795)	6 1/2" (165)	8.6 (0.80)	2.8 (0.26)	60 5/16" (1532)	12.0 (1.12)	
A321	0.9 (0.08)	19 1/2" (495)	6 1/2" (165)	7.8 (0.73)	2.6 (0.25)	60 5/16" (1532)	12.0 (1.12)	
A3251	1.1 (0.10)	23 3/4" (603)	6 1/2" (165)	9.6 (0.89)	3.2 (0.30)	60 5/16" (1532)	14.4 (1.34)	
AW21	0.9 (0.08)	19 1/2" (495)	6 1/2" (165)	3.2 (0.30)	0.9 (0.08)	56 1/16" (1424)	4.8 (0.45)	
AW251	1.1 (0.10)	23 3/4" (603)	6 1/2" (165)	3.9 (0.36)	1.1 (0.10)	56 1/16" (1424)	5.6 (0.52)	
AW281	1.2 (0.11)	26 7/8" (683)	6 1/2" (165)	4.4 (0.41)	1.2 (0.11)	56 1/16" (1424)	6.2 (0.58)	
AW31	1.4 (0.13)	31 5/16" (795)	6 1/2" (165)	5.2 (0.48)	1.4 (0.13)	56 1/16" (1424)	7.1 (0.66)	
AW351	1.6 (0.15)	36 3/16" (919)	6 1/2" (165)	6.0 (0.56)	1.6 (0.15)	56 1/16" (1424)	8.0 (0.74)	
AW41	2.0 (0.18)	43 3/8" (1102)	6 1/2" (165)	7.2 (0.67)	2.0 (0.18)	56 1/16" (1424)	9.5 (0.88)	
AW451	2.2 (0.20)	48 3/16" (1224)	6 1/2" (165)	8.0 (0.74)	2.2 (0.20)	56 1/16" (1424)	10.4 (0.97)	
AW51	2.5 (0.23)	55 1/2" (1410)	6 1/2" (165)	9.2 (0.86)	2.5 (0.23)	56 1/16" (1424)	11.8 (1.10)	
AW551	2.7 (0.25)	60 3/16" (1529)	6 1/2" (165)	10.0 (0.93)	2.7 (0.25)	56 1/16" (1424)	12.8 (1.19)	
AW61	3.0 (0.28)	67 1/2" (1715)	6 1/2" (165)	11.2 (1.04)	3.0 (0.28)	56 1/16" (1424)	14.2 (1.32)	
AW221	0.9 (0.08)	19 1/2" (495)	6 1/2" (165)	6.4 (0.60)	1.8 (0.16)	56 1/16" (1424)	9.6 (0.89)	
AW2251	1.1 (0.10)	23 3/4" (603)	6 1/2" (165)	7.8 (0.73)	2.1 (0.20)	56 1/16" (1424)	11.2 (1.04)	

*Top of Subfloor to Top of Inside Sill Stop" is calculated based upon a structural header height of 6'-10 1/2" (2096).
 • Dimensions in parentheses are in millimeters or square meters.

continued on next page

Picture Window Area Specifications

Window Number	Glass Area Sq. Ft./ (m ²)	Overall Window Area Sq. Ft./ (m ²)
P3030	6.8 (0.63)	9.0 (0.84)
P3035	7.8 (0.73)	10.2 (0.95)
P3040	9.4 (0.87)	12.0 (1.12)
P3045	10.4 (0.97)	13.2 (1.23)
P3050	12.0 (1.12)	14.9 (1.38)
P3055	13.0 (1.21)	16.2 (1.51)
P3060	14.6 (1.36)	17.9 (1.66)
P3530	7.8 (0.73)	10.2 (0.95)
P3535	9.0 (0.84)	11.6 (1.08)
P3540	10.8 (1.00)	13.6 (1.26)
P3545	12.1 (1.12)	15.0 (1.39)
P3550	13.8 (1.28)	17.0 (1.58)
P3555	15.1 (1.40)	18.4 (1.71)
P3560	16.8 (1.56)	20.4 (1.90)
P4030	9.4 (0.87)	12.0 (1.12)
P4035	10.8 (1.00)	13.6 (1.26)
P4040	13.0 (1.21)	16.0 (1.49)
P4045	14.5 (1.35)	17.6 (1.64)
P4050	16.6 (1.54)	20.0 (1.86)
P4055	18.1 (1.68)	21.6 (2.01)
P4060	20.2 (1.88)	24.0 (2.23)
P4530	10.4 (0.97)	13.2 (1.23)
P4535	12.1 (1.12)	15.0 (1.39)
P4540	14.5 (1.35)	17.6 (1.64)
P4545	16.1 (1.50)	19.4 (1.80)
P4550	18.4 (1.71)	22.0 (2.04)
P4555	20.1 (1.87)	23.8 (2.21)
P4560	22.4 (2.08)	26.4 (2.45)
P5030	12.0 (1.12)	14.9 (1.38)
P5035	13.8 (1.28)	17.0 (1.58)
P5040	16.6 (1.54)	20.0 (1.86)
P5045	18.4 (1.71)	22.0 (2.04)
P5050	21.1 (1.96)	24.9 (2.31)
P5055	23.0 (2.14)	26.9 (2.50)
P5060	25.7 (2.39)	29.9 (2.78)
P5530	13.0 (1.21)	16.2 (1.51)
P5535	15.1 (1.40)	18.4 (1.71)
P5540	18.1 (1.68)	21.6 (2.01)
P5545	20.1 (1.87)	23.8 (2.21)
P5550	23.0 (2.14)	26.9 (2.50)
P6030	14.6 (1.36)	17.9 (1.66)
P6035	16.8 (1.56)	20.4 (1.90)
P6040	20.2 (1.88)	24.0 (2.23)
P6045	22.4 (2.08)	26.4 (2.45)
P6050	25.7 (2.39)	29.9 (2.78)

* Dimensions in parentheses are in square meters.

CASEMENT & AWNING WINDOWS

Awning Window Opening and Area Specifications *(continued)*

Window Number	Clear Opening Area Sq. Ft./ (m ²)	Clear Opening in Full Open Position		Glass Area Sq. Ft./ (m ²)	Vent Area Sq. Ft./ (m ²)	Top of Subfloor to Top of Inside Sill Stop Inches/(mm)	Overall Window Area Sq. Ft./ (m ²)
		Width Inches/(mm)	Depth Inches/(mm)				
AW2281	1.2 (0.11)	26 7/8" (683)	6 1/2" (165)	8.8 (0.82)	2.4 (0.23)	56 1/16" (1424)	12.4 (1.15)
AW231	1.4 (0.13)	31 5/16" (795)	6 1/2" (165)	10.4 (0.97)	2.8 (0.26)	56 1/16" (1424)	14.2 (1.32)
AW321	0.9 (0.08)	19 1/2" (495)	6 1/2" (165)	9.6 (0.89)	2.6 (0.25)	56 1/16" (1424)	14.4 (1.34)
AW3251	1.1 (0.10)	23 3/4" (603)	6 1/2" (165)	11.7 (1.09)	3.2 (0.30)	56 1/16" (1424)	16.8 (1.56)
AX251	1.1 (0.10)	23 3/4" (603)	6 1/2" (165)	4.4 (0.41)	1.1 (0.10)	53 15/16" (1370)	6.2 (0.58)
AX281	1.2 (0.11)	26 7/8" (683)	6 1/2" (165)	5.0 (0.47)	1.2 (0.11)	53 15/16" (1370)	6.9 (0.64)
AX31	1.4 (0.13)	31 5/16" (795)	6 1/2" (165)	5.9 (0.54)	1.4 (0.13)	53 15/16" (1370)	7.9 (0.73)
AX351	1.6 (0.15)	36 3/16" (919)	6 1/2" (165)	6.8 (0.63)	1.6 (0.15)	53 15/16" (1370)	8.9 (0.83)
AX41	2.0 (0.18)	43 3/8" (1102)	6 1/2" (165)	8.1 (0.76)	2.0 (0.18)	53 15/16" (1370)	10.5 (0.98)
AX451	2.2 (0.20)	48 3/16" (1224)	6 1/2" (165)	9.0 (0.84)	2.2 (0.20)	53 15/16" (1370)	11.6 (1.07)
AX51	2.5 (0.23)	55 1/2" (1410)	6 1/2" (165)	10.4 (0.96)	2.5 (0.23)	53 15/16" (1370)	13.1 (1.22)
AX551	2.7 (0.25)	60 3/16" (1529)	6 1/2" (165)	11.3 (1.05)	2.7 (0.25)	53 15/16" (1370)	14.2 (1.32)
AX61	3.0 (0.28)	67 1/2" (1715)	6 1/2" (165)	12.6 (1.17)	3.0 (0.28)	53 15/16" (1370)	15.7 (1.46)
AX2251	1.1 (0.10)	23 3/4" (603)	6 1/2" (165)	8.9 (0.82)	2.1 (0.20)	53 15/16" (1370)	12.4 (1.15)
AX2281	1.2 (0.11)	26 7/8" (683)	6 1/2" (165)	10.0 (0.93)	2.4 (0.23)	53 15/16" (1370)	13.8 (1.28)
AX231	1.4 (0.13)	31 5/16" (795)	6 1/2" (165)	11.7 (1.09)	2.8 (0.26)	53 15/16" (1370)	15.7 (1.46)
AX3251	1.1 (0.10)	23 3/4" (603)	6 1/2" (165)	13.3 (1.24)	3.2 (0.30)	53 15/16" (1370)	18.6 (1.73)
AXW281	1.2 (0.11)	26 7/8" (683)	6 1/2" (165)	5.8 (0.54)	1.2 (0.11)	48 1/2" (1232)	7.9 (0.73)
AXW31	1.4 (0.13)	31 5/16" (795)	6 1/2" (165)	6.8 (0.63)	1.4 (0.13)	48 1/2" (1232)	9.0 (0.84)
AXW351	1.6 (0.15)	36 3/16" (919)	6 1/2" (165)	7.9 (0.73)	1.6 (0.15)	48 1/2" (1232)	10.2 (0.95)
AXW41	2.0 (0.18)	43 3/8" (1102)	6 1/2" (165)	9.5 (0.88)	2.0 (0.18)	48 1/2" (1232)	12.0 (1.12)
AXW451	2.2 (0.20)	48 3/16" (1224)	6 1/2" (165)	10.5 (0.98)	2.2 (0.20)	48 1/2" (1232)	13.2 (1.23)
AXW51	2.5 (0.23)	55 1/2" (1410)	6 1/2" (165)	12.1 (1.12)	2.5 (0.23)	48 1/2" (1232)	14.9 (1.38)
AXW551	2.7 (0.25)	60 3/16" (1529)	6 1/2" (165)	13.1 (1.22)	2.7 (0.25)	48 1/2" (1232)	16.2 (1.51)
AXW61	3.0 (0.28)	67 1/2" (1715)	6 1/2" (165)	14.7 (1.37)	3.0 (0.28)	48 1/2" (1232)	17.9 (1.66)
AXW2281	1.2 (0.11)	26 7/8" (683)	6 1/2" (165)	11.6 (1.08)	2.4 (0.23)	48 1/2" (1232)	15.8 (1.47)
AXW231	1.4 (0.13)	31 3/8" (795)	6 1/2" (165)	13.6 (1.26)	2.8 (0.26)	48 1/2" (1232)	18.0 (1.67)
A335*	1.4 (0.13)	31 5/16" (795)	6 1/2" (165)	7.0 (0.65)	1.3 (0.12)	43 11/16" (1110)	10.2 (0.95)
A3535	1.6 (0.14)	36 3/16" (943)	6 1/2" (165)	8.1 (0.75)	1.6 (0.15)	43 11/16" (1110)	11.5 (1.07)
AP32V	1.4 (0.12)	31 5/16" (795)	6 1/2" (165)	9.4 (0.87)	1.4 (0.13)	36 7/16" (926)	12.0 (1.12)
AP352V	1.6 (0.14)	36 3/16" (919)	6 1/2" (165)	10.9 (1.01)	1.6 (0.15)	36 7/16" (926)	13.6 (1.26)
AP42V	2.0 (0.17)	43 3/8" (1102)	6 1/2" (165)	13.1 (1.22)	2.0 (0.18)	36 7/16" (926)	16.0 (1.49)
A212	0.9 (0.08)	19 1/2" (495)	6 1/2" (165)	5.2 (0.48)	1.8 (0.16)	60 5/16" (1532)	8.0 (0.74)
A213	0.9 (0.08)	19 1/2" (495)	6 1/2" (165)	7.8 (0.73)	2.6 (0.25)	60 5/16" (1532)	12.0 (1.12)
A312	1.4 (0.13)	31 5/16" (795)	6 1/2" (165)	8.6 (0.80)	2.8 (0.26)	60 5/16" (1532)	12.0 (1.12)
A313	1.4 (0.13)	31 5/16" (795)	6 1/2" (165)	12.9 (1.20)	4.2 (0.39)	60 5/16" (1532)	18.0 (1.67)
PA3050**	1.4 (0.13)	31 5/16" (795)	6 1/2" (165)	4.3 (0.40)	1.4 (0.13)	60 5/16" (1532)	6.0 (0.56)
PA3060**	1.4 (0.13)	31 5/16" (795)	6 1/2" (165)	4.3 (0.40)	1.4 (0.13)	60 5/16" (1532)	6.0 (0.56)
PA3550**	1.6 (0.15)	36 3/16" (919)	6 1/2" (165)	4.9 (0.46)	1.6 (0.15)	60 5/16" (1532)	6.8 (0.63)
PA3560**	1.6 (0.15)	36 3/16" (919)	6 1/2" (165)	4.9 (0.46)	1.6 (0.15)	60 5/16" (1532)	6.8 (0.63)
PA4060**	2.0 (0.18)	43 3/8" (1102)	6 1/2" (165)	5.9 (0.55)	2.0 (0.18)	60 5/16" (1532)	8.0 (0.74)
AXW312	1.4 (0.13)	31 1/3" (795)	6 1/2" (165)	13.6 (1.26)	2.8 (0.26)	48 1/2" (1232)	18.0 (1.67)

• "Top of Subfloor to Top of Inside Sill Stop" is calculated based upon a structural header height of 6'-10 1/2" (2096).
• Dimensions in parentheses are in millimeters or square meters.
* Clear opening area of 5.8 sq. ft. or 0.54 m² and clear opening height of 26 1/2" (673) can be obtained by detaching operator from sash.
** Dimensions and calculations are for bottom venting sash.

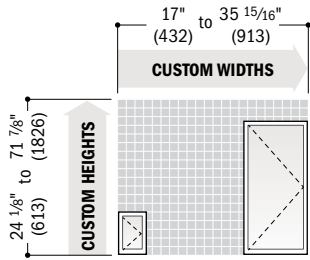
Transom Window Area Specifications

Window Number	Glass Area Sq. Ft./ (m ²)	Overall Window Area Sq. Ft./ (m ²)
CTR1510	0.7 (0.07)	1.4 (0.13)
CTR1810	0.8 (0.07)	1.7 (0.16)
CTR21810	1.7 (0.16)	3.4 (0.32)
CTR31810	2.6 (0.24)	5.1 (0.47)
CTR2010	1.0 (0.09)	2.0 (0.19)
CTR22010	2.1 (0.19)	4.0 (0.37)
CTR32010	3.1 (0.29)	6.0 (0.56)
CTR2410	1.2 (0.11)	2.4 (0.22)
CTR22410	2.5 (0.24)	4.7 (0.44)
CTR32410	3.8 (0.35)	7.1 (0.66)
CTR2810	1.4 (0.13)	2.6 (0.24)
CTR22810	2.9 (0.27)	5.2 (0.49)
CTR3010	1.6 (0.15)	3.0 (0.28)
CTR23010	3.3 (0.31)	6.0 (0.55)
CTR5110	2.8 (0.26)	5.1 (0.47)
CTR2910	1.5 (0.14)	2.8 (0.26)
CTR3410	1.8 (0.17)	3.4 (0.32)
CTR4010	2.2 (0.20)	4.0 (0.37)
CTR4810	2.6 (0.24)	4.7 (0.44)
CTR5210	2.9 (0.27)	5.2 (0.48)
CTR51110	3.4 (0.32)	6.0 (0.56)
CTR6010	3.4 (0.32)	6.0 (0.56)
CTR7010	4.0 (0.37)	7.1 (0.66)
PTR3010	1.6 (0.15)	3.0 (0.28)
PTR3510	1.8 (0.17)	3.4 (0.32)
PTR4010	2.2 (0.20)	4.0 (0.37)
PTR4510	2.4 (0.22)	4.4 (0.41)
PTR5010	2.8 (0.26)	5.0 (0.47)
PTR5510	3.0 (0.28)	5.4 (0.50)
PTR6010	3.4 (0.32)	6.0 (0.56)

• Dimensions in parentheses are in square meters.

Custom Sizes and Specification Formulas

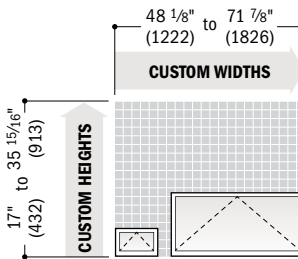
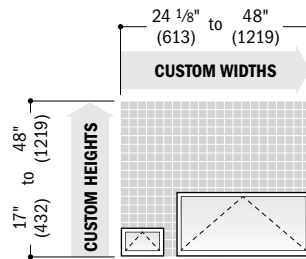
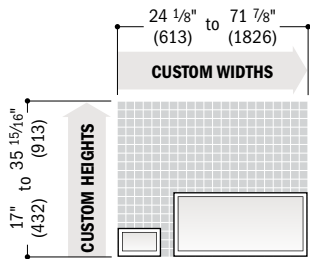
Casement Windows (stationary and venting)



Available in 1/8" (3) increments between minimum and maximum widths and heights. Windows can also be custom sized to match standard sizes ending in a sixteenth of an inch. Some restrictions apply; contact your Andersen supplier. Custom sizing is available for single windows only. To achieve custom-size 2- or 3-wide combinations, join custom-size single windows. For minimum rough opening dimensions for joined windows, see specific joining instruction guides. Measurement guide for custom-size windows can be found at andersenwindows.com/measure.

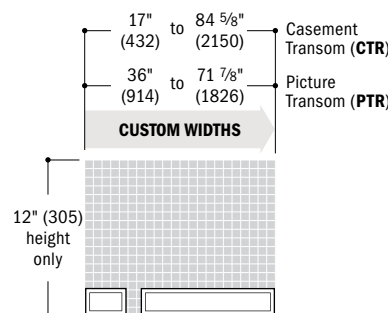
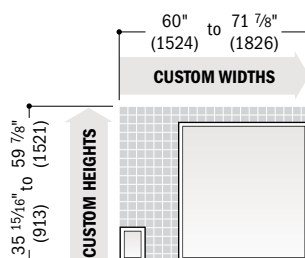
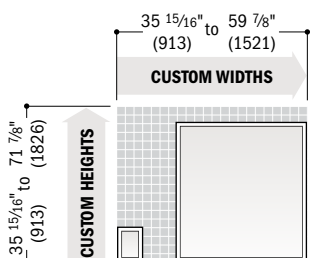
	Clear Opening Width = window width - 5.81" (148) = (window width - 9.66" (245)) x 1.07 = window width - 9.70" (246) Height = window height - 4.43" (113) = window height - 4.85" (123)	Width ≥ 24 1/8" (613) (hinge for widest clear opening) Width ≥ 28 3/8" (721) (hinge with wash mode and control bracket) Width ≥ 17" (432) (hinge with wash mode) Height ≥ 40 13/16" (1037) and < 48" (1219); Width ≥ 28 3/8" (721) and < 31 1/2" (800) All other window heights	Min. R.O. 	Width = window width + 1/2" (13) Height = window height + 1/2" (13)
	Vent Opening Width = window width - 5.81" (148) = window width - 6.10" (155) Height = window height - 4.43" (113) = window height - 4.85" (123)	Width ≥ 24 1/8" (613) (hinge for widest clear opening) Width ≥ 17" (432) (hinge with wash mode) Height ≥ 40 13/16" (1037) and < 48" (1219); Width ≥ 28 3/8" (721) and < 31 1/2" (800) All other window heights	Unobst. Gls. 	Width = window width - 4.40" (112) Height = window height - 4.95" (126)

Awning Windows (stationary and venting)



	Clear Opening Width = window width - 4.53" (115) Depth = 6.38" (162) = 6.44" (164) = 6.50" (165) Height ≥ 17" (432) and < 20 1/2" (521) Height ≥ 20 1/2" (521) and < 24 1/8" (613) All other window heights	Min. R.O. 	Width = window width + 1/2" (13) Height = window height + 1/2" (13)
	Vent Opening Width = window width - 4.53" (115) Depth = 6.38" (162) = 6.44" (164) = 6.50" (165) Height ≥ 17" (432) and < 20 1/2" (521) Height ≥ 20 1/2" (521) and < 24 1/8" (613) All other window heights	Unobst. Gls. 	Width = window width - 4.81" (122) Height = window height - 4.51" (115)

Casement/Awning Picture and Transom Windows



Min. R.O. 	Width = window width - 1/2" (13) Height = window height - 1/2" (13)
Unobst. Gls. 	Width = window width - 4.80" (122) Height = window height - 4.80" (122)

• Dimensions in parentheses are in millimeters.
 • **Clear Opening** formulas provide dimensions for determining area available for egress. **Vent Opening** formulas provide dimensions for determining area available for passage of air. **Min. R.O.** (minimum rough opening) formulas provide minimum rough opening width and height dimensions. **Unobst. Gls.** (unobstructed glass) formulas provide dimensions for determining area available for passage of light.
 • Refer to andersenwindows.com/measure for detailed instructions on how to properly measure for custom-size windows.

CASEMENT & AWNING WINDOWS

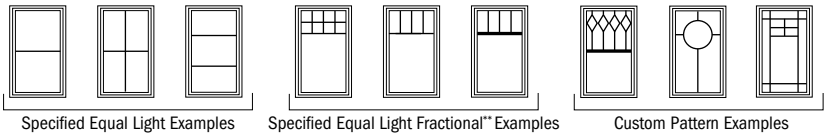
Grille Patterns

	Diamond*	Prairie A	Specified Equal Light with Simulated Meeting Rail	Colonial	Modified Colonial	Modified Colonial with Simulated Meeting Rail	Tall Fractional	Tall Fractional with Simulated Meeting Rail	Short Fractional	Short Fractional with Simulated Meeting Rail	Victorian
Casement											
Awning											
Picture											
Transom											

*Available only in Simulated Divided Light (SDL) configuration and only in 3/4" (19) and 7/8" (22) widths.

Number of lights and overall pattern varies with window size.

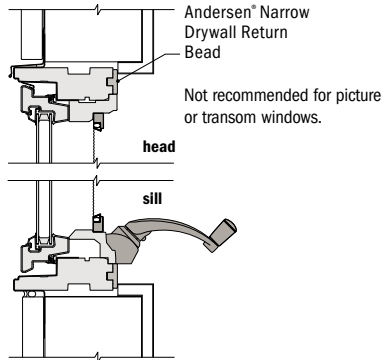
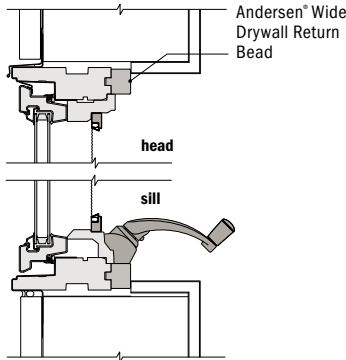
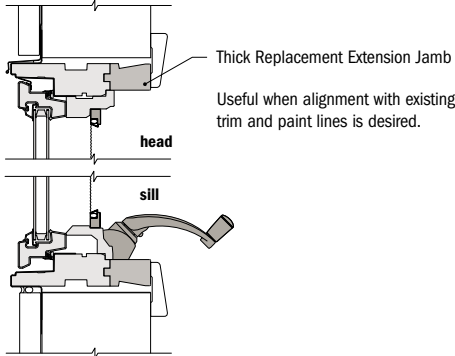
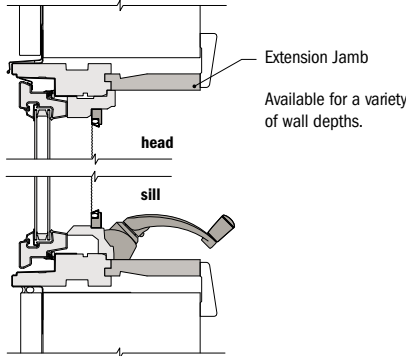
Patterns not available in all configurations. Specified equal light and custom patterns are also available. For more grille options, see page 14 or visit andersenwindows.com/grilles.



**Daylight opening dimensions are available at 8" (203), 10" (254), 12" (305), center and custom dimensions.

Interior Trim Options

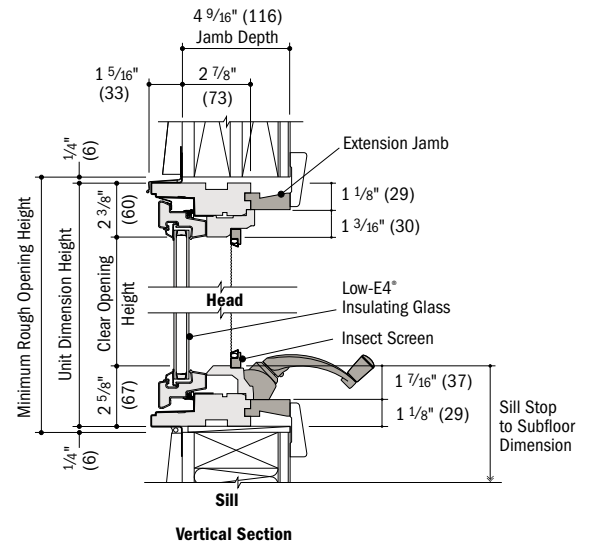
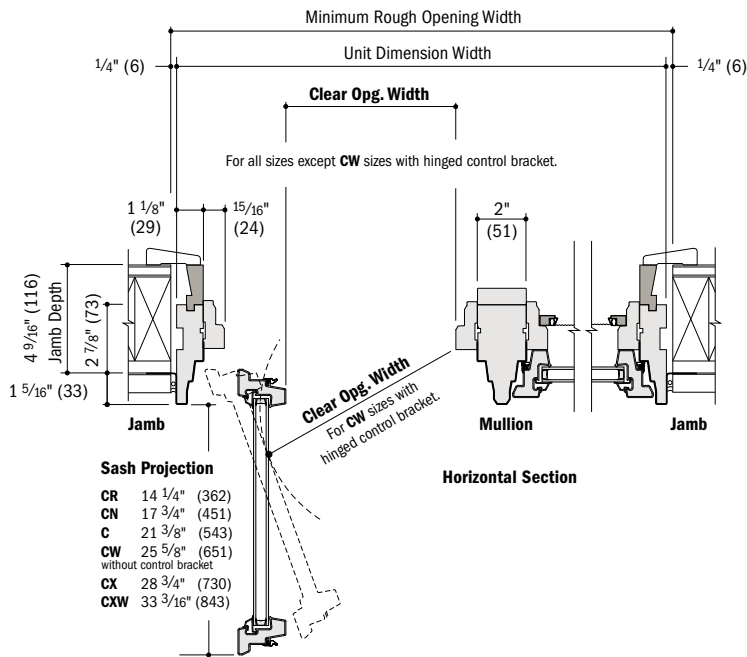
Extension jamb and drywall return bead applications shown. See page 21 for more information.



*Light-colored areas are parts included with window. Dark-colored areas are additional Andersen® parts required to complete window assembly as shown.
•Dimensions in parentheses are in millimeters.
•Details are for illustration only and are not intended to represent product installation methods or materials. Refer to product installation guides at andersenwindows.com.

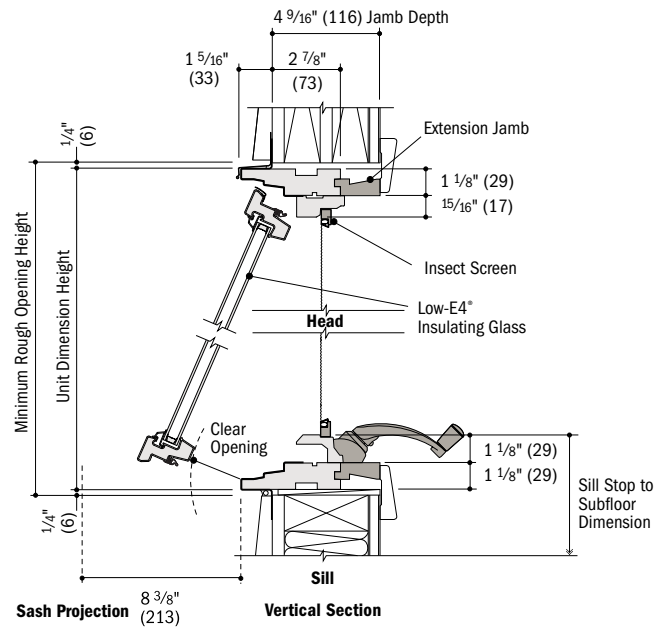
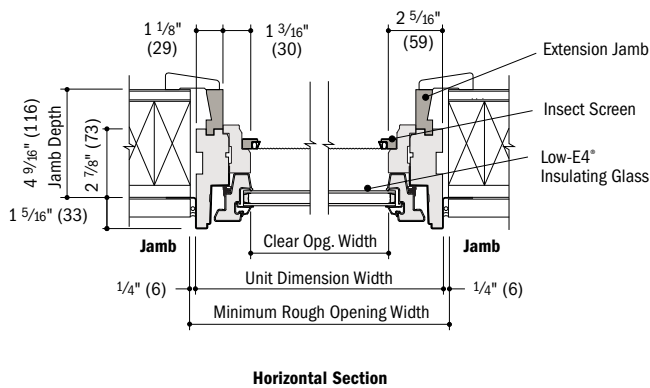
Casement Window Details

Scale 1 1/2" (38) = 1'-0" (305) – 1:8



Awning Window Details

Scale 1 1/2" (38) = 1'-0" (305) – 1:8

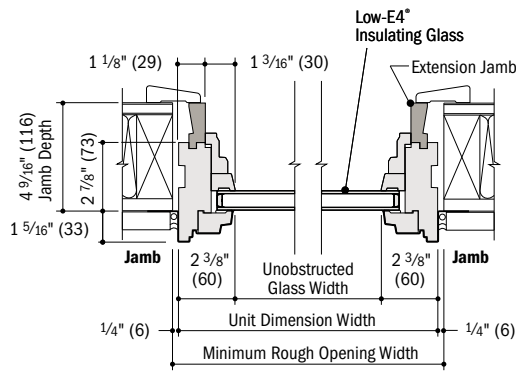


- 4 9/16" (116) overall jamb depth and 2 7/8" (73) base jamb depth measurement is from back side of installation flange.
- Light-colored areas are parts included with window. Dark-colored areas are additional Andersen® parts required to complete window assembly as shown.
- Dimensions in parentheses are in millimeters.
- Minimum rough openings may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See installation information on pages 210-211.
- Details are for illustration only and are not intended to represent product installation methods or materials. Refer to product installation guides at andersenwindows.com.

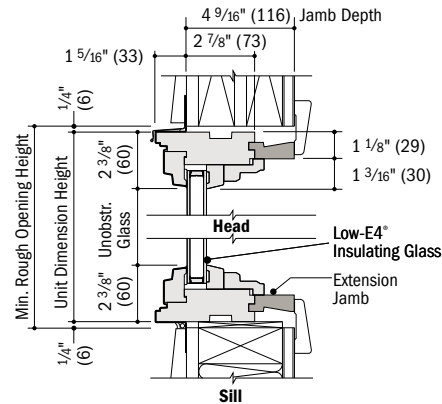
CASEMENT & AWNING WINDOWS

Picture and Transom Window Details

Scale 1 1/2" (38) = 1'-0" (305) – 1:8



Horizontal Section



Vertical Section

Horizontal (stack) Joining Detail

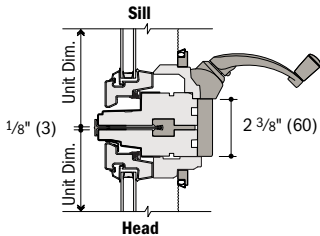
Scale 1 1/2" (38) = 1'-0" (305) – 1:8

Overall Window Dimension Height

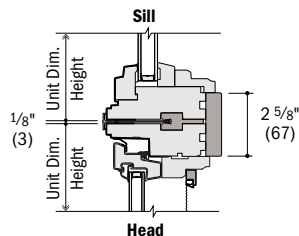
Sum of individual window heights plus 1/8" (3) for each join.

Overall Rough Opening Height

Overall window dimension height plus 1/2" (13).



Vertical Section
Casement over Awning

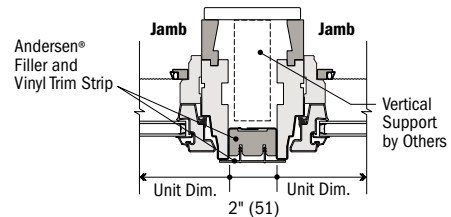


Vertical Section
Picture over Casement

Separate Rough Openings Detail

Scale 1 1/2" (38) = 1'-0" (305) – 1:8

To meet structural requirements or to achieve a wider joined appearance, windows may be installed into separate rough openings having vertical support (by others) in combination with Andersen® exterior filler and exterior vinyl trim.



Horizontal Section
Casement and Casement

Vertical (ribbon) Joining Detail

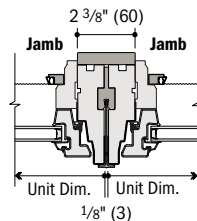
Scale 1 1/2" (38) = 1'-0" (305) – 1:8

Overall Window Dimension Width

Sum of individual window widths plus 1/8" (3) for each join.

Overall Rough Opening Width

Overall window dimension width plus 1/2" (13).



Horizontal Section
Casement to Casement

For more joining information, see the combination designs section starting on page 181.

- 4 9/16" (116) overall jamb depth and 2 7/8" (73) base jamb depth measurement is from back side of installation flange.
- Light-colored areas are parts included with window. Dark-colored areas are additional Andersen® parts required to complete window assembly as shown.
- Dimensions in parentheses are in millimeters.
- Minimum rough openings may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See installation information on pages 210-211.
- Details are for illustration only and are not intended to represent product installation methods or materials. Refer to product installation guides at andersenwindows.com.
- Consult with an architect or structural engineer regarding minimum requirements for structural support members between adjacent rough openings.



REPLACEMENT CASEMENT & AWNING WINDOWS

Custom Sizes	40
Grille Patterns	34
Window Details	35-36
Product Performance	197

CUSTOM SIZING
in 1/8" (3) increments



Dimensions in parentheses are in millimeters.

REPLACEMENT CASEMENT & AWNING WINDOWS

FEATURES

FRAME

A A seamless one-piece, rigid vinyl frame cover is secured to the exterior of the frame to protect the wood frame from moisture and maintain an attractive appearance while minimizing maintenance.

B Pre-drilled, through-the-jamb installation holes allow for quick and easy installation.

C Wood frame members are treated with a water-repellent preservative for long-lasting* protection and performance.

D Interior stops are unfinished pine. Low-maintenance prefinished white, dark bronze and black** interiors are also available.

SASH

E Rigid vinyl encases the entire sash – a vinyl weld protects each sash corner for superior weathertightness. It maintains an attractive appearance and minimizes maintenance.

F Wood core members provide excellent structural stability and energy efficiency.

G Vinyl closed-cell foam weatherstrip is factory installed on the perimeter of the sash.

GLASS

H In addition to stainless steel glass spacers, black or white glass spacers are now available to allow the spacer to blend in with the unit color.

I A glazing bead and silicone provide superior weathertightness and durability.

J High-Performance options include:

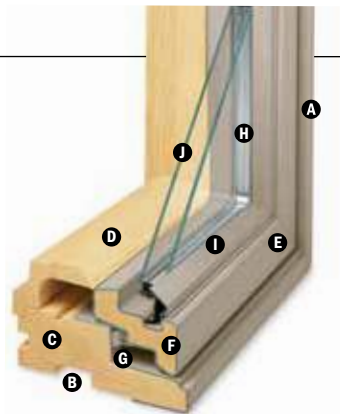
- Low-E4® glass
- Low-E4 HeatLock® glass
- Low-E4 SmartSun™ glass
- Low-E4 SmartSun HeatLock glass
- Low-E4 Sun glass

Tempered and other glass options are available. Contact your Andersen supplier.

A removable translucent film helps shield the glass from damage during delivery and construction, and simplifies finishing at the job site.

Patterned Glass

Patterned glass options are available. See page 12 for more details.



HARDWARE

Smooth Control Hardware System



The smooth control hardware system employs a worm gear drive for easy operation. Units with a wash mode have hinges that move the sash away from the frame to provide easier glass

cleaning. CXW15, CXW155, CXW16 and CXW25 sizes not available with wash mode. Hardware option and finish must be specified. Operator handle and cover sold separately.

Single-Actuation Casement Lock



On casement windows, a single-actuation lock easily releases all locking points on the casement sash while the reach-out action eliminates binding when closing. The lock handle is offered in finishes that coordinate with your specified hardware option.

Awning Sash Locks



Awning sash locks provide an added measure of security and weathertightness. Hardware style and finish options are compatible with Andersen® casement windows to ensure consistency in appearance when used in window combination designs.

INSTALLATION

Included Installation Materials

Flat self-hanging shims, backer rod, installation screws and complete instructions are included with each replacement window. See the measurement guide and worksheet at andersenwindows.com/measure.

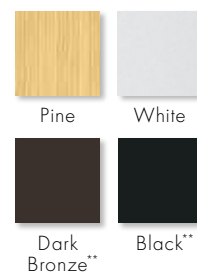


EXTERIOR & INTERIOR OPTIONS

EXTERIOR COLORS



INTERIOR OPTIONS



HARDWARE OPTIONS Sold Separately



CONTEMPORARY FOLDING

Black | Bright Brass | Gold Dust
Oil Rubbed Bronze | **Satin Nickel**
Stone | White



TRADITIONAL FOLDING

Antique Brass | Black | Bright Brass
Distressed Bronze | Distressed Nickel
Gold Dust | Oil Rubbed Bronze
Satin Nickel | Stone | White

Folding handles avoid interference with window treatments.



CLASSIC SERIES™

Stone | **White**



ESTATE™

Antique Brass | Bright Brass
Brushed Chrome | Distressed Bronze
Distressed Nickel | Oil Rubbed Bronze
Polished Chrome | Satin Nickel

Bold name denotes finish shown.

HARDWARE FINISHES



*Visit andersenwindows.com/warranty for details.

**Products with dark bronze and black interiors have matching exteriors.

Dimensions in parentheses are in millimeters.

Printing limitations prevent exact replication of colors and finishes. See your Andersen supplier for actual color and finish samples.

Naturally occurring variations in grain, color and texture of wood make each window one of a kind. All wood interiors are unfinished unless a finish is specified. Distressed bronze and oil rubbed bronze are "living" finishes that will change with time and use.

ACCESSORIES Sold Separately

FRAME

Extension Jamb



Standard jamb depth is 2 7/8" (73). Extension jambs are available in unfinished pine or prefinished white, dark bronze and black. Some sizes may be veneered.

Factory-applied and non-applied interior extension jambs are available in 1/16" (1.5) increments between 4 9/16" (116) and 7 1/8" (181). Extension jambs can be factory applied to either three sides (stool and apron application) or four sides (picture frame casing).

Thick Replacement Extension Jambs



To help preserve original alignment of trim and paint lines in replacement situations, special 1 1/8" (29) thick replacement extension jambs are available. Factory-applied and non-applied extension jambs are available in 1/16" (1.5) increments between 4 9/16" (116) and 7 1/8" (181). Non-applied extension jambs are available in 12" (3658) lineals. Detail on page 34.

Drywall Return Bead



A drywall return bead is available in a narrow or wide dimension with unfinished pine or prefinished white, dark bronze and black interiors. Can be ordered factory applied or in non-applied lineals. Detail on page 34.

HARDWARE

Corrosion-Resistant Components



Corrosion-resistant hinge and operator arm hardware is designed for applications in harsh and corrosive environments such as heavy industrial or coastal areas.*

Window Opening Control Device



A window opening control device is available, which limits sash travel to less than 4" (102) when the window is first opened. Available factory applied, or as a field-applied kit in stone, white and black.

Power Operator for Awning Windows



Awning windows can be ordered with an operator enhanced by PowerAssist™ technology that opens and closes the window with the touch of a button. Easy to install, the 24-volt system features a concealed window power drive, battery backup in case of a power outage and a moisture sensor that automatically closes the window when it rains. A wireless remote control is available (sold separately).

The PowerAssist system is controlled by a wall-mounted console, which includes a power box, battery, touch pad and mounting bracket. Windows can be ordered factory prepped to save time, or they can be ordered as a field kit. Power driver requires field installation. PowerAssist technology eliminates the need for sash locks. Available for windows up to 5' (1524) wide. Not available for units with Stormwatch® Protection or performance upgrades.

SPECIAL USE OPERATOR HANDLES

Available in Classic Series™ design only.

Compact Operator Handle



Specially designed for use in situations where blinds or other window treatments interfere with standard operator handle. Available in white or stone finish.

Easy-Grip Handle

Larger knob makes it easier to grip and operate.

Available in white or stone finish.



Operator Spline Cover



An operator spline cover is an attractive cap that covers the roto operator stud when the handle has been removed to control access or operation of the window. The operator spline cover should not be used on any window designated or intended for emergency escape or rescue. Please consult your local building code official for local egress code requirements.

Metal T-Handle



Our smallest operator handle, the metal T-handle, may make it more difficult for young children (5 and under) to open the window. For more information on child safety, write:

Andersen Corporation
LookOut For Kids® Program
 100 Fourth Avenue North
 Bayport, MN 55003
 Call 800-313-8889 or email
lofk@andersencorp.com.

GLASS

Andersen® Art Glass

Andersen art glass panels come in a variety of original patterns. See art glass section starting on page 173 for more information or visit andersenwindows.com/artglass.

INSECT SCREENS

TruScene® Insect Screens



Andersen TruScene insect screens let in over 25% more fresh air** and provide 50% greater clarity than conventional Andersen insect screens, all while keeping out unwanted small insects. For casement and awning windows, frames are available in white, stone, dark bronze and black, or with pine veneer frame interiors to blend with the wood interior of the window.

Conventional Insect Screens

Conventional insect screens have charcoal powder-coated aluminum screen mesh. Available with frames in white, stone, dark bronze and black.

GRILLES

Grilles are available in a variety of configurations and widths. For casement and awning window grille patterns, see page 34.

EXTERIOR TRIM

Available with Andersen exterior trim. See exterior trim section starting on page 175.

CAUTION:

- Painting and staining may cause damage to rigid vinyl.
- 400 Series windows in Terratone color may be painted any color lighter than Terratone color using quality oil-based or latex paint.
- Do not paint 400 Series windows in white, canvas, Sandtone, dark bronze, forest green or black exterior colors.
- Andersen does not warrant the adhesion or performance of homeowner-applied paint over vinyl or other factory-coated surfaces.
- For vinyl painting instructions and preparation, contact your Andersen supplier.
- Do not paint weatherstrip.
- Creosote-based stains should not come in contact with Andersen products.
- Abrasive cleaners or solutions containing corrosive solvents should not be used on Andersen products.

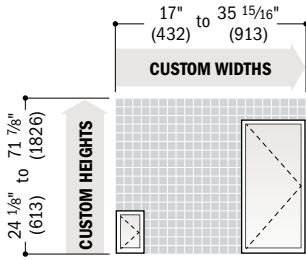
*Visit andersenwindows.com/warranty for details.

**TruScene insect screens let in over 25% more fresh air than standard Andersen fiberglass insect screens. Dimensions in parentheses are in millimeters.

REPLACEMENT CASEMENT & AWNING WINDOWS

Replacement Sizes and Specification Formulas

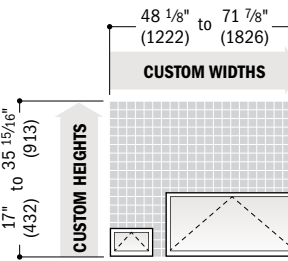
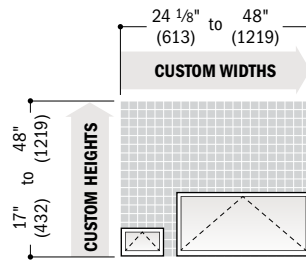
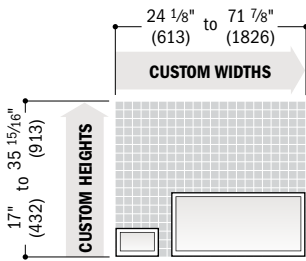
Casement Windows (stationary and venting)



Available in 1/8" (3) increments between minimum and maximum widths and heights. Windows can also be custom sized to match standard sizes ending in a sixteenth of an inch. Some restrictions apply; contact your Andersen supplier. Custom sizing is available for single windows only. To achieve custom-size 2- or 3-wide combinations, join custom-size single windows. For minimum rough opening dimensions for joined windows, see specific joining instruction guides. Measurement guide for custom-size windows can be found at andersenwindows.com/measure. Thick replacement extension jambs are available to preserve original alignment of trim and paint lines. Shown on page 39; see page 34 for detail.

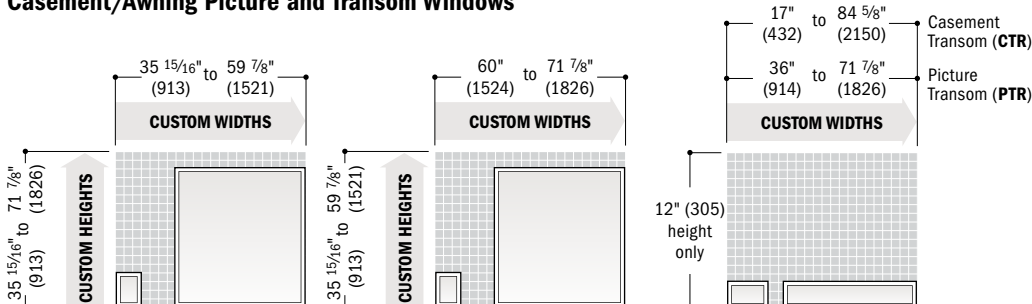
	Clear Opening Width = window width - 5.81" (148) = (window width - 9.66" (245)) x 1.07 = window width - 9.70" (246) Height = window height - 4.43" (113) = window height - 4.85" (123)	Width ≥ 24 1/8" (613) (hinge for widest clear opening) Width ≥ 28 3/8" (721) (hinge with wash mode and control bracket) Width ≥ 17" (432) (hinge with wash mode) Height ≥ 40 13/16" (1037) and < 48" (1219); Width ≥ 28 3/8" (721) and < 31 1/2" (800) All other window heights	Min. R.O. 	Width = window width + 1/2" (13) Height = window height + 1/2" (13)
	Vent Opening Width = window width - 5.81" (148) = window width - 6.10" (155) Height = window height - 4.43" (113) = window height - 4.85" (123)	Width ≥ 24 1/8" (613) (hinge for widest clear opening) Width ≥ 17" (432) (hinge with wash mode) Height ≥ 40 13/16" (1037) and < 48" (1219); Width ≥ 28 3/8" (721) and < 31 1/2" (800) All other window heights	Unobst. Gls. 	Width = window width - 4.40" (112) Height = window height - 4.95" (126)

Awning Windows (stationary and venting)



	Clear Opening Width = window width - 4.53" (115) Depth = 6.38" (162) = 6.44" (164) = 6.50" (165) Height ≥ 17" (432) and < 20 1/2" (521) Height ≥ 20 1/2" (521) and < 24 1/8" (613) All other window heights	Min. R.O. 	Width = window width + 1/2" (13) Height = window height + 1/2" (13)
	Vent Opening Width = window width - 4.53" (115) Depth = 6.38" (162) = 6.44" (164) = 6.50" (165) Height ≥ 17" (432) and < 20 1/2" (521) Height ≥ 20 1/2" (521) and < 24 1/8" (613) All other window heights	Unobst. Gls. 	Width = window width - 4.81" (122) Height = window height - 4.51" (115)

Casement/Awning Picture and Transom Windows



Min. R.O. 	Width = window width - 1/2" (13) Height = window height - 1/2" (13)
Unobst. Gls. 	Width = window width - 4.80" (122) Height = window height - 4.80" (122)

* Dimensions in parentheses are in millimeters.

* **Clear Opening** formulas provide dimensions for determining area available for egress. **Vent Opening** formulas provide dimensions for determining area available for passage of air. **Min. R.O.** (minimum rough opening) formulas provide minimum rough opening width and height dimensions. **Unobst. Gls.** (unobstructed glass) formulas provide dimensions for determining area available for passage of light.

* Refer to andersenwindows.com/measure for detailed instructions on how to properly measure for custom-size windows.



COMPLEMENTARY CASEMENT WINDOWS

Custom Sizes	44
Window Details	45-46
Product Performance	197

CUSTOM SIZING
in 1/8" (3) increments



Dimensions in parentheses are in millimeters.

COMPLEMENTARY CASEMENT WINDOWS

FEATURES

FRAME

A Heavy-duty extruded aluminum cladding protects the frame exterior, providing low-maintenance durability. Standard cladding finish meets AAMA 2604. An optional finish that meets the AAMA 2605 standard is also available.

B Wood frame members are treated with a water-repellent preservative for long-lasting protection and performance.

C Interior stops are unfinished. Low-maintenance prefinished white, dark bronze and black interiors are also available.

Installation flange extends 1 1/2" (38) around the perimeter of the unit for positioning and locating. Installation clips are standard for increased structural anchoring to building members. Mounted around the frame perimeter, the clips rotate into position and can be bent into place against the framing members to suit all jamb conditions.



HARDWARE

Smooth Control Hardware System



The smooth control hardware system employs a worm gear drive for easy operation. Units with a wash mode have hinges that move the sash away from the frame to provide easier glass cleaning on rectangular units. Arch and Springline™ casement units use the same smooth control hardware system with stainless steel butt hinges for smooth operation. Hardware option and finish must be specified. Operator handle and cover sold separately.

Single-Actuation Casement Lock



A single-actuation lock easily releases all locking points on the casement sash while the reach-out action eliminates binding when closing. The lock handle is offered in finishes that coordinate with your specified hardware option.

SASH

D Wood core members provide excellent structural stability and energy efficiency.

E Heavy-duty extruded aluminum cladding protects the sash exterior, providing low-maintenance durability.

F Weatherstrip throughout the unit provides a long-lasting, energy-efficient seal. Rain skirt is factory installed on the perimeter of the sash.

GLASS

G In addition to stainless steel glass spacers, black or white glass spacers are now available to allow the spacer to blend in with the unit color.

H Silicone glazing bead combined with two-sided silicone tape provide superior weathertightness.

I High-Performance options include:

- Low-E4® glass
- Low-E4 HeatLock® glass
- Low-E4 SmartSun™ glass
- Low-E4 SmartSun HeatLock glass
- Low-E4 Sun glass

Tempered and other glass options are available. Contact your Andersen supplier.

A removable translucent film helps shield the glass from damage during delivery and construction, and simplifies finishing at the job site.

Patterned Glass

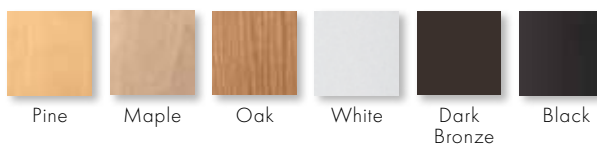
Patterned glass options are available. See page 12 for more details.

EXTERIOR & INTERIOR OPTIONS

EXTERIOR COLORS



INTERIOR OPTIONS



HARDWARE OPTIONS Sold Separately



CONTEMPORARY FOLDING

Black | Bright Brass | Gold Dust
Oil Rubbed Bronze | **Satin Nickel**
Stone | White



TRADITIONAL FOLDING

Antique Brass | Black | Bright Brass
Distressed Bronze | Distressed Nickel
Gold Dust | Oil Rubbed Bronze
Satin Nickel | Stone | White

Folding handles avoid interference with window treatments.



CLASSIC SERIES™

Stone | White



ESTATE™

Antique Brass | Bright Brass
Brushed Chrome | Distressed Bronze
Distressed Nickel | Oil Rubbed Bronze
Polished Chrome | Satin Nickel

Bold name denotes finish shown.

HARDWARE FINISHES



*Visit andersenwindows.com/warranty for details.

Dimensions in parentheses are in millimeters.

Printing limitations prevent exact replication of colors and finishes. See your Andersen supplier for actual color and finish samples.

Naturally occurring variations in grain, color and texture of wood make each window one of a kind.

All wood interiors are unfinished unless a finish is specified.

Distressed bronze and oil rubbed bronze are "living" finishes that will change with time and use.

FRENCH CASEMENT



Andersen® complementary French casements allow both sash to swing outward from the center, eliminating a center mullion post. They offer smooth operating multi-point locking mechanisms and hinges. The multi-point lock is activated with a single turn of a handle that simultaneously secures both sash. French casement windows have a unique locking handle that's available in antique brass, black, bright brass, brushed chrome, oil rubbed bronze, polished chrome, satin nickel, stone and white finishes.

ACCESSORIES Sold Separately

FRAME

Extension Jamb



Complementary casement jamb depth is 3 3/8" (86). Extension base jambs are available in 1/16" (1.5) increments between 4 9/16" (116) and 7 1/8" (181). Additional dimensions are available. Contact your Andersen supplier for more information. Extension jambs are available in unfinished pine or prefinished white, dark bronze and black. Available for job site application or can be factory applied.

HARDWARE

Corrosion-Resistant Components



Corrosion-resistant hinge and operator arm hardware is designed for applications in harsh and corrosive environments such as heavy industrial or coastal areas.* Shown above on a 400 Series casement window.

Window Opening Control Device



A window opening control device is available, which limits sash travel to less than 4" (102) when the window is first opened. Available factory applied, or as a field-applied kit in stone, white and black. Not available for French casement windows.

SPECIAL USE OPERATOR HANDLES

Available in Classic Series™ design only.

Compact Operator Handle



Specially designed for use in situations where blinds or other window treatments interfere with standard operator handle. Available in white or stone finish.

Easy-Grip Handle

Larger knob makes it easier to grip and operate. Available in white or stone finish.



Operator Spline Cover



An operator spline cover is an attractive cap that covers the roto operator stud when the handle has been removed to control access or operation of the window. The operator spline cover should not be used on any window designated or intended for emergency escape or rescue. Please consult your local building code official for local egress code requirements.

Metal T-Handle



Our smallest operator handle, the metal T-handle, may make it more difficult for young children (5 and under) to open the window. For more information on child safety, write:

Andersen Corporation
LookOut For Kids® Program
 100 Fourth Avenue North
 Bayport, MN 55003
 Call 800-313-8889 or email
 lofk@andersencorp.com.

INSECT SCREENS

TruScene® Insect Screens



Andersen TruScene insect screens let in over 25% more fresh air** and provide 50% greater clarity than conventional Andersen insect screens, all while keeping out unwanted small insects. For complementary casement windows, TruScene frames are available in white, stone, dark bronze and black as well as pine, maple and oak wood veneers.

Conventional Insect Screens

Conventional insect screens have black fiberglass screen mesh. Optional charcoal powder-coated aluminum screen mesh is available. Frames are available in white, stone, dark bronze and black.

CAUTION:

- Do not paint weatherstrip.
- Creosote-based stains should not come in contact with Andersen products.
- Abrasive cleaners or solutions containing corrosive solvents should not be used on Andersen products.

*Visit andersenwindows.com/warranty for details.

**TruScene insect screens let in over 25% more fresh air than standard Andersen fiberglass insect screens.

Dimensions in parentheses are in millimeters.

COMPLEMENTARY CASEMENT WINDOWS

Shapes and Sizes

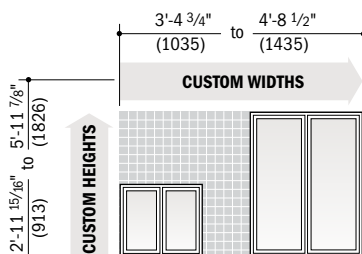
Standard sizes are available for French, Springline™ French and Arch French casement windows. Springline, Springline flanker, twin Springline, arch, twin and triple arch, trapezoid, unequal leg arch and rectangular casement window standard sizes are also available. For casement picture and transom window sizes, contact your Andersen supplier.

Custom Sizes

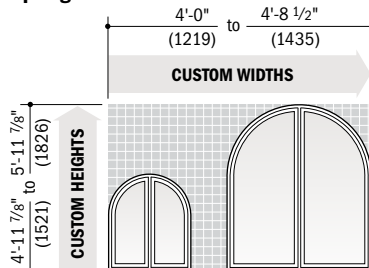


Choose left, right or stationary as viewed from the exterior. Custom-size windows are available in 1/8" (3) increments between minimum and maximum widths and heights.

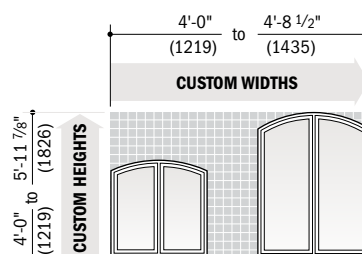
French Casement



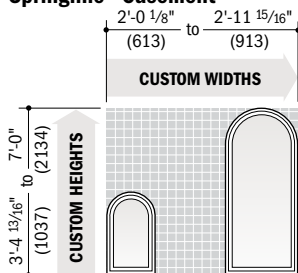
Springline™ French Casement



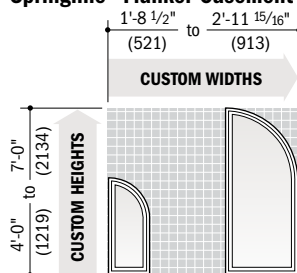
Arch French Casement



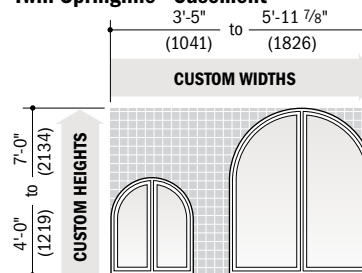
Springline™ Casement*



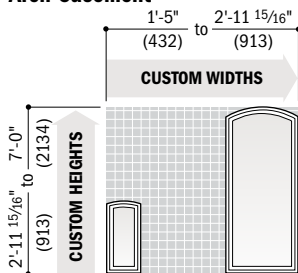
Springline™ Flanker Casement*



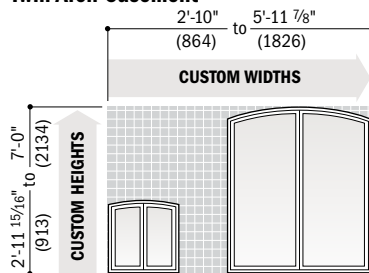
Twin Springline™ Casement*



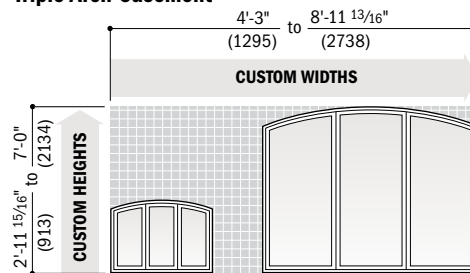
Arch Casement*



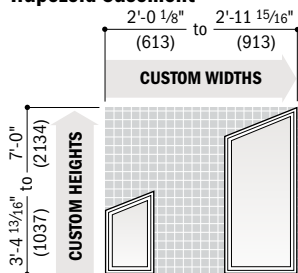
Twin Arch Casement*



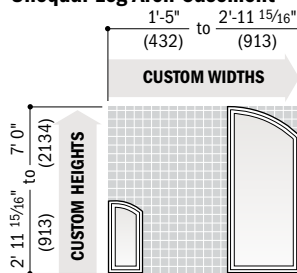
Triple Arch Casement*



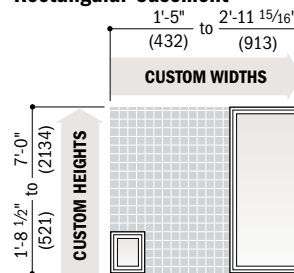
Trapezoid Casement*



Unequal Leg Arch Casement



Rectangular Casement



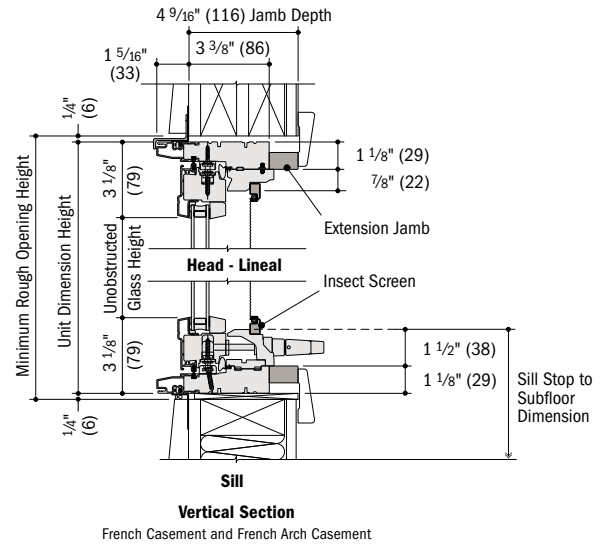
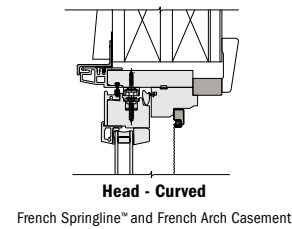
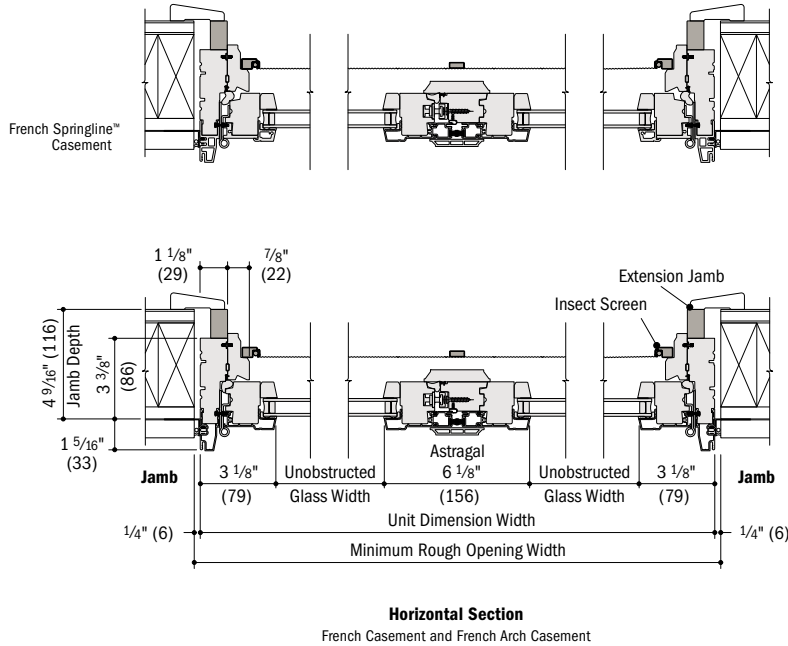
* Rough openings may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See pages 210-211 for more details.

* Dimensions in parentheses are in millimeters.

* For exterior wall cladding that extends beyond the face of the window, there may be a reduction in the amount of opening "swing" when the top of the sash touches the wall cladding.

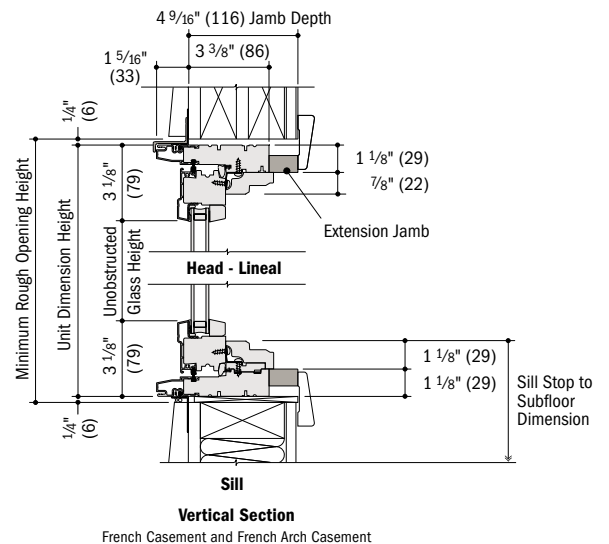
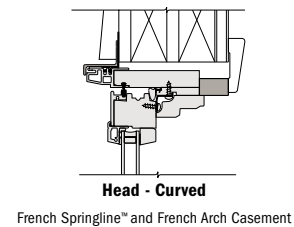
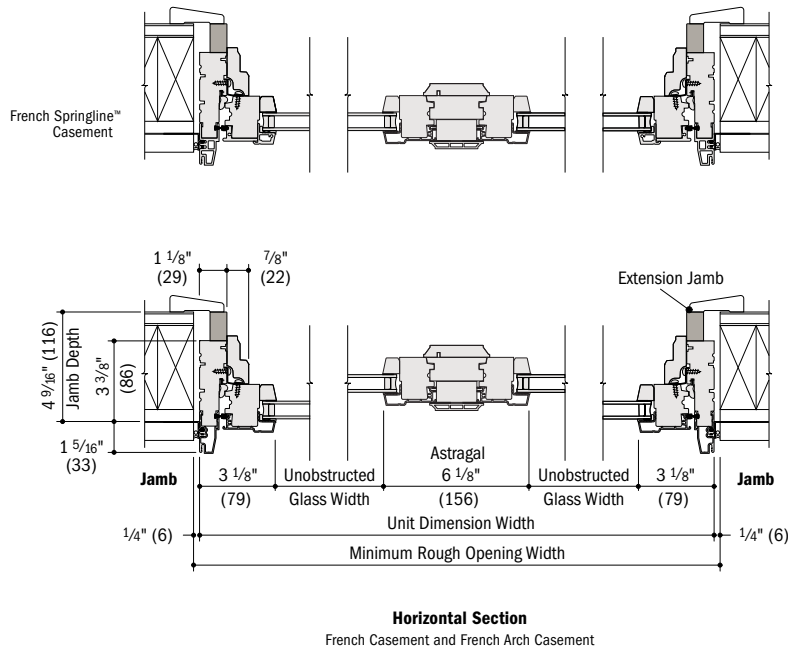
Clad Complementary Venting French Casement Window Details

Scale 1 1/2" (38) = 1'-0" (305) – 1:8



Clad Complementary Stationary French Casement Window Details

Scale 1 1/2" (38) = 1'-0" (305) – 1:8

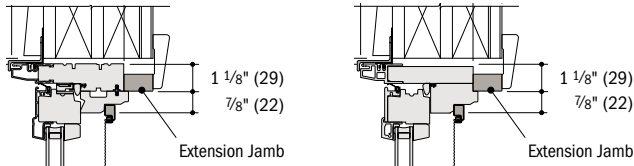


- 4 9/16" (116) overall jamb depth and 3 3/8" (86) base jamb depth measurement is from back side of installation flange.
- Light-colored areas are parts included with window. Dark-colored areas are additional Andersen® parts required to complete window assembly as shown.
- Dimensions in parentheses are in millimeters.
- Minimum rough openings may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See installation information on pages 210-211.
- Details are for illustration only and are not intended to represent product installation methods or materials. Refer to unit installation guides at andersenwindows.com.

COMPLEMENTARY CASEMENT WINDOWS

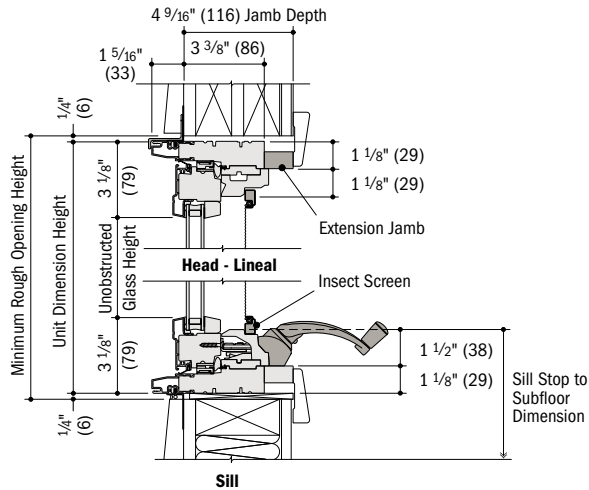
Clad Complementary Venting Casement Window Details

Scale 1 1/2" (38) = 1'-0" (305) – 1:8

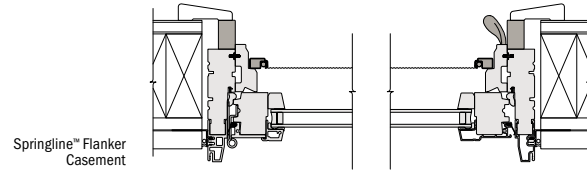


Head - Lineal
Trapezoid Casement

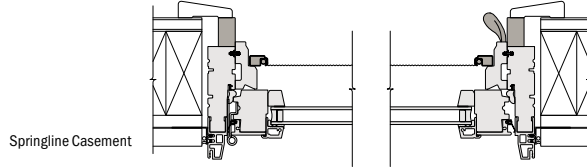
Head - Curved
Arch Casement, Unequal Leg Arch Casement,
Springline™ and Springline Flanker Casements



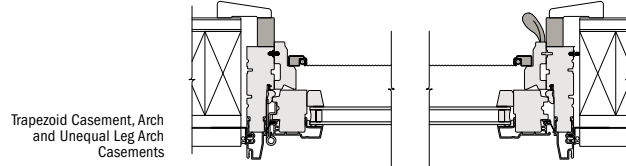
Vertical Section
Casement



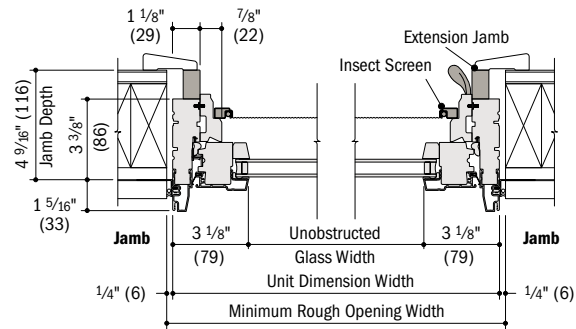
Springline™ Flanker
Casement



Springline Casement



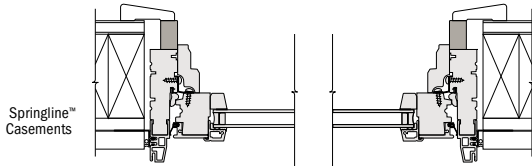
Trapezoid Casement, Arch
and Unequal Leg Arch
Casements



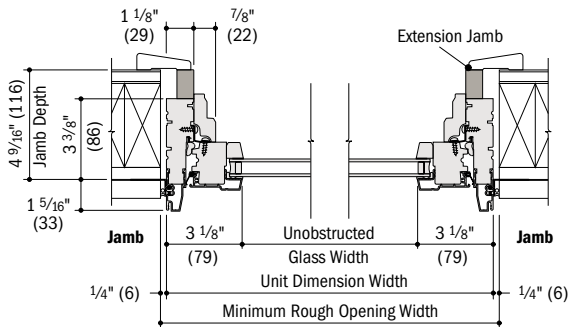
Horizontal Section
Casement

Clad Complementary Stationary Casement Window Details

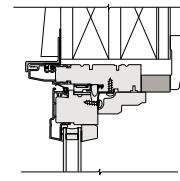
Scale 1 1/2" (38) = 1'-0" (305) – 1:8



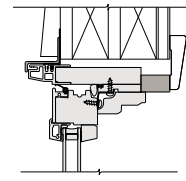
Springline™
Casements



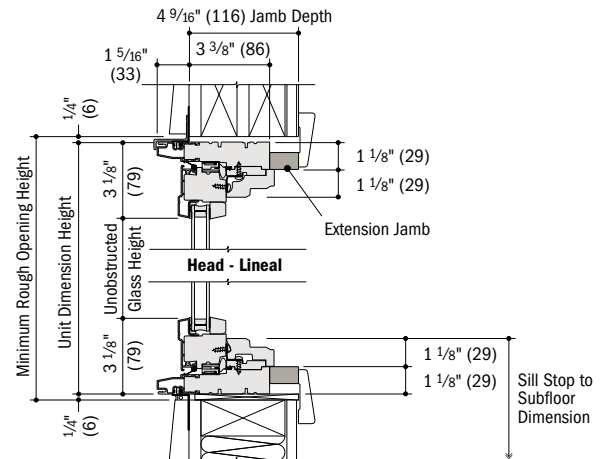
Horizontal Section
Casement, Trapezoid Casement, Arch and Unequal Leg Arch Casements



Head - Lineal
Trapezoid Casement



Head - Curved
Arch Casement, Unequal Leg Arch Casement,
Springline™ and Springline Flanker Casements



Vertical Section
Casement

- 4 9/16" (116) overall jamb depth and 3 3/8" (86) base jamb depth measurement is from back side of installation flange.
- Light-colored areas are parts included with window. Dark-colored areas are additional Andersen® parts required to complete window assembly as shown.
- Dimensions in parentheses are in millimeters.
- **Minimum rough openings may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See installation information on pages 210-211.**
- Details are for illustration only and are not intended to represent product installation methods or materials. Refer to unit installation guides at andersenwindows.com.

WOODWRIGHT® DOUBLE-HUNG FULL-FRAME WINDOWS

Tables of Sizes	50-56
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Custom Sizes	62
Grille Patterns	63
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Joining Details	65
Combination Designs	181
Product Performance	197

CUSTOM SIZING
in 1/8" (3) increments



Dimensions in parentheses are in millimeters.



WOODWRIGHT® DOUBLE-HUNG FULL-FRAME WINDOWS

FEATURES

FRAME

- A** Perma-Shield® exterior cladding protects the frame – beautifully. Best of all, it's low maintenance and never needs painting.
- B** For exceptional long-lasting* performance, sill members are constructed with a wood core and a Fibrex® material exterior.
- C** Natural wood stops are available in pine, maple, oak and prefinished white. Wood jamb liners add beauty and authenticity to the window interior.
- D** A factory-applied rigid vinyl flange on the head, sill and sides of the outer frame helps secure the unit to the structure.
- E** Multiple weatherstrip systems help provide a barrier against wind, rain and dust. The combination of spring-tension vinyl, rigid vinyl and flexible bulb weatherstrip is efficient and effective.
- F** For units with white exterior color, the exterior jamb liner is white. For all other units, the exterior jamb liner is gray.

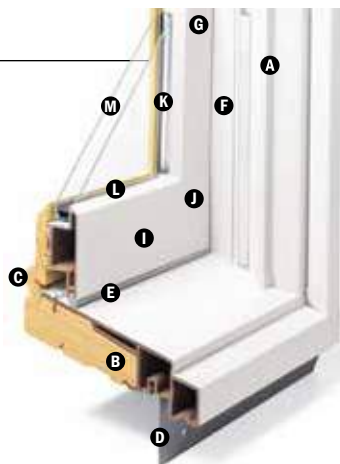
SASH

- G** Balancers in the sash enable contractors to screw through the jamb during installation without interfering with the window's operation.

Wood Jamb Liner



- H** Natural wood sash interior with classic chamfer detailing. Available in pine, maple, oak or prefinished white.
- I** Low-maintenance sash exterior provides long-lasting* protection and performance. Sash exteriors on most units include Fibrex material.
- J** Sash joints simulate the look of traditional mortise-and-tenon construction inside and out.



GLASS

- K** In addition to stainless steel glass spacers, black or white glass spacers are now available to allow the spacer to blend in with the unit color.
- L** Silicone bed glazing provides superior weathertightness and durability.
- M** High-Performance options include:
- Low-E4® glass
 - Low-E4 HeatLock® glass
 - Low-E4 SmartSun™ glass
 - Low-E4 SmartSun HeatLock glass
 - Low-E4 Sun glass

Tempered and other glass options are available. Contact your Andersen supplier.

A removable translucent film helps shield the glass from damage during delivery and construction, and simplifies finishing at the job site.

Patterned Glass

Patterned glass options are available. See page 12 for more details.

HARDWARE



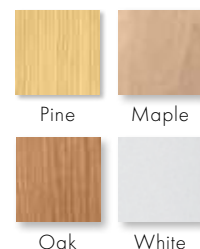
Standard lock and keeper design provides an easy tilt-to-clean feature integrated into the lock.

EXTERIOR & INTERIOR OPTIONS

EXTERIOR COLORS



INTERIOR OPTIONS



HARDWARE



Standard Lock & Keeper

Antique Brass | **Black** | Bright Brass
Brushed Chrome | Distressed Bronze
Distressed Nickel | Gold Dust
Oil Rubbed Bronze | Polished Chrome
Satin Nickel | Stone | White

OPTIONAL HARDWARE Sold Separately

CONTEMPORARY



Bar Lift

Available in all hardware finishes.
Shown in **Distressed Nickel**.

ESTATE™



Hand Lift

Finger Lifts

Antique Brass | Bright Brass
Brushed Chrome | Distressed Bronze
Distressed Nickel | Oil Rubbed Bronze
Polished Chrome | **Satin Nickel**

TRADITIONAL



Bar Lift



Hand Lift



Finger Lifts

Antique Brass | Black | Bright Brass | Brushed Chrome
Distressed Bronze | Distressed Nickel | Gold Dust | **Oil Rubbed Bronze**
Polished Chrome | Satin Nickel | Stone | White

CLASSIC SERIES™



Bar Lift



Hand Lift



Finger Lifts

Stone | **White**

Bold name denotes finish shown.

HARDWARE FINISHES



*Visit andersenwindows.com/warranty for details.

Dimensions in parentheses are in millimeters.

Printing limitations prevent exact replication of colors and finishes.

See your Andersen supplier for actual color and finish samples.

Naturally occurring variations in grain, color and texture of wood make each window one of a kind. All wood interiors are unfinished unless a finish is specified.

Distressed bronze and oil rubbed bronze are "living" finishes that will change with time and use.

StormWATCH[®] PROTECTION

Performance Grade (PG) Upgrades

Performance upgrades are available for select sizes of standard, non-impact Woodwright[®] windows allowing these units to achieve higher performance ratings. Performance Grade (PG) ratings are more comprehensive than Design Pressure (DP) ratings for measuring product performance. For up-to-date performance information of individual products, visit andersenwindows.com. Use of this option will subtract 5/8" (16) from clear opening height. Contact your Andersen supplier for availability.

Visit andersenwindows.com/coastal for more information on Stormwatch[®] Protection.

SHAPES

Woodwright windows are available in the following shapes.



Double-Hung

Springline[™]
Single-Hung



Arch Double-Hung

Unequal Leg Arch
Double-Hung

SASH OPTIONS*



Cottage

Reverse Cottage

ACCESSORIES Sold Separately

FRAME

Extension Jamb



Standard jamb depth is 4 1/2" (114). Extension jambs are available in unfinished pine or prefinished white. Some sizes may be veneered.

Factory-applied and non-applied interior extension jambs are available in 1/16" (1.5) increments between 5 1/4" (133) and 7 1/8" (181). Extension jambs can be factory applied to either three sides (stool and apron application) or four sides (picture frame casing).

Pine Stool



A clear pine stool is available and ready for finishing. The Woodwright stool is available in 4 9/16" (116) for use in wall depths up to 5 1/4" (133) and 6 1/16" (167) for use in wall depths up to 7 1/8" (181). Works with 2 1/4" (57) and 2 1/2" (64) casing widths. Shown above on a 400 Series tilt-wash double-hung window.

HARDWARE

Window Opening Control Device



A window opening control device is available, which limits sash travel to less than 4" (102) when the window is first opened. Available factory applied, or as a field-applied kit in stone or white.

STORM/INSECT SCREEN COMBINATION UNIT**



A self-storing storm window combined with an insect screen provides greater energy efficiency, while allowing ventilation when needed.

Constructed with an aluminum frame, single-pane upper and lower glass panels, and charcoal powder-coated aluminum screen mesh. Available in white, Sandtone and Terratone to match product exteriors. Canvas, dark bronze, forest green and black are available by special order.

Combination units can improve Sound Transmission Class (STC) and Outdoor Indoor Transmission Class (OITC) ratings. Ideal for projects near airports, busy roadways or other noisy environments. For example, adding a combination unit to a 400 Series tilt-wash double-hung (3862) unit with Low-E4[®] glass will improve its STC rating from 26 to 32. Contact your Andersen supplier for additional STC and OITC rating information.

INSECT SCREENS

Insect Screen Frames



Choose full insect screen or half insect screen. Half insect screen (shown above) allows ventilation without affecting the view through the upper sash. Frames are available in colors to match product exteriors.

TruScene[®] Insect Screens

Andersen TruScene insect screens let in over 25% more fresh air† and provide 50% greater clarity than conventional Andersen insect screens, all while keeping out unwanted small insects.

Conventional Insect Screens

Conventional insect screens have charcoal powder-coated aluminum screen mesh.

GRILLES

Grilles are available in a variety of configurations and widths. For double-hung grille patterns, see page 63.

EXTERIOR TRIM

Available with Andersen[®] exterior trim. See exterior trim section starting on page 175.

CAUTION:

- Painting and staining may cause damage to rigid vinyl.
- 400 Series windows in Terratone color may be painted any color lighter than Terratone color using quality oil-based or latex paint.
- Do not paint 400 Series windows with white, canvas, Sandtone, dark bronze, forest green or black exterior colors.
- Andersen does not warrant the adhesion or performance of homeowner-applied paint over vinyl or other factory-coated surfaces.
- For vinyl painting instructions and preparation, contact your Andersen supplier.
- Do not paint weatherstrip.
- Creosote-based stains should not come in contact with Andersen products.
- Abrasive cleaners or solutions containing corrosive solvents should not be used on Andersen products.

*Shown on 400 Series tilt-wash double-hung windows.

**Do not add combination units to windows with Low-E4 Sun glass unless window glass is tempered. Combination units may also reduce the overall clear operable area of the window. See your local code official for egress requirements in your area.

†TruScene insect screens let in over 25% more fresh air than standard Andersen fiberglass insect screens.

Dimensions in parentheses are in millimeters.

WOODWRIGHT® DOUBLE-HUNG FULL-FRAME WINDOWS

Table of Woodwright® Double-Hung Window Sizes

Scale 1/8" (3) = 1'-0" (305) – 1:96

Notes on the next page also apply to this page.

Window Dimension	1'-9 5/8"	2'-1 5/8"	2'-5 5/8"	2'-7 5/8"	2'-9 5/8"	2'-11 5/8"	3'-1 5/8"	3'-5 5/8"	3'-9 5/8"
	(549)	(651)	(752)	(803)	(854)	(905)	(956)	(1057)	(1159)
Minimum Rough Opening	1'-10 1/8"	2'-2 1/8"	2'-6 1/8"	2'-8 1/8"	2'-10 1/8"	3'-0 1/8"	3'-2 1/8"	3'-6 1/8"	3'-10 1/8"
	(562)	(664)	(765)	(816)	(867)	(917)	(968)	(1070)	(1172)
Unobstructed Glass (lower sash only)	15 5/8"	19 5/8"	23 5/8"	25 5/8"	27 5/8"	29 5/8"	31 5/8"	35 5/8"	39 5/8"
	(397)	(498)	(600)	(651)	(702)	(752)	(803)	(905)	(1006)

CUSTOM WIDTHS – 16 1/2" to 45 5/8"

CUSTOM HEIGHTS – 32" to 76 7/8"	16 1/2"	18 1/2"	20 1/2"	22 1/2"	24 1/2"	26 1/2"	28 1/2"	30 1/2"	32"	34"	36"	38"	40"	42"	44"	45 5/8"
3'-0 7/8"	WDH18210	WDH20210	WDH24210	WDH26210	WDH28210	WDH210210	WDH30210	WDH34210	WDH38210							
3'-4 7/8"	WDH1832	WDH2032	WDH2432	WDH2632	WDH2832	WDH21032	WDH3032	WDH3432	WDH3832							
3'-8 7/8"	WDH1836	WDH2036	WDH2436	WDH2636	WDH2836	WDH21036	WDH3036	WDH3436	WDH3836							
4'-0 7/8"	WDH18310	WDH20310	WDH24310	WDH26310	WDH28310	WDH210310	WDH30310	WDH34310	WDH38310							
4'-4 7/8"	WDH1842	WDH2042	WDH2442	WDH2642	WDH2842	WDH21042	WDH3042	WDH3442	WDH3842							
4'-8 7/8"	WDH1846	WDH2046	WDH2446	WDH2646	WDH2846	WDH21046	WDH3046°	WDH3446°	WDH3846°							
5'-0 7/8"	WDH18410	WDH20410	WDH24410	WDH26410	WDH28410	WDH210410°	WDH30410°	WDH34410°	WDH38410°							
5'-4 7/8"	WDH1852	WDH2052	WDH2452	WDH2652	WDH2852°	WDH21052°	WDH3052°	WDH3452°	WDH3852°							
5'-8 7/8"	WDH1856	WDH2056	WDH2456	WDH2656°	WDH2856°	WDH21056°	WDH3056°	WDH3456°	WDH3856°							
6'-0 7/8"	WDH18510	WDH20510	WDH24510°	WDH26510°	WDH28510°	WDH210510°	WDH30510°	WDH34510°	WDH38510°							
6'-4 7/8"	WDH1862	WDH2062	WDH2462°	WDH2662°	WDH2862°	WDH21062°	WDH3062°	WDH3462°	WDH3862°							

2:3 cottage or 3:2 reverse cottage sash ratio available for all widths and heights. Size tables for windows with cottage or reverse cottage sash are available at andersenwindow.com/sizing.

CUSTOM WIDTHS –

1'-4 1/2" (419) to 3'-9 5/8" (1159)

CUSTOM HEIGHTS –

3'-0 7/8" (937) to 6'-4 7/8" (1953)

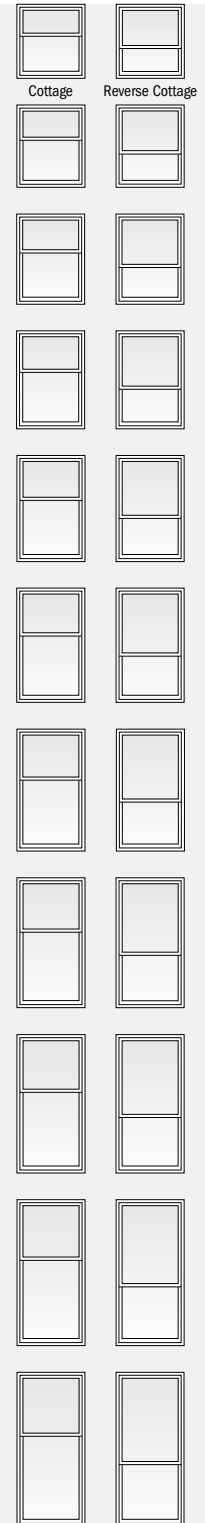


Table of Woodwright® Springline™ Single-Hung Window Sizes

Scale 1/8" (3) = 1'-0" (305) – 1:96

Window Dimension	2'-1 5/8"	2'-5 5/8"	2'-7 5/8"	2'-9 5/8"	2'-11 5/8"	3'-1 5/8"	3'-5 5/8"	3'-9 5/8"
	(651)	(752)	(803)	(854)	(905)	(956)	(1057)	(1159)
Minimum Rough Opening	2'-2 1/8"	2'-6 1/8"	2'-8 1/8"	2'-10 1/8"	3'-0 1/8"	3'-2 1/8"	3'-6 1/8"	3'-10 1/8"
	(664)	(765)	(816)	(867)	(917)	(968)	(1070)	(1172)
Unobstructed Glass (lower sash only)	19 5/8"	23 5/8"	25 5/8"	27 5/8"	29 5/8"	31 5/8"	35 5/8"	39 5/8"
	(498)	(600)	(651)	(702)	(752)	(803)	(905)	(1006)
CUSTOM WIDTHS – 25 5/8" to 45 5/8"								
CUSTOM HEIGHTS – 52 13/16" to 76 1/2"								
Unobstructed Glass (lower sash only)	12 13/16" (325)	14 13/16" (376)	15 13/16" (402)	16 13/16" (427)	17 13/16" (452)	18 13/16" (478)	20 13/16" (529)	22 13/16" (579)
Side Height	12 13/16" (325)	14 13/16" (376)	15 13/16" (402)	16 13/16" (427)	17 13/16" (452)	18 13/16" (478)	20 13/16" (529)	22 13/16" (579)
Radius and Chord Height	12 13/16" (325)	14 13/16" (376)	15 13/16" (402)	16 13/16" (427)	17 13/16" (452)	18 13/16" (478)	20 13/16" (529)	22 13/16" (579)
21 3/8" (543)	WS2042	WS2442	WS2642	WS2842	WS21042	WS3042	WS3442	WS3842
23 3/8" (594)	WS2046	WS2446	WS2646	WS2846	WS21046	WS3046	WS3446	WS3846
25 3/8" (645)	WS20410	WS24410	WS26410	WS28410	WS210410	WS30410	WS34410	WS38410
27 3/8" (695)	WS2052	WS2452	WS2652	WS2852	WS21052	WS3052	WS3452	WS3852
29 3/8" (746)	WS2056	WS2456	WS2656	WS2856	WS21056	WS3056	WS3456	WS3856
31 3/8" (797)	WS20510	WS24510	WS26510	WS28510	WS210510	WS30510	WS34510	WS38510
33 3/8" (848)	WS2062	WS2462	WS2662	WS2862	WS21062	WS3062	WS3462	WS3862

Custom-size windows are available in 1/8" (3) increments. See page 62 for custom sizing.

Grille patterns shown on page 63.

Woodwright Springline single-hung only:

Minimum rough opening height is the same as the window dimension height. Upper sash does not operate and lower sash travel is limited by the radius of the upper sash. Contact your Andersen supplier for cottage and reverse cottage sash availability.

Side-by-side joining is not recommended.

400 Series Woodwright® Double-Hung Full-Frame Windows

* "Window Dimension" always refers to outside frame-to-frame dimension.
 * "Minimum Rough Opening" dimensions may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See pages 210-211 for more details.
 * Dimensions in parentheses are in millimeters.
 * Meet or exceed clear opening area of 5.7 sq. ft. or 0.53 m², clear opening width of 20" (508) and clear opening height of 24" (210). See tables on pages 57-58.

WOODWRIGHT® DOUBLE-HUNG FULL-FRAME WINDOWS

Table of Woodwright® Arch Double-Hung Window Sizes

Scale 1/8" (3) = 1'-0" (305) – 1:96

Notes on the next page also apply to this page.

Window Dimension	1'-9 5/8" (549)	2'-1 5/8" (651)	2'-5 5/8" (752)	2'-7 5/8" (803)	2'-9 5/8" (854)	2'-11 5/8" (905)	3'-1 5/8" (956)	3'-5 5/8" (1057)	3'-9 5/8" (1159)
Minimum Rough Opening	1'-10 1/8" (562)	2'-2 1/8" (664)	2'-6 1/8" (765)	2'-8 1/8" (816)	2'-10 1/8" (867)	3'-0 1/8" (917)	3'-2 1/8" (968)	3'-6 1/8" (1070)	3'-10 1/8" (1172)
Unobstructed Glass (lower sash only)	15 5/8" (397)	19 5/8" (498)	23 5/8" (600)	25 5/8" (651)	27 5/8" (702)	29 5/8" (752)	31 5/8" (803)	35 5/8" (905)	39 5/8" (1006)

CUSTOM WIDTHS – 21 5/8" to 45 5/8"									
Radius	21 5/8" (549)	25 5/8" (651)	29 5/8" (752)	31 5/8" (803)	33 5/8" (854)	35 5/8" (905)	37 5/8" (956)	41 5/8" (1057)	45 5/8" (1159)
Chord Height	2 15/16" (75)	3 7/16" (87)	4" (102)	4 1/4" (108)	4 1/2" (114)	4 13/16" (122)	5 1/16" (129)	5 9/16" (141)	6 1/8" (156)
Side Height	2'-9 15/16" (862)	2'-9 15/16" (862)	2'-9 15/16" (862)	2'-9 15/16" (862)	2'-9 15/16" (862)	2'-9 15/16" (862)	2'-9 15/16" (862)	2'-9 15/16" (862)	2'-9 15/16" (862)

CUSTOM HEIGHTS – 36 7/8" to 76 7/8"	3'-0 7/8" (937)	3'-4 7/8" (1038)	3'-8 7/8" (1140)	4'-0 7/8" (1241)	4'-4 7/8" (1343)	4'-8 7/8" (1445)	5'-0 7/8" (1546)	5'-4 7/8" (1648)	5'-8 7/8" (1749)	6'-0 7/8" (1851)	6'-4 7/8" (1953)
WA18210	WA1832	WA1836	WA18310	WA1842	WA1846	WA18410	WA1852	WA1856	WA18510	WA1862	
WA2032	WA2036	WA20310	WA2042	WA2046	WA20410	WA2052	WA2056	WA20510	WA2062		
WA2432	WA2436	WA24310	WA2442	WA2446	WA24410	WA2452	WA2456	WA24510	WA2462		
WA2632	WA2636	WA26310	WA2642	WA2646	WA26410	WA2652	WA2656	WA26510	WA2662		
WA2836	WA28310	WA2842	WA2846	WA28410	WA2852	WA2856	WA2862				
WA30310	WA3042	WA3046	WA30410	WA3052	WA3056	WA3062					
WA34310	WA3442	WA3446	WA34410	WA3452	WA3456	WA3462					
WA3842	WA3846	WA38410	WA3852	WA3856	WA3862						

Side-by-side joining of arch double-hung windows is not recommended.

Table of Woodwright® Unequal Leg Arch Double-Hung Window Sizes

Scale 1/8" (3) = 1'-0" (305) – 1:96

Window Dimension	1'-9 5/8" (549)	2'-1 5/8" (651)	2'-5 5/8" (752)	2'-7 5/8" (803)	2'-9 5/8" (854)	2'-11 5/8" (905)	3'-1 5/8" (956)	3'-5 5/8" (1057)	3'-9 5/8" (1159)
Minimum Rough Opening	1'-10 1/8" (562)	2'-2 1/8" (664)	2'-6 1/8" (765)	2'-8 1/8" (816)	2'-10 1/8" (867)	3'-0 1/8" (917)	3'-2 1/8" (968)	3'-6 1/8" (1070)	3'-10 1/8" (1172)
Unobstructed Glass (lower sash only)	15 5/8" (397)	19 5/8" (498)	23 5/8" (600)	25 5/8" (651)	27 5/8" (702)	29 5/8" (752)	31 5/8" (803)	35 5/8" (905)	39 5/8" (1006)

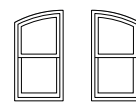
CUSTOM WIDTHS – 21 5/8" to 45 5/8"									
Radius	45 5/8" (1159)	45 5/8" (1159)	45 5/8" (1159)	45 5/8" (1159)	45 5/8" (1159)	96" (2438)	96" (2438)	96" (2438)	96" (2438)
Chord Height	5 7/16" (138)	7 7/8" (200)	10 15/16" (279)	12 3/4" (324)	14 13/16" (376)	6 13/16" (173)	7 11/16" (195)	9 1/2" (241)	11 9/16" (294)

CUSTOM HEIGHTS – 44 7/8" to 76 7/8"									
Side Height	3'-8 7/8" (1140)	3'-8 7/8" (1140)	3'-8 7/8" (1140)	3'-8 7/8" (1140)	3'-8 7/8" (1140)	3'-8 7/8" (1140)	3'-8 7/8" (1140)	3'-8 7/8" (1140)	3'-8 7/8" (1140)
Side Height	4'-0 7/8" (1241)	4'-0 7/8" (1241)	4'-0 7/8" (1241)	4'-0 7/8" (1241)	4'-0 7/8" (1241)	4'-0 7/8" (1241)	4'-0 7/8" (1241)	4'-0 7/8" (1241)	4'-0 7/8" (1241)
Side Height	4'-4 7/8" (1343)	4'-4 7/8" (1343)	4'-4 7/8" (1343)	4'-4 7/8" (1343)	4'-4 7/8" (1343)	4'-4 7/8" (1343)	4'-4 7/8" (1343)	4'-4 7/8" (1343)	4'-4 7/8" (1343)
Side Height	4'-8 7/8" (1445)	4'-8 7/8" (1445)	4'-8 7/8" (1445)	4'-8 7/8" (1445)	4'-8 7/8" (1445)	4'-8 7/8" (1445)	4'-8 7/8" (1445)	4'-8 7/8" (1445)	4'-8 7/8" (1445)
Side Height	5'-0 7/8" (1546)	5'-0 7/8" (1546)	5'-0 7/8" (1546)	5'-0 7/8" (1546)	5'-0 7/8" (1546)	5'-0 7/8" (1546)	5'-0 7/8" (1546)	5'-0 7/8" (1546)	5'-0 7/8" (1546)
Side Height	5'-4 7/8" (1648)	5'-4 7/8" (1648)	5'-4 7/8" (1648)	5'-4 7/8" (1648)	5'-4 7/8" (1648)	5'-4 7/8" (1648)	5'-4 7/8" (1648)	5'-4 7/8" (1648)	5'-4 7/8" (1648)
Side Height	5'-8 7/8" (1749)	5'-8 7/8" (1749)	5'-8 7/8" (1749)	5'-8 7/8" (1749)	5'-8 7/8" (1749)	5'-8 7/8" (1749)	5'-8 7/8" (1749)	5'-8 7/8" (1749)	5'-8 7/8" (1749)
Side Height	6'-0 7/8" (1851)	6'-0 7/8" (1851)	6'-0 7/8" (1851)	6'-0 7/8" (1851)	6'-0 7/8" (1851)	6'-0 7/8" (1851)	6'-0 7/8" (1851)	6'-0 7/8" (1851)	6'-0 7/8" (1851)
Side Height	6'-4 7/8" (1953)	6'-4 7/8" (1953)	6'-4 7/8" (1953)	6'-4 7/8" (1953)	6'-4 7/8" (1953)	6'-4 7/8" (1953)	6'-4 7/8" (1953)	6'-4 7/8" (1953)	6'-4 7/8" (1953)

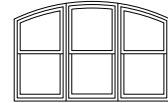


Custom-size windows are available in 1/8" (3) increments. See page 62 for custom sizing.

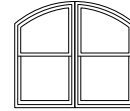
Lower sash travel is limited by the radius of the upper sash. Contact your Andersen supplier for cottage and reverse cottage sash availability.



Choose left facing or right facing as viewed from the exterior.



Arch double-hung with flanking unequal leg arch double-hungs.



Joining long sides creates a smooth arc. **Joining short sides is not recommended.**

* "Window Dimension" always refers to outside frame-to-frame dimension.
 ** "Minimum Rough Opening" dimensions may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See pages 210-211 for more details.
 † Dimensions in parentheses are in millimeters.
 ‡ Meet or exceed clear opening area of 5.7 sq. ft. or 0.53 m²; clear opening width of 20" (508) and clear opening height of 24" (210). See tables on pages 59-61.

WOODWRIGHT® DOUBLE-HUNG FULL-FRAME WINDOWS

Table of Woodwright® Transom Window Sizes

Scale 1/8" (3) = 1'-0" (305) – 1:96

Notes on the next page also apply to this page.

Window Dimension	1'-9 5/8" (549)	2'-1 5/8" (651)	2'-5 5/8" (752)	2'-7 5/8" (803)	2'-9 5/8" (854)	2'-11 5/8" (905)	3'-1 5/8" (956)	3'-5 5/8" (1057)	3'-9 5/8" (1159)	3'-11 5/16" (1202)	
Minimum Rough Opening	1'-10 1/8" (562)	2'-2 1/8" (664)	2'-6 1/8" (765)	2'-8 1/8" (816)	2'-10 1/8" (867)	3'-0 1/8" (917)	3'-2 1/8" (968)	3'-6 1/8" (1070)	3'-10 1/8" (1172)	3'-11 7/8" (1215)	
Unobstructed Glass	15 5/8" (397)	19 5/8" (498)	23 5/8" (600)	25 5/8" (651)	27 5/8" (702)	29 5/8" (752)	31 5/8" (803)	35 5/8" (905)	39 5/8" (1006)	41 1/4" (1048)	
CUSTOM WIDTHS — 12" to 75 5/16"											
CUSTOM HEIGHTS — 12" to 39 5/16"	1'-0"	 WTR1810	 WTR2010	 WTR2410	 WTR2610	 WTR2810	 WTR21010	 WTR3010	 WTR3410	 WTR3810	 WTR31010
	1'-0 1/2"										
	1'-7 5/16"	 WTR1815	 WTR2015	 WTR2415	 WTR2615	 WTR2815	 WTR21015	 WTR3015	 WTR3415	 WTR3815	 WTR31015
	1'-9 5/16"	 WTR1817	 WTR2017	 WTR2417	 WTR2617	 WTR2817	 WTR21017	 WTR3017	 WTR3417	 WTR3817	 WTR31017
	1'-9 7/8"										
	2'-1 5/16"	 WTR18111	 WTR20111	 WTR24111	 WTR26111	 WTR28111	 WTR210111	 WTR30111	 WTR34111	 WTR38111	 WTR310111
	2'-1 7/8"										
	2'-3 5/16"	 WTR1821	 WTR2021	 WTR2421	 WTR2621	 WTR2821	 WTR21021	 WTR3021	 WTR3421	 WTR3821	 WTR31021
	2'-3 7/8"										
	2'-5 5/16"	 WTR1823	 WTR2023	 WTR2423	 WTR2623	 WTR2823	 WTR21023	 WTR3023	 WTR3423	 WTR3823	 WTR31023
	2'-5 7/8"										
	2'-9 5/16"	 WTR1827	 WTR2027	 WTR2427	 WTR2627	 WTR2827	 WTR21027	 WTR3027	 WTR3427	 WTR3827	 WTR31027
	2'-9 7/8"										
	3'-3 5/16"	 WTR1831	 WTR2031	 WTR2431	 WTR2631	 WTR2831	 WTR21031	 WTR3031	 WTR3431	 WTR3831	 WTR31031
	3'-3 7/8"										
	34 1/8"										

* "Window Dimension" always refers to outside frame-to-frame dimension.

* "Minimum Rough Opening" dimensions may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See pages 210-211 for more details.

* Dimensions in parentheses are in millimeters.

Woodwright® Transom Window Area Specifications

Window Number	Glass Area Sq. Ft./ (m²)	Overall Window Area Sq. Ft./ (m²)
WTR1810	0.74 (0.07)	1.80 (0.17)
WTR1815	1.53 (0.14)	2.90 (0.27)
WTR1817	1.75 (0.16)	3.20 (0.30)
WTR18111	2.18 (0.20)	3.80 (0.35)
WTR1821	2.40 (0.22)	4.10 (0.38)
WTR1823	2.62 (0.24)	4.40 (0.41)
WTR1827	3.05 (0.28)	5.00 (0.46)
WTR1831	3.70 (0.34)	5.90 (0.55)
WTR2010	0.93 (0.09)	2.14 (0.20)
WTR2015	1.93 (0.18)	3.44 (0.32)
WTR2017	2.20 (0.20)	3.79 (0.35)
WTR20111	2.74 (0.25)	4.50 (0.42)
WTR2021	3.02 (0.28)	4.86 (0.45)
WTR2023	3.29 (0.31)	5.22 (0.48)
WTR2027	3.83 (0.36)	5.93 (0.55)
WTR2031	4.65 (0.43)	7.00 (0.65)
WTR2410	1.12 (0.10)	2.47 (0.23)
WTR2415	2.32 (0.22)	3.97 (0.37)
WTR2417	2.65 (0.25)	4.38 (0.41)
WTR24111	3.30 (0.31)	5.21 (0.48)

Window Number	Glass Area Sq. Ft./ (m²)	Overall Window Area Sq. Ft./ (m²)
WTR2421	3.63 (0.34)	5.62 (0.52)
WTR2423	3.96 (0.37)	6.03 (0.56)
WTR2427	4.61 (0.43)	6.85 (0.64)
WTR2431	5.60 (0.52)	8.09 (0.75)
WTR2610	1.21 (0.11)	2.64 (0.24)
WTR2615	2.51 (0.23)	4.24 (0.39)
WTR2617	2.87 (0.27)	4.68 (0.43)
WTR26111	3.58 (0.33)	5.56 (0.52)
WTR2621	3.94 (0.37)	6.00 (0.56)
WTR2623	4.29 (0.40)	6.44 (0.60)
WTR2627	5.00 (0.46)	7.32 (0.68)
WTR2631	6.07 (0.56)	8.63 (0.80)
WTR2810	1.31 (0.12)	2.80 (0.26)
WTR2815	2.71 (0.25)	4.51 (0.42)
WTR2817	3.09 (0.29)	4.98 (0.46)
WTR28111	3.86 (0.36)	5.91 (0.55)
WTR2821	4.24 (0.39)	6.38 (0.59)
WTR2823	4.63 (0.43)	6.84 (0.64)
WTR2827	5.40 (0.50)	7.78 (0.72)
WTR2831	6.55 (0.61)	9.18 (0.85)

Window Number	Glass Area Sq. Ft./ (m²)	Overall Window Area Sq. Ft./ (m²)
WTR21010	1.40 (0.13)	2.97 (0.28)
WTR21015	2.91 (0.27)	4.78 (0.44)
WTR21017	3.32 (0.31)	5.27 (0.49)
WTR210111	4.14 (0.38)	6.26 (0.58)
WTR21021	4.55 (0.42)	6.76 (0.63)
WTR21023	4.96 (0.46)	7.25 (0.67)
WTR21027	5.79 (0.54)	8.24 (0.77)
WTR21031	7.02 (0.65)	9.73 (0.90)
WTR3010	1.50 (0.14)	3.14 (0.29)
WTR3015	3.10 (0.29)	5.05 (0.47)
WTR3017	3.54 (0.33)	5.57 (0.52)
WTR30111	4.42 (0.41)	6.61 (0.61)
WTR3021	4.86 (0.45)	7.14 (0.66)
WTR3023	5.30 (0.49)	7.66 (0.71)
WTR3027	6.18 (0.57)	8.70 (0.81)
WTR3031	7.49 (0.70)	10.27 (0.95)
WTR3410	1.69 (0.16)	3.47 (0.32)
WTR3415	3.49 (0.32)	5.58 (0.52)

* Dimensions in parentheses are in square meters.

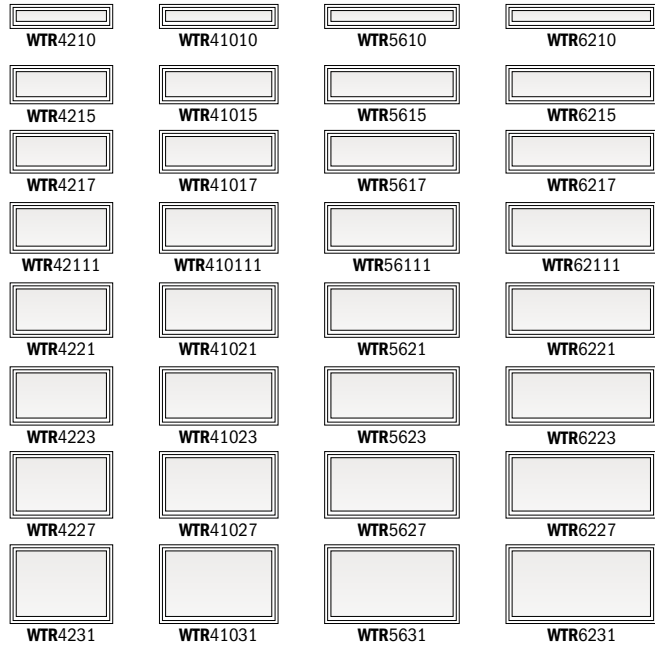
continued on next page

4'-3 5/16" (1303)	4'-11 5/16" (1506)	5'-7 5/16" (1710)	6'-3 5/16" (1913)
4'-3 7/8" (1317)	4'-11 7/8" (1520)	5'-7 7/8" (1724)	6'-3 7/8" (1927)
45 1/4" (1149)	53 1/4" (1353)	61 1/4" (1556)	69 1/4" (1745)



Custom-size windows are available in 1/8" (3) increments. See page 62 for custom sizing.

Grille patterns shown on page 63.



*"Window Dimension" always refers to outside frame-to-frame dimension.
 *"Minimum Rough Opening" dimensions may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See pages 210-211 for more details.
 *Dimensions in parentheses are in millimeters.

Woodwright® Transom Window Area Specifications *(continued)*

Window Number	Glass Area Sq. Ft./ (m ²)	Overall Window Area Sq. Ft./ (m ²)
WTR3417	3.99 (0.37)	6.16 (0.57)
WTR34111	4.98 (0.46)	7.32 (0.68)
WTR3421	5.47 (0.51)	7.90 (0.73)
WTR3423	5.97 (0.55)	8.47 (0.79)
WTR3427	6.96 (0.65)	9.63 (0.89)
WTR3431	8.44 (0.78)	11.36 (1.06)
WTR3810	1.87 (0.17)	3.80 (0.35)
WTR3815	3.89 (0.36)	6.12 (0.57)
WTR3817	4.44 (0.41)	6.75 (0.63)
WTR38111	5.54 (0.51)	8.02 (0.75)
WTR3821	6.09 (0.57)	8.65 (0.80)
WTR3823	6.64 (0.62)	9.29 (0.86)
WTR3827	7.74 (0.72)	10.55 (0.98)
WTR3831	9.39 (0.87)	12.46 (1.16)
WTR31010	1.95 (0.18)	3.94 (0.37)
WTR31015	4.05 (0.38)	6.35 (0.59)
WTR31017	4.63 (0.43)	7.00 (0.65)
WTR310111	5.77 (0.54)	8.32 (0.77)
WTR31021	6.35 (0.59)	8.97 (0.83)
WTR31023	6.92 (0.64)	9.63 (0.89)

Window Number	Glass Area Sq. Ft./ (m ²)	Overall Window Area Sq. Ft./ (m ²)
WTR31027	8.07 (0.75)	10.95 (1.02)
WTR31031	9.79 (0.91)	12.92 (1.20)
WTR4210	2.14 (0.20)	4.28 (0.40)
WTR4215	4.44 (0.41)	6.88 (0.64)
WTR4217	5.07 (0.47)	7.59 (0.71)
WTR42111	6.33 (0.59)	9.02 (0.84)
WTR4221	6.96 (0.65)	9.73 (0.90)
WTR4223	7.59 (0.71)	10.45 (0.97)
WTR4227	8.85 (0.82)	11.87 (1.10)
WTR4231	10.74 (1.00)	14.01 (1.30)
WTR41010	2.52 (0.23)	4.94 (0.46)
WTR41015	5.23 (0.49)	7.95 (0.74)
WTR41017	5.97 (0.55)	8.78 (0.82)
WTR410111	7.45 (0.69)	10.43 (0.97)
WTR41021	8.19 (0.76)	11.25 (1.05)
WTR41023	8.93 (0.83)	12.07 (1.12)
WTR41027	10.41 (0.97)	13.72 (1.27)
WTR41031	12.63 (1.17)	16.19 (1.50)
WTR5610	2.90 (0.27)	5.61 (0.52)
WTR5615	6.01 (0.56)	9.03 (0.84)

Window Number	Glass Area Sq. Ft./ (m ²)	Overall Window Area Sq. Ft./ (m ²)
WTR5617	6.87 (0.64)	9.96 (0.93)
WTR56111	8.57 (0.80)	11.83 (1.10)
WTR5621	9.42 (0.88)	12.77 (1.19)
WTR5623	10.27 (0.95)	13.70 (1.27)
WTR5627	11.98 (1.11)	15.57 (1.45)
WTR5631	14.53 (1.35)	18.38 (1.71)
WTR6210	3.28 (0.30)	6.28 (0.58)
WTR6215	6.80 (0.63)	10.10 (0.94)
WTR6217	7.76 (0.72)	11.15 (1.04)
WTR62111	9.69 (0.90)	13.24 (1.23)
WTR6221	10.65 (0.99)	14.28 (1.33)
WTR6223	11.61 (1.08)	15.33 (1.42)
WTR6227	13.54 (1.26)	17.42 (1.62)
WTR6231	16.43 (1.53)	20.56 (1.91)

* Dimensions in parentheses are in square meters.

WOODWRIGHT® DOUBLE-HUNG FULL-FRAME WINDOWS

Table of Woodwright® Picture Window Sizes

Scale 1/8" (3) = 1'-0" (305) – 1:96

Window Dimension	1'-0" (305)	3'-1 5/8" (956)	3'-5 5/8" (1057)	3'-11 5/16" (1202)	4'-3 5/16" (1303)	4'-11 5/16" (1507)	5'-7 5/16" (1710)
Minimum Rough Opening	1'-0 1/2" (318)	3'-2 1/8" (968)	3'-6 1/8" (1070)	3'-11 7/8" (1216)	4'-3 7/8" (1318)	4'-11 7/8" (1521)	5'-7 7/8" (1724)
Unobstructed Glass	6" (152)	31 5/8" (803)	35 5/8" (905)	41 1/4" (1048)	45 1/4" (1149)	53 1/4" (1353)	61 1/4" (1556)

CUSTOM WIDTHS – 12" to 67 5/16"						
CUSTOM HEIGHTS – 14 1/2" to 76 7/8"	4'-0 7/8" (1241)	4'-0 7/8" (1241)	4'-0 7/8" (1241)	4'-0 7/8" (1241)	4'-0 7/8" (1241)	4'-0 7/8" (1241)
	WPW10310	WPW30310	WPW34310	WPW310310	WPW42310	WPW410310
	WPW1042	WPW3042	WPW3442	WPW31042	WPW4242	WPW41042
	WPW1046	WPW3046	WPW3446	WPW31046	WPW4246	WPW41046
	WPW10410	WPW30410	WPW34410	WPW310410	WPW42410	WPW410410
	WPW1052	WPW3052	WPW3452	WPW31052	WPW4252	WPW41052
	WPW1056	WPW3056	WPW3456	WPW31056	WPW4256	WPW41056
	WPW10510	WPW30510	WPW34510	WPW310510	WPW42510	WPW410510
CUSTOM HEIGHTS – 14 1/2" to 76 7/8"	4'-4 7/8" (1343)	4'-4 7/8" (1343)	4'-4 7/8" (1343)	4'-4 7/8" (1343)	4'-4 7/8" (1343)	4'-4 7/8" (1343)
	WPW1062	WPW3062	WPW3462	WPW31062	WPW4262	WPW41062
	WPW1062	WPW3062	WPW3462	WPW31062	WPW4262	WPW41062
	WPW1062	WPW3062	WPW3462	WPW31062	WPW4262	WPW41062
	WPW1062	WPW3062	WPW3462	WPW31062	WPW4262	WPW41062
	WPW1062	WPW3062	WPW3462	WPW31062	WPW4262	WPW41062
	WPW1062	WPW3062	WPW3462	WPW31062	WPW4262	WPW41062
	WPW1062	WPW3062	WPW3462	WPW31062	WPW4262	WPW41062



Custom-size windows are available in 1/8" (3) increments. See page 62 for custom sizing.

Grille patterns shown on page 63.

* "Window Dimension" always refers to outside frame-to-frame dimension.

* "Minimum Rough Opening" dimensions may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See pages 210-211 for more details.

* Dimensions in parentheses are in millimeters.

Woodwright® Double-Hung Window Opening and Area Specifications

Window Number	Clear Opening Area Sq. Ft./ (m ²)		Clear Opening in Full Open Position		Glass Area Sq. Ft./ (m ²)	Vent Area Sq. Ft./ (m ²)		Top of Subfloor to Top of Inside Sill Stop Inches/(mm)	Overall Window Area Sq. Ft./ (m ²)	
			Width Inches/(mm)	Height Inches/(mm)						
WDH18210	1.73	(0.16)	17 7/8" (454)	14 1/4" (362)	2.90 (0.27)	1.78 (0.17)	48 1/2" (1231)	5.53 (0.51)		
WDH1832	1.98	(0.18)	17 7/8" (454)	16 1/4" (412)	3.32 (0.31)	2.03 (0.19)	44 1/2" (1130)	6.14 (0.57)		
WDH1836	2.23	(0.21)	17 7/8" (454)	18 1/4" (463)	3.74 (0.35)	2.28 (0.21)	40 1/2" (1028)	6.74 (0.63)		
WDH18310	2.48	(0.23)	17 7/8" (454)	20 1/4" (514)	4.15 (0.39)	2.53 (0.24)	36 1/2" (926)	7.34 (0.68)		
WDH1842	2.73	(0.25)	17 7/8" (454)	22 1/4" (565)	4.57 (0.43)	2.78 (0.26)	32 1/2" (825)	7.94 (0.74)		
WDH1846	2.90	(0.27)	17 7/8" (454)	24 1/4" (616)	4.98 (0.46)	3.02 (0.28)	28 1/2" (723)	8.54 (0.79)		
WDH18410	3.22	(0.30)	17 7/8" (454)	26 1/4" (666)	5.40 (0.50)	3.27 (0.30)	24 1/2" (622)	9.14 (0.85)		
WDH1852	3.47	(0.32)	17 7/8" (454)	28 1/4" (717)	5.81 (0.54)	3.52 (0.33)	20 1/2" (520)	9.74 (0.91)		
WDH1856	3.72	(0.35)	17 7/8" (454)	30 1/4" (768)	6.23 (0.58)	3.02 (0.28)	16 1/2" (418)	10.34 (0.96)		
WDH18510	3.97	(0.37)	17 7/8" (454)	32 1/4" (819)	6.65 (0.62)	4.02 (0.37)	12 1/2" (317)	10.94 (1.02)		
WDH1862	4.22	(0.39)	17 7/8" (454)	34 1/4" (870)	7.06 (0.66)	4.26 (0.40)	8 1/2" (215)	11.54 (1.07)		
WDH20210	2.12	(0.20)	21 7/8" (556)	14 1/4" (362)	3.68 (0.34)	2.18 (0.20)	48 1/2" (1231)	6.56 (0.61)		
WDH2032	2.42	(0.23)	21 7/8" (556)	16 1/4" (412)	4.21 (0.39)	2.48 (0.23)	44 1/2" (1130)	7.27 (0.68)		
WDH2036	2.73	(0.25)	21 7/8" (556)	18 1/4" (463)	4.73 (0.44)	2.79 (0.26)	40 1/2" (1028)	7.98 (0.74)		
WDH20310	3.03	(0.28)	21 7/8" (556)	20 1/4" (514)	5.26 (0.49)	3.09 (0.29)	36 1/2" (926)	8.69 (0.81)		
WDH2042	3.34	(0.31)	21 7/8" (556)	22 1/4" (565)	5.79 (0.54)	3.40 (0.32)	32 1/2" (825)	9.41 (0.87)		
WDH2046	3.55	(0.33)	21 7/8" (556)	24 1/4" (616)	6.31 (0.59)	3.70 (0.34)	28 1/2" (723)	10.12 (0.94)		
WDH20410	3.94	(0.37)	21 7/8" (556)	26 1/4" (666)	6.84 (0.64)	4.00 (0.37)	24 1/2" (622)	10.83 (1.01)		
WDH2052	4.25	(0.39)	21 7/8" (556)	28 1/4" (717)	7.37 (0.69)	4.31 (0.40)	20 1/2" (520)	11.54 (1.07)		
WDH2056	4.55	(0.42)	21 7/8" (556)	30 1/4" (768)	7.89 (0.73)	3.70 (0.34)	16 1/2" (418)	12.25 (1.14)		
WDH20510	4.86	(0.45)	21 7/8" (556)	32 1/4" (819)	8.42 (0.78)	4.92 (0.46)	12 1/2" (317)	12.96 (1.20)		
WDH2062	5.16	(0.48)	21 7/8" (556)	34 1/4" (870)	8.95 (0.83)	5.22 (0.49)	8 1/2" (215)	13.68 (1.27)		
WDH24210	2.51	(0.23)	25 7/8" (657)	14 1/4" (362)	4.46 (0.41)	2.58 (0.24)	48 1/2" (1231)	7.58 (0.70)		
WDH2432	2.86	(0.27)	25 7/8" (657)	16 1/4" (412)	5.09 (0.47)	2.94 (0.27)	44 1/2" (1130)	8.40 (0.78)		
WDH2436	3.22	(0.30)	25 7/8" (657)	18 1/4" (463)	5.73 (0.53)	3.30 (0.31)	40 1/2" (1028)	9.23 (0.86)		
WDH24310	3.59	(0.33)	25 7/8" (657)	20 1/4" (514)	6.37 (0.59)	3.66 (0.34)	36 1/2" (926)	10.05 (0.93)		
WDH2442	3.95	(0.37)	25 7/8" (657)	22 1/4" (565)	7.01 (0.65)	4.02 (0.37)	32 1/2" (825)	10.87 (1.01)		
WDH2446	4.19	(0.39)	25 7/8" (657)	24 1/4" (616)	7.65 (0.71)	4.38 (0.41)	28 1/2" (724)	11.70 (1.09)		
WDH24410	4.66	(0.43)	25 7/8" (657)	26 1/4" (666)	8.28 (0.77)	4.74 (0.44)	24 1/2" (622)	12.52 (1.16)		
WDH2452	5.02	(0.47)	25 7/8" (657)	28 1/4" (717)	8.92 (0.83)	5.10 (0.47)	20 1/2" (520)	13.34 (1.24)		
WDH2456	5.38	(0.50)	25 7/8" (657)	30 1/4" (768)	9.56 (0.89)	4.38 (0.41)	16 1/2" (418)	14.17 (1.32)		
WDH24510	5.74	(0.53)	25 7/8" (657)	32 1/4" (819)	10.20 (0.95)	5.81 (0.54)	12 1/2" (317)	14.99 (1.39)		
WDH2462	6.10	(0.57)	25 7/8" (657)	34 1/4" (870)	10.84 (1.01)	6.17 (0.57)	8 1/2" (215)	15.81 (1.47)		
WDH26210	2.71	(0.25)	27 7/8" (708)	14 1/4" (362)	4.84 (0.45)	2.78 (0.26)	48 1/2" (1231)	8.09 (0.75)		
WDH2632	3.09	(0.29)	27 7/8" (708)	16 1/4" (412)	5.54 (0.52)	3.17 (0.30)	44 1/2" (1130)	8.97 (0.83)		
WDH2636	3.48	(0.32)	27 7/8" (708)	18 1/4" (463)	6.23 (0.58)	3.55 (0.33)	40 1/2" (1028)	9.85 (0.92)		
WDH26310	3.86	(0.36)	27 7/8" (708)	20 1/4" (514)	6.92 (0.64)	3.94 (0.37)	36 1/2" (926)	10.73 (1.00)		
WDH2642	4.25	(0.40)	27 7/8" (708)	22 1/4" (565)	7.62 (0.71)	4.33 (0.40)	32 1/2" (825)	11.61 (1.08)		
WDH2646	4.52	(0.42)	27 7/8" (708)	24 1/4" (616)	8.31 (0.77)	4.71 (0.44)	28 1/2" (723)	12.49 (1.16)		
WDH26410	5.02	(0.47)	27 7/8" (708)	26 1/4" (666)	9.01 (0.84)	5.10 (0.47)	24 1/2" (622)	13.36 (1.24)		
WDH2652	5.41	(0.50)	27 7/8" (708)	28 1/4" (717)	9.70 (0.90)	5.49 (0.51)	20 1/2" (520)	14.24 (1.32)		
WDH2656	5.80	(0.54)	27 7/8" (708)	30 1/4" (768)	10.39 (0.96)	4.71 (0.44)	16 1/2" (418)	15.12 (1.41)		
WDH26510	6.19	(0.57)	27 7/8" (708)	32 1/4" (819)	11.09 (1.03)	6.26 (0.58)	12 1/2" (317)	16.00 (1.49)		
WDH2662	6.58	(0.61)	27 7/8" (708)	34 1/4" (870)	11.78 (1.09)	6.65 (0.62)	8 1/2" (215)	16.88 (1.57)		
WDH28210	2.90	(0.27)	29 7/8" (759)	14 1/4" (362)	5.23 (0.49)	2.98 (0.28)	48 1/2" (1231)	8.61 (0.80)		
WDH2832	3.31	(0.31)	29 7/8" (759)	16 1/4" (412)	5.98 (0.56)	3.39 (0.32)	44 1/2" (1130)	9.54 (0.89)		
WDH2836	3.73	(0.35)	29 7/8" (759)	18 1/4" (463)	6.73 (0.63)	3.81 (0.35)	40 1/2" (1028)	10.47 (0.97)		
WDH28310	4.14	(0.38)	29 7/8" (759)	20 1/4" (514)	7.48 (0.70)	4.22 (0.39)	36 1/2" (926)	11.41 (1.06)		
WDH2842	4.56	(0.42)	29 7/8" (759)	22 1/4" (565)	8.23 (0.77)	4.64 (0.43)	32 1/2" (825)	12.34 (1.15)		
WDH2846	4.85	(0.45)	29 7/8" (759)	24 1/4" (616)	8.98 (0.83)	5.05 (0.47)	28 1/2" (723)	13.28 (1.23)		
WDH28410	5.38	(0.50)	29 7/8" (759)	26 1/4" (666)	9.73 (0.90)	5.47 (0.51)	24 1/2" (622)	14.21 (1.32)		
WDH2852	5.80	(0.54)	29 7/8" (759)	28 1/4" (717)	10.48 (0.97)	5.88 (0.55)	20 1/2" (520)	15.14 (1.41)		
WDH2856	6.22	(0.58)	29 7/8" (759)	30 1/4" (768)	11.22 (1.04)	5.05 (0.47)	16 1/2" (418)	16.08 (1.49)		
WDH28510	6.63	(0.62)	29 7/8" (759)	32 1/4" (819)	11.97 (1.11)	6.71 (0.62)	12 1/2" (317)	17.01 (1.58)		
WDH2862	7.05	(0.66)	29 7/8" (759)	34 1/4" (870)	12.72 (1.18)	7.13 (0.66)	8 1/2" (215)	17.95 (1.67)		
WDH210210	3.09	(0.29)	31 7/8" (809)	14 1/4" (362)	5.62 (0.52)	3.18 (0.30)	48 1/2" (1231)	9.12 (0.85)		
WDH21032	3.53	(0.33)	31 7/8" (809)	16 1/4" (412)	6.42 (0.60)	3.62 (0.34)	44 1/2" (1130)	10.11 (0.94)		
WDH21036	3.97	(0.37)	31 7/8" (809)	18 1/4" (463)	7.23 (0.67)	4.06 (0.38)	40 1/2" (1028)	11.10 (1.03)		
WDH210310	4.42	(0.41)	31 7/8" (809)	20 1/4" (514)	8.03 (0.75)	4.51 (0.42)	36 1/2" (926)	12.09 (1.12)		
WDH21042	4.86	(0.45)	31 7/8" (809)	22 1/4" (565)	8.84 (0.82)	4.95 (0.46)	32 1/2" (825)	13.08 (1.22)		
WDH21046	5.17	(0.48)	31 7/8" (809)	24 1/4" (616)	9.64 (0.90)	5.39 (0.50)	28 1/2" (723)	14.07 (1.31)		

For cottage and reverse cottage sash

opening specifications, visit

andersenwindows.com/openingspecs.

• "Top of Subfloor to Top of Inside Sill Stop" is calculated based upon a structural header height of 6'-10 1/2" (2096).
• Dimensions in parentheses are in millimeters or square meters.
◊ Meet or exceed clear opening area of 5.7 sq. ft. or 0.53 m², clear opening width of 20" (508) and clear opening height of 24" (610).

continued on next page

WOODWRIGHT® DOUBLE-HUNG FULL-FRAME WINDOWS

Woodwright® Double-Hung Window Opening and Area Specifications *(continued)*

Window Number	Clear Opening Area Sq. Ft./ (m ²)	Clear Opening in Full Open Position		Glass Area Sq. Ft./ (m ²)	Vent Area Sq. Ft./ (m ²)	Top of Subfloor to Top of Inside Sill Stop Inches/(mm)	Overall Window Area Sq. Ft./ (m ²)
		Width Inches/(mm)	Height Inches/(mm)				
WDH210410 ◊	5.74 (0.53)	31 7/8" (809)	26 1/4" (666)	10.45 (0.97)	5.83 (0.54)	24 1/2" (622)	15.05 (1.40)
WDH21052 ◊	6.18 (0.57)	31 7/8" (809)	28 1/4" (717)	11.25 (1.05)	6.28 (0.58)	20 1/2" (520)	16.04 (1.49)
WDH21056 ◊	6.63 (0.62)	31 7/8" (809)	30 1/4" (768)	12.06 (1.12)	5.39 (0.50)	16 1/2" (418)	17.03 (1.59)
WDH210510 ◊	7.07 (0.66)	31 7/8" (809)	34 1/4" (819)	12.86 (1.20)	7.16 (0.67)	12 1/2" (317)	18.02 (1.67)
WDH21062 ◊	7.52 (0.70)	31 7/8" (809)	34 1/4" (870)	13.67 (1.27)	7.60 (0.71)	8 1/2" (215)	19.01 (1.77)
WDH30210	3.29 (0.31)	33 7/8" (860)	14 1/4" (362)	6.01 (0.56)	3.38 (0.31)	48 1/2" (1231)	9.63 (0.90)
WDH3032	3.75 (0.35)	33 7/8" (860)	16 1/4" (412)	6.87 (0.64)	3.85 (0.36)	44 1/2" (1130)	10.67 (0.99)
WDH3036	4.22 (0.39)	33 7/8" (860)	18 1/4" (463)	7.73 (0.72)	4.32 (0.40)	40 1/2" (1028)	11.72 (1.09)
WDH30310	4.69 (0.44)	33 7/8" (860)	20 1/4" (514)	8.59 (0.80)	4.79 (0.45)	36 1/2" (926)	12.76 (1.19)
WDH3042	5.17 (0.48)	33 7/8" (860)	22 1/4" (565)	9.45 (0.88)	5.26 (0.49)	32 1/2" (825)	13.81 (1.28)
WDH3046 ◊	5.75 (0.53)	33 7/8" (860)	24 1/4" (616)	10.31 (0.96)	5.73 (0.53)	28 1/2" (723)	14.85 (1.38)
WDH30410 ◊	6.10 (0.57)	33 7/8" (860)	26 1/4" (666)	11.17 (1.04)	6.20 (0.58)	24 1/2" (622)	15.90 (1.48)
WDH3052 ◊	6.57 (0.61)	33 7/8" (860)	28 1/4" (717)	12.03 (1.12)	6.67 (0.62)	20 1/2" (520)	16.95 (1.58)
WDH3056 ◊	7.04 (0.65)	33 7/8" (860)	30 1/4" (768)	12.89 (1.20)	5.73 (0.53)	16 1/2" (418)	17.99 (1.67)
WDH30510 ◊	7.52 (0.70)	33 7/8" (860)	32 1/4" (819)	13.75 (1.28)	7.61 (0.71)	12 1/2" (317)	19.04 (1.77)
WDH3062 ◊	7.99 (0.74)	33 7/8" (860)	34 1/4" (870)	14.61 (1.36)	8.08 (0.75)	8 1/2" (215)	20.08 (1.87)
WDH34210	3.68 (0.34)	37 7/8" (962)	14 1/4" (362)	6.79 (0.63)	3.78 (0.35)	48 1/2" (1231)	10.65 (0.99)
WDH3432	4.19 (0.39)	37 7/8" (962)	16 1/4" (412)	7.76 (0.72)	4.30 (0.40)	44 1/2" (1130)	11.81 (1.10)
WDH3436	4.72 (0.44)	37 7/8" (962)	18 1/4" (463)	8.73 (0.81)	4.83 (0.45)	40 1/2" (1028)	12.97 (1.21)
WDH34310	5.25 (0.49)	37 7/8" (962)	20 1/4" (514)	9.70 (0.90)	5.35 (0.50)	36 1/2" (926)	14.12 (1.31)
WDH3442	5.78 (0.54)	37 7/8" (962)	22 1/4" (565)	10.67 (0.99)	5.88 (0.55)	32 1/2" (825)	15.28 (1.42)
WDH3446 ◊	6.14 (0.57)	37 7/8" (962)	24 1/4" (616)	11.64 (1.08)	6.41 (0.60)	28 1/2" (723)	16.43 (1.53)
WDH34410 ◊	6.82 (0.63)	37 7/8" (962)	26 1/4" (666)	12.61 (1.17)	6.93 (0.64)	24 1/2" (622)	17.59 (1.63)
WDH3452 ◊	7.35 (0.68)	37 7/8" (962)	28 1/4" (717)	13.58 (1.26)	7.46 (0.69)	20 1/2" (520)	18.75 (1.74)
WDH3456 ◊	7.88 (0.73)	37 7/8" (962)	30 1/4" (768)	14.55 (1.35)	6.41 (0.60)	16 1/2" (418)	19.90 (1.85)
WDH34510 ◊	8.41 (0.78)	37 7/8" (962)	32 1/4" (819)	15.53 (1.44)	8.51 (0.79)	12 1/2" (317)	21.06 (1.96)
WDH3462 ◊	8.94 (0.83)	37 7/8" (962)	34 1/4" (870)	16.50 (1.53)	9.04 (0.84)	8 1/2" (215)	22.22 (2.06)
WDH38210	4.07 (0.38)	41 7/8" (1064)	14 1/4" (362)	7.56 (0.70)	4.17 (0.39)	48 1/2" (1231)	11.68 (1.09)
WDH3832	4.64 (0.43)	41 7/8" (1064)	16 1/4" (412)	8.64 (0.80)	4.76 (0.44)	44 1/2" (1130)	12.94 (1.20)
WDH3836	5.22 (0.49)	41 7/8" (1064)	18 1/4" (463)	9.72 (0.90)	5.34 (0.50)	40 1/2" (1028)	14.21 (1.32)
WDH38310	5.81 (0.54)	41 7/8" (1064)	20 1/4" (514)	10.81 (1.00)	5.92 (0.55)	36 1/2" (926)	15.48 (1.44)
WDH3842	6.39 (0.59)	41 7/8" (1064)	22 1/4" (565)	11.89 (1.11)	6.50 (0.60)	32 1/2" (825)	16.75 (1.56)
WDH3846 ◊	6.79 (0.63)	41 7/8" (1064)	24 1/4" (616)	12.97 (1.21)	7.08 (0.66)	28 1/2" (723)	18.01 (1.67)
WDH38410 ◊	7.55 (0.70)	41 7/8" (1064)	26 1/4" (666)	14.05 (1.31)	7.66 (0.71)	24 1/2" (622)	19.28 (1.79)
WDH3852 ◊	8.13 (0.76)	41 7/8" (1064)	28 1/4" (717)	15.14 (1.41)	8.25 (0.77)	20 1/2" (520)	20.55 (1.91)
WDH3856 ◊	8.72 (0.81)	41 7/8" (1064)	30 1/4" (768)	16.22 (1.51)	7.08 (0.66)	16 1/2" (418)	21.62 (2.01)
WDH38510 ◊	9.30 (0.86)	41 7/8" (1064)	32 1/4" (819)	17.30 (1.61)	9.41 (0.87)	12 1/2" (317)	23.08 (2.14)
WDH3862 ◊	9.88 (0.92)	41 7/8" (1064)	34 1/4" (870)	18.38 (1.71)	9.99 (0.93)	8 1/2" (215)	24.35 (2.26)

For cottage and reverse cottage sash

opening specifications visit

andersenwindows.com/openingspecs.

Woodwright® Springline™ Single-Hung Window Opening and Area Specifications

Window Number	Clear Opening Area Sq. Ft./ (m ²)	Clear Opening in Full Open Position		Glass Area Sq. Ft./ (m ²)	Vent Area Sq. Ft./ (m ²)	Top of Subfloor to Top of Inside Sill Stop Inches/(mm)	Overall Window Area Sq. Ft./ (m ²)
		Width Inches/(mm)	Height Inches/(mm)				
WS2042	1.39 (0.13)	21 7/8" (556)	9 3/16" (231)	5.48 (0.51)	1.39 (0.13)	32 9/16" (828)	8.90 (0.83)
WS2046	1.54 (0.14)	21 7/8" (556)	10 2/16" (257)	5.88 (0.55)	1.54 (0.14)	29 9/16" (751)	9.44 (0.88)
WS20410	1.69 (0.16)	21 7/8" (556)	11 2/16" (282)	6.29 (0.59)	1.69 (0.16)	26 9/16" (675)	9.97 (0.93)
WS2052	1.84 (0.17)	21 7/8" (556)	12 2/16" (308)	6.70 (0.62)	1.84 (0.17)	23 9/16" (599)	10.51 (0.98)
WS2056	2.76 (0.26)	21 7/8" (556)	18 2/16" (461)	7.80 (0.72)	2.76 (0.26)	15 9/16" (395)	11.94 (1.11)
WS20510	2.96 (0.28)	21 7/8" (556)	19 1/2" (495)	8.25 (0.77)	2.96 (0.28)	12 9/16" (310)	12.53 (1.16)
WS2062	3.16 (0.29)	21 7/8" (556)	20 13/16" (529)	8.71 (0.81)	3.16 (0.29)	8 7/8" (226)	13.12 (1.22)
WS2442	1.64 (0.15)	25 7/8" (658)	9 2/16" (231)	6.85 (0.64)	1.64 (0.15)	30 9/16" (777)	10.62 (0.99)
WS2446	1.82 (0.17)	25 7/8" (658)	10 2/16" (257)	7.34 (0.68)	1.82 (0.17)	27 9/16" (701)	11.23 (1.04)
WS24410	2.00 (0.19)	25 7/8" (658)	11 2/16" (282)	7.83 (0.73)	2.00 (0.19)	24 9/16" (624)	11.85 (1.10)
WS2452	2.18 (0.20)	25 7/8" (658)	12 2/16" (308)	8.33 (0.77)	2.18 (0.20)	21 9/16" (548)	12.47 (1.16)
WS2456	3.26 (0.30)	25 7/8" (658)	18 2/16" (461)	9.65 (0.90)	3.26 (0.30)	13 9/16" (344)	14.12 (1.31)
WS24510	3.50 (0.33)	25 7/8" (658)	19 1/2" (495)	10.19 (0.95)	3.50 (0.33)	10 3/16" (259)	14.81 (1.38)
WS2462	3.74 (0.35)	25 7/8" (658)	20 13/16" (529)	10.74 (1.00)	3.74 (0.35)	6 7/8" (175)	15.49 (1.44)
WS2642	1.76 (0.16)	27 7/8" (708)	9 1/8" (231)	7.57 (0.70)	1.76 (0.16)	29 9/16" (751)	11.51 (1.07)
WS2646	1.96 (0.18)	27 7/8" (708)	10 1/8" (257)	8.10 (0.75)	1.96 (0.18)	26 9/16" (675)	12.17 (1.13)
WS26410	2.15 (0.20)	27 7/8" (708)	11 1/8" (282)	8.64 (0.80)	2.15 (0.20)	23 9/16" (599)	12.82 (1.19)
WS2652	2.35 (0.22)	27 7/8" (708)	12 1/8" (308)	9.17 (0.85)	2.35 (0.22)	20 9/16" (523)	13.48 (1.25)
WS2656	3.52 (0.33)	27 7/8" (708)	18 1/8" (461)	10.60 (0.99)	3.52 (0.33)	12 9/16" (319)	15.25 (1.42)

• "Top of Subfloor to Top of Inside Sill Stop" is calculated based upon a structural header height of 6'-10 1/2" (2096).
• Dimensions in parentheses are in millimeters or square meters.
◊ Meet or exceed clear opening area of 5.7 sq. ft. or 0.53 m², clear opening width of 20" (508) and clear opening height of 24" (610).

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Woodwright® Springline™ Single-Hung Window Opening and Area Specifications *(continued)*

Window Number	Clear Opening Area Sq. Ft./ (m ²)		Clear Opening in Full Open Position		Glass Area Sq. Ft./ (m ²)	Vent Area Sq. Ft./ (m ²)	Top of Subfloor to Top of Inside Sill Stop Inches/(mm)	Overall Window Area Sq. Ft./ (m ²)
			Width Inches/(mm)	Height Inches/(mm)				
WS26510	3.77	(0.35)	27 1/8" (708)	19 1/2" (495)	11.19 (1.04)	3.77 (0.35)	9 3/16" (234)	15.98 (1.49)
WS2662	4.03	(0.38)	27 1/8" (708)	20 13/16" (529)	11.79 (1.10)	4.03 (0.38)	*	16.71 (1.55)
WS2842	1.89	(0.18)	29 7/8" (759)	9 1/8" (231)	8.31 (0.77)	1.89 (0.18)	28 9/16" (726)	12.42 (1.15)
WS2846	2.10	(0.20)	29 7/8" (759)	10 1/8" (257)	8.89 (0.83)	2.10 (0.20)	25 9/16" (650)	13.12 (1.22)
WS28410	2.31	(0.21)	29 7/8" (759)	11 1/8" (282)	9.46 (0.88)	2.31 (0.21)	22 9/16" (574)	13.82 (1.28)
WS2852	2.51	(0.23)	29 7/8" (759)	12 1/8" (308)	10.04 (0.93)	2.51 (0.23)	19 9/16" (497)	14.52 (1.35)
WS2856	3.77	(0.35)	29 7/8" (759)	18 1/8" (461)	11.58 (1.08)	3.77 (0.35)	11 9/16" (293)	16.40 (1.52)
WS28510	4.04	(0.38)	29 7/8" (759)	19 1/2" (495)	12.22 (1.14)	4.04 (0.38)	8 3/16" (209)	17.18 (1.60)
WS2862	4.32	(0.40)	29 7/8" (759)	20 13/16" (529)	12.86 (1.20)	4.32 (0.40)	*	17.95 (1.67)
WS21042	2.02	(0.19)	31 7/8" (810)	9 1/8" (231)	9.07 (0.84)	2.02 (0.19)	27 9/16" (701)	13.35 (1.24)
WS21046	2.24	(0.21)	31 7/8" (810)	10 1/8" (257)	9.69 (0.90)	2.24 (0.21)	24 9/16" (624)	14.09 (1.31)
WS210410	2.46	(0.23)	31 7/8" (810)	11 1/8" (282)	10.31 (0.96)	2.46 (0.23)	21 9/16" (548)	14.84 (1.38)
WS21052	2.68	(0.25)	31 7/8" (810)	12 1/8" (308)	10.93 (1.02)	2.68 (0.25)	18 9/16" (472)	15.58 (1.45)
WS21056	4.02	(0.37)	31 7/8" (810)	18 1/8" (461)	12.58 (1.17)	4.02 (0.37)	10 9/16" (268)	17.57 (1.63)
WS210510	4.32	(0.40)	31 7/8" (810)	19 1/2" (495)	13.27 (1.23)	4.32 (0.40)	7 3/16" (183)	18.39 (1.71)
WS21062	4.61	(0.43)	31 7/8" (810)	20 13/16" (529)	13.95 (1.30)	4.61 (0.43)	*	19.22 (1.79)
WS3042	2.14	(0.20)	33 7/8" (861)	9 1/8" (231)	9.86 (0.92)	2.14 (0.20)	26 9/16" (675)	14.31 (1.33)
WS3046	2.38	(0.22)	33 7/8" (861)	10 1/8" (257)	10.52 (0.98)	2.38 (0.22)	23 9/16" (599)	15.09 (1.40)
WS30410	2.62	(0.24)	33 7/8" (861)	11 1/8" (282)	11.18 (1.04)	2.62 (0.24)	20 9/16" (523)	15.87 (1.48)
WS3052	2.85	(0.27)	33 7/8" (861)	12 1/8" (308)	11.84 (1.10)	2.85 (0.27)	17 9/16" (447)	16.66 (1.55)
WS3056	4.27	(0.40)	33 7/8" (861)	18 1/8" (461)	13.60 (1.26)	4.27 (0.40)	9 9/16" (242)	18.76 (1.74)
WS30510	4.59	(0.43)	33 7/8" (861)	19 1/2" (495)	14.33 (1.33)	4.59 (0.43)	6 3/16" (158)	19.63 (1.82)
WS3062	4.90	(0.46)	33 7/8" (861)	20 13/16" (529)	15.07 (1.40)	4.90 (0.46)	*	20.50 (1.90)
WS3442	2.40	(0.22)	37 7/8" (962)	9 1/8" (231)	11.50 (1.07)	2.40 (0.22)	24 9/16" (624)	16.28 (1.51)
WS3446	2.66	(0.25)	37 7/8" (962)	10 1/8" (257)	12.24 (1.14)	2.66 (0.25)	21 9/16" (548)	17.15 (1.59)
WS34410	2.92	(0.27)	37 7/8" (962)	11 1/8" (282)	12.98 (1.21)	2.92 (0.27)	18 9/16" (472)	18.02 (1.67)
WS3452	3.19	(0.30)	37 7/8" (962)	12 1/8" (308)	13.72 (1.28)	3.19 (0.30)	15 9/16" (396)	18.88 (1.75)
WS3456	4.78	(0.44)	37 7/8" (962)	18 1/8" (461)	15.71 (1.46)	4.78 (0.44)	7 9/16" (192)	21.21 (1.97)
WS34510	5.13	(0.48)	37 7/8" (962)	19 1/2" (495)	16.54 (1.54)	5.13 (0.48)	*	22.17 (2.06)
WS3462	5.48	(0.51)	37 7/8" (962)	20 13/16" (529)	17.36 (1.61)	5.48 (0.51)	*	23.13 (2.15)
WS3842	2.65	(0.25)	41 7/8" (1064)	9 1/8" (231)	13.22 (1.23)	2.65 (0.25)	22 9/16" (574)	18.34 (1.70)
WS3846	2.94	(0.27)	41 7/8" (1064)	10 1/8" (257)	14.04 (1.31)	2.94 (0.27)	19 9/16" (497)	19.29 (1.79)
WS38410	3.23	(0.30)	41 7/8" (1064)	11 1/8" (282)	14.87 (1.38)	3.23 (0.30)	16 9/16" (421)	20.24 (1.88)
WS3852	3.52	(0.33)	41 7/8" (1064)	12 1/8" (308)	15.69 (1.46)	3.52 (0.33)	13 9/16" (345)	21.19 (1.97)
WS3856	5.28	(0.49)	41 7/8" (1064)	18 1/8" (461)	17.91 (1.66)	5.28 (0.49)	*	23.74 (2.21)
WS38510	5.67	(0.53)	41 7/8" (1064)	19 1/2" (495)	18.82 (1.75)	5.67 (0.53)	*	24.80 (2.30)
WS3862	6.06	(0.56)	41 7/8" (1064)	20 13/16" (529)	19.74 (1.83)	6.06 (0.56)	*	25.85 (2.40)

Woodwright® Arch Double-Hung Window Opening and Area Specifications

Window Number	Clear Opening Area Sq. Ft./ (m ²)		Clear Opening in Full Open Position		Glass Area Sq. Ft./ (m ²)	Vent Area Sq. Ft./ (m ²)	Top of Subfloor to Top of Inside Sill Stop Inches/(mm)	Overall Window Area Sq. Ft./ (m ²)
			Width Inches/(mm)	Height Inches/(mm)				
WA18210	1.26	(0.12)	17 7/8" (454)	10 3/16" (259)	2.84 (0.26)	1.61 (0.15)	48 1/2" (1232)	5.39 (0.50)
WA1832	1.51	(0.14)	17 7/8" (454)	12 3/16" (309)	3.27 (0.30)	1.85 (0.17)	44 1/2" (1131)	5.99 (0.56)
WA1836	1.76	(0.16)	17 7/8" (454)	14 3/16" (360)	3.71 (0.34)	2.10 (0.20)	40 1/2" (1029)	6.59 (0.61)
WA18310	2.01	(0.19)	17 7/8" (454)	16 3/16" (411)	4.14 (0.39)	2.35 (0.22)	36 1/2" (928)	7.20 (0.67)
WA1842	2.26	(0.21)	17 7/8" (454)	18 3/16" (462)	4.58 (0.43)	2.60 (0.24)	32 1/2" (826)	7.80 (0.72)
WA1846	2.51	(0.23)	17 7/8" (454)	20 3/16" (513)	5.01 (0.47)	2.85 (0.27)	28 1/2" (724)	8.40 (0.78)
WA18410	2.76	(0.26)	17 7/8" (454)	22 3/16" (563)	5.44 (0.51)	3.10 (0.29)	24 1/2" (623)	9.00 (0.84)
WA1852	3.00	(0.28)	17 7/8" (454)	24 3/16" (614)	5.88 (0.55)	3.35 (0.31)	20 1/2" (521)	9.60 (0.89)
WA1856	3.25	(0.30)	17 7/8" (454)	26 3/16" (665)	6.31 (0.59)	3.59 (0.33)	16 1/2" (420)	10.20 (0.95)
WA18510	3.50	(0.33)	17 7/8" (454)	28 3/16" (716)	6.75 (0.63)	3.84 (0.36)	12 1/2" (318)	10.80 (1.00)
WA1862	3.75	(0.35)	17 7/8" (454)	30 3/16" (767)	7.18 (0.67)	4.09 (0.38)	8 1/2" (216)	11.40 (1.06)
WA2032	1.77	(0.16)	21 7/8" (556)	11 5/8" (296)	4.09 (0.38)	2.24 (0.21)	44 1/2" (1131)	7.07 (0.66)
WA2036	2.07	(0.19)	21 7/8" (556)	13 5/8" (347)	4.63 (0.43)	2.55 (0.24)	40 1/2" (1029)	7.78 (0.72)
WA20310	2.38	(0.22)	21 7/8" (556)	15 5/8" (397)	5.18 (0.48)	2.85 (0.27)	36 1/2" (928)	8.50 (0.79)
WA2042	2.68	(0.25)	21 7/8" (556)	17 5/8" (448)	5.72 (0.53)	3.15 (0.29)	32 1/2" (826)	9.21 (0.86)
WA2046	2.99	(0.28)	21 7/8" (556)	19 5/8" (499)	6.27 (0.58)	3.46 (0.32)	28 1/2" (724)	9.92 (0.92)
WA20410	3.29	(0.31)	21 7/8" (556)	21 5/8" (550)	6.81 (0.63)	3.76 (0.35)	24 1/2" (623)	10.63 (0.99)
WA2052	3.59	(0.33)	21 7/8" (556)	23 5/8" (601)	7.36 (0.68)	4.07 (0.38)	20 1/2" (521)	11.34 (1.05)
WA2056	3.90	(0.36)	21 7/8" (556)	25 5/8" (651)	7.90 (0.73)	4.37 (0.41)	16 1/2" (420)	12.05 (1.12)
WA20510	4.20	(0.39)	21 7/8" (556)	27 5/8" (702)	8.45 (0.79)	4.68 (0.43)	12 1/2" (318)	12.77 (1.19)

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Woodwright® Picture Window Area Specifications

Window Number	Glass Area Sq. Ft./ (m ²)	Overall Window Area Sq. Ft./ (m ²)
WPW10310	2.03 (0.19)	4.07 (0.38)
WPW1042	2.22 (0.21)	4.41 (0.41)
WPW1046	2.42 (0.23)	4.74 (0.44)
WPW10410	2.61 (0.24)	5.07 (0.47)
WPW1052	2.81 (0.26)	5.41 (0.50)
WPW1056	3.01 (0.28)	5.74 (0.53)
WPW10510	3.20 (0.30)	6.07 (0.56)
WPW1062	3.40 (0.32)	6.41 (0.60)
WPW30310	9.38 (0.87)	12.77 (1.19)
WPW3042	10.29 (0.96)	13.82 (1.28)
WPW3046	11.19 (1.04)	14.86 (1.38)
WPW30410	12.10 (1.12)	15.91 (1.48)
WPW3052	13.01 (1.21)	16.95 (1.58)
WPW3056	13.92 (1.29)	18.00 (1.67)
WPW30510	14.83 (1.38)	19.04 (1.77)
WPW3062	15.73 (1.46)	20.09 (1.87)
WPW34310	10.53 (0.98)	14.13 (1.31)
WPW3442	11.54 (1.07)	15.28 (1.42)
WPW3446	12.56 (1.17)	16.44 (1.53)
WPW34410	13.58 (1.26)	17.60 (1.64)
WPW3452	14.60 (1.36)	18.75 (1.74)
WPW3456	15.62 (1.45)	19.91 (1.85)
WPW34510	16.64 (1.55)	21.07 (1.96)
WPW3462	17.66 (1.64)	22.22 (2.06)
WPW310310	12.16 (1.13)	16.06 (1.49)
WPW31042	13.33 (1.24)	17.37 (1.61)
WPW31046	14.51 (1.35)	18.69 (1.74)
WPW310410	15.69 (1.46)	20.00 (1.86)
WPW31052	16.87 (1.57)	21.32 (1.98)
WPW31056	18.04 (1.68)	22.63 (2.10)
WPW310510	19.22 (1.79)	23.94 (2.22)
WPW31062	20.40 (1.90)	25.26 (2.35)
WPW42310	13.30 (1.24)	17.42 (1.62)
WPW4242	14.20 (1.32)	18.84 (1.75)
WPW4246	15.88 (1.48)	20.27 (1.88)
WPW42410	17.17 (1.60)	21.69 (2.02)
WPW4252	18.46 (1.72)	23.12 (2.15)
WPW4256	19.75 (1.84)	24.54 (2.28)
WPW42510	21.03 (1.95)	25.97 (2.41)
WPW4262	22.32 (2.07)	27.39 (2.55)
WPW410310	15.60 (1.45)	20.13 (1.87)
WPW41042	17.11 (1.59)	21.78 (2.02)
WPW41046	18.62 (1.73)	23.43 (2.18)
WPW410410	20.13 (1.87)	25.07 (2.33)
WPW41052	21.64 (2.01)	26.72 (2.48)
WPW41056	23.15 (2.15)	28.37 (2.64)
WPW410510	24.66 (2.29)	30.02 (2.79)
WPW41062	26.17 (2.43)	31.66 (2.94)
WPW56310	17.89 (1.66)	22.85 (2.12)
WPW5642	19.63 (1.82)	24.72 (2.30)
WPW5646	21.36 (1.98)	26.59 (2.47)
WPW56410	23.09 (2.15)	28.46 (2.64)
WPW5652	24.83 (2.31)	30.33 (2.82)
WPW5656	26.56 (2.47)	32.20 (2.99)
WPW56510	28.29 (2.63)	34.07 (3.17)
WPW5662	30.02 (2.79)	35.93 (3.34)

* Dimensions in parentheses are in square meters.

* "Top of Subfloor to Top of Inside Sill Stop" is calculated based upon a structural header height of 6'-10 1/2" (2096).

* Dimensions in parentheses are in millimeters or square meters.

* Dimension varies depending on header height.

WOODWRIGHT® DOUBLE-HUNG FULL-FRAME WINDOWS

Woodwright® Arch Double-Hung Window Opening and Area Specifications (continued)

Window Number	Clear Opening Area Sq. Ft./ (m ²)	Clear Opening in Full Open Position		Glass Area Sq. Ft./ (m ²)	Vent Area Sq. Ft./ (m ²)	Top of Subfloor to Top of Inside Sill Stop Inches/(mm)	Overall Window Area Sq. Ft./ (m ²)
		Width Inches/(mm)	Height Inches/(mm)				
WA2062	4.51 (0.42)	21 7/8" (556)	29 5/8" (753)	8.99 (0.84)	4.98 (0.46)	8 1/2" (216)	13.48 (1.25)
WA2432	2.00 (0.19)	25 1/8" (658)	11 1/8" (282)	4.89 (0.46)	2.62 (0.24)	44 1/2" (1131)	8.14 (0.76)
WA2436	2.36 (0.22)	25 1/8" (658)	13 1/8" (333)	5.55 (0.52)	2.98 (0.28)	40 1/2" (1029)	8.96 (0.83)
WA24310	2.72 (0.25)	25 1/8" (658)	15 1/8" (384)	6.21 (0.58)	3.34 (0.31)	36 1/2" (928)	9.79 (0.91)
WA2442	3.08 (0.29)	25 1/8" (658)	17 1/8" (435)	6.86 (0.64)	3.70 (0.34)	32 1/2" (826)	10.61 (0.99)
WA2446	3.44 (0.32)	25 1/8" (658)	19 1/8" (485)	7.52 (0.70)	4.06 (0.38)	28 1/2" (724)	11.43 (1.06)
WA24410	3.80 (0.35)	25 1/8" (658)	21 1/8" (536)	8.17 (0.76)	4.42 (0.41)	24 1/2" (623)	12.26 (1.14)
WA2452	4.16 (0.39)	25 1/8" (658)	23 1/8" (587)	8.83 (0.82)	4.78 (0.44)	20 1/2" (521)	13.08 (1.22)
WA2456	4.51 (0.42)	25 1/8" (658)	25 1/8" (638)	9.49 (0.88)	5.14 (0.48)	16 1/2" (420)	13.90 (1.29)
WA24510	4.87 (0.45)	25 1/8" (658)	27 1/8" (689)	10.14 (0.94)	5.50 (0.51)	12 1/2" (318)	14.72 (1.37)
WA2462	5.23 (0.49)	25 1/8" (658)	29 1/8" (739)	10.80 (1.00)	5.86 (0.54)	8 1/2" (216)	15.55 (1.44)
WA2632	2.10 (0.20)	27 7/8" (708)	10 13/16" (275)	5.29 (0.49)	2.81 (0.26)	44 1/2" (1131)	8.67 (0.81)
WA2636	2.49 (0.23)	27 7/8" (708)	12 13/16" (326)	6.00 (0.56)	3.19 (0.30)	40 1/2" (1029)	9.55 (0.89)
WA26310	2.88 (0.27)	27 7/8" (708)	14 13/16" (377)	6.72 (0.62)	3.58 (0.33)	36 1/2" (928)	10.43 (0.97)
WA2642	3.26 (0.30)	27 7/8" (708)	16 13/16" (428)	7.43 (0.69)	3.97 (0.37)	32 1/2" (826)	11.31 (1.05)
WA2646	3.65 (0.34)	27 7/8" (708)	18 13/16" (479)	8.14 (0.76)	4.36 (0.41)	28 1/2" (724)	12.18 (1.13)
WA26410	4.04 (0.38)	27 7/8" (708)	20 13/16" (529)	8.85 (0.82)	4.74 (0.44)	24 1/2" (623)	13.06 (1.21)
WA2652	4.42 (0.41)	27 7/8" (708)	22 13/16" (580)	9.56 (0.89)	5.13 (0.48)	20 1/2" (521)	13.94 (1.30)
WA2656	4.81 (0.45)	27 7/8" (708)	24 13/16" (631)	10.28 (0.96)	5.52 (0.51)	16 1/2" (420)	14.82 (1.38)
WA26510	5.20 (0.48)	27 7/8" (708)	26 13/16" (682)	10.99 (1.02)	5.91 (0.55)	12 1/2" (318)	15.70 (1.46)
WA2662	5.59 (0.52)	27 7/8" (708)	28 13/16" (733)	11.70 (1.09)	6.29 (0.59)	8 1/2" (216)	16.58 (1.54)
WA2836	2.61 (0.24)	29 7/8" (759)	12 9/16" (319)	6.46 (0.60)	3.41 (0.32)	40 1/2" (1029)	10.13 (0.94)
WA28310	3.03 (0.28)	29 7/8" (759)	14 9/16" (370)	7.22 (0.67)	3.82 (0.36)	36 1/2" (928)	11.07 (1.03)
WA2842	3.44 (0.32)	29 7/8" (759)	16 9/16" (421)	7.99 (0.74)	4.24 (0.39)	32 1/2" (826)	12.00 (1.12)
WA2846	3.86 (0.36)	29 7/8" (759)	18 9/16" (472)	8.76 (0.81)	4.65 (0.43)	28 1/2" (724)	12.94 (1.20)
WA28410	4.27 (0.40)	29 7/8" (759)	20 9/16" (523)	9.53 (0.89)	5.07 (0.47)	24 1/2" (623)	13.87 (1.29)
WA2852	4.69 (0.44)	29 7/8" (759)	22 9/16" (573)	10.29 (0.96)	5.48 (0.51)	20 1/2" (521)	14.80 (1.38)
WA2856	5.10 (0.47)	29 7/8" (759)	24 9/16" (624)	11.06 (1.03)	5.90 (0.55)	16 1/2" (420)	15.74 (1.46)
WA28510	5.52 (0.51)	29 7/8" (759)	26 9/16" (675)	11.83 (1.10)	6.31 (0.59)	12 1/2" (318)	16.67 (1.55)
WA2862 ◊	5.93 (0.55)	29 7/8" (759)	28 9/16" (726)	12.60 (1.17)	6.73 (0.63)	8 1/2" (216)	17.61 (1.64)
WA210310	3.17 (0.29)	31 7/8" (810)	14 5/16" (363)	7.73 (0.72)	4.06 (0.38)	36 1/2" (928)	11.70 (1.09)
WA21042	3.61 (0.34)	31 7/8" (810)	16 5/16" (414)	8.55 (0.80)	4.50 (0.42)	32 1/2" (826)	12.69 (1.18)
WA21046	4.05 (0.38)	31 7/8" (810)	18 5/16" (465)	9.38 (0.87)	4.94 (0.46)	28 1/2" (724)	13.68 (1.27)
WA210410	4.50 (0.42)	31 7/8" (810)	20 5/16" (516)	10.20 (0.95)	5.39 (0.50)	24 1/2" (623)	14.67 (1.36)
WA21052	4.94 (0.46)	31 7/8" (810)	22 5/16" (567)	11.02 (1.02)	5.83 (0.54)	20 1/2" (521)	15.66 (1.46)
WA21056	5.38 (0.50)	31 7/8" (810)	24 5/16" (617)	11.84 (1.10)	6.27 (0.58)	16 1/2" (420)	16.65 (1.55)
WA210510 ◊	5.83 (0.54)	31 7/8" (810)	26 5/16" (668)	12.67 (1.18)	6.72 (0.62)	12 1/2" (318)	17.64 (1.64)
WA21062 ◊	6.27 (0.58)	31 7/8" (810)	28 5/16" (719)	13.49 (1.25)	7.16 (0.67)	8 1/2" (216)	18.63 (1.73)
WA30310	3.30 (0.31)	33 7/8" (861)	14 1/16" (357)	8.23 (0.77)	4.29 (0.40)	36 1/2" (928)	12.34 (1.15)
WA3042	3.78 (0.35)	33 7/8" (861)	16 1/16" (407)	9.11 (0.85)	4.76 (0.44)	32 1/2" (826)	13.38 (1.24)
WA3046	4.25 (0.39)	33 7/8" (861)	18 1/16" (458)	9.99 (0.93)	5.23 (0.49)	28 1/2" (724)	14.43 (1.34)
WA30410	4.72 (0.44)	33 7/8" (861)	20 1/16" (509)	10.87 (1.01)	5.70 (0.53)	24 1/2" (623)	15.47 (1.44)
WA3052	5.19 (0.48)	33 7/8" (861)	22 1/16" (560)	11.75 (1.09)	6.17 (0.57)	20 1/2" (521)	16.52 (1.54)
WA3056	5.66 (0.53)	33 7/8" (861)	24 1/16" (611)	12.62 (1.17)	6.65 (0.62)	16 1/2" (420)	17.56 (1.63)
WA30510 ◊	6.13 (0.57)	33 7/8" (861)	26 1/16" (661)	13.50 (1.25)	7.12 (0.66)	12 1/2" (318)	18.61 (1.73)
WA3062 ◊	6.60 (0.61)	33 7/8" (861)	28 1/16" (712)	14.38 (1.34)	7.59 (0.71)	8 1/2" (216)	19.65 (1.83)
WA34310	3.55 (0.33)	37 7/8" (962)	13 1/2" (343)	9.23 (0.86)	4.75 (0.44)	36 1/2" (928)	13.60 (1.26)
WA3442	4.08 (0.38)	37 7/8" (962)	15 1/2" (394)	10.22 (0.95)	5.28 (0.49)	32 1/2" (826)	14.76 (1.37)
WA3446	4.61 (0.43)	37 7/8" (962)	17 1/2" (445)	11.21 (1.04)	5.81 (0.54)	28 1/2" (724)	15.91 (1.48)
WA34410	5.13 (0.48)	37 7/8" (962)	19 1/2" (495)	12.20 (1.13)	6.33 (0.59)	24 1/2" (623)	17.07 (1.59)
WA3452	5.66 (0.53)	37 7/8" (962)	21 1/2" (546)	13.19 (1.23)	6.86 (0.64)	20 1/2" (521)	18.22 (1.69)
WA3456	6.19 (0.58)	37 7/8" (962)	23 1/2" (597)	14.18 (1.32)	7.38 (0.69)	16 1/2" (420)	19.38 (1.80)
WA34510 ◊	6.71 (0.62)	37 7/8" (962)	25 1/2" (648)	15.17 (1.41)	7.91 (0.74)	12 1/2" (318)	20.54 (1.91)
WA3462 ◊	7.24 (0.67)	37 7/8" (962)	27 1/2" (699)	16.16 (1.50)	8.44 (0.78)	8 1/2" (216)	21.69 (2.02)
WA3842	4.36 (0.41)	41 7/8" (1064)	15" (380)	11.32 (1.05)	5.79 (0.54)	32 1/2" (826)	16.12 (1.50)
WA3846	4.94 (0.46)	41 7/8" (1064)	17" (431)	12.42 (1.15)	6.37 (0.59)	28 1/2" (724)	17.39 (1.62)
WA38410	5.52 (0.51)	41 7/8" (1064)	19" (482)	13.52 (1.26)	6.95 (0.65)	24 1/2" (623)	18.65 (1.73)
WA3852	6.10 (0.57)	41 7/8" (1064)	21" (533)	14.62 (1.36)	7.53 (0.70)	20 1/2" (521)	19.92 (1.85)
WA3856	6.68 (0.62)	41 7/8" (1064)	23" (583)	15.72 (1.46)	8.11 (0.75)	16 1/2" (420)	21.19 (1.97)
WA38510 ◊	7.26 (0.68)	41 7/8" (1064)	25" (634)	16.82 (1.56)	8.70 (0.81)	12 1/2" (318)	22.46 (2.09)
WA3862 ◊	7.85 (0.73)	41 7/8" (1064)	27" (685)	17.93 (1.67)	9.28 (0.86)	8 1/2" (216)	23.72 (2.20)

* "Top of Subfloor to Top of Inside Sill Stop" is calculated based upon a structural header height of 6'-10 1/2" (2096).
 * Dimensions in parentheses are in millimeters or square meters.
 ◊ Meet or exceed clear opening area of 5.7 sq. ft. or 0.53 m², clear opening width of 20" (508) and clear opening height of 24" (610).

Woodwright® Unequal Leg Arch Double-Hung Window Opening and Area Specifications

Window Number	Clear Opening Area Sq. Ft./ (m ²)		Clear Opening in Full Open Position		Glass Area Sq. Ft./ (m ²)	Vent Area Sq. Ft./ (m ²)	Top of Subfloor to Top of Inside Sill Stop Inches/(mm)	Overall Window Area Sq. Ft./ (m ²)
			Width Inches/(mm)	Height Inches/(mm)				
WU1836	1.44	(0.13)	17 7/8" (454)	11 5/8" (295)	3.59 (0.33)	1.98 (0.18)	40 1/2" (1029)	6.47 (0.60)
WU18310	1.69	(0.16)	17 7/8" (454)	13 5/8" (346)	4.02 (0.37)	2.23 (0.21)	36 1/2" (928)	7.07 (0.66)
WU1842	1.94	(0.18)	17 7/8" (454)	15 5/8" (396)	4.46 (0.41)	2.48 (0.23)	32 1/2" (826)	7.67 (0.71)
WU1846	2.19	(0.20)	17 7/8" (454)	17 5/8" (447)	4.89 (0.45)	2.72 (0.25)	28 1/2" (724)	8.27 (0.77)
WU18410	2.44	(0.23)	17 7/8" (454)	19 5/8" (498)	5.32 (0.49)	2.97 (0.28)	24 1/2" (623)	8.87 (0.82)
WU1852	2.68	(0.25)	17 7/8" (454)	21 5/8" (549)	5.76 (0.53)	3.22 (0.30)	20 1/2" (521)	9.47 (0.88)
WU1856	2.93	(0.27)	17 7/8" (454)	23 5/8" (600)	6.19 (0.58)	3.47 (0.32)	16 1/2" (420)	10.07 (0.94)
WU18510	3.18	(0.30)	17 7/8" (454)	25 5/8" (650)	6.63 (0.62)	3.72 (0.35)	12 1/2" (318)	10.67 (0.99)
WU1862	3.43	(0.32)	17 7/8" (454)	27 5/8" (701)	7.06 (0.66)	3.97 (0.37)	8 1/2" (216)	11.28 (1.05)
WU20310	1.71	(0.16)	21 1/8" (556)	11 1/4" (286)	4.95 (0.46)	2.61 (0.24)	36 1/2" (928)	8.24 (0.77)
WU2042	2.02	(0.19)	21 1/8" (556)	13 1/4" (337)	5.50 (0.51)	2.91 (0.27)	32 1/2" (826)	8.96 (0.83)
WU2046	2.32	(0.22)	21 1/8" (556)	15 1/4" (388)	6.04 (0.56)	3.22 (0.30)	28 1/2" (724)	9.67 (0.90)
WU20410	2.62	(0.24)	21 1/8" (556)	17 1/4" (438)	6.59 (0.61)	3.52 (0.33)	24 1/2" (623)	10.38 (0.96)
WU2052	2.93	(0.27)	21 1/8" (556)	19 1/4" (489)	7.13 (0.66)	3.83 (0.36)	20 1/2" (521)	11.09 (1.03)
WU2056	3.23	(0.30)	21 1/8" (556)	21 1/4" (540)	7.68 (0.71)	4.13 (0.38)	16 1/2" (420)	11.80 (1.10)
WU20510	3.54	(0.33)	21 1/8" (556)	23 1/4" (591)	8.22 (0.76)	4.44 (0.41)	12 1/2" (318)	12.51 (1.16)
WU2062	3.84	(0.36)	21 1/8" (556)	25 1/4" (642)	8.77 (0.81)	4.74 (0.44)	8 1/2" (216)	13.23 (1.23)
WU2446	2.21	(0.21)	25 1/8" (658)	12 1/4" (312)	7.12 (0.66)	3.64 (0.34)	28 1/2" (724)	10.99 (1.02)
WU24410	2.57	(0.24)	25 1/8" (658)	14 1/4" (363)	7.78 (0.72)	4.00 (0.37)	24 1/2" (623)	11.81 (1.10)
WU2452	2.93	(0.27)	25 1/8" (658)	16 1/4" (413)	8.44 (0.78)	4.36 (0.41)	20 1/2" (521)	12.63 (1.17)
WU2456E	3.29	(0.31)	25 1/8" (658)	18 1/4" (464)	9.09 (0.84)	4.72 (0.44)	16 1/2" (420)	13.46 (1.25)
WU24510	3.65	(0.34)	25 1/8" (658)	20 1/4" (515)	9.75 (0.91)	5.08 (0.47)	12 1/2" (318)	14.28 (1.33)
WU2462	4.01	(0.37)	25 1/8" (658)	22 1/4" (566)	10.40 (0.97)	5.44 (0.51)	8 1/2" (216)	15.10 (1.40)
WU26410	2.42	(0.23)	27 1/8" (708)	12 1/2" (318)	8.34 (0.78)	4.21 (0.39)	24 1/2" (623)	12.49 (1.16)
WU2652	2.81	(0.26)	27 1/8" (708)	14 1/2" (368)	9.06 (0.84)	4.59 (0.43)	20 1/2" (521)	13.37 (1.24)
WU2656	3.20	(0.30)	27 1/8" (708)	16 1/2" (419)	9.77 (0.91)	4.98 (0.46)	16 1/2" (420)	14.25 (1.32)
WU26510	3.58	(0.33)	27 1/8" (708)	18 1/2" (470)	10.48 (0.97)	5.37 (0.50)	12 1/2" (318)	15.13 (1.41)
WU2662	3.97	(0.37)	27 1/8" (708)	20 1/2" (521)	11.19 (1.04)	5.76 (0.53)	8 1/2" (216)	16.01 (1.49)
WU2852	2.59	(0.24)	29 1/8" (759)	12 1/2" (317)	9.65 (0.90)	4.80 (0.45)	20 1/2" (521)	14.08 (1.31)
WU2856	3.01	(0.28)	29 1/8" (759)	14 1/2" (368)	10.42 (0.97)	5.22 (0.48)	16 1/2" (420)	15.01 (1.40)
WU28510	3.42	(0.32)	29 1/8" (759)	16 1/2" (419)	11.19 (1.04)	5.63 (0.52)	12 1/2" (318)	15.95 (1.48)
WU2862	3.84	(0.36)	29 1/8" (759)	18 1/2" (470)	11.95 (1.11)	6.05 (0.56)	8 1/2" (216)	16.88 (1.57)
WU21042	3.13	(0.29)	31 1/8" (810)	14 1/8" (359)	8.35 (0.78)	4.31 (0.40)	32 1/2" (826)	12.52 (1.16)
WU21046	3.57	(0.33)	31 1/8" (810)	16 1/8" (409)	9.17 (0.85)	4.75 (0.44)	28 1/2" (724)	13.51 (1.26)
WU210410	4.01	(0.37)	31 1/8" (810)	18 1/8" (460)	10.00 (0.93)	5.19 (0.48)	24 1/2" (623)	14.50 (1.35)
WU21052	4.46	(0.41)	31 1/8" (810)	20 1/8" (511)	10.82 (1.01)	5.64 (0.52)	20 1/2" (521)	15.49 (1.44)
WU21056	4.90	(0.46)	31 1/8" (810)	22 1/8" (562)	11.64 (1.08)	6.08 (0.56)	16 1/2" (420)	16.48 (1.53)
WU210510	5.34	(0.50)	31 1/8" (810)	24 1/8" (613)	12.46 (1.16)	6.52 (0.61)	12 1/2" (318)	17.47 (1.62)
WU21062 ◊	5.78	(0.54)	31 1/8" (810)	26 1/8" (663)	13.29 (1.23)	6.96 (0.65)	8 1/2" (216)	18.46 (1.72)
WU3042	3.13	(0.29)	33 1/8" (861)	13 5/16" (338)	8.86 (0.82)	4.51 (0.42)	32 1/2" (826)	13.15 (1.22)
WU3046	3.60	(0.34)	33 1/8" (861)	15 5/16" (389)	9.73 (0.90)	4.98 (0.46)	28 1/2" (724)	14.20 (1.32)
WU30410	4.07	(0.38)	33 1/8" (861)	17 5/16" (440)	10.61 (0.99)	5.46 (0.51)	24 1/2" (623)	15.24 (1.42)
WU3052	4.54	(0.42)	33 1/8" (861)	19 5/16" (490)	11.49 (1.07)	5.93 (0.55)	20 1/2" (521)	16.29 (1.51)
WU3056	5.02	(0.47)	33 1/8" (861)	21 5/16" (541)	12.37 (1.15)	6.40 (0.59)	16 1/2" (420)	17.33 (1.61)
WU30510	5.49	(0.51)	33 1/8" (861)	23 5/16" (592)	13.25 (1.23)	6.87 (0.64)	12 1/2" (318)	18.38 (1.71)
WU3062 ◊	5.96	(0.55)	33 1/8" (861)	25 5/16" (643)	14.13 (1.31)	7.34 (0.68)	8 1/2" (216)	19.42 (1.80)
WU34410	4.09	(0.38)	37 1/8" (962)	15 1/2" (395)	11.81 (1.10)	5.95 (0.55)	24 1/2" (623)	16.69 (1.55)
WU3452	4.61	(0.43)	37 1/8" (962)	17 1/2" (445)	12.80 (1.19)	6.47 (0.60)	20 1/2" (521)	17.85 (1.66)
WU3456	5.14	(0.48)	37 1/8" (962)	19 1/2" (496)	13.79 (1.28)	7.00 (0.65)	16 1/2" (420)	19.01 (1.77)
WU34510	5.67	(0.53)	37 1/8" (962)	21 1/2" (547)	14.78 (1.37)	7.53 (0.70)	12 1/2" (318)	20.16 (1.87)
WU3462	6.19	(0.58)	37 1/8" (962)	23 1/2" (598)	15.77 (1.47)	8.05 (0.75)	8 1/2" (216)	21.32 (1.98)
WU3852	4.52	(0.42)	41 1/8" (1064)	15 1/2" (394)	14.06 (1.31)	6.97 (0.65)	20 1/2" (521)	19.36 (1.80)
WU3856	5.10	(0.47)	41 1/8" (1064)	17 1/2" (445)	15.16 (1.41)	7.55 (0.70)	16 1/2" (420)	20.63 (1.92)
WU38510	5.68	(0.53)	41 1/8" (1064)	19 1/2" (496)	16.27 (1.51)	8.13 (0.76)	12 1/2" (318)	21.90 (2.03)
WU3862	6.26	(0.58)	41 1/8" (1064)	21 1/2" (547)	17.37 (1.61)	8.71 (0.81)	8 1/2" (216)	23.16 (2.15)

*"Top of Subfloor to Top of Inside Sill Stop" is calculated based upon a structural header height of 6'-10 1/2" (2096).

*Dimensions in parentheses are in millimeters or square meters.

◊ Meet or exceed clear opening area of 5.7 sq. ft. or 0.53 m², clear opening width of 20" (508) and clear opening height of 24" (610).

WOODWRIGHT® DOUBLE-HUNG FULL-FRAME WINDOWS

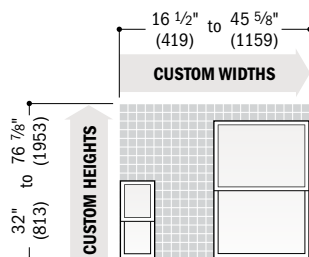
Custom Sizes



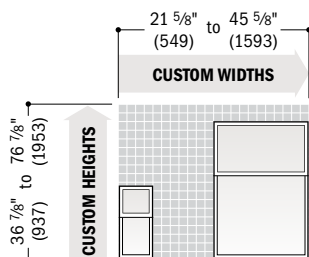
Available in $\frac{1}{8}$ " (3) increments between minimum and maximum widths and heights. Windows can also be custom sized to match standard sizes ending in a sixteenth of an inch. Some restrictions apply; contact your Andersen supplier. Measurement guide for custom-size windows can be found at andersenwindows.com/measure.

Woodwright® Double-Hung Windows

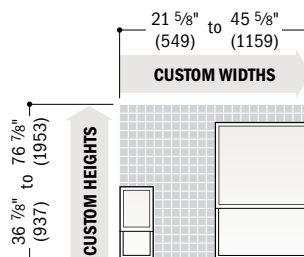
Equal



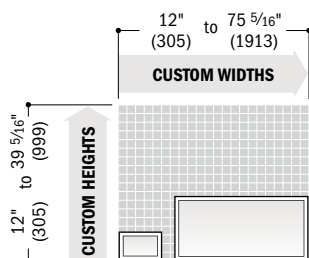
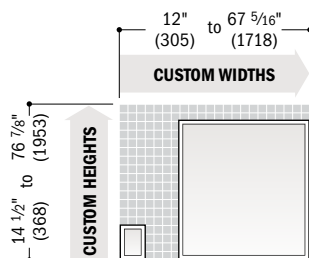
2:3 Cottage



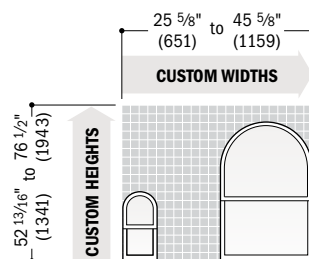
3:2 Reverse Cottage



Woodwright® Picture and Transom Windows

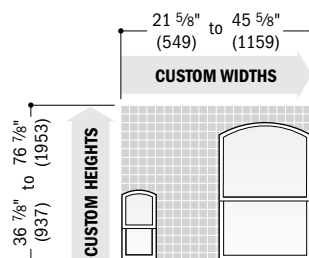


Woodwright® Springline™ Single-Hung Windows



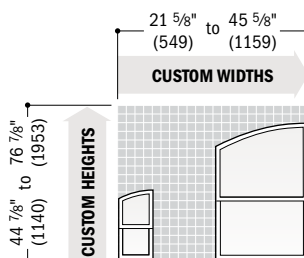
Side-by-side joining of two Springline windows is not recommended.

Woodwright® Arch Double-Hung Windows



Side-by-side joining of two arch windows is not recommended.

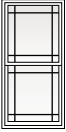
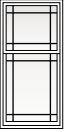
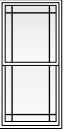
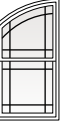
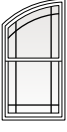
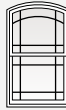
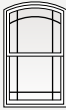
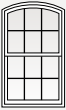
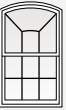
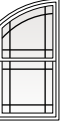
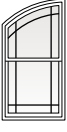
Woodwright® Unequal Leg Arch Double-Hung Windows

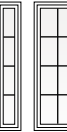
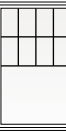
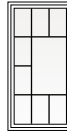


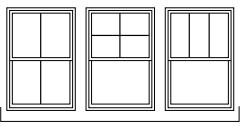
Short side joining of unequal leg arch windows is not recommended.

* Dimensions in parentheses are in millimeters.

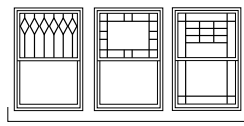
Grille Patterns

	Prairie A	6-Light Prairie	Colonial	Renaissance		Prairie A	6-Light Prairie	Colonial	Renaissance
Woodwright® Double-Hung									
	Equal	Cottage	Equal	Cottage					
Woodwright Arch Double-Hung					Woodwright Unequal Leg Arch Double-Hung				
					Woodwright Springline™ Single-Hung				

	Prairie A	Colonial	Modified Colonial	Modified Colonial with Simulated Meeting Rail	Tall Fractional	Tall Fractional with Simulated Meeting Rail	Short Fractional	Short Fractional with Simulated Meeting Rail	Victorian
Woodwright Picture									
Woodwright Transom									



Specified Equal Light Examples



Custom Pattern Examples

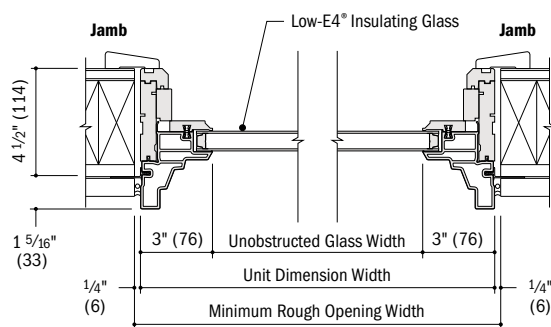
Specified equal light and custom patterns are also available. For more grille options, see page 14 or visit andersenwindows.com/grilles.

Patterns for double- and single-hung windows are also available in Upper Sash Only (USO) configurations. For picture window patterns that require alignment with double- or single-hung window patterns, identify the sash style (equal, cottage or reverse cottage) when ordering. **Number of lights and overall pattern varies with window size. Patterns not available in all configurations.**

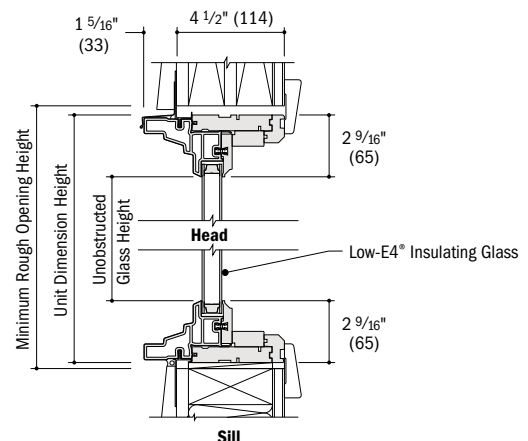
400 Series Woodwright® Double-Hung Full-Frame Windows

Woodwright® Transom Window Details

Scale 1 1/2" (38) = 1'-0" (305) – 1:8



Horizontal Section



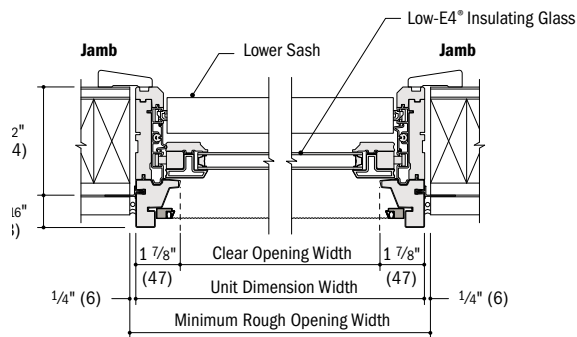
Vertical Section

- Minimum rough openings may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See installation information on pages 210-211.
- Details are for illustration only and are not intended to represent product installation methods or materials. Refer to product installation guides at andersenwindows.com.
- Dimensions in parentheses are in millimeters.

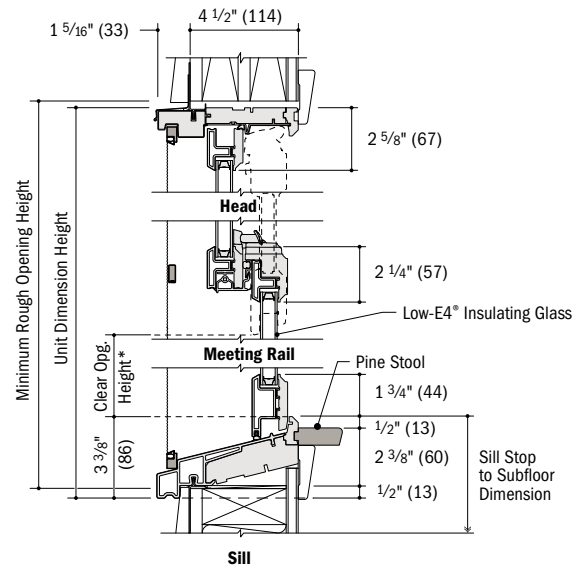
WOODWRIGHT® DOUBLE-HUNG FULL-FRAME WINDOWS

Woodwright® Double-Hung Window Details

Scale 1 1/2" (38) = 1'-0" (305) – 1:8



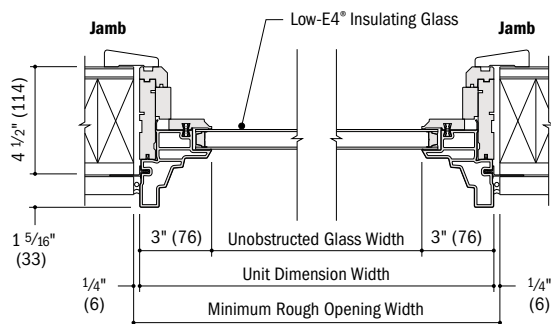
Horizontal Section



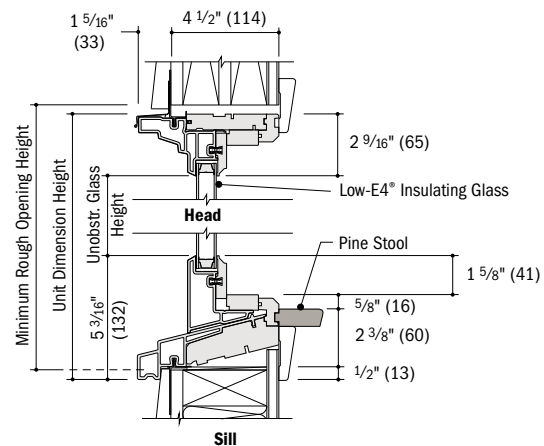
Vertical Section

Woodwright® Picture Window Details

Scale 1 1/2" (38) = 1'-0" (305) – 1:8



Horizontal Section



Vertical Section

• Light-colored areas are parts included with window. Dark-colored areas are additional Andersen® parts required to complete window assembly as shown.

• **Minimum rough openings may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See installation information on pages 210-211.**

• Details are for illustration only and are not intended to represent product installation methods or materials. Refer to product installation guides at andersenwindows.com.

• Dimensions in parentheses are in millimeters.

• Clear opening height dimension is less on arch, unequal leg arch and Springline™ hung windows.

Horizontal (stack) Joining Detail

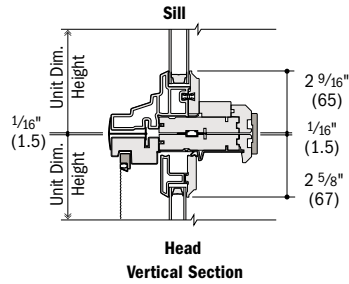
Scale $1\frac{1}{2}"$ (38) = 1'-0" (305) – 1:8

Overall Window Dimension Height

Sum of individual window heights plus $\frac{1}{16}"$ (1.5) for each join.

Overall Rough Opening Height

Overall window dimension height.*



Woodwright® Transom (WTR) over Woodwright Double-Hung

Vertical (ribbon) Joining Detail

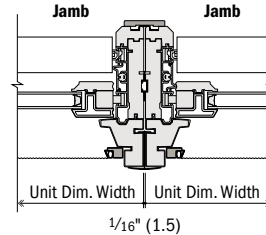
Scale $1\frac{1}{2}"$ (38) = 1'-0" (305) – 1:8

Overall Window Dimension Width

Sum of individual window widths plus $\frac{1}{16}"$ (1.5) for each join.

Overall Rough Opening Width

Overall window dimension width plus $\frac{1}{2}"$ (13).



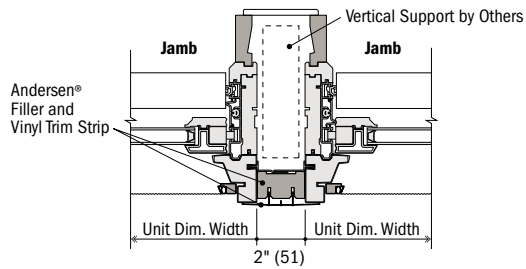
Woodwright® Double-Hung to Woodwright Double-Hung

For more joining information, see the combination designs section starting on page 181.

Separate Rough Openings Detail

Scale $1\frac{1}{2}"$ (38) = 1'-0" (305) – 1:8

To meet structural requirements or to achieve a wider joined appearance, windows may be installed into separate rough openings having vertical support (by others) in combination with Andersen® exterior filler and exterior vinyl trim.



Woodwright® Double-Hung and Woodwright Double-Hung

* Light-colored areas are parts included with window. Dark-colored areas are additional Andersen® parts required to complete window assembly as shown.

• **Minimum rough openings may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See installation information on pages 210-211.**

• Details are for illustration only and are not intended to represent product installation methods or materials. Refer to product installation guides at andersenwindows.com.

• Consult with an architect or structural engineer regarding minimum requirements for structural support members between adjacent rough openings.

• Dimensions in parentheses are in millimeters.

* For stacks where bottom unit in combination is a double-hung or picture window with a sloped sill. If bottom window has a flat sill, add $\frac{1}{2}"$ (13) to the overall window dimension height.



WOODWRIGHT® DOUBLE-HUNG INSERT WINDOWS

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Specifications	70
Existing Window Measurements	71
Sill Angle Details	71
Grille Patterns	72
Window Details	72-73
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CUSTOM SIZING
in 1/8" (3) increments



Dimensions in parentheses are in millimeters.

WOODWRIGHT® DOUBLE-HUNG INSERT WINDOWS

FEATURES

FRAME

A A Fibrex® material exterior protects the frame – beautifully. Best of all, it's low maintenance and never needs painting.

B For exceptional long-lasting* performance, sill members are constructed with a wood core and a Fibrex material exterior.

C Natural wood stops are available in pine, maple, oak and prefinished white. Wood jamb liners add beauty and authenticity to the window interior.

D Multiple weatherstrip systems help provide a barrier against wind, rain and dust. The combination of spring-tension vinyl, rigid vinyl and flexible bulb weatherstrip is efficient and effective.

E Exterior stop covers are specially designed to allow easy application of high-quality sealant.

3 1/4" (83) "pocket window" jamb depth allows convenient replacement without disturbing interior window trim for most double-hung replacement situations.

F For units with white exterior color, the exterior jamb liner is white. For all other units, the exterior jamb liner is gray.

SASH

G Balancers in the sash enable contractors to screw through the jamb during installation without interfering with the window's operation.

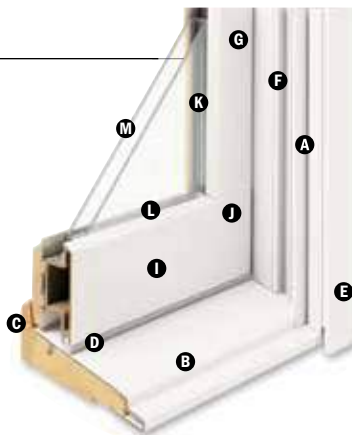
Wood Jamb Liner



H Natural wood sash interior with classic chamfer detailing. Available in pine, maple, oak or prefinished white.

I Low-maintenance sash exterior provides long-lasting* protection and performance. Sash exteriors on most units include Fibrex material.

J Sash joints simulate the look of traditional mortise-and-tenon construction inside and out.



GLASS

K In addition to stainless steel glass spacers, black or white glass spacers are now available to allow the spacer to blend in with the unit color.

L Silicone bed glazing provides superior weathertightness and durability.

M High-Performance options include:

- Low-E4® glass
- Low-E4 HeatLock® glass
- Low-E4 SmartSun™ glass
- Low-E4 SmartSun HeatLock glass
- Low-E4 Sun glass

Tempered and other glass options are available. Contact your Andersen supplier.

A removable translucent film helps shield the glass from damage during delivery and construction, and simplifies finishing at the job site.

Patterned Glass

Patterned glass options are available. See page 12 for more details.

HARDWARE



Standard lock and keeper design provides an easy tilt-to-clean feature integrated into the lock.

SILL ANGLES

Three sill angles are available – 0°, 8° and 14° – to closely match the existing sill in window replacement applications. See page 71 for details.



0° Sill Angle



8° Sill Angle



14° Sill Angle

Sill Angle Finder App

Our Sill Angle Finder App lets you quickly and easily find the sill angle of existing double-hung windows. Available for free for both iPhone® and Android™ smartphones. Download the app for iPhone from the App Store™ or for Android smartphones from the Google Play Store. The app is only available for smartphones, as tablets and other large devices are too bulky for measuring window sill angles.

INSTALLATION

Exterior Stop Cover



An exterior stop cover provides a clean transition from the new window to the existing window casing.

Included Installation Materials



Flat self-hanging shims, backer rod, installation screws and complete instructions are included with each insert window. See the measurement guide and worksheet at andersenwindows.com/measure.

SASH OPTIONS**



Cottage

Reverse Cottage

*Visit andersenwindows.com/warranty for details.

**Shown on 400 Series tilt-wash double-hung full-frame windows.

"iPhone" and "App Store" are registered trademarks of Apple Inc. "Android" is a trademark of Google Inc.

Dimensions in parentheses are in millimeters.

EXTERIOR & INTERIOR OPTIONS

EXTERIOR COLORS



INTERIOR OPTIONS



HARDWARE



Standard Lock & Keeper

Antique Brass | **Black** | Bright Brass
 Brushed Chrome | Distressed Bronze
 Distressed Nickel | Gold Dust
 Oil Rubbed Bronze | Polished Chrome
 Satin Nickel | Stone | White

OPTIONAL HARDWARE Sold Separately

CONTEMPORARY



Bar Lift

Available in all hardware finishes.
 Shown in **Distressed Nickel**.

ESTATE™



Hand Lift

Finger Lifts

Antique Brass | Bright Brass
 Brushed Chrome | Distressed Bronze
 Distressed Nickel | Oil Rubbed Bronze
 Polished Chrome | **Satin Nickel**

TRADITIONAL



Bar Lift



Hand Lift



Finger Lifts

Antique Brass | Black | Bright Brass | Brushed Chrome
 Distressed Bronze | Distressed Nickel | Gold Dust | **Oil Rubbed Bronze**
 Polished Chrome | Satin Nickel | Stone | White

CLASSIC SERIES™



Bar Lift



Hand Lift



Finger Lifts

Stone | **White**

Bold name denotes finish shown.

HARDWARE FINISHES



ACCESSORIES Sold Separately

FRAME

Wood Interior Stop



Optional interior stop with matching chamfer is available.

SASH

Window Opening Control Device



A window opening control device is available, which limits sash travel to less than 4" (102) when the window is first opened. Available factory applied, or as a field-applied kit in stone or white.

INSECT SCREENS

Insect Screen Frames



Choose full insect screen or half insect screen. Half insect screen (shown above) allows ventilation without affecting the view through the upper sash. Frames are available in colors to match product exteriors.

TruScene® Insect Screens

Andersen TruScene insect screens let in over 25% more fresh air* and provide 50% greater clarity than conventional Andersen insect screens, all while keeping out unwanted small insects.

Conventional Insect Screens

Conventional insect screens have charcoal powder-coated aluminum screen mesh.

GRILLES

Grilles are available in a variety of configurations and widths. For double-hung grille patterns, see page 72.

INSTALLATION

Coil Stock



Andersen® aluminum coil stock can be ordered to match any of our 11 trim colors. Made from .018" thick aluminum, Andersen coil stock is available in 24" (610) x 50' (15240) rolls. Color-matched 1 1/4" (32)-long stainless steel trim nails are also available and can be ordered in 1 lb/.454 kg boxes.

CAUTION:

- Painting and staining may cause damage to rigid vinyl.
- 400 Series windows in Terratone color may be painted any color lighter than Terratone color using quality oil-based or latex paint.
- Do not paint 400 Series windows in white, canvas, Sandtone, dark bronze, forest green or black exterior colors.
- Andersen does not warrant the adhesion or performance of homeowner-applied paint over vinyl or other factory-coated surfaces.
- For vinyl painting instructions and preparation, contact your Andersen supplier.
- Do not paint weatherstrip.
- Creosote-based stains should not come in contact with Andersen products.
- Abrasive cleaners or solutions containing corrosive solvents should not be used on Andersen products.

*TruScene insect screens let in over 25% more fresh air than standard Andersen fiberglass insect screens.

Dimensions in parentheses are in millimeters.

Printing limitations prevent exact replication of colors and finishes. See your Andersen supplier for actual color and finish samples.

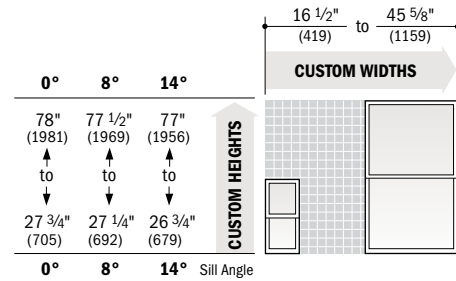
Naturally occurring variations in grain, color and texture of wood make each window one of a kind. All wood interiors are unfinished unless a finish is specified.

Distressed bronze and oil rubbed bronze are "living" finishes that will change with time and use.

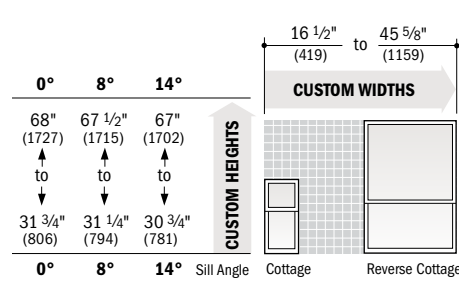
WOODWRIGHT® DOUBLE-HUNG INSERT WINDOWS

Woodwright® Double-Hung, Picture and Transom Insert Window Sizes

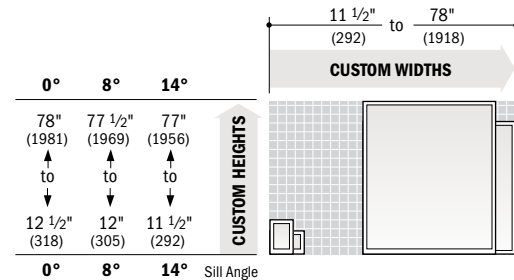
Double-Hung Equal Sash Ratio



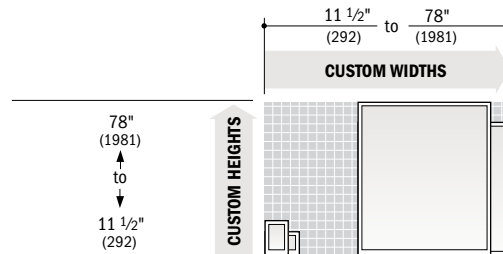
Double-Hung 2:3 Cottage and 3:2 Reverse Cottage Sash Ratio



Picture



Transom



Available in 1/8" (3) increments between minimum and maximum widths and heights. Height limits for double-hung and picture insert windows depend on new insert window sill angle.

For picture and transom insert windows, either height or width must be 68" (1727) or less, and height plus width cannot be less than 28" (711).

Measurement guide for custom-sized windows can be found at andersenwindows.com/measure. Grille patterns shown on page 72.

Woodwright® Double-Hung Insert Window Specification Formulas

	Clear Opening	Width = window width - 3.4375" (87)				
		Height = Depends on sash ratio and specific sill angle of insert window; see below.				
		sash ratio	clear opening height	sill angle deduction		
				14°	8°	0°
		1:1 Equal	= (window height ÷ 2) - sill angle deduction	3.1875" (81)	3.4375" (87)	3.75" (95)
		2:3 Cottage	= (window height x 2) ÷ 5 - sill angle deduction	2.875" (73)	3.0625" (78)	3.25" (83)
		3:2 Reverse Cottage	= (window height x 2) ÷ 5 - sill angle deduction	2.375" (60)	2.5625" (65)	2.8125" (71)
	Vent Opening	Width = window width - 3.4375" (87)				
		Height = Depends on sash ratio and specific sill angle of insert window; see below.				
		sash ratio	vent opening height	sill angle deduction		
				14°	8°	0°
		Equal, Height < 48" (1219)	= ((window height ÷ 2) - sill angle deduction) - 6.5" (165)	2.75" (70)	2.9375" (75)	3.25" (83)
		Equal, Height > 48" (1219)	= ((window height ÷ 2) - sill angle deduction) - 11.5" (292)			
		Cottage, Height < 48" (1219)	= ((window height x 2) ÷ 5 - sill angle deduction) - 6.5" (165)	1.9375" (49)	2.125" (54)	2.375" (60)
		Cottage, Height > 48" (1219)	= ((window height x 2) ÷ 5 - sill angle deduction) - 11.5" (292)			
		Reverse Cottage, Height < 48" (1219)	= ((window height x 2) ÷ 5 - sill angle deduction) - 6.5" (165)	3.5625" (90)	3.8125" (97)	4.8125" (122)
		Reverse Cottage, Height > 48" (1219)	= ((window height x 2) ÷ 5 - sill angle deduction) - 11.5" (292)			
	Unobst. Glass	Width = window width - 6.0" (152)				
		Height = Depends on sash ratio and specific sill angle of insert window; see below.				
		sash ratio	unobstructed glass height	sill angle deduction		
				14°	8°	0°
		Equal Upper and Lower Sash	= (window height ÷ 2) - sill angle deduction	7.875" (200)	8.375" (213)	9.0" (229)
		Cottage Upper Sash or Reverse Cottage Lower Sash	= (window height x 2) ÷ 5 - sill angle deduction	3.1875" (81)	3.375" (86)	3.625" (92)
		Cottage Lower Sash or Reverse Cottage Upper Sash	= (window height x 2) ÷ 5 - sill angle deduction	4.75" (121)	5.0625" (129)	5.4375" (138)

Woodwright® Picture and Transom Insert Window Specification Formulas

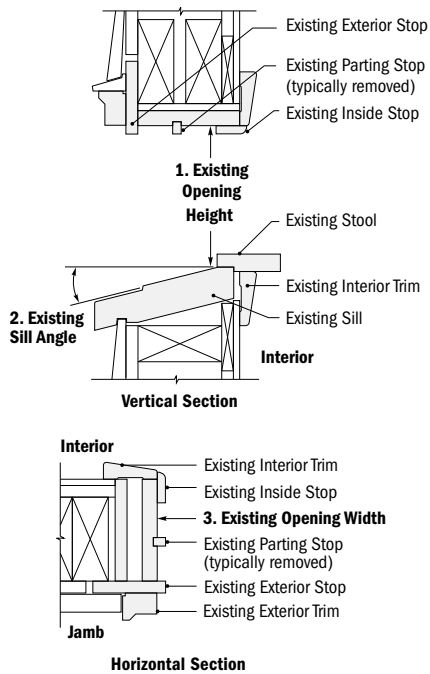
	Unobst. Glass	Picture Insert	Transom Insert		
		Width = window width - 6.0" (152)	Width = window width - 6.0" (152)		
		Height = Depends on sash ratio and specific sill angle of insert window; see below.	Height = window width - 6.0" (152)		
		unobstructed glass height	sill angle deductions		
			14°	8°	0°
		= window height - sill angle deduction	5.816" (148)	6.285" (160)	6.890" (175)

• Dimensions in parentheses are in millimeters.
 • **Clear Opening** formulas provide dimensions for determining area available for egress.
Vent Opening formulas provide dimensions for determining area available for passage of air. **Unobst. Glass** (unobstructed glass) formulas provide dimensions for determining area available for passage of light.
 • Refer to andersenwindows.com/measure for detailed instructions on how to properly measure for insert windows.

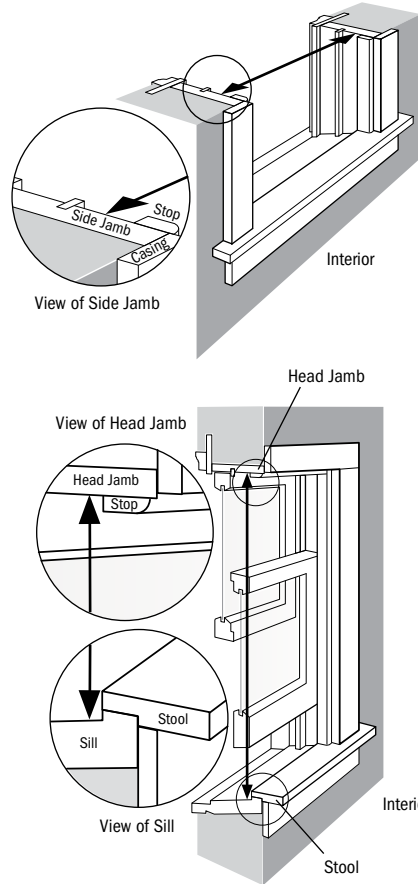
Existing Window Measurements

Required measurements:

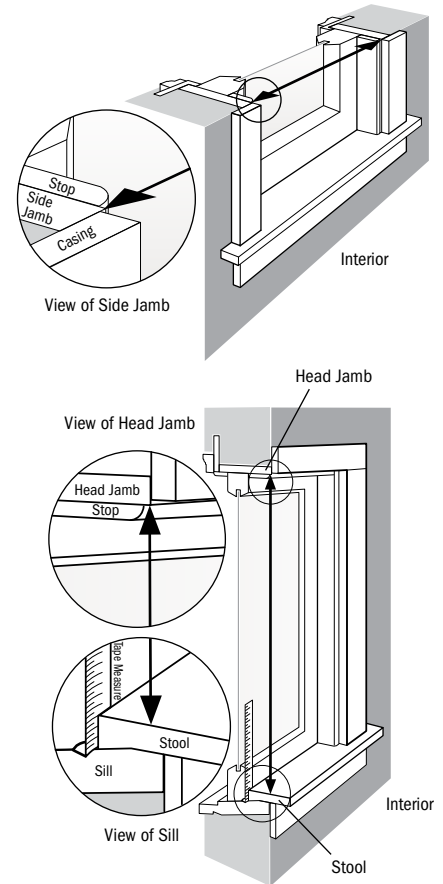
1. Existing Opening Height
2. Existing Sill Angle
3. Existing Opening Width



Existing Double-Hung Window



Existing Picture Window



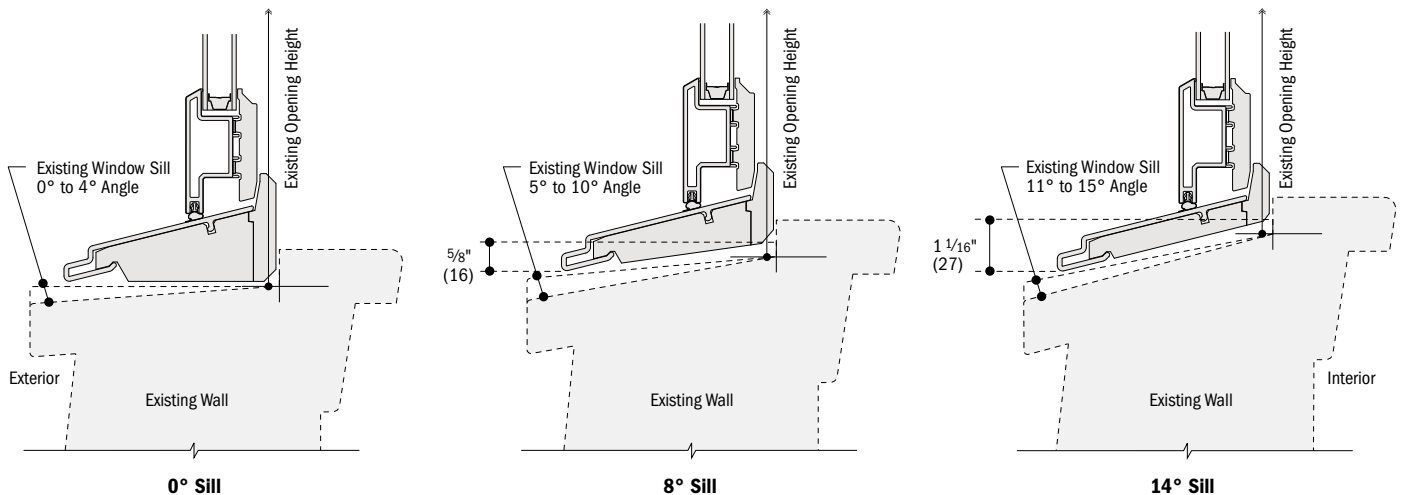
Sill Angle Details

Scale 3" (76) = 1'-0" (305) – 1:4

Select a sill angle that most closely matches your existing sill angle.

Windows with a smaller sill angle will have a larger maximum height.

A "Sill Angle Finder App" is available; see page 68.



• Details are for illustration only and are not intended to represent product installation methods or materials. Refer to product installation guides at andersenwindows.com.
• Dimensions in parentheses are in millimeters.
• Refer to andersenwindows.com/measure for detailed instructions on how to properly measure for insert windows.

WOODWRIGHT® DOUBLE-HUNG INSERT WINDOWS

Grille Patterns

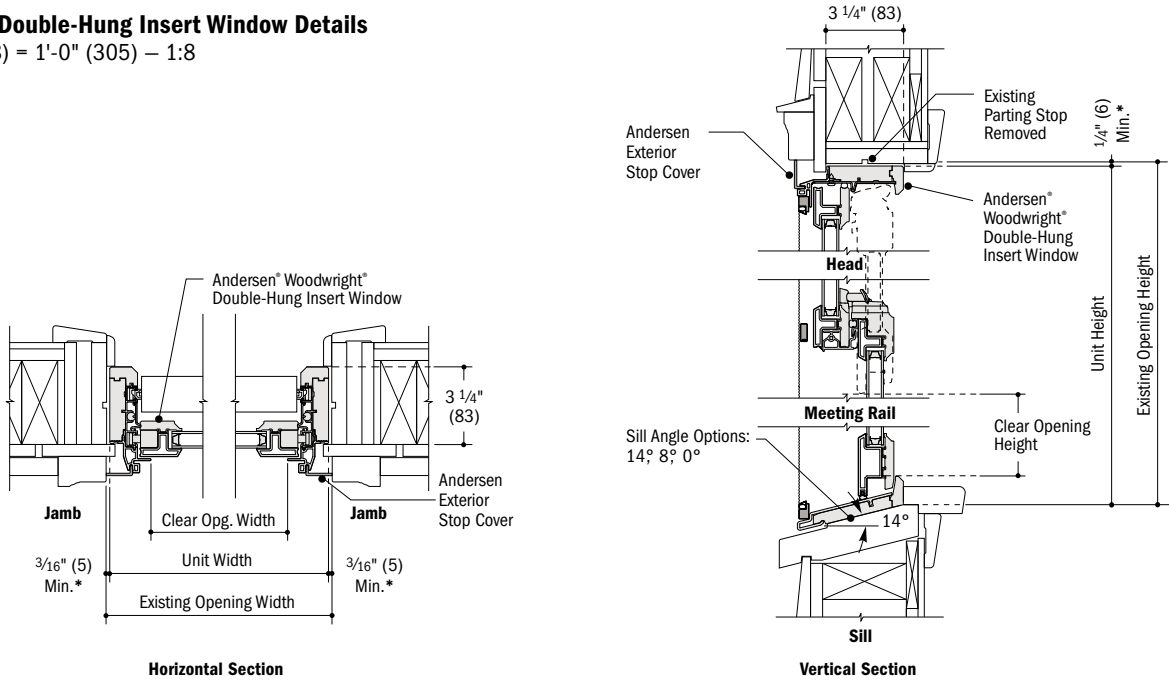
	Prairie A		6-Light Prairie		Specified Equal Light	
Woodwright® Double-Hung Insert						
	Equal	Cottage	Equal	Cottage	Equal	Cottage

	Prairie A	Specified Equal Light
Woodwright Transom Insert		
Woodwright Picture Insert		

Patterns for double-hung windows are also available in Upper Sash Only (USO) configurations. For picture window patterns that require alignment with double-hung window patterns, identify the sash style (equal, cottage or reverse cottage) when ordering. **Number of lights and overall pattern varies with window size. Patterns not available in all configurations.** For more grille options, see page 14 or visit andersenwindows.com/grilles.

Woodwright® Double-Hung Insert Window Details

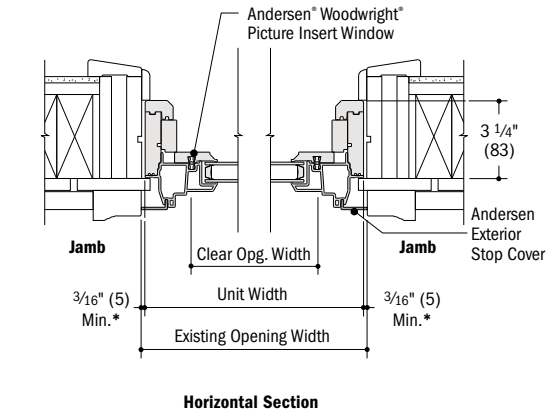
Scale 1 1/2" (38) = 1'-0" (305) – 1:8



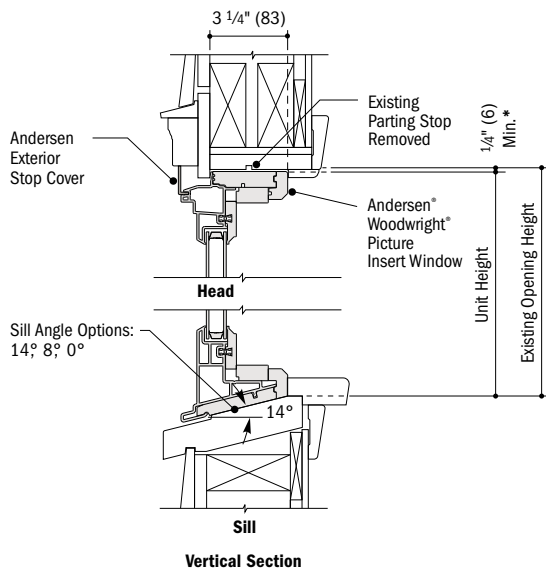
* Light-colored areas are parts included with window. Dark-colored areas are additional Andersen® parts required to complete window assembly as shown.
* Details are for illustration only and are not intended to represent product installation methods or materials. Refer to product installation guides at andersenwindows.com.
* Dimensions in parentheses are in millimeters.
* Refer to andersenwindows.com/measure for detailed instructions on how to properly measure for insert windows.

Woodwright® Picture Insert Window Details

Scale 1½" (38) = 1'-0" (305) – 1:8



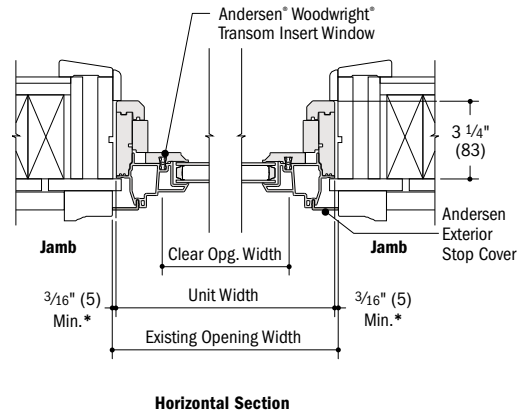
Horizontal Section



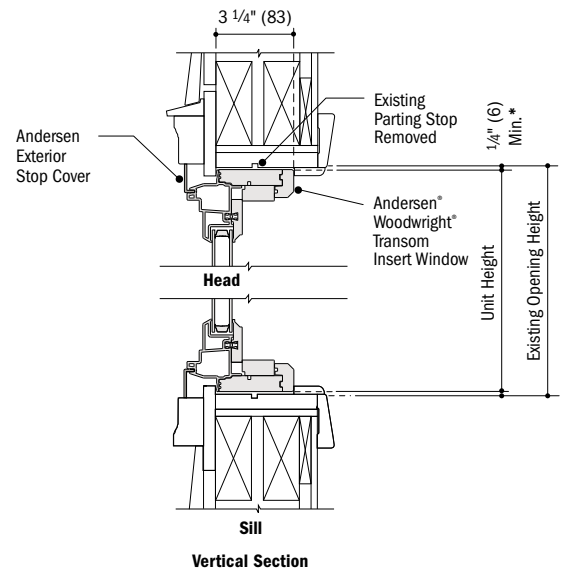
Vertical Section

Woodwright® Transom Insert Window Details

Scale 1½" (38) = 1'-0" (305) – 1:8



Horizontal Section

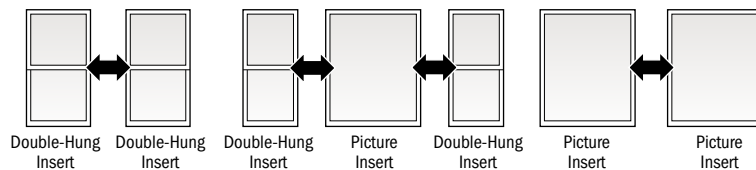
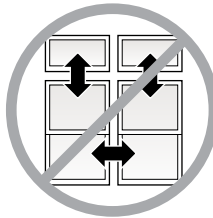
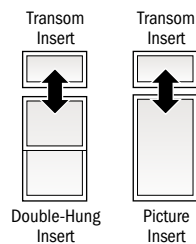


Vertical Section

Joining Combinations

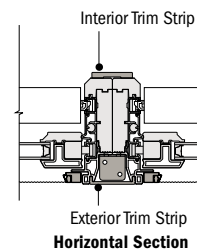
Join insert windows in one-way horizontal (stack) or vertical (ribbon) combinations.

Do not join insert windows in two-way combinations.



Vertical (ribbon) Joining Detail

Scale 1½" (38) = 1'-0" (305) – 1:8



Horizontal Section

Woodwright® Double-Hung Insert to Woodwright Double-Hung Insert

For more joining information, see the combination designs section starting on page 181.

* Light-colored areas are parts included with window. Dark-colored areas are additional Andersen® parts required to complete window assembly as shown.
 * Details are for illustration only and are not intended to represent product installation methods or materials. Refer to product installation guides at andersenwindows.com.
 * Dimensions in parentheses are in millimeters.
 * Refer to andersenwindows.com/measure for detailed instructions on how to properly measure for insert windows.

TILT-WASH DOUBLE-HUNG FULL-FRAME WINDOWS

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Grille Patterns	85
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Joining Details	86
Narroline® Conversion Kit	87
Combination Designs	181
Product Performance	197

CUSTOM SIZING
 in 1/8" (3) increments 

Dimensions in parentheses are in millimeters.

TILT-WASH DOUBLE-HUNG FULL-FRAME WINDOWS

FEATURES

FRAME

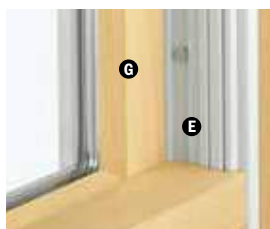
A Exterior outer frame members are covered with a Perma-Shield® rigid vinyl cladding, minimizing maintenance and providing an attractive appearance.

B For exceptional long-lasting* performance, sill members are constructed with a wood core and a Fibrex® material exterior. Sill ends are protected and sealed with weather-resistant covers.

C Natural wood stops are available in pine, and prefinished white, dark bronze and black.**

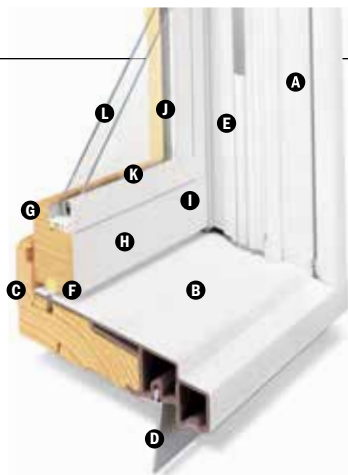
D A factory-applied rigid vinyl anchoring flange on the head, sill and sides of the outer frame helps secure the unit to the structure.

E An extruded rigid vinyl jamb liner and fin provide a protective seal against the outer frame members. Exclusive slide wash assists make it easy to tilt the sash into wash mode position.



Unique block-and-tackle balancers feature sized-to-the-unit, rust-resistant springs that require no adjustment. Glass-reinforced nylon balancer shoes provide smooth, reliable sash operation. Sash can be removed, without tools, for drywall pass-through. Jamb liners are available in white or gray, and must be specified when ordering. Contact your Andersen supplier for details.

F Weatherstrip throughout the unit provides a long-lasting, energy-efficient, weather-resistant seal. For the top and bottom rails, an encased foam material is used. The head jamb liner and sill have a rigid vinyl rib that the weatherstrip material compresses against. At the meeting rail, compressible vinyl bulb material is used. Side jamb liners use leaf-type weatherstrip with foam inserts.



SASH

Wash assists make it easy to tilt the sash into wash mode.

G Wood sash members are treated with a water-repellent preservative for long-lasting protection and performance. Interior surfaces are unfinished pine. Low-maintenance prefinished white interiors are also available.

H A polyester-stabilized coat with a Flexacron® finish is electrostatically applied to penetrate all exterior surfaces for maximum protection and a lustrous finish.

I Sash joints simulate the look of traditional mortise-and-tenon construction inside and out.

GLASS

J In addition to stainless steel glass spacers, black or white glass spacers are now available to allow the spacer to blend in with the unit color.

K Silicone bed glazing provides superior weathertightness and durability.

L High-Performance options include:

- Low-E4® glass
- Low-E4 HeatLock® glass
- Low-E4 SmartSun™ glass
- Low-E4 SmartSun HeatLock glass
- Low-E4 Sun glass

Tempered and other glass options are available. Contact your Andersen supplier.

A removable translucent film helps shield the glass from damage during delivery and construction, and simplifies finishing at the job site.

Patterned Glass

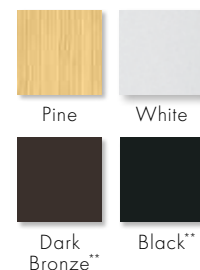
Patterned glass options are available. See page 12 for more details.

EXTERIOR & INTERIOR OPTIONS

EXTERIOR COLORS



INTERIOR OPTIONS



HARDWARE



Standard Lock & Keeper

Black | Gold Dust | **Stone** | White

Stone is standard with natural interior units. White comes with prefinished white interiors. Other finishes optional.

OPTIONAL HARDWARE Sold Separately

ESTATE™



Lock & Keeper

Antique Brass | Bright Brass
Brushed Chrome | Distressed Bronze
Distressed Nickel | Oil Rubbed Bronze
Polished Chrome | **Satin Nickel**

Optional Estate lock and keeper reduces the clear opening height by 1/16" (14). Check with local building code officials to determine compliance with egress requirements.

CONTEMPORARY



Bar Lift

Antique Brass | Black | Bright Brass
Brushed Chrome | Distressed Bronze
Distressed Nickel | Gold Dust
Oil Rubbed Bronze | Polished Chrome
Satin Nickel | Stone | White

TRADITIONAL



Bar Lift



Hand Lift

Finger Lifts

Antique Brass | Black | Bright Brass | Brushed Chrome
Distressed Bronze | Distressed Nickel | Gold Dust | **Oil Rubbed Bronze**
Polished Chrome | Satin Nickel | Stone | White

Bold name denotes finish shown.

HARDWARE FINISHES



*Visit andersenwindows.com/warranty for details.

**Products with dark bronze and black interiors have matching exteriors.

"Flexacron" is a registered trademark of PPG Industries, Inc.

Dimensions in parentheses are in millimeters.

Printing limitations prevent exact replication of colors and finishes. See your Andersen supplier for actual color and finish samples.

Naturally occurring variations in grain, color and texture of wood make each window one of a kind. All wood interiors are unfinished unless a finish is specified.

Distressed bronze and oil rubbed bronze are "living" finishes that will change with time and use.

StormWATCH[®] PROTECTION

400 Series tilt-wash double-hung full-frame windows are available with Stormwatch[®] Protection. Visit andersenwindows.com/coastal for more details.

Performance Grade (PG) Upgrades

A high inside sill stop* with exterior sill brackets and hidden interior brackets is available to provide additional structural support for tilt-wash windows, allowing standard, non-impact glass units to achieve higher performance grade ratings. Performance Grade (PG) ratings are more comprehensive than Design Pressure (DP) ratings for measuring product performance. For up-to-date performance information of individual products, please visit andersenwindows.com. Use of this option will subtract 5/8" (15) from the clear opening height. PG Upgrade not available for 72" (1829) and 76" (1930) heights. Contact your Andersen supplier for availability.

SASH OPTIONS



Cottage

Reverse Cottage

ACCESSORIES Sold Separately

FRAME

Extension Jamb



Standard jamb depth is 4 1/2" (114). Extension jambs are available in unfinished pine or prefinished white. Some sizes may be veneered.

Factory-applied and non-applied interior extension jambs are available in 1/16" (1.5) increments between 5 1/4" (133) and 7 1/8" (181). Extension jambs can be factory applied to either three sides (stool and apron application) or four sides (picture frame casing).

Pine Stool



A clear pine stool is available and ready for finishing. The tilt-wash stool is available in 4 9/16" (116) for use in wall depths up to 5 1/4" (133), and 6 9/16" (167) for use in wall depths up to 7 1/8" (181). Works with 2 1/4" (57) and 2 1/2" (64) casing widths.

HARDWARE

Window Opening Control Device



A recessed window opening control device is available factory applied. It limits the sash travel to less than 4" (102) when the window is first opened. Available in white, stone and black. A field-applied window opening control device kit is also available.

STORM/INSECT SCREEN COMBINATION UNIT**



A self-storing storm window combined with an insect screen provides greater energy efficiency, while allowing ventilation when needed.

Constructed with an aluminum frame, single-pane upper and lower glass panels, and charcoal powder-coated aluminum screen mesh. Available in white, Sandtone and Terratone to match product exteriors. Canvas, dark bronze, forest green and black are available by special order.

Combination units can improve Sound Transmission Class (STC) and Outdoor Indoor Transmission Class (OITC) ratings. Ideal for projects near airports, busy roadways or other noisy environments. For example, adding a combination unit to a 400 Series tilt-wash double-hung (3862) unit with Low-E4[®] glass will improve its STC rating from 26 to 32. Contact your Andersen supplier for additional STC and OITC rating information.

GLASS

Andersen[®] Art Glass

Available for 400 Series tilt-wash transom and picture units. Andersen art glass panels come in a variety of original patterns. See art glass section starting on page 173 for more information or visit andersenwindows.com/artglass.

INSECT SCREENS

Insect Screen Frames



Full and half insect screens are available for most unit sizes. Frame colors match product exteriors. Half insect screen (shown above) allows ventilation without affecting the view through the upper sash. Not available on windows with Stormwatch Protection.

TruScene[®] Insect Screens

Andersen TruScene insect screens let in over 25% more fresh air† and provide 50% greater clarity than conventional Andersen insect screens, all while keeping out unwanted small insects.

Conventional Insect Screens

Conventional insect screens have charcoal powder-coated aluminum screen mesh.

GRILLES

Grilles are available in a variety of configurations and widths. For double-hung grille patterns, see page 85.

EXTERIOR TRIM

Available with Andersen exterior trim. See exterior trim section starting on page 175.

CAUTION:

- Painting and staining may cause damage to rigid vinyl.
- 400 Series windows in Terratone color may be painted any color lighter than Terratone color using quality oil-based or latex paint.
- Do not paint 400 Series windows in white, canvas, Sandtone, dark bronze, forest green or black exterior colors.
- Andersen does not warrant the adhesion or performance of homeowner-applied paint over vinyl or other factory-coated surfaces.
- For vinyl painting instructions and preparation, contact your Andersen supplier.
- Do not paint weatherstrip.
- Creosote-based stains should not come in contact with Andersen products.
- Abrasive cleaners or solutions containing corrosive solvents should not be used on Andersen products.

*Infringes on the overall net clear opening. Unit clear operable area may not meet egress requirements. See your local building code official for more information.

**Do not add combination units to windows with Low-E4 Sun glass unless window glass is tempered. Combination units may also reduce the overall clear operable area of the window. See your local code official for egress requirements in your area.

†TruScene insect screens let in over 25% more fresh air than standard Andersen fiberglass insect screens.

Dimensions in parentheses are in millimeters.

TILT-WASH DOUBLE-HUNG FULL-FRAME WINDOWS

Table of Tilt-Wash Double-Hung Window Sizes

Scale 1/8" (3) = 1'-0" (305) – 1:96

Window Dimension	1'-9 5/8"	2'-1 5/8"	2'-5 5/8"	2'-7 5/8"	2'-9 5/8"	2'-11 5/8"	3'-1 5/8"	3'-5 5/8"	3'-9 5/8"
	(549)	(651)	(752)	(803)	(854)	(905)	(956)	(1057)	(1159)
Minimum Rough Opening	1'-10 1/8"	2'-2 1/8"	2'-6 1/8"	2'-8 1/8"	2'-10 1/8"	3'-0 1/8"	3'-2 1/8"	3'-6 1/8"	3'-10 1/8"
	(562)	(664)	(765)	(816)	(867)	(917)	(968)	(1070)	(1172)
Unobstructed Glass (lower sash only)	15"	19"	23"	25"	27"	29"	31"	35"	39"
	(381)	(483)	(584)	(635)	(686)	(737)	(787)	(889)	(991)

CUSTOM WIDTHS – 21 5/8" to 45 5/8"

CUSTOM HEIGHTS – 36 7/8" to 92 7/8"									
3'-0 7/8"	TW18210	TW20210	TW24210	TW26210	TW28210	TW210210	TW30210	TW34210	TW38210
3'-4 7/8"	TW1832	TW2032	TW2432	TW2632	TW2832	TW21032	TW3032	TW3432	TW3832
3'-8 7/8"	TW1836	TW2036	TW2436	TW2636	TW2836	TW21036	TW3036	TW3436	TW3836
4'-0 7/8"	TW18310	TW20310	TW24310	TW26310	TW28310	TW210310	TW30310	TW34310	TW38310
4'-4 7/8"	TW1842	TW2042	TW2442	TW2642	TW2842	TW21042	TW3042	TW3442	TW3842
4'-8 7/8"	TW1846	TW2046	TW2446	TW2646	TW2846	TW21046	TW3046 ^o	TW3446 ^o	TW3846 ^o
5'-0 7/8"	TW18410	TW20410	TW24410	TW26410	TW28410	TW210410 ^o	TW30410 ^o	TW34410 ^o	TW38410 ^o
5'-4 7/8"	TW1852	TW2052	TW2452	TW2652	TW2852 ^o	TW21052 ^o	TW3052 ^o	TW3452 ^o	TW3852 ^o
5'-8 7/8"	TW1856	TW2056	TW2456	TW2656 ^o	TW2856 ^o	TW21056 ^o	TW3056 ^o	TW3456 ^o	TW3856 ^o
6'-0 7/8"	TW18510	TW20510	TW24510 ^o	TW26510 ^o	TW28510 ^o	TW210510 ^o	TW30510 ^o	TW34510 ^o	TW38510 ^o
6'-4 7/8"	TW1862	TW2062	TW2462 ^o	TW2662 ^o	TW2862 ^o	TW21062 ^o	TW3062 ^o	TW3462 ^o	TW3862 ^o



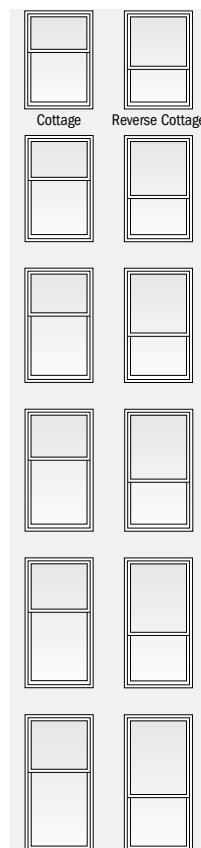
Custom-size windows are available in 1/8" (3) increments. See page 84 for custom sizing.

Grille patterns shown on page 85.

Cottage or reverse cottage sash ratio available for heights shown below in all widths.

CUSTOM WIDTHS – 21 5/8" to 45 5/8"

CUSTOM HEIGHTS – 48 1/8" to 76 1/8"



Size tables for windows with cottage or reverse cottage sash are available at andersenwindows.com/sizing.

- "Window Dimension" always refers to outside frame-to-frame dimension.
- "Minimum Rough Opening" dimensions may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See pages 210-211 for more details.
- Dimensions in parentheses are in millimeters.
- Meet or exceed clear opening area of 5.7 sq. ft. or 0.53 m²; clear opening width of 20" (508) and clear opening height of 24" (610). See tables on pages 82-83.

continued on next page

Table of Tilt-Wash Double-Hung Window Sizes *(continued)*

Scale 1/8" (3) = 1'-0" (305) – 1:96

Window Dimension	1'-9 5/8" (549)	2'-1 5/8" (651)	2'-5 5/8" (752)	2'-7 5/8" (803)	2'-9 5/8" (854)	2'-11 5/8" (905)	3'-1 5/8" (956)	3'-5 5/8" (1057)	3'-9 5/8" (1159)
Minimum Rough Opening	1'-10 1/8" (562)	2'-2 1/8" (664)	2'-6 1/8" (765)	2'-8 1/8" (816)	2'-10 1/8" (867)	3'-0 1/8" (917)	3'-2 1/8" (968)	3'-6 1/8" (1070)	3'-10 1/8" (1172)
Unobstructed Glass (lower sash only)	15" (381)	19" (483)	23" (584)	25" (635)	27" (686)	29" (737)	31" (787)	35" (889)	39" (991)
CUSTOM WIDTHS – 21 5/8" to 45 5/8"									
CUSTOM HEIGHTS – 36 7/8" to 92 7/8"	7'-4 7/8" (2257)	7'-4 7/8" (2257)	39 15/16" (1014)						
	7'-8 7/8" (2359)	7'-8 7/8" (2359)	41 15/16" (1065)						
	TW1872	TW2072 ^o	TW2472 ^o	TW2672 ^o	TW2872 ^o	TW21072 ^o	TW3072 ^o	TW3472 ^o	TW3872 ^o
	TW1876	TW2076 ^o	TW2476 ^o	TW2676 ^o	TW2876 ^o	TW21076 ^o	TW3076 ^o	TW3476 ^o	TW3876 ^o

* "Window Dimension" always refers to outside frame-to-frame dimension.

* "Minimum Rough Opening" dimensions may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items.

See pages 210-211 for more details.

* Dimensions in parentheses are in millimeters.

^o Meet or exceed clear opening area of 5.7 sq. ft. or 0.53 m², clear opening width of 20" (508) and clear opening height of 24" (610). See tables on pages 82-83.


Custom-size windows are available in 1/8" (3) increments. See page 84 for custom sizing.

Windows 7'-4 7/8" (2257) and 7'-8 7/8" (2359) high have interior and exterior brackets. Interior brackets, located on both sides of the meeting rail, must be flipped up for proper product performance. Andersen® reinforced joining materials must be used when vertically joining 7'-4 7/8" (2257) and 7'-8 7/8" (2359) height windows.

Grille patterns shown on page 85.

Tilt-Wash Transom Window Area Specifications

Window Number	Glass Area Sq. Ft./ (m ²)	Overall Window Area Sq. Ft./ (m ²)
TWT1810	0.56 (0.05)	1.80 (0.17)
TWT1815	1.32 (0.12)	2.90 (0.27)
TWT1817	1.52 (0.14)	3.20 (0.30)
TWT18111	1.94 (0.18)	3.80 (0.35)
TWT1821	2.15 (0.20)	4.10 (0.38)
TWT1823	2.35 (0.22)	4.40 (0.41)
TWT1827	2.77 (0.26)	5.00 (0.47)
TWT1831	3.39 (0.32)	5.90 (0.55)
TWT2010	0.70 (0.07)	2.14 (0.20)
TWT2015	1.67 (0.16)	3.44 (0.32)
TWT2017	1.93 (0.18)	3.79 (0.35)
TWT20111	2.46 (0.23)	4.50 (0.42)
TWT2021	2.72 (0.25)	4.86 (0.45)
TWT2023	2.98 (0.28)	5.22 (0.49)
TWT2027	3.51 (0.33)	5.93 (0.55)
TWT2031	4.30 (0.40)	7.00 (0.65)
TWT2410	0.85 (0.08)	2.47 (0.23)
TWT2415	2.02 (0.19)	3.97 (0.37)
TWT2417	2.34 (0.22)	4.38 (0.41)
TWT24111	2.98 (0.28)	5.21 (0.48)
TWT2421	3.29 (0.31)	5.62 (0.52)
TWT2423	3.61 (0.34)	6.03 (0.56)
TWT2427	4.25 (0.40)	6.85 (0.64)
TWT2431	5.21 (0.48)	8.09 (0.75)
TWT2610	0.93 (0.09)	2.64 (0.25)
TWT2615	2.19 (0.20)	4.24 (0.39)
TWT2617	2.54 (0.24)	4.68 (0.44)

Window Number	Glass Area Sq. Ft./ (m ²)	Overall Window Area Sq. Ft./ (m ²)
TWT26111	3.23 (0.30)	5.56 (0.52)
TWT2621	3.58 (0.33)	6.00 (0.56)
TWT2623	3.93 (0.37)	6.44 (0.60)
TWT2627	4.62 (0.43)	7.32 (0.68)
TWT2631	5.66 (0.53)	8.63 (0.80)
TWT2810	1.00 (0.09)	2.80 (0.26)
TWT2815	2.37 (0.22)	4.51 (0.42)
TWT2817	2.74 (0.26)	4.98 (0.46)
TWT28111	3.49 (0.32)	5.91 (0.55)
TWT2821	3.87 (0.36)	6.38 (0.59)
TWT2823	4.24 (0.39)	6.84 (0.64)
TWT2827	4.99 (0.46)	7.78 (0.72)
TWT2831	6.12 (0.57)	9.18 (0.85)
TWT21010	1.07 (0.10)	2.97 (0.28)
TWT21015	2.55 (0.24)	4.78 (0.44)
TWT21017	2.95 (0.27)	5.27 (0.49)
TWT210111	3.75 (0.35)	6.26 (0.58)
TWT21021	4.15 (0.39)	6.76 (0.63)
TWT21023	4.56 (0.42)	7.25 (0.67)
TWT21027	5.36 (0.50)	8.24 (0.77)
TWT21031	6.57 (0.61)	9.73 (0.90)
TWT3010	1.15 (0.11)	3.14 (0.29)
TWT3015	2.72 (0.25)	5.05 (0.47)
TWT3017	3.15 (0.29)	5.57 (0.52)
TWT30111	4.01 (0.37)	6.61 (0.61)
TWT3021	4.44 (0.41)	7.14 (0.66)
TWT3023	4.87 (0.45)	7.66 (0.71)

Window Number	Glass Area Sq. Ft./ (m ²)	Overall Window Area Sq. Ft./ (m ²)
TWT3027	5.73 (0.53)	8.70 (0.81)
TWT3031	7.02 (0.65)	10.27 (0.95)
TWT3410	1.30 (0.12)	3.47 (0.32)
TWT3415	3.07 (0.29)	5.58 (0.52)
TWT3417	3.56 (0.33)	6.16 (0.57)
TWT34111	4.53 (0.42)	7.32 (0.68)
TWT3421	5.02 (0.47)	7.89 (0.73)
TWT3423	5.50 (0.51)	8.47 (0.79)
TWT3427	6.47 (0.60)	9.63 (0.90)
TWT3431	7.93 (0.74)	11.36 (1.06)
TWT3810	1.45 (0.14)	3.80 (0.35)
TWT3815	3.42 (0.32)	6.12 (0.57)
TWT3817	3.97 (0.37)	6.75 (0.63)
TWT38111	5.05 (0.47)	8.02 (0.75)
TWT3821	5.59 (0.52)	8.65 (0.80)
TWT3823	6.13 (0.57)	9.29 (0.86)
TWT3827	7.21 (0.67)	10.55 (0.98)
TWT3831	8.84 (0.82)	12.46 (1.16)
TWT31010	1.51 (0.14)	3.94 (0.37)
TWT4210	1.66 (0.15)	4.28 (0.40)
TWT41010	1.95 (0.18)	4.94 (0.46)
TWT5610	2.25 (0.21)	5.61 (0.52)
TWT6210	2.55 (0.24)	6.28 (0.58)

* Dimensions in parentheses are in square meters.

TILT-WASH DOUBLE-HUNG FULL-FRAME WINDOWS

Table of Tilt-Wash Transom Window Sizes

Scale 1/8" = 1'-0" (1:96)

Window Dimension	1'-9 5/8"	2'-1 5/8"	2'-5 5/8"	2'-7 5/8"	2'-9 5/8"	2'-11 5/8"	3'-1 5/8"	3'-5 5/8"	3'-9 5/8"	3'-11 5/16"	4'-3 5/16"
Minimum Rough Opening	1'-10 1/8" (562)	2'-2 1/8" (664)	2'-6 1/8" (765)	2'-8 1/8" (816)	2'-10 1/8" (867)	3'-0 1/8" (917)	3'-2 1/8" (968)	3'-6 1/8" (1070)	3'-10 1/8" (1172)	3'-11 7/8" (1215)	4'-3 7/8" (1318)
Unobstructed Glass	15" (380)	19" (482)	23" (583)	25" (635)	27" (685)	29" (737)	31" (787)	35" (888)	39" (990)	40 11/16" (1033)	44 11/16" (1135)

CUSTOM WIDTHS — 21 5/8" to 75 5/16"

CUSTOM HEIGHTS — 12" to 39 5/16"	1'-0"	1'-7 5/16"	1'-9 5/16"	2'-1 5/16"	2'-3 5/16"	2'-5 5/16"	2'-9 5/16"	3'-3 5/16"
	(305) (541) (541) (643) (694) (745) (846) (999)	(491) (541) (555) (657) (707) (758) (860) (1012)	(318) (504) (555) (657) (707) (758) (860) (1012)	(136) (321) (372) (474) (525) (575) (677) (829)				
	TWT1810	TWT1815	TWT1817	TWT18111	TWT1821	TWT1823	TWT1827	TWT1831
	TWT2010	TWT2015	TWT2017	TWT20111	TWT2021	TWT2023	TWT2027	TWT2031
	TWT2410	TWT2415	TWT2417	TWT24111	TWT2421	TWT2423	TWT2427	TWT2431
	TWT2610	TWT2615	TWT2617	TWT26111	TWT2621	TWT2623	TWT2627	TWT2631
	TWT2810	TWT2815	TWT2817	TWT28111	TWT2821	TWT2823	TWT2827	TWT2831
	TWT21010	TWT21015	TWT21017	TWT210111	TWT21021	TWT21023	TWT21027	TWT21031
	TWT3010	TWT3015	TWT3017	TWT30111	TWT3021	TWT3023	TWT3027	TWT3031
	TWT3410	TWT3415	TWT3417	TWT34111	TWT3421	TWT3423	TWT3427	TWT3431
	TWT3810	TWT3815	TWT3817	TWT38111	TWT3821	TWT3823	TWT3827	TWT3831
	TWT31010							
	TWT4210							



Custom-size windows are available in 1/8" (3) increments. See page 84 for custom sizing.

Grille patterns shown on page 85.

* "Window Dimension" always refers to outside frame-to-frame dimension.

* "Minimum Rough Opening" dimensions may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See pages 210-211 for more details.

* Dimensions in parentheses are in millimeters.

Tilt-Wash Picture Window Area Specifications

Window Number	Glass Area Sq. Ft./ (m ²)	Overall Window Area Sq. Ft./ (m ²)
DHP10310	2.03 (0.19)	4.07 (0.38)
DHP1042	2.22 (0.21)	4.41 (0.41)
DHP1046	2.42 (0.23)	4.74 (0.44)
DHP10410	2.61 (0.24)	5.07 (0.47)
DHP1052	2.81 (0.26)	5.41 (0.50)
DHP1056	3.01 (0.28)	5.74 (0.53)
DHP10510	3.20 (0.30)	6.07 (0.56)
DHP1062	3.40 (0.32)	6.41 (0.60)
DHP30310	9.38 (0.87)	12.77 (1.19)
DHP3042	10.29 (0.96)	13.82 (1.28)
DHP3046	11.19 (1.04)	14.86 (1.38)
DHP30410	12.10 (1.12)	15.91 (1.48)
DHP3052	13.01 (1.21)	16.95 (1.58)
DHP3056	13.92 (1.29)	18.00 (1.67)
DHP30510	14.83 (1.38)	19.04 (1.77)
DHP3062	15.73 (1.46)	20.09 (1.87)
DHP34310	10.53 (0.98)	14.13 (1.31)
DHP3442	11.54 (1.07)	15.28 (1.42)
DHP3446	12.56 (1.17)	16.44 (1.53)

Window Number	Glass Area Sq. Ft./ (m ²)	Overall Window Area Sq. Ft./ (m ²)
DHP34410	13.58 (1.26)	17.60 (1.64)
DHP3452	14.60 (1.36)	18.75 (1.74)
DHP3456	15.62 (1.45)	19.91 (1.85)
DHP34510	16.64 (1.55)	21.07 (1.96)
DHP3462	17.66 (1.64)	22.22 (2.06)
DHP310310	12.16 (1.13)	16.06 (1.49)
DHP31042	13.33 (1.24)	17.37 (1.61)
DHP31046	14.51 (1.35)	18.69 (1.74)
DHP310410	15.69 (1.46)	20.00 (1.86)
DHP31052	16.87 (1.57)	21.32 (1.98)
DHP31056	18.04 (1.68)	22.63 (2.10)
DHP310510	19.22 (1.79)	23.94 (2.22)
DHP31062	20.40 (1.90)	25.26 (2.35)
DHP42310	13.30 (1.24)	17.42 (1.62)
DHP4242	14.56 (1.35)	18.83 (1.75)
DHP4246	15.88 (1.48)	20.27 (1.88)
DHP42410	17.17 (1.60)	21.69 (2.02)
DHP4252	18.46 (1.72)	23.12 (2.15)
DHP4256	19.75 (1.84)	24.54 (2.28)

Window Number	Glass Area Sq. Ft./ (m ²)	Overall Window Area Sq. Ft./ (m ²)
DHP42510	21.03 (1.95)	25.97 (2.41)
DHP4262	22.32 (2.07)	27.39 (2.55)
DHP410310	15.60 (1.45)	20.13 (1.87)
DHP41042	17.11 (1.59)	21.78 (2.02)
DHP41046	18.62 (1.73)	23.43 (2.18)
DHP410410	20.13 (1.87)	25.07 (2.33)
DHP41052	21.64 (2.01)	26.72 (2.48)
DHP41056	23.15 (2.15)	28.37 (2.64)
DHP410510	24.66 (2.29)	30.02 (2.79)
DHP41062	26.17 (2.43)	31.66 (2.94)
DHP56310	17.89 (1.66)	22.85 (2.12)
DHP5642	19.63 (1.82)	24.72 (2.30)
DHP5646	21.36 (1.98)	26.59 (2.47)
DHP56410	23.09 (2.15)	28.46 (2.64)
DHP5652	24.83 (2.31)	30.33 (2.82)
DHP5656	26.56 (2.47)	32.20 (2.99)
DHP56510	28.29 (2.63)	34.07 (3.17)
DHP5662	30.02 (2.79)	35.93 (3.34)

* Dimensions in parentheses are in square meters.

4'-11 5/16" (1057)	5'-7 5/16" (1710)	6'-3 5/16" (1913)
4'-11 7/8" (1070)	5'-7 7/8" (1724)	6'-3 7/8" (1927)
52 11/16" (905)	60 11/16" (1556)	68 11/16" (1745)

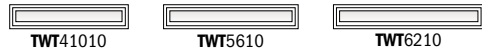


Table of Tilt-Wash Picture Window Sizes

Scale 1/8" (3) = 1'-0" (305) – 1:96

Window Dimension	1'-0" (305)	3'-1 5/8" (956)	3'-5 5/8" (1057)	3'-11 5/16" (1202)	4'-3 5/16" (1303)	4'-11 5/16" (1507)	5'-7 5/16" (1710)
Minimum Rough Opening	1'-0 1/2" (318)	3'-2 1/8" (968)	3'-6 1/8" (1070)	3'-11 7/8" (1216)	4'-3 7/8" (1318)	4'-11 7/8" (1521)	5'-7 7/8" (1724)
Unobstructed Glass	7 1/16" (179)	32 11/16" (830)	36 11/16" (932)	42 3/8" (1076)	46 3/8" (1178)	54 3/8" (1381)	62 3/8" (1584)

4'-0 7/8" (1241)	DHP10310	DHP30310	DHP34310	DHP310310	DHP42310	DHP410310	DHP56310
4'-4 7/8" (1343)	DHP1042	DHP3042	DHP3442	DHP31042	DHP4242	DHP41042	DHP5642
4'-8 7/8" (1445)	DHP1046	DHP3046	DHP3446	DHP31046	DHP4246	DHP41046	DHP5646
5'-0 7/8" (1547)	DHP10410	DHP30410	DHP34410	DHP310410	DHP42410	DHP410410	DHP56410
5'-4 7/8" (1648)	DHP1052	DHP3052	DHP3452	DHP31052	DHP4252	DHP41052	DHP5652
5'-8 7/8" (1749)	DHP1056	DHP3056	DHP3456	DHP31056	DHP4256	DHP41056	DHP5656
6'-0 7/8" (1851)	DHP10510	DHP30510	DHP34510	DHP310510	DHP42510	DHP410510	DHP56510
6'-4 7/8" (1953)	DHP1062	DHP3062	DHP3462	DHP31062	DHP4262	DHP41062	DHP5662



Custom-size windows are available in 1/8" (3) increments. See page 84 for custom sizing.

Grille patterns shown on page 85.

• "Window Dimension" always refers to outside frame-to-frame dimension.
• "Minimum Rough Opening" dimensions may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See pages 210-211 for more details.
• Dimensions in parentheses are in millimeters.

TILT-WASH DOUBLE-HUNG FULL-FRAME WINDOWS

Tilt-Wash Double-Hung Window Opening and Area Specifications

Window Number	Clear Opening Area Sq. Ft./ (m ²)	Clear Opening in Full Open Position		Glass Area Sq. Ft./ (m ²)	Vent Area Sq. Ft./ (m ²)	Top of Subfloor to Top of Inside Sill Stop Inches/(mm)	Overall Window Area Sq. Ft./ (m ²)
		Width Inches/(mm)	Height Inches/(mm)				
TW18210	1.77 (0.16)	17 7/8" (454)	14 1/4" (362)	2.90 (0.27)	1.78 (0.17)	48 1/2" (1231)	5.53 (0.51)
TW1832	2.02 (0.19)	17 7/8" (454)	16 1/4" (412)	3.32 (0.31)	2.03 (0.19)	44 1/2" (1130)	6.14 (0.57)
TW1836	2.26 (0.21)	17 7/8" (454)	18 1/4" (463)	3.74 (0.35)	2.28 (0.21)	40 1/2" (1028)	6.74 (0.63)
TW18310	2.51 (0.23)	17 7/8" (454)	20 1/4" (514)	4.15 (0.39)	2.53 (0.24)	36 1/2" (926)	7.34 (0.68)
TW1842	2.76 (0.26)	17 7/8" (454)	22 1/4" (565)	4.57 (0.43)	2.78 (0.26)	32 1/2" (825)	7.94 (0.74)
TW1846	3.07 (0.29)	17 7/8" (454)	24 1/4" (628)	4.98 (0.46)	3.03 (0.28)	28 1/2" (711)	8.54 (0.79)
TW18410	3.26 (0.30)	17 7/8" (454)	26 1/4" (666)	5.40 (0.50)	3.27 (0.30)	24 1/2" (622)	9.14 (0.85)
TW1852	3.51 (0.33)	17 7/8" (454)	28 1/4" (717)	5.81 (0.54)	3.52 (0.33)	20 1/2" (520)	9.74 (0.91)
TW1856	3.75 (0.35)	17 7/8" (454)	30 1/4" (768)	6.23 (0.58)	3.77 (0.35)	16 1/2" (418)	10.34 (0.96)
TW18510	4.00 (0.37)	17 7/8" (454)	32 1/4" (819)	6.65 (0.62)	4.02 (0.37)	12 1/2" (317)	10.94 (1.02)
TW1862	4.12 (0.38)	17 7/8" (454)	33 1/4" (843)	7.06 (0.66)	4.24 (0.39)	8 1/2" (203)	11.54 (1.07)
TW1872	5.00 (0.46)	17 7/8" (454)	40 1/4" (1022)	8.32 (0.77)	5.03 (0.47)	10 1/4" * (260)*	13.35 (1.24)
TW1876	5.24 (0.49)	17 7/8" (454)	42 1/4" (1073)	8.74 (0.81)	5.27 (0.49)	6 1/4" * (159)*	13.95 (1.30)
TW20210	2.16 (0.20)	21 7/8" (556)	14 1/4" (362)	3.68 (0.34)	2.18 (0.20)	48 1/2" (1231)	6.56 (0.61)
TW2032	2.47 (0.23)	21 7/8" (556)	16 1/4" (412)	4.21 (0.39)	2.48 (0.23)	44 1/2" (1130)	7.27 (0.68)
TW2036	2.77 (0.26)	21 7/8" (556)	18 1/4" (463)	4.73 (0.44)	2.79 (0.26)	40 1/2" (1028)	7.98 (0.74)
TW20310	3.07 (0.29)	21 7/8" (556)	20 1/4" (514)	5.26 (0.49)	3.09 (0.29)	36 1/2" (926)	8.69 (0.81)
TW2042	3.38 (0.31)	21 7/8" (556)	22 1/4" (565)	5.79 (0.54)	3.40 (0.32)	32 1/2" (825)	9.41 (0.87)
TW2046	3.76 (0.35)	21 7/8" (556)	24 1/4" (628)	6.31 (0.59)	3.71 (0.34)	28 1/2" (711)	10.12 (0.94)
TW20410	3.99 (0.37)	21 7/8" (556)	26 1/4" (666)	6.84 (0.64)	4.00 (0.37)	24 1/2" (622)	10.83 (1.01)
TW2052	4.29 (0.40)	21 7/8" (556)	28 1/4" (717)	7.37 (0.69)	4.31 (0.40)	20 1/2" (520)	11.54 (1.07)
TW2056	4.59 (0.43)	21 7/8" (556)	30 1/4" (768)	7.89 (0.73)	4.61 (0.43)	16 1/2" (418)	12.25 (1.14)
TW20510	4.90 (0.46)	21 7/8" (556)	32 1/4" (819)	8.42 (0.78)	4.92 (0.46)	12 1/2" (317)	12.96 (1.20)
TW2062	5.04 (0.47)	21 7/8" (556)	33 1/4" (843)	8.95 (0.83)	5.18 (0.48)	8 1/2" (203)	13.68 (1.27)
TW2072 ◊	6.11 (0.57)	21 7/8" (556)	40 1/4" (1022)	10.54 (0.98)	6.14 (0.57)	10 1/4" * (260)*	15.82 (1.47)
TW2076 ◊	6.42 (0.60)	21 7/8" (556)	42 1/4" (1073)	11.06 (1.03)	6.45 (0.60)	6 1/4" * (159)*	16.53 (1.54)
TW24210	2.56 (0.24)	25 7/8" (657)	14 1/4" (362)	4.46 (0.41)	2.58 (0.24)	48 1/2" (1231)	7.58 (0.70)
TW2432	2.92 (0.27)	25 7/8" (657)	16 1/4" (412)	5.09 (0.47)	2.94 (0.27)	44 1/2" (1130)	8.40 (0.78)
TW2436	3.28 (0.31)	25 7/8" (657)	18 1/4" (463)	5.73 (0.53)	3.30 (0.31)	40 1/2" (1028)	9.23 (0.86)
TW24310	3.64 (0.34)	25 7/8" (657)	20 1/4" (514)	6.37 (0.59)	3.66 (0.34)	36 1/2" (926)	10.05 (0.93)
TW2442	4.00 (0.37)	25 7/8" (657)	22 1/4" (565)	7.01 (0.65)	4.02 (0.37)	32 1/2" (825)	10.87 (1.01)
TW2446	4.44 (0.41)	25 7/8" (657)	24 1/4" (628)	7.65 (0.71)	4.39 (0.41)	28 1/2" (711)	11.70 (1.09)
TW24410	4.71 (0.44)	25 7/8" (657)	26 1/4" (666)	8.28 (0.77)	4.74 (0.44)	24 1/2" (622)	12.52 (1.16)
TW2452	5.07 (0.47)	25 7/8" (657)	28 1/4" (717)	8.92 (0.83)	5.10 (0.47)	20 1/2" (520)	13.34 (1.24)
TW2456	5.43 (0.51)	25 7/8" (657)	30 1/4" (768)	9.56 (0.89)	5.46 (0.51)	16 1/2" (418)	14.17 (1.32)
TW24510 ◊	5.79 (0.54)	25 7/8" (657)	32 1/4" (819)	10.20 (0.95)	5.81 (0.54)	12 1/2" (317)	14.99 (1.39)
TW2462 ◊	5.97 (0.55)	25 7/8" (657)	33 1/4" (843)	10.84 (1.01)	6.13 (0.57)	8 1/2" (203)	15.81 (1.47)
TW2472 ◊	7.23 (0.67)	25 7/8" (657)	40 1/4" (1022)	12.76 (1.19)	7.26 (0.68)	10 1/4" * (260)*	18.28 (1.70)
TW2476 ◊	7.59 (0.71)	25 7/8" (657)	42 1/4" (1073)	13.40 (1.25)	7.62 (0.71)	6 1/4" * (159)*	19.11 (1.78)
TW26210	2.76 (0.26)	27 7/8" (708)	14 1/4" (362)	4.84 (0.45)	2.78 (0.26)	48 1/2" (1231)	8.09 (0.75)
TW2632	3.14 (0.29)	27 7/8" (708)	16 1/4" (412)	5.54 (0.52)	3.17 (0.30)	44 1/2" (1130)	8.97 (0.83)
TW2636	3.53 (0.33)	27 7/8" (708)	18 1/4" (463)	6.23 (0.58)	3.55 (0.33)	40 1/2" (1028)	9.85 (0.92)
TW26310	3.92 (0.36)	27 7/8" (708)	20 1/4" (514)	6.92 (0.64)	3.94 (0.37)	36 1/2" (926)	10.73 (1.00)
TW2642	4.30 (0.40)	27 7/8" (708)	22 1/4" (565)	7.62 (0.71)	4.33 (0.40)	32 1/2" (825)	11.61 (1.08)
TW2646	4.79 (0.44)	27 7/8" (708)	24 1/4" (628)	8.31 (0.77)	4.73 (0.44)	28 1/2" (711)	12.49 (1.16)
TW26410	5.08 (0.47)	27 7/8" (708)	26 1/4" (666)	9.01 (0.84)	5.10 (0.47)	24 1/2" (622)	13.36 (1.24)
TW2652	5.47 (0.51)	27 7/8" (708)	28 1/4" (717)	9.70 (0.90)	5.49 (0.51)	20 1/2" (520)	14.24 (1.32)
TW2656 ◊	5.85 (0.54)	27 7/8" (708)	30 1/4" (768)	10.39 (0.96)	5.88 (0.55)	16 1/2" (418)	15.12 (1.41)
TW26510 ◊	6.24 (0.58)	27 7/8" (708)	32 1/4" (819)	11.09 (1.03)	6.26 (0.58)	12 1/2" (317)	16.00 (1.49)
TW2662 ◊	6.43 (0.60)	27 7/8" (708)	33 1/4" (843)	11.78 (1.09)	6.61 (0.61)	8 1/2" (203)	16.88 (1.57)
TW2672 ◊	7.79 (0.72)	27 7/8" (708)	40 1/4" (1022)	13.86 (1.29)	7.82 (0.73)	10 1/4" * (260)*	19.52 (1.81)
TW2676 ◊	8.18 (0.76)	27 7/8" (708)	42 1/4" (1073)	14.56 (1.35)	8.21 (0.76)	6 1/4" * (159)*	20.40 (1.89)
TW28210	2.95 (0.27)	29 7/8" (759)	14 1/4" (362)	5.23 (0.49)	2.98 (0.28)	48 1/2" (1231)	8.61 (0.80)
TW2832	3.37 (0.31)	29 7/8" (759)	16 1/4" (412)	5.98 (0.56)	3.39 (0.32)	44 1/2" (1130)	9.54 (0.89)
TW2836	3.78 (0.35)	29 7/8" (759)	18 1/4" (463)	6.73 (0.63)	3.81 (0.35)	40 1/2" (1028)	10.47 (0.97)
TW28310	4.20 (0.39)	29 7/8" (759)	20 1/4" (514)	7.48 (0.70)	4.22 (0.39)	36 1/2" (926)	11.41 (1.06)
TW2842	4.61 (0.43)	29 7/8" (759)	22 1/4" (565)	8.23 (0.77)	4.64 (0.43)	32 1/2" (825)	12.34 (1.15)
TW2846	5.13 (0.48)	29 7/8" (759)	24 1/4" (628)	8.98 (0.83)	5.07 (0.47)	28 1/2" (711)	13.28 (1.23)
TW28410	5.44 (0.51)	29 7/8" (759)	26 1/4" (666)	9.73 (0.90)	5.47 (0.51)	24 1/2" (622)	14.21 (1.32)
TW2852 ◊	5.86 (0.54)	29 7/8" (759)	28 1/4" (717)	10.48 (0.97)	5.88 (0.55)	20 1/2" (520)	15.14 (1.41)

Opening calculations change when using PG Upgrade sill stop.

For opening specifications for windows with Stormwatch® Protection, visit andersenwindows.com/openingspecs.

For cottage and reverse cottage sash opening specifications, visit andersenwindows.com/openingspecs.

* "Top of Subfloor to Top of Inside Sill Stop" is calculated based upon a structural header height of 6'-10 1/2" (2096) except for 7'-5" and 7'-9" heights which are calculated using a header height of 8" (2438).
 • Dimensions in parentheses are in millimeters or square meters.
 ◊ Meet or exceed clear opening area of 5.7 sq. ft. or 0.53 m², clear opening width of 20" (508) and clear opening height of 24" (610).
 * Calculated based upon a structural header height of 8" (2438).

continued on next page

Tilt-Wash Double-Hung Window Opening and Area Specifications *(continued)*

Window Number	Clear Opening Area Sq. Ft./ (m ²)	Clear Opening in Full Open Position		Glass Area Sq. Ft./ (m ²)	Vent Area Sq. Ft./ (m ²)	Top of Subfloor to Top of Inside Sill Stop Inches/ (mm)	Overall Window Area Sq. Ft./ (m ²)
		Width Inches/ (mm)	Height Inches/ (mm)				
TW2856 ◊	6.27 (0.58)	29 1/8" (759)	30 1/4" (768)	11.22 (1.04)	6.30 (0.59)	16 1/2" (418)	16.08 (1.49)
TW28510 ◊	6.69 (0.62)	29 7/8" (759)	32 1/4" (819)	11.97 (1.11)	6.71 (0.62)	12 1/2" (317)	17.01 (1.58)
TW2862 ◊	6.89 (0.64)	29 7/8" (759)	33 1/4" (843)	12.72 (1.18)	7.08 (0.66)	8 1/2" (203)	17.95 (1.67)
TW2872 ◊	8.35 (0.78)	29 7/8" (759)	40 1/4" (1022)	14.98 (1.39)	8.38 (0.78)	10 1/4" * (260)*	20.75 (1.93)
TW2876 ◊	8.77 (0.81)	29 7/8" (759)	42 1/4" (1073)	15.72 (1.46)	8.80 (0.82)	6 1/4" * (159)*	21.69 (2.01)
TW210210	3.15 (0.29)	31 7/8" (809)	14 1/4" (362)	5.62 (0.52)	3.18 (0.30)	48 1/2" (1231)	9.12 (0.85)
TW21032	3.59 (0.33)	31 7/8" (809)	16 1/4" (412)	6.42 (0.60)	3.62 (0.34)	44 1/2" (1130)	10.11 (0.94)
TW21036	4.04 (0.38)	31 7/8" (809)	18 1/4" (463)	7.23 (0.67)	4.06 (0.38)	40 1/2" (1028)	11.10 (1.03)
TW210310	4.48 (0.42)	31 7/8" (809)	20 1/4" (514)	8.03 (0.75)	4.51 (0.42)	36 1/2" (926)	12.09 (1.12)
TW21042	4.92 (0.46)	31 7/8" (809)	22 1/4" (565)	8.84 (0.82)	4.95 (0.46)	32 1/2" (825)	13.08 (1.22)
TW21046	5.48 (0.51)	31 7/8" (809)	24 3/4" (628)	9.64 (0.90)	5.41 (0.50)	28 1/2" (711)	14.07 (1.31)
TW210410 ◊	5.81 (0.54)	31 7/8" (809)	26 1/4" (666)	10.45 (0.97)	5.83 (0.54)	24 1/2" (622)	15.05 (1.40)
TW21052 ◊	6.25 (0.58)	31 7/8" (809)	28 1/4" (717)	11.25 (1.05)	6.28 (0.58)	20 1/2" (520)	16.04 (1.49)
TW21056 ◊	6.69 (0.62)	31 7/8" (809)	30 1/4" (768)	12.06 (1.12)	6.72 (0.62)	16 1/2" (418)	17.03 (1.59)
TW210510 ◊	7.14 (0.66)	31 7/8" (809)	32 1/4" (819)	12.86 (1.20)	7.16 (0.67)	12 1/2" (317)	18.02 (1.67)
TW21062 ◊	7.35 (0.68)	31 7/8" (809)	33 1/4" (843)	13.67 (1.27)	7.55 (0.70)	8 1/2" (203)	19.01 (1.77)
TW21072 ◊	8.91 (0.83)	31 7/8" (810)	40 1/4" (1022)	16.08 (1.49)	8.94 (0.83)	10 1/4" * (260)*	21.99 (2.04)
TW21076 ◊	9.35 (0.87)	31 7/8" (810)	42 1/4" (1073)	16.90 (1.57)	9.38 (0.87)	6 1/4" * (159)*	22.98 (2.13)
TW30210	3.35 (0.31)	33 7/8" (860)	14 1/4" (362)	6.01 (0.56)	3.38 (0.31)	48 1/2" (1231)	9.63 (0.90)
TW3032	3.82 (0.36)	33 7/8" (860)	16 1/4" (412)	6.87 (0.64)	3.85 (0.36)	44 1/2" (1130)	10.67 (0.99)
TW3036	4.29 (0.40)	33 7/8" (860)	18 1/4" (463)	7.73 (0.72)	4.32 (0.40)	40 1/2" (1028)	11.72 (1.09)
TW30310	4.76 (0.44)	33 7/8" (860)	20 1/4" (514)	8.59 (0.80)	4.79 (0.45)	36 1/2" (926)	12.76 (1.19)
TW3042	5.23 (0.49)	33 7/8" (860)	22 1/4" (565)	9.45 (0.88)	5.26 (0.49)	32 1/2" (825)	13.81 (1.28)
TW3046 ◊	5.82 (0.54)	33 7/8" (860)	24 3/4" (628)	10.31 (0.96)	5.75 (0.53)	28 1/2" (711)	14.85 (1.38)
TW30410 ◊	6.17 (0.57)	33 7/8" (860)	26 1/4" (666)	11.17 (1.04)	6.20 (0.58)	24 1/2" (622)	15.90 (1.48)
TW3052 ◊	6.64 (0.62)	33 7/8" (860)	28 1/4" (717)	12.03 (1.12)	6.67 (0.62)	20 1/2" (520)	16.95 (1.58)
TW3056 ◊	7.11 (0.66)	33 7/8" (860)	30 1/4" (768)	12.89 (1.20)	7.14 (0.66)	16 1/2" (418)	17.99 (1.67)
TW30510 ◊	7.58 (0.70)	33 7/8" (860)	32 1/4" (819)	13.75 (1.28)	7.61 (0.71)	12 1/2" (317)	19.04 (1.77)
TW3062 ◊	7.81 (0.73)	33 7/8" (860)	33 1/4" (843)	14.61 (1.36)	8.03 (0.75)	8 1/2" (203)	20.08 (1.87)
TW3072 ◊	9.47 (0.88)	33 7/8" (860)	40 1/4" (1022)	17.20 (1.60)	9.50 (0.88)	10 1/4" * (260)*	23.22 (2.16)
TW3076 ◊	9.94 (0.92)	33 7/8" (860)	42 1/4" (1073)	18.06 (1.68)	9.97 (0.93)	6 1/4" * (159)*	24.27 (2.25)
TW34210	3.74 (0.35)	37 7/8" (962)	14 1/4" (362)	6.79 (0.63)	3.78 (0.35)	48 1/2" (1231)	10.65 (0.99)
TW3432	4.27 (0.40)	37 7/8" (962)	16 1/4" (412)	7.76 (0.72)	4.30 (0.40)	44 1/2" (1130)	11.81 (1.10)
TW3436	4.80 (0.45)	37 7/8" (962)	18 1/4" (463)	8.73 (0.81)	4.83 (0.45)	40 1/2" (1028)	12.97 (1.21)
TW34310	5.32 (0.49)	37 7/8" (962)	20 1/4" (514)	9.70 (0.90)	5.35 (0.50)	36 1/2" (926)	14.12 (1.31)
TW3442	5.85 (0.54)	37 7/8" (962)	22 1/4" (565)	10.67 (0.99)	5.88 (0.55)	32 1/2" (825)	15.28 (1.42)
TW3446 ◊	6.51 (0.60)	37 7/8" (962)	24 3/4" (628)	11.64 (1.08)	6.42 (0.60)	28 1/2" (711)	16.43 (1.53)
TW34410 ◊	6.90 (0.64)	37 7/8" (962)	26 1/4" (666)	12.61 (1.17)	6.93 (0.64)	24 1/2" (622)	17.59 (1.63)
TW3452 ◊	7.43 (0.69)	37 7/8" (962)	28 1/4" (717)	13.58 (1.26)	7.46 (0.69)	20 1/2" (520)	18.75 (1.74)
TW3456 ◊	7.95 (0.74)	37 7/8" (962)	30 1/4" (768)	14.55 (1.35)	7.98 (0.74)	16 1/2" (418)	19.90 (1.85)
TW34510 ◊	8.48 (0.79)	37 7/8" (962)	32 1/4" (819)	15.53 (1.44)	8.51 (0.79)	12 1/2" (317)	21.06 (1.96)
TW3462 ◊	8.73 (0.81)	37 7/8" (962)	33 1/4" (843)	16.50 (1.53)	8.98 (0.83)	8 1/2" (203)	22.22 (2.06)
TW3472 ◊	10.59 (0.98)	37 7/8" (962)	40 1/4" (1022)	19.42 (1.80)	10.62 (0.99)	10 1/4" * (260)*	25.69 (2.39)
TW3476 ◊	11.11 (1.03)	37 7/8" (962)	42 1/4" (1073)	20.38 (1.89)	11.14 (1.04)	6 1/4" * (159)*	26.85 (2.49)
TW38210	4.14 (0.39)	41 7/8" (1064)	14 1/4" (362)	7.56 (0.70)	4.17 (0.39)	48 1/2" (1231)	11.68 (1.09)
TW3832	4.72 (0.44)	41 7/8" (1064)	16 1/4" (412)	8.64 (0.80)	4.76 (0.44)	44 1/2" (1130)	12.94 (1.20)
TW3836	5.30 (0.49)	41 7/8" (1064)	18 1/4" (463)	9.72 (0.90)	5.34 (0.50)	40 1/2" (1028)	14.21 (1.32)
TW38310	5.88 (0.55)	41 7/8" (1064)	20 1/4" (514)	10.81 (1.00)	5.92 (0.55)	36 1/2" (926)	15.48 (1.44)
TW3842	6.47 (0.60)	41 7/8" (1064)	22 1/4" (565)	11.89 (1.11)	6.50 (0.60)	32 1/2" (825)	16.75 (1.56)
TW3846 ◊	7.19 (0.67)	41 7/8" (1064)	24 3/4" (628)	12.97 (1.21)	7.10 (0.66)	28 1/2" (711)	18.01 (1.67)
TW38410 ◊	7.63 (0.71)	41 7/8" (1064)	26 1/4" (666)	14.05 (1.31)	7.66 (0.71)	24 1/2" (622)	19.28 (1.79)
TW3852 ◊	8.21 (0.76)	41 7/8" (1064)	28 1/4" (717)	15.14 (1.41)	8.25 (0.77)	20 1/2" (520)	20.55 (1.91)
TW3856 ◊	8.79 (0.82)	41 7/8" (1064)	30 1/4" (768)	16.22 (1.51)	8.83 (0.82)	16 1/2" (418)	21.62 (2.01)
TW38510 ◊	9.37 (0.87)	41 7/8" (1064)	32 1/4" (819)	17.30 (1.61)	9.41 (0.87)	12 1/2" (317)	23.08 (2.14)
TW3862 ◊	9.66 (0.90)	41 7/8" (1064)	33 1/4" (843)	18.38 (1.71)	9.92 (0.92)	8 1/2" (203)	24.35 (2.26)
TW3872 ◊	11.70 (1.09)	41 7/8" (1064)	40 1/4" (1022)	21.64 (2.01)	11.73 (1.09)	10 1/4" * (260)*	28.16 (2.26)
TW3876 ◊	12.29 (1.14)	41 7/8" (1064)	42 1/4" (1073)	22.72 (2.11)	12.32 (1.14)	6 1/4" * (159)*	29.43 (2.73)

*"Top of Subfloor to Top of Inside Sill Stop" is calculated based upon a structural header height of 6'-10 1/2" (2096) except for 7'-5" and 7'-9" heights which are calculated using a header height of 8' (2438).

*Dimensions in parentheses are in millimeters or square meters.

◊ Meet or exceed clear opening area of 5.7 sq. ft. or 0.53 m²; clear opening width of 20" (508) and clear opening height of 24" (610).

*Calculated based upon a structural header height of 8' (2438).

Opening calculations change when using PG Upgrade sill stop.

For opening specifications for windows with Stormwatch® Protection, visit andersenwindows.com/openingspecs.

For cottage and reverse cottage sash opening specifications, visit andersenwindows.com/openingspecs.

TILT-WASH DOUBLE-HUNG FULL-FRAME WINDOWS

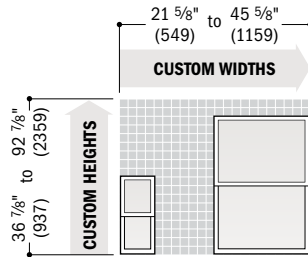
Custom Sizes and Specification Formulas



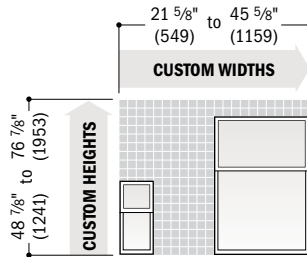
Available in $\frac{1}{8}$ " (3) increments between minimum and maximum widths and heights. Some restrictions apply; contact your Andersen supplier. For minimum rough opening dimensions for joined windows, see specific joining instruction guides. Measurement guide for custom-size windows can be found at andersenwindows.com/measure.

Tilt-Wash Double-Hung Windows

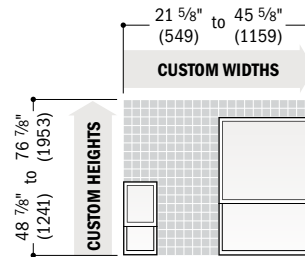
Equal



Cottage

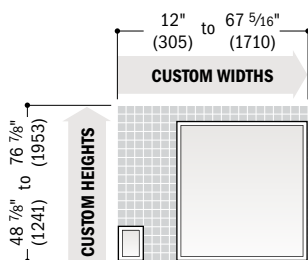


Reverse Cottage

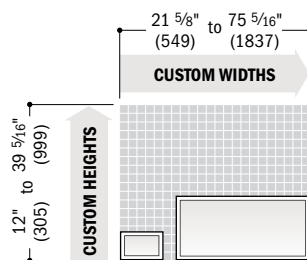


Clear Opening 	Width = window width - 1.852" (47) x 2 <i>Contact your Andersen supplier for clear opening height.</i>	Minimum R.O. 	Width = window width + 1/2" (51) Height = window height + 0"
Vent Opening 	<i>Vent opening formulas are dependent on window size; contact your Andersen supplier.</i>	Unobst. Glass 	Width = window width - 3.376" (86) Height: Upper Sash = upper sash height - 3.035" (77) Lower Sash = lower sash height - 3.831" (97)

Tilt-Wash Picture Windows



Tilt-Wash Transom Windows



Minimum R.O. 	Width = window width + 1/2" (51) Height = window height + 0	Unobst. Glass 	Picture Window Width = window width - 4.924" (125) Height = window height - 7.531" (191)	Transom Window Width = window width - 6.625" (168) Height = window height - 6.625" (168)
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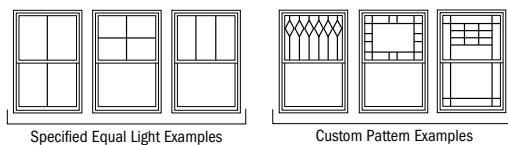
*Dimensions in parentheses are in millimeters.

• **Clear Opening** formulas provide dimensions for determining area available for egress. **Vent Opening** formulas provide dimensions for determining area available for passage of air. **Minimum R.O.** (minimum rough opening) formulas provide minimum rough opening width and height dimensions. **Unobst. Glass** (unobstructed glass) formulas provide dimensions for determining area available for passage of light.

Grille Patterns

	Diamond* Prairie A 6-Light Prairie Colonial								Patterns for double-hung windows are also available in Upper Sash Only (USO) configurations. For picture window patterns that require alignment with double-hung window patterns, identify the sash style (equal, cottage or reverse cottage) when ordering. Number of lights and overall pattern varies with window size. Patterns not available in all configurations.			
Tilt-Wash Double-Hung												
	Equal	Cottage	Equal	Cottage	Equal	Cottage	Equal	Cottage				
Tilt-Wash Picture	Diamond*	Prairie A	Colonial		Modified Colonial	Modified Colonial with Simulated Meeting Rail	Tall Fractional	Tall Fractional with Simulated Meeting Rail	Short Fractional	Short Fractional with Simulated Meeting Rail	Victorian	
Tilt-Wash Transom												

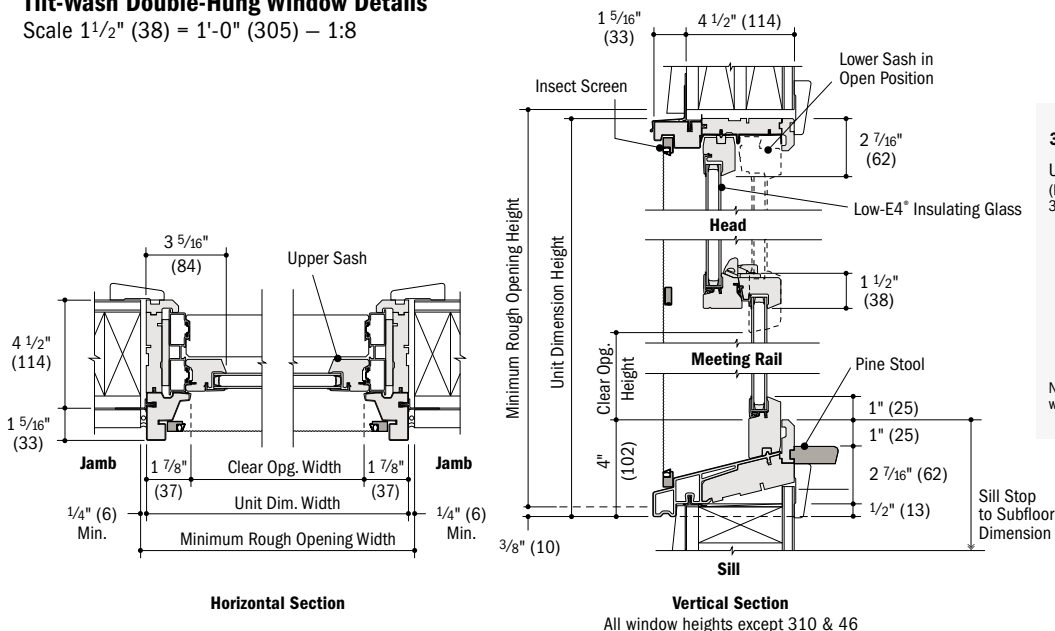
*Available only in Simulated Divided Light (SDL) configuration and only in $\frac{3}{4}$ " (19) and $\frac{7}{8}$ " (22) widths.



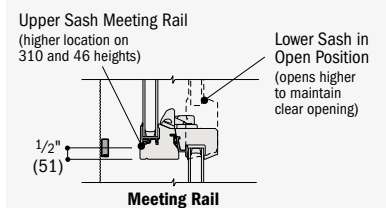
Specified equal light and custom patterns are also available. For more grille options, see page 14 or visit andersenwindows.com/grilles.

Tilt-Wash Double-Hung Window Details

Scale $1\frac{1}{2}$ " (38) = 1'-0" (305) – 1:8



310 and 46 Height Windows Only:



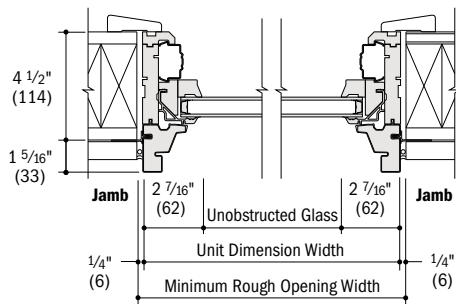
Note: Location of support bar on optional insect screen aligns with meeting rail location on 310 and 46 window heights.

- Light-colored areas are parts included with window. Dark-colored areas are additional Andersen® parts required to complete window assembly as shown.
- **Minimum rough openings may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See installation information on pages 210-211.**
- Details are for illustration only and are not intended to represent product installation methods or materials. Refer to product installation guides at andersenwindows.com.
- Dimensions in parentheses are in millimeters.

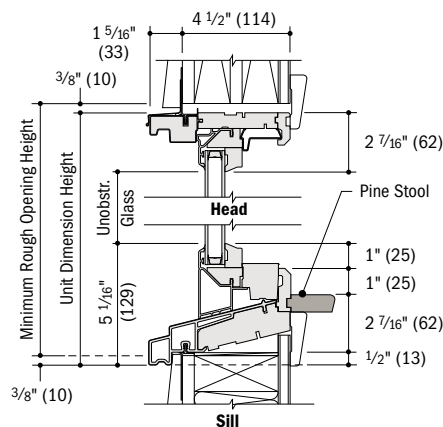
TILT-WASH DOUBLE-HUNG FULL-FRAME WINDOWS

Tilt-Wash Picture Window Details

Scale 1 1/2" (38) = 1'-0" (305) – 1:8



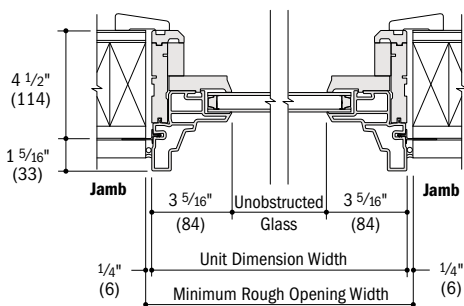
Horizontal Section



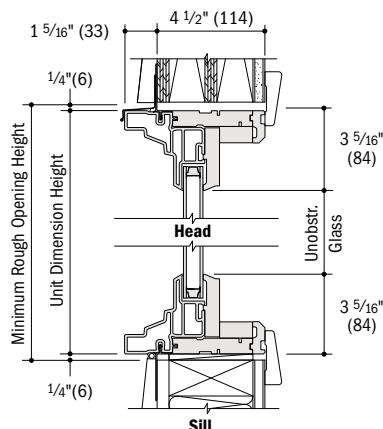
Vertical Section

Tilt-Wash Transom Window Details

Scale 1 1/2" (38) = 1'-0" (305) – 1:8



Horizontal Section



Vertical Section

Horizontal (stack) Joining Detail

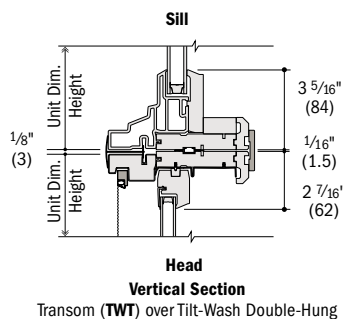
Scale 1 1/2" (38) = 1'-0" (305) – 1:8

Overall Window Dimension Height

Sum of individual window heights
plus 1/16" (1.5) for each join.

Overall Rough Opening Height

Overall window dimension height.*

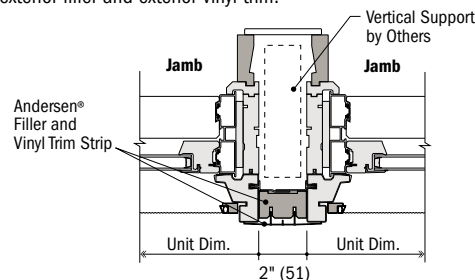


Head
Vertical Section
Transom (TWT) over Tilt-Wash Double-Hung

Separate Rough Openings Detail

Scale 1 1/2" (38) = 1'-0" (305) – 1:8

To meet structural requirements or to achieve a wider joined appearance, windows may be installed into separate rough openings having vertical support (by others) in combination with Andersen® exterior filler and exterior vinyl trim.



Horizontal Section
Tilt-Wash Double-Hung and Tilt-Wash Double-Hung

Vertical (ribbon) Joining Detail

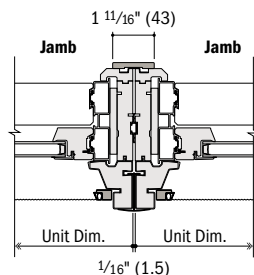
Scale 1 1/2" (38) = 1'-0" (305) – 1:8

Overall Window Dimension Width

Sum of individual window widths
plus 1/16" (1.5) for each join.

Overall Rough Opening Width

Overall window dimension width plus 1/2" (13).



Horizontal Section
Tilt-Wash Double-Hung to Tilt-Wash Double-Hung

For more joining information, see the combination designs section starting on page 181.

* Light-colored areas are parts included with window. Dark-colored areas are additional Andersen® parts required to complete window assembly as shown.
* Minimum rough openings may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See installation information on pages 210-211.
* Details are for illustration only and are not intended to represent product installation methods or materials. Refer to product installation guides at andersenwindows.com.
* Consult with an architect or structural engineer regarding minimum requirements for structural support members between adjacent rough openings.
* Dimensions in parentheses are in millimeters.
* For stacks where bottom unit in combination is a double-hung or picture window with a sloped sill. If bottom window has a flat sill add 1/2" (13) to the overall window dimension height.

FEATURES

NARROLINE® DOUBLE-HUNG WINDOW CONVERSION KIT

Narroline double-hung window conversion kits are designed specifically to update existing Narroline double-hung windows (made from 1968 to 2013) to tilt-wash double-hung windows. They provide quick and easy installation with less mess than traditional window replacement because there are no window frame tear-out or trim modifications.

Each kit includes:

- Upper and lower sash with your choice of Low-E4® glass options
- Jamb liners
- Balancers
- Lock and keeper

GLASS

In addition to stainless steel glass spacers, black or white glass spacers are now available to allow the spacer to blend in with the unit color.

High-Performance options include:

- Low-E4 glass
- Low-E4 HeatLock® glass
- Low-E4 SmartSun™ glass
- Low-E4 SmartSun HeatLock glass
- Low-E4 Sun glass

Tempered and other glass options are available. Contact your Andersen supplier.

A removable translucent film helps shield the glass from damage during delivery and construction, and simplifies finishing at the job site.

High-Performance Low-E4 glass is 45% more energy efficient than ordinary dual-pane glass in winter and 56% more energy efficient in summer.*

LOW MAINTENANCE

Sash tilt inward for easy cleaning of window exteriors from inside the home (no need for ladders).



See videos of Narroline double-hung window conversion kit features and installation at andersenwindows.com/narroline.

EXTERIOR & INTERIOR OPTIONS

EXTERIOR COLORS



INTERIOR OPTIONS



Narroline Double-Hung Window Identification

Unobstructed Glass Width Inches/(mm)	Unobstructed Glass Height** Inches/(mm)	Window Number
16 7/16" (418)	13 15/16" (354)	18210
16 7/16" (418)	15 15/16" (405)	1832
16 7/16" (418)	19 15/16" (506)	18310
16 7/16" (418)	21 15/16" (557)	1842
16 7/16" (418)	23 15/16" (608)	1846
16 7/16" (418)	27 15/16" (710)	1852
16 7/16" (418)	35 15/16" (913)	1856
16 7/16" (418)	33 15/16" (862)	1862
20 7/16" (519)	13 15/16" (354)	20210
20 7/16" (519)	15 15/16" (405)	2032
20 7/16" (519)	19 15/16" (506)	20310
20 7/16" (519)	21 15/16" (557)	2042
20 7/16" (519)	23 15/16" (608)	2046
20 7/16" (519)	27 15/16" (710)	2052
20 7/16" (519)	35 15/16" (913)	2056
20 7/16" (519)	33 15/16" (862)	2062
24 7/16" (621)	13 15/16" (354)	24210
24 7/16" (621)	15 15/16" (405)	2432
24 7/16" (621)	19 15/16" (506)	24310
24 7/16" (621)	21 15/16" (557)	2442
24 7/16" (621)	23 15/16" (608)	2446
24 7/16" (621)	27 15/16" (710)	2452
24 7/16" (621)	35 15/16" (913)	2456
24 7/16" (621)	33 15/16" (862)	2462
28 7/16" (722)	13 15/16" (354)	28210
28 7/16" (722)	15 15/16" (405)	2832
28 7/16" (722)	19 15/16" (506)	28310
28 7/16" (722)	21 15/16" (557)	2842
28 7/16" (722)	23 15/16" (608)	2846
28 7/16" (722)	27 15/16" (710)	2852
28 7/16" (722)	35 15/16" (913)	2856
28 7/16" (722)	33 15/16" (862)	2862
32 7/16" (824)	13 15/16" (354)	30210
32 7/16" (824)	15 15/16" (405)	3032
32 7/16" (824)	19 15/16" (506)	30310
32 7/16" (824)	21 15/16" (557)	3042
32 7/16" (824)	23 15/16" (608)	3046
32 7/16" (824)	27 15/16" (710)	3052
32 7/16" (824)	35 15/16" (913)	3056
32 7/16" (824)	33 15/16" (862)	3062
36 7/16" (926)	13 15/16" (354)	34210
36 7/16" (926)	15 15/16" (405)	3432
36 7/16" (926)	19 15/16" (506)	34310
36 7/16" (926)	21 15/16" (557)	3442
36 7/16" (926)	23 15/16" (608)	3446
36 7/16" (926)	27 15/16" (710)	3452
36 7/16" (926)	35 15/16" (913)	3456
36 7/16" (926)	33 15/16" (862)	3462
40 7/16" (1027)	13 15/16" (354)	38210
40 7/16" (1027)	15 15/16" (405)	3832
40 7/16" (1027)	19 15/16" (506)	38310
40 7/16" (1027)	21 15/16" (557)	3842
40 7/16" (1027)	23 15/16" (608)	3846
40 7/16" (1027)	27 15/16" (710)	3852
40 7/16" (1027)	35 15/16" (913)	3856
40 7/16" (1027)	33 15/16" (862)	3862

*Values are based on comparison of Andersen® double-hung window conversion kit U-Factor to the U-Factor for clear dual-pane glass non-metal frame default values from the 2006, 2009, 2012, 2015 and 2018 International Energy Conservation Code "Glazed Fenestration" Default Tables.

***Unobstructed Glass Height" dimensions in table are for lower sash only.

Dimensions in parentheses are in millimeters.

Printing limitations prevent exact replication of colors and finishes. See your Andersen supplier for actual color and finish samples.

Naturally occurring variations in grain, color and texture of wood make each window one of a kind. All wood interiors are unfinished unless a finish is specified.

TILT-WASH DOUBLE-HUNG INSERT WINDOWS

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CUSTOM SIZING
in 1/8" (3) increments



Dimensions in parentheses are in millimeters.

TILT-WASH DOUBLE-HUNG INSERT WINDOWS

FEATURES

FRAME

A A Fibrex® material exterior protects the frame – beautifully. Best of all, it's low maintenance and never needs painting.*

B For exceptional long-lasting performance, sill members are constructed with a wood core and a Fibrex material exterior. Sill ends are protected and sealed with weather-resistant covers.

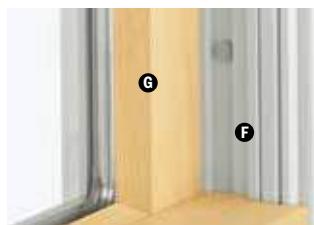
C Natural wood stops are available in pine, and prefinished white, dark bronze and black.**

D Weatherstrip throughout the unit provides a long-lasting, energy-efficient, weather-resistant seal. For the top and bottom rails, an encased foam material is used. The head jamb liner and sill have a rigid vinyl rib that the weatherstrip material compresses against. At the meeting rail, compressible vinyl bulb material is used. Side jamb liners use leaf-type weatherstrip with foam inserts.

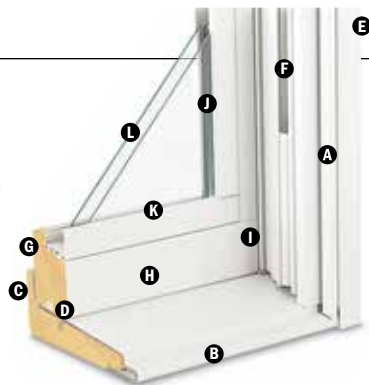
E Exterior stop covers are specially designed to allow easy application of high-quality sealant.

3 1/4" (83) "pocket window" jamb depth allows convenient replacement without disturbing interior window trim for most double-hung replacement situations.

F Jamb liners are available in white or gray, and must be specified when ordering. Contact your Andersen supplier for details.



Unique block-and-tackle balancers feature sized-to-the-unit, rust-resistant springs that require no adjustment. Glass-reinforced nylon balancer shoes provide smooth, reliable sash operation. They automatically lock the balancer into position when sash are tilted into wash mode.



SASH

Wash assists make it easy to tilt the sash into wash mode.

G Wood sash members are treated with a water-repellent preservative for long-lasting protection and performance. Interior surfaces are unfinished pine. Low-maintenance prefinished white interiors are also available.

H A polyester-stabilized coat with a Flexacron® finish is electrostatically applied to penetrate all exterior surfaces for maximum protection and a lustrous finish.

I Sash joints simulate the look of traditional mortise-and-tenon construction inside and out.

GLASS

J In addition to stainless steel glass spacers, black or white glass spacers are now available to allow the spacer to blend in with the unit color.

K Silicone bed glazing provides superior weathertightness and durability.

L High-Performance options include:

- Low-E4® glass
- Low-E4 HeatLock® glass
- Low-E4 SmartSun™ glass
- Low-E4 SmartSun HeatLock glass
- Low-E4 Sun glass

Tempered and other glass options are available. Contact your Andersen supplier.

A removable translucent film helps shield the glass from damage during delivery and construction, and simplifies finishing at the job site.

Patterned Glass

Patterned glass options are available. See page 12 for more details.

SILL

Sill Angles

Three sill angles are available – 0°, 8° and 14° – to closely match the existing sill in window replacement applications. See page 93 for details.



0° Sill Angle



8° Sill Angle



14° Sill Angle

Sill Angle Finder App

Our Sill Angle Finder App lets you quickly and easily find the sill angle of existing double-hung windows. Available for free for both iPhone® and Android™ smartphones. Download the app for iPhone from the App Store™ or for Android smartphones from the Google Play Store. The app is only available for smartphones, as tablets and other large devices are too bulky for measuring window sill angles.

INSTALLATION

Exterior Stop Cover



An exterior stop cover provides a clean transition from the new window to the existing window casing.

Included Installation Materials



Flat self-hanging shims, backer rod, installation screws and complete instructions are included with each insert window. See the measurement guide and worksheet at andersenwindows.com/measure.

SASH OPTIONS†



Cottage

Reverse Cottage

*Visit andersenwindows.com/warranty for details.

**Products with dark bronze and black interiors have matching exteriors.

†Shown on 400 Series tilt-wash double-hung full-frame windows.

“Flexacron” is a registered trademark of PPG Industries, Inc.

“iPhone” and “App Store” are registered trademarks of Apple Inc. “Android” is a trademark of Google Inc.

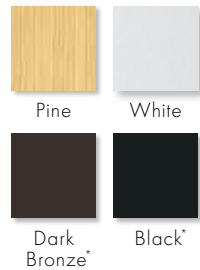
Dimensions in parentheses are in millimeters.

EXTERIOR & INTERIOR OPTIONS

EXTERIOR COLORS



INTERIOR OPTIONS



HARDWARE



Standard Lock & Keeper

Black | Gold Dust | **Stone** | White

Stone is standard with natural interior units.
 White comes with prefinished white interiors.
 Other finishes optional.

OPTIONAL HARDWARE Sold Separately

ESTATE™



Lock & Keeper

Optional Estate lock and keeper reduces the clear opening height by 3/8" (14). Check with local building code officials to determine compliance with egress requirements.

Antique Brass | Bright Brass
 Brushed Chrome | Distressed Bronze
 Distressed Nickel | Oil Rubbed Bronze
 Polished Chrome | **Satin Nickel**

CONTEMPORARY



Bar Lift

Antique Brass | Black | Bright Brass
 Brushed Chrome | Distressed Bronze
Distressed Nickel | Gold Dust
 Oil Rubbed Bronze | Polished Chrome
 Satin Nickel | Stone | White

TRADITIONAL



Bar Lift



Hand Lift



Finger Lifts

Antique Brass | Black | Bright Brass | Brushed Chrome
 Distressed Bronze | Distressed Nickel | Gold Dust | **Oil Rubbed Bronze**
 Polished Chrome | Satin Nickel | Stone | White

Bold name denotes finish shown.

HARDWARE FINISHES



ACCESSORIES Sold Separately

SASH

Window Opening Control Device



A recessed window opening control device is available factory applied. It limits the sash travel to less than 4" (102) when the window is first opened. Available in white, stone and black. A field-applied window opening control device kit is also available.

INSECT SCREENS

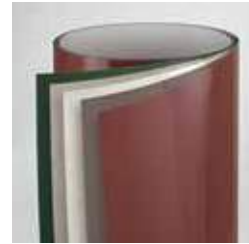
Insect Screen Frames



Choose full insect screen or half insect screen. Half insect screen (shown above) allows ventilation without affecting the view through the upper sash. Frames are available in colors to match product exteriors.

INSTALLATION

Coil Stock



Andersen® aluminum coil stock can be ordered to match any of our 11 trim colors. Made from .018" thick aluminum, Andersen coil stock is available in 24" (610) x 50' (15240) rolls. Color-matched 1 1/4" (32)-long stainless steel trim nails are also available and can be ordered in 1 lb/.454 kg boxes.

TruScene® Insect Screens

Andersen TruScene insect screens let in over 25% more fresh air** and provide 50% greater clarity than conventional Andersen insect screens, all while keeping out unwanted small insects.

Conventional Insect Screens

Conventional insect screens have charcoal powder-coated aluminum screen mesh.

GRILLES

Grilles are available in a variety of configurations and widths. For double-hung grille patterns, see page 94.

CAUTION:

- Painting and staining may cause damage to rigid vinyl.
- 400 Series windows in Terratone color may be painted any color lighter than Terratone color using quality oil-based or latex paint.
- Do not paint 400 Series windows in white, canvas, Sandtone, dark bronze, forest green or black exterior colors.
- Andersen does not warrant the adhesion or performance of homeowner-applied paint over vinyl or other factory-coated surfaces.
- For vinyl painting instructions and preparation, contact your Andersen supplier.
- Do not paint weatherstrip.
- Creosote-based stains should not come in contact with Andersen products.
- Abrasive cleaners or solutions containing corrosive solvents should not be used on Andersen products.

GLASS

Andersen Art Glass

Available for 400 Series tilt-wash transom and picture units. Andersen art glass panels come in a variety of original patterns. See art glass section starting on page 173 for more information or visit andersenwindows.com/artglass.

*Products with dark bronze and black interiors have matching exteriors.

**TruScene insect screens let in over 25% more fresh air than standard Andersen fiberglass insect screens.

Dimensions in parentheses are in millimeters.

Printing limitations prevent exact replication of colors and finishes. See your Andersen supplier for actual color and finish samples.

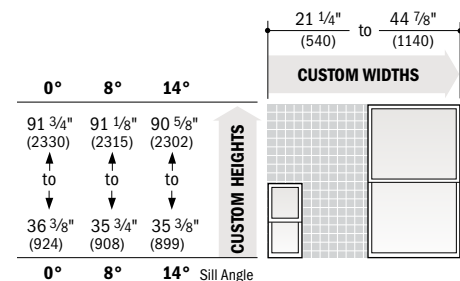
Naturally occurring variations in grain, color and texture of wood make each window one of a kind. All wood interiors are unfinished unless a finish is specified.

Distressed bronze and oil rubbed bronze are "living" finishes that will change with time and use.

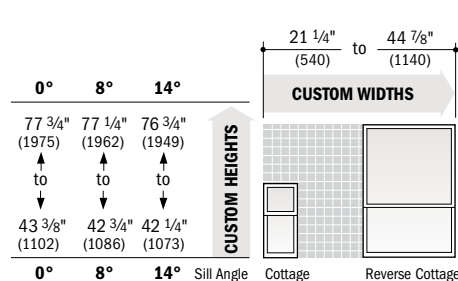
TILT-WASH DOUBLE-HUNG INSERT WINDOWS

Tilt-Wash Double-Hung, Picture and Transom Insert Window Sizes

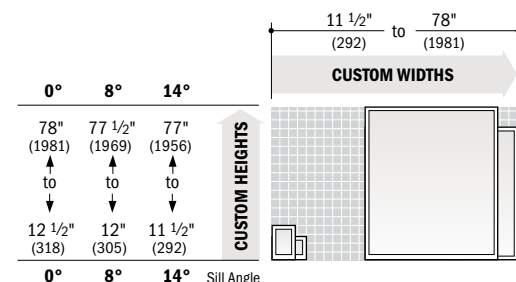
Double-Hung Equal Sash Ratio



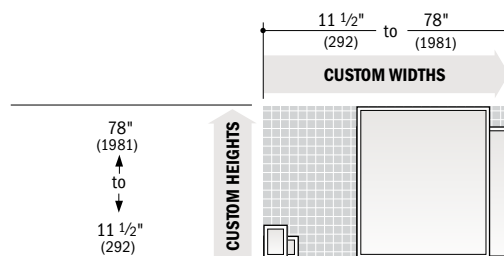
Double-Hung 2:3 Cottage and 3:2 Reverse Cottage Sash Ratio



Picture



Transom



Available in 1/8" (3) increments between minimum and maximum widths and heights. Height limits for double-hung and picture insert windows depend on new insert window sill angle.

For picture and transom insert windows, either height or width must be 68" (1727) or less, and height plus width cannot be less than 28" (711).

Measurement guide for custom-sized windows can be found at andersenwindows.com/measure. Grille patterns shown on page 94.

Tilt-Wash Double-Hung Insert Window Specification Formulas

Vent Opening	Width = window width - 3.798" (96)				
	Height = Depends on sash ratio and specific sill angle of insert window; see below.				
	sash ratio	clear opening height	sill angle deduction		
			14°	8°	0°
	1:1 Equal	= (window height ÷ 2) - sill angle deduction	3.602" (91)	3.836" (97)	4.138" (105)
	2:3 Cottage	= (window height x 2) ÷ 5 - sill angle deduction	2.879" (73)	3.066" (78)	3.308" (84)
	3:2 Reverse Cottage	= (window height x 2) ÷ 5 - sill angle deduction	2.083" (53)	2.270" (58)	2.512" (64)
Unobst. Glass	Width = window width - 6.219" (158)				
	Height = Depends on sash ratio and specific sill angle of insert window; see below.				
	sash ratio	unobstructed glass height	sill angle deduction		
			14°	8°	0°
	Equal Upper and Lower Sash	= (window height ÷ 2) - sill angle deduction	3.625" (92)	3.844" (98)	4.156" (106)
	Cottage Upper Sash or Reverse Cottage Lower Sash	= (window height x 2) ÷ 5 - sill angle deduction	2.891" (73)	3.078" (78)	3.328" (85)
	Cottage Lower Sash or Reverse Cottage Upper Sash	= (window height x 2) ÷ 5 - sill angle deduction	4.344" (110)	4.625" (117)	4.984" (127)

Optional Estate™ hardware will reduce vent opening height by 7/32" (6).

For clear opening specifications, contact your Andersen supplier.

Tilt-Wash Picture and Transom Insert Window Specification Formulas

Unobst. Glass	Picture Insert		Transom Insert		
	Width = window width - 6.0" (152)		Width = window width - 6.0" (152)		
	Height = Depends on sash ratio and specific sill angle of insert window; see below.		Height = window width - 6.0" (152)		
	unobstructed glass height	sill angle deductions	14°	8°	0°
= window height - sill angle deduction			5.816" (148)	6.285" (160)	6.890" (175)

* Dimensions in parentheses are in millimeters.

* **Clear Opening** formulas provide dimensions for determining area available for egress. **Vent Opening** formulas provide dimensions for determining area available for passage of air.

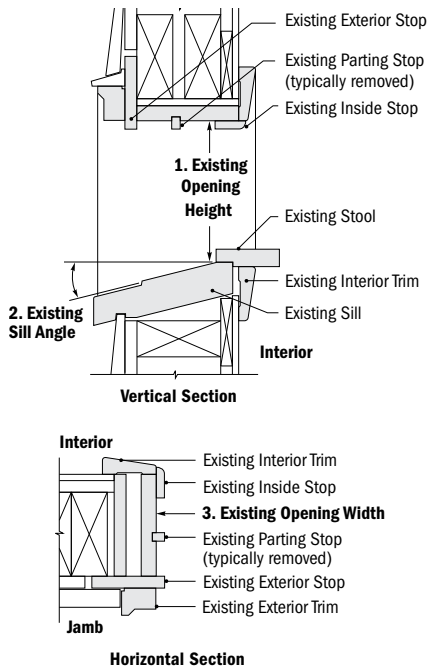
Unobst. Glass (unobstructed glass) formulas provide dimensions for determining area available for passage of light.

* Refer to andersenwindows.com/measure for detailed instructions on how to properly measure for insert windows.

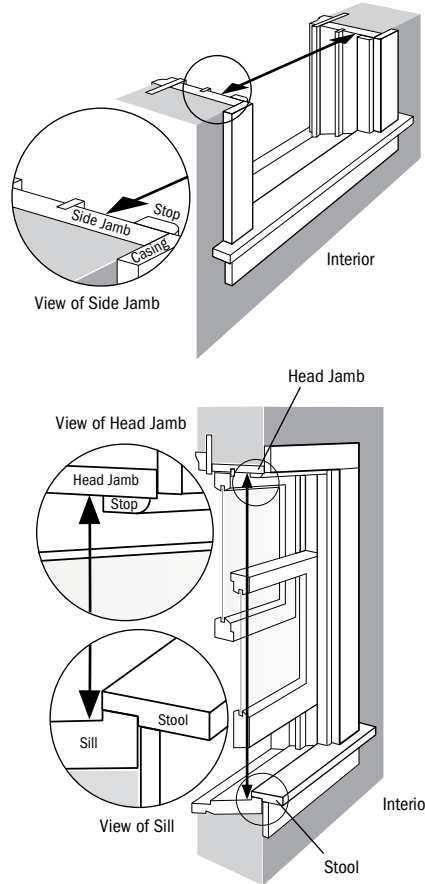
Existing Window Measurements

Required measurements:

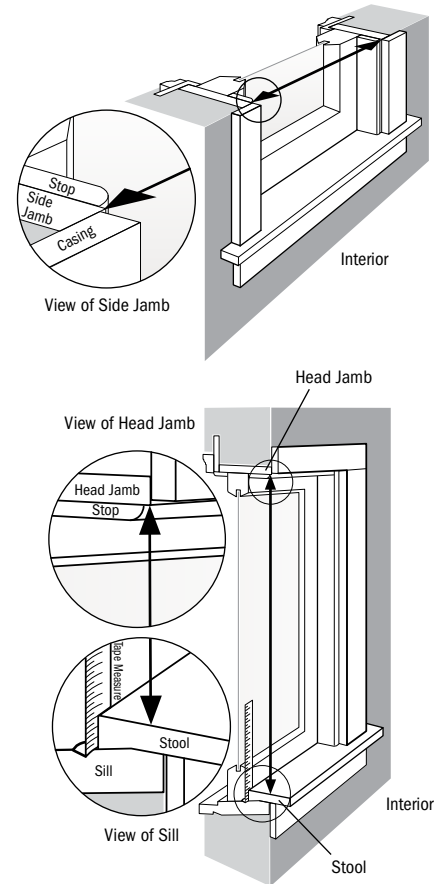
1. Existing Opening Height
2. Existing Sill Angle
3. Existing Opening Width



Existing Double-Hung Window



Existing Picture Window



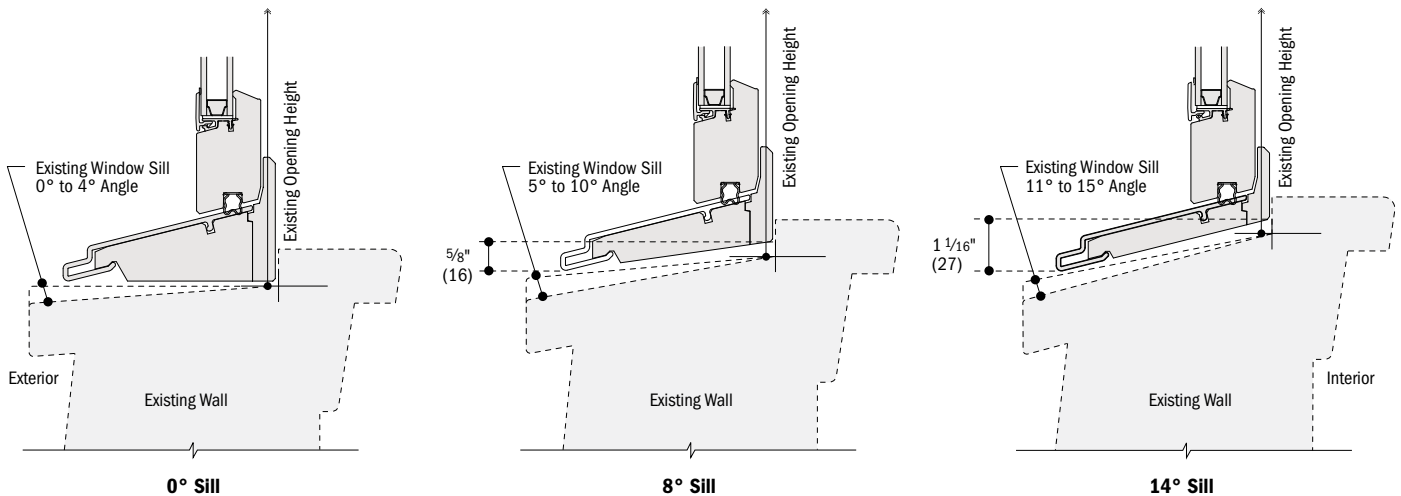
Sill Angle Details

Scale 3" (76) = 1'-0" (305) – 1:4

Select a sill angle that most closely matches your existing sill angle.

Windows with a smaller sill angle will have a larger maximum height.

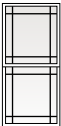
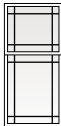
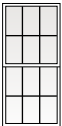
A "Sill Angle Finder App" is available, see page 90.



• Details are for illustration only and are not intended to represent product installation methods or materials. Refer to product installation guides at andersenwindows.com.
 • Dimensions in parentheses are in millimeters.
 • Refer to andersenwindows.com/measure for detailed instructions on how to properly measure for insert windows.

TILT-WASH DOUBLE-HUNG INSERT WINDOWS

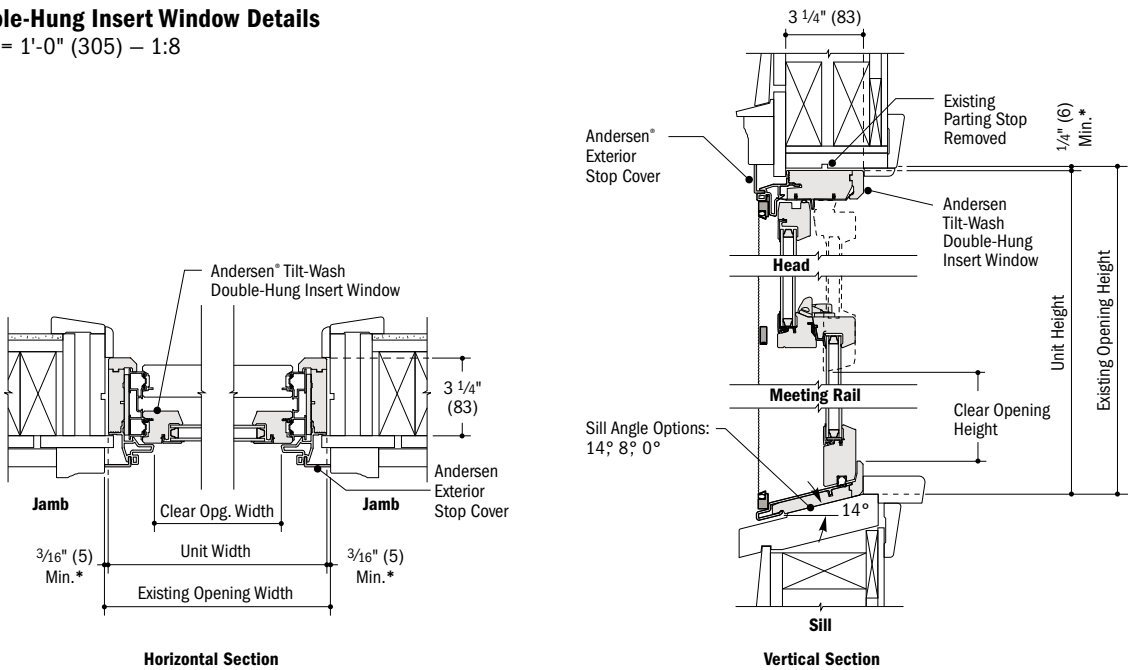
Grille Patterns

	Prairie A		Specified Equal Light			Prairie A		Specified Equal Light	
Tilt-Wash Double-Hung Insert					Tilt-Wash Transom Insert				
	Equal	Cottage	Equal	Cottage					

Patterns for double-hung windows are also available in Upper Sash Only (USO) configurations. For picture window patterns that require alignment with double-hung window patterns, identify the sash style (equal, cottage or reverse cottage) when ordering. **Number of lights and overall pattern varies with window size. Patterns not available in all configurations.** For more grille options, see page 14 or visit andersenwindows.com/grilles.

Tilt-Wash Double-Hung Insert Window Details

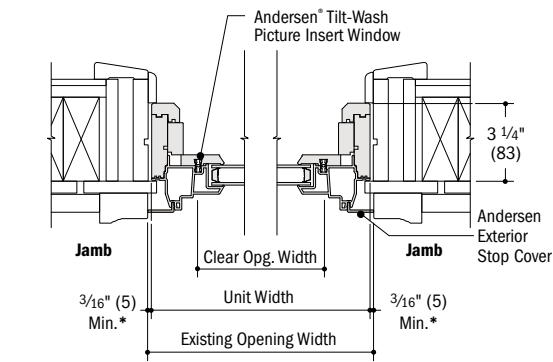
Scale 1 1/2" (38) = 1'-0" (305) – 1:8



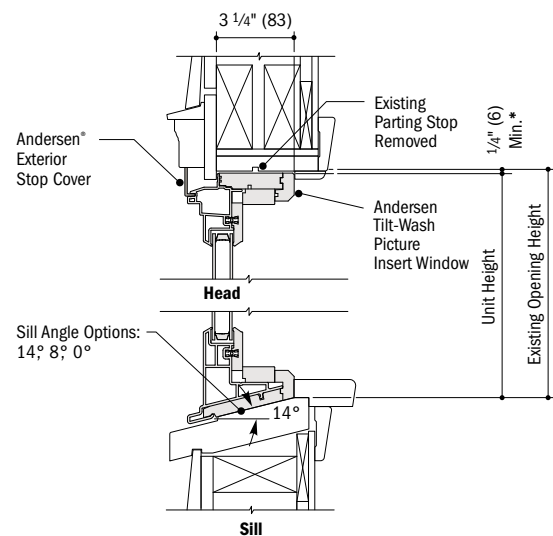
* Light-colored areas are parts included with window. Dark-colored areas are additional Andersen® parts required to complete window assembly as shown.
* Details are for illustration only and are not intended to represent product installation methods or materials. Refer to product installation guides at andersenwindows.com.
* Dimensions in parentheses are in millimeters.
* Refer to andersenwindows.com/measure for detailed instructions on how to properly measure for insert windows.

Tilt-Wash Picture Insert Window Details

Scale 1½" (38) = 1'-0" (305) – 1:8



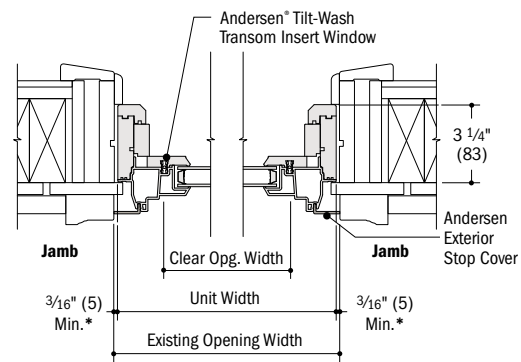
Horizontal Section



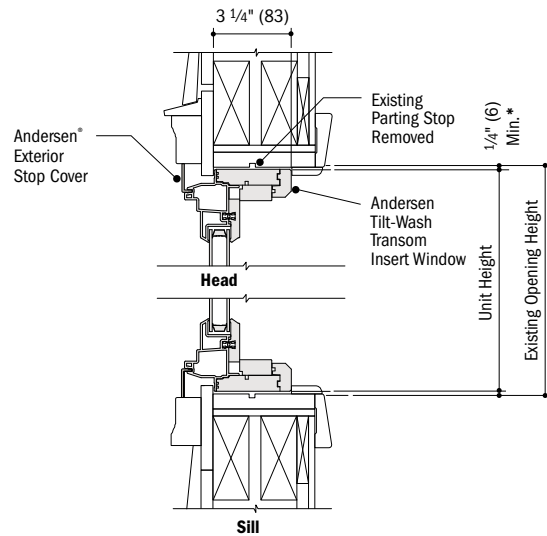
Vertical Section

Tilt-Wash Transom Insert Window Details

Scale 1½" (38) = 1'-0" (305) – 1:8



Horizontal Section

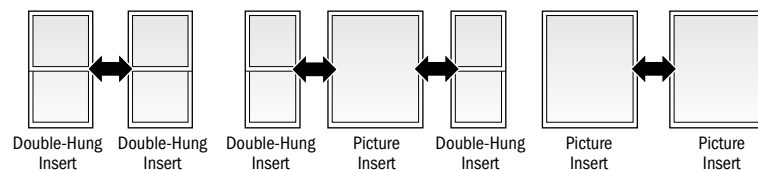
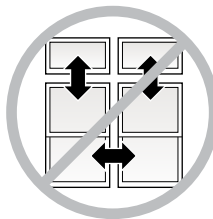
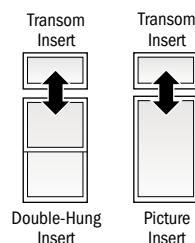


Vertical Section

Joining Combinations

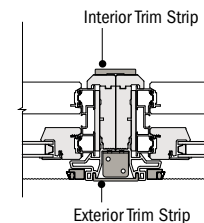
Join insert windows in one-way horizontal (stack) or vertical (ribbon) combinations.

Do not join insert windows in two-way combinations.



Vertical (ribbon) Joining Detail

Scale 1½" (38) = 1'-0" (305) – 1:8



Horizontal Section

Tilt-Wash Double-Hung Insert to Tilt-Wash Double-Hung Insert

For more joining information, see the combination designs section starting on page 181.

* Light-colored areas are parts included with window. Dark-colored areas are additional Andersen® parts required to complete window assembly as shown.
 * Details are for illustration only and are not intended to represent product installation methods or materials. Refer to product installation guides at andersenwindows.com.
 * Dimensions in parentheses are in millimeters.
 * Refer to andersenwindows.com/measure for detailed instructions on how to properly measure for insert windows.



BAY & BOW WINDOWS

Casement Bay & Bow Windows

Tables of Sizes	100-101
Window Details	102-103
Custom Sizes	104-105

Woodwright® & Tilt-Wash Double-Hung Bay Windows

Tables of Sizes	106-109
Window Details	110

CUSTOM SIZING
in 1/8" (3) increments



Dimensions in parentheses are in millimeters.

BAY & BOW WINDOWS

FEATURES

CASEMENT BAY & BOW WINDOWS

Constructed using basic casement windows. Some options must be specified to complete an order. These include color, glass and hardware.

A Pre-milled mullion posts join individual casement windows together into 30° angle bay, 45° angle bay, 90° box bay and 10° bow window units. Mullion posts lock into a channel in each adjoining casement window for a sturdy, easy-to-install unit. The exterior is sheathed with vinyl cladding; the interior is trimmed in natural wood, which can be finished to enhance any décor.

B Andersen® auxiliary casing is supplied as trim to finish the top of 30° angle bay, 45° angle bay and 10° bow windows. Auxiliary casing is an option for 90° box bay windows.

C Platforms made of 3/4" (19) plywood at the head and sill of bay and bow windows provide added strength to the assembly.

Custom bay and bow windows are available in a wide variety of unit configurations. See pages 104-105. Contact your Andersen supplier for details.



Casement 30° Angle Bay Window



Casement 90° Box Bay Window



Casement 10° Bow Window

For casement window colors and hardware options, see page 20.

WOODWRIGHT® & TILT-WASH DOUBLE-HUNG BAY WINDOWS

Constructed using basic double-hung windows. Some options must be specified to complete an order. These include color and glass.

D Pre-milled mullion posts join individual units together into 30° angle bay and 45° angle bay window units for a sturdy, easy-to-install unit. The exterior is sheathed with vinyl cladding; the interior is trimmed in natural wood, which can be finished to enhance any décor.

E Andersen auxiliary casing is mitered, joined and installed as trim to finish the top of 30° and 45° angle bay windows. Cellular Fibrex® is covered in vinyl cladding.

F Platforms made of 3/4" (19) plywood at the head and sill of bay and bow windows provide added strength to the assembly.



Double-Hung 45° Angle Bay Window

For Woodwright double-hung window colors and hardware options, see page 48. For tilt-wash double-hung window colors and hardware options, see page 76.

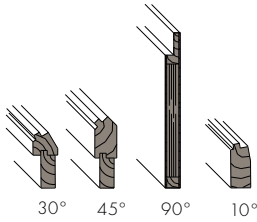
Dimensions in parentheses are in millimeters.

Installation of custom bay units having a projection greater than 24" (610) requires the expertise of a structural engineer to determine needed structural support. Failure to use sufficient structural support could result in personal injury or damage to windows or other property. Each cable within the system can support a maximum load of 500 lbs/227 kg. If the section of the window unit requiring support exceeds 1000 lbs/554 kg, additional support is needed.

ACCESSORIES Sold Separately. Please refer to individual product sections for a full list of options and accessories.

CASEMENT FRAME

Casement Extension Jamb & Extension Jamb Adaptors



Extension jambs and extension jamb adaptors are available in unfinished pine and prefinished white, dark bronze and black.

For 30° and 45° bay windows, extension jambs are available in $\frac{1}{8}$ " (3) increments between $4\frac{9}{16}$ " (116) and $7\frac{1}{8}$ " (181). Some sizes may be veneered.

For box bay and bow windows, extension jambs are available in $\frac{1}{16}$ " (1.5) increments between $5\frac{1}{4}$ " (133) and $7\frac{1}{8}$ " (181). For wall depths less than $5\frac{1}{4}$ " (133), order $5\frac{1}{4}$ " (133) extension jambs and trim to fit.

Casement Head & Seat Boards



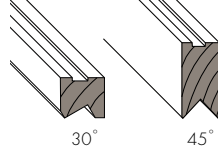
Head and seat boards are available in unfinished pine, maple, oak and prefinished white, dark bronze and black.

For 30° and 45° bay windows, head and seat boards are available in $\frac{1}{16}$ " (1.5) increments between $4\frac{9}{16}$ " (116) and $7\frac{1}{8}$ " (181).

For box bay and bow windows, head and seat boards are available in $\frac{1}{16}$ " (1.5) increments between $5\frac{1}{4}$ " (133) and $7\frac{1}{8}$ " (181). For wall depths less than $5\frac{1}{4}$ " (133), order $5\frac{1}{4}$ " (133) head and seat boards and trim to fit.

DOUBLE-HUNG FRAME

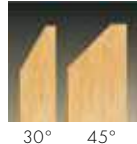
Double-Hung Extension Jamb & Extension Jamb Adaptors



Extension jambs and extension jamb adaptors are available in unfinished pine and prefinished white, dark bronze and black.

Jamb depth of the unit plus extension jamb adaptor is $4\frac{1}{2}$ " (114). Extension jambs are available in $\frac{1}{16}$ " (1.5) increments between $5\frac{1}{4}$ " (133) and $7\frac{1}{8}$ " (181). Some sizes may be veneered.

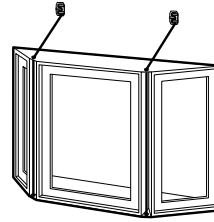
Double-Hung Head & Seat Boards



Head and seat boards are available in unfinished pine, maple, oak and prefinished white, dark bronze and black. Available in $\frac{1}{16}$ " (1.5) increments to match wall thicknesses between $5\frac{1}{4}$ " (133) and $7\frac{1}{8}$ " (181). Some sizes may be veneered.

INSTALLATION

Cable Support



A cable provides additional support. Recommended for installations that extend out from the structure without a framed support wall beneath the unit. Each cable within the system can support a maximum load of 500 lbs/227 kg. If the section of the window unit requiring support exceeds 1000 lbs/554 kg, additional support is necessary. Failure to use sufficient structural support could result in personal injury or damage to windows or other property.

⚠ WARNING

Proper support of projecting bow and bay windows is required, see installation instructions. Failure to do so may result in injury, product or property damage.

CAUTION:

- Painting and staining may cause damage to rigid vinyl.
- 400 Series windows in Terratone color may be painted any color lighter than Terratone color using quality oil-based or latex paint.
- Do not paint 400 Series windows in white, canvas, Sandtone, dark bronze, forest green or black exterior colors.
- Andersen does not warrant the adhesion or performance of homeowner-applied paint over vinyl or other factory-coated surfaces.
- For vinyl painting instructions and preparation, contact your Andersen supplier.
- Do not paint weatherstrip.
- Creosote-based stains should not come in contact with Andersen products.
- Abrasive cleaners or solutions containing corrosive solvents should not be used on Andersen products.

BAY & BOW WINDOWS

Table of Casement 30° Angle Bay Windows

Projection		13 3/4" (349)	13 3/4" (349)	13 3/4" (349)	13 3/4" (349)	13 3/4" (349)
WIDTHS						
HEIGHTS	Bay Window Dimension	5'-10" (1778)	7'-9 7/8" (2384)	7'-9 7/8" (2384)	9'-9 3/4" (2991)	9'-9 3/4" (2991)
	Minimum Rough Opening	5'-9 1/8" (1756)	7'-9" (2362)	7'-9" (2362)	9'-8 7/8" (2969)	9'-8 7/8" (2969)
	3'-1 7/16" (951)	30-C13-20	30-C23-20	30-P4030-20	30-C33-20	30-P6030-20
	3'-2" (965)					
	3'-6 5/16" (1075)	30-C135-20	30-C235-20	30-P4035-20	30-C335-20	30-P6035-20
	3'-6 7/8" (1089)					
	4'-1 1/2" (1257)	30-C14-20	30-C24-20	30-P4040-20	30-C34-20	30-P6040-20
	4'-2" (1270)					
	4'-6 5/16" (1380)	30-C145-20	30-C245-20	30-P4045-20	30-C345-20	30-P6045-20
	4'-6 7/8" (1394)					
	5'-1 3/8" (1559)	30-C15-20	30-C25-20	30-P4050-20	30-C35-20	30-P6050-20
	5'-1 7/8" (1572)					
	5'-6 5/16" (1684)	30-C155-20	30-C255-20	30-P4055-20		
	5'-6 7/8" (1699)					
	6'-1 3/8" (1864)	30-C16-20	30-C26-20	30-P4060-20		
	6'-1 7/8" (1876)					

Table of Casement 45° Angle Bay Windows

Projection		19 3/16" (487)	19 3/16" (487)	19 3/16" (487)	19 3/16" (487)	19 3/16" (487)
WIDTHS						
HEIGHTS	Bay Window Dimension	5'-4 1/8" (1629)	7'-3 7/8" (2232)	7'-3 7/8" (2232)	9'-3 3/4" (2838)	9'-3 3/4" (2838)
	Minimum Rough Opening	5'-2 5/8" (1591)	7'-2 1/2" (2197)	7'-2 1/2" (2197)	9'-2 3/8" (2804)	9'-2 3/8" (2804)
	3'-1 7/16" (951)	45-C13-20	45-C23-20	45-P4030-20	45-C33-20	45-P6030-20
	3'-2" (965)					
	3'-6 5/16" (1075)	45-C135-20	45-C235-20	45-P4035-20	45-C335-20	45-P6035-20
	3'-6 7/8" (1089)					
	4'-1 1/2" (1257)	45-C14-20	45-C24-20	45-P4040-20	45-C34-20	45-P6040-20
	4'-2" (1270)					
	4'-6 5/16" (1380)	45-C145-20	45-C245-20	45-P4045-20	45-C345-20	45-P6045-20
	4'-6 7/8" (1394)					
	5'-1 3/8" (1559)	45-C15-20	45-C25-20	45-P4050-20	45-C35-20	45-P6050-20
	5'-1 7/8" (1572)					
	5'-6 5/16" (1684)	45-C155-20	45-C255-20	45-P4055-20		
	5'-6 7/8" (1699)					
	6'-1 3/8" (1864)	45-C16-20	45-C26-20	45-P4060-20		
	6'-1 7/8" (1876)					

Custom-size windows are available in 1/8" (3) increments. See pages 104-105 for more information.



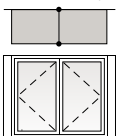
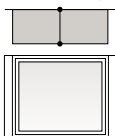
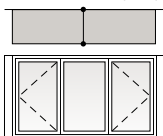
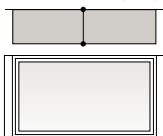
⚠ WARNING

Proper support of projecting bow and bay windows is required, see installation instructions. Failure to do so may result in injury, product or property damage.

In addition to venting shown in tables, other standard configurations are available. Choose left venting, right venting or stationary as viewed from the exterior.

- "Projection" refers to outside of the exterior sheathing to the outer edge of the window.
- "Window Dimension" always refers to outside frame-to-frame dimension.
- "Minimum Rough Opening" dimensions may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See pages 210-211 for more details.
- One Andersen® cable kit, with two cables, is included with the unit for proper installation. Each cable supports a maximum load of 500 lbs/227 kg; additional support is necessary for loads exceeding 1000 lbs/454 kg.
- Angle bay and bow windows include only the basic unit. Roof and other installation materials provided by other manufacturers.
- For walkout angle bay and bow window details and installation guidelines, contact your Andersen supplier.
- Dimensions in parentheses are in millimeters.

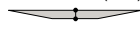
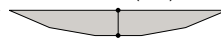
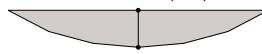
Table of Casement 90° Box Bay Windows

Projection		22 15/16" (583)	22 15/16" (583)	22 15/16" (583)	22 15/16" (583)
WIDTHS					
HEIGHTS	Bay Window Dimension	4'-8 1/4" (1429)	4'-8 1/4" (1429)	6'-8 1/8" (2035)	6'-8 1/8" (2035)
	Minimum Rough Opening	4'-1 5/8" (1260)	4'-1 5/8" (1260)	6'-1 1/2" (1867)	6'-1 1/2" (1867)
	3'-1 7/16" (951)	90-C23-15	90-P4030-15	90-C33-15	90-P6030-15
	3'-2" (965)				
	3'-6 5/16" (1075)	90-C235-15	90-P4035-15	90-C335-15	90-P6035-15
	3'-6 7/8" (1089)				
	4'-1 1/2" (1257)	90-C24-15	90-P4040-15	90-C34-15	90-P6040-15
	4'-2" (1270)				
	4'-6 5/16" (1380)	90-C245-15	90-P4045-15	90-C345-15	90-P6045-15
	4'-6 7/8" (1394)				
	5'-1 3/8" (1559)	90-C25-15	90-P4050-15	90-C35-15	90-P6050-15
	5'-1 7/8" (1572)				
	5'-6 5/16" (1684)	90-C255-15	90-P4055-15		
	5'-6 7/8" (1699)				
	6'-1 3/8" (1864)	90-C26-15	90-P4060-15		
	6'-1 7/8" (1876)				

Custom-size windows are available in 1/8" (3) increments. See pages 104-105 for more information.

In addition to venting shown in tables, other standard configurations are available. Choose left venting, right venting or stationary as viewed from the exterior.

Table of Casement 10° Bow Windows

Projection		5 9/16" (141)	9 13/16" (249)	14" (356)	20 5/16" (516)	26 3/8" (670)
WIDTHS						
HEIGHTS	Bow Window Dimension	6'-1 9/16" (1868)	8'-1 9/16" (2478)	10'-0 3/4" (3067)	11'-11 1/16" (3634)	13'-8 5/16" (4174)
	Minimum Rough Opening	6'-1 5/8" (1862)	8'-1 3/8" (2473)	10'-0 3/8" (3058)	11'-10 1/2" (3620)	13'-7 1/2" (4153)
	3'-1 7/16" (951)	C33 BOW	C43 BOW	C53 BOW	C63 BOW	C73 BOW
	3'-2" (965)					
	3'-6 5/16" (1075)	C335 BOW	C435 BOW	C535 BOW	C635 BOW	C735 BOW
	3'-6 7/8" (1089)					
	4'-1 1/2" (1257)	C34 BOW	C44 BOW	C54 BOW	C64 BOW	C74 BOW
	4'-2" (1270)					
	4'-6 5/16" (1380)	C345 BOW	C445 BOW	C545 BOW	C645 BOW	C745 BOW
	4'-6 7/8" (1394)					
	5'-1 3/8" (1559)	C35 BOW	C45 BOW	C55 BOW	C65 BOW	C75 BOW
	5'-1 7/8" (1572)					
	5'-6 5/16" (1684)	C355 BOW	C455 BOW	C555 BOW	C655 BOW	C755 BOW
	5'-6 7/8" (1699)					
	6'-1 3/8" (1864)	C36 BOW	C46 BOW	C56 BOW	C66 BOW	C76 BOW
	6'-1 7/8" (1876)					

⚠ WARNING

Proper support of projecting bow and bay windows is required, see installation instructions. Failure to do so may result in injury, product or property damage.

*"Projection" refers to outside of the exterior sheathing to the outer edge of the window.

*"Window Dimension" always refers to outside frame-to-frame dimension.

*"Minimum Rough Opening" dimensions may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See pages 210-211 for more details.

*One Andersen® cable kit, with two cables, is included with the unit for proper installation. Each cable supports a maximum load of 500 lbs/227 kg; additional support is necessary for loads exceeding 1000 lbs/454 kg.

*Angle bay and bow windows include only the basic unit. Roof and other installation materials provided by other manufacturers.

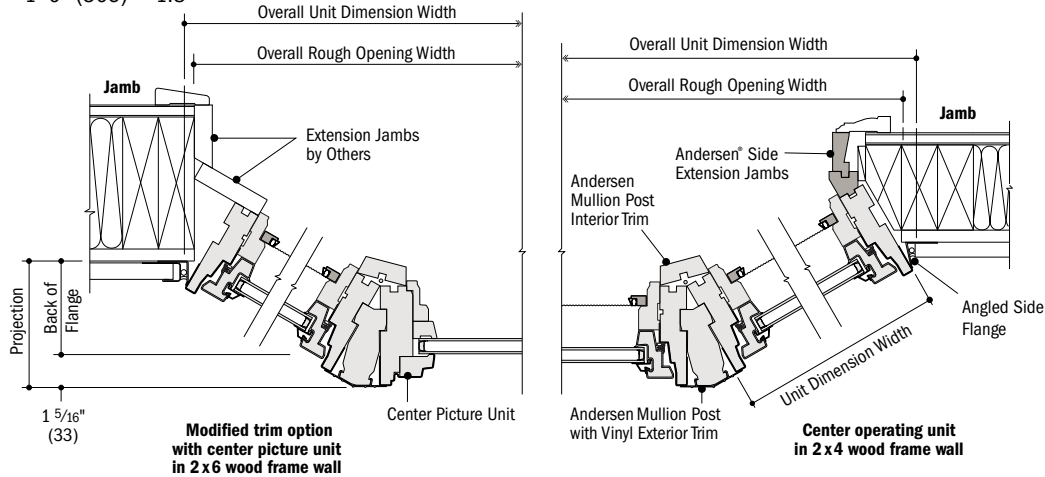
*For walkout angle bay and bow window details and installation guidelines, contact your Andersen supplier.

*Dimensions in parentheses are in millimeters.

BAY & BOW WINDOWS

Casement 30° Angle Bay Window Detail

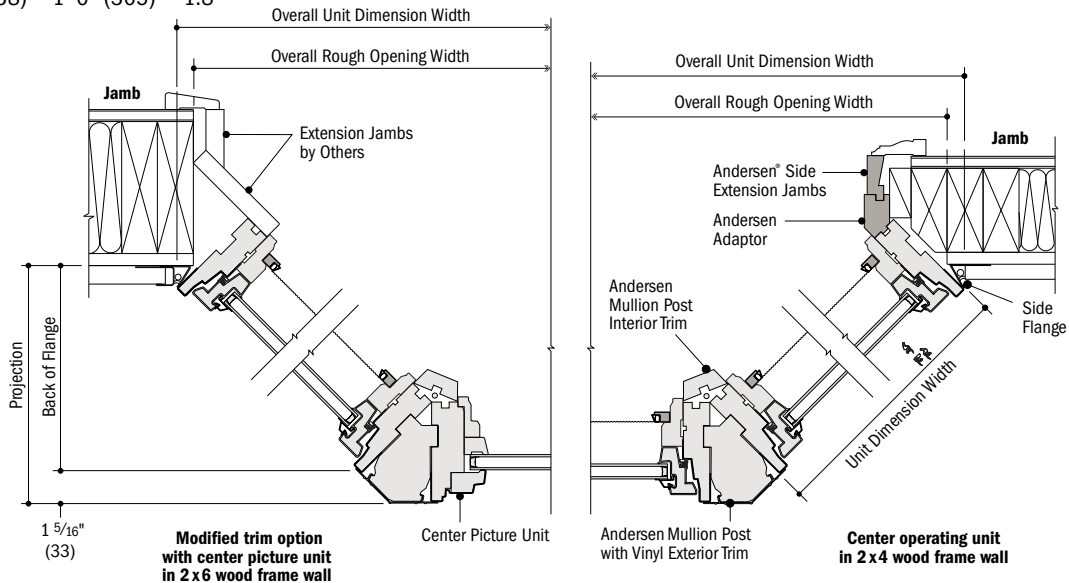
Scale 1 1/2" (38) = 1'-0" (305) – 1:8



Horizontal Section

Casement 45° Angle Bay Window Detail

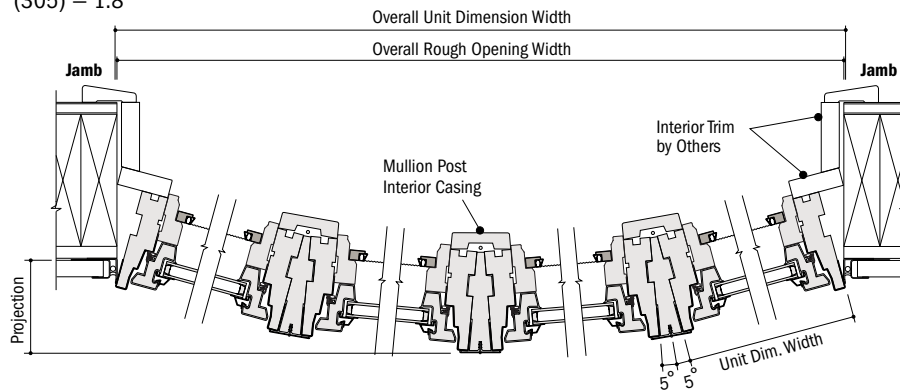
Scale 1 1/2" (38) = 1'-0" (305) – 1:8



Horizontal Section

Casement 10° Bow Window Detail

Scale 1 1/2" (38) = 1'-0" (305) – 1:8



Horizontal Section

* Light-colored areas are parts included with window. Dark-colored areas are additional Andersen® parts required to complete window assembly as shown.

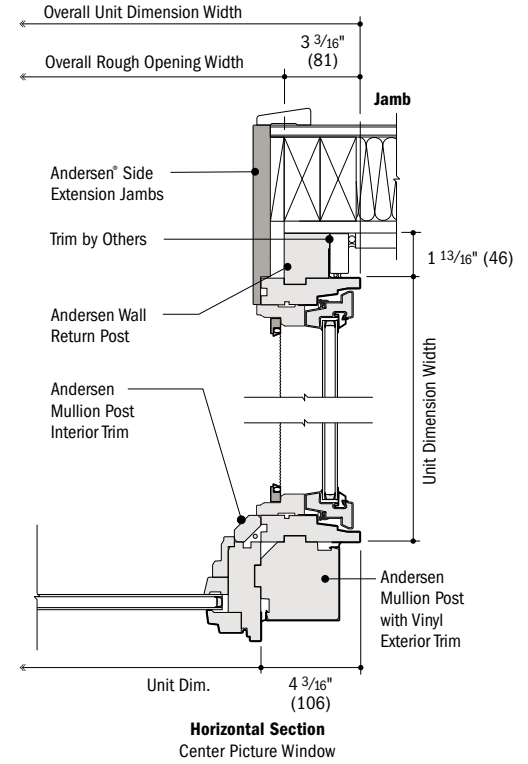
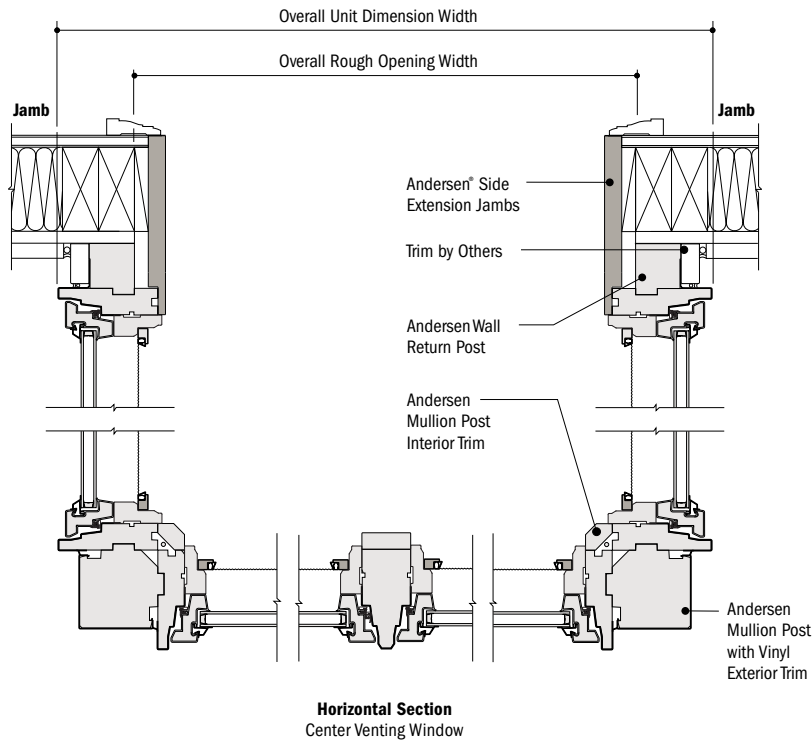
* Minimum rough openings may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See installation information on pages 210-211.

* Details are for illustration only and are not intended to represent product installation methods or materials. Refer to unit installation guides at andersenwindows.com.

* Dimensions in parentheses are in millimeters.

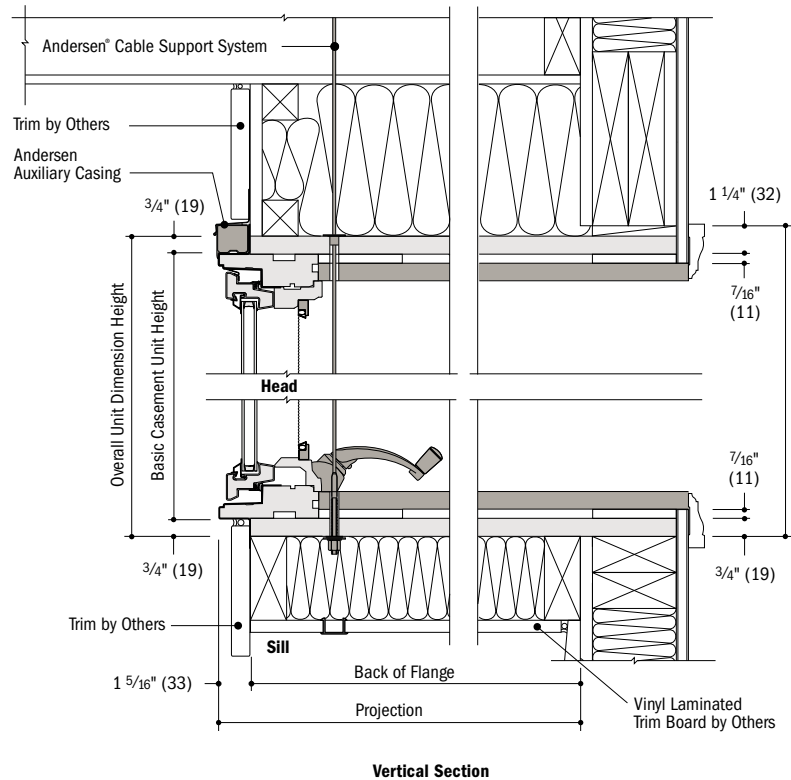
Casement 90° Box Bay Window Details

Scale 1 1/2" (38) = 1'-0" (305) – 1:8



Casement 30° and 45° Angle Bay, 10° Bow and 90° Box Bay Window Detail

Scale 1 1/2" (38) = 1'-0" (305) – 1:8



*Light-colored areas are parts included with window. Dark-colored areas are additional Andersen® parts required to complete window assembly as shown.

• **Minimum rough openings may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See installation information on pages 210-211.**

• Details are for illustration only and are not intended to represent product installation methods or materials. Refer to unit installation guides at andersenwindows.com.

• Dimensions in parentheses are in millimeters.

BAY & BOW WINDOWS



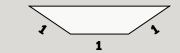
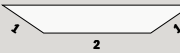
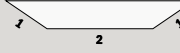
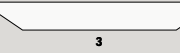
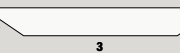
Individual window units are available custom sized in 1/8" (3) increments.

In addition to venting shown in tables, other standard configurations are available.

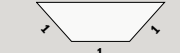
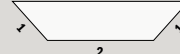
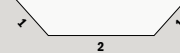
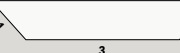
Choose left venting, right venting or stationary as viewed from the exterior.

Measurement guide can be found at andersenwindows.com/measure.

Custom Casement 30° Angle Bay Window Size and Projection Range

Sash Ratio Window Configuration	Center Window Venting Configuration	Bay Window Dimension				Projection		
		Minimum Width Inches/(mm)	Maximum Width Inches/(mm)	Minimum Height Inches/(mm)	Maximum Height Inches/(mm)	Minimum Inches/(mm)	Maximum Inches/(mm)	
1:1:1 	Venting or Stationary 	50" (1270)	101 1/2" (2578)	x	26 1/8" (664)	73 7/8" (1876)	10 1/4" (260)	19 5/8" (498)
1:2:1 	Venting or Stationary 	67 3/8" (1711)	137 1/2" (3493)	x	26 1/8" (664)	73 7/8" (1876)	10 1/4" (260)	19 5/8" (498)
1:2:1 	Picture 	70 7/8" (1800)	115 1/4" (2927)	x	38" (965)	73 7/8" (1876)	10 3/4" (273)	16 5/8" (422)
		115 1/4" (2927)	137 5/8" (3496)	x	38" (965)	61 7/8" (1571)	16 5/8" (422)	19 5/8" (498)
1:3:1 	Venting or Stationary 	84 1/2" (2146)	144" (3658)	x	26 1/8" (664)	73 7/8" (1876)	10 1/4" (260)	16 1/2" (419)
1:3:1 	Picture 	83 1/8" (2130)	97 1/8" (2486)	x	38" (965)	73 7/8" (1876)	10 1/4" (260)	11 5/8" (295)
		97 7/8" (2486)	116 7/8" (2969)	x	38" (965)	61 7/8" (1571)	11 5/8" (295)	13 5/8" (346)

Custom Casement 45° Angle Bay Window Size and Projection Range

Sash Ratio Window Configuration	Center Window Venting Configuration	Bay Window Dimension				Projection		
		Minimum Width Inches/(mm)	Maximum Width Inches/(mm)	Minimum Height Inches/(mm)	Maximum Height Inches/(mm)	Minimum Inches/(mm)	Maximum Inches/(mm)	
1:1:1 	Venting or Stationary 	45 3/4" (1162)	91 1/8" (2318)	x	26 1/8" (664)	73 7/8" (1876)	14 3/16" (360)	27 1/2" (699)
1:2:1 	Venting or Stationary 	63" (1600)	127 1/4" (3232)	x	26 1/8" (664)	73 7/8" (1876)	14 1/4" (362)	27 1/2" (699)
1:2:1 	Picture 	66" (1676)	106 7/8" (2715)	x	38" (965)	73 7/8" (1876)	14 7/8" (378)	23 1/4" (591)
		106 7/8" (2715)	127 1/4" (3232)	x	38" (965)	61 7/8" (1571)	23 1/4" (591)	27 1/2" (699)
1:3:1 	Venting or Stationary 	80 1/8" (2035)	144" (3658)	x	26 1/8" (664)	73 7/8" (1876)	14 1/4" (362)	24 5/16" (618)
1:3:1 	Picture 	79 5/8" (2023)	92 3/4" (2356)	x	38" (965)	73 7/8" (1876)	14 3/16" (360)	16 1/4" (413)
		92 3/4" (2356)	110 3/8" (2804)	x	38" (965)	61 7/8" (1571)	16 1/4" (413)	19" (483)

⚠ WARNING

Proper support of projecting bow and bay windows is required, see installation instructions. Failure to do so may result in injury, product or property damage.

• "Projection" refers to outside of the exterior sheathing to the outer edge of the window.

• "Window Dimension" always refers to outside frame-to-frame dimension.

• **"Minimum Rough Opening" dimensions may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See pages 210-211 for more details.**

• One Andersen® cable kit, with two cables, is included with the unit for proper installation. Each cable supports a maximum load of 500 lbs/227 kg; additional support is necessary for loads exceeding 1000 lbs/454 kg.

• Angle bay and bow windows include only the basic unit. Roof and other installation materials provided by other manufacturers.

• For walkout angle bay and bow window details and installation guidelines, contact your Andersen supplier.

• Refer to andersenwindows.com/measure for detailed instructions on how to properly measure for custom-size windows.

• Dimensions in parentheses are in millimeters.



Individual window units are available custom sized in 1/8" (3) increments.

In addition to venting shown in tables, other standard configurations are available.

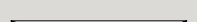
Choose left venting, right venting or stationary as viewed from the exterior.

Measurement guide can be found at andersenwindows.com/measure.

Custom Casement 90° Box Bay Window Size and Projection Range

Window Configuration	Center Window Venting Configuration	Bay Window Dimension					Flanker		Projection	
		Minimum Width Inches/(mm)	Maximum Width Inches/(mm)		Minimum Height Inches/(mm)	Maximum Height Inches/(mm)	Minimum Width Inches/(mm)	Maximum Width Inches/(mm)	Minimum Depth Inches/(mm)	Maximum Depth Inches/(mm)
	Picture 	38 1/4" (972)	61 7/8" (1572)	x	38" (965)	73 7/8" (1876)	17" (432)	35 7/8" (911)	21 1/2" (546)	40 3/8" (1026)
	Picture 	61 7/8" (1572)	74 1/8" (1883)	x	38" (965)	61 7/8" (1572)	17" (432)	35 7/8" (911)	21 1/2" (546)	40 3/8" (1026)
	Venting or Stationary 	36 3/8" (924)	74 1/4" (1886)	x	26 1/8" (664)	73 7/8" (1876)	17" (432)	35 7/8" (911)	21 1/2" (546)	40 3/8" (1026)
	Venting or Stationary 	53 1/2" (1359)	110 3/8" (2804)	x	26 1/8" (664)	73 7/8" (1876)	17" (432)	35 7/8" (911)	21 1/2" (546)	40 3/8" (1026)

Custom Casement 10° Bow Window Size and Projection Range

Window Configuration	Center Window Venting Configuration	Bow Window Dimension					Projection	
		Minimum Width Inches/(mm)	Maximum Width Inches/(mm)		Minimum Height Inches/(mm)	Maximum Height Inches/(mm)	Minimum Depth Inches/(mm)	Maximum Depth Inches/(mm)
3-Wide 	Venting or Stationary 	52 1/2" (1334)	108 7/8" (2765)	x	26 1/8" (664)	73 7/8" (1876)	4 3/8" (111)	7 5/8" (194)
4-Wide 	Venting or Stationary 	69 1/2" (1765)	143 7/8" (3654)	x	26 1/8" (664)	73 7/8" (1876)	7 3/8" (187)	13 7/8" (352)
5-Wide 	Venting or Stationary 	85 7/8" (2181)	164 1/4" (4172)	x	26 1/8" (664)	73 7/8" (1876)	10 3/8" (264)	18 5/8" (473)
6-Wide 	Venting or Stationary 	101 5/8" (2581)	164 1/4" (4172)	x	26 1/8" (664)	73 7/8" (1876)	14 7/8" (378)	23 3/16" (589)
7-Wide 	Venting or Stationary 	116 5/8" (2962)	164 1/4" (4172)	x	26 1/8" (664)	73 7/8" (1876)	19 3/16" (487)	26 3/8" (670)

⚠ WARNING

Proper support of projecting bow and bay windows is required, see installation instructions. Failure to do so may result in injury, product or property damage.

- "Projection" refers to outside of the exterior sheathing to the outer edge of the window.
- "Window Dimension" always refers to outside frame-to-frame dimension.
- **"Minimum Rough Opening" dimensions may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See pages 210-211 for more details.**
- One Andersen® cable kit, with two cables, is included with the unit for proper installation. Each cable supports a maximum load of 500 lbs/227 kg; additional support is necessary for loads exceeding 1000 lbs/454 kg.
- Angle bay and bow windows include only the basic unit. Roof and other installation materials provided by other manufacturers.
- For walkout angle bay and bow window details and installation guidelines, contact your Andersen supplier.
- Refer to andersenwindows.com/measure for detailed instructions on how to properly measure for custom-size windows.
- Dimensions in parentheses are in millimeters.

BAY & BOW WINDOWS

Table of Double-Hung 30° Angle Bay Window Sizes with Picture Window and 1-8 Flanking Windows

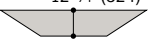
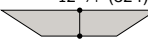
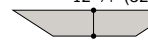
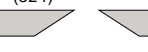
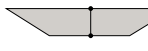
Projection		12 3/4" (324)	12 3/4" (324)	12 3/4" (324)	12 3/4" (324)	12 3/4" (324)	12 3/4" (324)
WIDTHS							
HEIGHTS	Bay Window Dimension	6'-8 15/16" (2056)	7'-0 15/16" (2157)	7'-6 5/8" (2302)	7'-10 5/8" (2403)	8'-6 5/8" (2607)	9'-2 5/8" (2810)
	Minimum Rough Opening	6'-8 1/8" (2035)	7'-0 1/8" (2137)	7'-5 3/4" (2280)	7'-9 3/4" (2381)	8'-5 3/4" (2584)	9'-1 3/4" (2788)
	4'-2 1/4" (1276)	30-30310-18		30-310310-18	30-42310-18	30-410310-18	
	4'-2 3/4" (1289)						
	4'-6 1/4" (1378)	30-3042-18	30-3442-18	30-31042-18	30-4242-18	30-41042-18	30-5642-18
	4'-6 3/4" (1391)						
	4'-10 1/4" (1480)	30-3046-18	30-3446-18	30-31046-18	30-4246-18	30-41046-18	30-5646-18
	4'-10 3/4" (1492)						
	5'-6 1/4" (1683)	30-3052-18		30-31052-18	30-4252-18	30-41052-18	
	5'-6 3/4" (1695)						
	5'-10 1/4" (1784)			30-31056-18	30-4256-18		
	5'-10 3/4" (1797)						
	6'-6 1/4" (1988)			30-31062-18	30-4262-18		
	6'-6 3/4" (2000)						

Table of Double-Hung 30° Angle Bay Window Sizes with Picture Window and 2-0 Flanking Windows

Projection		14 3/4" (375)	14 3/4" (375)	14 3/4" (375)	14 3/4" (375)	14 3/4" (375)	14 3/4" (375)
WIDTHS							
HEIGHTS	Bay Window Dimension	7'-3 7/8" (2232)	7'-7 7/8" (2334)	8'-1 9/16" (2478)	8'-5 9/16" (2580)	9'-1 9/16" (2783)	9'-9 9/16" (2986)
	Minimum Rough Opening	7'-3" (2210)	7'-7" (2311)	8'-0 3/4" (2457)	8'-4 3/4" (2559)	9'-0 3/4" (2762)	9'-8 3/4" (2965)
	4'-2 1/4" (1276)	30-30310-20		30-310310-20	30-42310-20	30-410310-20	
	4'-2 3/4" (1289)						
	4'-6 1/4" (1378)	30-3042-20	30-3442-20	30-31042-20	30-4242-20	30-41042-20	30-5642-20
	4'-6 3/4" (1391)						
	4'-10 1/4" (1480)	30-3046-20	30-3446-20	30-31046-20	30-4246-20	30-41046-20	30-5646-20
	4'-10 3/4" (1492)						
	5'-6 1/4" (1683)	30-3052-20		30-31052-20	30-4252-20	30-41052-20	
	5'-6 3/4" (1695)						
	5'-10 1/4" (1784)			30-31056-20	30-4256-20		
	5'-10 3/4" (1797)						
	6'-6 1/4" (1988)			30-31062-20	30-4262-20		
	6'-6 3/4" (2000)						

⚠ WARNING

Proper support of projecting bow and bay windows is required, see installation instructions. Failure to do so may result in injury, product or property damage.

Ordering Prefix:

WDH 400 Series Woodwright® Double-Hung Window
WPW 400 Series Woodwright Picture Window
TW 400 Series Tilt-Wash Double-Hung Window
DHP 400 Series Tilt-Wash Picture Window

*"Projection" refers to outside of the exterior sheathing to the outer edge of the window.

*"Window Dimension" always refers to outside frame-to-frame dimension.

*"Minimum Rough Opening" dimensions may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See pages 210-211 for more details.

*One Andersen® cable kit, with two cables, is included with the unit for proper installation. Each cable supports a maximum load of 500 lbs/227 kg; additional support is necessary for loads exceeding 1000 lbs/454 kg.

*Angle bay and bow windows include only the basic unit. Roof and other installation materials provided by other manufacturers.

*For walkout angle bay and bow window details and installation guidelines, contact your Andersen supplier.

*Dimensions in parentheses are in millimeters.

Table of Double-Hung 30° Angle Bay Window Sizes with 1-8 Flanking Double-Hung Windows

Projection		12 3/4" (324)	12 3/4" (324)	12 3/4" (324)	12 3/4" (324)	12 3/4" (324)
WIDTHS						
HEIGHTS		7'-0 15/16" (2157)	7'-10 5/8" (2403)	8'-6 5/8" (2599)	9'-2 5/8" (2810)	9'-10 5/8" (3013)
	Minimum Rough Opening	7'-0 1/8" (2137)	7'-9 3/4" (2581)	8'-5 3/4" (2584)	9'-1 3/4" (2788)	9'-9 3/4" (2991)
	4'-2 1/4" (1276)	30-34310-18	30-20310-2-18	30-24310-2-18	30-28310-2-18	30-30310-2-18
	4'-2 3/4" (1289)					
	4'-6 1/4" (1378)	30-3442-18	30-2042-2-18	30-2442-2-18	30-2842-2-18	30-3042-2-18
	4'-6 3/4" (1391)					
	4'-10 1/4" (1480)	30-3446-18	30-2046-2-18	30-2446-2-18	30-2846-2-18	30-3046-2-18
	4'-10 3/4" (1492)					
	5'-6 1/4" (1683)	30-3452-18	30-2052-2-18	30-2452-2-18	30-2852-2-18	30-3052-2-18
	5'-6 3/4" (1695)					
	5'-10 1/4" (1784)	30-3456-18	30-2056-2-18	30-2456-2-18	30-2856-2-18	30-3056-2-18
	5'-10 3/4" (1797)					
	6'-6 1/4" (1988)	30-3462-18	30-2062-2-18	30-2462-2-18	30-2862-2-18	30-3062-2-18
	6'-6 3/4" (2000)					

Table of Double-Hung 30° Angle Bay Window Sizes with 2-0 Flanking Double-Hung Windows

Projection		14 3/4" (375)	14 3/4" (375)	14 3/4" (375)	14 3/4" (375)	14 3/4" (375)
WIDTHS						
HEIGHTS		7'-7 7/8" (2334)	8'-5 9/16" (2580)	9'-1 9/16" (2783)	9'-9 9/16" (2986)	10'-5 9/16" (3189)
	Minimum Rough Opening	7'-7" (2311)	8'-4 3/4" (2559)	9'-0 3/4" (2762)	9'-8 3/4" (2965)	10'-4 3/4" (3169)
	4'-2 1/4" (1276)	30-34310-20	30-20310-2-20	30-24310-2-20	30-28310-2-20	30-30310-2-20
	4'-2 3/4" (1289)					
	4'-6 1/4" (1378)	30-3442-20	30-2042-2-20	30-2442-2-20	30-2842-2-20	30-3042-2-20
	4'-6 3/4" (1391)					
	4'-10 1/4" (1480)	30-3446-20	30-2046-2-20	30-2446-2-20	30-2846-2-20	30-3046-2-20
	4'-10 3/4" (1492)					
	5'-6 1/4" (1683)	30-3452-20	30-2052-2-20	30-2452-2-20	30-2852-2-20	30-3052-2-20
	5'-6 3/4" (1695)					
	5'-10 1/4" (1784)	30-3456-20	30-2056-2-20	30-2456-2-20	30-2856-2-20	30-3056-2-20
	5'-10 3/4" (1797)					
	6'-6 1/4" (1988)	30-3462-20	30-2062-2-20	30-2462-2-20	30-2862-2-20	30-3062-2-20
	6'-6 3/4" (2000)					

⚠ WARNING

Proper support of projecting bow and bay windows is required, see installation instructions. Failure to do so may result in injury, product or property damage.

Ordering Prefix:

WDH 400 Series Woodwright® Double-Hung Window
WPW 400 Series Woodwright Picture Window
TW 400 Series Tilt-Wash Double-Hung Window
DHP 400 Series Tilt-Wash Picture Window

*"Projection" refers to outside of the exterior sheathing to the outer edge of the window.

*"Window Dimension" always refers to outside frame-to-frame dimension.

*"Minimum Rough Opening" dimensions may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See pages 210-211 for more details.

*One Andersen® cable kit, with two cables, is included with the unit for proper installation. Each cable supports a maximum load of 500 lbs/227 kg; additional support is necessary for loads exceeding 1000 lbs/454 kg.

*Angle bay and bow windows include only the basic unit. Roof and other installation materials provided by other manufacturers.

*For walkout angle bay and bow window details and installation guidelines, contact your Andersen supplier.

*Dimensions in parentheses are in millimeters.

BAY & BOW WINDOWS

Table of Double-Hung 45° Angle Bay Window Sizes with Picture Window and 1-8 Flanking Windows

Projection		17 15/16" (456)	17 15/16" (456)	17 15/16" (456)	17 15/16" (456)	17 15/16" (456)	17 15/16" (456)
WIDTHS							
HEIGHTS	Bay Window Dimension	6'-4 7/16" (1942)	6'-8 7/16" (2043)	7'-2 1/8" (2188)	7'-6 1/8" (2289)	8'-2 1/8" (2492)	8'-10 1/8" (2696)
	Minimum Rough Opening	6'-3 1/8" (1908)	6'-7 1/8" (2010)	7'-0 3/4" (2153)	7'-4 3/4" (2254)	8'-0 3/4" (2457)	8'-8 3/4" (2661)
	4'-2 1/4" (1276)	45-30310-18		45-310310-18	45-42310-18	45-410310-18	
	4'-2 3/4" (1289)						
	4'-6 1/4" (1378)	45-3042-18	45-3442-18	45-31042-18	45-4242-18	45-41042-18	45-5642-18
	4'-6 3/4" (1391)						
	4'-10 1/4" (1480)	45-3046-18	45-3446-18	45-31046-18	45-4246-18	45-41046-18	45-5646-18
	4'-10 3/4" (1492)						
	5'-6 1/4" (1683)	45-3052-18		45-31052-18	45-4252-18	45-41052-18	
	5'-6 3/4" (1695)						
	5'-10 1/4" (1784)			45-31056-18	45-4256-18		
	5'-10 3/4" (1797)						
	6'-6 1/4" (1988)			45-31062-18	45-4262-18		
	6'-6 3/4" (2000)						

Table of Double-Hung 45° Angle Bay Window Sizes with Picture Window and 2-0 Flanking Windows

Projection		20 3/4" (527)	20 3/4" (527)	20 3/4" (527)	20 3/4" (527)	20 3/4" (527)	20 3/4" (527)
WIDTHS							
HEIGHTS	Bay Window Dimension	6'-10 1/8" (2086)	7'-2 1/8" (2188)	7'-7 13/16" (2332)	7'-11 13/16" (2434)	8'-7 13/16" (2637)	9'-3 13/16" (2840)
	Minimum Rough Opening	6'-8 3/4" (2051)	7'-0 3/4" (2153)	7'-6 1/2" (2299)	7'-10 1/2" (2400)	8'-6 1/2" (2604)	9'-2 1/2" (2807)
	4'-2 1/4" (1276)	45-30310-20		45-310310-20	45-42310-20	45-410310-20	
	4'-2 3/4" (1289)						
	4'-6 1/4" (1378)	45-3042-20	45-3442-20	45-31042-20	45-4242-20	45-41042-20	45-5642-20
	4'-6 3/4" (1391)						
	4'-10 1/4" (1480)	45-3046-20	45-3446-20	45-31046-20	45-4246-20	45-41046-20	45-5646-20
	4'-10 3/4" (1492)						
	5'-6 1/4" (1683)	45-3052-20		45-31052-20	45-4252-20	45-41052-20	
	5'-6 3/4" (1695)						
	5'-10 1/4" (1784)			45-31056-20	45-4256-20		
	5'-10 3/4" (1797)						
	6'-6 1/4" (1988)			45-31062-20	45-4262-20		
	6'-6 3/4" (2000)						

⚠ WARNING

Proper support of projecting bow and bay windows is required, see installation instructions. Failure to do so may result in injury, product or property damage.

WDH 400 Series Woodwright® Double-Hung Window
WPW 400 Series Woodwright Picture Window
TW 400 Series Tilt-Wash Double-Hung Window
DHP 400 Series Tilt-Wash Picture Window

*"Projection" refers to outside of the exterior sheathing to the outer edge of the window.

*"Window Dimension" always refers to outside frame-to-frame dimension.

*"Minimum Rough Opening" dimensions may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See pages 210-211 for more details.

*One Andersen® cable kit, with two cables, is included with the unit for proper installation. Each cable supports a maximum load of 500 lbs/227 kg; additional support is necessary for loads exceeding 1000 lbs/454 kg.

*Angle bay and bow windows include only the basic unit. Roof and other installation materials provided by other manufacturers.

*For walkout angle bay and bow window details and installation guidelines, contact your Andersen supplier.

*Dimensions in parentheses are in millimeters.

Table of Double-Hung 45° Angle Bay Window Sizes with 1-8 Flanking Windows

Projection		17 15/16" (456)	17 15/16" (456)	17 15/16" (465)	17 15/16" (456)	17 15/16" (456)
WIDTHS						
HEIGHTS	Bay Window Dimension	6'-8 7/16" (2043)	7'-6 1/8" (2289)	8'-2 1/8" (2492)	8'-10 1/8" (2696)	9'-6 1/8" (2899)
	Minimum Rough Opening	6'-7 1/8" (2010)	7'-4 7/8" (2257)	8'-0 3/4" (2445)	8'-8 3/4" (2661)	9'-4 3/4" (2864)
	4'-2 1/4" (1276)	45-34310-18	45-20310-2-18	45-24310-2-18	45-28310-2-18	45-30310-2-18
	4'-2 3/4" (1289)					
	4'-6 1/4" (1378)	45-3442-18	45-2042-2-18	45-2442-2-18	45-2842-2-18	45-3042-2-18
	4'-6 3/4" (1391)					
	4'-10 1/4" (1480)	45-3446-18	45-2046-2-18	45-2446-2-18	45-2846-2-18	45-3046-2-18
	4'-10 3/4" (1492)					
	5'-6 1/4" (1683)	45-3452-18	45-2052-2-18	45-2452-2-18	45-2852-2-18	45-3052-2-18
	5'-6 3/4" (1695)					
	5'-10 1/4" (1784)	45-3456-18	45-2056-2-18	45-2456-2-18	45-2856-2-18	45-3056-2-18
	5'-10 3/4" (1797)					
	6'-6 1/4" (1988)	45-3462-18	45-2062-2-18	45-2462-2-18	45-2862-2-18	45-3062-2-18
	6'-6 3/4" (2000)					

Table of Double-Hung 45° Angle Bay Window Sizes with 2-0 Flanking Windows

Projection		20 3/4" (257)	20 3/4" (257)	20 3/4" (257)	20 3/4" (257)	20 3/4" (257)
WIDTHS						
HEIGHTS	Bay Window Dimension	7'-2 1/8" (2188)	7'-11 13/16" (2434)	8'-7 13/16" (2637)	9'-3 13/16" (2840)	9'-11 13/16" (3043)
	Minimum Rough Opening	7'-0 3/4" (2153)	7'-10 1/2" (2400)	8'-6 1/2" (2604)	9'-2 1/2" (2807)	9'-10 1/2" (3010)
	4'-2 1/4" (1276)	45-34310-20	45-20310-2-20	45-24310-2-20	45-28310-2-20	45-30310-2-20
	4'-2 3/4" (1289)					
	4'-6 1/4" (1378)	45-3442-20	45-2042-2-20	45-2442-2-20	45-2842-2-20	45-3042-2-20
	4'-6 3/4" (1391)					
	4'-10 1/4" (1480)	45-3446-20	45-2046-2-20	45-2446-2-20	45-2846-2-20	45-3046-2-20
	4'-10 3/4" (1492)					
	5'-6 1/4" (1683)	45-3452-20	45-2052-2-20	45-2452-2-20	45-2852-2-20	45-3052-2-20
	5'-6 3/4" (1695)					
	5'-10 1/4" (1784)	45-3456-20	45-2056-2-20	45-2456-2-20	45-2856-2-20	45-3056-2-20
	5'-10 3/4" (1797)					
	6'-6 1/4" (1988)	45-3462-20	45-2062-2-20	45-2462-2-20	45-2862-2-20	45-3062-2-20
	6'-6 3/4" (2000)					

⚠ WARNING

Proper support of projecting bow and bay windows is required, see installation instructions. Failure to do so may result in injury, product or property damage.

Ordering Prefix:

WDH 400 Series Woodwright® Double-Hung Window
WPW 400 Series Woodwright Picture Window
TW 400 Series Tilt-Wash Double-Hung Window
DHP 400 Series Tilt-Wash Picture Window

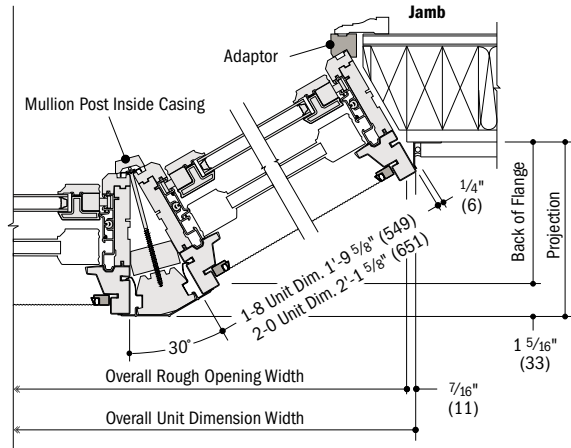
- * "Projection" refers to outside of the exterior sheathing to the outer edge of the window.
- * "Window Dimension" always refers to outside frame-to-frame dimension.
- * "Minimum Rough Opening" dimensions may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See pages 210-211 for more details.
- * One Andersen® cable kit, with two cables, is included with the unit for proper installation. Each cable supports a maximum load of 500 lbs/227 kg; additional support is necessary for loads exceeding 1000 lbs/454 kg.
- * Angle bay and bow windows include only the basic unit. Roof and other installation materials provided by other manufacturers.
- * For walkout angle bay and bow window details and installation guidelines, contact your Andersen supplier.
- * Dimensions in parentheses are in millimeters.

BAY & BOW WINDOWS

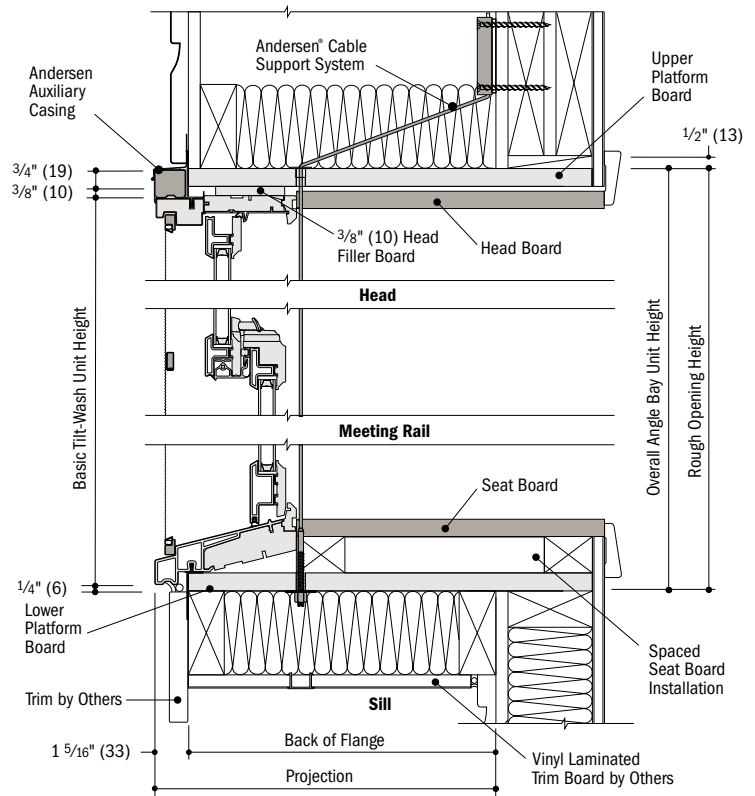
Double-Hung 30° Angle Bay Window Details

Scale 1 1/2" (38) = 1'-0" (305) – 1:8

Woodwright® double-hung 30° angle bay window shown. Tilt-wash double-hung 30° angle bay window installation is similar.



Horizontal Section

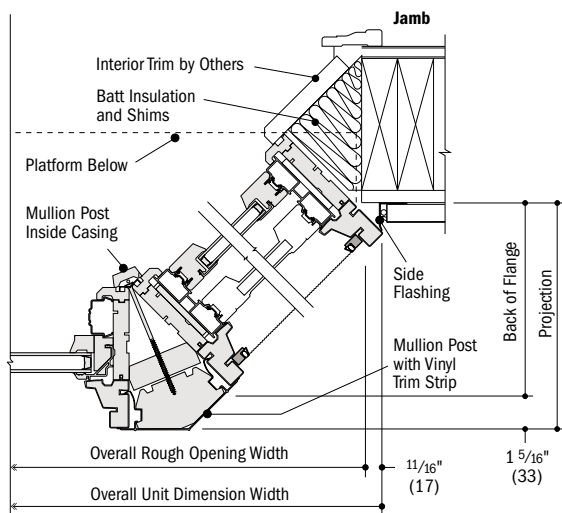


Vertical Section

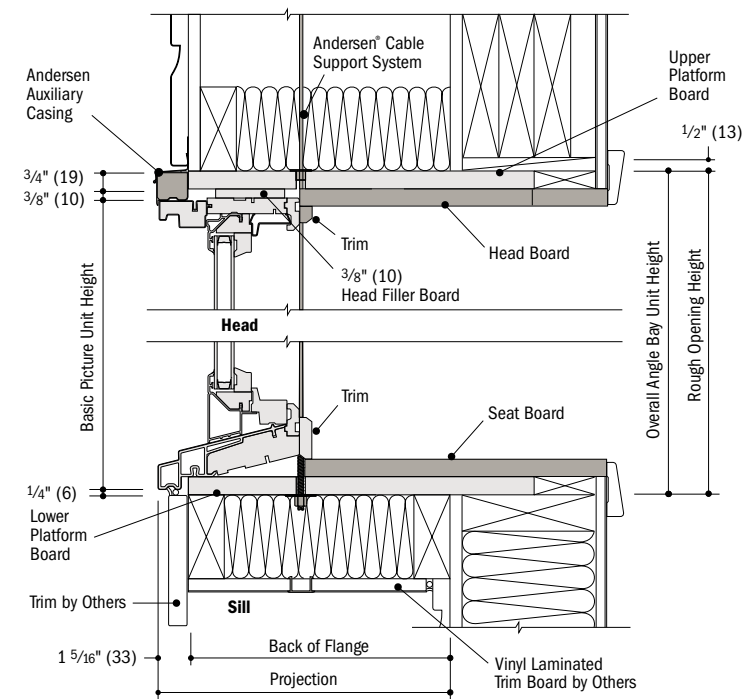
Double-Hung 45° Angle Bay Window Details

Scale 1 1/2" (38) = 1'-0" (305) – 1:8

Tilt-wash double-hung 30° angle bay window shown. Woodwright double-hung 30° angle bay window installation is similar.



Horizontal Section



Vertical Section

* Light-colored areas are parts included with window. Dark-colored areas are additional Andersen® parts required to complete window assembly as shown.

* **Minimum rough openings may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See installation information on pages 210-211.**

* Details are for illustration only and are not intended to represent product installation methods or materials. Refer to unit installation guides at andersenwindows.com.

* Dimensions in parentheses are in millimeters.



GLIDING WINDOWS

Tables of Sizes	114
Specifications	115
Grille Patterns	115
Window Details	116
Product Performance	197

FEATURES

FRAME

A The exterior of the frame is covered with fiberglass to maintain an attractive appearance while minimizing maintenance.

B Wood frame members are treated with a water-repellent preservative for long-lasting* protection and performance.

C Flexible bulb weatherstrip and spring-tension vinyl are installed at the factory, and help provide a tight seal between the sash and frame.

D Fold-out-and-lock installation flanges accommodate 4 1/2" (114) and 4 1/8" (105) wall construction.

SASH

E For improved ventilation, both sash are operable. Rigid vinyl encases the entire sash. A vinyl weld protects each sash corner for superior weathertightness to maintain an attractive appearance and minimize maintenance.

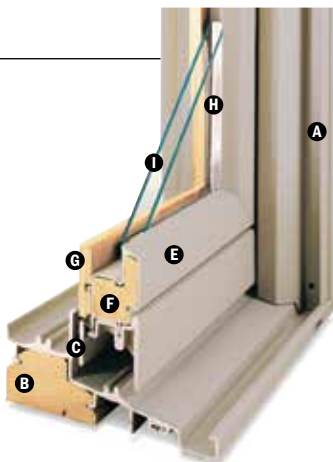
F Natural wood sash members help provide excellent structural stability and energy efficiency.

G Interior stops are unfinished pine. Low-maintenance prefinished white, Sandtone, dark bronze and black** interiors are also available.

Delrin® Glides



Teflon®-infused Delrin glides are self-lubricating and require only 8 lbs./3.6 kg of force to operate. A stainless steel spring within the glide provides years* of reliable operation – even in harsh environments.



GLASS

H In addition to stainless steel glass spacers, black or white glass spacers are now available to allow the spacer to blend in with the unit color.

I High-Performance options include:

- Low-E4® glass
- Low-E4 HeatLock® glass
- Low-E4 SmartSun™ glass
- Low-E4 SmartSun HeatLock glass
- Low-E4 Sun glass

Tempered and other glass options are available. Contact your Andersen supplier.

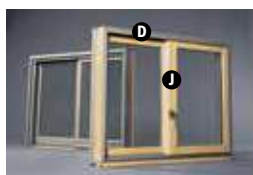
A removable translucent film helps shield the glass from damage during delivery and construction, and simplifies finishing at the job site.

Patterned Glass

Patterned glass options are available. See page 12 for more details.

HARDWARE

Locking System



J For an added measure of security and increased weathertightness, the locking system pulls the sash firmly closed while pushing the sash tight to the side jambs. This lock is single-point on 2' (610) tall windows, two-point on 3' (914) tall windows, and three-point on 3'-6" (1067), 4' (1219) and 5' (1524) tall windows.

EXTERIOR & INTERIOR OPTIONS

EXTERIOR COLORS



INTERIOR OPTIONS



HARDWARE OPTIONS Sold Separately



Rotating Sash Handle

Antique Brass | Black | Bright Brass
Brushed Chrome | Distressed Bronze
Distressed Nickel | Oil Rubbed Bronze
Polished Chrome | **Satin Nickel**
Stone | White

Bold name denotes finish shown.

HARDWARE FINISHES



*Visit andersenwindows.com/warranty for details.

**Sandtone interior available with Sandtone, canvas, Terratone, dark bronze and black exteriors.

†Products with white, dark bronze and black interiors have matching exteriors.

"Delrin" and "Teflon" are registered trademarks of E.I. du Pont de Nemours and Company.

Dimensions in parentheses are in millimeters.

Printing limitations prevent exact replication of colors and finishes. See your Andersen supplier for actual color and finish samples.

Naturally occurring variations in grain, color and texture of wood make each window one of a kind. All wood interiors are unfinished unless a finish is specified.

Distressed bronze and oil rubbed bronze are "living" finishes that will change with time and use.

ACCESSORIES Sold Separately

FRAME

Extension Jamb



Standard jamb depth is 4 9/16" (116). Extension jambs are available in unfinished pine, or prefinished white, dark bronze and black. Some sizes may be veneered.

Factory-applied and non-applied interior extension jambs are available in 1/16" (1.5) increments between 5 1/16" (129) and 7 1/8" (181).

HARDWARE

Passive Sash Handle



Attaches to the passive sash to aid in operation. Available in Sandtone.

Window Opening Control Device



A window opening control device is available, which limits sash travel to less than 4" (102) when the window is first opened. Available in factory applied, or as a field-applied kit in stone or white. Device shown above on a 200 Series gliding window.

INSECT SCREENS

Choose fixed, full insect screens or gliding pass-through insect screens. Frames are available in colors to match product exteriors.

TruScene® Insect Screens

Andersen® TruScene insect screens let in over 25% more fresh air* and provide 50% greater clarity than conventional Andersen insect screens, all while keeping out unwanted small insects.

Conventional Insect Screens

Conventional insect screens have charcoal powder-coated aluminum screen mesh.

GRILLES

Grilles are available in a variety of configurations and widths. For gliding window grille patterns, see page 115.

EXTERIOR TRIM

Available with Andersen exterior trim. See exterior trim section starting on page 175.

CAUTION:

- Painting and staining may cause damage to rigid vinyl.
- 400 Series windows in Terratone color may be painted any color lighter than Terratone color using quality oil-based or latex paint.
- Do not paint 400 Series windows in white, canvas, Sandtone, dark bronze, forest green or black exterior colors.
- Andersen does not warrant the adhesion or performance of homeowner-applied paint over vinyl or other factory-coated surfaces.
- For vinyl painting instructions and preparation, contact your Andersen supplier.
- Do not paint weatherstrip.
- Creosote-based stains should not come in contact with Andersen products.
- Abrasive cleaners or solutions containing corrosive solvents should not be used on Andersen products.

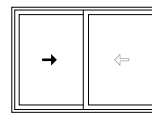
*TruScene insect screens let in over 25% more fresh air than standard Andersen fiberglass insect screens.
 Dimensions in parentheses are in millimeters.

GLIDING WINDOWS

Table of Gliding Window Sizes

Scale $\frac{1}{8}"$ (3) = 1'-0" (305) – 1:96

Window Dimension	2'-11 $\frac{1}{4}"$ (895)	3'-11 $\frac{1}{4}"$ (1200)	4'-11 $\frac{1}{4}"$ (1505)	5'-11 $\frac{1}{4}"$ (1810)
Minimum Rough Opening	3'-0" (914)	4'-0" (1219)	5'-0" (1524)	6'-0" (1829)
Unobstructed Glass (single sash only)	12 $\frac{9}{16}"$ (319)	18 $\frac{9}{16}"$ (472)	24 $\frac{9}{16}"$ (624)	30 $\frac{9}{16}"$ (776)
1'-10 $\frac{1}{4}"$ (565)	1'-11" (584)	1'-11" (584)	1'-11" (584)	1'-11" (584)
2'-11 $\frac{1}{4}"$ (895)	3'-0" (914)	3'-0" (914)	3'-0" (914)	3'-0" (914)
3'-5 $\frac{1}{4}"$ (1048)	3'-6" (1067)	3'-6" (1067)	3'-6" (1067)	3'-6" (1067)
3'-11 $\frac{1}{4}"$ (1200)	4'-0" (1219)	4'-0" (1219)	4'-0" (1219)	4'-0" (1219)
4'-11 $\frac{1}{4}"$ (1505)	5'-0" (1524)	5'-0" (1524)	5'-0" (1524)	5'-0" (1524)



Active Passive

Viewed from the exterior. Passive sash will open after active sash has been opened.

Grille patterns shown on page 115.

* "Window Dimension" always refers to outside frame-to-frame dimension.

* "Minimum Rough Opening" dimensions may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See pages 210-211 for more details.

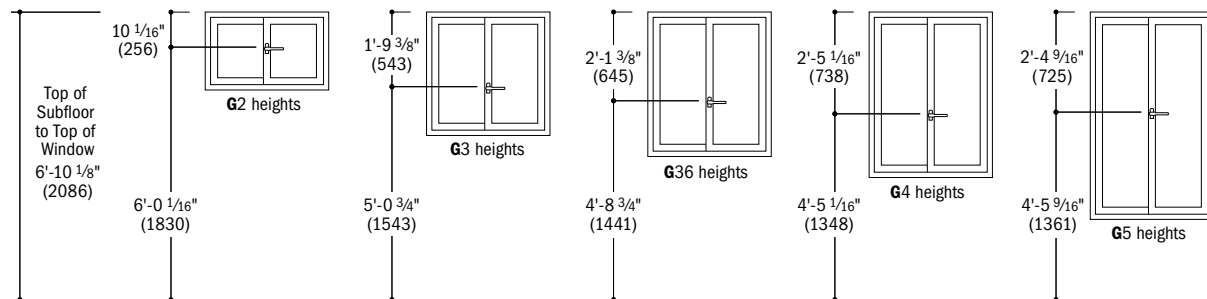
* Dimensions in parentheses are in millimeters.

◊ Meet or exceed clear opening area of 5.7 sq. ft. or 0.53 m², clear opening width of 20" (508) and clear opening height of 24" (610). See table on page 115.

Handle Location

Operational force of handle is equal to 8 lbs/3.6 kg.

Dimensions shown are from top of handle in open position.



* Dimensions in parentheses are in millimeters.

Gliding Window Opening and Area Specifications

Window Number	Clear Opening Area Sq. Ft./ (m ²)		Clear Opening in Full Open Position		Glass Area Sq. Ft./ (m ²)	Vent Area Sq. Ft./ (m ²)	Top of Subfloor to Top of Sill Parting Stop Inches/(mm)	Overall Window Area Sq. Ft./ (m ²)
			Width Inches/(mm)	Height Inches/(mm)				
G32	1.70	(0.16)	14 9/32" (363)	17 1/8" (435)	2.5 (0.23)	1.70 (0.16)	62 9/16" (1589)	5.45 (0.51)
G33	3.00	(0.28)	14 9/32" (363)	30 1/8" (765)	4.7 (0.44)	3.00 (0.28)	49 9/16" (1259)	8.63 (0.80)
G336	3.58	(0.33)	14 9/32" (363)	36 1/8" (918)	5.7 (0.53)	3.58 (0.33)	43 9/16" (1107)	10.10 (0.94)
G34	4.18	(0.39)	14 9/32" (363)	42 1/8" (1070)	6.8 (0.63)	4.18 (0.39)	37 9/16" (954)	11.57 (1.08)
G35	5.40	(0.50)	14 9/32" (363)	54 1/8" (1375)	8.9 (0.83)	5.40 (0.50)	25 9/16" (649)	14.50 (1.35)
G42	2.40	(0.22)	20 9/32" (515)	17 1/8" (435)	3.6 (0.33)	2.40 (0.22)	62 9/16" (1589)	7.30 (0.68)
G43	4.40	(0.41)	20 9/32" (515)	30 1/8" (765)	7.0 (0.65)	4.40 (0.41)	49 9/16" (1259)	11.57 (1.08)
G436	5.10	(0.47)	20 9/32" (515)	36 1/8" (918)	8.5 (0.79)	5.10 (0.47)	43 9/16" (1107)	13.54 (1.26)
G44 ◊	6.00	(0.56)	20 9/32" (515)	42 1/8" (1070)	10.0 (0.93)	6.00 (0.56)	37 9/16" (954)	15.50 (1.44)
G45 ◊	7.62	(0.71)	20 9/32" (515)	54 1/8" (1375)	13.1 (1.22)	7.62 (0.71)	25 9/16" (649)	19.44 (1.81)
G52	3.13	(0.29)	26 9/32" (668)	17 1/8" (435)	4.8 (0.45)	3.13 (0.29)	62 9/16" (1589)	9.15 (0.85)
G53	5.50	(0.51)	26 9/32" (668)	30 1/8" (765)	9.2 (0.86)	5.50 (0.51)	49 9/16" (1259)	14.50 (1.35)
G536 ◊	6.60	(0.61)	26 9/32" (668)	36 1/8" (918)	11.3 (1.05)	6.60 (0.61)	43 9/16" (1107)	16.97 (1.58)
G54 ◊	7.70	(0.72)	26 9/32" (668)	42 1/8" (1070)	13.3 (1.24)	7.70 (0.72)	37 9/16" (954)	19.44 (1.81)
G55 ◊	9.90	(0.92)	26 9/32" (668)	54 1/8" (1375)	17.4 (1.62)	9.90 (0.92)	25 9/16" (649)	24.38 (2.27)
G62	3.84	(0.36)	32 9/32" (820)	17 1/8" (435)	6.0 (0.56)	3.84 (0.36)	62 9/16" (1589)	11.01 (1.02)
G63 ◊	6.75	(0.63)	32 9/32" (820)	30 1/8" (765)	11.5 (1.07)	6.75 (0.63)	49 9/16" (1259)	17.44 (1.62)
G636 ◊	8.10	(0.75)	32 9/32" (820)	36 1/8" (918)	14.0 (1.30)	8.10 (0.75)	43 9/16" (1107)	20.41 (1.90)
G64 ◊	9.44	(0.88)	32 9/32" (820)	42 1/8" (1070)	16.6 (1.54)	9.44 (0.88)	37 9/16" (954)	23.38 (2.17)
G65 ◊	12.13	(1.13)	32 9/32" (820)	54 1/8" (1375)	21.7 (2.02)	12.13 (1.13)	25 9/16" (649)	29.32 (2.72)

*Top of Subfloor to Top of Inside Sill Stop" is calculated based upon a structural header height of 6'-10 1/2" (2096).

*Dimensions in parentheses are in millimeters or square meters.

♦ Meet or exceed clear opening area of 5.7 sq. ft. or 0.53 m², clear opening width of 20" (508) and clear opening height of 24" (610).

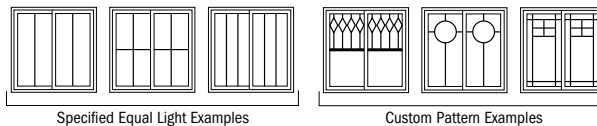
Grille Patterns

	Prairie A	Colonial	Modified Colonial	Modified Colonial with Simulated Meeting Rail	Tall Fractional	Tall Fractional with Simulated Meeting Rail	Short Fractional	Short Fractional with Simulated Meeting Rail
Gliding								

Number of lights and overall pattern varies with window size. Patterns not available in all configurations.

Specified equal light and custom patterns are also available. For more grille options, see page 14 or visit

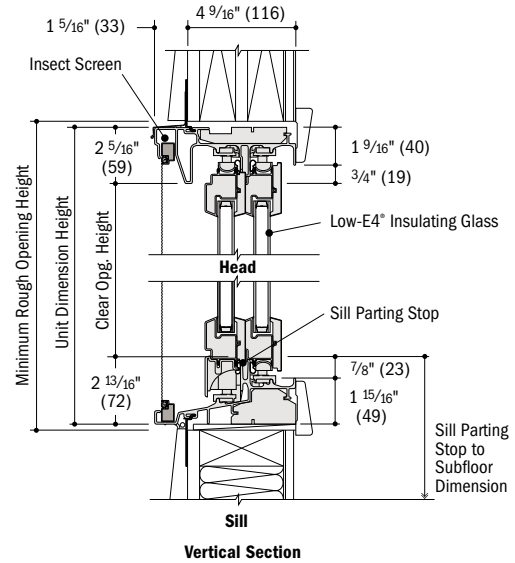
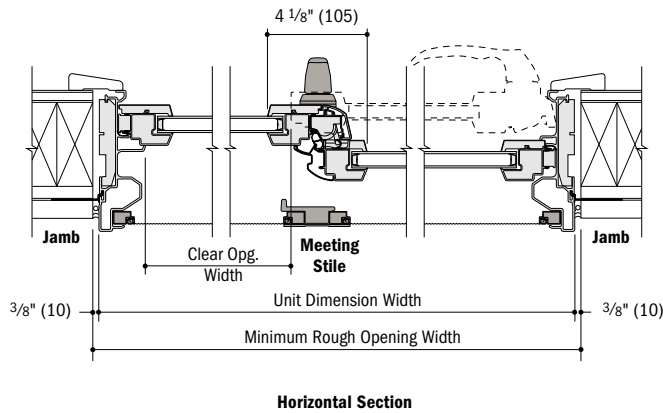
andersenwindows.com/grilles.



GLIDING WINDOWS

Gliding Window Details

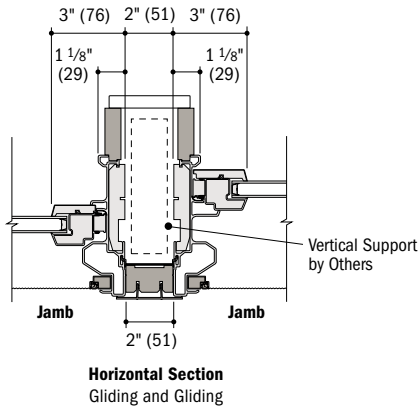
Scale 1 1/2" (38) = 1'-0" (305) – 1:8



Separate Rough Openings Detail

Scale 1 1/2" (38) = 1'-0" (305) – 1:8

To meet structural requirements or to achieve a wider joined appearance, windows may be installed into separate rough openings having vertical support (by others) in combination with Andersen® exterior filler and exterior vinyl trim.



• Light-colored areas are parts included with window. Dark-colored areas are additional Andersen® parts required to complete window assembly as shown.

• **Minimum rough openings may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See installation information on pages 210-211.**

• Details are for illustration only and are not intended to represent product installation methods or materials. Refer to product installation guides at andersenwindows.com.

• Consult with an architect or structural engineer regarding minimum requirements for structural support members between adjacent rough openings.

• Dimensions in parentheses are in millimeters.

SPECIALTY WINDOWS

Half Circle, Quarter Circle, Eyebrow,
 Elliptical, Circle, Oval, Extended Gothic,
 Octagon, Monumental Circle and
 Monumental Quarter Circle Windows

Tables of Sizes	120-123
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Grille Patterns	122
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Custom Arch Windows	127
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**Arch, Springline™ &
 Springline Flanker Windows**

Tables of Sizes	128-133
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Flexiframe® Windows

Shapes & Custom Sizing	134
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Combination Designs	181
Product Performance	197

CUSTOM SIZING
 in 1/8" (3) increments



Dimensions in parentheses are in millimeters.



FEATURES

FRAME

A Wood frame members are treated with a water-repellent preservative for long-lasting* protection and performance. Radii are made of laminated pine, offering improved strength and appearance.

B The lined sections of the jamb and sill on eyebrow, extended gothic, octagon, monumental, Flexiframe®, custom arch and arch windows are covered with a low-maintenance, fiberglass-reinforced composite. The arched head members and Springline™ units are covered with stretch-formed aluminum.

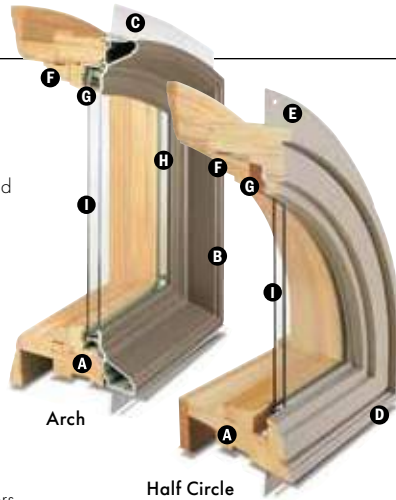
C The vinyl installation flange on eyebrow, extended gothic, octagon, monumental, Flexiframe, custom arch, arch and Springline units extends 1 1/4" (32) around the entire perimeter of the unit. It helps seal the unit to the structure.

D Circle, half circle, quarter circle, elliptical and oval windows are covered with a rigid vinyl cladding. Low-maintenance exterior cladding provides long-lasting* beauty.

E Rigid vinyl cladding on circle, half circle, quarter circle, elliptical and oval window frames forms a full-perimeter installation flange for securing the unit to the structure. It also helps maintain an attractive appearance while minimizing maintenance.

F Inside trim stop is made of unfinished pine. Arched trim stops are made with quality, full-length laminated pine. Units are shipped with the trim stops tacked on, so removal is easy – expediting finishing and joining procedures.

G Unfinished interior wood glazing stops help secure the glass in place. Arched glazing stops are made with full-length laminated pine.



EXTERIOR & INTERIOR OPTIONS

EXTERIOR COLORS



INTERIOR OPTIONS



GLASS

H In addition to stainless steel glass spacers, black or white glass spacers are now available to allow the spacer to blend in with the unit color.

I High-Performance options include:

- Low-E4® glass
- Low-E4 HeatLock® glass
- Low-E4 SmartSun™ glass
- Low-E4 SmartSun HeatLock glass
- Low-E4 Sun glass

Tempered and other glass options are available. Contact your Andersen supplier.

A removable translucent film helps shield the glass from damage during delivery and construction, and simplifies finishing at the job site.

Patterned Glass

Patterned glass options are available. See page 12 for more details.



Specialty windows are available with Stormwatch® Protection. Visit andersenwindows.com/coastal for more details.



Circle/Oval



Springline™



Flexiframe®

*Visit andersenwindows.com/warranty for details.

**Products with dark bronze and black interiors have matching exteriors.

Dimensions in parentheses are in millimeters.

Printing limitations prevent exact replication of colors. See your Andersen supplier for actual color samples.

Naturally occurring variations in grain, color and texture of wood make each window one of a kind. All wood interiors are unfinished unless a finish is specified.

ACCESSORIES Sold Separately

FRAME

Extension Jamb

Specify extension jambs when ordering.

Standard unit jamb depth is 2 7/8" (73), except for elliptical and double-hung half circle units, which are 4 1/2" (114).

Pine extension jambs are available for most products in 1/16" (1.5) increments between 4 9/16" (116) and 7 1/8" (181). Elliptical and double-hung half circle extension jambs are available between 5 1/16" (129) and 7 1/8" (181). Some sizes may be pine veneer.

Springline™ window extension jambs and transition blocks are applied when ordered with the unit (key component block is also applied to units with a 48" (1219) radius).

Extension Jamb Alignment for Joined Combinations

When joining 400 Series arch, Springline or Flexiframe® over casement windows or when joining arch, Springline or Flexiframe alongside awning windows, use Method A or Method B for extension jamb alignment. See page 135 for details.

Method A: Individually Framed

Specify Andersen® auxiliary extension jambs. Available for the following wall thicknesses: 4 9/16" (116), 5 1/4" (133), 6 9/16" (167) and 7 1/8" (181).

Method B: Perimeter Framed

Specify 1/4" (6) filler in pine or white. Requires modification of extension jambs.

CASING

Interior Arch Casing

Available in Colonial or Ranch styles. Arch casings come with transition blocks or plinth blocks, depending on the product. For easy integration and consistency, casing dimensions are consistent with Wood Moulding and Millwork Producers Association specifications. Available in pine, maple and oak.



2 1/4" (57) Colonial style WM366



2 1/2" (64) Colonial style WM351



3 1/2" (89) Colonial style WM444



2 1/4" (57) Ranch style WM324
2 1/2" (64) Ranch style WM315

Plinth Blocks

For enhancing casing transitions. Decorated with a radial sunburst, or use the reverse side flush face.



For arch windows, use 2 7/8" (73) x 4" (102) size plinth block with 2 1/4" (57) and 2 1/2" (64) casing. With 3 1/2" (89) casing, use 3 7/8" (98) x 5 1/4" (133).



For half circle, circle and oval windows, use 2 7/8" (73) size plinth block with 2 1/4" (57) and 2 1/2" (64) casing. With 3 1/2" (89) casing, use 3 7/8" (98).

Key Block



Excellent for creating unique trim designs or accents at arch casing transitions. A key block is an option for circle and oval windows.

Transition Blocks



Two transition blocks come with the interior arch casing extension jambs, providing a beautiful accent for circle and oval windows.

GLASS

Andersen Art Glass

Andersen art glass panels come in a variety of original patterns. See art glass section starting on page 173 for more information or visit andersenwindows.com/artglass.

GRILLES

Grilles are available in a variety of configurations and widths. For specialty window grille patterns, see pages 122 and 132.

EXTERIOR TRIM

Available with Andersen exterior trim. See exterior trim section starting on page 175.

CAUTION:

- Painting and staining may cause damage to rigid vinyl.
- 400 Series windows in Terratone color may be painted any color lighter than Terratone color using quality oil-based or latex paint.
- Do not paint 400 Series windows in white, canvas, Sandtone, dark bronze, forest green or black exterior colors.
- Andersen does not warrant the adhesion or performance of homeowner-applied paint over vinyl or other factory-coated surfaces.
- For vinyl painting instructions and preparation, contact your Andersen supplier.
- Do not paint weatherstrip.
- Creosote-based stains should not come in contact with Andersen products.
- Abrasive cleaners or solutions containing corrosive solvents should not be used on Andersen products.

SPECIALTY WINDOWS

Table of Double-Hung Half Circle and Eyebrow Window Sizes

Scale 1/8" (3) = 1'-0" (305) – 1:96

Window Dimension	2'-1 5/8"	2'-5 5/8"	2'-9 5/8"	3'-1 5/8"	3'-5 5/8"
	(651)	(752)	(854)	(956)	(1057)
Minimum Rough Opening	2'-2 1/8"	2'-6 1/8"	2'-10 1/8"	3'-2 1/8"	3'-6 1/8"
	(664)	(765)	(867)	(968)	(1070)
Unobstructed Glass (Half Circle)	20 3/8"	24 3/8"	28 3/8"	32 3/8"	36 3/8"
	(518)	(619)	(721)	(822)	(924)
Radius	12 13/16" (325)	14 13/16" (376)	16 13/16" (427)	18 13/16" (478)	20 13/16" (529)
					
1'-3 3/16" (386)	1'-5 3/16" (437)	1'-7 3/16" (487)	1'-9 3/16" (538)	1'-11 3/16" (589)	
1'-3 3/4" (400)	1'-5 3/4" (451)	1'-7 3/4" (502)	1'-9 3/4" (552)	1'-11 3/4" (603)	
10'-3/16" (259)	12'-3/16" (310)	14'-3/16" (360)	16'-3/16" (411)	18'-3/16" (462)	
CTN20	CTN24	CTN28	CTN30	CTN34	
		Unobstructed Glass (Eyebrow)	24 7/8"	26 1/8"	32 7/16"
			(632)	(664)	(824)
		Radius	18 3/4" (476)	24" (610)	24" (610)
		10 7/16" (265)	11" (279)	5 3/4" (146)	
					
		FCD28	FCD30	FCD34	
20210, 2032, 2036, 20310, 2042, 2046, 20410, 2052, 2056, 20510, 2062, 2072, 2076	24210, 2432, 2436, 24310, 2442, 2446, 24410, 2452, 2456, 24510, 2462, 2472, 2476	28210, 2832, 2836, 28310, 2842, 2846, 28410, 2852, 2856, 28510, 2862, 2872, 2876	30210, 3032, 3036, 30310, 3042, 3046, 30410, 3052, 3056, 30510, 3062, 3072, 3076	34210, 3432, 3436, 34310, 3442, 3446, 34410, 3452, 3456, 34510, 3462, 3472, 3476	

Table of Casement/Awning Half Circle, Quarter Circle and Eyebrow Window Sizes

Scale 1/8" (3) = 1'-0" (305) – 1:96

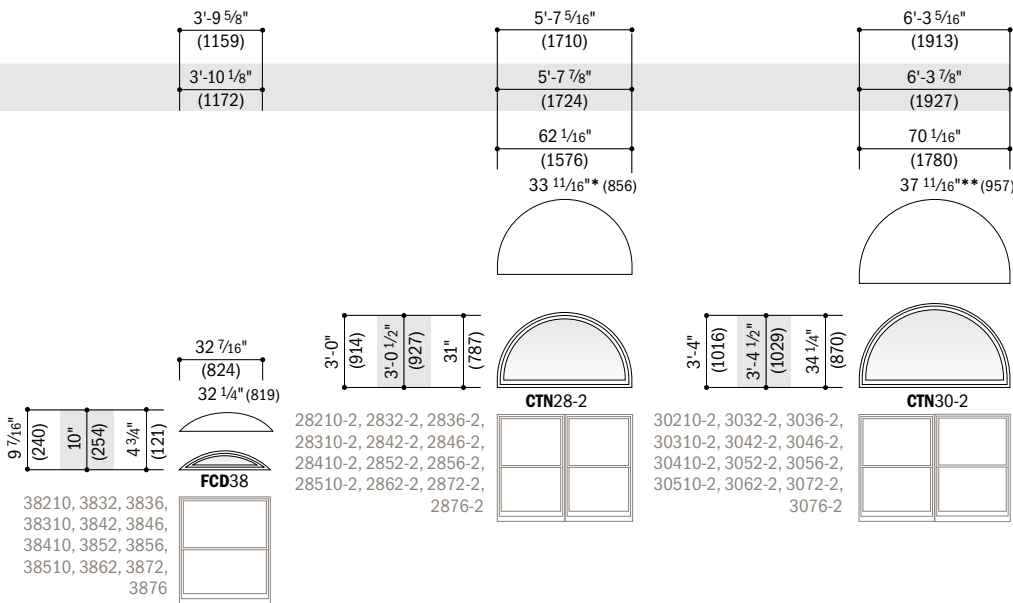
Window Dimension	2'-0 1/8"	2'-4 3/8"	2'-7 1/2"	2'-11 15/16"	4'-0"
	(613)	(721)	(800)	(913)	(1219)
Minimum Rough Opening	2'-0 5/8"	2'-4 7/8"	2'-8"	3'-0 1/2"	4'-0 1/2"
	(625)	(733)	(813)	(927)	(1232)
Unobstructed Glass (Half & Quarter Circle)	19 1/2"	23 3/4"	26 7/8"	31 5/16"	43 3/8"
	(495)	(603)	(683)	(795)	(1102)
Radius	12 1/16" (306)	14 3/16" (360)	15 3/4" (400)	18" (457)	24" (610)
					
1'-2 3/8" (365)	1'-4 1/2" (419)	1'-6" (458)	1'-8 1/4" (514)	2'-2 5/16" (668)	
1'-2 7/8" (378)	1'-5" (432)	1'-6 1/2" (470)	1'-8 3/4" (527)	2'-2 7/8" (683)	
9 3/4" (248)	11 7/8" (302)	13 7/16" (341)	15 5/8" (397)	21 11/16" (551)	
CTC1	CTCW1	CTCX1	CTCXW1	CTC2	
Radius	24" (610)	28 1/4" (718)	31 3/8" (797)	35 13/16" (910)	
					
2'-0 1/8" (613)	2'-4 3/8" (721)	2'-7 1/2" (800)	2'-11 15/16" (913)		
2'-0 5/8" (625)	2'-4 7/8" (733)	2'-8" (813)	3'-0 1/2" (927)		
19 1/2" (495)	23 3/4" (603)	26 7/8" (683)	31 5/16" (795)		
CTQC1	CTQCW1	CTQCX1	CTQA3		
C12, C125, C13, C135, C14, C145, C15, C155, C16, CTR2010, AR21, AN21, A21, AW21, A212, A213	CW12, CW125, CW13, CW135, CW14, CW145, CW15, CW155, CW16, CTR2410, AR251, AN251, A251, AW251, AX251	CX125, CX13, CX135, CX14, CX145, CX15, CX155, CX16, CTR2810, AR281, AN281, A281, AW281, AX281, AXW281	Unobstructed Glass (Eyebrow)	28 15/16" (735)	35 7/8" (911)
			Radius	18 3/4" (476)	32 1/4" (819)
			1'-1 3/8" (340)	1'-1 7/8" (352)	8 11/16" (221)
					
			FCCXW3	FCC2	
			CXW13, CXW135, CXW14, CXW145, CXW15, CXW155, CXW16, CTR3010, PTR3010, P3030, P3035, P3040, P3045, P3050, P3055, P3060, AR31, AN31, A31, AW31, AX31, AXW31, A335, A312, AXW312, A313, AP32V, PA3050, PA3060	C22, C225, C23, C235, C24, C245, C25, C255, C26, CTR4010, CTR22010, PTR4010, AR41, AN41, A41, AW41, AX41, AXW41, AR221, AN221, A221, AW221, P4030, P4035, P4040, P4045, P4050, P4055, P4060, AP24V, PA4060	

* "Window Dimension" always refers to outside frame-to-frame dimension.

* "Minimum Rough Opening" dimensions may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See pages 210-211 for more details.

* Dimensions in parentheses are in millimeters.

* Actual radius of 17 31/32" (456).



Compatible double-hung, casement, awning and picture windows are shown below specialty windows. Grille patterns shown on page 122.

Double-Hung Half Circle Window Area Specifications

Window Number	Glass Area Sq. Ft./ (m ²)
CTN20	1.1 (0.10)
CTN24	1.6 (0.15)
CTN28	2.2 (0.20)
CTN30	2.8 (0.26)
CTN34	3.6 (0.34)
CTN28-2	10.5 (0.98)
CTN30-2	13.4 (1.25)

Casement/Awning Half Circle Window Area Specifications

Window Number	Glass Area Sq. Ft./ (m ²)
CTC1	1.0 (0.09)
CTCW1	1.5 (0.14)
CTCXW1	2.7 (0.25)
CTC2	5.1 (0.47)
CTCW2	7.3 (0.68)
CTC3	12.3 (1.14)
CTCX1	2.0 (0.19)
CTCX2	9.3 (0.86)

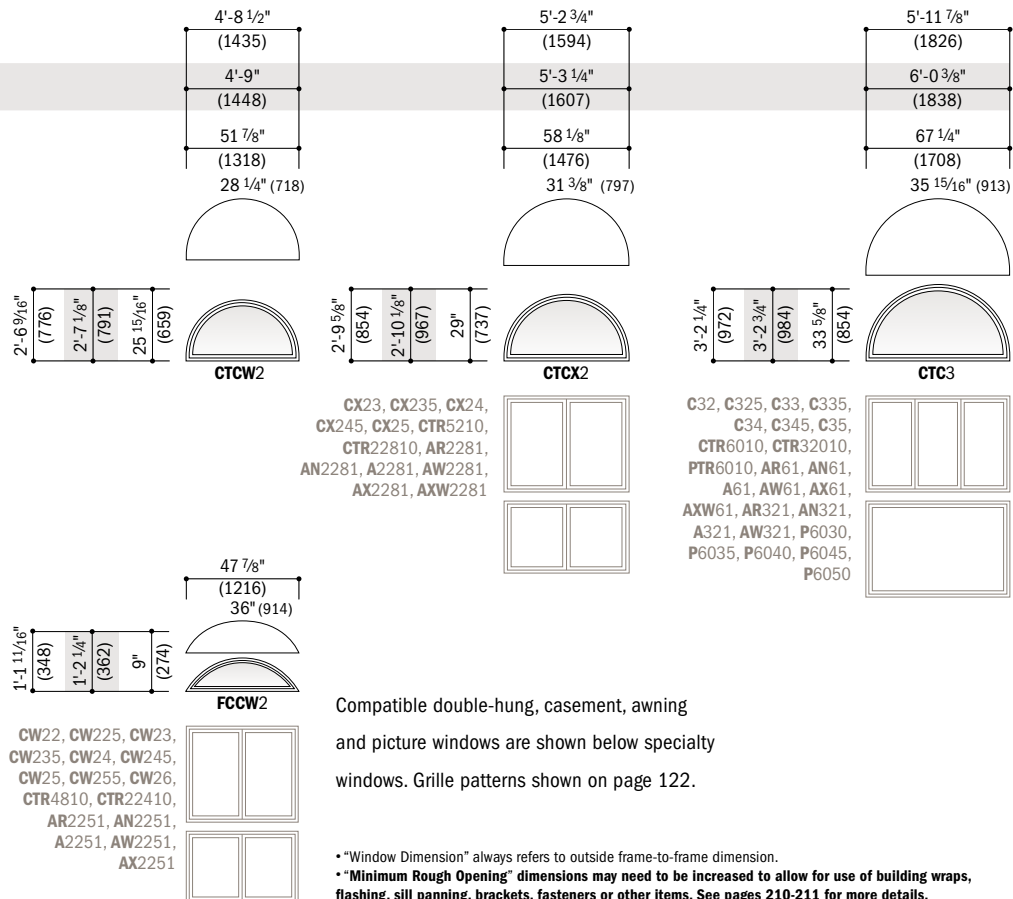
Quarter Circle Window Area Specifications

Window Number	Glass Area Sq. Ft./ (m ²)
CTQC1	1.9 (0.18)
CTQCW1	3.0 (0.28)
CTQA3	5.2 (0.48)
CTQCX1	3.8 (0.35)

Eyebrow Window Area Specifications

Window Number	Glass Area Sq. Ft./ (m ²)
FCD28	0.69 (0.06)
FCD30	0.54 (0.05)
FCD34	1.15 (0.11)
FCD38	0.84 (0.08)
FCCXW3	1.24 (0.12)
FCC2	1.02 (0.09)
FCCW2	2.78 (0.26)

* Dimensions in parentheses are in square meters.

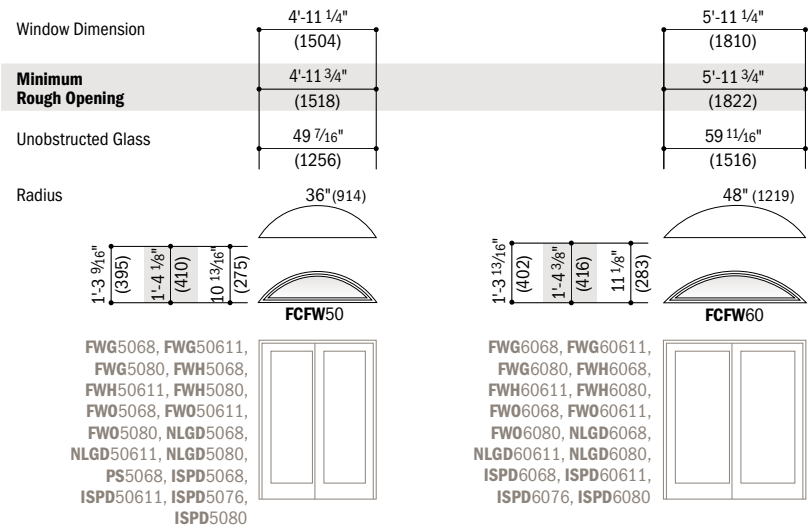


Compatible double-hung, casement, awning and picture windows are shown below specialty windows. Grille patterns shown on page 122.

- * "Window Dimension" always refers to outside frame-to-frame dimension.
- * "Minimum Rough Opening" dimensions may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See pages 210-211 for more details.
- * Dimensions in parentheses are in millimeters.
- * Actual radius of 33 21/32" (855).
- ** Actual radius of 37 21/32" (956).

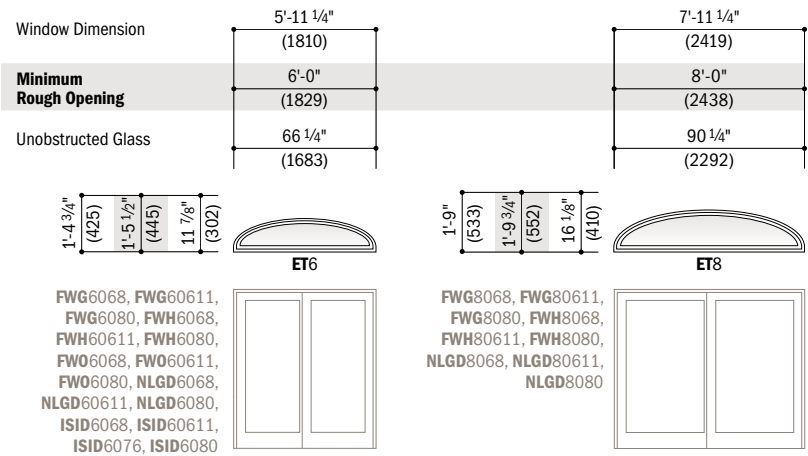
SPECIALTY WINDOWS

Table of Eyebrow Window Sizes – Patio Doors
Scale 1/8" (3) = 1'-0" (305) – 1:96



Compatible patio doors are shown below specialty windows. Grille patterns shown below.

Table of Elliptical Window Sizes – Patio Doors
Scale 1/8" (3) = 1'-0" (305) – 1:96



*"Window Dimension" always refers to outside frame-to-frame dimension.
* "Minimum Rough Opening" dimensions may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See pages 210-211 for more details.
* Dimensions in parentheses are in millimeters.

Eyebrow Window Area Specifications

Window Number	Glass Area Sq. Ft./ (m²)
FCFW50	2.57 (0.24)
FCFW60	3.15 (0.29)

Elliptical Window Area Specifications

Window Number	Glass Area Sq. Ft./ (m²)
ET6	4.3 (0.40)
ET8	8.0 (0.74)

Circle and Oval Window Area Specifications

Window Number	Glass Area Sq. Ft./ (m²)
CIR20	2.1 (0.20)
CIR24	3.0 (0.28)
CIR30	5.2 (0.48)
OVL1824	1.9 (0.18)
OVL2030	3.2 (0.30)
OVL3048	8.7 (0.81)

Extended Gothic and Octagon Window Area Specifications

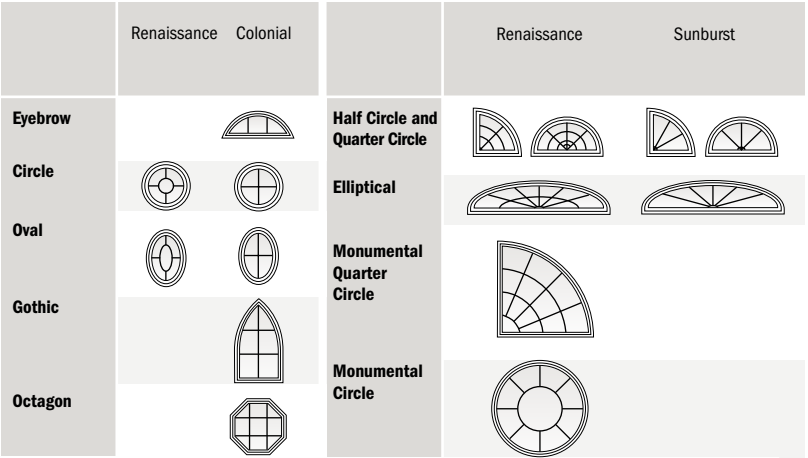
Window Number	Glass Area Sq. Ft./ (m²)
GT2036	4.01 (0.37)
GT2440	5.84 (0.54)
GT3046	8.78 (0.82)
GT4056	14.88 (1.38)
OC20	2.14 (0.20)
OC24	3.12 (0.29)
OC30	5.63 (0.52)

Monumental Quarter Circle and Circle Area Specifications

Window Number	Glass Area Sq. Ft./ (m²)
QR40	9.91 (0.92)
FR40	10.22 (0.95)
FR60	24.69 (2.29)

* Dimensions in parentheses are in square meters.

Grille Patterns



Patterns for specialty windows may not align with patterns for picture windows when horizontally joined. **Number of lights and overall pattern varies with window size. Patterns not available in all configurations.** Specified equal light and custom patterns are also available. For more grille options, see page 14 or visit andersenwindows.com/grilles.

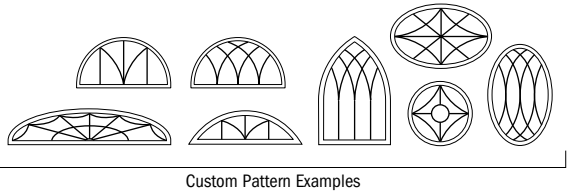
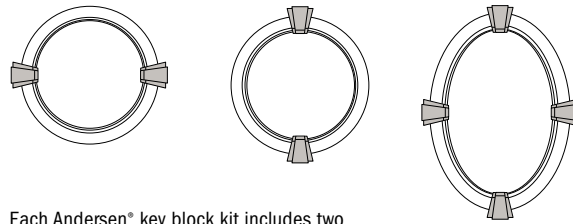
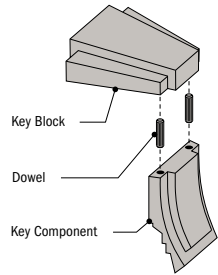


Table of Circle Window Sizes

Scale 1/8" (3) = 1'-0" (305) – 1:96

Window Dimension	2'-0 1/8" (613)	2'-4 3/8" (721)	2'-11 15/16" (913)
Minimum Rough Opening	2'-0 5/8" (625)	2'-4 7/8" (733)	3'-0 1/2" (927)
Unobstructed Glass	19 3/4" (502)	24" (610)	31 9/16" (802)

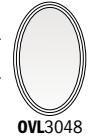
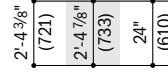


Each Andersen® key block kit includes two key blocks and two key components.

Table of Oval Window Sizes

Scale 1/8" (3) = 1'-0" (305) – 1:96

Window Dimension	1'-7 3/4" (502)	2'-0" (610)	3'-0" (914)
Minimum Rough Opening	1'-8 1/4" (514)	2'-0 1/2" (622)	3'-0 1/2" (927)
Unobstructed Glass	15 3/8" (391)	19 3/8" (492)	31 3/8" (797)



Oval windows can be installed in a vertical or horizontal orientation.



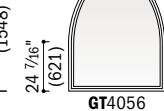
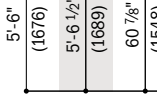
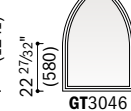
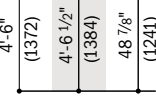
Circle, oval, extended gothic, octagon and monumental quarter circle and circle specifications shown on page 122. Grille patterns shown on page 122.

400 Series Specialty Windows

Table of Extended Gothic Window Sizes

Scale 1/8" = 1'-0" (1:96)

Window Dimension	2'-0 1/8" (613)	2'-4 3/8" (721)	2'-11 15/16" (913)	4'-0" (1219)
Minimum Rough Opening	2'-0 5/8" (625)	2'-4 7/8" (733)	3'-0 1/2" (927)	4'-0 1/2" (1232)
Unobstructed Glass	19 7/16" (495)	23 11/16" (602)	31 1/4" (794)	43 5/16" (1110)
Radius	32 1/4" (819)	32 1/4" (819)	36" (914)	48" (1219)


Table of Octagon Window Sizes

Scale 1/8" (3) = 1'-0" (305) – 1:96

Window Dimension	2'-0" (610)	2'-4" (711)	3'-0" (914)
Minimum Rough Opening	2'-0 1/2" (622)	2'-4 1/2" (724)	3'-0 1/2" (927)
Unobstructed Glass	19 5/16" (491)	23 5/16" (592)	31 5/16" (795)


Table of Monumental Quarter Circle and Circle Window Sizes

Scale 1/8" (3) = 1'-0" (305) – 1:96

Window Dimension	4'-0" (1219)	4'-0" (1219)	6'-0" (1829)
Minimum Rough Opening	4'-0 1/2" (1232)	4'-0 1/2" (1232)	6'-0 1/2" (1842)
Unobstructed Glass	43 1/4" (1099)	43 5/16" (1100)	67 5/16" (1710)
Radius	48" (1219)	24" (610)	36" (914)

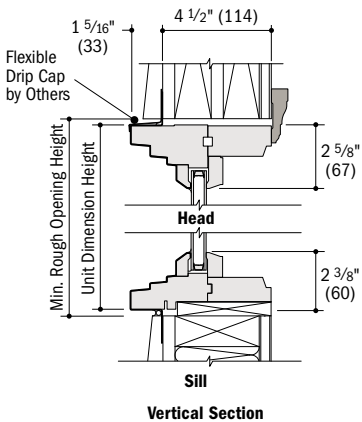


- "Window Dimension" always refers to outside frame-to-frame dimension.
- "Minimum Rough Opening" dimensions may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See pages 210-211 for more details.
- Dimensions in parentheses are in millimeters.

SPECIALTY WINDOWS

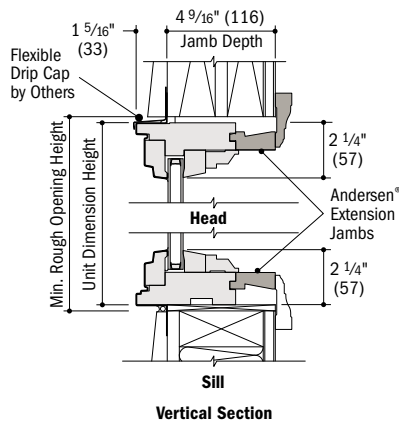
Double-Hung Half Circle Window Detail

Scale 1 1/2" (38) = 1'-0" (305) – 1:8



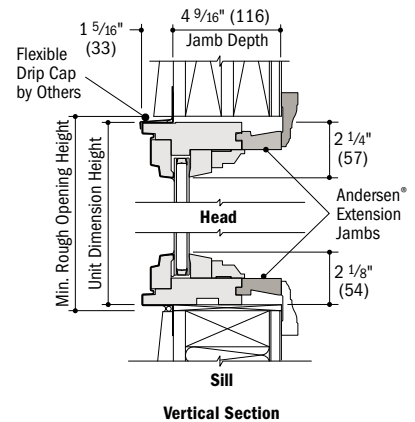
Casement/Awning Half Circle Window Detail

Scale 1 1/2" (38) = 1'-0" (305) – 1:8



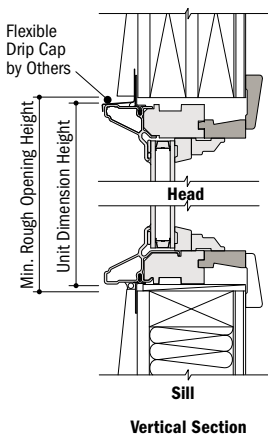
Casement/Awning Quarter Circle Window Detail

Scale 1 1/2" (38) = 1'-0" (305) – 1:8



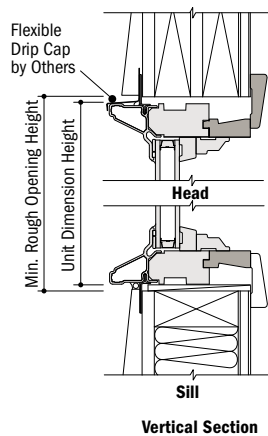
Eyebrow Window Details

Scale 1 1/2" (38) = 1'-0" (305) – 1:8



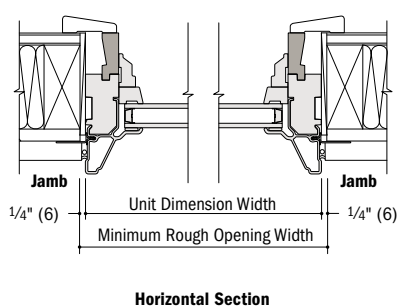
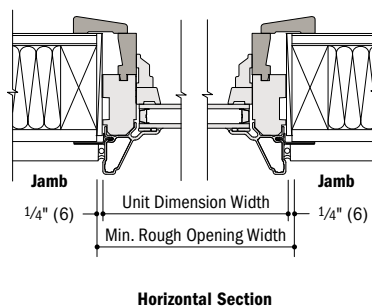
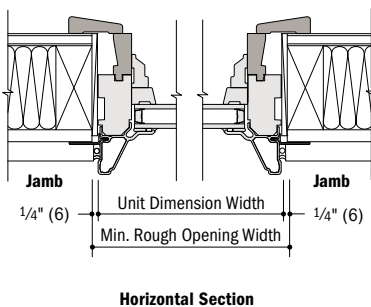
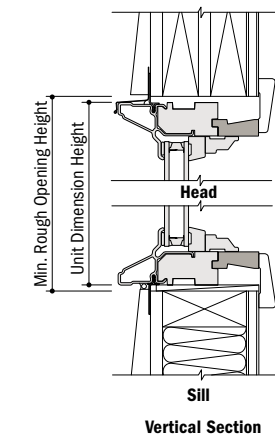
Extended Gothic Window Details

Scale 1 1/2" (38) = 1'-0" (305) – 1:8



Octagon Window Details

Scale 1 1/2" (38) = 1'-0" (305) – 1:8



• 4 9/16" (116) overall jamb depth measurement is from back side of installation flange.

• Light-colored areas are parts included with window. Dark-colored areas are additional Andersen® parts required to complete window assembly as shown.

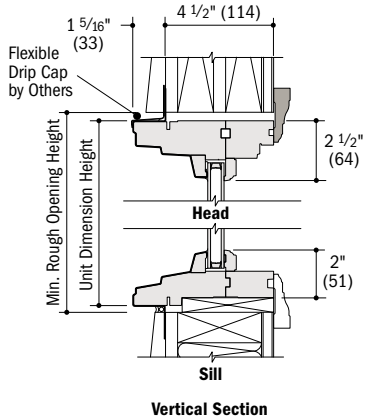
• Minimum rough openings may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See installation information on pages 210-211.

• Details are for illustration only and are not intended to represent product installation methods or materials. Refer to product installation guides at andersenwindows.com.

• Dimensions in parentheses are in millimeters.

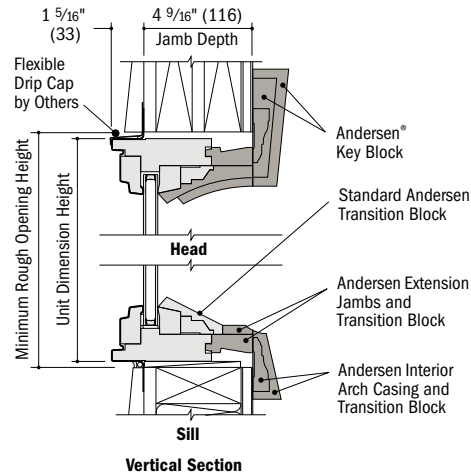
Elliptical Window Detail

Scale 1 1/2" (38) = 1'-0" (305) – 1:8



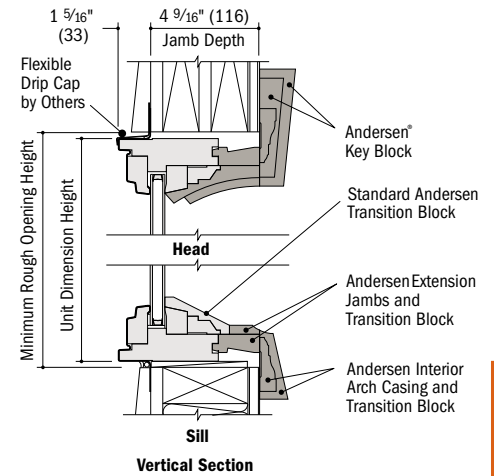
Circle Window Detail

Scale 1 1/2" (38) = 1'-0" (305) – 1:8



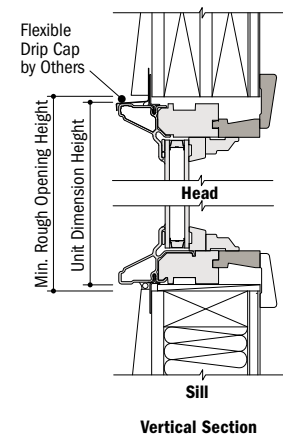
Oval Window Detail

Scale 1 1/2" (38) = 1'-0" (305) – 1:8



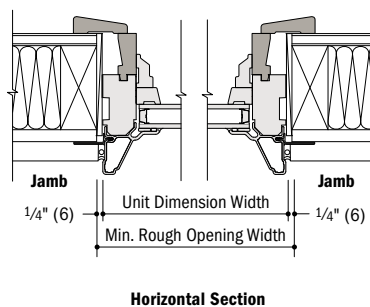
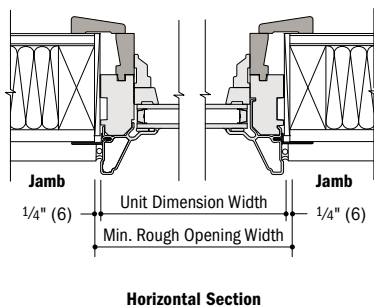
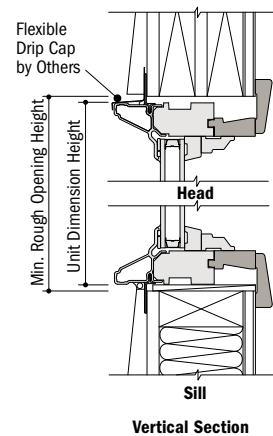
Monumental Quarter Circle Window Details

Scale 1 1/2" (38) = 1'-0" (305) – 1:8



Monumental Circle Window Details

Scale 1 1/2" (38) = 1'-0" (305) – 1:8



- 4 9/16" (116) overall jamb depth measurement is from back side of installation flange.
- Light-colored areas are parts included with window. Dark-colored areas are additional Andersen® parts required to complete window assembly as shown.
- **Minimum rough openings may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See installation information on pages 210-211.**
- Details are for illustration only and are not intended to represent product installation methods or materials. Refer to product installation guides at andersenwindows.com.
- Dimensions in parentheses are in millimeters.

SPECIALTY WINDOWS

Horizontal (stack) Joining Details

Scale 1 1/2" (38) = 1'-0" (305) – 1:8

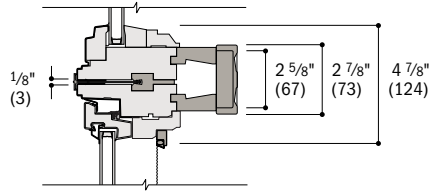
Casement Half Circle over Casement Window

Overall Window Dimension Height

Sum of individual window heights plus 1/8" (3) for each join.

Overall Rough Opening Height

Overall window dimension height plus 5/8" (16).



Vertical Section

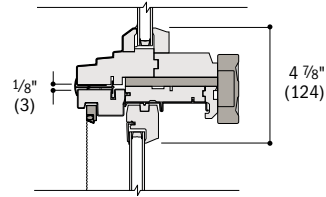
Double-Hung Half Circle over Tilt-Wash Double-Hung Window

Overall Window Dimension Height

Sum of individual window heights plus 0" for each join.

Overall Rough Opening Height

Overall window dimension height plus 3/8" (10).



Vertical Section

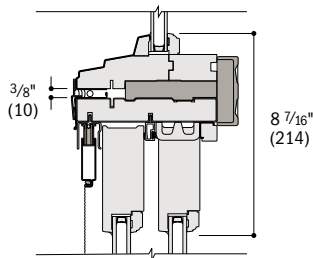
Elliptical Window over Frenchwood® Gliding Patio Door

Overall Unit Dimension Height

Sum of individual unit heights plus 3/8" (10).

Overall Rough Opening Height

Overall unit dimension height plus 5/8" (16).



Vertical Section

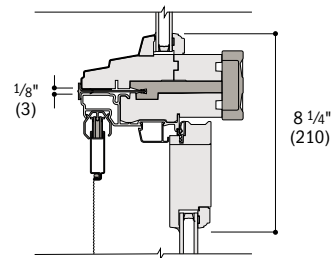
Elliptical Window over Frenchwood® Hinged Inswing Patio Door

Overall Unit Dimension Height

Sum of individual unit heights plus 1/8" (3).

Overall Rough Opening Height

Overall unit dimension height plus 1" (25).



Vertical Section

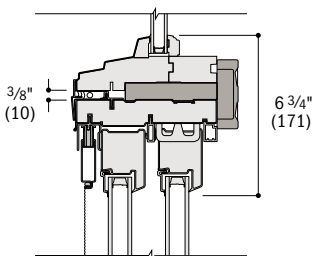
Elliptical Window over Perma-Shield® Gliding Patio Door

Overall Unit Dimension Height

Sum of individual unit heights plus 3/8" (10).

Overall Rough Opening Height

Overall unit dimension height plus 5/8" (16).



Vertical Section

For more joining information, see the combination designs section starting on page 181.

* Light-colored areas are parts included with window. Dark-colored areas are additional Andersen® parts required to complete window assembly as shown.

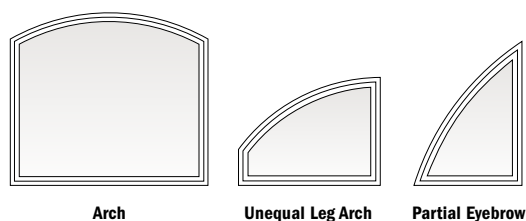
* **Minimum rough openings may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See installation information on pages 210-211.**

* Details are for illustration only and are not intended to represent product installation methods or materials. Refer to product installation guides at andersenwindows.com.

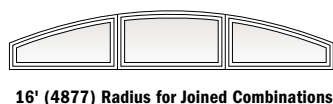
* Consult with an architect or structural engineer regarding minimum requirements for structural support members between adjacent rough openings.

* Dimensions in parentheses are in millimeters.

Custom Arch Windows

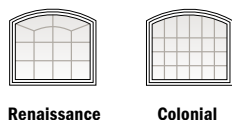


Andersen offers even greater design flexibility with custom-dimensioned arch, unequal leg arch and partial eyebrow windows. Custom arch windows can be designed using one of 10 standard radii, further expanding the existing line of 90 standard sizes of Andersen® arch windows.



Custom arch shapes and sizes are specially constructed to be used in combination with other Andersen windows, including casement, awning, double-hung, gliding and Flexiframe® windows, and hinged or gliding patio doors.

Andersen grilles are available for most styles and sizes. Contact your supplier for availability.

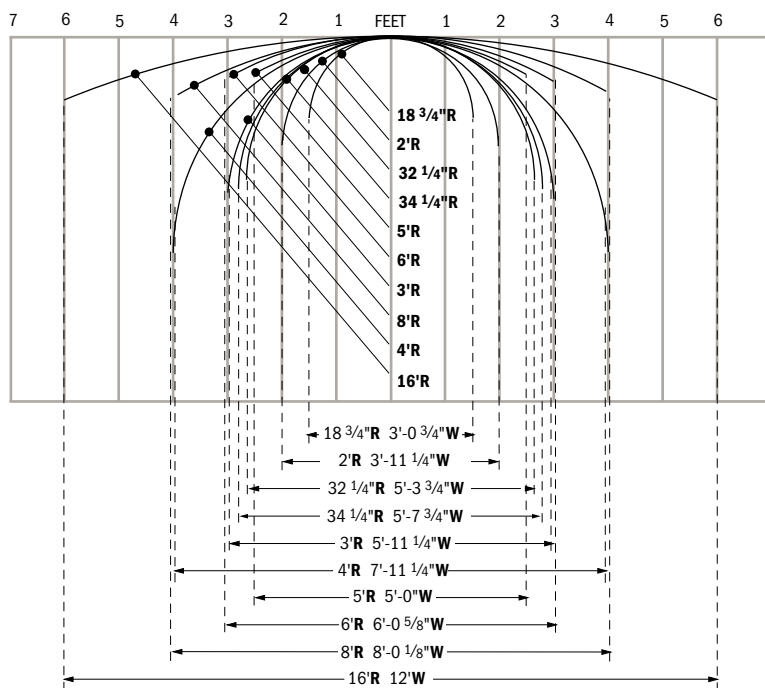


Design Criteria

Listed below are some factors that must be considered when deciding on a custom arch size and shape. For specific design criteria, joining instructions and order information, contact your Andersen supplier.



- **Do all calculations in inches to 3 decimal places**
- **Order extension jambs along with window for correct sizing**
- **All units are fixed**
- **Maximum standard glass area of 60 sq. ft. or 5.57 m²**
- **Ten standard radii:**
18 3/4" (476), 2' (610), 32 1/4" (819), 34 1/4" (870), 3' (914), 4' (1219), 5' (1524), 6' (1829), 8' (2438), 16' (4877)
- **Maximum radii:** based on available radius piece length; contact supplier for specific information
- **Maximum equal leg arch unit width:**
36 3/4" (399) for 18 3/4" (476) radius to 12' (3658) for 16' (4877) radius
- **Maximum unequal leg arch unit width:**
18 3/4" (476) for 18 3/4" radius to 11'-2" (3404) for 16' (4877) radius
- **Maximum partial eyebrow unit width:**
18 3/4" (476) for 18 3/4" radius to 11'-5 1/2" (3493) for 16' (4877) radius
- **Only one dimension, height or width, can exceed 7'-0" (2134)**
- **No height dimension greater than 12'-0" (3658)**
- **No leg dimension less than 6" (152)**



Standard Radii and Maximum Unit Width for Custom Arch Windows

* Dimensions in parentheses are in millimeters.

SPECIALTY WINDOWS

Table of Arch Window Sizes

Scale $\frac{1}{8}$ " (3) = 1'-0" (305) – 1:96

Notes on the next page also apply to this page.

Window Width Dimension		2'-0 $\frac{1}{8}$ " (613)	2'-4 $\frac{3}{8}$ " (721)	2'-11 $\frac{15}{16}$ " (913)	4'-0" (1219)	4'-8 $\frac{1}{2}$ " (1435)	4'-11 $\frac{1}{4}$ " (1505)	5'-11 $\frac{1}{4}$ " (1810)
Minimum Rough Opening		2'-0 $\frac{5}{8}$ " (625)	2'-4 $\frac{7}{8}$ " (733)	3'-0 $\frac{1}{2}$ " (927)	4'-0 $\frac{1}{2}$ " (1232)	4'-9" (1448)	4'-11 $\frac{3}{4}$ " (1518)	5'-11 $\frac{3}{4}$ " (1822)
Unobstructed Glass		19 $\frac{3}{8}$ " (492)	23 $\frac{5}{8}$ " (600)	31 $\frac{3}{16}$ " (792)	43 $\frac{1}{4}$ " (1099)	51 $\frac{3}{4}$ " (1314)	54 $\frac{1}{2}$ " (1384)	66 $\frac{1}{2}$ " (1689)
Window Height Shown in Table	Radius	2' (610)	2' (610)	2'-11 $\frac{15}{16}$ " (914)	4' (1219)	4'-8 $\frac{1}{2}$ " (1435)	4'-11 $\frac{1}{4}$ " (1505)	5'-11 $\frac{1}{4}$ " (1810)
	Chord Height	2'-0 $\frac{5}{8}$ " (625)	2'-4 $\frac{7}{8}$ " (733)	3'-0 $\frac{1}{2}$ " (927)	4'-0 $\frac{1}{2}$ " (1232)	4'-9" (1448)	4'-11 $\frac{3}{4}$ " (1518)	5'-11 $\frac{3}{4}$ " (1822)
Side Height		2'-0 $\frac{1}{8}$ " (613)	2'-3 $\frac{3}{8}$ " (695)	2'-11 $\frac{15}{16}$ " (913)	4'-0" (1219)	4'-8 $\frac{1}{2}$ " (1435)	4'-11 $\frac{1}{4}$ " (1505)	5'-11 $\frac{1}{4}$ " (1810)
Unobstructed Glass = window height - 4 $\frac{3}{4}$ " (121)		2'-0 $\frac{1}{8}$ " (613)	2'-3 $\frac{3}{8}$ " (695)	2'-11 $\frac{15}{16}$ " (913)	4'-0" (1219)	4'-8 $\frac{1}{2}$ " (1435)	4'-11 $\frac{1}{4}$ " (1505)	5'-11 $\frac{1}{4}$ " (1810)
Minimum Rough Opening = window height + $\frac{1}{2}$ " (13)		2'-0 $\frac{1}{8}$ " (613)	2'-3 $\frac{3}{8}$ " (695)	2'-11 $\frac{15}{16}$ " (913)	4'-0" (1219)	4'-8 $\frac{1}{2}$ " (1435)	4'-11 $\frac{1}{4}$ " (1505)	5'-11 $\frac{1}{4}$ " (1810)
		2'-0 $\frac{1}{8}$ " (613)	2'-3 $\frac{3}{8}$ " (695)	2'-11 $\frac{15}{16}$ " (913)	4'-0" (1219)	4'-8 $\frac{1}{2}$ " (1435)	4'-11 $\frac{1}{4}$ " (1505)	5'-11 $\frac{1}{4}$ " (1810)
		AFC106	AFCW106	AFCP3006	AFC206	AFCW206	AFFW5006	AFFW6006
		AFC11	AFCW11	AFCP301	AFC21	AFCW21	AFFW501	AFFW601
		AFC12	AFCW12	AFCP302	AFC22	AFCW22	AFFW502	AFFW602
		AFC13	AFCW13	AFCP303	AFC23	AFCW23	AFFW503	AFFW603
		AFC135	AFCW135	AFCP3035	AFC235	AFCW235	AFFW5035	AFFW6035
		AFC14	AFCW14	AFCP304	AFC24	AFCW24	AFFW504	AFFW604
		AFC145	AFCW145	AFCP3045	AFC245	AFCW245	AFFW5045	AFFW6045
		AFC15	AFCW15	AFCP305	AFC25	AFCW25	AFFW505	AFFW605
		AFC155	AFCW155	AFCP3055	AFC255	AFCW255	AFFW5055	AFFW6055
		AFC16	AFCW16	AFCP306	AFC26	AFCW26	AFFW506	AFFW606
		AFC18	AFCW18	AFCP308	AFC28	AFCW28	AFFW508	AFFW608*

Arch Window Area Specifications



Grille patterns shown on page 132.

Window Number	Glass Area Sq. Ft./ (m ²)
AFC106	0.7 (0.07)
AFC11	1.6 (0.15)
AFC12	3.4 (0.32)
AFC13	5.1 (0.47)
AFC135	5.8 (0.54)
AFC14	6.8 (0.63)
AFC145	7.5 (0.70)
AFC15	8.5 (0.79)
AFC155	9.2 (0.86)
AFC16	10.3 (0.96)
AFC18	13.8 (1.28)
AFCW106	1.1 (0.10)
AFCW11	2.1 (0.20)
AFCW12	4.2 (0.39)
AFCW13	6.3 (0.59)
AFCW135	7.1 (0.66)
AFCW14	8.4 (0.78)
AFCW145	9.2 (0.86)
AFCW15	10.4 (0.97)
AFCW155	11.3 (1.05)
AFCW16	12.5 (1.16)
AFCW18	16.8 (1.56)
AFCP3006	1.4 (0.13)
AFCP301	2.8 (0.26)
AFCP302	5.5 (0.51)
AFCP303	8.2 (0.76)
AFCP3035	9.3 (0.86)
AFCP304	10.9 (1.01)
AFCP3045	12.0 (1.12)
AFCP305	13.6 (1.26)
AFCP3055	14.7 (1.37)
AFCP306	16.3 (1.51)
AFCP308	21.8 (2.03)
AFC206	2.2 (0.20)
AFC21	4.1 (0.38)
AFC22	7.8 (0.73)
AFC23	11.5 (1.07)
AFC235	13.0 (1.21)
AFC24	15.2 (1.41)
AFC245	16.7 (1.55)
AFC25	18.9 (1.76)
AFC255	20.4 (1.90)
AFC26	22.6 (2.10)
AFC28	30.2 (2.81)
AFCW206	2.8 (0.26)
AFCW21	5.1 (0.47)
AFCW22	9.5 (0.88)
AFCW23	13.9 (1.29)
AFCW235	15.7 (1.46)
AFCW24	18.3 (1.70)
AFCW245	20.1 (1.87)
AFCW25	22.7 (2.11)
AFCW255	24.6 (2.29)
AFCW26	27.2 (2.53)
AFCW28	36.1 (3.35)
AFW5006	3.2 (0.30)
AFW501	5.5 (0.51)
AFW502	10.3 (0.96)
AFW503	14.8 (1.38)
AFW5035	16.7 (1.55)
AFW504	19.5 (1.81)

Window Number	Glass Area Sq. Ft./ (m ²)
AFW5045	21.4 (1.99)
AFW505	24.1 (2.24)
AFW5055	26.1 (2.43)
AFW506	28.8 (2.68)
AFW508	38.2 (3.55)
AFW6006	4.4 (0.41)
AFW601	7.2 (0.67)
AFW602	12.9 (1.20)
AFW603	18.5 (1.72)
AFW6035	20.8 (1.93)
AFW604	24.2 (2.25)
AFW6045	26.5 (2.46)
AFW605	29.8 (2.77)
AFW6055	32.1 (2.98)
AFW606	35.5 (3.30)
AFW608	46.9 (4.36)
AFW8006	7.3 (0.68)
AFW801	11.1 (1.03)
AFW802	18.8 (1.75)
AFW803	26.4 (2.45)
AFW8035	29.5 (2.74)
AFW804	34.1 (3.17)
AFW8045	37.1 (3.45)
AFW805	41.6 (3.87)
AFW8055	44.8 (4.16)
AFW806	49.3 (4.58)
AFW12006	9.9 (0.92)
AFW1201	15.6 (1.45)
AFW1202	27.1 (2.52)

*Dimensions in parentheses are in square meters.

- * "Window Dimension" always refers to outside frame-to-frame dimension.
- ** "Minimum Rough Opening" dimensions may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See pages 210-211 for more details.
- *Dimensions in parentheses are in millimeters.
- *Tempered glass standard.

SPECIALTY WINDOWS

Table of Springline™ Window Sizes

Scale 1/8" (3) = 1'-0" (305) – 1:96

Notes on the next page also apply to this page.

Window Width Dimension		3'-1 1/2"	4'-0"	5'-4 1/2"	5'-8 1/2"	5'-11 1/4"	6'-0"
		(953)	(1219)	(1638)	(1740)	(1810)	(1829)
Minimum Rough Opening		3'-2"	4'-0 1/2"	5'-5"	5'-9"	5'-11 3/4"	6'-0 1/2"
		(965)	(1232)	(1651)	(1753)	(1822)	(1842)
Unobstructed Glass		32 3/4"	43 1/4"	59 3/4"	63 3/4"	66 1/2"	67 1/4"
		(832)	(1099)	(1518)	(1619)	(1689)	(1708)
Radius		18 3/4" (476)	24" (610)	32 1/4" (819)	34 1/4" (870)	36" (914)	36" (914)
Window Height Shown in Table		18 3/4" (476)	24" (610)	32 1/4" (819)	34 1/4" (870)	30 13/16" (783)	36" (914)
Chord Height							
Side Height		6" (152)					
Unobstructed Glass = window height - 4 3/4" (121)							
Minimum Rough Opening = window height + 1/2" (13) Unobstructed Glass = window height - 4 3/4" (121)		2'-0 3/4" (629)		3'-2 1/4" (972)	3'-4 1/4" (1022)	3'-0 13/16" (935)	3'-6" (1067)
		SE3106		SE5406	SE5806	ELFW6006	SE6006
		12" (305)	2'-6 3/4" (781)	3'-8 1/4" (1124)	3'-10 1/4" (1175)	3'-6 13/16" (1087)	4'-0" (1219)
		SE311		SE541	SE581	ELFW601	SE601
		2'-0 1/8" (613)	3'-6 7/8" (1089)	4'-8 3/8" (1432)	4'-10 3/8" (1483)	4'-6 15/16" (1395)	5'-0 1/8" (1527)
		SE312	SP402	SE542	SE582	ELFW602	SE602
		2'-11 15/16" (913)	4'-6 11/16" (1389)	5'-8 3/16" (1732)	5'-10 3/16" (1783)	5'-11 15/16" (1827)	
		SE313	SP403	SE543	SE583	SE603	
		3'-4 13/16" (1037)	4'-11 9/16" (1513)	6'-1 1/16" (1856)	6'-3 1/16" (1907)	6'-4 13/16" (1951)	
		SE3135	SP4035	SE5435	SE5835	SE6035	
		4'-0" (1219)	5'-6 3/4" (1695)	6'-8 1/4" (2038)	6'-10 1/4" (2089)	7'-0" (2134)	
		SE314	SP404	SE544	SE584	SE604	
		4'-4 13/16" (1341)	5'-11 9/16" (1818)	7'-1 1/16" (2161)	7'-3 1/16" (2211)	7'-4 13/16" (2256)	
		SE3145	SP4045	SE5445	SE5845	SE6045	
		4'-11 7/8" (1521)	6'-6 5/8" (1997)	7'-8 1/8" (2340)	7'-10 1/8" (2391)	7'-11 7/8" (2435)	
		SE315	SP405	SE545	SE585	SE605*	

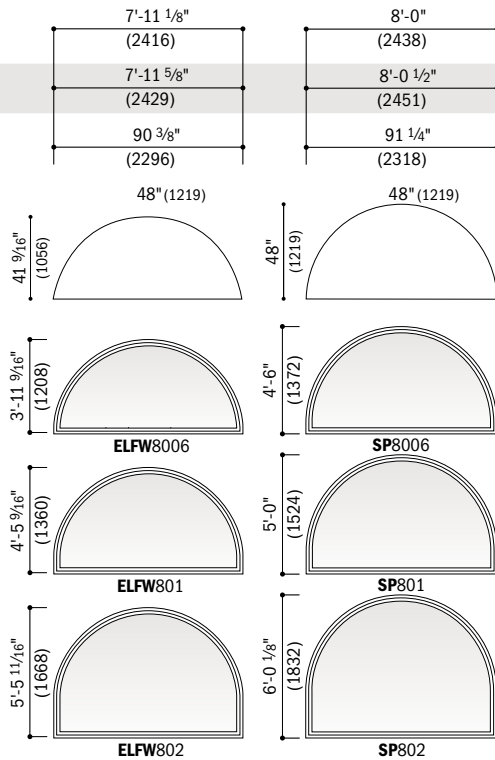
Additional heights
on page 132.

continued on next two pages

Springline™ Window Area Specifications

Window Number	Glass Area Sq. Ft./ (m ²)
SE3106	3.74 (0.35)
SE311	5.10 (0.47)
SE312	7.86 (0.73)
SE313	10.54 (0.98)
SE3135	11.65 (1.08)
SE314	13.28 (1.23)
SE3145	14.38 (1.34)
SE315	15.98 (1.49)
SE3155	17.10 (1.59)
SE316	18.71 (1.74)
SE5406	11.22 (1.04)
SE541	13.71 (1.27)
SE542	18.74 (1.74)
SE543	23.64 (2.20)
SE5435	25.66 (2.38)
SE544	28.64 (2.66)
SE5445	30.64 (2.85)
SE545	33.57 (3.12)
SE5455	35.61 (3.31)
SE546	38.54 (3.58)
SE5806	12.67 (1.18)
SE581	15.33 (1.42)
SE582	20.69 (1.92)
SE583	25.92 (2.41)
SE5835	28.08 (2.61)
SE584	31.26 (2.90)
SE5845	33.39 (3.10)
SE585	36.51 (3.39)
SE5855	38.70 (3.60)
SE586	41.82 (3.89)
SE6006	14.01 (1.30)
SE601	16.81 (1.56)
SE602	22.47 (2.09)
SE603	27.98 (2.60)
SE6035	30.26 (2.81)
SE604	33.61 (3.12)
SE6045	35.86 (3.33)
SE605	39.16 (3.64)
SE6055	41.46 (3.85)
SE606	44.76 (4.16)
SP402	11.62 (1.08)
SP403	15.16 (1.41)
SP4035	16.63 (1.55)
SP404	18.78 (1.75)
SP4045	20.23 (1.88)
SP405	22.35 (2.08)
SP4055	23.83 (2.21)
SP406	25.95 (2.41)
SP8006	24.98 (2.32)
SP801	24.98 (2.32)
SP802	36.46 (3.39)
ELFW6006	11.58 (1.08)
ELFW601	14.35 (1.33)
ELFW602	19.95 (1.85)
ELFW8006	20.88 (1.94)
ELFW801	24.64 (2.29)
ELFW802	32.25 (3.00)

* Dimensions in parentheses are in square meters.



continued on next page

Extension jambs are available factory applied when ordered at the same time as Springline™ windows.

Grille patterns shown on page 132.

- * "Window Dimension" always refers to outside frame-to-frame dimension.
- * "Minimum Rough Opening" dimensions may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See pages 210-211 for more details.
- * Dimensions in parentheses are in millimeters.
- * Tempered glass standard.

SPECIALTY WINDOWS

Table of Springline™ Window Sizes (continued)
Scale 1/8" (3) = 1'-0" (305) – 1:96

Window Width Dimension	3'-1 1/2" (953)	4'-0" (1219)	5'-4 1/2" (1638)	5'-8 1/2" (1740)	6'-0" (1829)
Minimum Rough Opening	3'-2" (965)	4'-0 1/2" (1232)	5'-5" (1651)	5'-9" (1753)	6'-0 1/2" (1842)
Unobstructed Glass	32 3/4" (832)	43 1/4" (1099)	59 3/4" (1518)	63 3/4" (1619)	67 1/4" (1708)
Radius	18 3/4" (476)	24" (610)	32 1/4" (819)	34 1/4" (870)	36" (914)
Window Height Shown in Table	18 3/4" (476)	24" (610)	32 1/4" (819)	34 1/4" (870)	36" (914)
Chord Height					

Minimum Rough Opening = window height + 1/2" (13) Unobstructed Glass = window height - 4 3/4" (121)	Side Height 5'-4 13/16" (1646) 6'-11 9/16" (2122) SE3155	7'-4 13/16" (2256) SP4055	8'-1 1/16" (2465) SE5455	8'-3 1/16" (2515) SE5855*	8'-4 13/16" (2561) SE6055*
	5'-11 7/8" (1826) 7'-6 5/8" (2302) SE316	7'-11 7/8" (2435) SP406	8'-8 1/8" (2645) SE546*	8'-10 7/8" (2696) SE586*	8'-11 7/8" (2740) SE606*

Table is continued from page 130.

Extension jambs are available factory applied when ordered at the same time as Springline™ windows. Grille patterns shown below.

* "Window Dimension" always refers to outside frame-to-frame dimension.
* "Minimum Rough Opening" dimensions may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See pages 210-211 for more details.
* Dimensions in parentheses are in millimeters.
* Tempered glass standard.

Grille Patterns

	Renaissance	Colonial	Sunburst
Arch			
Springline™			
Springline Flanker			

Number of lights and overall pattern varies with window size. Patterns not available in all configurations. Specified equal light and custom patterns are also available. For more grille options, see page 14 or visit andersenwindows.com/grilles.

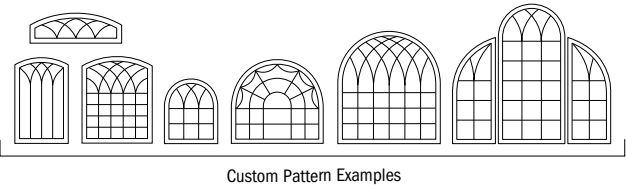


Table of Springline™ Flanker Window Sizes

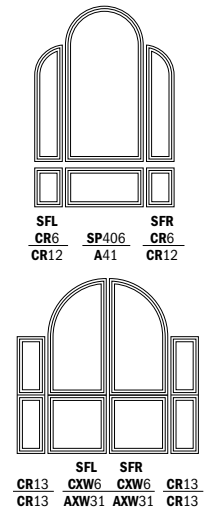
Scale 1/8" (3) = 1'-0" (305) – 1:96

Window Dimension	1'-5" (432)	1'-5" (432)	1'-8 1/2" (521)	1'-8 1/2" (521)	2'-0 1/8" (613)	2'-0 1/8" (613)	2'-4 3/8" (721)	2'-4 3/8" (721)	2'-11 15/16" (913)	2'-11 15/16" (913)
Minimum Rough Opening	1'-5 1/2" (445)	1'-5 1/2" (445)	1'-9" (533)	1'-9" (533)	2'-0 5/8" (625)	2'-0 5/8" (625)	2'-4 7/8" (733)	2'-4 7/8" (733)	3'-0 1/2" (927)	3'-0 1/2" (927)
Unobstructed Glass	12 3/4" (324)	12 3/4" (324)	15 3/4" (400)	15 3/4" (400)	19 3/8" (492)	19 3/8" (492)	23 5/8" (600)	23 5/8" (600)	31 3/16" (792)	31 3/16" (792)
	CR		CN		C		CW		CXW	
Radius	18 3/4" (476)		24" (610)		32 1/4" (819)		32 1/4" (819)		36" (914)	
Chord Height	18 5/8" (473)		23 11/16" (584)		31 3/16" (792)		32" (813)		36" (914)	
Side Height	2'-11 15/16" (913)		3'-0 1/2" (927)		3'-0 1/2" (927)		3'-0 1/2" (927)		3'-0 1/2" (927)	
	C3		C35		C4		C5		C6	
	2'-11 15/16" (913)		3'-0 1/2" (927)		3'-0 1/2" (927)		3'-0 1/2" (927)		3'-0 1/2" (927)	
	3'-0 1/2" (927)		3'-5 3/8" (1051)		3'-5 3/8" (1051)		3'-5 3/8" (1051)		3'-5 3/8" (1051)	
	3'-5 3/8" (1051)		3'-13 1/8" (986)		3'-13 1/8" (986)		3'-13 1/8" (986)		3'-13 1/8" (986)	
	3'-13 1/8" (986)		4'-0" (1219)		4'-0" (1219)		4'-0" (1219)		4'-0" (1219)	
	4'-0" (1219)		4'-0 1/2" (1232)		4'-0 1/2" (1232)		4'-0 1/2" (1232)		4'-0 1/2" (1232)	
	4'-0 1/2" (1232)		4'-11 7/8" (1521)		4'-11 7/8" (1521)		4'-11 7/8" (1521)		4'-11 7/8" (1521)	
	4'-11 7/8" (1521)		5'-0 3/8" (1534)		5'-0 3/8" (1534)		5'-0 3/8" (1534)		5'-0 3/8" (1534)	
	5'-0 3/8" (1534)		5'-11 7/8" (1708)		5'-11 7/8" (1708)		5'-11 7/8" (1708)		5'-11 7/8" (1708)	
	5'-11 7/8" (1708)		6'-0 3/8" (1838)		6'-0 3/8" (1838)		6'-0 3/8" (1838)		6'-0 3/8" (1838)	
	6'-0 3/8" (1838)		6'-7 1/4" (1708)		6'-7 1/4" (1708)		6'-7 1/4" (1708)		6'-7 1/4" (1708)	
	6'-7 1/4" (1708)		6'-11 7/8" (1826)		6'-11 7/8" (1826)		6'-11 7/8" (1826)		6'-11 7/8" (1826)	
	6'-11 7/8" (1826)		6'-11 7/8" (1826)		6'-11 7/8" (1826)		6'-11 7/8" (1826)		6'-11 7/8" (1826)	

- "Window Dimension" always refers to outside frame-to-frame dimension.
- "Minimum Rough Opening" dimensions may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See pages 210-211 for more details.
- Dimensions in parentheses are in millimeters.

Window dimensions shown in table are compatible with standard casement window widths (CR, CN, C, CW, CXW) and heights (C3, C35, C4, C5, C6). Grille patterns shown on page 132.

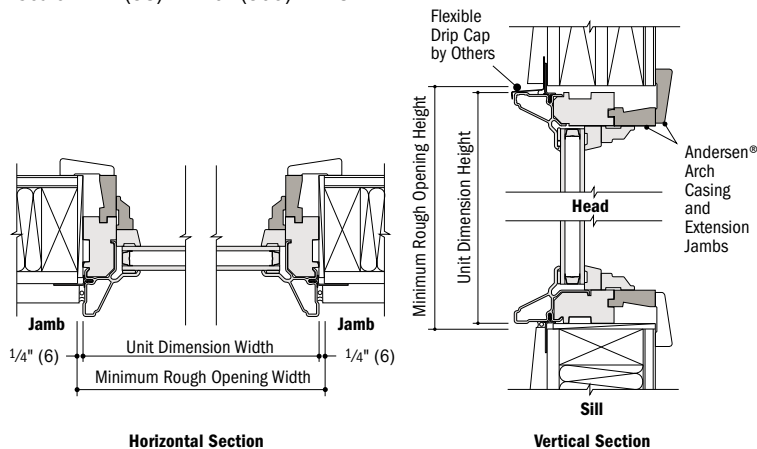
Examples:



400 Series Specialty Windows

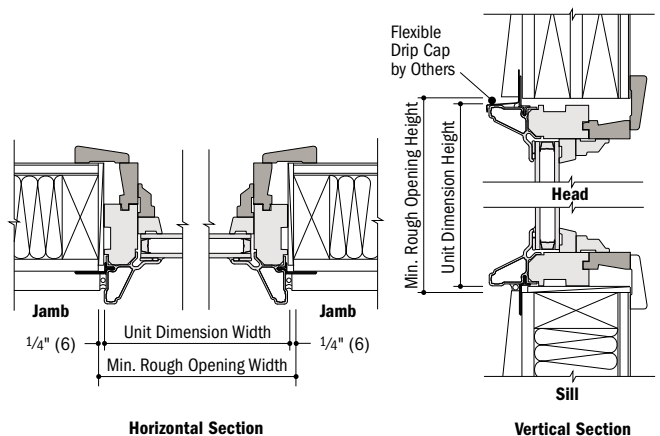
Arch Window Details

Scale 1 1/2" (38) = 1'-0" (305) – 1:8



Springline™ Window Details

Scale 1 1/2" (38) = 1'-0" (305) – 1:8



- Light-colored areas are parts included with window. Dark-colored areas are additional Andersen® parts required to complete window assembly as shown.
- Minimum rough openings may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See installation information on pages 210-211.
- Details are for illustration only and are not intended to represent product installation methods or materials. Refer to product installation guides at andersenwindows.com.
- Dimensions in parentheses are in millimeters.

SPECIALTY WINDOWS

Flexiframe® Window Shapes and Design Criteria

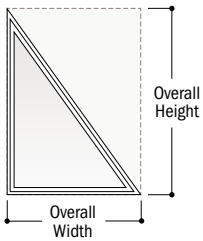
Minimum and Maximum Limits

Flexiframe windows are available in many shapes and sizes with these limitations:

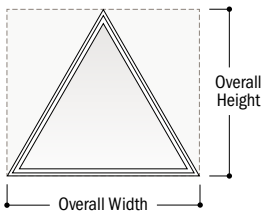
- **Maximum standard glass area of 60 sq. ft. or 5.57 m²**
- **Square footage is based on a square or rectangular shape**
- **No angle may be less than 14°**
- **No leg may be less than 6" (152) or greater than 144" (3658)**
- **No short side may be greater than 84" (2134)**
- **See product information below for additional limitations based on specific shapes**



Triangle

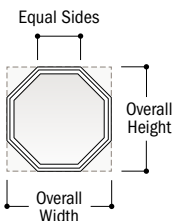


Right triangles contain one 90° corner. Specify overall width and overall height extending from the 90° corner.



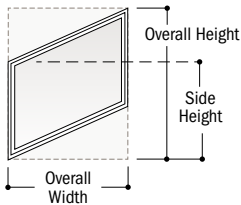
Isosceles triangles contain two sides of equal length and equal angle. Specify overall width and overall height (sill to peak).

Octagon

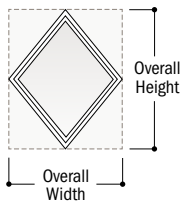


Octagons contain eight equal angles and sides. Specify length of equal side. Standard-size octagons are available in 2' (610), 2'-4" (711) and 3' (914) dimensions. See page 123.

Parallelogram

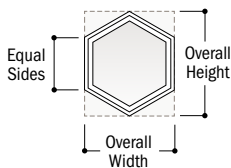


Parallelograms contain two pairs of parallel sides. Specify overall width along with side height and overall window height.

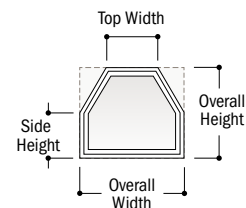


Diamonds contain two pairs of parallel and equal length sides. Specify overall width and overall height.

Hexagon

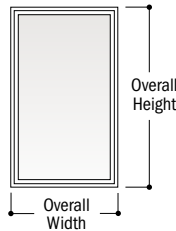
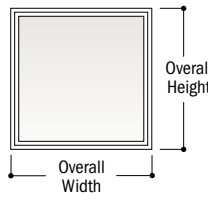


Hexagons contain six equal angles and sides. Specify length of equal sides.



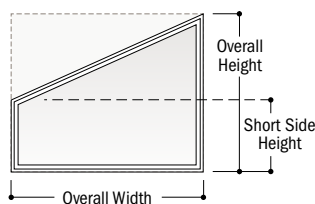
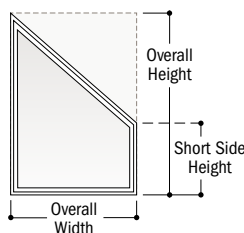
Unequal hexagons contain three pairs of angles and two sets of equal-length sides. Top side is parallel to and centered over the sill. Specify overall width, top width, short side height and overall height.

Rectangle



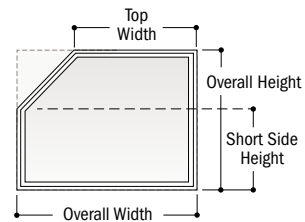
Rectangles contain four equal angles and two equal sides for rectangles, or four equal sides for squares. Specify overall width and overall height.

Trapezoid

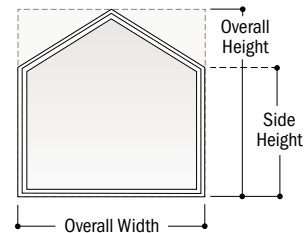


Trapezoids contain an angle face cut to left or right. Specify overall width along with short side height and overall height. Window's pitch is often designed to match a roof's pitch.

Pentagon



Angled pentagons contain an angle cut, or a "cut-off corner" sloping to left or right. Specify overall width and top width along with short side height and overall height.

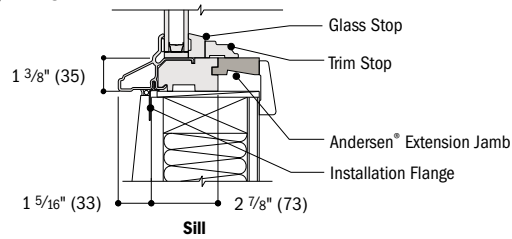


Peak pentagons contain sides of equal length extending at right angles from the sill and two angled sides of equal length that peak above center of sill. Specify overall width, side height and overall height.

• Dimensions in parentheses are in millimeters.

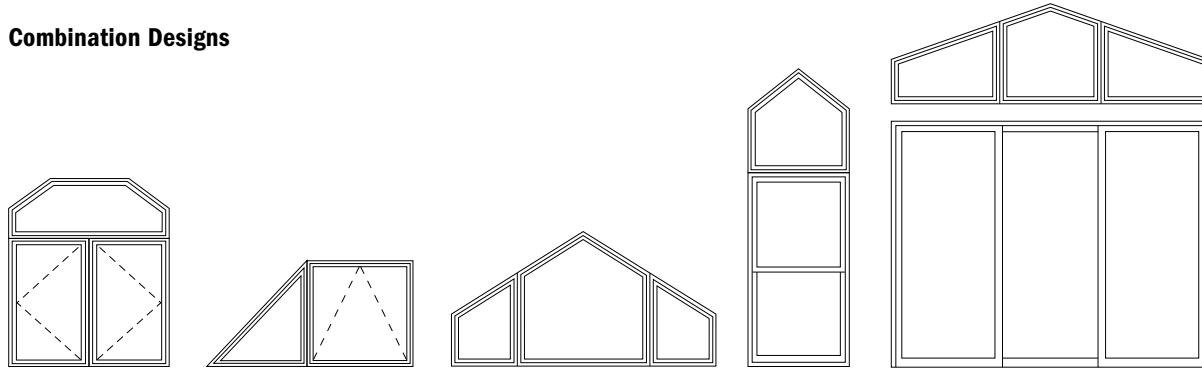
Flexiframe® Window Detail

Scale 1½" (38) = 1'-0" (305) – 1:8



Vertical Section

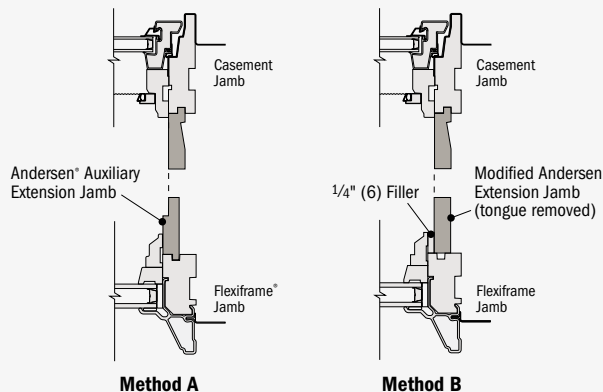
Combination Designs



Extension Jamb Alignment

For these joined 400 Series window combinations only:

- Arch, Springline™ or Flexiframe over Casement
- Arch, Springline or Flexiframe alongside Awning



Method A

Method B

Method A: Individually Framed – Use optional Andersen auxiliary extension jambs for individual picture frame trimming.

Method B: Perimeter Framed – For continuous perimeter trimming, remove extension jamb tongue and use ¼" (6)-thick filler between Arch, Springline or Flexiframe trim stop and extension jamb.

Vertical (ribbon) Joining Detail

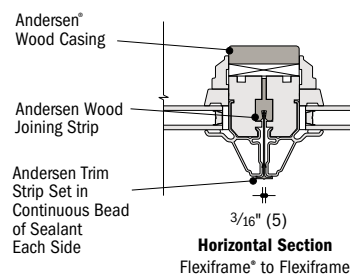
Scale 1½" (38) = 1'-0" (305) – 1:8

Overall Window Dimension Width

Sum of individual window widths plus ⅜" (5) for each join.

Overall Rough Opening Width

Overall window dimension width plus ½" (13).



Horizontal joining on next page.

For more joining information, see the combination designs section starting on page 181.

• Light-colored areas are parts included with window. Dark-colored areas are additional Andersen® parts required to complete window assembly as shown.
 • Minimum rough openings may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See installation information on pages 210-211.
 • Details are for illustration only and are not intended to represent product installation methods or materials. Refer to product installation guides at andersenwindows.com.
 • Dimensions in parentheses are in millimeters.

SPECIALTY WINDOWS

Horizontal (stack) Joining Details

Scale 1 1/2" (38) = 1'-0" (305) – 1:8

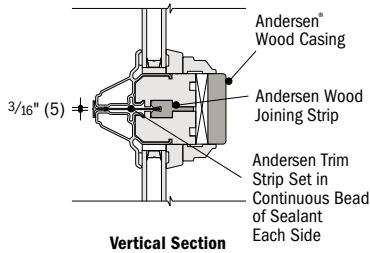
Flexiframe® over Flexiframe Window

Overall Window Dimension Height

Sum of individual window heights plus 3/16" (5) for each join.

Overall Rough Opening Height

Overall window dimension height plus 1/2" (13).



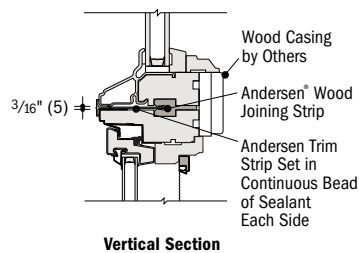
Flexiframe over Casement Window

Overall Window Dimension Height

Sum of individual window heights plus 3/16" (5) for each join.

Overall Rough Opening Height

Overall window dimension height plus 1/2" (13).



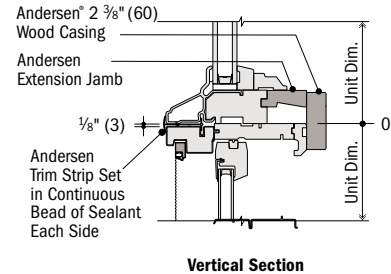
Flexiframe over Tilt-Wash Double-Hung Window

Overall Window Dimension Height

Sum of individual window heights plus 1/8" (3) for each join.

Overall Rough Opening Height

Overall window dimension height plus 1/2" (13).



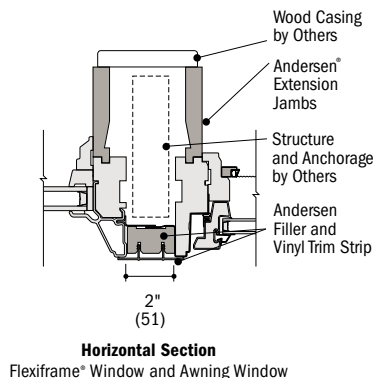
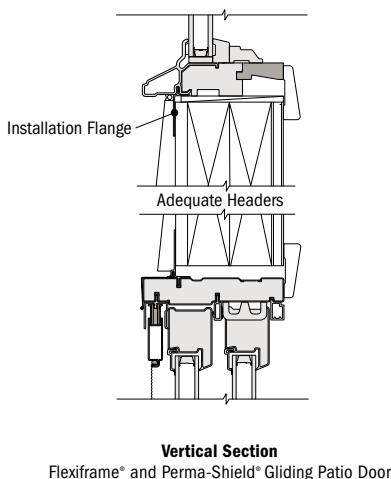
Vertical joining on previous page.

For more joining information, see the combination designs section starting on page 181.

Separate Rough Openings Details

Scale 1 1/2" (38) = 1'-0" (305) – 1:8

To meet structural requirements or to achieve a wider joined appearance, windows may be installed into separate rough openings having vertical support (by others) in combination with Andersen® exterior filler and exterior vinyl trim.



* Light-colored areas are parts included with window. Dark-colored areas are additional Andersen® parts required to complete window assembly as shown.

* **Minimum rough openings may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See installation information on pages 210-211.**

* Details are for illustration only and are not intended to represent product installation methods or materials. Refer to product installation guides at andersenwindows.com.

* Consult with an architect or structural engineer regarding minimum requirements for structural support members between adjacent rough openings.

* Dimensions in parentheses are in millimeters.



COMPLEMENTARY SPECIALTY WINDOWS

Window Details	140
Joining Details	140
Combination Designs	181
Product Performance	197

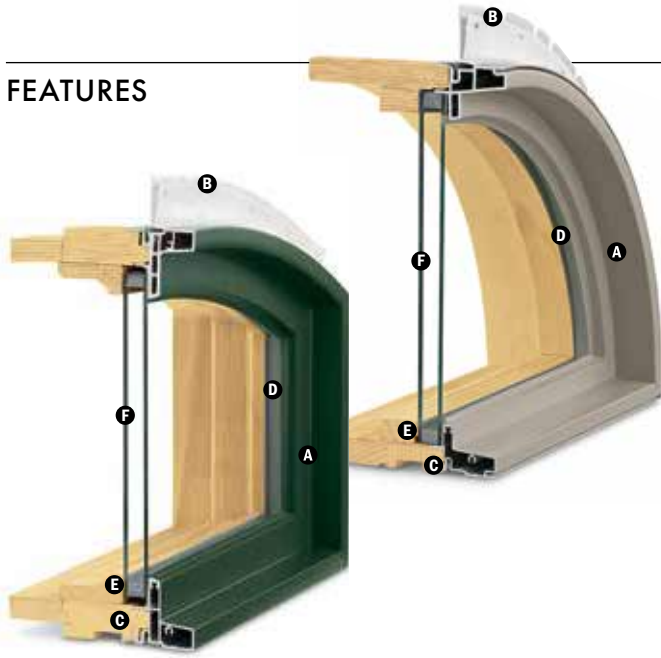
CUSTOM SIZING
in $\frac{1}{8}$ " (3) increments



Dimensions in parentheses are in millimeters.

COMPLEMENTARY SPECIALTY WINDOWS

FEATURES



FRAME

A Heavy-duty aluminum cladding protects the frame exterior, providing low-maintenance durability. Standard cladding finish meets AAMA 2604 specification. An optional finish that meets the AAMA 2605 specification is also available.

B A vinyl installation flange extends 1 1/2" (38) around the perimeter of the unit to help properly position the unit in the opening. Installation clips are standard for increased structural anchoring to building members. Mounted around the perimeter, the clips rotate into position and can be bent into place against the framing members to suit all jamb conditions.

C Wood frame members are treated with a water-repellent wood preservative for long-lasting* protection and performance. Radii are made of laminated pine veneers. Lineal components are solid or engineered wood with a pine core.

Jambs

A variety of basic unit jamb designs and depths are available to match 400 Series units. Specify desired jamb depth when ordering.

CAUTION:

- Do not paint weatherstrip.
- Creosote-based stains should not come in contact with Andersen products.
- Abrasive cleaners or solutions containing corrosive solvents should not be used on Andersen products.

*Visit andersenwindows.com/warranty for details.

Dimensions in parentheses are in millimeters.

Printing limitations prevent exact replication of colors. See your Andersen supplier for actual color samples.

Naturally occurring variations in grain, color and texture of wood make each window one of a kind. All wood interiors are unfinished unless a finish is specified.

GLASS

D In addition to stainless steel glass spacers, black or white glass spacers are now available to allow the spacer to blend in with the unit color.

E Silicone glazing bead combined with two-sided silicone tape provide superior weathertightness.

F High-Performance options include:

- Low-E4® glass
- Low-E4 HeatLock® glass
- Low-E4 SmartSun™ glass
- Low-E4 SmartSun HeatLock glass
- Low-E4 Sun glass

Tempered and other glass options are available. Contact your Andersen supplier.

A removable translucent film helps shield the glass from damage during delivery and construction, and simplifies finishing at the job site.

Patterned Glass

Patterned glass options are available. See page 12 for more details.



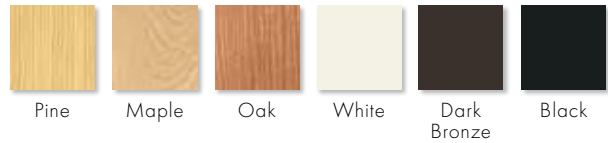
Complementary specialty windows are available with Stormwatch® Protection. For more details, visit andersenwindows.com/coastal.

EXTERIOR & INTERIOR OPTIONS

EXTERIOR COLORS



INTERIOR OPTIONS



ACCESSORIES

FRAME

Extension Jambs

Standard jamb depths are 4 9/16" (116) or 2 7/8" (73). Extension jambs are available in 1/16" (1.5) increments between 4 9/16" (116) and 7 1/8" (181). Additional dimensions are available. Contact your supplier for more information. Extension jambs are available in unfinished pine or prefinished white, dark bronze and black. Available for job site application or can be factory applied.

Plinth Blocks

For enhancing casing transitions. Decorated with a radial sunburst or use the reverse side flush face.



For arch windows, use 2 7/8" (73) x 4" (102) size plinth block with 2 1/4" (57) and 2 1/2" (64) casing. With 3 1/2" (89) casing, use 3 7/8" (98) x 5 1/4" (133).



For half circle, circle and oval windows, use 2 7/8" (73) size plinth block with 2 1/4" (57) and 2 1/2" (64) casing. With 3 1/2" (89) casing, use 3 7/8" (98).

CASING

Interior Arch Casing

Available in Colonial or Ranch styles. Arch casings come with transition blocks or plinth blocks, depending on the product. For easy integration and consistency, casing dimensions are consistent with Wood Moulding and Millwork Producers Association specifications. Available in pine, maple and oak.



2 1/4" (57) Colonial style WM366



2 1/2" (64) Colonial style WM351



3 1/2" (89) Colonial style WM444



2 1/4" (57) Ranch style WM324
2 1/2" (64) Ranch style WM315

SHAPES

Andersen® complementary specialty windows are available in a variety of sizes. Fixed unit profiles may vary dependent upon shape. For specific sizes, details and joining information, contact your Andersen supplier.



Rectangle



Right Triangle



Isosceles Triangle



Trapezoid



Angled Pentagon



Peak Pentagon



Parallelogram



Hexagon



Diamond



Octagon



Unequal Hexagon



Gothic



Half Circle



Quarter Circle



Eyebrow



Partial Eyebrow



Elliptical



Extended Gothic



Springline™



Springline Flanker



Arch



Unequal Leg Arch



Circle



Oval

The additional specialty window shapes below are available by special order.



Partial Arch



Partial Elliptical



Reverse Partial Eyebrow



Extended Reverse Partial Eyebrow



Extended Reverse Eyebrow



Quatrefoil



Quarter Arch



Partial Extended Arch



Extended Raised Eyebrow



Extended Raised Eyebrow



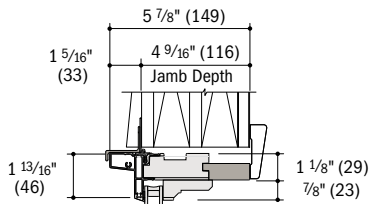
Extended Elliptical

COMPLEMENTARY SPECIALTY WINDOWS

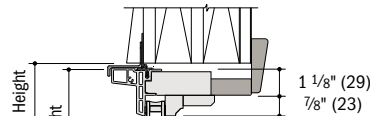
Complementary Specialty Window Details

Scale 1 1/2" (38) = 1'-0" (305) – 1:8

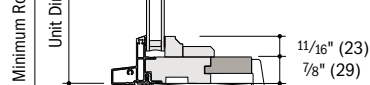
Complements 400 Series Casement, Awning and Picture Windows



Lineal Head

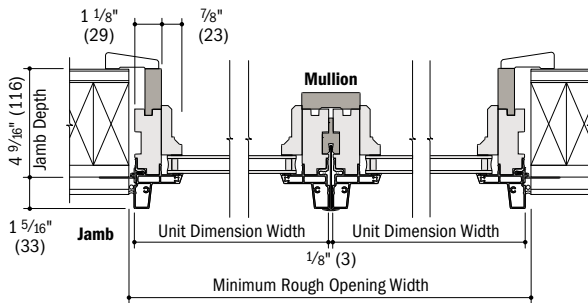


Curved Head



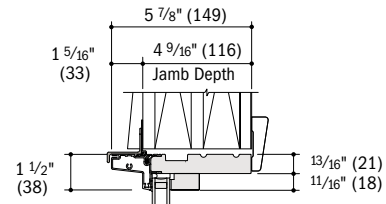
Sill

Vertical Section

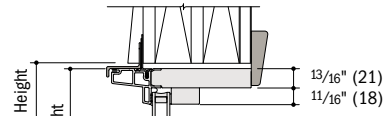


Horizontal Section

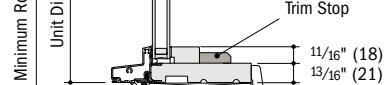
Complements 400 Series Double-Hung Windows and Patio Doors



Lineal Head

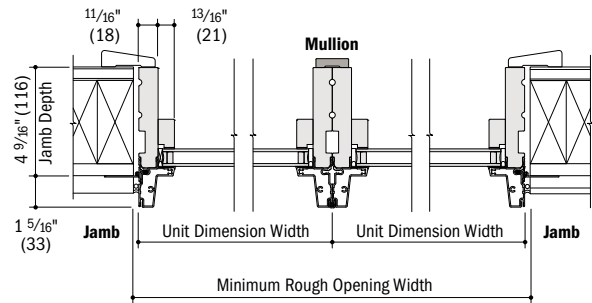


Curved Head



Sill

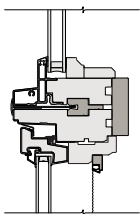
Vertical Section



Horizontal Section

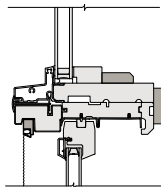
Horizontal (stack) Joining Detail

Scale 1 1/2" (38) = 1'-0" (305) – 1:8



Vertical Section

Complementary Specialty over
400 Series Casement Window

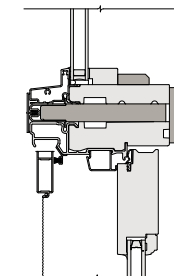


Vertical Section

Complementary Specialty over
400 Series Tilt-Wash Double-Hung Window

Horizontal (stack) Joining Detail – LVL

Scale 1 1/2" (38) = 1'-0" (305) – 1:8



Vertical Section

Complementary Specialty over
400 Series Frenchwood® Hinged Inswing Patio Door

For more joining information, see the combination designs section starting on page 181.

- 4 9/16" (116) overall jamb depth measurement is from back side of installation flange.
- Light-colored areas are parts included with window. Dark-colored areas are additional Andersen® parts required to complete window assembly as shown.
- Minimum rough openings may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See installation information on pages 210-211.
- Details are for illustration only and are not intended to represent product installation methods or materials. Refer to product installation guides at andersenwindows.com.
- Dimensions in parentheses are in millimeters.

FRENCHWOOD® GLIDING PATIO DOORS

Table of Sizes	144
Specifications	146
Custom Sizing	145
Door Details	146-148
Joining Details	148
Grille Patterns	155
Combination Designs	181
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CUSTOM SIZING
in 1/8" (3) increments



Dimensions in parentheses are in millimeters.

FRENCHWOOD® GLIDING PATIO DOORS

FEATURES

FRAME

A The sill has an extruded aluminum track, with a stainless steel cap that resists stains, rust and denting*. A thermal barrier reduces conductive heat loss and limits condensation on the inside. The sill has an attractive, wear-resistant, heat-baked finish in neutral gray.

B All basic exterior frame members are covered with a rigid vinyl sheath that maintains an attractive appearance while minimizing maintenance.

C Wood frame members are treated with a water-repellent preservative for long-lasting protection and performance. Interior frame trim pieces are unfinished pine. Maple and oak veneers, or prefinished white interior options are available.

Factory-assembled two-panel doors are available and arrive at the job site ready to install. Unassembled doors are also available and require job site assembly.

D A flexible vinyl weatherstrip at the head and side jambs provides a positive seal between the frame and panels.

PANEL

E The exterior of the wood door panel is protected with a low-maintenance urethane base finish in white, Sandtone, Terratone or forest green.

F Panel interior surfaces are unfinished pine veneer. Unfinished maple or oak veneers are available as options. Low-maintenance prefinished white interiors are also available on units with white exteriors.

G Dual ball-bearing rollers on door panels provide smooth gliding operation with self-contained leveling adjusters.

*Visit andersenwindows.com/warranty for details.

Mix-and-match interior and exterior style and finish options are available.

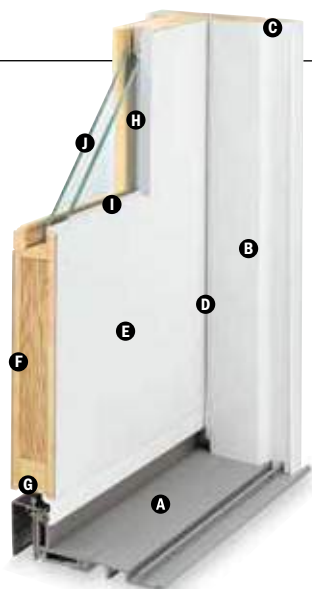
Bright brass and satin nickel finishes feature a 10-year limited warranty.

Tribeca and Albany hardware are zinc die cast with powder-coated durable finish. Other hardware is solid forged brass.

Dimensions in parentheses are in millimeters.

Naturally occurring variations in grain, color and texture of wood make each window one of a kind. All wood interiors are unfinished unless a finish is specified.

Printing limitations prevent exact replication of colors and finishes. See your Andersen supplier for actual color and finish samples. Distressed bronze and oil rubbed bronze are "living" finishes that will change with time and use.



Mortise-and-Tenon Joints



Panel joints are mortise and tenon with patented dowel construction for maximum strength.

Flexible Seal



A full-length combination weatherstrip/interlock system provides a flexible seal at the meeting stile.

GLASS

H In addition to stainless steel glass spacers, black or white glass spacers are now available to allow the spacer to blend in with the unit color.

I Panels are silicone bed glazed and finished with an interior wood stop.

J High-Performance options include:

- Low-E4® tempered glass
- Low-E4 HeatLock® tempered glass
- Low-E4 SmartSun™ tempered glass
- Low-E4 SmartSun HeatLock tempered glass
- Low-E4 Sun tempered glass

Additional glass options are available. Contact your Andersen supplier.

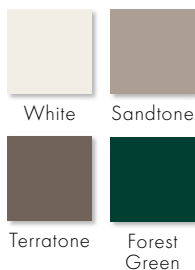
A removable translucent film helps shield the glass from damage during delivery and construction, and simplifies finishing at the job site.

Patterned Glass

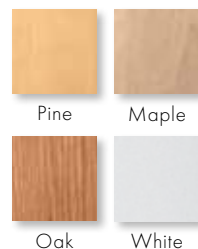
Patterned glass options are available. See page 12 for more details.

EXTERIOR & INTERIOR OPTIONS

EXTERIOR COLORS



INTERIOR OPTIONS



HARDWARE OPTIONS Sold Separately



ANVERS®
Bright Brass
Oil Rubbed Bronze
Satin Nickel



YUMA®
Distressed Bronze
Distressed Nickel



NEWBURY®
Antique Brass
Bright Brass
Brushed Chrome
Oil Rubbed Bronze
Polished Chrome
Satin Nickel



ALBANY
Black
Gold Dust
Stone
White



COVINGTON™
Antique Brass
Bright Brass
Oil Rubbed Bronze



ENCINO®
Distressed Bronze
Distressed Nickel



WHITMORE®
Antique Brass
Bright Brass
Oil Rubbed Bronze
Satin Nickel



TRIBECA®
Black
Stone
White

HARDWARE FINISHES

Bold name denotes finish shown.



Blinds-Between-the-Glass



Blinds-between-the-glass are available for select gliding patio door sizes when ordered with Low-E4® tempered glass, and a pine or prefinished white door interior and any of our four exterior colors. White 1/2" (13) aluminum slat blinds come mounted between two panes of insulated glass in a dust-free environment. Blinds are magnetically controlled and can be tilted, raised and lowered using low-profile controls. Smooth, simple operation allows for customized light and privacy control. Available in 3368, 33611, 6068, 60611, 12068-4 and 120611-4 door sizes.

HARDWARE

Reachout Locking Hardware



The unique Andersen® reachout locking hardware pulls the door panel snugly into the jamb for a weathertight seal and enhanced security.

ACCESSORIES Sold Separately

FRAME

Standard jamb depth is 4 9/16" (116). Pine, maple and oak veneers or prefinished white interior extension jambs are available in 1/16" (1.5) increments between 5 1/16" (116) and 7 1/8" (181).

Threshold



A maple or oak threshold is available for finishing the interior of the sill.

Ramped Sill Insert



Ramped sills in maple or oak provide smooth transition from interior to exterior, and can be used with a retractable insect screen but not a gliding insect screen. Check with local and federal officials to determine if product meets accessibility codes.

Sill Support



An aluminum sill support is designed to lock into a channel under the sill and tie back into the wall. This offers support to the outermost sill section when needed. Available in a neutral gray finish.

HARDWARE

Exterior Keyed Lock



A six-pin key cylinder lock is available in finishes that coordinate with the hardware. This lock allows the gliding door to be locked and unlocked from the exterior.

Auxiliary Foot Lock



Provides an extra measure of security when the door is in a locked position. Lock can be set so the door is fully closed or partially open to provide a secure venting position. Available in all hardware finishes.

GLASS

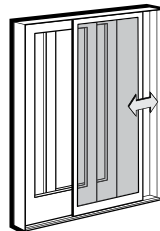
Andersen Art Glass

Andersen art glass panels come in a variety of original patterns. Available for stationary panels, sidelights and transoms. See art glass section starting on page 173 for more information or visit andersenwindows.com/artglass.

INSECT SCREENS

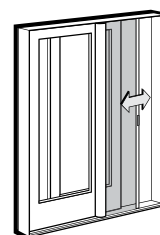
All insect screens have a long-lasting fiberglass screen mesh with a charcoal finish, and frames are color matched to the exterior of the door unless otherwise specified.

Gliding Insect Screen



Patented square-corner joint construction adds considerable strength to the frame members. The insect screen is available for both two-panel doors and four-panel doors. Gliding insect screens have Delrin® injection-molded bottom rollers with self-contained leveling adjusters, providing smooth operation. Interior and exterior pulls and latch are provided.

Retractable Insect Screen



The retractable insect screen is installed on the exterior of the door and opens side to side across the width of the opening. When the insect screen is not in use, it neatly retracts into a small canister mounted on the exterior of the door. The retractable insect screen canister is available for two-panel patio doors in our four standard exterior colors. Please note that the retractable insect screen track reduces clear opening height by 1" (25).

GRILLES

Grilles are available in a variety of configurations and widths. For patio door grille patterns, see page 155.

EXTERIOR TRIM

Available with Andersen exterior trim. See exterior trim section starting on page 175.

SIDELIGHTS & TRANSOMS

Andersen Frenchwood® patio door sidelights and transoms feature elegant lines that match our Frenchwood gliding patio doors. They feature pine, maple, oak and prefinished white interior options, plus our four standard exterior colors. Stationary units can also be selected for use as sidelights. For details, see pages 159-162.

CAUTION:

- Painting and staining may cause damage to rigid vinyl.
- 400 Series patio door in Terratone color may be painted any color lighter than Terratone color using quality oil-based or latex paint.
- Do not paint 400 Series patio doors in white, canvas, Sandtone, dark bronze, forest green or black exterior colors.
- Andersen does not warrant the adhesion or performance of homeowner-applied paint over vinyl or other factory-coated surfaces.
- For vinyl painting instructions and preparation, contact your Andersen supplier.
- Do not paint weatherstrip.
- Creosote-based stains should not come in contact with Andersen products.
- Abrasive cleaners or solutions containing corrosive solvents should not be used on Andersen products.

*Visit andersenwindows.com/warranty for details.

“Delrin” is a registered trademark of E.I. du Pont de Nemours and Company.

Andersen patio doors are not intended for use as entrance doors.

Dimensions in parentheses are in millimeters.

FRENCHWOOD® GLIDING PATIO DOORS

Three Patio Door Heights

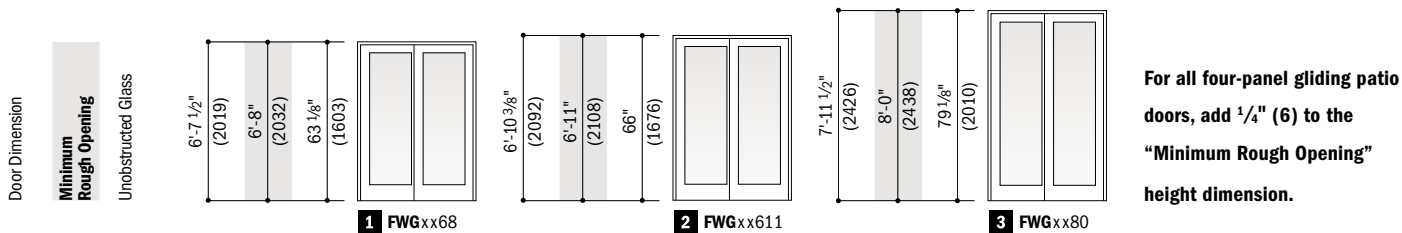
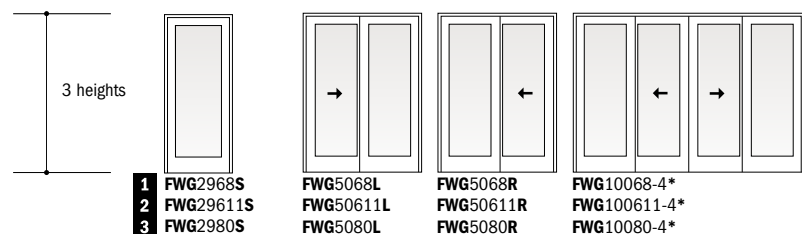


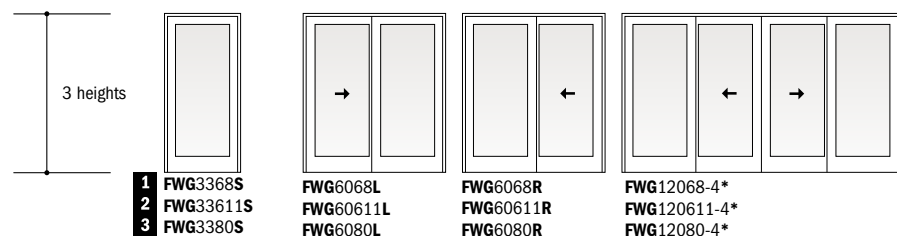
Table of Frenchwood® Gliding Patio Door Sizes

Scale 1/8" (3) = 1'-0" (305) – 1:96

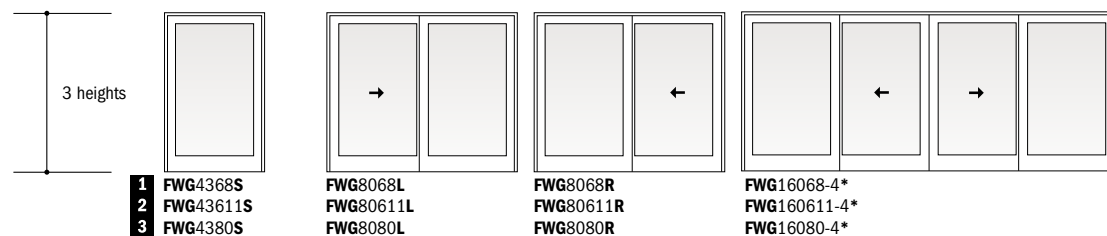
Door Dimension	2'-8"	4'-11 1/4"	4'-11 1/4"	9'-9"
	(813)	(1505)	(1505)	(2972)
Minimum Rough Opening	2'-8 3/4"	5'-0"	5'-0"	9'-9 3/4"
	(832)	(1524)	(1524)	(2991)
Unobstructed Glass (single panel only)	21 1/8"	21 1/8"	21 1/8"	21 1/8"
	(537)	(537)	(537)	(537)



Door Dimension	3'-2"	5'-11 1/4"	5'-11 1/4"	11'-9"
	(965)	(1810)	(1810)	(3581)
Minimum Rough Opening	3'-2 3/4"	6'-0"	6'-0"	11'-9 3/4"
	(984)	(1829)	(1829)	(3600)
Unobstructed Glass (single panel only)	27 1/8"	27 1/8"	27 1/8"	27 1/8"
	(689)	(689)	(689)	(689)



Door Dimension	4'-2"	7'-11 1/4"	7'-11 1/4"	15'-9"
	(1270)	(2419)	(2419)	(4801)
Minimum Rough Opening	4'-2 3/4"	8'-0"	8'-0"	15'-9 3/4"
	(1289)	(2438)	(2438)	(4820)
Unobstructed Glass (single panel only)	39 1/8"	39 1/8"	39 1/8"	39 1/8"
	(994)	(994)	(994)	(994)



Custom-size doors are available in 1/8" (3) increments.
See page 145 for custom sizes and specifications.

Viewed from the exterior. Arrow indicates direction of panel operation. Stationary (S) doors can be used as an individual unit or as a sidelight. Two-panel doors are available factory assembled and arrive at the jobsite ready to install.

Grille patterns shown on page 155.

*"Door Dimension" always refers to outside frame-to-frame dimension.

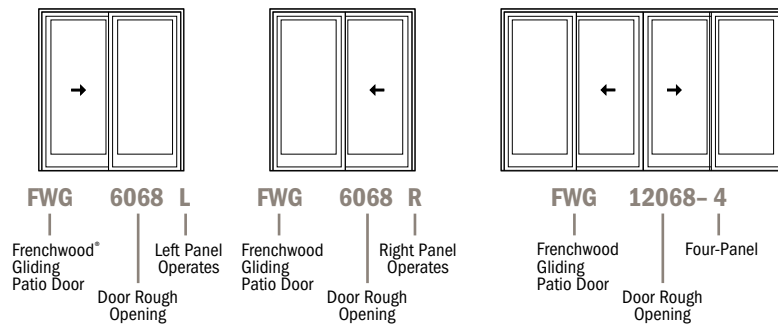
*"Minimum Rough Opening" dimensions may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See pages 210-211 for more details.

*Dimensions in parentheses are in millimeters.

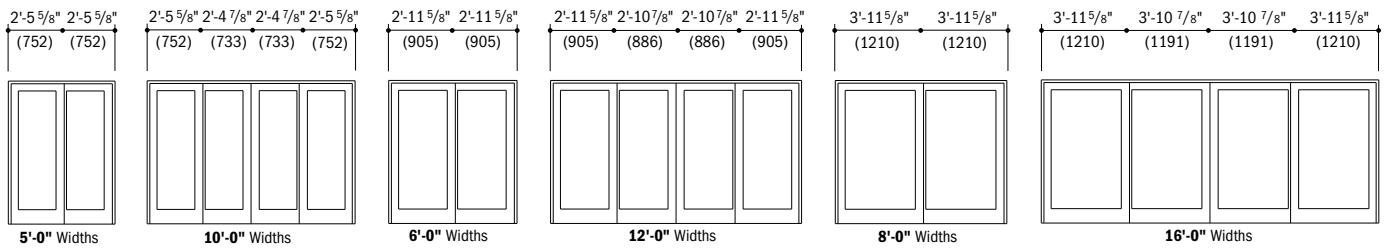
*Add 1/4" (6) to the "Minimum Rough Opening" height dimension for four-panel doors.

Order Designation Description

Viewed from the exterior.



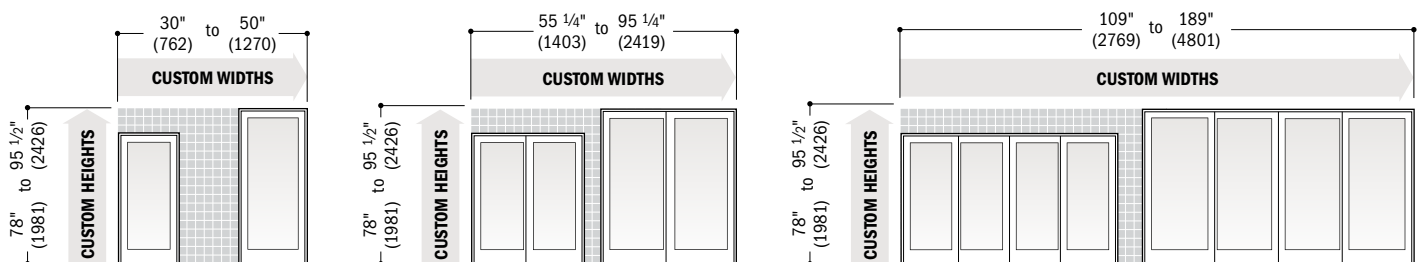
Frenchwood® Gliding Patio Door Centerline Astragal Dimensions



Custom Sizes and Specification Formulas



Available in 1/8" (3) increments between minimum and maximum widths and heights shown. Some restrictions apply. Measurement guide for custom-size patio doors can be found at andersenwindows.com/measure.



Clear Opening	Two-Panel	Four-Panel	Minimum R.O.	Single-Panel and Two-Panel	Four-Panel	Unobst. Glass	Single-Panel	Two-Panel	Four-Panel
	Width = (width + 2) - 7.773" (197) Height = height - 4.155" (106)	Width = (width + 2) - 14.322" (364) Height = height - 4.155" (106)		Width = width + 3/4" (19) Height = height + 1/2" (13)	Width = width + 3/4" (19) Height = height + 3/4" (19)		Width = width - 10.876" (276) Height = height - 16.391" (416)	Width = width - 17.002" (432) Height = height - 16.391" (416)	Width = width - 32.504" (826) Height = height - 16.391" (416)

* Dimensions in parentheses are in millimeters.

• **Clear Opening** formulas provide dimensions for determining area available for egress. Vent opening, or area available for passage of air, is equal to clear opening. **Minimum R.O.** (minimum rough opening) formulas provide minimum rough opening width and height dimensions. **Unobst. Glass** (unobstructed glass) formulas provide dimensions for determining area available for passage of light.

FRENCHWOOD® GLIDING PATIO DOORS

Two-Panel and Four-Panel Frenchwood® Gliding Patio Door Opening and Area Specifications

Door Number	Clear Opening Area Sq. Ft./(m ²)		Clear Opening in Full Open Position		Glass Area Sq. Ft./(m ²)	Vent Area Sq. Ft./(m ²)	Overall Door Area Sq. Ft./(m ²)	
			Width Inches/(mm)	Height Inches/(mm)				
FWG5068	11.43	(1.06)	21 13/16" (555)	75 5/16" (1914)	18.52 (1.72)	11.43 (1.06)	32.71 (3.04)	
FWG6068	14.57	(1.35)	27 13/16" (707)	75 5/16" (1914)	23.77 (2.21)	14.57 (1.35)	39.34 (3.65)	
FWG8068	20.85	(1.94)	39 13/16" (1012)	75 5/16" (1914)	34.29 (3.19)	20.85 (1.94)	52.59 (4.89)	
FWG10068	23.12	(2.15)	44 1/8" (1122)	75 5/16" (1914)	37.03 (3.44)	23.12 (2.15)	64.59 (6.00)	
FWG12068	29.39	(2.73)	56 1/8" (1427)	75 5/16" (1914)	47.55 (4.42)	29.39 (2.73)	77.84 (7.23)	
FWG16068	41.95	(3.90)	80 1/8" (2037)	75 5/16" (1914)	68.59 (6.37)	41.95 (3.90)	104.34 (9.69)	
FWG50611	11.87	(1.10)	21 13/16" (555)	78 3/16" (1987)	19.36 (1.80)	11.87 (1.10)	33.89 (3.15)	
FWG60611	15.13	(1.41)	27 13/16" (707)	78 3/16" (1987)	24.86 (2.31)	15.13 (1.41)	40.76 (3.79)	
FWG80611	21.65	(2.01)	39 13/16" (1012)	78 3/16" (1987)	35.85 (3.33)	21.65 (2.01)	54.49 (5.06)	
FWG100611	24.00	(2.23)	44 1/8" (1122)	78 3/16" (1987)	38.72 (3.60)	24.00 (2.23)	66.93 (6.22)	
FWG120611	30.52	(2.83)	56 1/8" (1427)	78 3/16" (1987)	49.72 (4.62)	30.52 (2.83)	80.66 (7.49)	
FWG160611	43.55	(4.05)	80 1/8" (2037)	78 3/16" (1987)	71.71 (6.66)	43.55 (4.05)	108.12 (10.04)	
FWG5080	13.86	(1.29)	21 13/16" (555)	91 5/16" (2320)	23.21 (2.16)	13.86 (1.29)	39.29 (3.65)	
FWG6080	17.67	(1.64)	27 13/16" (707)	91 5/16" (2320)	29.80 (2.77)	17.67 (1.64)	47.25 (4.39)	
FWG8080	25.28	(2.35)	39 13/16" (1012)	91 5/16" (2320)	42.99 (3.99)	25.28 (2.35)	63.17 (5.87)	
FWG10080	28.02	(2.60)	44 1/8" (1122)	91 5/16" (2320)	46.42 (4.31)	28.02 (2.60)	77.59 (7.21)	
FWG12080	35.64	(3.31)	56 1/8" (1427)	91 5/16" (2320)	59.60 (5.54)	35.64 (3.31)	93.51 (8.69)	
FWG16080	50.86	(4.73)	80 1/8" (2037)	91 5/16" (2320)	85.97 (7.99)	50.86 (4.73)	125.34 (11.64)	

*Dimensions in parentheses are in millimeters or square meters

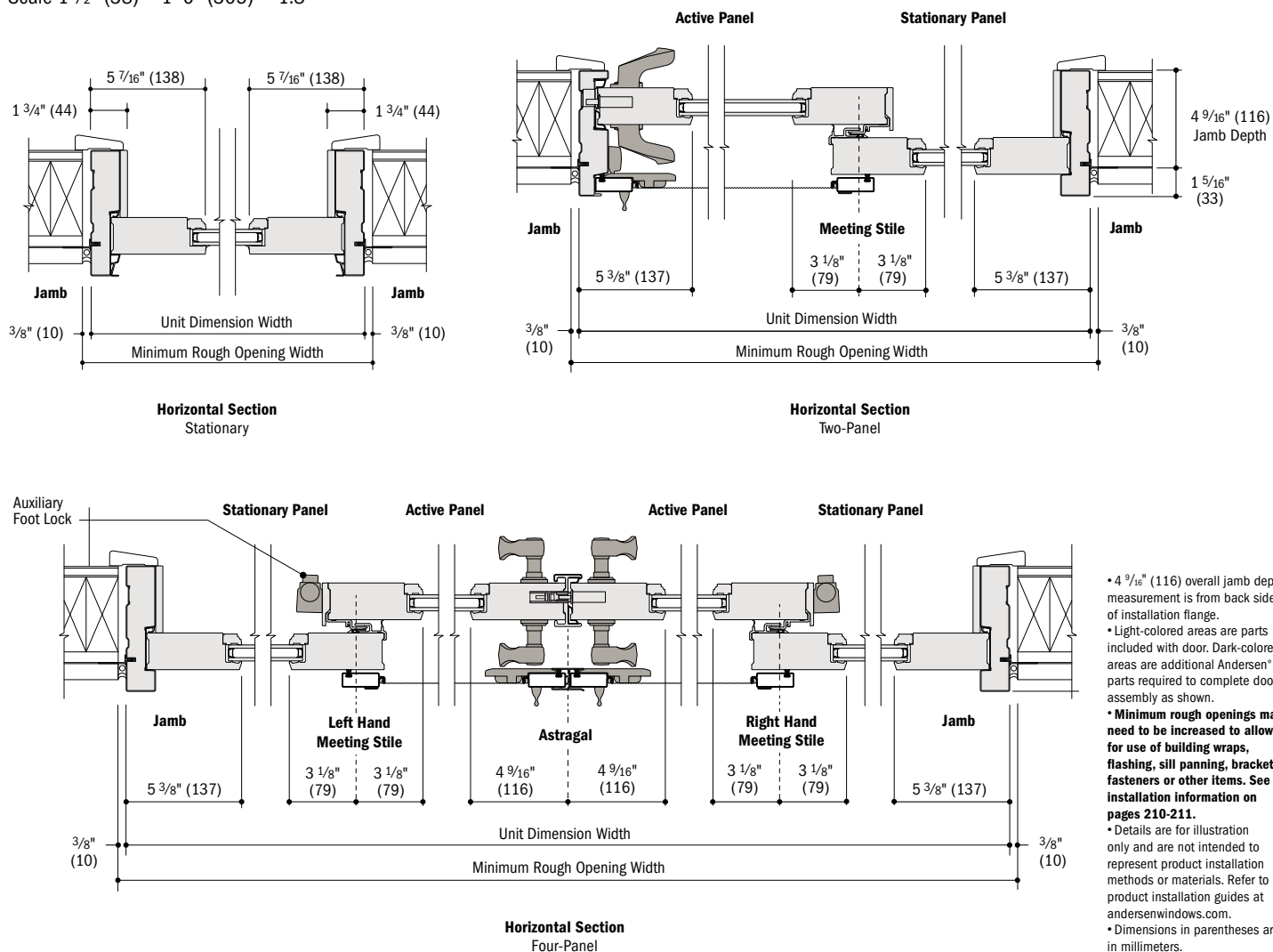
Stationary Frenchwood Gliding Patio Door Area Specifications

Door Number	Glass Area Sq. Ft./ (m ²)	Overall Door Area Sq. Ft./ (m ²)
FWG2968	9.26 (0.86)	17.67 (1.64)
FWG3368	11.89 (1.11)	20.98 (1.95)
FWG4368	17.15 (1.59)	27.60 (2.56)
FWG29611	9.68 (0.90)	18.31 (1.70)
FWG33611	12.43 (1.16)	21.74 (2.02)
FWG43611	17.93 (1.67)	28.60 (2.66)
FWG2980	11.60 (1.08)	21.22 (1.97)
FWG3380	14.90 (1.38)	25.20 (2.34)
FWG4380	21.49 (2.00)	33.16 (3.08)

*Dimensions in parentheses are in square meters

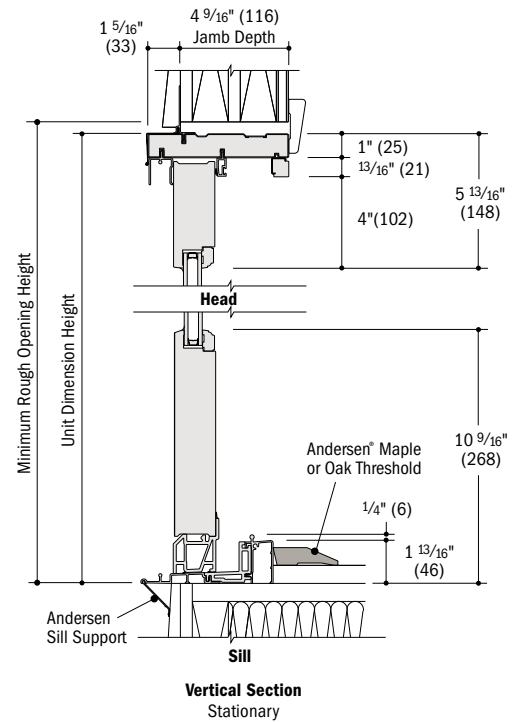
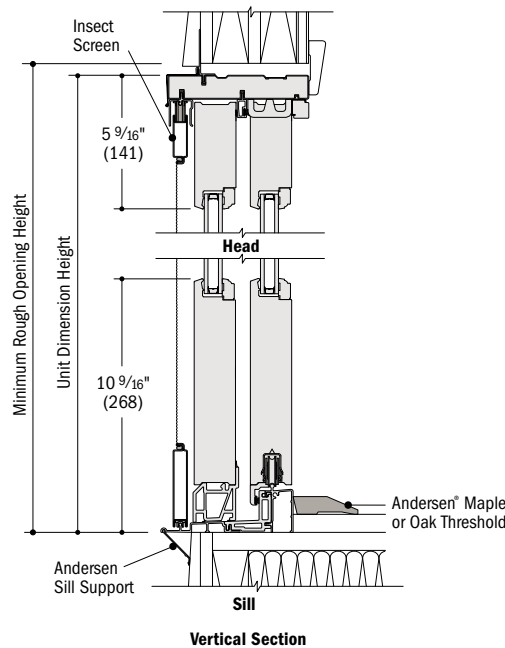
Frenchwood Gliding Patio Door Details

Scale 1 1/2" (38) = 1'-0" (305) – 1:8



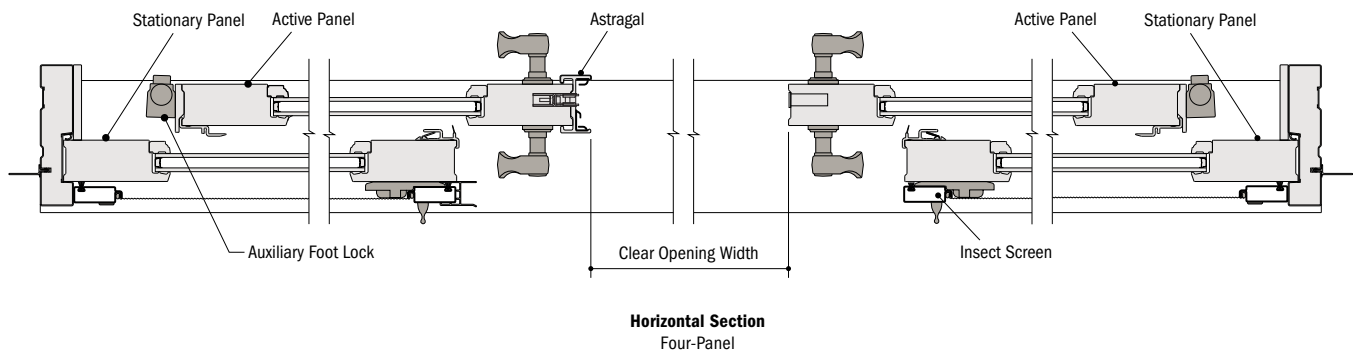
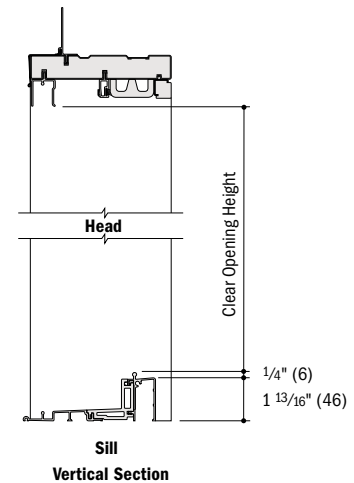
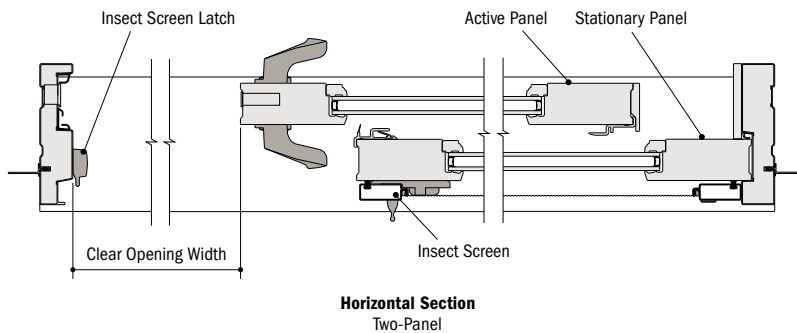
Frenchwood® Gliding Patio Door Details

Scale 1 1/2" (38) = 1'-0" (305) – 1:8



Clear Opening Details

Scale 1 1/2" (38) = 1'-0" (305) – 1:8

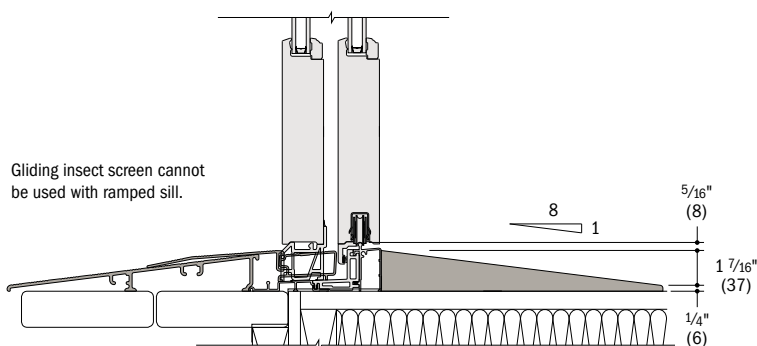


- 4 9/16" (116) overall jamb depth measurement is from back side of installation flange.
- Light-colored areas are parts included with door. Dark-colored areas are additional Andersen® parts required to complete door assembly as shown.
- **Minimum rough openings may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See installation information on pages 210-211.**
- Details are for illustration only and are not intended to represent product installation methods or materials. Refer to product installation guides at andersenwindows.com.
- Dimensions in parentheses are in millimeters.

FRENCHWOOD® GLIDING PATIO DOORS

Ramped Sill Detail

Scale 1 1/2" (38) = 1'-0" (305) – 1:8



Vertical Joining Detail

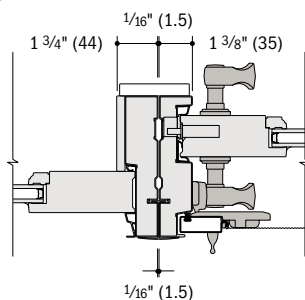
Scale 1 1/2" (38) = 1'-0" (305) – 1:8

Overall Door Dimension Width

Sum of individual door widths
plus 1/16" (1.5) for each join.

Overall Rough Opening Width

Overall door width plus 3/4" (19).



Horizontal Section

Frenchwood® Gliding to Frenchwood Gliding

Vertical Joining Detail – Fiberglass

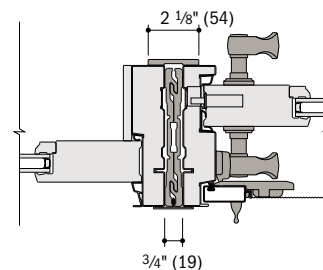
Scale 1 1/2" (38) = 1'-0" (305) – 1:8

Overall Door Dimension Width

Sum of individual door widths
plus 3/4" (19) for each join.

Overall Rough Opening Width

Overall door width plus 3/4" (19).



Horizontal Section

Frenchwood® Gliding to Frenchwood Gliding

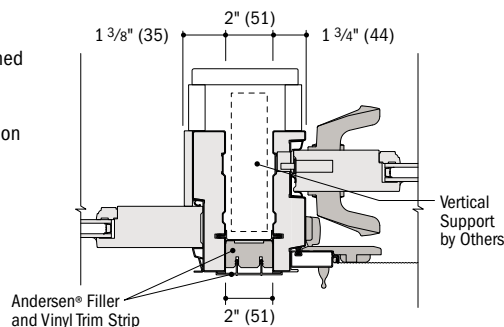
Andersen does not recommend joining of receiver jamb to receiver jamb.

For more joining information, see the combination designs section starting on page 181.

Separate Rough Openings Detail

Scale 1 1/2" (38) = 1'-0" (305) – 1:8

To meet structural requirements or to achieve a wider joined appearance, doors may be installed into separate rough openings having vertical support (by others) in combination with Andersen® exterior filler and exterior vinyl trim.



Horizontal Section

Frenchwood® Gliding and Frenchwood Gliding

* Light-colored areas are parts included with door. Dark-colored areas are additional Andersen® parts required to complete door assembly as shown.

* **Minimum rough openings may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See installation information on pages 210-211.**

* Details are for illustration only and are not intended to represent product installation methods or materials. Refer to product installation guides at andersenwindows.com.

* Andersen recommends installation of doors into separate rough openings. Consult with an architect or structural engineer regarding minimum requirements for structural support members between adjacent rough openings.

* Dimensions in parentheses are in millimeters.



FRENCHWOOD® HINGED INSWING PATIO DOORS

Table of Sizes	152-153
Specifications	154
Custom Sizing	155
Grille Patterns	155
Door Details	156-157
Joining Details	158
Combination Designs	181
Product Performance	197

CUSTOM SIZING
in 1/8" (3) increments



Dimensions in parentheses are in millimeters.

FRENCHWOOD® HINGED INSWING PATIO DOORS

FEATURES

FRAME

A The sill is made with three-piece construction. The subsill is made of Fibrex® material, and the sill step is solid oak. The exterior sill member is made of extruded aluminum with an attractive wear-resistant, heat-baked finish in neutral gray. This combination of materials combines durability and low maintenance with excellent insulating characteristics.

B All basic exterior frame members are fiberglass reinforced composite, which maintains an attractive appearance while minimizing maintenance.

C The exterior frame members are attached to a water-repellent preservative-treated wood subframe for long-lasting protection and performance. The subframe is grooved to accept extension jambs.

PANEL

D Panel interior surfaces are unfinished pine veneer. Unfinished maple or oak veneers are available as options. Low-maintenance prefinished white interiors are also available.

Hinged inswing operating panels are left-hand active, right-hand active or two-panel active-passive jamb hinged.



E The exterior of the wood door panel is protected with a long-lasting urethane base finish available in white, Sandtone, Terratone and forest green.

F A factory-applied, one-piece compression-type rubber weatherstrip continues in one plane around the panel to provide maximum effectiveness against water and air infiltration. Corners of the weatherstrip are welded to eliminate gaps between the panel and the frame/sill shoulder.

Mortise-and-Tenon Joints



Mortise and tenon joints prevent panel sag and maintain smooth operation.

GLASS

G In addition to stainless steel glass spacers, black or white glass spacers are now available to allow the spacer to blend in with the unit color.

H Panels are silicone bed glazed and finished with an interior wood stop.

I High-Performance options include:

- Low-E4® tempered glass
- Low-E4 HeatLock® tempered glass
- Low-E4 SmartSun™ tempered glass
- Low-E4 SmartSun HeatLock tempered glass
- Low-E4 Sun tempered glass

Additional glass options are available. Contact your Andersen supplier.

A removable translucent film helps shield the glass from damage during delivery and construction, and simplifies finishing at the job site.

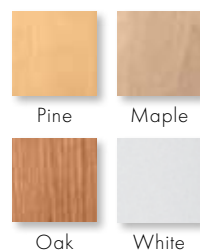
Patterned glass options are available. See page 12 for more details.

EXTERIOR & INTERIOR OPTIONS

EXTERIOR COLORS



INTERIOR OPTIONS



Naturally occurring variations in grain, color and texture of wood make each window one of a kind. All wood interiors are unfinished unless a finish is specified. Printing limitations prevent exact replication of colors and finishes. See your Andersen supplier for actual color and finish samples.

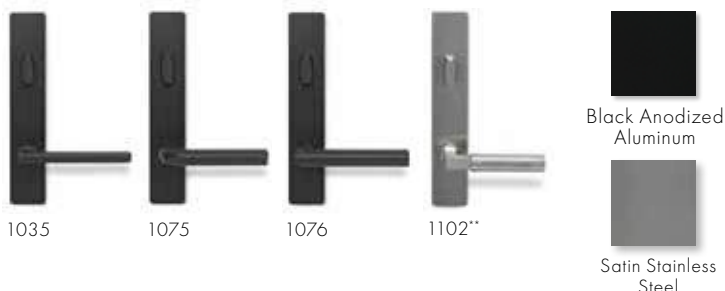
HARDWARE OPTIONS Sold Separately



HARDWARE FINISHES



FSB® HARDWARE & FINISHES



Bold name denotes finish shown.

*Visit andersenwindows.com/warranty for details.

**FSB style 1102 is not available in black anodized aluminum.

"FSB" is a registered trademark of Franz Schneider Brakel GmbH & Co. Matching hinges are available for inswing patio doors.

Mix-and-match interior and exterior style and finish options are available; excludes FSB hardware.

Bright brass and satin nickel finishes feature a 10-year limited warranty.

Tribeca and Albany hardware are zinc die cast with powder-coated durable finish. Other hardware is solid forged brass.

Distressed bronze and oil rubbed bronze are "living" finishes that will change with time and use.

Blinds-Between-the-Glass



Blinds-between-the-glass are available for select hinged patio door sizes when ordered with Low-E4[®] tempered glass, and a pine or prefinished white door interior and any of our four exterior colors. White 1/2" (13) aluminum slat blinds come mounted between two panes of insulated glass in a dust-free environment. Blinds are magnetically controlled and can be tilted, raised and lowered using low-profile controls. Smooth, simple operation allows for customized light and privacy control. Available in 2768, 27611, 3168, 31611, 5068, 50611, 6068, 60611, 9068 and 90611 door sizes.

HARDWARE

Hinges

Adjustable hinges are standard on inswing patio doors and have ball-bearing pivots for smooth, frictionless movement. Feature easy horizontal and vertical adjustment, plus quick-release for easy panel removal. The release feature is ideal for transporting large units up stairs or to other hard-to-reach areas.



Gold dust finish

Gold dust finish is standard on wood interior doors. For units with prefinished white interior, white is standard. Also available in finishes that coordinate with the hardware.

Multi-Point Locking System



The multi-point locking system, with a hook bolt above and below the center dead bolt, provides a weathertight seal and enhanced security.

ACCESSORIES Sold Separately

FRAME

Interior Extension Jamb

Standard jamb depth is 4 1/8" (116). Pine, maple and oak veneers, or prefinished white extension jambs are available in 1/8" (1.5) increments between 5 1/8" (129) and 7 1/8" (181). Interior extension jambs on inswing units will restrict the full opening of the door.

Exterior Extension Jamb*

Exterior extension jamb system is available for the following wall thicknesses: 5 1/4" (133), 6 3/16" (167) and 7 3/16" (192). In walls over 4 1/2" (114), the exterior sill extender and exterior extension jamb system allows the unit to be installed flush to the interior, so the hinged doors will open flat against the interior wall. Color matched to the exterior of the finished unit, this system provides a low-maintenance, finished exterior appearance. An extended double-insect screen track is available for jamb-hinged doors that require gliding insect screens. Exterior extension jamb kits are available with or without the double-insect screen track.

Threshold



A maple or oak threshold is available for finishing the interior of the sill.

Ramped Sill Insert



Ramped sills in maple or oak provide smooth transition from interior to exterior. Ramped sill cannot be used with insect screens. Check with local and federal officials to determine if product meets accessibility codes. Shown with a Frenchwood[®] gliding patio door.

Sill Support



An aluminum sill support is designed to lock into a channel under the sill and tie back into the wall. This offers support to the outermost sill section when needed. Available in a neutral gray finish.

HARDWARE

Exterior Keyed Lock



A six-pin key cylinder lock is available in styles and finishes that coordinate with the hardware. This lock allows the hinged patio door to be locked and unlocked from the exterior.

Handle Extension



Extends interior door handle an additional 1" (25) from the door interior panel to accommodate blinds or shades. Kit includes

one handle extender and spindle. A second extender may be added to increase the length an additional 1" (25) to a 2" (51) total extension. Extenders are available in finishes that coordinate with hardware.

Strike Plate Extensions

Bright brass, antique brass, polished chrome, oil rubbed bronze, brushed chrome and satin nickel strike plate extensions are available for the following wall thicknesses: 5 1/4" (133), 6 3/16" (167), 7 1/8" (181) and 7 3/16" (192).

Construction Lock



This hardware can be used on all Andersen[®] hinged doors to help secure the structure during the construction phase of the project. It features an undersized escutcheon plate, which makes on-site finishing easier.

Panel Stop



This hinged door panel stop helps prevent wall damage when opening the inswing door. Available in finishes that coordinate with the hardware.

GLASS

Andersen[®] Art Glass

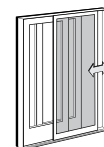
Andersen art glass panels come in a variety of original patterns. Available for stationary panels, sidelights and transoms. See art glass section starting on page 173 for more information or visit andersenwindows.com/artglass.

INSECT SCREENS

All insect screens have a long-lasting** fiberglass screen mesh with a charcoal finish, and frames are color matched to the exterior of the door unless otherwise specified.

Gliding Insect Screen

Available for all two- and three-panel doors. Features Delrin[®] material injection-molded bottom rollers with self-contained leveling adjusters.



A double insect screen track is required for two-panel active-passive or passive-active doors. Gliding insect screens are not available for 4' (1219)-wide doors.

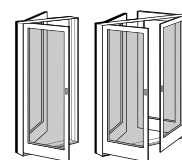
Double-Insect Screen Track



An extended insect screen track is required for two-panel active-passive or passive-active hinged doors that use gliding insect screens.

Hinged Insect Screens

Available for single-panel hinged doors, and two-panel active-passive or passive-active doors.



GRILLES

Available in a variety of configurations and widths. See page 155.

EXTERIOR TRIM

Available with Andersen exterior trim. See exterior trim section starting on page 175.

SIDELIGHTS & TRANSOMS

Andersen Frenchwood patio door sidelights and transoms feature elegant lines that match our Frenchwood hinged patio doors. See pages 159-162 for details.

CAUTION:

- Painting and staining may cause damage to rigid vinyl.
- Do not paint 400 Series patio doors in white, canvas, Sandtone, dark bronze, forest green or black exterior colors.

See page 143 for a complete list of painting, staining and cleaning cautions.

*Exterior extension jambs for hinged inswing patio doors must be applied before installing into opening.

**Visit andersenwindows.com/warranty for details.

"Delrin" is a registered trademark of E.I. du Pont de Nemours and Company.

Andersen patio doors are not intended for use as entrance doors.

Dimensions in parentheses are in millimeters.

FRENCHWOOD® HINGED INSWING PATIO DOORS

Table of Frenchwood® Hinged Inswing Patio Door Sizes

Scale 1/8" (3) = 1'-0" (305) – 1:96

Door Dimension	2'-0 1/2" (620)			4'-0" (1219)	4'-0" (1219)			
Minimum Rough Opening	2'-1" (634)			4'-1" (1242)	4'-1" (1242)			
Unobstructed Glass (single panel only)	13 1/4" (336)			13 1/4" (336)	13 1/4" (336)			
3 heights								
	1 FWH2168S 2 FWH21611S 3 FWH2180S			FWH4168APLR FWH41611APLR FWH4180APLR	FWH4168PALR FWH41611PALR FWH4180PALR			
Door Dimension	2'-6 1/8" (765)	2'-6 1/8" (765)	2'-6 1/8" (765)	4'-11 1/4" (1504)	4'-11 1/4" (1504)	4'-11 1/4" (1504)	4'-11 1/4" (1504)	4'-11 1/4" (1504)
Minimum Rough Opening	2'-7" (787)	2'-7" (787)	2'-7" (787)	5'-0" (1524)	5'-0" (1524)	5'-0" (1524)	5'-0" (1524)	5'-0" (1524)
Unobstructed Glass (single panel only)	18 7/8" (479)	18 7/8" (479)	18 7/8" (479)	18 7/8" (479)	18 7/8" (479)	18 7/8" (479)	18 7/8" (479)	18 7/8" (479)
3 heights								
	1 FWH2768S 2 FWH27611S 3 FWH2780S	FWH2768AR FWH27611AR FWH2780AR	FWH2768AL FWH27611AL FWH2780AL	FWH5068SS FWH50611SS FWH5080SS	FWH5068ASR FWH50611ASR FWH5080ASR	FWH5068SAL FWH50611SAL FWH5080SAL	FWH5068APLR FWH50611APLR FWH5080APLR	FWH5068PALR FWH50611PALR FWH5080PALR
Door Dimension	2'-8 1/8" (816)	2'-8 1/8" (816)	2'-8 1/8" (816)	5'-3 1/4" (1607)	5'-3 1/4" (1607)	5'-3 1/4" (1607)	5'-3 1/4" (1607)	5'-3 1/4" (1607)
Minimum Rough Opening	2'-9" (838)	2'-9" (838)	2'-9" (838)	5'-4" (1626)	5'-4" (1626)	5'-4" (1626)	5'-4" (1626)	5'-4" (1626)
Unobstructed Glass (single panel only)	20 7/8" (530)	20 7/8" (530)	20 7/8" (530)	20 7/8" (530)	20 7/8" (530)	20 7/8" (530)	20 7/8" (530)	20 7/8" (530)
3 heights								
	1 FWH2968S 2 FWH29611S 3 FWH2980S	FWH2968AR FWH29611AR FWH2980AR	FWH2968AL FWH29611AL FWH2980AL	FWH5468SS FWH54611SS FWH5480SS	FWH5468ASR FWH54611ASR FWH5480ASR	FWH5468SAL FWH54611SAL FWH5480SAL	FWH5468APLR FWH54611APLR FWH5480APLR	FWH5468PALR FWH54611PALR FWH5480PALR
Door Dimension	3'-0 1/8" (918)	3'-0 1/8" (918)	3'-0 1/8" (918)	5'-11 1/4" (1810)	5'-11 1/4" (1810)	5'-11 1/4" (1810)	5'-11 1/4" (1810)	5'-11 1/4" (1810)
Minimum Rough Opening	3'-1" (940)	3'-1" (940)	3'-1" (940)	6'-0" (1829)	6'-0" (1829)	6'-0" (1829)	6'-0" (1829)	6'-0" (1829)
Unobstructed Glass (single panel only)	24 7/8" (632)	24 7/8" (632)	24 7/8" (632)	24 7/8" (632)	24 7/8" (632)	24 7/8" (632)	24 7/8" (632)	24 7/8" (632)
3 heights								
	1 FWH3168S 2 FWH31611S 3 FWH3180S	FWH3168AR FWH31611AR FWH3180AR	FWH3168AL FWH31611AL FWH3180AL	FWH6068SS FWH60611SS FWH6080SS	FWH6068ASR FWH60611ASR FWH6080ASR	FWH6068SAL FWH60611SAL FWH6080SAL	FWH6068APLR FWH60611APLR FWH6080APLR	FWH6068PALR FWH60611PALR FWH6080PALR

Custom-size doors are available in 1/8" (3) increments. See page 155 for custom sizes and specifications.

Stationary (S) doors can be used as an individual unit or as a sidelight. In addition to venting door panels shown in table, other standard configurations are available for two- and three-panel doors.

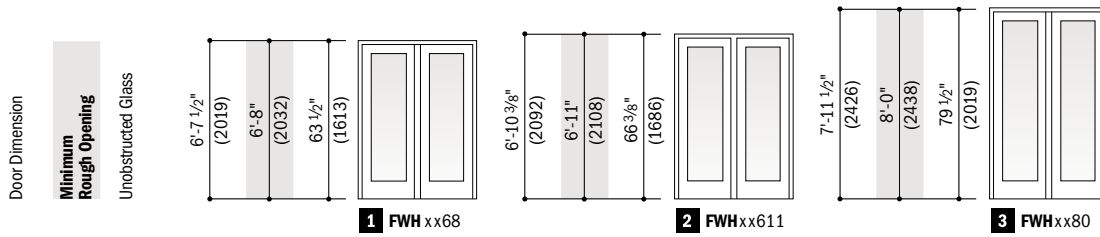
Grille patterns shown on page 155.

* "Door Dimension" always refers to outside frame-to-frame dimension.

** "Minimum Rough Opening" dimensions may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See pages 210-211 for more details.

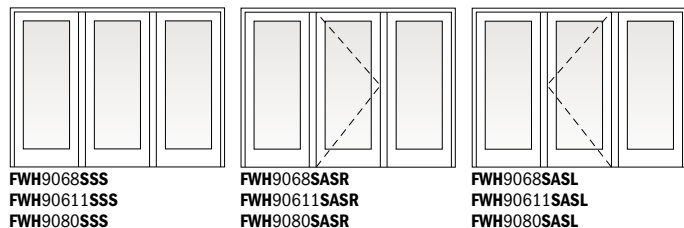
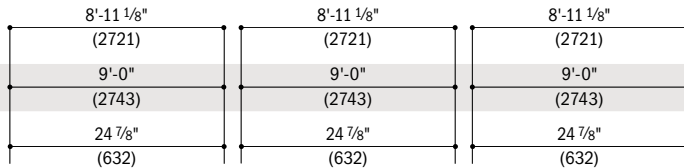
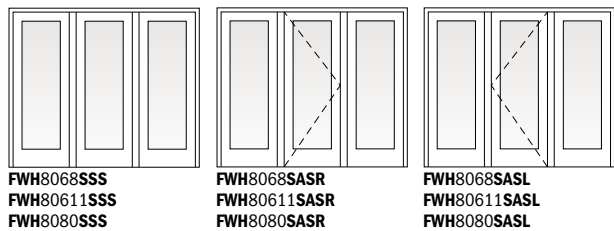
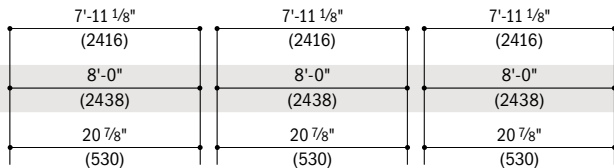
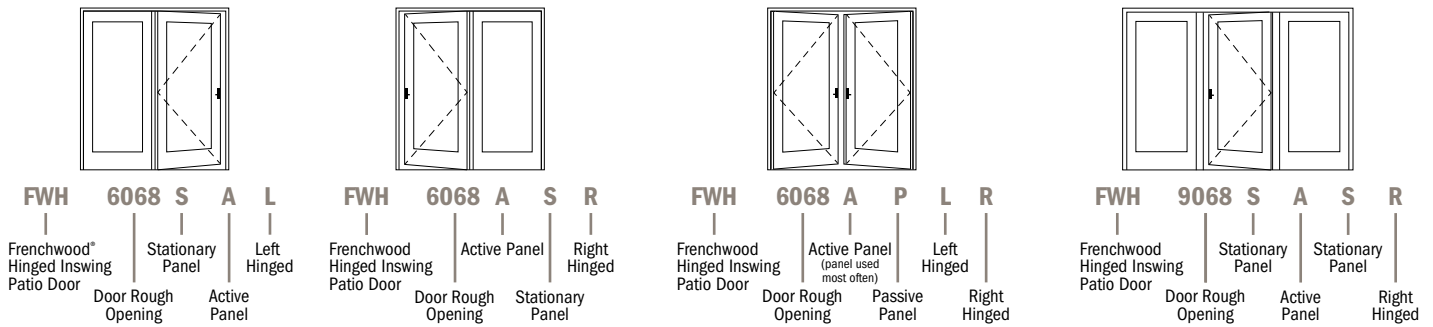
* Dimensions in parentheses are in millimeters.

Three Patio Door Heights



Order Designation Description

Viewed from the exterior.



* "Door Dimension" always refers to outside frame-to-frame dimension.
 * "Minimum Rough Opening" dimensions may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See pages 210-211 for more details.
 • Dimensions in parentheses are in millimeters.

FRENCHWOOD® HINGED INSWING PATIO DOORS

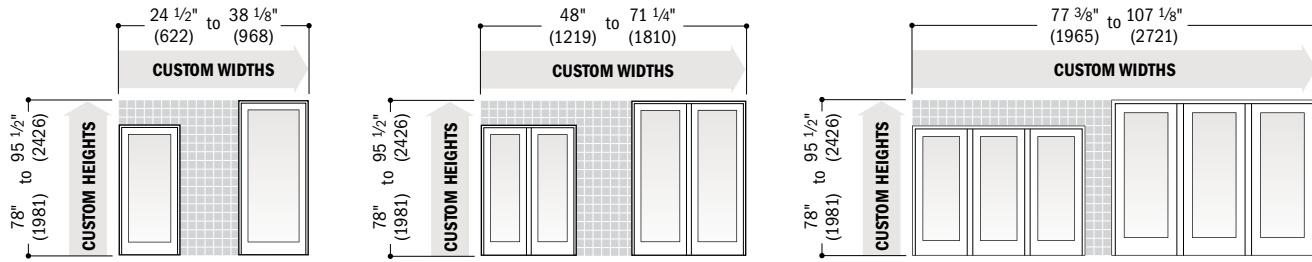
Frenchwood® Hinged Inswing Patio Door Opening and Area Specifications

Door Number	Number of Panels in Open Position*	Clear Opening Area Sq. Ft./ (m²)	Clear Opening Maximums			Glass Area Sq. Ft./ (m²)	Vent Area Sq. Ft./ (m²)	Overall Door Area Sq. Ft./ (m²)
			90° Open Position Width Inches/(mm)	Full Open Position Width Inches/(mm)	Height Inches/(mm)			
FWH2168S	-	-	-	-	-	5.74 (0.53)	-	13.39 (1.24)
FWH2768	1	12.98 (1.21)	24 13/16" (630)	26" (660)	75 1/4" (1911)	8.32 (0.77)	12.98 (1.21)	16.63 (1.55)
FWH2968	1	14.02 (1.30)	26 13/16" (681)	28" (711)	75 1/4" (1911)	9.20 (0.86)	14.02 (1.30)	17.74 (1.65)
FWH3168	1	16.11 (1.50)	30 13/16" (783)	32" (813)	75 1/4" (1911)	10.96 (1.02)	16.11 (1.50)	19.95 (1.85)
FWH4168	2	21.43 (1.99)	41" (1039)	43 7/8" (1112)	75 1/4" (1911)	11.68 (1.09)	21.43 (1.99)	26.50 (2.46)
FWH4168	1	11.01 (1.02)	19 7/8" (505)	21 1/16" (535)	75 1/4" (1911)	11.68 (1.09)	11.01 (1.02)	26.50 (2.46)
FWH5068	1 - AS/SA	12.98 (1.21)	24 13/16" (630)	26" (660)	75 1/4" (1911)	16.64 (1.55)	12.98 (1.21)	32.71 (3.04)
FWH5068	2 - AP/PA	27.30 (2.54)	52 1/4" (1327)	55 1/8" (1400)	75 1/4" (1911)	16.64 (1.55)	27.30 (2.54)	32.71 (3.04)
FWH5068	1 - AP/PA	13.32 (1.23)	25 1/2" (647)	26 11/16" (678)	75 1/4" (1911)	16.64 (1.55)	13.32 (1.23)	32.71 (3.04)
FWH5468	1 - AS/SA	14.02 (1.30)	26 13/16" (681)	28" (711)	75 1/4" (1911)	18.39 (1.71)	14.02 (1.30)	34.92 (3.24)
FWH5468	2 - AP/PA	29.39 (2.73)	56 1/4" (1429)	59 1/8" (1502)	75 1/4" (1911)	18.39 (1.71)	29.39 (2.73)	34.92 (3.24)
FWH5468	1 - AP/PA	14.37 (1.33)	27 1/2" (698)	28 11/16" (729)	75 1/4" (1911)	18.39 (1.71)	14.37 (1.33)	34.92 (3.24)
FWH6068	1 - AS/SA	16.11 (1.50)	30 13/16" (783)	32" (813)	75 1/4" (1911)	21.92 (2.04)	16.11 (1.50)	39.34 (3.66)
FWH6068	2 - AP/PA	33.58 (3.12)	64 1/2" (1632)	67 1/8" (1705)	75 1/4" (1911)	21.92 (2.04)	33.58 (3.12)	39.34 (3.66)
FWH6068	1 - AP/PA	16.46 (1.52)	31 1/2" (800)	32 11/16" (830)	75 1/4" (1911)	21.92 (2.04)	16.46 (1.52)	39.34 (3.66)
FWH8068	1	14.02 (1.30)	26 13/16" (681)	28" (711)	75 1/4" (1911)	27.60 (2.56)	14.02 (1.30)	52.52 (4.88)
FWH9068	1	16.11 (1.50)	30 13/16" (783)	32" (813)	75 1/4" (1911)	32.88 (3.06)	16.11 (1.50)	59.14 (5.49)
FWH21611S	-	-	-	-	-	6.01 (0.56)	-	13.89 (1.29)
FWH27611	1	13.48 (1.25)	24 13/16" (630)	26" (660)	78 1/8" (1984)	8.69 (0.81)	13.48 (1.25)	17.21 (1.60)
FWH29611	1	14.55 (1.35)	26 13/16" (681)	28" (711)	78 1/8" (1984)	9.61 (0.89)	14.55 (1.35)	18.36 (1.71)
FWH31611	1	16.72 (1.55)	30 13/16" (783)	32" (813)	78 1/8" (1984)	11.45 (1.06)	16.72 (1.55)	20.64 (1.92)
FWH41611	2	22.24 (2.07)	41" (1039)	43 7/8" (1112)	78 1/8" (1984)	12.20 (1.13)	22.24 (2.07)	27.46 (2.55)
FWH41611	1	11.43 (1.06)	19 7/8" (505)	21 1/16" (535)	78 1/8" (1984)	12.20 (1.13)	11.43 (1.06)	27.46 (2.55)
FWH50611	1 - AS/SA	13.48 (1.25)	24 13/16" (630)	26" (660)	78 1/8" (1984)	17.38 (1.62)	13.48 (1.25)	33.89 (3.15)
FWH50611	2 - AP/PA	28.34 (2.63)	52 1/4" (1327)	55 1/8" (1400)	78 1/8" (1984)	17.38 (1.62)	28.34 (2.63)	33.89 (3.15)
FWH50611	1 - AP/PA	13.83 (1.28)	25 1/2" (647)	26 11/16" (678)	78 1/8" (1984)	17.38 (1.62)	13.83 (1.28)	33.89 (3.15)
FWH54611	1 - AS/SA	14.55 (1.35)	26 13/16" (681)	28" (660)	78 1/8" (1984)	19.22 (1.79)	14.55 (1.35)	36.18 (3.36)
FWH54611	2 - AP/PA	30.51 (2.83)	56 1/4" (1429)	59 1/8" (1502)	78 1/8" (1984)	19.22 (1.79)	30.51 (2.83)	36.18 (3.36)
FWH54611	1 - AP/PA	14.91 (1.58)	27 1/2" (698)	28 11/16" (729)	78 1/8" (1984)	19.22 (1.79)	14.91 (1.58)	36.18 (3.36)
FWH60611	1 - AS/SA	16.72 (1.55)	30 13/16" (783)	32" (813)	78 1/8" (1984)	22.91 (2.13)	16.72 (1.55)	40.76 (3.79)
FWH60611	2 - AP/PA	34.86 (3.24)	64 1/2" (1632)	67 1/8" (1705)	78 1/8" (1984)	22.91 (2.13)	34.86 (3.24)	40.76 (3.79)
FWH60611	1 - AP/PA	17.08 (1.68)	31 1/2" (800)	32 11/16" (830)	78 1/8" (1984)	22.91 (2.13)	17.08 (1.68)	40.76 (3.79)
FWH80611	1	14.55 (1.35)	26 13/16" (681)	28" (660)	78 1/8" (1984)	28.83 (2.68)	14.55 (1.35)	54.43 (5.06)
FWH90611	1	16.72 (1.55)	30 13/16" (783)	32" (813)	78 1/8" (1984)	34.36 (3.19)	16.72 (1.55)	61.30 (5.70)
FWH2180S	-	-	-	-	-	7.19 (0.67)	-	16.08 (1.49)
FWH2780	1	15.73 (1.46)	24 13/16" (630)	26" (660)	91 1/4" (2318)	10.41 (0.97)	15.73 (1.46)	19.98 (1.86)
FWH2980	1	17.00 (1.58)	26 13/16" (681)	28" (711)	91 1/4" (2318)	11.52 (1.07)	17.00 (1.58)	21.31 (1.98)
FWH3180	1	19.54 (1.82)	30 13/16" (783)	32" (813)	91 1/4" (2318)	13.72 (1.28)	19.54 (1.82)	23.96 (2.23)
FWH4180	2	25.98 (2.41)	41" (1039)	43 7/8" (1112)	91 1/4" (2318)	14.62 (1.36)	25.98 (2.41)	31.83 (2.96)
FWH4180	1	13.35 (1.24)	19 7/8" (505)	21 1/16" (535)	91 1/4" (2318)	14.62 (1.36)	13.35 (1.24)	31.83 (2.96)
FWH5080	1 - AS/SA	15.73 (1.46)	24 13/16" (630)	26" (660)	91 1/4" (2318)	20.82 (1.93)	15.73 (1.46)	39.30 (3.65)
FWH5080	2 - AP/PA	33.11 (3.08)	52 1/4" (1327)	55 1/8" (1400)	91 1/4" (2318)	20.82 (1.93)	33.11 (3.08)	39.30 (3.65)
FWH5080	1 - AP/PA	16.15 (1.50)	25 1/2" (647)	26 11/16" (678)	91 1/4" (2318)	20.82 (1.93)	16.15 (1.50)	39.30 (3.65)
FWH5480	1 - AS/SA	17.00 (1.58)	26 13/16" (681)	28" (660)	91 1/4" (2318)	23.03 (2.14)	17.00 (1.58)	41.95 (3.90)
FWH5480	2 - AP/PA	35.64 (3.31)	56 1/4" (1429)	59 1/8" (1502)	91 1/4" (2318)	23.03 (2.14)	35.64 (3.31)	41.95 (3.90)
FWH5480	1 - AP/PA	17.42 (1.61)	27 1/2" (698)	28 11/16" (729)	91 1/4" (2318)	23.03 (2.14)	17.42 (1.61)	41.95 (3.90)
FWH6080	1 - AS/SA	19.54 (1.82)	30 13/16" (783)	32" (813)	91 1/4" (2318)	27.44 (2.55)	19.54 (1.82)	47.25 (4.39)
FWH6080	2 - AP/PA	40.71 (3.78)	64 1/2" (1632)	67 1/8" (1705)	91 1/4" (2318)	27.44 (2.55)	40.71 (3.78)	47.25 (4.39)
FWH6080	1 - AP/PA	19.96 (1.85)	31 1/2" (800)	32 11/16" (830)	91 1/4" (2318)	27.44 (2.55)	19.96 (1.85)	47.25 (4.39)
FWH8080	1	17.00 (1.58)	26 13/16" (681)	28" (660)	91 1/4" (2318)	34.55 (3.21)	17.00 (1.58)	63.09 (5.86)
FWH9080	1	19.54 (1.82)	30 13/16" (783)	32" (813)	91 1/4" (2318)	41.16 (3.82)	19.54 (1.82)	71.05 (6.60)

* Dimensions in parentheses are in millimeters or square meters.

* For two-panel AP/PA doors with only one panel open, clear opening is based on the active panel open and the passive panel closed.

Custom Sizes and Specification Formulas



Clear Opening	Height = height - 4.22" (107)	Minimum R.O.	Width = width + 3/4" (19) Height = height + 1/2" (13)	Unobst. Glass	Single-Panel Width = width - 11.22" (285) Height = height - 16.05" (408) Two-Panel Width = width - 21.5" (546) Height = height - 16.05" (408) Three-Panel Width = width - 32.55" (827) Height = height - 16.05" (408)
 	Single-Panel Width = width - 5.744" (145)				
	Two-Panel, two panels open Width = width - 7.394" (187)				
	Two-Panel, one panel open Width = (width - 10.550" (267)) ÷ 2				
	Three-Panel Width = (width - 16.106" (409)) ÷ 3				

• Clear opening width formulas are based on panel(s) in a 90° open position.
• Dimensions in parentheses are in millimeters.
• **Clear Opening** formulas provide dimensions for determining area available for egress. Vent opening, or area available for passage of air, is equal to clear opening. **Minimum R.O.** (minimum rough opening) formulas provide minimum rough opening width and height dimensions. **Unobst. Glass** (unobstructed glass) formulas provide dimensions for determining area available for passage of light.



Available in 1/8" (3) increments between minimum and maximum widths and heights. Some restrictions apply. Measurement guide can be found at andersenwindows.com/measure.

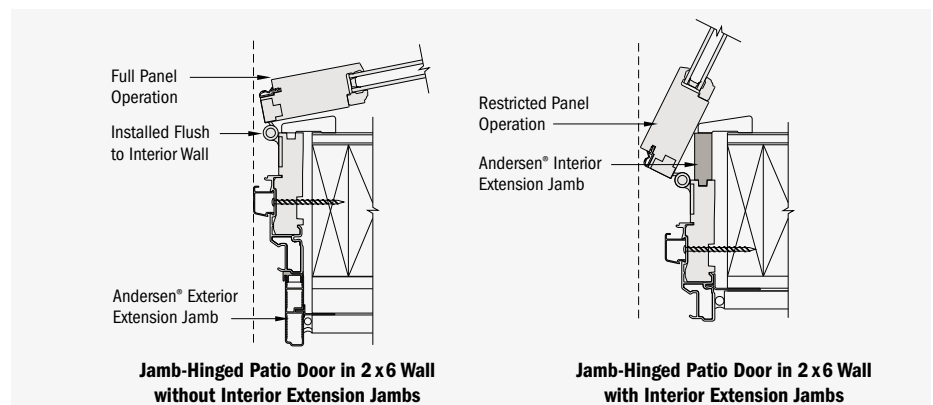
Grille Patterns

	Prairie A	Colonial	Modified Colonial	Modified Colonial with Simulated Meeting Rail	Tall Fractional	Tall Fractional with Simulated Meeting Rail	Short Fractional	Short Fractional with Simulated Meeting Rail
Frenchwood® Gliding and Hinged Inswing Patio Doors								
Specified Equal Light Examples								
Custom Pattern Examples								

Number of lights and overall pattern varies with panel size.
Patterns not available in all configurations. Specified equal light and custom patterns are also available. For more grille options, see page 14 or visit andersenwindows.com/grilles.

Interior Extension Jamb

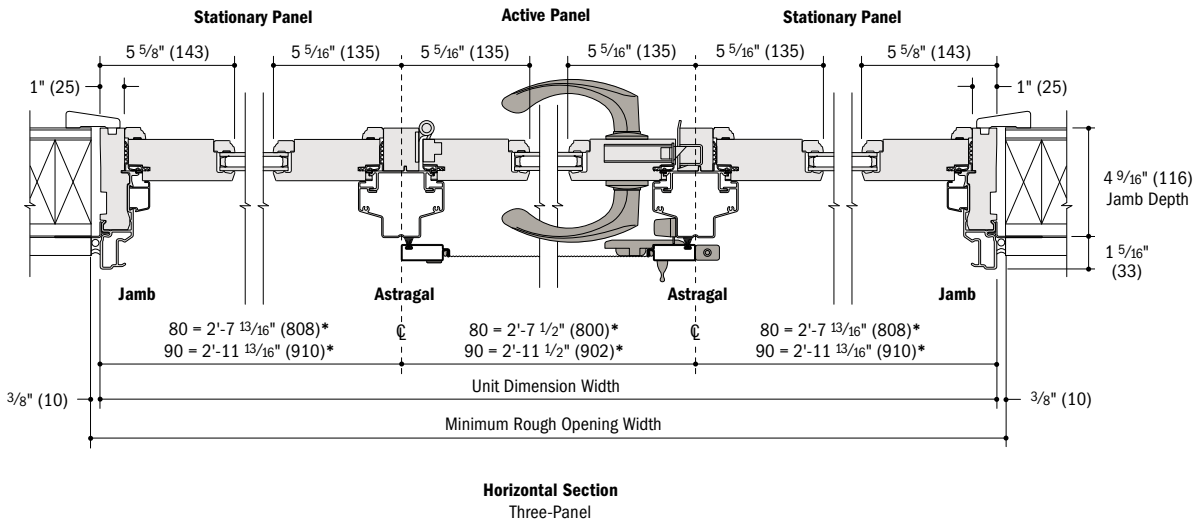
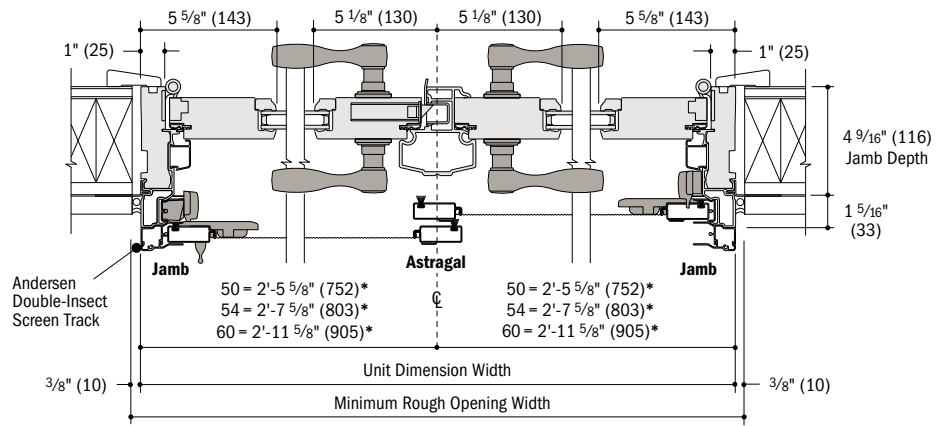
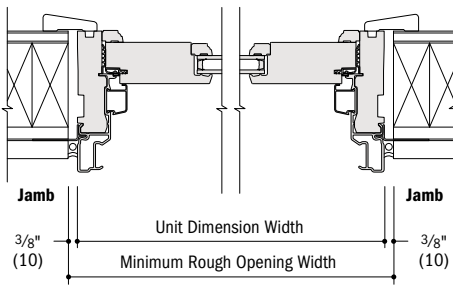
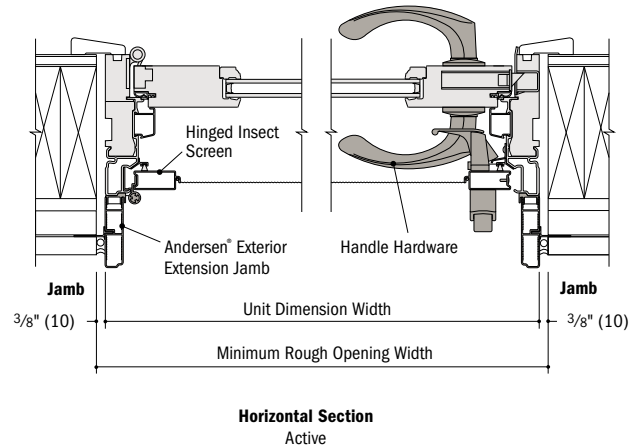
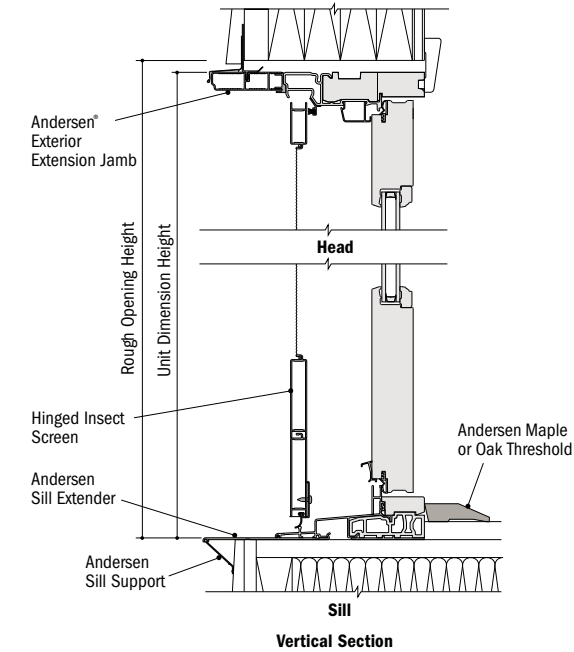
Use of interior extension jambs or drywall return will restrict panel operation on jamb-hinged patio doors. Jamb-hinged patio doors must be installed flush to the interior to achieve full panel operation.



FRENCHWOOD® HINGED INSWING PATIO DOORS

Frenchwood® Hinged Inswing Patio Door Details

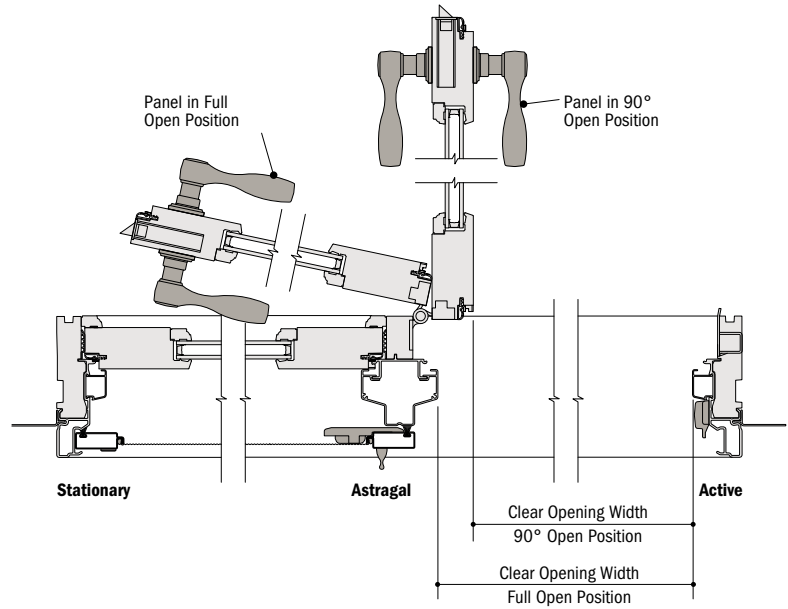
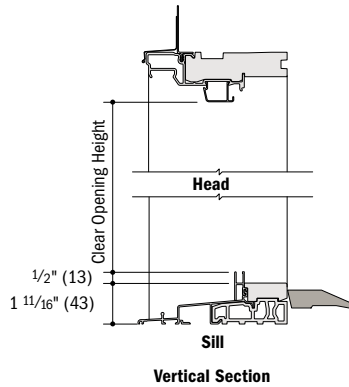
Scale 1 1/2" (38) = 1'-0" (305) – 1:8



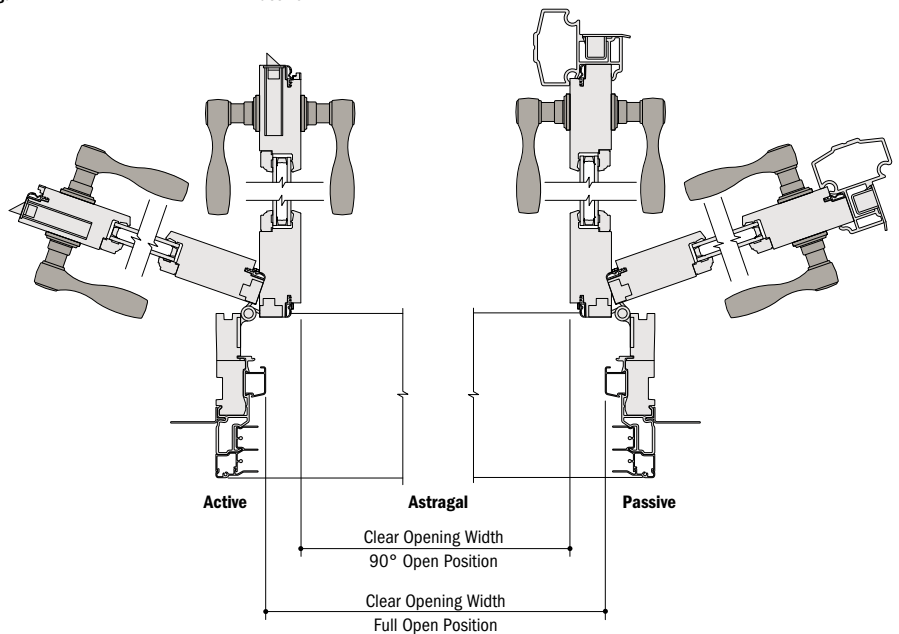
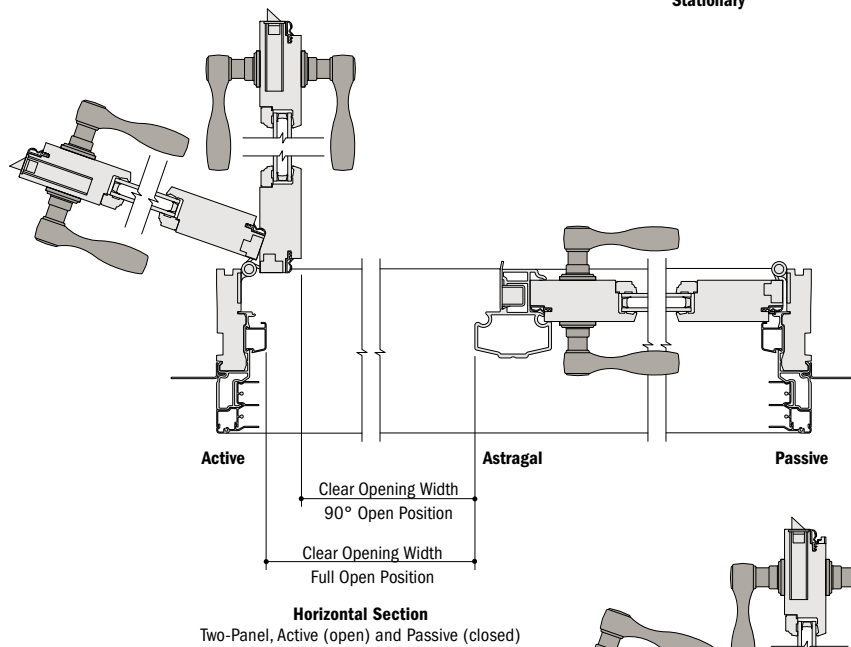
- 4 9/16" (116) overall jamb depth measurement is from back side of installation flange.
- Light-colored areas are parts included with door. Dark-colored areas are additional Andersen® parts required to complete door assembly as shown.
- **Minimum rough openings may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See installation information on pages 210-211.**
- Details are for illustration only and are not intended to represent product installation methods or materials. Refer to product installation guides at andersenwindows.com.
- Dimensions in parentheses are in millimeters.
- *Dimension indicates location of astragal centerline.

Clear Opening Details

Scale 1 1/2" (38) = 1'-0" (305) – 1:8



Horizontal Section
Two-Panel, Stationary-Active (open)



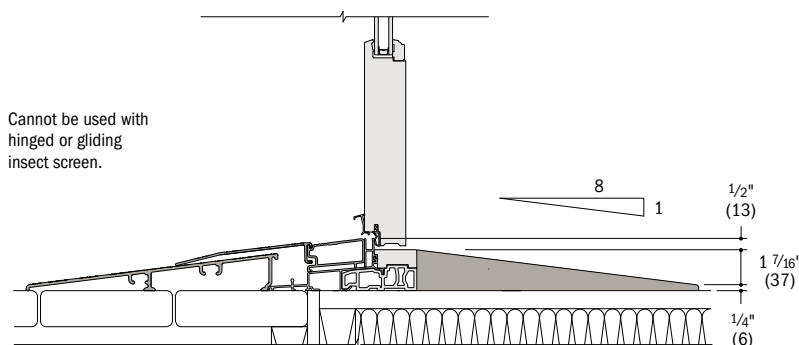
Horizontal Section
Two-Panel, Active (open) and Passive (open)

- Light-colored areas are parts included with door. Dark-colored areas are additional Andersen® parts required to complete door assembly as shown.
- Minimum rough openings may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See installation information on pages 210-211.
- Details are for illustration only and are not intended to represent product installation methods or materials. Refer to product installation guides at andersenwindows.com.
- Dimensions in parentheses are in millimeters.

FRENCHWOOD® HINGED INSWING PATIO DOORS

Ramped Sill Detail

Scale 1 1/2" (38) = 1'-0" (305) – 1:8



Vertical Section

Vertical Joining Detail

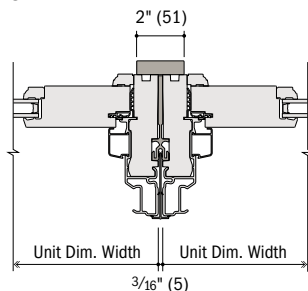
Scale 1 1/2" (38) = 1'-0" (305) – 1:8

Overall Door Dimension Width

Sum of individual door widths
plus 3/16" (5) for each join.

Overall Rough Opening Width

Overall door dimension width
plus 3/4" (19).



Horizontal Section

Frenchwood® Hinged Inswing to
Frenchwood Hinged Inswing

Vertical Joining Detail – Fiberglass

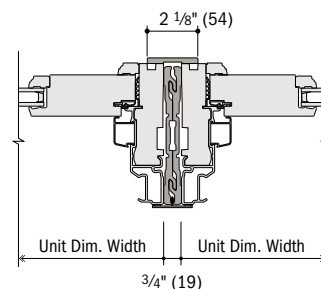
Scale 1 1/2" (38) = 1'-0" (305) – 1:8

Overall Door Dimension Width

Sum of individual door widths
plus 3/4" (19) for each join.

Overall Rough Opening Width

Overall door dimension width
plus 3/4" (19).



Horizontal Section

Frenchwood® Hinged Inswing to
Frenchwood Hinged Inswing

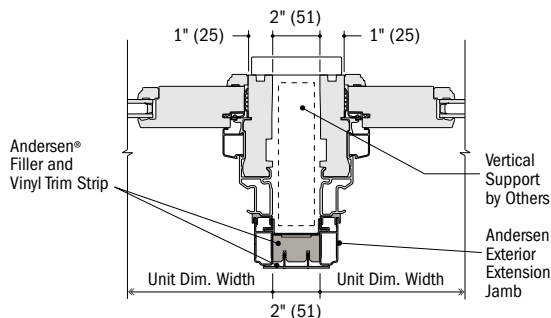
Andersen does not recommend joining of hinge jamb to hinge jamb.

For more joining information, see the combination designs section starting on page 181.

Separate Rough Openings Detail

Scale 1 1/2" (38) = 1'-0" (305) – 1:8

To meet structural requirements or to achieve a wider joined appearance, doors may be installed into separate rough openings having vertical support (by others) in combination with Andersen® exterior filler and exterior vinyl trim.



Horizontal Section

Frenchwood® Hinged Inswing and
Frenchwood Hinged Inswing

• Light-colored areas are parts included with door. Dark-colored areas are additional Andersen® parts required to complete door assembly as shown.

• **Minimum rough openings may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See installation information on page 210-211.**

• Details are for illustration only and are not intended to represent product installation methods or materials. Refer to product installation guides at andersenwindows.com.

• Andersen recommends installation of doors into separate rough openings. Consult with an architect or structural engineer regarding minimum requirements for structural support members between adjacent rough openings.

• Dimensions in parentheses are in millimeters.

FRENCHWOOD® PATIO DOOR SIDELIGHTS & TRANSOMS

Table of Sizes	161
Specifications	161
Custom Sizing	162
Sidelight & Transom Details	162
Combination Designs	181
Product Performance	197

CUSTOM SIZING
in 1/8" (3) increments



Dimensions in parentheses are in millimeters.

FRENCHWOOD® PATIO DOOR SIDELIGHTS & TRANSOMS

FEATURES

FRAME

- A** All basic exterior frame members are fiberglass-reinforced composite, which maintains an attractive appearance while minimizing maintenance.
- B** The frame members are attached to a water-repellent preservative-treated wood subframe for long-lasting* protection and performance. The subframe is grooved to accept extension jambs.
- C** The exterior of the wood door panel is protected with a long-lasting* urethane base finish in white, Sandtone, Terratone or forest green.
- D** Panel interior surfaces are unfinished pine veneer. Unfinished maple or oak veneers are available as options. Low-maintenance prefinished white interiors are also available.
- E** The sill of the Frenchwood patio door sidelight is made with three-piece construction. The subsill is made of Fibrex® material, and the sill step is solid oak. The exterior sill member is made of extruded aluminum with an attractive wear-resistant, heat-baked finish in neutral gray. This combination of materials combines durability and low maintenance with excellent insulating characteristics.

GLASS

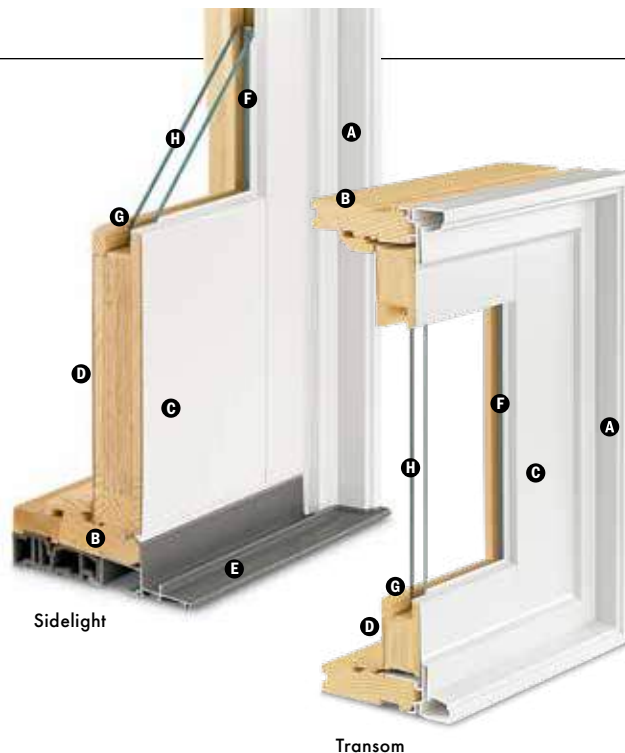
- F** In addition to stainless steel glass spacers, black or white glass spacers are now available to allow the spacer to blend in with the unit color.
- G** Panels are silicone bed glazed and finished with an interior wood stop.
- H** High-Performance options include:
 - Low-E4® tempered glass
 - Low-E4 HeatLock® tempered glass
 - Low-E4 SmartSun™ tempered glass
 - Low-E4 SmartSun HeatLock tempered glass
 - Low-E4 Sun tempered glass

Additional glass options are available. Contact your Andersen supplier.

A removable translucent film helps shield the glass from damage during delivery and construction, and simplifies finishing at the job site.

Patterned Glass

Patterned glass options are available. See page 12 for more details.

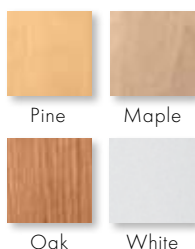


EXTERIOR & INTERIOR OPTIONS

EXTERIOR COLORS

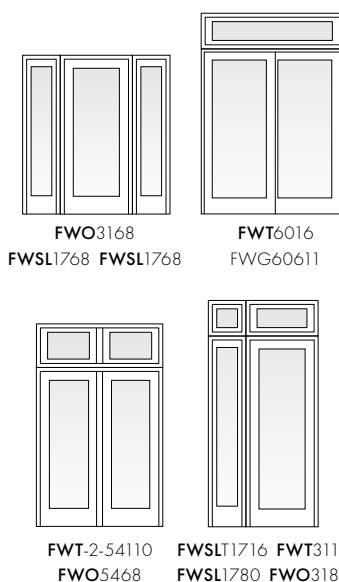


INTERIOR OPTIONS



Frenchwood patio door sidelights, transoms and sidelight transoms elegantly frame our 400 Series Frenchwood patio doors.

Fiberglass-reinforced joining materials are available in 4 1/16" (116) and 6 1/16" (167) depths. See joining information on pages 191-196.



ACCESSORIES Sold Separately

FRAME

Extension Jambs

Standard jamb depth is 4 1/16" (116). Pine, maple and oak veneers, or prefinished white interior extension jambs are available in 1/16" (1.5) increments between 5 1/16" (129) and 7 1/8" (181).

GLASS

Andersen® Art Glass

Andersen art glass panels come in a variety of original patterns. Available for stationary panels, sidelights and transoms. See art glass section starting on page 173 for more information or visit andersenwindows.com/artglass.

GRILLES

Grilles are available in a variety of configurations and widths.

EXTERIOR TRIM

Available with Andersen exterior trim. See exterior trim section starting on page 175.

CAUTION:

- Painting and staining may cause damage to rigid vinyl.
- 400 Series patio door sidelights and transoms in Terratone color may be painted any color lighter than Terratone color using quality oil-based or latex paint.
- Do not paint 400 Series patio door sidelights or transoms in white, canvas, Sandtone, dark bronze, forest green or black exterior colors.
- Andersen does not warrant the adhesion or performance of homeowner-applied paint over vinyl or other factory-coated surfaces.
- For vinyl painting instructions and preparation, contact your Andersen supplier.
- Do not paint weatherstrip.
- Creosote-based stains should not come in contact with Andersen products.
- Abrasive cleaners or solutions containing corrosive solvents should not be used on Andersen products.

*Visit andersenwindows.com/warranty for details.

Dimensions in parentheses are in millimeters.

Printing limitations prevent exact replication of colors and finishes. See your Andersen supplier for actual color and finish samples.

Naturally occurring variations in grain, color and texture of wood make each window one of a kind. All wood interiors are unfinished unless a finish is specified.

Table of Frenchwood® Patio Door Transom, Sidelight Transom and Sidelight Sizes

Scale 1/8" (3) = 1'-0" (305) – 1:96

Transom/Sidelight Dimension	1'-2 13/16" (376)	1'-6 13/16" (478)	2'-0 1/2" (622)	2'-6 1/8" (765)	2'-8 1/8" (816)	3'-0 1/8" (918)	4'-0" (1219)	4'-11 1/4" (1505)	5'-3 1/4" (1607)	5'-11 1/4" (1810)
Minimum Rough Opening	1'-3 1/2" (394)	1'-7 1/2" (495)	2'-1" (635)	2'-7" (787)	2'-9" (838)	3'-1" (940)	4'-1" (1245)	5'-0" (1524)	5'-4" (1626)	6'-0" (1829)
Unobstructed Glass (single sash only)	6 3/8" (162)	10 3/8" (264)	13 5/16" (338)	18 15/16" (481)	20 15/16" (532)	24 15/16" (633)	36 13/16" (935) 13 5/16" (338)	48 1/16" (1221) 18 15/16" (481)	52 1/16" (1322) 20 15/16" (532)	60 1/16" (1526) 24 15/16" (633)

1'-0 13/16" (325)	1'-1 1/2" (343)	1'-1 1/2" (343)	1'-1 1/2" (343)	1'-1 1/2" (343)	1'-1 1/2" (343)	1'-1 1/2" (343)	1'-1 1/2" (343)	1'-1 1/2" (343)	1'-1 1/2" (343)	1'-1 1/2" (343)
FWSLT1311	FWSLT1711	FWT2111	FWT2711	FWT2911	FWT3111	FWT4111	FWT5011	FWT5411	FWT6011	
1'-0 13/16" (325)	1'-1 1/2" (343)	1'-1 1/2" (343)	1'-1 1/2" (343)	1'-1 1/2" (343)	1'-1 1/2" (343)	1'-1 1/2" (343)	1'-1 1/2" (343)	1'-1 1/2" (343)	1'-1 1/2" (343)	1'-1 1/2" (343)
FWSLT1316	FWSLT1716	FWT2116	FWT2716	FWT2916	FWT3116	FWT4116	FWT5016	FWT5416	FWT6016	
1'-5 13/16" (452)	1'-6 1/2" (470)	1'-6 1/2" (470)	1'-6 1/2" (470)	1'-6 1/2" (470)	1'-6 1/2" (470)	1'-6 1/2" (470)	1'-6 1/2" (470)	1'-6 1/2" (470)	1'-6 1/2" (470)	1'-6 1/2" (470)
FWSLT13110	FWSLT17110	FWT21110	FWT27110	FWT29110	FWT31110	FWT41110	FWT50110	FWT54110	FWT60110	
1'-9 13/16" (554)	1'-10 1/2" (572)	1'-10 1/2" (572)	1'-10 1/2" (572)	1'-10 1/2" (572)	1'-10 1/2" (572)	1'-10 1/2" (572)	1'-10 1/2" (572)	1'-10 1/2" (572)	1'-10 1/2" (572)	1'-10 1/2" (572)
FWSLT1368	FWSLT1768									
6'-10 3/8" (2092)	6'-11" (2108)	6'-11" (2108)	6'-11" (2108)	6'-11" (2108)	6'-11" (2108)	6'-11" (2108)	6'-11" (2108)	6'-11" (2108)	6'-11" (2108)	6'-11" (2108)
FWSLT13611	FWSLT17611									
7'-11 1/2" (2426)	8'-0" (2438)	8'-0" (2438)	8'-0" (2438)	8'-0" (2438)	8'-0" (2438)	8'-0" (2438)	8'-0" (2438)	8'-0" (2438)	8'-0" (2438)	8'-0" (2438)
FWSLT1380	FWSLT1780									

- * "Transom/Sidelight Dimension" always refers to outside frame-to-frame dimension.
- * "Minimum Rough Opening" dimensions may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See pages 210-211 for more details.
- * Dimensions in parentheses are in millimeters.

Frenchwood® Patio Door Sidelight Area Specifications

Sidelight Number	Glass Area Sq. Ft./ (m²)	Overall Window Area Sq. Ft./ (m²)
FWSLT1368	2.82 (0.26)	8.18 (0.76)
FWSLT1768	4.58 (0.43)	10.39 (0.97)
FWSLT13611	2.95 (0.27)	8.47 (0.79)
FWSLT17611	4.79 (0.45)	10.76 (1.00)
FWSLT1380	3.53 (0.33)	9.82 (0.91)
FWSLT1780	5.74 (0.53)	12.48 (1.16)

Frenchwood® Patio Door Sidelight Transom Area Specifications

Sidelight Transom Number	Glass Area Sq. Ft./ (m²)	Overall Window Area Sq. Ft./ (m²)
FWSLT1311	0.20 (0.02)	1.32 (0.12)
FWSLT1316	0.42 (0.04)	1.83 (0.17)
FWSLT13110	0.60 (0.06)	2.24 (0.21)
FWSLT1711	0.32 (0.03)	1.67 (0.16)
FWSLT1716	0.68 (0.06)	2.33 (0.22)
FWSLT17110	0.97 (0.09)	2.85 (0.27)

Frenchwood® Patio Door Transom Area Specifications

Transom Number	Glass Area Sq. Ft./ (m²)	Overall Window Area Sq. Ft./ (m²)
FWT2111	0.41 (0.04)	2.18 (0.20)
FWT2116	0.87 (0.08)	3.03 (0.28)
FWT21110	1.24 (0.12)	3.71 (0.35)
FWT2711	0.58 (0.05)	2.68 (0.25)
FWT2716	1.24 (0.12)	3.73 (0.35)
FWT27110	1.77 (0.16)	4.56 (0.42)
FWT2911	0.64 (0.06)	2.86 (0.27)
FWT2916	1.37 (0.13)	3.97 (0.37)
FWT29110	1.95 (0.18)	4.87 (0.45)
FWT3111	0.76 (0.07)	3.21 (0.30)
FWT3116	1.63 (0.15)	4.47 (0.42)
FWT31110	2.33 (0.22)	5.47 (0.51)

Frenchwood® Patio Door Transom Area Specifications

Transom Number	Glass Area Sq. Ft./ (m²)	Overall Window Area Sq. Ft./ (m²)
FWT4111	1.13 (0.11)	4.27 (0.40)
FWT4116	2.41 (0.22)	5.94 (0.55)
FWT41110	3.43 (0.32)	7.27 (0.68)
FWT5011	1.47 (0.14)	5.27 (0.49)
FWT5016	3.14 (0.29)	7.33 (0.68)
FWT50110	4.48 (0.42)	8.98 (0.83)
FWT5411	1.59 (0.15)	5.63 (0.52)
FWT5416	3.40 (0.32)	7.82 (0.73)
FWT54110	4.85 (0.45)	9.58 (0.89)
FWT6011	1.84 (0.17)	6.34 (0.59)
FWT6016	3.93 (0.37)	8.81 (0.82)
FWT60110	5.60 (0.52)	10.79 (1.00)
FWT-2 4111	0.82 (0.08)	4.27 (0.40)
FWT-2 4116	1.74 (0.16)	5.94 (0.55)
FWT-2 41110	2.49 (0.23)	7.27 (0.68)
FWT-2 5011	1.16 (0.11)	5.27 (0.49)
FWT-2 5016	2.48 (0.23)	7.33 (0.68)
FWT-2 50110	3.53 (0.33)	8.98 (0.83)
FWT-2 5411	1.28 (0.12)	5.63 (0.52)
FWT-2 5416	2.74 (0.26)	7.82 (0.73)
FWT-2 54110	3.91 (0.36)	9.58 (0.89)
FWT-2 6011	1.53 (0.14)	6.34 (0.59)
FWT-2 6016	3.26 (0.30)	8.81 (0.82)
FWT-2 60110	4.65 (0.43)	10.79 (1.00)

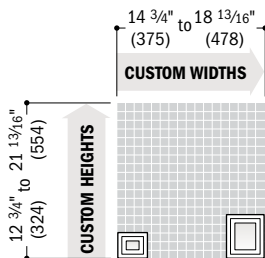
* Dimensions in parentheses are in square meters

FRENCHWOOD® PATIO DOOR SIDELIGHTS & TRANSOMS

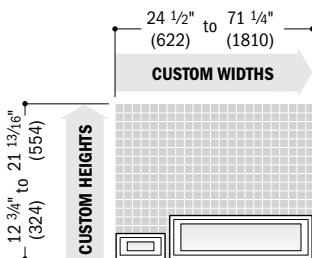
Custom Sizes and Specification Formulas

Available in 1/8" (3) increments between minimum and maximum widths and heights. Some restrictions apply. Measurement guide can be found at andersenwindows.com/measure.

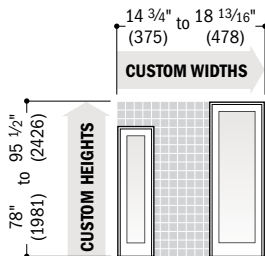
Sidelight Transoms



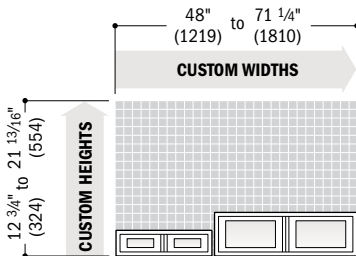
Transoms



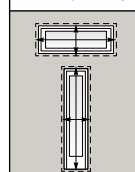
Sidelights



Twin Transoms



Minimum R.O.



Transoms, Twin Transoms and Sidelight Transoms

Width = width + 3/4" (19)

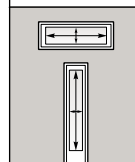
Height = height + 3/4" (19)

Sidelights

Width = width + 3/4" (19)

Height = height + 1/2" (13)

Unobst. Glass



Transoms

Width = window width - 11.15" (283)

Height = window height - 8.4" (213)

Twin Transoms

Width = window width - 21.30" (541)

Height = window height - 8.4" (213)

Sidelight Transoms

Width = window width - 8.4" (213)

Height = window height - 8.4" (213)

Sidelights

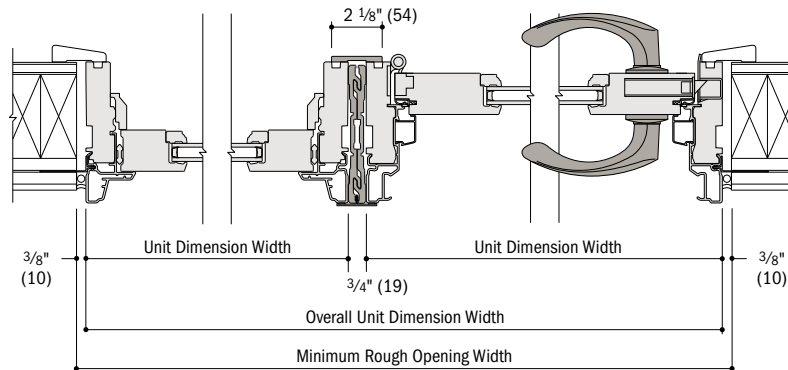
Width = window width - 8.4" (213)

Height = window height - 16.06" (408)

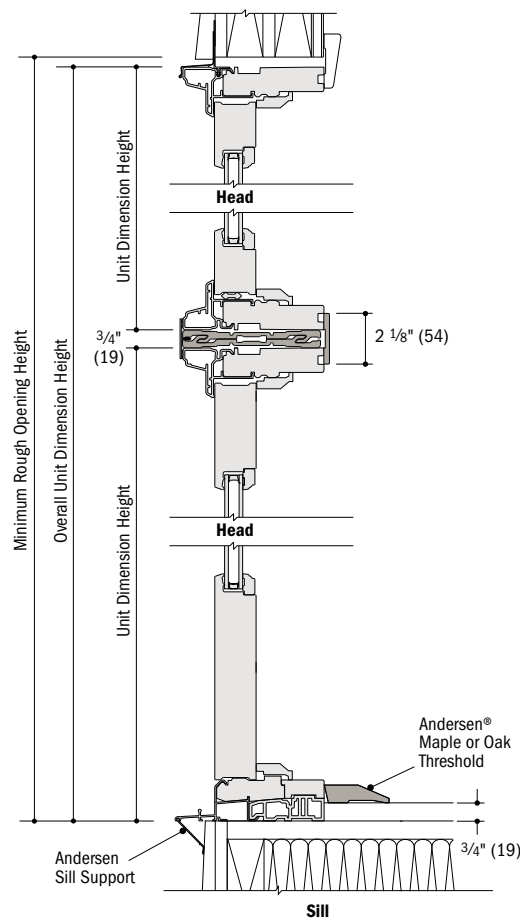
• **Minimum R.O.** (minimum rough opening) formulas provide minimum rough opening width and height dimensions. **Unobst. Glass** (unobstructed glass) formulas provide dimensions for determining area available for passage of light.

Frenchwood® Patio Door Transom and Sidelight Details

Scale 1 1/2" (38) = 1'-0" (305) - 1:8



Horizontal Section
Frenchwood® Patio Door Sidelight to Frenchwood Hinged Inswing Patio Door



Vertical Section
Frenchwood® Patio Door Transom over Frenchwood Patio Door Sidelight

For more joining information, see the combination designs section starting on page 181.

• Light-colored areas are parts included with patio door sidelights/transoms or doors. Dark-colored areas are additional Andersen® parts required to complete patio door sidelights/transoms or door assembly as shown.

• **Minimum rough openings may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See installation information on pages 210-211.**

• Details are for illustration only and are not intended to represent product installation methods or materials. Refer to product installation guides at andersenwindows.com.

• Dimensions in parentheses are in millimeters.



COMPLEMENTARY CURVED TOP PATIO DOORS

Springline™ Hinged Inswing & Outswing Patio Doors

Dimensions & Specifications 165

Door Details 166-167

Arch Hinged Inswing & Outswing Patio Doors

Dimensions & Specifications 168-170

Sidelight Details 170

Joining Details 170

Door Details 171-172

Product Performance 197

CUSTOM SIZING
in 1/8" (3) increments



Dimensions in parentheses are in millimeters.

COMPLEMENTARY CURVED TOP PATIO DOORS

FEATURES

FRAME

A Heavy-duty extruded aluminum cladding protects the frame exterior, providing low-maintenance durability. Standard cladding finish meets the AAMA 2604 specification. An optional finish that meets the AAMA 2605 specification is also available.

Installation flange extends 1 1/2" (38) around three sides of the unit to help properly position the unit in the opening. Installation clips are standard for increased structural anchoring to building members. Mounted around the frame perimeter, the clips rotate into position and can be bent into place against the framing members to suit all jamb conditions.

B Wood frame members are treated with a water-repellent wood preservative for long-lasting* protection and performance. Radii are made of laminated continuous veneers. Lineal components are engineered wood with a pine core.

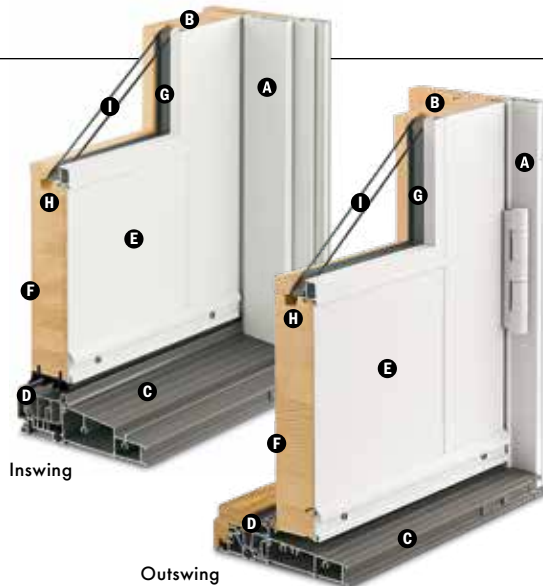
C Extruded aluminum sill is thermally broken and available in a painted bronze or gray finish. Innovative sill design provides superior water management. Standard outswinging sills have an oak cap. Maple or mahogany† is optional. Inswinging sills have an interior wood trim strip to match the interior finish.

D One-piece compression weatherstrip at the frame sides and head protects against air and water infiltration. Flexible thermoplastic sweep is featured at the bottom of the panel on inswinging units. Outswinging doors also feature a polypropylene rain skirt at the panel sides and top for added protection.

PANEL

E Heavy-duty extruded aluminum cladding protects the panel exterior, providing low-maintenance durability.

F Panel interior surfaces are unfinished wood veneers. Available species are pine, maple and oak.



GLASS

G In addition to stainless steel glass spacers, black or white glass spacers are now available to allow the spacer to blend in with the unit color.

H Silicone glazing bead combined with two-sided silicone tape provide superior weathertightness.

I High-Performance options include:

- Low-E4® tempered glass
- Low-E4 HeatLock® tempered glass
- Low-E4 SmartSun™ tempered glass
- Low-E4 SmartSun HeatLock tempered glass
- Low-E4 Sun tempered glass

A removable translucent film helps shield the glass from damage during delivery and construction, and simplifies finishing at the job site.

Additional glass options are available. Contact your Andersen supplier.

OPERATION

Inswinging and outswinging units are available. Choose left-hinged, right-hinged or stationary as viewed from the exterior.

HARDWARE

Multi-Point Locking System

The complementary hinged patio door has a multi-point locking system with a hook bolt above and below the center dead bolt. This system provides a weathertight seal and enhanced security.

Hinges

Adjustable hinges are standard on inswinging patio doors and have ball-bearing pivots for smooth, frictionless movement. Feature easy horizontal and vertical adjustment, plus quick-release for easy panel removal. The release feature is ideal for transporting large units up stairs or to other hard-to-reach areas.

Ball-bearing hinges are standard on outswinging patio doors and are available in finishes that coordinate with hardware trim sets. Gold dust finish is standard on wood interior doors. For units with a prefinished white interior, white finish hinges are standard. Also available in finishes that coordinate with hardware.

Hardware Options†

Mix-and-match style and finish options are available to get just the right look inside and out. See pages 10-11 for hardware styles and finishes, including FSB® hardware.

ACCESSORIES Sold Separately

FRAME

Extension Jamb

Inswinging and outswinging standard jamb depth is 4 9/16" (116). Inswinging is also available in a 6 9/16" (167) jamb depth. Interior extension jamba are available in 1/16" (1.5) increments between 4 9/16" (116) and 7 1/8" (181). Additional dimensions are available. Contact your Andersen supplier for more information.

Interior extension jamba on inswinging units will restrict the full opening of the door.

Casings



Curved interior casings are available in the same profiles as other Andersen® products. Curved exterior aluminum and wood casings are available in matching radii and a variety of profiles.

HARDWARE

Exterior Keyed Lock



A six-pin key cylinder lock is available for all patio doors in styles and finishes that coordinate with the hardware. This lock allows the door to be locked and unlocked from the exterior.

GRILLES

Grilles are available in a variety of configurations and widths.

ART GLASS

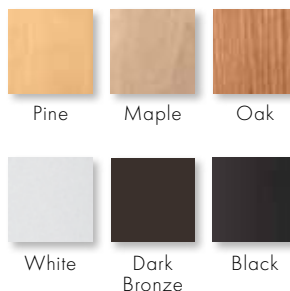
Decorative insulated art glass designs are available.

EXTERIOR & INTERIOR OPTIONS

EXTERIOR COLORS



INTERIOR OPTIONS††



*Visit andersenwindows.com/warranty for details.

††Actual wood species is either Sapele or Sipo, both non-endangered species grown in Africa, with color and characteristics similar to Central American mahoganies.

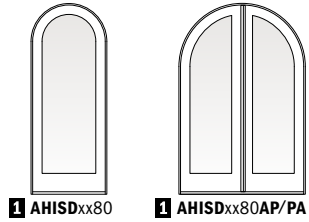
†Sold separately.

††Painted options available on pine only. Additional interior wood species and colors are available.

"FSB" is a registered trademark of Franz Schneider Brakel GmbH & Co.

Dimensions in parentheses are in millimeters.

Naturally occurring variations in grain, color and texture of wood make each window one of a kind. All wood interiors are unfinished unless a finish is specified. Printing limitations prevent exact replication of colors and finishes. See your Andersen supplier for actual color and finish samples.



Custom-size doors are available in 1/8" (3) increments.

Traditional panels are standard. Custom-designed and 3/4-light panels are also available. Stationary doors are also available (i.e., 3180S or 4080SS). Add AHISD to "Door Number" listed in table (i.e., AHISD3180).

Complementary Springline™ Hinged Inswing Patio Door Dimensions and Specifications

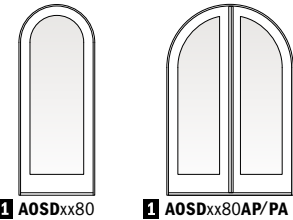
Door Number	Number of Panels Open*	Door Dimensions				Min. Rough Opening		Clear Opening Area Sq. Ft./ (m ²)	Clear Opening Maximums			Glass Area Sq. Ft./ (m ²)	Vent Area Sq. Ft./ (m ²)	Overall Door Area Sq. Ft./ (m ²)
		Radius Inches/(mm)	Side Height Inches/(mm)	Width Inches/(mm)	Height Inches/(mm)	Width Inches/(mm)	Height Inches/(mm)		90° Open Position Width Inches/(mm)	Full Open Position Width Inches/(mm)	Height Inches/(mm)			
3180	1	18" (457)	77 1/2" (1969)	35 15/16" (913)	95 1/2" (2426)	37" (940)	96" (2438)	17.26 (1.60)	30 7/8" (784)	32 13/16" (833)	75 3/4" (1924)	13.28 (1.23)	20.27 (1.88)	22.88 (2.13)
3380	1	19" (483)	76 1/2" (1943)	37 15/16" (964)	95 1/2" (2426)	39" (991)	96" (2438)	18.07 (1.68)	32 7/8" (835)	34 13/16" (884)	74 3/4" (1899)	14.31 (1.33)	21.45 (1.99)	24.09 (2.24)
4080	2	23 5/8" (600)	71 1/8" (1826)	47 1/4" (1200)	95 1/2" (2426)	48" (1219)	96" (2438)	21.34 (1.98)	39 15/16" (1014)	43 13/16" (1113)	70 1/8" (1781)	13.27 (1.23)	26.72 (2.48)	29.67 (2.76)
4080	1	23 5/8" (600)	71 1/8" (1826)	47 1/4" (1200)	95 1/2" (2426)	48" (1219)	96" (2438)	10.17 (0.94)	18 15/16" (481)	20 7/8" (530)	70 1/8" (1781)	13.27 (1.23)	11.72 (1.09)	29.67 (2.76)
5080	2	29 5/8" (752)	65 1/8" (1673)	59 1/4" (1505)	95 1/2" (2426)	60" (1524)	96" (2438)	24.85 (2.31)	51 15/16" (1319)	55 13/16" (1418)	64 1/8" (1629)	19.14 (1.78)	33.54 (3.12)	36.68 (3.41)
5080	1	29 5/8" (752)	65 1/8" (1673)	59 1/4" (1505)	95 1/2" (2426)	60" (1524)	96" (2438)	11.97 (1.11)	24 15/16" (633)	26 7/8" (683)	64 1/8" (1629)	19.14 (1.78)	14.53 (1.35)	36.68 (3.41)
5480	2	31 5/8" (803)	63 7/8" (1622)	63 1/4" (1607)	95 1/2" (2426)	64" (1626)	96" (2438)	25.80 (2.40)	55 15/16" (1421)	59 13/16" (1519)	62 1/8" (1578)	21.05 (1.96)	35.77 (3.32)	38.97 (3.62)
5480	1	31 5/8" (803)	63 7/8" (1622)	63 1/4" (1607)	95 1/2" (2426)	64" (1626)	96" (2438)	12.46 (1.16)	26 15/16" (684)	28 7/8" (733)	62 1/8" (1578)	21.05 (1.96)	15.45 (1.44)	38.97 (3.62)
6080	2	35 5/8" (905)	59 7/8" (1521)	71 1/4" (1810)	95 1/2" (2426)	72" (1829)	96" (2438)	27.37 (2.54)	63 15/16" (1624)	67 13/16" (1722)	58 1/8" (1476)	24.79 (2.30)	40.15 (3.73)	43.47 (4.04)
6080	1	35 5/8" (905)	59 7/8" (1521)	71 1/4" (1810)	95 1/2" (2426)	72" (1829)	96" (2438)	13.27 (1.23)	30 15/16" (786)	32 7/8" (835)	58 1/8" (1476)	24.79 (2.30)	17.24 (1.60)	43.47 (4.04)
6480	2	37 5/8" (956)	57 7/8" (1470)	75 1/4" (1911)	95 1/2" (2426)	76" (1930)	96" (2438)	27.99 (2.60)	67 15/16" (1726)	71 13/16" (1824)	56 1/8" (1426)	26.63 (2.47)	42.30 (3.93)	45.69 (4.24)
6480	1	37 5/8" (956)	57 7/8" (1470)	75 1/4" (1911)	95 1/2" (2426)	76" (1930)	96" (2438)	13.59 (1.26)	32 15/16" (837)	34 7/8" (886)	56 1/8" (1426)	26.63 (2.47)	19.84 (1.84)	45.69 (4.24)

*"Door Dimension" always refers to outside frame-to-frame dimension.

*"Minimum Rough Opening" dimensions may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See pages 210-211 for more details.

*Dimensions in parentheses are in millimeters or square meters.

*For two-panel patio doors with one panel open, clear opening is based on active panel being open and passive panel being closed.



Custom-size doors are available in 1/8" (3) increments.

Traditional panels are standard. Custom-designed and 3/4-light panels are also available. Stationary doors are also available (i.e., 3180S or 4080SS). Add AOSD to "Door Number" listed in table (i.e., AOSD3180).

Complementary Springline™ Hinged Outswing Patio Door Dimensions and Specifications

Door Number	Number of Panels Open*	Door Dimensions				Min. Rough Opening		Clear Opening Area Sq. Ft./ (m ²)	Clear Opening Maximums			Glass Area Sq. Ft./ (m ²)	Vent Area Sq. Ft./ (m ²)	Overall Door Area Sq. Ft./ (m ²)
		Radius Inches/(mm)	Side Height Inches/(mm)	Width Inches/(mm)	Height Inches/(mm)	Width Inches/(mm)	Height Inches/(mm)		90° Open Position Width Inches/(mm)	Full Open Position Width Inches/(mm)	Height Inches/(mm)			
3180	1	18" (457)	77 1/2" (1969)	35 15/16" (913)	95 1/2" (2426)	37" (940)	96" (2438)	17.52 (1.63)	31 3/8" (797)	33 5/16" (846)	75 3/4" (1924)	13.28 (1.23)	20.53 (1.91)	22.88 (2.13)
3380	1	19" (483)	76 1/2" (1943)	37 15/16" (964)	95 1/2" (2426)	39" (991)	96" (2438)	18.33 (1.70)	33 3/8" (848)	35 5/16" (897)	74 3/4" (1899)	14.31 (1.33)	21.71 (2.02)	24.09 (2.24)
4080	2	23 5/8" (600)	71 1/8" (1826)	47 1/4" (1200)	95 1/2" (2426)	48" (1219)	96" (2438)	21.73 (2.02)	40 15/16" (1033)	44 5/8" (1133)	70 1/8" (1781)	13.27 (1.23)	27.12 (2.52)	29.67 (2.76)
4080	1	23 5/8" (600)	71 1/8" (1826)	47 1/4" (1200)	95 1/2" (2426)	48" (1219)	96" (2438)	10.35 (0.96)	19 1/4" (489)	21 1/4" (540)	70 1/8" (1781)	13.27 (1.23)	11.72 (1.09)	29.67 (2.76)
5080	2	29 5/8" (752)	65 1/8" (1673)	59 1/4" (1505)	95 1/2" (2426)	60" (1524)	96" (2438)	25.22 (2.34)	52 15/16" (1338)	56 5/8" (1438)	64 1/8" (1629)	19.14 (1.78)	33.90 (3.15)	36.68 (3.41)
5080	1	29 5/8" (752)	65 1/8" (1673)	59 1/4" (1505)	95 1/2" (2426)	60" (1524)	96" (2438)	12.13 (1.13)	25 1/4" (641)	27 1/4" (692)	64 1/8" (1629)	19.14 (1.78)	14.53 (1.35)	36.68 (3.41)
5480	2	31 5/8" (803)	63 7/8" (1622)	63 1/4" (1607)	95 1/2" (2426)	64" (1626)	96" (2438)	26.16 (2.43)	56 15/16" (1440)	60 5/8" (1540)	62 1/8" (1578)	21.05 (1.96)	36.12 (3.36)	38.97 (3.62)
5480	1	31 5/8" (803)	63 7/8" (1622)	63 1/4" (1607)	95 1/2" (2426)	64" (1626)	96" (2438)	12.62 (1.17)	27 1/4" (692)	29 1/4" (743)	62 1/8" (1578)	21.05 (1.96)	15.45 (1.44)	38.97 (3.62)
6080	2	35 5/8" (905)	59 7/8" (1521)	71 1/4" (1810)	95 1/2" (2426)	72" (1829)	96" (2438)	27.70 (2.57)	64 15/16" (1643)	68 5/8" (1743)	58 1/8" (1476)	24.79 (2.30)	40.48 (3.76)	43.47 (4.04)
6080	1	35 5/8" (905)	59 7/8" (1521)	71 1/4" (1810)	95 1/2" (2426)	72" (1829)	96" (2438)	13.42 (1.25)	31 1/4" (794)	33 1/4" (845)	58 1/8" (1476)	24.79 (2.30)	17.24 (1.60)	43.47 (4.04)
6480	2	37 5/8" (956)	57 7/8" (1470)	75 1/4" (1911)	95 1/2" (2426)	76" (1930)	96" (2438)	28.31 (2.63)	68 15/16" (1745)	72 5/8" (1845)	56 1/8" (1426)	26.63 (2.47)	42.62 (3.96)	45.69 (4.24)
6480	1	37 5/8" (956)	57 7/8" (1470)	75 1/4" (1911)	95 1/2" (2426)	76" (1930)	96" (2438)	13.74 (1.28)	33 1/4" (845)	35 1/4" (895)	56 1/8" (1426)	26.63 (2.47)	19.84 (1.84)	45.69 (4.24)

*"Door Dimension" always refers to outside frame-to-frame dimension.

*"Minimum Rough Opening" dimensions may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See pages 210-211 for more details.

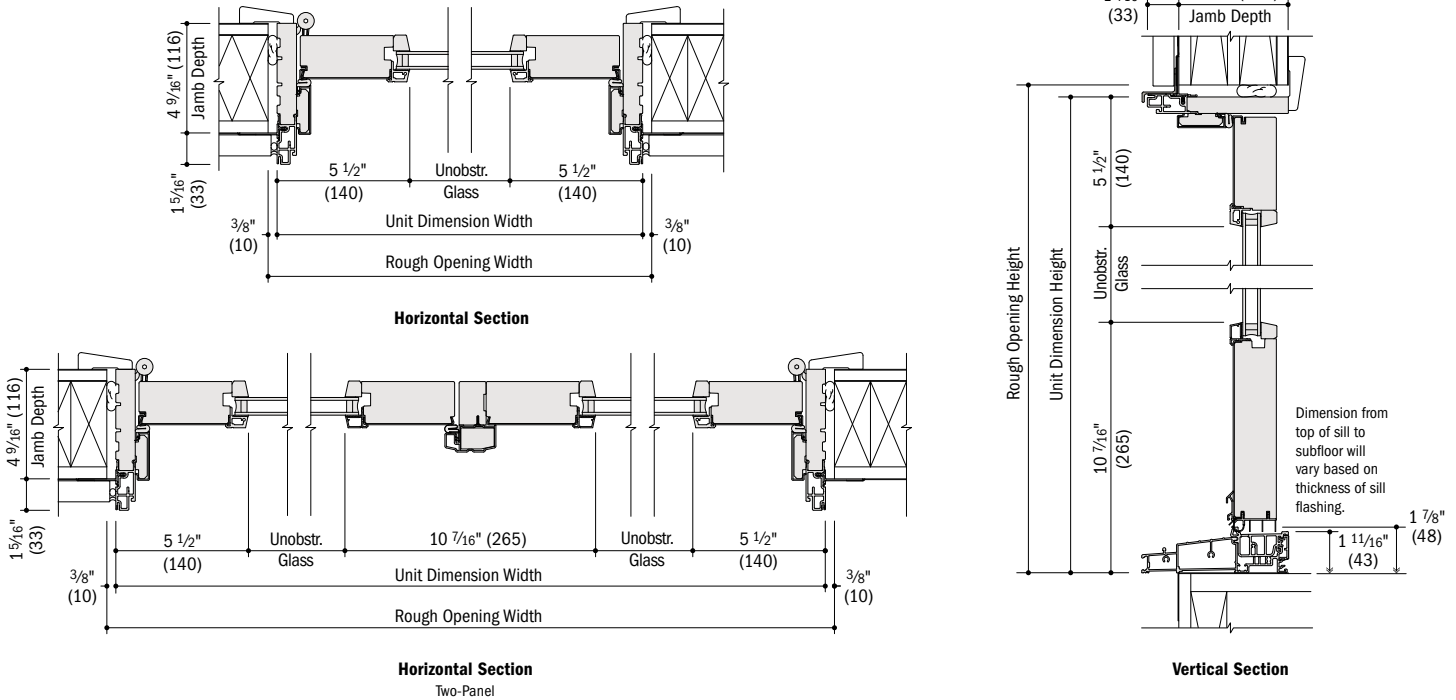
*Dimensions in parentheses are in millimeters or square meters.

*For two-panel patio doors with one panel open, clear opening is based on active panel being open and passive panel being closed.

COMPLEMENTARY CURVED TOP PATIO DOORS

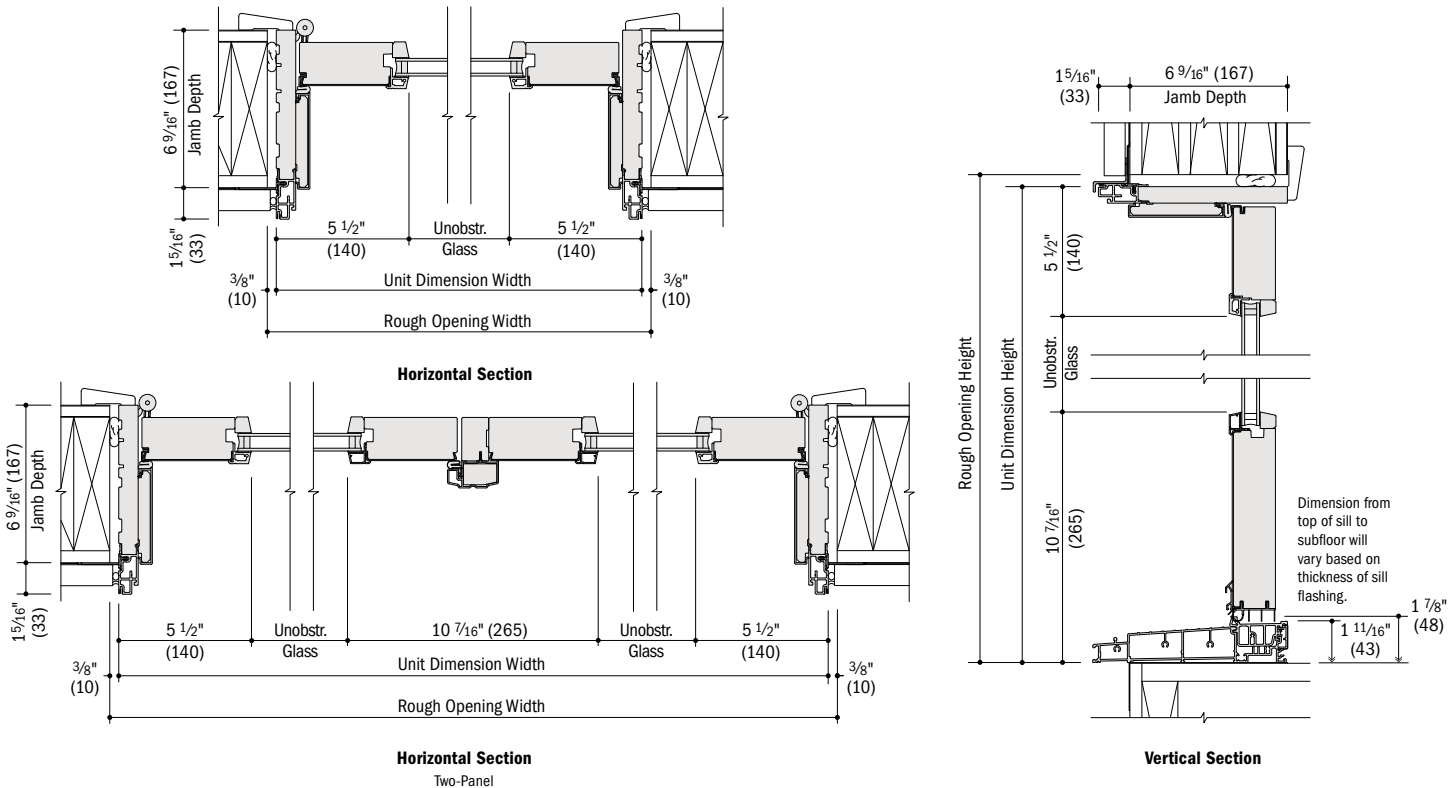
Complementary Springline™ Hinged Inswing Patio Door Details – 4 9/16" (116) Jamb Depth

Scale 1 1/2" (38) = 1'-0" (305) – 1:8



Complementary Springline™ Hinged Inswing Patio Door Details – 6 9/16" (167) Jamb Depth

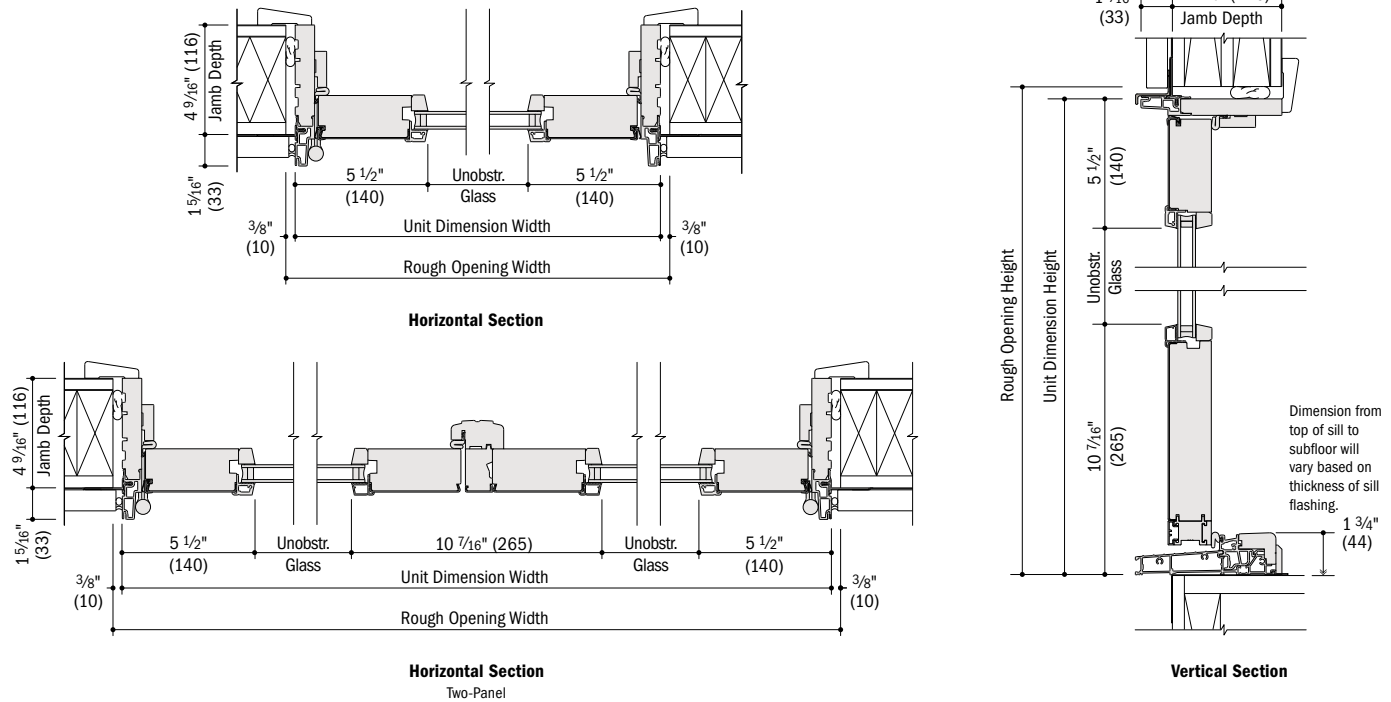
Scale 1 1/2" (38) = 1'-0" (305) – 1:8



- 4 9/16" (116) and 6 9/16" (167) overall jamb depth measurements are from back side of installation flange.
- Light-colored areas are parts included with door. Dark-colored areas are additional Andersen® parts required to complete door assembly as shown.
- **Minimum rough openings may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See installation information on pages 210-211.**
- Details are for illustration only and are not intended to represent product installation methods or materials. Refer to product installation guides at andersenwindows.com.
- Dimensions in parentheses are in millimeters.

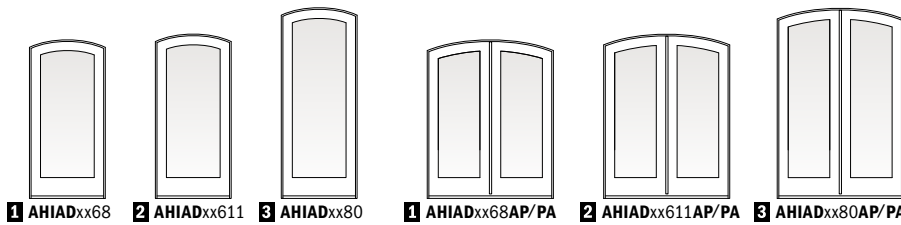
Complementary Springline™ Hinged Outswing Patio Door Details – 4 9/16" (116) Jamb Depth

Scale 1 1/2" (38) = 1'-0" (305) – 1:8



- 4 9/16" (116) overall jamb depth measurements are from back side of installation flange.
- Light-colored areas are parts included with door. Dark-colored areas are additional Andersen® parts required to complete door assembly as shown.
- **Minimum rough openings may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See installation information on pages 210-211.**
- Details are for illustration only and are not intended to represent product installation methods or materials. Refer to product installation guides at andersenwindows.com.
- Dimensions in parentheses are in millimeters.

COMPLEMENTARY CURVED TOP PATIO DOORS



Custom-size doors are available in 1/8" (3) increments. Traditional panels are standard. Custom-designed and 3/4-light panels are also available. Stationary doors are also available (i.e., 2168S or 4068SS). Add **AHIA2** to "Door Number" listed in table (i.e., **AHIA22168**).

Complementary Arch Hinged Inswing Patio Door Dimensions and Specifications

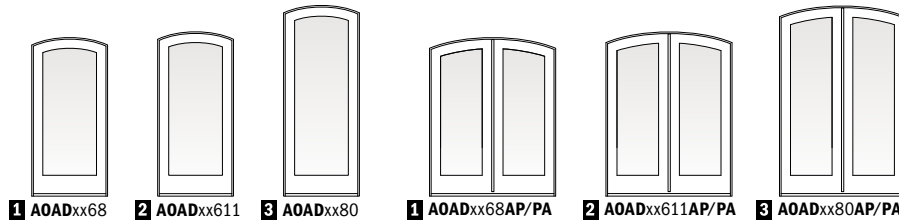
Door Number	Number of Panels Open*	Door Dimensions				Min. Rough Opening		Clear Opening Area Sq. Ft./ (m ²)	Clear Opening Maximums			Glass Area Sq. Ft./ (m ²)	Vent Area Sq. Ft./ (m ²)	Overall Door Area Sq. Ft./ (m ²)
		Radius Inches/ (mm)	Side Height Inches/ (mm)	Width Inches/ (mm)	Height Inches/ (mm)	Width Inches/ (mm)	Height Inches/ (mm)		90° Open Position Width Inches/ (mm)	Full Open Position Width Inches/ (mm)	Height Inches/ (mm)			
2168	1	36" (914)	77 7/16" (1967)	23 15/16" (608)	79 1/2" (2019)	25" (635)	80" (2032)	10.79 (1.00)	18 7/8" (479)	20 13/16" (529)	74 11/16" (1897)	5.66 (0.53)	12.46 (1.16)	14.49 (1.35)
2768	1	48" (1219)	77 7/16" (1959)	29 15/16" (760)	79 1/2" (2019)	31" (787)	80" (2032)	13.84 (1.29)	24 7/8" (632)	26 13/16" (681)	74 5/16" (1888)	8.28 (0.77)	15.70 (1.46)	17.85 (1.66)
2968	1	48" (1219)	76 3/4" (1949)	31 15/16" (811)	79 1/2" (2019)	33" (838)	80" (2032)	14.81 (1.38)	26 7/8" (683)	28 13/16" (732)	74" (1880)	9.15 (0.85)	16.77 (1.56)	18.95 (1.76)
3168	1	48" (1219)	76" (1930)	35 15/16" (913)	79 1/2" (2019)	37" (940)	80" (2032)	16.71 (1.55)	30 7/8" (784)	32 13/16" (833)	73 5/16" (1862)	10.87 (1.01)	18.88 (1.75)	21.13 (1.96)
3368	1	48" (1219)	75 5/8" (1921)	37 15/16" (964)	79 1/2" (2019)	39" (991)	80" (2032)	17.86 (1.66)	32 7/8" (835)	34 13/16" (884)	73 7/8" (1876)	11.72 (1.09)	22.01 (2.04)	24.36 (2.26)
21611	1	36" (914)	80 5/16" (2040)	23 15/16" (608)	82 3/8" (2092)	25" (635)	83" (2108)	11.21 (1.04)	18 7/8" (479)	20 13/16" (529)	77 9/16" (1970)	5.93 (0.55)	14.39 (1.34)	16.65 (1.55)
27611	1	48" (1219)	80" (2032)	29 15/16" (760)	82 3/8" (2092)	31" (787)	83" (2108)	14.37 (1.33)	24 7/8" (632)	26 13/16" (681)	77 3/16" (1961)	8.68 (0.81)	18.17 (1.69)	20.55 (1.91)
29611	1	48" (1219)	79 5/8" (2022)	31 15/16" (811)	82 3/8" (2092)	33" (838)	83" (2108)	15.38 (1.43)	26 7/8" (683)	28 13/16" (732)	76 3/16" (1953)	9.58 (0.89)	19.41 (1.80)	21.83 (2.03)
31611	1	48" (1219)	78 7/8" (2003)	35 15/16" (913)	82 3/8" (2092)	37" (940)	83" (2108)	17.36 (1.61)	30 7/8" (784)	32 13/16" (833)	76 3/16" (1935)	11.39 (1.06)	21.89 (2.03)	24.37 (2.26)
33611	1	48" (1219)	78 1/4" (1994)	37 15/16" (964)	82 3/8" (2092)	39" (991)	83" (2108)	18.55 (1.72)	32 7/8" (835)	34 13/16" (884)	76 3/16" (1949)	12.28 (1.14)	25.19 (2.34)	27.78 (2.58)
2180	1	36" (914)	93 7/16" (2373)	23 15/16" (608)	95 1/2" (2426)	25" (635)	96" (2438)	13.11 (1.22)	18 7/8" (479)	20 13/16" (529)	90 11/16" (2303)	7.09 (0.66)	16.31 (1.52)	18.81 (1.75)
2780	1	48" (1219)	93 1/8" (2365)	29 15/16" (760)	95 1/2" (2426)	31" (787)	96" (2438)	16.82 (1.56)	24 7/8" (632)	26 13/16" (681)	90 5/16" (2294)	10.38 (0.96)	20.63 (1.92)	23.25 (2.16)
2980	1	48" (1219)	92 3/4" (2356)	31 15/16" (811)	95 1/2" (2426)	33" (838)	96" (2438)	18.01 (1.67)	26 7/8" (683)	28 13/16" (732)	90" (2286)	11.47 (1.07)	22.06 (2.05)	24.71 (2.30)
3180	1	48" (1219)	92" (2337)	35 15/16" (913)	95 1/2" (2426)	37" (940)	96" (2438)	20.35 (1.89)	30 7/8" (784)	32 13/16" (833)	89 5/16" (2269)	13.63 (1.27)	24.89 (2.31)	27.62 (2.57)
3380	1	48" (1219)	91 5/8" (2327)	37 15/16" (964)	95 1/2" (2426)	39" (991)	96" (2438)	21.73 (2.02)	32 7/8" (835)	34 13/16" (884)	89 7/8" (2283)	14.71 (1.37)	28.38 (2.64)	31.20 (2.90)
4068	2	48" (1219)	73 5/16" (1862)	47 1/4" (1200)	79 1/2" (2019)	48" (1219)	80" (2032)	21.56 (2.00)	39 15/16" (1014)	43 13/16" (1113)	70 7/8" (1800)	10.93 (1.02)	25.61 (2.38)	28.07 (2.61)
4068	1	48" (1219)	73 5/16" (1862)	47 1/4" (1200)	79 1/2" (2019)	48" (1219)	80" (2032)	10.27 (0.95)	18 15/16" (481)	20 7/8" (530)	70 7/8" (1800)	10.93 (1.02)	12.22 (1.14)	28.07 (2.61)
5068	2	96" (2438)	74 13/16" (1900)	59 1/4" (1505)	79 1/2" (2019)	60" (1524)	80" (2032)	27.95 (2.60)	51 15/16" (1319)	55 13/16" (1418)	72 7/8" (1832)	16.30 (1.51)	32.24 (3.00)	34.97 (3.25)
5068	1	96" (2438)	74 13/16" (1900)	59 1/4" (1505)	79 1/2" (2019)	60" (1524)	80" (2032)	13.46 (1.25)	24 15/16" (633)	26 7/8" (683)	72 1/8" (1832)	16.30 (1.51)	15.54 (1.44)	34.97 (3.25)
5468	2	96" (2438)	74 1/8" (1883)	63 1/4" (1607)	79 1/2" (2019)	64" (1626)	80" (2032)	29.70 (2.76)	55 15/16" (1421)	59 13/16" (1519)	71 1/2" (1816)	17.97 (1.67)	34.29 (3.19)	37.09 (3.45)
5468	1	96" (2438)	74 1/8" (1883)	63 1/4" (1607)	79 1/2" (2019)	64" (1626)	80" (2032)	14.34 (1.33)	26 15/16" (684)	28 7/8" (733)	71 1/2" (1816)	17.97 (1.67)	16.56 (1.54)	37.09 (3.45)
6068	2	96" (2438)	72 5/8" (1845)	71 1/4" (1810)	79 1/2" (2019)	72" (1829)	80" (2032)	32.99 (3.06)	63 15/16" (1624)	67 13/16" (1722)	70 1/16" (1780)	21.25 (1.97)	38.33 (3.56)	41.27 (3.83)
6068	1	96" (2438)	72 5/8" (1845)	71 1/4" (1810)	79 1/2" (2019)	72" (1829)	80" (2032)	16.00 (1.49)	30 15/16" (786)	32 7/8" (835)	70 1/16" (1780)	21.25 (1.97)	18.58 (1.73)	41.27 (3.83)
6468	2	96" (2438)	71 13/16" (1824)	75 1/4" (1911)	79 1/2" (2019)	76" (1930)	80" (2032)	34.53 (3.21)	67 15/16" (1726)	71 13/16" (1824)	69 1/4" (1759)	22.86 (2.12)	44.22 (4.11)	47.36 (4.40)
6468	1	96" (2438)	71 13/16" (1824)	75 1/4" (1911)	79 1/2" (2019)	76" (1930)	80" (2032)	16.77 (1.56)	32 15/16" (837)	34 7/8" (886)	69 1/4" (1759)	22.86 (2.12)	21.53 (2.00)	47.36 (4.40)
40611	2	48" (1219)	76 3/16" (1935)	47 1/4" (1200)	82 3/8" (2092)	48" (1219)	83" (2108)	22.44 (2.08)	39 15/16" (1014)	43 13/16" (1113)	73 3/4" (1873)	11.46 (1.06)	29.64 (2.75)	32.34 (3.00)
40611	1	48" (1219)	76 3/16" (1935)	47 1/4" (1200)	82 3/8" (2092)	48" (1219)	83" (2108)	10.69 (0.99)	18 15/16" (481)	20 7/8" (530)	73 3/4" (1873)	11.46 (1.06)	14.29 (1.33)	32.34 (3.00)
50611	2	96" (2438)	77 11/16" (1973)	59 1/4" (1505)	82 3/8" (2092)	60" (1524)	83" (2108)	29.07 (2.70)	51 15/16" (1319)	55 13/16" (1418)	75" (1905)	17.09 (1.59)	37.35 (3.47)	40.32 (3.75)
50611	1	96" (2438)	77 11/16" (1973)	59 1/4" (1505)	82 3/8" (2092)	60" (1524)	83" (2108)	14.00 (1.30)	24 15/16" (633)	26 7/8" (683)	75" (1905)	17.09 (1.59)	18.15 (1.69)	40.32 (3.75)
54611	2	96" (2438)	77" (1956)	63 1/4" (1607)	82 3/8" (2092)	64" (1626)	83" (2108)	30.89 (2.87)	55 15/16" (1421)	59 13/16" (1519)	74 3/8" (1889)	18.84 (1.75)	39.77 (3.69)	42.80 (3.98)
54611	1	96" (2438)	77" (1956)	63 1/4" (1607)	82 3/8" (2092)	64" (1626)	83" (2108)	14.91 (1.39)	26 15/16" (684)	28 7/8" (733)	74 3/8" (1889)	18.84 (1.75)	19.35 (1.80)	42.80 (3.98)
60611	2	96" (2438)	75 1/2" (1918)	71 1/4" (1810)	82 3/8" (2092)	72" (1829)	83" (2108)	34.35 (3.19)	63 15/16" (1624)	67 13/16" (1722)	72 15/16" (1853)	22.28 (2.07)	44.53 (4.14)	47.71 (4.43)
60611	1	96" (2438)	75 1/2" (1918)	71 1/4" (1810)	82 3/8" (2092)	72" (1829)	83" (2108)	16.65 (1.55)	30 15/16" (786)	32 7/8" (835)	72 15/16" (1853)	22.28 (2.07)	21.74 (2.02)	47.71 (4.43)
64611	2	96" (2438)	74 13/16" (1897)	75 1/4" (1911)	82 3/8" (2092)	76" (1930)	83" (2108)	35.97 (3.34)	67 15/16" (1726)	71 13/16" (1824)	72 7/8" (1832)	23.98 (2.23)	50.78 (4.72)	54.16 (5.03)
64611	1	96" (2438)	74 13/16" (1897)	75 1/4" (1911)	82 3/8" (2092)	76" (1930)	83" (2108)	17.47 (1.62)	32 15/16" (837)	34 7/8" (886)	72 7/8" (1832)	23.98 (2.23)	25.22 (2.34)	54.16 (5.03)
4080	2	48" (1219)	89 5/16" (2269)	47 1/4" (1200)	95 1/2" (2426)	48" (1219)	96" (2438)	26.43 (2.46)	39 15/16" (1014)	43 13/16" (1113)	86 7/8" (2207)	13.76 (1.28)	33.66 (3.13)	36.60 (3.40)
4080	1	48" (1219)	89 5/16" (2269)	47 1/4" (1200)	95 1/2" (2426)	48" (1219)	96" (2438)	12.59 (1.17)	18 15/16" (481)	20 7/8" (530)	86 7/8" (2207)	13.76 (1.28)	14.29 (1.33)	36.60 (3.40)
5080	2	96" (2438)	90 13/16" (2307)	59 1/4" (1505)	95 1/2" (2426)	60" (1524)	96" (2438)	34.16 (3.17)	51 15/16" (1319)	55 13/16" (1418)	88 1/8" (2238)	20.50 (1.90)	42.47 (3.95)	45.67 (4.24)
5080	1	96" (2438)	90 13/16" (2307)	59 1/4" (1505)	95 1/2" (2426)	60" (1524)	96" (2438)	16.45 (1.53)	24 15/16" (633)	26 7/8" (683)	88 1/8" (2238)	20.50 (1.90)	18.15 (1.69)	45.67 (4.24)
5480	2	96" (2438)	90 1/8" (2289)	63 1/4" (1607)	95 1/2" (2426)	64" (1626)	96" (2438)	36.34 (3.38)	55 15/16" (1421)	59 13/16" (1519)	87 1/2" (2223)	22.61 (2.10)	45.24 (4.20)	48.51 (4.51)
5480	1	96" (2438)	90 1/8" (2289)	63 1/4" (1607)	95 1/2" (2426)	64" (1626)	96" (2438)	17.55 (1.63)	26 15/16" (684)	28 7/8" (733)	87 1/2" (2223)	22.61 (2.10)	19.35 (1.80)	48.51 (4.51)
6080	2	96" (2438)	88 5/8" (2251)	71 1/4" (1810)	95 1/2" (2426)	72" (1829)	96" (2438)	40.53 (3.77)	63 15/16" (1624)	67 13/16" (1722)	86 1/16" (2186)	26.78 (2.49)	50.73 (4.71)	54.14 (5.03)
6080	1	96" (2438)	88 5/8" (2251)	71 1/4" (1810)	95 1/2" (2426)	72" (1829)	96" (2438)	19.65 (1.83)	30 15/16" (786)	32 7/8" (835)	86 1/16" (2186)	26.78 (2.49)	21.74 (2.02)	54.14 (5.03)
6480	2	96" (2438)	87 13/16" (2230)	75 1/4" (1911)	95 1/2" (2426)	76" (1930)	96" (2438)	42.51 (3.95)	67 15/16" (1726)	71 13/16" (1824)	85 1/4" (2165)	28.83 (2.68)	57.33 (5.33)	60.95 (5.66)
6480	1	96" (2438)	87 13/16" (2230)	75 1/4" (1911)	95 1/2" (2426)	76" (1930)	96" (2438)	20.65 (1.92)	32 15/16" (837)	34 7/8" (886)	85 1/4" (2165)	28.83 (2.68)	25.22 (2.34)	60.95 (5.66)

* "Door Dimension" always refers to outside frame-to-frame dimension.

* "Minimum Rough Opening" dimensions may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See pages 210-211 for more details.

* Dimensions in parentheses are in millimeters or square meters.

* For two-panel patio doors with one panel open, clear opening is based on active panel being open and passive panel being closed.



Custom-size doors are available in 1/8" (3) increments. Traditional panels are standard. Custom-designed and 3/4-light panels are also available. Stationary doors are also available (i.e., 2168S or 4068SS). Add AOAD to "Door Number" listed in table (i.e., AOAD2168).

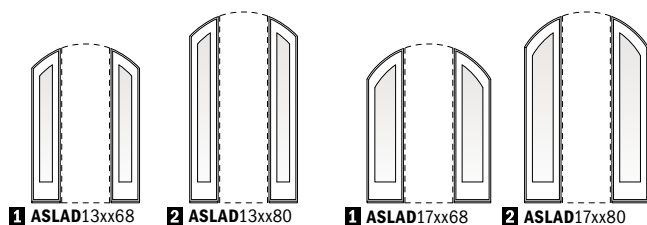
Complementary Arch Hinged Outswing Patio Door Dimensions and Specifications

Door Number	Number of Panels Open*	Radius Inches/(mm)	Side Height Inches/(mm)	Width Inches/(mm)	Height Inches/(mm)	Width Inches/(mm)	Height Inches/(mm)	Clear Opening Area Sq. Ft./ (m ²)	90° Open Position Width Inches/(mm)	Full Open Position Width Inches/(mm)	Height Inches/(mm)	Glass Area Sq. Ft./ (m ²)	Vent Area Sq. Ft./ (m ²)	Overall Door Area Sq. Ft./ (m ²)
2168	1	36" (914)	77 1/16" (1967)	23 15/16" (608)	79 1/2" (2019)	25" (635)	80" (2032)	11.06 (1.03)	19 3/8" (492)	21 5/16" (541)	74 3/4" (1899)	5.66 (0.53)	12.46 (1.16)	14.49 (1.35)
2768	1	48" (1219)	77 1/8" (1959)	29 15/16" (760)	79 1/2" (2019)	31" (787)	80" (2032)	14.11 (1.31)	25 3/8" (645)	27 5/16" (694)	74 3/8" (1889)	8.28 (0.77)	15.70 (1.46)	17.85 (1.66)
2968	1	48" (1219)	76 3/4" (1949)	31 15/16" (811)	79 1/2" (2019)	33" (838)	80" (2032)	15.08 (1.40)	27 3/8" (695)	29 5/16" (745)	74 1/16" (1881)	9.15 (0.85)	16.77 (1.56)	18.95 (1.76)
3168	1	48" (1219)	76" (1930)	35 15/16" (913)	79 1/2" (2019)	37" (940)	80" (2032)	16.97 (1.58)	31 3/8" (797)	33 3/16" (846)	73 3/8" (1864)	10.87 (1.01)	18.88 (1.75)	21.13 (1.96)
3368	1	48" (1219)	75 5/8" (1921)	37 15/16" (964)	79 1/2" (2019)	39" (991)	80" (2032)	17.90 (1.66)	33 3/8" (848)	35 5/16" (897)	73" (1854)	11.72 (1.09)	22.01 (2.04)	24.36 (2.26)
21611	1	36" (914)	80 5/16" (2040)	23 15/16" (608)	82 3/8" (2092)	25" (635)	83" (2108)	11.49 (1.07)	19 3/8" (492)	21 5/16" (541)	77 5/8" (1972)	5.93 (0.55)	14.39 (1.34)	16.65 (1.55)
27611	1	48" (1219)	80" (2032)	29 15/16" (760)	82 3/8" (2092)	31" (787)	83" (2108)	14.65 (1.36)	25 3/8" (645)	27 5/16" (694)	77 1/4" (1962)	8.68 (0.81)	18.17 (1.69)	20.55 (1.91)
29611	1	48" (1219)	79 5/8" (2022)	31 15/16" (811)	82 3/8" (2092)	33" (838)	83" (2108)	15.66 (1.45)	27 3/8" (695)	29 5/16" (745)	76 15/16" (1954)	9.58 (0.89)	19.41 (1.80)	21.83 (2.03)
31611	1	48" (1219)	78 1/8" (2003)	35 15/16" (913)	82 3/8" (2092)	37" (940)	83" (2108)	17.64 (1.64)	31 3/8" (797)	33 5/16" (846)	76 1/4" (1937)	11.39 (1.06)	21.89 (2.03)	24.37 (2.26)
33611	1	48" (1219)	78 1/8" (1994)	37 15/16" (964)	82 3/8" (2092)	39" (991)	83" (2108)	18.61 (1.73)	33 3/8" (848)	35 5/16" (897)	75 7/8" (1927)	12.28 (1.14)	25.19 (2.34)	27.78 (2.58)
2180	1	36" (914)	93 7/16" (2373)	23 15/16" (608)	95 1/2" (2426)	25" (635)	96" (2438)	13.43 (1.25)	19 3/8" (492)	21 5/16" (541)	90 3/4" (2305)	7.09 (0.66)	16.31 (1.52)	18.81 (1.75)
2780	1	48" (1219)	93 1/8" (2365)	29 15/16" (760)	95 1/2" (2426)	31" (787)	96" (2438)	17.14 (1.59)	25 3/8" (645)	27 5/16" (694)	90 3/8" (2296)	10.38 (0.96)	20.63 (1.92)	23.25 (2.16)
2980	1	48" (1219)	92 3/4" (2356)	31 15/16" (811)	95 1/2" (2426)	33" (838)	96" (2438)	18.33 (1.70)	27 3/8" (695)	29 5/16" (745)	90 1/16" (2288)	11.47 (1.07)	22.06 (2.05)	24.71 (2.30)
3180	1	48" (1219)	92" (2337)	35 15/16" (913)	95 1/2" (2426)	37" (940)	96" (2438)	20.68 (1.92)	31 3/8" (797)	33 3/16" (846)	89 3/8" (2270)	13.63 (1.27)	24.89 (2.31)	27.62 (2.57)
3380	1	48" (1219)	91 5/8" (2327)	37 15/16" (964)	95 1/2" (2426)	39" (991)	96" (2438)	21.83 (2.03)	33 3/8" (848)	35 5/16" (897)	89" (2261)	14.71 (1.37)	28.38 (2.64)	31.20 (2.90)
4068	2	48" (1219)	73 5/16" (1862)	47 1/4" (1200)	79 1/2" (2019)	48" (1219)	80" (2032)	21.93 (2.04)	40 11/16" (1033)	44 5/8" (1133)	70 3/4" (1797)	10.93 (1.02)	25.61 (2.38)	28.07 (2.61)
4068	1	48" (1219)	73 5/16" (1862)	47 1/4" (1200)	79 1/2" (2019)	48" (1219)	80" (2032)	10.44 (0.97)	19 1/4" (489)	21 1/4" (540)	70 3/4" (1797)	10.93 (1.02)	12.22 (1.14)	28.07 (2.61)
5068	2	96" (2438)	74 13/16" (1900)	59 1/4" (1505)	79 1/2" (2019)	60" (1524)	80" (2032)	28.36 (2.63)	52 11/16" (1338)	56 5/8" (1438)	72 1/8" (1832)	16.30 (1.51)	32.24 (3.00)	34.97 (3.25)
5068	1	96" (2438)	74 13/16" (1900)	59 1/4" (1505)	79 1/2" (2019)	60" (1524)	80" (2032)	13.65 (1.27)	25 1/4" (641)	27 1/4" (692)	72 1/8" (1832)	16.30 (1.51)	15.54 (1.44)	34.97 (3.25)
5468	2	96" (2438)	74 1/8" (1883)	63 1/4" (1607)	79 1/2" (2019)	64" (1626)	80" (2032)	30.08 (2.79)	56 11/16" (1440)	60 5/8" (1540)	71 1/16" (1815)	17.97 (1.67)	34.29 (3.19)	37.09 (3.45)
5468	1	96" (2438)	74 1/8" (1883)	63 1/4" (1607)	79 1/2" (2019)	64" (1626)	80" (2032)	14.51 (1.35)	27 1/4" (692)	29 1/4" (743)	71 1/16" (1815)	17.97 (1.67)	16.56 (1.54)	37.09 (3.45)
6068	2	96" (2438)	72 5/8" (1845)	71 1/4" (1810)	79 1/2" (2019)	72" (1829)	80" (2032)	33.36 (3.10)	64 11/16" (1643)	68 5/8" (1743)	70" (1778)	21.25 (1.97)	38.33 (3.56)	41.27 (3.83)
6068	1	96" (2438)	72 5/8" (1845)	71 1/4" (1810)	79 1/2" (2019)	72" (1829)	80" (2032)	16.16 (1.50)	31 1/4" (794)	33 1/4" (845)	70" (1778)	21.25 (1.97)	18.58 (1.73)	41.27 (3.83)
6468	2	96" (2438)	71 13/16" (1824)	75 1/4" (1911)	79 1/2" (2019)	76" (1930)	80" (2032)	34.89 (3.24)	68 11/16" (1745)	72 5/8" (1845)	69 3/16" (1757)	22.86 (2.12)	44.22 (4.11)	47.36 (4.40)
6468	1	96" (2438)	71 13/16" (1824)	75 1/4" (1911)	79 1/2" (2019)	76" (1930)	80" (2032)	16.94 (1.57)	33 1/4" (845)	35 1/4" (895)	69 3/16" (1757)	22.86 (2.12)	21.53 (2.00)	47.36 (4.40)
40611	2	48" (1219)	76 3/16" (1935)	47 1/4" (1200)	82 3/8" (2092)	48" (1219)	83" (2108)	22.82 (2.12)	40 11/16" (1033)	44 5/8" (1133)	73 5/8" (1870)	11.46 (1.06)	29.64 (2.75)	32.34 (3.00)
40611	1	48" (1219)	76 3/16" (1935)	47 1/4" (1200)	82 3/8" (2092)	48" (1219)	83" (2108)	10.86 (1.01)	19 1/4" (489)	21 1/4" (540)	73 5/8" (1870)	11.46 (1.06)	14.29 (1.33)	32.34 (3.00)
50611	2	96" (2438)	77 11/16" (1973)	59 1/4" (1505)	82 3/8" (2092)	60" (1524)	83" (2108)	29.49 (2.74)	52 11/16" (1338)	56 5/8" (1438)	75" (1905)	17.09 (1.59)	37.35 (3.47)	40.32 (3.75)
50611	1	96" (2438)	77 11/16" (1973)	59 1/4" (1505)	82 3/8" (2092)	60" (1524)	83" (2108)	14.19 (1.32)	25 1/4" (641)	27 1/4" (692)	75" (1905)	17.09 (1.59)	18.15 (1.69)	40.32 (3.75)
54611	2	96" (2438)	77" (1956)	63 1/4" (1607)	82 3/8" (2092)	64" (1626)	83" (2108)	31.29 (2.91)	56 11/16" (1440)	60 5/8" (1540)	74 5/16" (1888)	18.84 (1.75)	39.77 (3.69)	42.80 (3.98)
54611	1	96" (2438)	77" (1956)	63 1/4" (1607)	82 3/8" (2092)	64" (1626)	83" (2108)	15.09 (1.40)	27 1/4" (692)	29 1/4" (743)	74 5/16" (1888)	18.84 (1.75)	19.35 (1.80)	42.80 (3.98)
60611	2	96" (2438)	75 1/2" (1918)	71 1/4" (1810)	82 3/8" (2092)	72" (1829)	83" (2108)	34.73 (3.23)	64 11/16" (1643)	68 5/8" (1743)	72 1/8" (1851)	22.28 (2.07)	44.53 (4.14)	47.71 (4.43)
60611	1	96" (2438)	75 1/2" (1918)	71 1/4" (1810)	82 3/8" (2092)	72" (1829)	83" (2108)	16.83 (1.56)	31 1/4" (794)	33 1/4" (845)	72 1/8" (1851)	22.28 (2.07)	21.74 (2.02)	47.71 (4.43)
64611	2	96" (2438)	74 11/16" (1897)	75 1/4" (1911)	82 3/8" (2092)	76" (1930)	83" (2108)	36.34 (3.38)	68 11/16" (1745)	72 5/8" (1845)	72 1/16" (1830)	23.98 (2.23)	50.78 (4.72)	54.16 (5.03)
64611	1	96" (2438)	74 11/16" (1897)	75 1/4" (1911)	82 3/8" (2092)	76" (1930)	83" (2108)	17.64 (1.64)	33 1/4" (845)	35 1/4" (895)	72 1/16" (1830)	23.98 (2.23)	25.22 (2.34)	54.16 (5.03)
4080	2	48" (1219)	89 5/16" (2269)	47 1/4" (1200)	95 1/2" (2426)	48" (1219)	96" (2438)	26.88 (2.50)	40 11/16" (1033)	44 5/8" (1133)	86 3/4" (2203)	13.76 (1.28)	33.66 (3.13)	36.60 (3.40)
4080	1	48" (1219)	89 5/16" (2269)	47 1/4" (1200)	95 1/2" (2426)	48" (1219)	96" (2438)	12.80 (1.19)	19 1/4" (489)	21 1/4" (540)	86 3/4" (2203)	13.76 (1.28)	14.29 (1.33)	36.60 (3.40)
5080	2	96" (2438)	90 13/16" (2307)	59 1/4" (1505)	95 1/2" (2426)	60" (1524)	96" (2438)	34.65 (3.22)	52 11/16" (1338)	56 5/8" (1438)	88 1/8" (2238)	20.50 (1.90)	42.47 (3.95)	45.67 (4.24)
5080	1	96" (2438)	90 13/16" (2307)	59 1/4" (1505)	95 1/2" (2426)	60" (1524)	96" (2438)	16.68 (1.55)	25 1/4" (641)	27 1/4" (692)	88 1/8" (2238)	20.50 (1.90)	18.15 (1.69)	45.67 (4.24)
5480	2	96" (2438)	90 1/8" (2289)	63 1/4" (1607)	95 1/2" (2426)	64" (1626)	96" (2438)	36.81 (3.42)	56 11/16" (1440)	60 5/8" (1540)	87 7/16" (2221)	22.61 (2.10)	45.24 (4.20)	48.51 (4.51)
5480	1	96" (2438)	90 1/8" (2289)	63 1/4" (1607)	95 1/2" (2426)	64" (1626)	96" (2438)	17.76 (1.65)	27 1/4" (692)	29 1/4" (743)	87 7/16" (2221)	22.61 (2.10)	19.35 (1.80)	48.51 (4.51)
6080	2	96" (2438)	88 5/8" (2251)	71 1/4" (1810)	95 1/2" (2426)	72" (1829)	96" (2438)	40.98 (3.81)	64 11/16" (1643)	68 5/8" (1743)	86" (2184)	26.78 (2.49)	50.73 (4.71)	54.14 (5.03)
6080	1	96" (2438)	88 5/8" (2251)	71 1/4" (1810)	95 1/2" (2426)	72" (1829)	96" (2438)	19.86 (1.84)	31 1/4" (794)	33 1/4" (845)	86" (2184)	26.78 (2.49)	21.74 (2.02)	54.14 (5.03)
6480	2	96" (2438)	87 13/16" (2230)	75 1/4" (1911)	95 1/2" (2426)	76" (1930)	96" (2438)	42.96 (3.99)	68 11/16" (1745)	72 5/8" (1845)	85 3/16" (2164)	28.83 (2.68)	57.33 (5.33)	60.95 (5.66)
6480	1	96" (2438)	87 13/16" (2230)	75 1/4" (1911)	95 1/2" (2426)	76" (1930)	96" (2438)	20.85 (1.94)	33 1/4" (845)	35 1/4" (895)	85 3/16" (2164)	28.83 (2.68)	25.22 (2.34)	60.95 (5.66)

*"Door Dimension" always refers to outside frame-to-frame dimension.
 **"Minimum Rough Opening" dimensions may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See pages 210-211 for more details.
 *Dimensions in parentheses are in millimeters or square meters.
 *For two-panel patio doors with one panel open, clear opening is based on active panel being open and passive panel being closed.

COMPLEMENTARY CURVED TOP PATIO DOORS

Complementary Arch Patio Door Sidelights

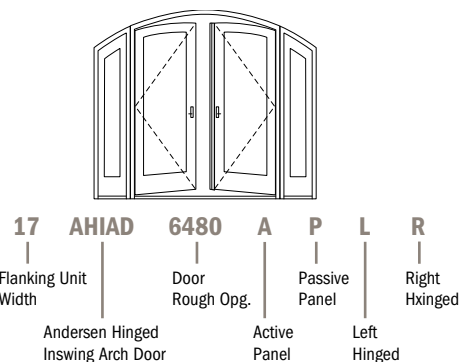
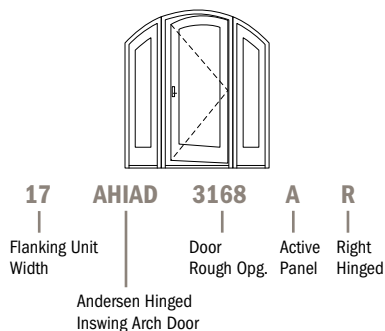
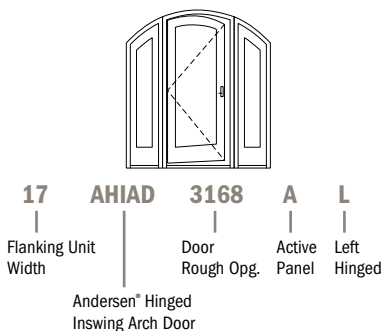


Custom sized in 1/8" (3) increments.

Standard sizes in two widths and heights. Contact your Andersen supplier for sidelight dimensions and specifications. Sash-set arch patio door sidelights, shown, are standard. Direct-set sidelights are available by special order.

Order Designation Description

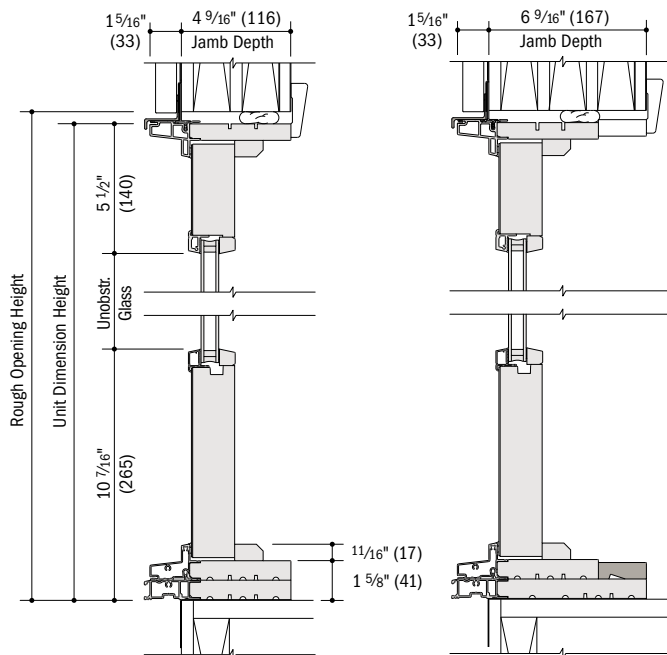
Viewed from the exterior.



Arch inswing patio doors (AHIA) shown above; for arch outswing patio doors use AOAD. Outswing patio doors open outward to the exterior.

Complementary Arch Patio Door Sidelight Details

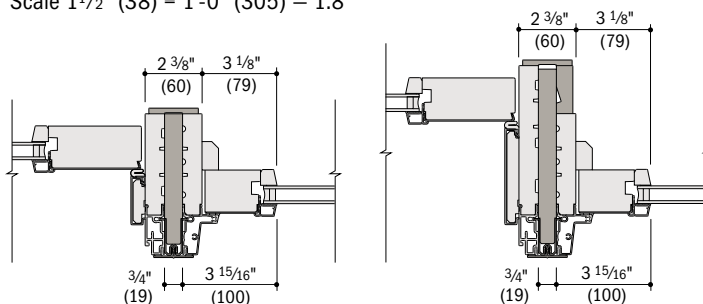
Scale 1 1/2" (38) = 1'-0" (305) – 1:8



Vertical Sections

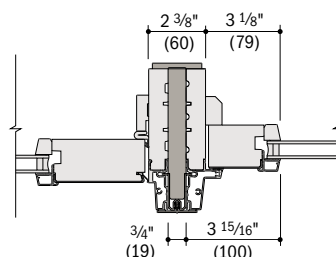
Vertical Joining Details

Scale 1 1/2" (38) = 1'-0" (305) – 1:8



Complementary Arch Inswing Patio Door to Complementary Arch Patio Door Sidelight
4 9/16" (116) Jamb Depth

Complementary Arch Inswing Patio Door to Complementary Arch Patio Door Sidelight
6 9/16" (167) Jamb Depth

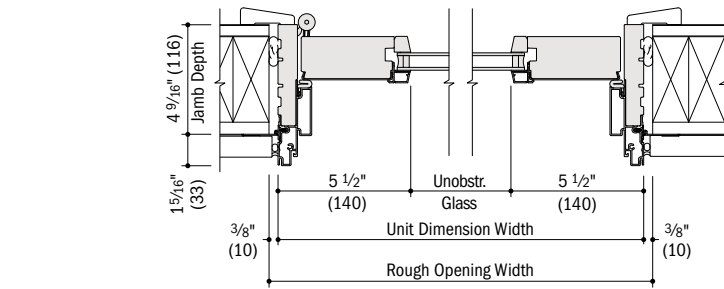


Complementary Arch Outswing Patio Door to Complementary Arch Patio Door Sidelight

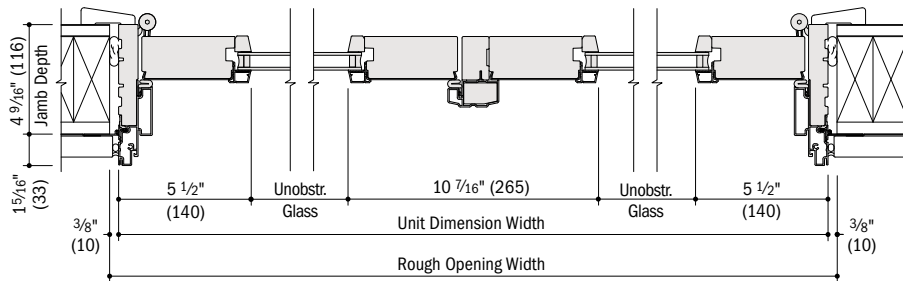
- 4 9/16" (116) and 6 9/16" (167) overall jamb depth measurements are from back side of installation flange.
- Light-colored areas are parts included with window and/or door. Dark-colored areas are additional Andersen® parts required to complete window and/or door assembly as shown.
- Minimum rough openings may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See installation information on pages 210-211.
- Details are for illustration only and are not intended to represent product installation methods or materials. Refer to product installation guides at andersenwindows.com.
- Dimensions in parentheses are in millimeters.

Complementary Arch Hinged Inswing Patio Door Details – 4 9/16" (116) Jamb Depth

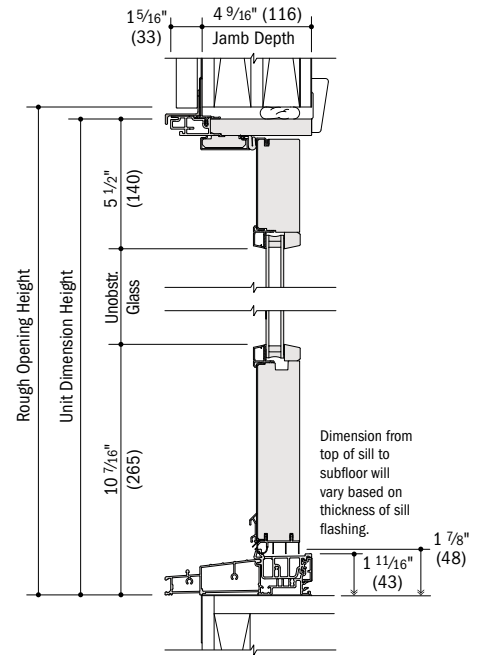
Scale 1 1/2" (38) = 1'-0" (305) – 1:8



Horizontal Section



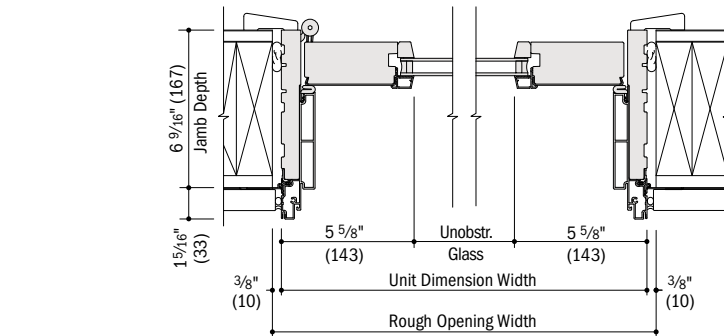
Horizontal Section
Two-Panel



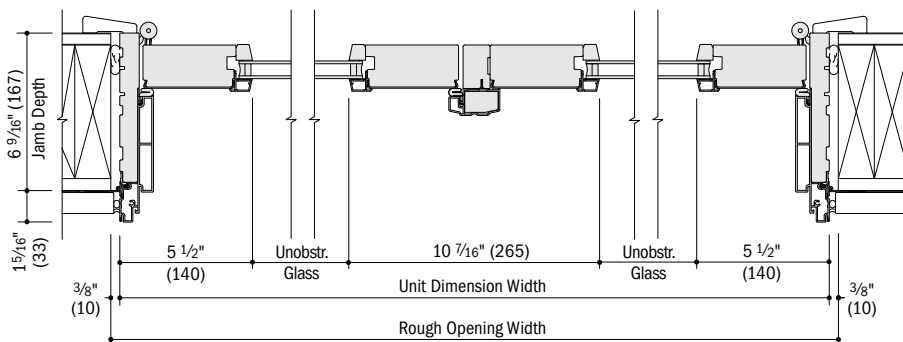
Vertical Section

Complementary Arch Hinged Inswing Patio Door Details – 6 9/16" (167) Jamb Depth

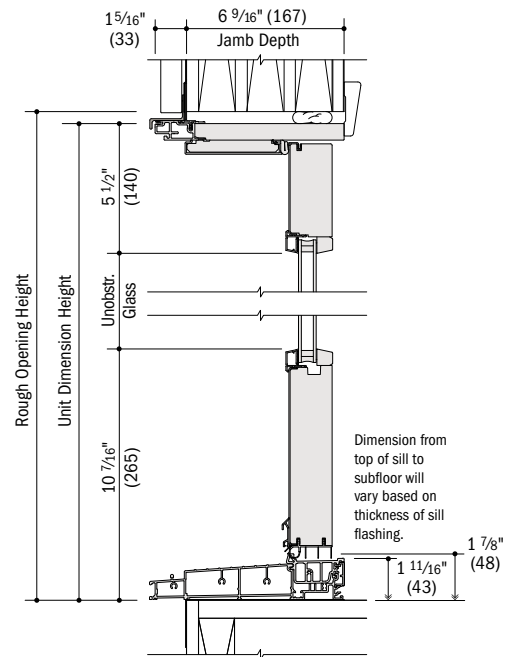
Scale 1 1/2" (38) = 1'-0" (305) – 1:8



Horizontal Section



Horizontal Section
Two-Panel



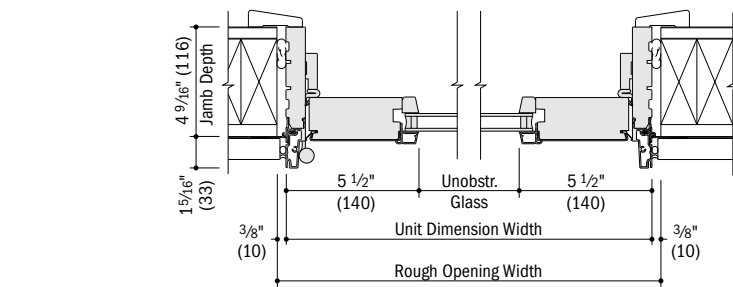
Vertical Section

- 4 9/16" (116) and 6 9/16" (167) overall jamb depth measurements are from back side of installation flange.
- Light-colored areas are parts included with door. Dark-colored areas are additional Andersen® parts required to complete door assembly as shown.
- **Minimum rough openings may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See installation information on pages 210-211.**
- Details are for illustration only and are not intended to represent product installation methods or materials. Refer to product installation guides at andersenwindows.com.
- Dimensions in parentheses are in millimeters.

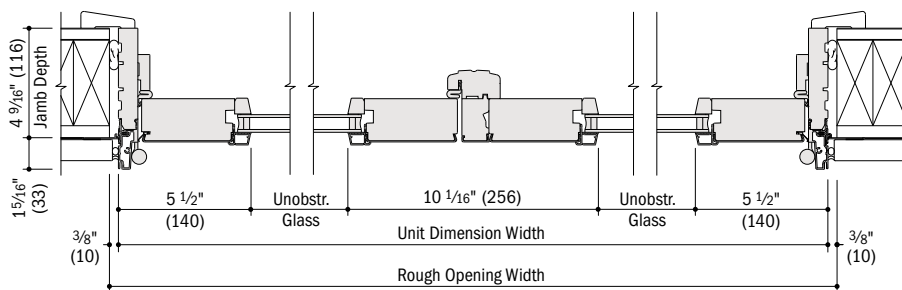
COMPLEMENTARY CURVED TOP PATIO DOORS

Complementary Arch Outswing Patio Door Details – 4 9/16" (116) Jamb Depth

Scale 1 1/2" (38) = 1'-0" (305) – 1:8

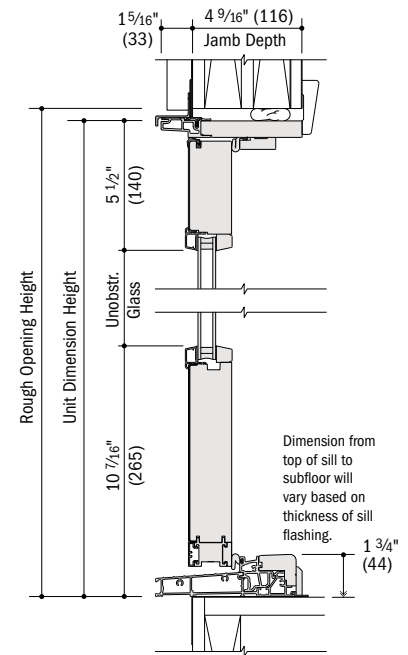


Horizontal Section



Horizontal Section

Two-Panel



Vertical Section

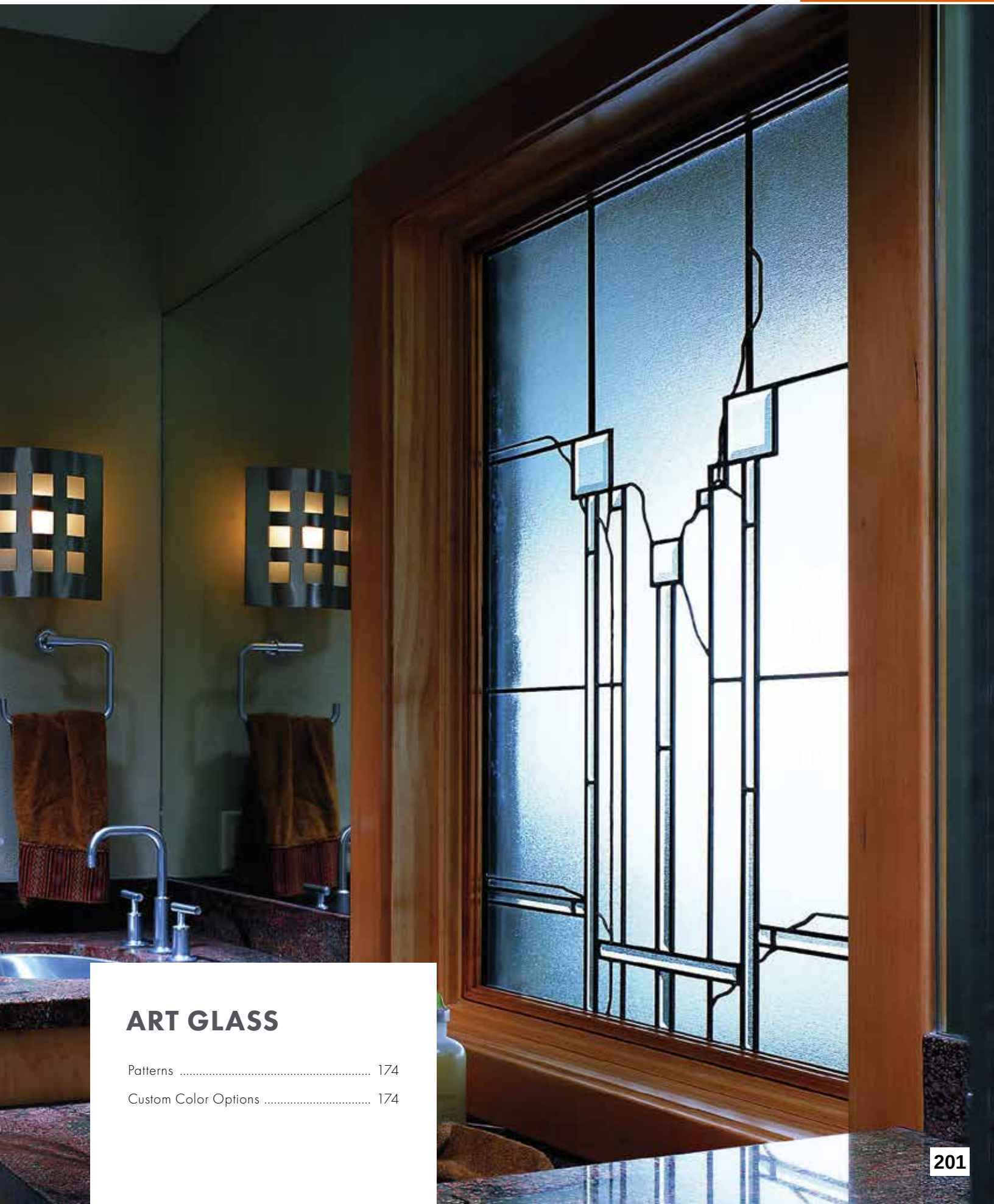
• 4 9/16" (116) overall jamb depth measurement is from back side of installation flange.

• Light-colored areas are parts included with door. Dark-colored areas are additional Andersen® parts required to complete door assembly as shown.

• **Minimum rough openings may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See installation information on pages 210-211.**

• Details are for illustration only and are not intended to represent product installation methods or materials. Refer to product installation guides at andersenwindows.com.

• Dimensions in parentheses are in millimeters.



ART GLASS

Patterns	174
Custom Color Options	174

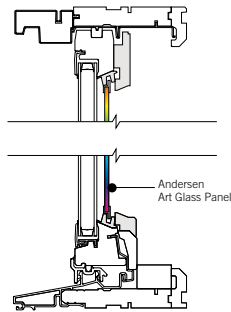
FEATURES

FRAME

For most units, Andersen® art glass panel kits include pine and laminated maple trim to give each installation a finished appearance. Panels are edged with steel-reinforced zinc coming for stability. Coming finish options are available in antique (bronze), bright goldtone and silvertone.

PACKAGE INCLUDES

Andersen art glass panel, installation brackets, wood trim pieces (where applicable), brass screws, and complete installation and cleaning instructions.



INSTALLATION

Panels are secured with polypropylene, snap-lock installation brackets.

AVAILABILITY

Andersen art glass panels are sized to fit Andersen casement, awning, half circle, elliptical, circle, oval, arch, Flexiframe®, double-hung transom and picture windows, Frenchwood® hinged patio doors, sidelights and transoms.

GLASS

Designs are offered in several standard color palettes, or choose from the many optional colors for glass and accent "jewels" to create your own unique color combinations.

PATTERN DETAILS

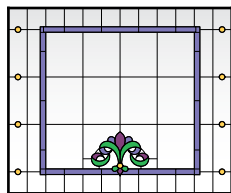
Each design can be ordered in many shapes and sizes, including detailed art glass patterns for specific unit sizes.

COLOR OPTIONS

Andersen gives you a choice of antique, silvertone or bright goldtone coming, the ornamental material used to hold sections of decorative glass in place.

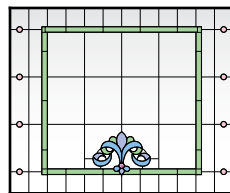
For more information, see your Andersen supplier or visit andersenwindows.com/artglass.

PATTERNS



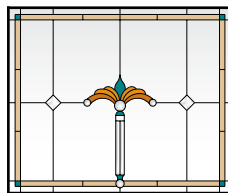
Victoria

Violet, deep rose, deep green and amber jewels



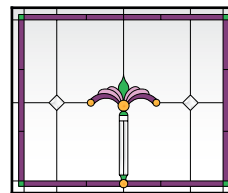
Victoria

Light green, lilac, light blue, pink jewels and lilac jewels



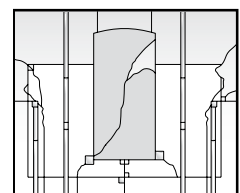
Regency

Sand, deep teal, topaz, copper and smoke jewels



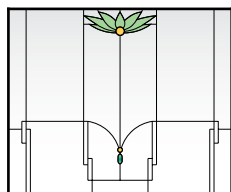
Regency

Deep rose, deep green, rose and opal amber jewels



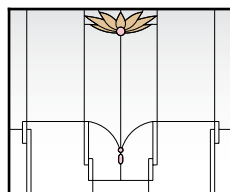
Harmonics

Opal, sage and clear bevels (right orientation)



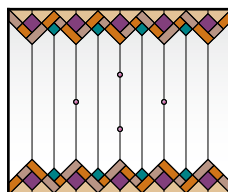
Lotus

Light green, amber jewels and green jewels



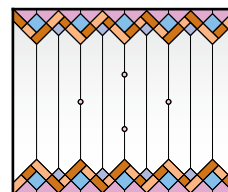
Lotus

Sand and pink jewels



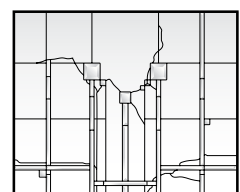
Taos

Dusty coral, copper, sand, deep rose, deep teal and lilac jewels



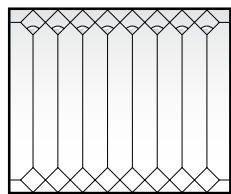
Taos

Peach, copper, rose, lilac, light blue and pink jewels



Affinity

No color, clear bevels (right orientation)



Diamond Lights

Clear fan-shaped bevels

CLASSIC SERIES

The Classic Series includes five different styles that represent major architectural design themes from the late 1800s through the 1930s, as well as a Southwestern-inspired design. Classic Series glass patterns are also available with semi-privacy glass or clear antique glass in place of colored glass.

ARTISAN SERIES

Two designs influenced by 20th century American and European architectural schools feature striking visual patterns that evoke an extraordinary blend of art and nature. Artisan Series glass patterns are available in left or right orientations, as viewed from the exterior.

CUSTOM COLOR OPTIONS



Clear, clear antique and semi-privacy glass are also available as custom art glass color options.

Andersen art glass panel patterns vary based on window size and shape. Contact your Andersen supplier for complete pattern information. Colors in the Classic Series and Artisan Series may vary from photos and actual glass samples due to the unique character of the mouthblown glass. Art glass changes appearance greatly based on lighting in its environment, making it beautiful to look at yet difficult to represent accurately in print. Printing limitations prevent exact color replication.



EXTERIOR TRIM

Flat Casing	178
Brick Mould	179
Sill Nose	179
Decorative Drip Cap	180
Cornices	180
Mull Cover	180

EXTERIOR TRIM

FEATURES

EXTERIOR TRIM SYSTEM

Easier Installation

- Installs independently of water management system
- No nail holes to fill
- No visible fasteners
- No painting



Made of Fibrex® material that is an environmentally smart composite, containing 40% pre-consumer reclaimed wood fiber by weight.



EXTERIOR TRIM

- A** For exceptional long-lasting performance, exterior trim is made from Fibrex material or high-density urethane with low-maintenance exterior finishes.
- B** Sill nose profile, made from Fibrex material, is placed at the sill for a traditional look.
- C** Rigid vinyl exterior trim attachment strips (field applied) allow the trim to be securely fastened to the home.
- D** Trim surrounds are assembled with corner keys and stainless steel fasteners for stability and strength.

Profiles

Exterior trim is available in four profiles made from our Fibrex material. Profiles include 3 1/2" (89) flat casing, 4 1/2" (114) flat casing, 2" (51) brick mould and sill nose for the bottom trim piece. See profiles and sill options on the next page.

Thick trim profiles overlap the window frame to create clean lines without visible sealant joints.

Drip Cap

Full-length, color-matched aluminum drip cap is included with kits and surrounds.

End Caps

Provide a clean appearance when joining two trim members.

Corner Keys

Provide tight alignment of corner joints.



EXTERIOR TRIM OPTIONS

EXTERIOR TRIM COLORS



Design a window and view exterior trim installation guides at andersenwindows.com/exteriortrim.

Fasteners

Screws are made of high-quality stainless steel and provide corner joints with a secure, tight fit.

Head Trim Options

Three styles are available. All can be used above our flat casing and include an integrated installation flange. The decorative drip cap is made from our Fibrex material. Both the 2" (51) cornice and 3 5/8" (92) cornice are made from highly durable urethane material. See head trim options on the next page.

Specialty Trim

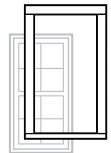


Made of highly durable factory-finished urethane material for selected shapes. Contact your Andersen supplier for availability.

INSTALLATION OPTIONS

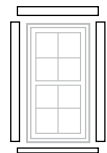
Preassembled Trim Surrounds

Factory-assembled surrounds install quickly and eliminate measuring, cutting, mitering and filling nail holes.



Precut Kits

Knock-down kits include precut and predrilled trim with all the necessary components for on-site assembly for windows.



Individual Trim Components

13' (3962) factory-finished trim lineals, end caps, corner keys, fasteners, metal drip caps and field attachment strips allow for field fabrication and assembly.



*See the 400 Series Limited Warranty for exterior trim applied to 400 Series products. Visit andersenwindows.com/warranty for details.

Dimensions in parentheses are in millimeters.

Printing limitations prevent exact duplication of colors. See your Andersen supplier for actual color samples.

PROFILES



2" (51) Brick Mould in dove gray with Terratone window



3 1/2" (89) Flat Casing in dark bronze with white window



4 1/2" (114) Flat Casing in canvas with forest green window

HEAD TRIM OPTIONS



Decorative Drip Cap with 3 1/2" (89) flat casing in red rock with Sandtone window



2" (51) Cornice with 3 1/2" (89) flat casing in red rock with Sandtone window



3 5/8" (92) Cornice with 3 1/2" (89) flat casing in red rock with Sandtone window

SILL OPTIONS



2" (51) Brick Mould with sill nose in dove gray with Terratone window

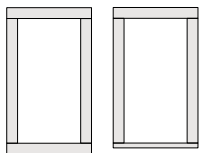


3 1/2" (89) Flat Casing with sill nose in dark bronze with white window

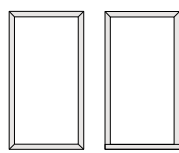


4 1/2" (114) Flat Casing with sill nose in canvas with forest green window

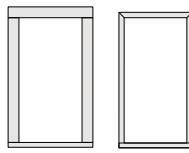
TRIM COMBINATIONS



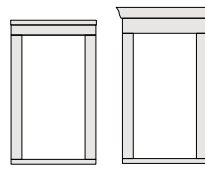
Flat Casing can be used on all four sides flush at the head and sill. Combine 3 1/2" (89) and 4 1/2" (114) flat casing or use with a flush sill nose.



Brick Mould can be used on all four sides or with a flush sill nose.



Sill Nose can be used with flat casing or brick mould.



Decorative Drip Cap or **Cornices** can be used above flat casing at the head.

ACCESSORIES

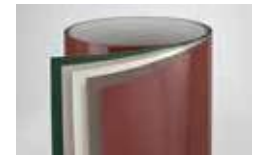
INSTALLATION

Fibrex® Trim Board



Andersen offers a 3 1/2" (89) wide by 3/4" (19) thick cellular Fibrex trim board in 10' (3048) lengths. Available in the same 11 colors as the exterior trim system, this solid trim board can be ripped to size and can be fastened using nails or screws.

Coil Stock



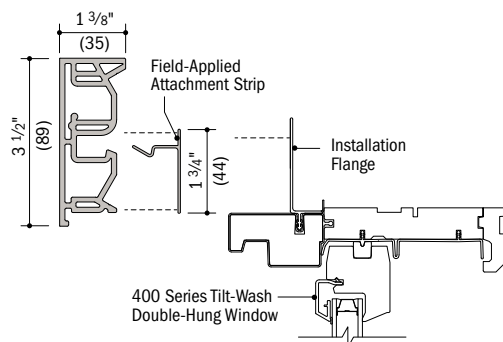
Factory finished in any of our 11 exterior trim colors, our aluminum coil stock allows you to form your own profiles in the field. Made from .018" thick aluminum, coil stock is available in 24" (610) x 50' (15240) rolls. Color-matched 1 1/4" (32)-long stainless steel trim nails are also available and can be ordered in 1 lb/.454 kg boxes.

EXTERIOR TRIM

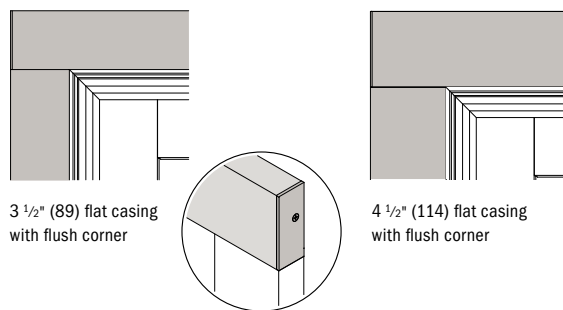
Window and Patio Door Attachment

Field-Applied Attachment Strip

Field-applied attachment strip fastens to framing through window or patio door installation flange and flashing tape with screws. Exterior trim connects securely to the field-applied attachment strip. Follow window and patio door installation guides for flashing instructions.



3 1/2" (89) and 4 1/2" (114) Flat Casing



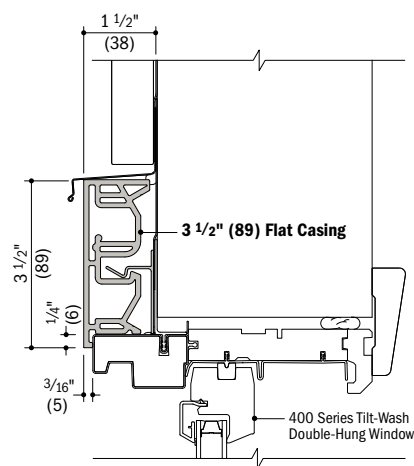
Formula for dimension of window/door plus exterior trim:

Add 4 1/4" (108) per side for 4 1/2" (114) flat casing

Add 3 1/4" (83) per side for 3 1/2" (89) flat casing

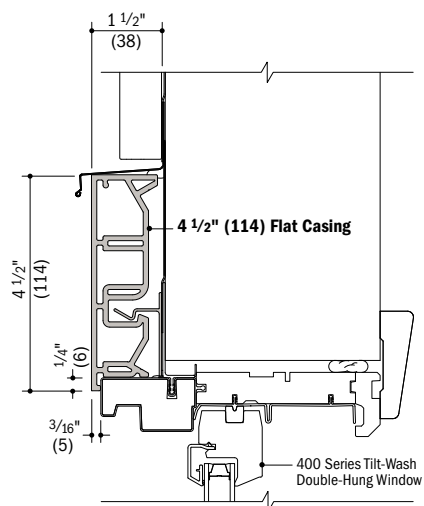
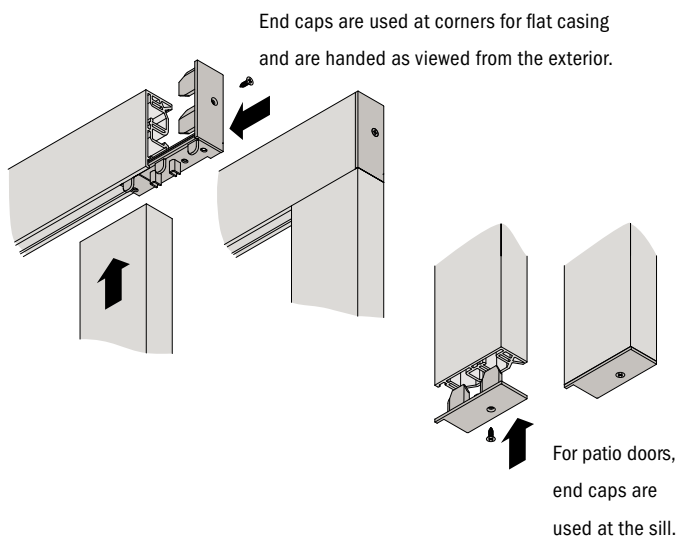
Trim Details

Scale 3" (76) = 1'-0" (305) – 1:4



Vertical Section

400 Series Tilt-Wash Double-Hung Window with 3 1/2" (89) Flat Casing



Vertical Section

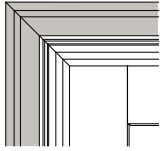
400 Series Tilt-Wash Double-Hung Window with 4 1/2" (114) Flat Casing

• Dimensions in parentheses are in millimeters.

• Typical trim combinations shown. Additional combinations may also be used. Some restrictions apply. For more information, contact your Andersen supplier.

• Details are for illustration only and are not intended to represent product installation methods or materials. Refer to product installation guides at andersenwindows.com.

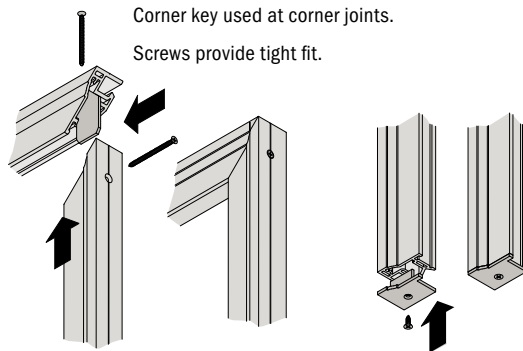
Brick Mould



Brick mould with mitered corners

Formula for dimension of window/door plus exterior trim:

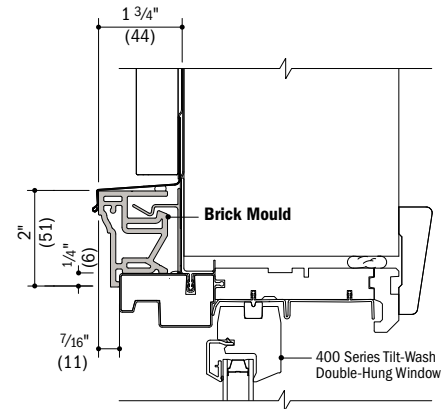
Add 1 3/4" (44) per side for brick mould



For patio doors, end caps
are used at the sill.

Trim Detail

Scale 3" (76) = 1'-0" (305) – 1:4

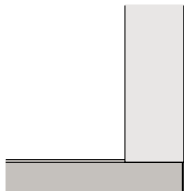


Vertical Section

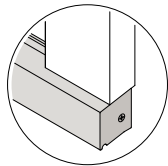
400 Series Tilt-Wash Double-Hung Window with Brick Mould

Exterior Trim

Sill Nose



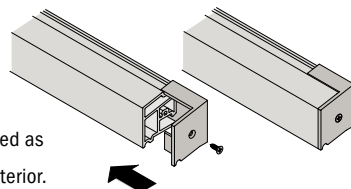
Sill nose and 3 1/2" (89) flat
casing with flush corner



Formula for dimension of window plus exterior trim:

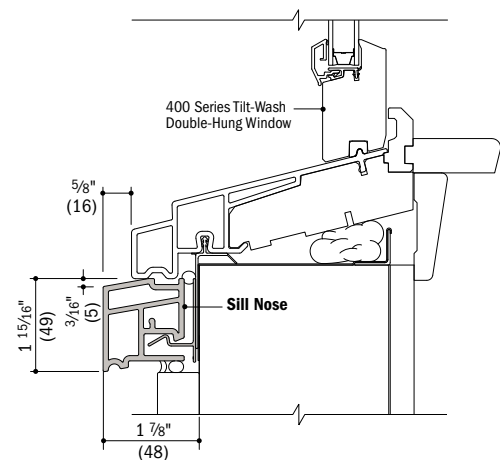
Add 1 15/16" (49) for sill nose

End caps are handed as
viewed from the exterior.



Trim Detail

Scale 3" (76) = 1'-0" (305) – 1:4



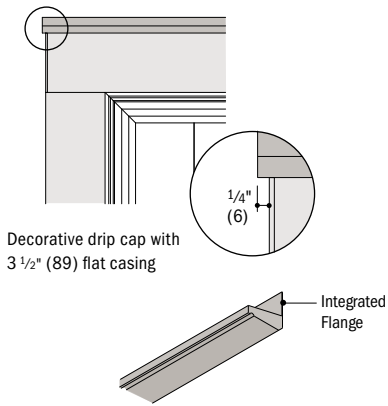
Vertical Section

400 Series Tilt-Wash Double-Hung Window with Sill Nose

• Dimensions in parentheses are in millimeters.
• Typical trim combinations shown. Additional combinations may also be used. Some restrictions apply. For more information, contact your Andersen supplier.
• Details are for illustration only and are not intended to represent product installation methods or materials. Refer to product installation guides at andersenwindows.com.

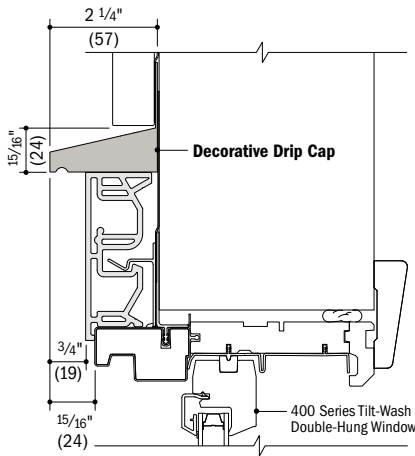
EXTERIOR TRIM

Decorative Drip Cap



Trim Detail

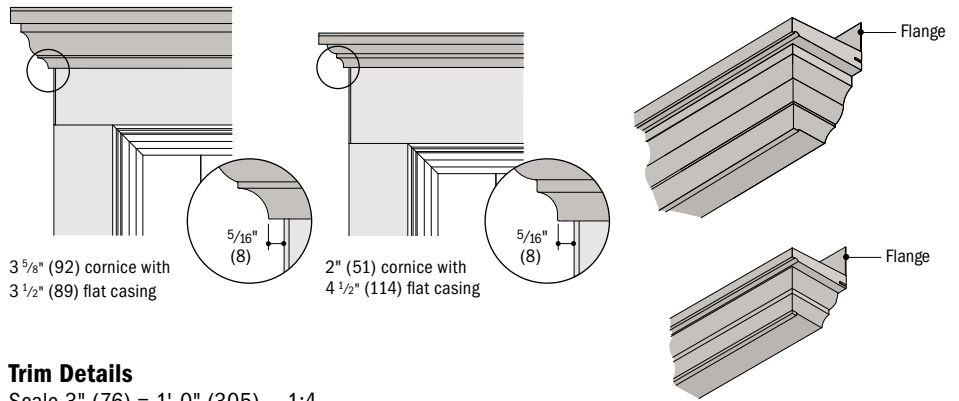
Scale 3" (76) = 1'-0" (305) – 1:4



Vertical Section

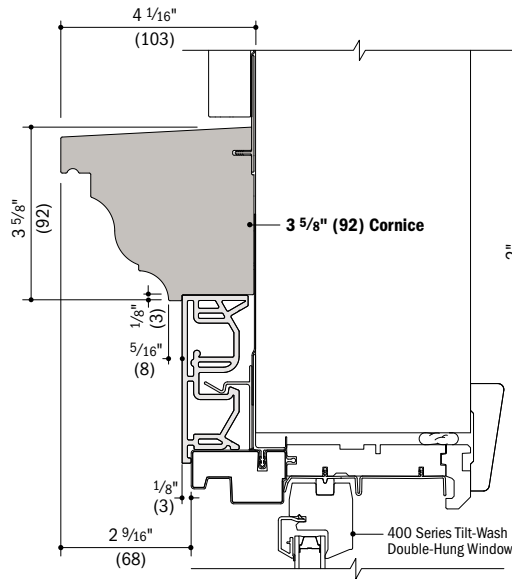
400 Series Tilt-Wash Double-Hung Window with 3 1/2" (89) Flat Casing and Decorative Drip Cap

Cornices



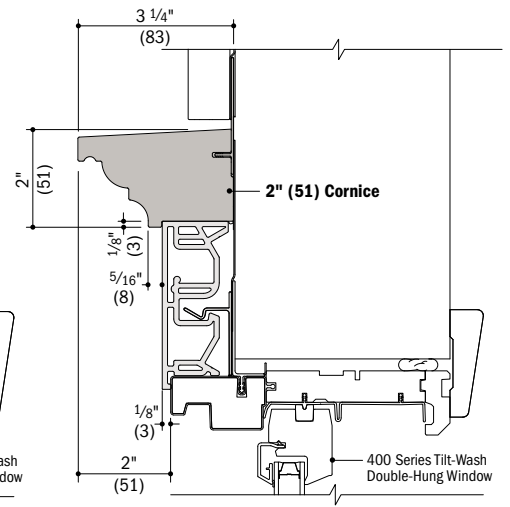
Trim Details

Scale 3" (76) = 1'-0" (305) – 1:4



Vertical Section

400 Series Tilt-Wash Double-Hung Window with 3 1/2" (89) Flat Casing and 3 5/8" (92) Cornice

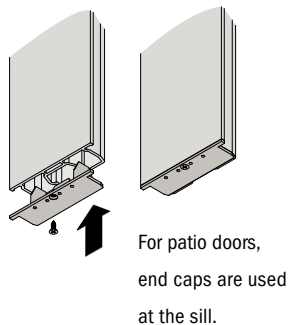


Vertical Section

400 Series Tilt-Wash Double-Hung Window with 3 1/2" (89) Flat Casing and 2" (51) Cornice

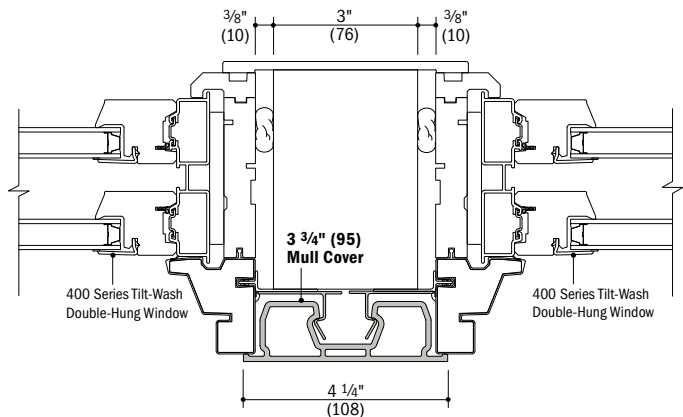
Mull Cover

3 3/4" (95) mull cover is available for installations where windows or patio doors have been installed into separate rough openings to obtain a joined appearance.



Separate Rough Openings Detail

Scale 3" (76) = 1'-0" (305) – 1:4



Horizontal Section

400 Series Tilt-Wash Double-Hung Windows and 3 3/4" (95) Mull Cover

*Dimensions in parentheses are in millimeters.
 *Typical trim combinations shown. Additional combinations may also be used.
 Some restrictions apply. For more information, contact your Andersen supplier.
 *Details are for illustration only and are not intended to represent product installation methods or materials. Refer to product installation guides at andersenwindows.com.
 *Consult with an architect or structural engineer regarding minimum requirements for structural support members between adjacent rough openings.

Andersen® window and patio doors make it easy to create a wide variety of combination designs

Combination Types

Ribbons

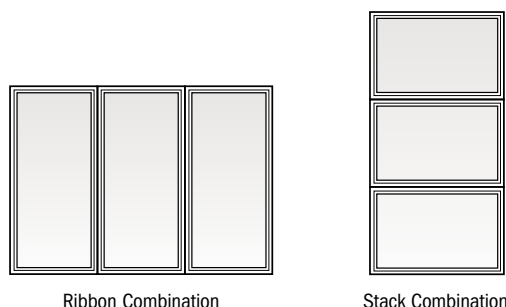
Ribbons are horizontal window combinations (vertical joins) where opposite ends (head and sill) of individual windows are fastened to the building structure.

Stacks

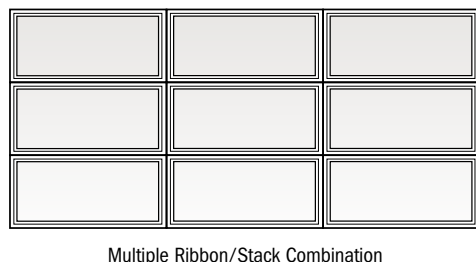
Stacks are vertical window combinations (horizontal joins) where opposite sides (both side jambs) of individual windows are fastened to the building structure.

Two basic configurations are used in combination designs: one-way or two-way.

One-Way



Two-Way



Two-way combinations exist when multiple vertical stacks and horizontal ribbons are joined together. Unlike one-way combinations, the adjacent sides (head and sill, or both side jambs) of individual units are not necessarily fastened directly to the building structure. Two-way combinations are joined with both vertical and horizontal joining material, and may require reinforced joining materials and brackets depending on the local building code requirement for design wind load (measured in pounds per square foot, psf).

Determining Design Wind Load Performance

Proper combination design in conformance with local wind load requirements is vital to the success of your project. To make sure a combination is safe and that it complies with local building codes, the combination design wind load performance capacity must be determined.

Correctly determining this performance capacity involves the following three steps:

STEP 1

Determine Building Code Requirement

Make sure that you have the proper local codes and have identified specified compliance values. This calculated value (psf) will be used to determine if the combination will be acceptable (STEP 3).



STEP 2

Determine Product Performance

Compare product Design Pressure Rating data to the local building code (psf) requirement. This will show whether the individual units in a combination design are acceptable.



STEP 3

Determine Combination Performance

This step helps determine whether a given product, size, configuration and joining material type will meet the local building code design wind load requirement. To determine what joining material type to use (fiberglass, LVL, steel, aluminum or wood), compare the local building code design wind load requirement to the design wind load table value for a particular joining material on the following pages.

COMBINATION DESIGNS

Andersen® Joining Materials and Installation Accessories

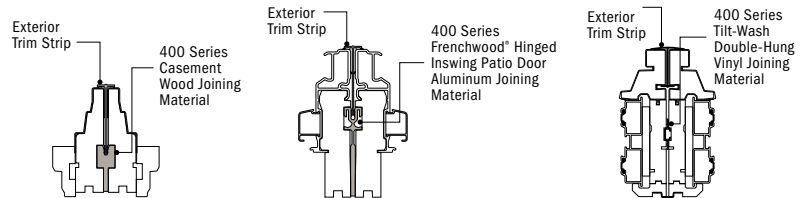
For a successful installation, designed to provide the required design pressure, it is important that Andersen joining materials and installation accessories be specified by a project architect or contractor. Andersen offers several types of joining materials. Each creates a joining system that maintains the look of Andersen products. Choose the type appropriate for your combination design. Components used with each joining system will vary depending on products being joined. Check with your Andersen supplier for more information. The addition of joining materials will affect the overall rough opening dimension, see page 210. **Instruction guides are available at andersenwindows.com.**

Read and follow instruction guides in their entirety.

Andersen Exterior Trim Strips – A variety of trim strips for finishing the space between joined products are available in colors to match Andersen windows and doors.

Andersen Interior Wood Casing – Available in several wood types, pre-finished options, sizes and style options, including laminated arch casings, decorative plinths and key blocks.

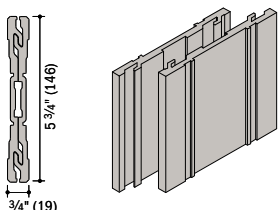
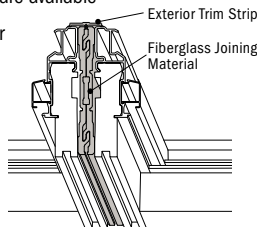
Materials vary depending on type of units being joined and wind load requirements. Non-reinforced joining materials are used to create alignment and positive joining between windows. Joining materials are not connected to the rough opening structure. Non-reinforced joins can also be achieved using accessory items such as V-notch gusset plates. Please contact your Andersen supplier for specific performance and product recommendations.



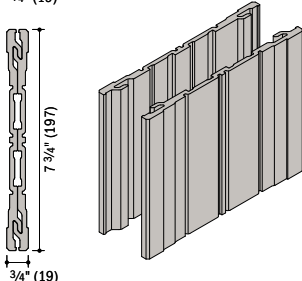
Reinforced joining materials are used to create product alignment, positive joining and load transfer between the Andersen windows and doors and the rough opening. They provide added strength capable of withstanding a variety of wind load pressures. The structural performance of any combination is only as high as the lowest structural performance rating of any individual window or joining material in the combination.

Fiberglass Joining Material

Fiberglass joining material is now available for 400 Series patio doors. The fiberglass joining material utilizes either 3/4" (19) x 5 3/4" (146) fiberglass interlocking joining plates for 4 9/16" (116) jamb depths or 3/4" (19) x 7 3/4" (197) fiberglass interlocking joining plates for higher performance for one-way and two-way joining, and is required for Frenchwood® hinged inswing patio doors with 6 9/16" (167) exterior extension jambs. Fiberglass reinforced joining kits are available for joining and installing patio door, sidelight and/or transom combinations at the job site. Extension jamb kits are also available. In some situations, joining material may prohibit the application of perimeter extension jambs. For more information, contact your Andersen supplier.



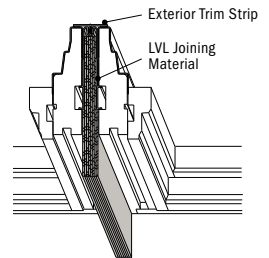
**3/4" (19) x 5 3/4" (146)
Fiberglass Joining Material**
For 4 9/16" (116) jamb depths.



**3/4" (19) x 7 3/4" (197)
Fiberglass Joining Material**
For higher performance for 1-way and 2-way joining.
Required for Frenchwood® hinged inswing patio doors with 6 9/16" (167) base jamb depths.

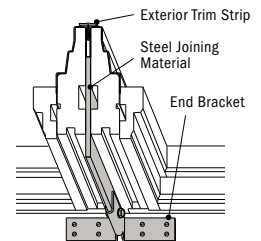
Laminated Veneer Lumber (LVL) Joining Material

Available in 3/4" (19) x 4 9/16" (116) and 3/4" (19) x 6 9/16" (167) sizes and includes an aluminum exterior trim strip retainer. Available in a variety of lengths up to 10' (3048). Use with casement, awning, double-hung and select specialty windows.



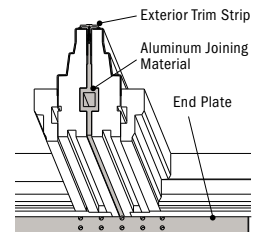
Steel Joining Material

Available in 8'-0 1/4" (2445), 9'-6" (2896) and 12'-6" (3810) lengths. Treated for corrosion resistance, a 4" (102) depth of material provides strength and rigidity. Adjacent windows attach to the steel joining material with screws. Use with casement, awning, double-hung, select specialty windows and patio doors.



Aluminum Joining Material

Available in 6'-0 3/32" (1831) and 7'-8" (2337) lengths. High-quality aluminum provides increased stiffness and is anodized for corrosion resistance. Aluminum joining material stays within the basic jamb of the window so interior casing can be used without extension jambs. Adjacent windows attach to the aluminum joining material with screws. Use with casement, awning, select specialty windows and patio doors.



* Dimensions in parentheses are in millimeters.

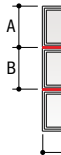
* Structural performance of any combination is only as high as the lowest structural performance of any individual unit or joining material in the combination.

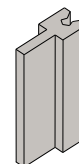
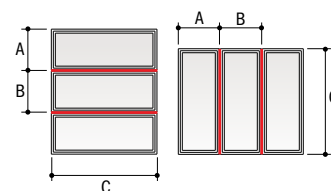
Casement and Awning Windows

1-Way Wood Joining

400 Series Casement, Awning, Complementary Specialty Joined with Flexiframe® Windows

Average Adjacent Window Dimension	(A + B) ÷ 2 = 12'-6" (3810)	70	58	40	29	22						
	(A + B) ÷ 2 = 12'-0" (3658)	70	58	40	29	22						
	(A + B) ÷ 2 = 11'-6" (3505)	70	58	40	29	22						
	(A + B) ÷ 2 = 11'-0" (3353)	70	58	40	29	22						
	(A + B) ÷ 2 = 10'-6" (3200)	70	58	40	29	22						
	(A + B) ÷ 2 = 10'-0" (3048)	70	58	40	29	22						
	(A + B) ÷ 2 = 9'-6" (2896)	70	58	40	29	22						
	(A + B) ÷ 2 = 9'-0" (2743)	70	58	40	29	22						
	(A + B) ÷ 2 = 8'-6" (2591)	70	58	40	29	22						
	(A + B) ÷ 2 = 8'-0" (2438)	70	58	40	29	22						
	(A + B) ÷ 2 = 7'-6" (2286)	70	58	40	29	22						
	(A + B) ÷ 2 = 7'-0" (2134)	70	58	40	29	22						
	(A + B) ÷ 2 = 6'-6" (1981)	70	58	40	29	22						
	(A + B) ÷ 2 = 6'-0" (1829)	70	58	40	29	22						
	(A + B) ÷ 2 = 5'-6" (1676)	70	58	40	29	22						
	(A + B) ÷ 2 = 5'-0" (1524)	70	58	40	29	22						
	(A + B) ÷ 2 = 4'-6" (1372)	70	58	40	30	23						
	(A + B) ÷ 2 = 4'-0" (1219)	70	58	41	31	24	20					
	(A + B) ÷ 2 = 3'-6" (1067)	70	59	43	33	27	22					
	(A + B) ÷ 2 = 3'-0" (914)	70	63	47	37	30	25	21				
	(A + B) ÷ 2 = 2'-6" (762)	70	70	54	43	35	29	24	21			
	(A + B) ÷ 2 = 2'-0" (610)	70	70	65	52	42	35	30	26	22		
	(A + B) ÷ 2 = 1'-6" (457)	70	70	70	68	56	46	39	34	29	26	
	C = (length of join)	3'-6" (1067)	4'-0" (1219)	4'-6" (1372)	5'-0" (1524)	5'-6" (1676)	6'-0" (1829)	6'-6" (1981)	7'-0" (2134)	7'-6" (2286)	8'-0" (2438)	





Wood Joining Material

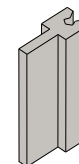
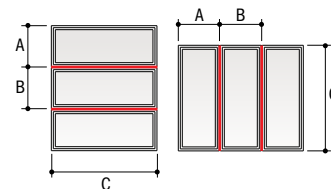
Note: Stacking of windows is allowed to a maximum height of 12'-6" (3810). Contact your Andersen supplier for information about taller combination heights.

Combination Designs,
Product Performance
& Installation

1-Way Wood Joining

400 Series Casement, Awning and Complementary Specialty Windows

Average Adjacent Window Dimension	(A + B) ÷ 2 = 12'-6" (3810)	70	70	58	42	32	24	20			
	(A + B) ÷ 2 = 12'-0" (3658)	70	70	58	42	32	24	20			
	(A + B) ÷ 2 = 11'-6" (3505)	70	70	58	42	32	24	20			
	(A + B) ÷ 2 = 11'-0" (3353)	70	70	58	42	32	24	20			
	(A + B) ÷ 2 = 10'-6" (3200)	70	70	58	42	32	24	20			
	(A + B) ÷ 2 = 10'-0" (3048)	70	70	58	42	32	24	20			
	(A + B) ÷ 2 = 9'-6" (2896)	70	70	58	42	32	24	20			
	(A + B) ÷ 2 = 9'-0" (2743)	70	70	58	42	32	24	20			
	(A + B) ÷ 2 = 8'-6" (2591)	70	70	58	42	32	24	20			
	(A + B) ÷ 2 = 8'-0" (2438)	70	70	58	42	32	24	20			
	(A + B) ÷ 2 = 7'-6" (2286)	70	70	58	42	32	24	20			
	(A + B) ÷ 2 = 7'-0" (2134)	70	70	58	42	32	24	20			
	(A + B) ÷ 2 = 6'-6" (1981)	70	70	58	42	32	24	20			
	(A + B) ÷ 2 = 6'-0" (1829)	70	70	58	42	32	24	20			
	(A + B) ÷ 2 = 5'-6" (1676)	70	70	58	42	32	25	20			
	(A + B) ÷ 2 = 5'-0" (1524)	70	70	58	42	32	25	21			
	(A + B) ÷ 2 = 4'-6" (1372)	70	70	58	43	33	27	22			
	(A + B) ÷ 2 = 4'-0" (1219)	70	70	59	45	35	29	24	20		
	(A + B) ÷ 2 = 3'-6" (1067)	70	70	63	48	38	31	26	22		
	(A + B) ÷ 2 = 3'-0" (914)	70	70	68	54	43	36	30	25	22	
	(A + B) ÷ 2 = 2'-6" (762)	70	70	70	62	50	42	35	30	26	22
	(A + B) ÷ 2 = 2'-0" (610)	70	70	70	70	61	51	43	37	32	27
	(A + B) ÷ 2 = 1'-6" (457)	70	70	70	70	70	67	57	49	42	35
	C = (length of join)	3'-6" (1067)	4'-0" (1219)	4'-6" (1372)	5'-0" (1524)	5'-6" (1676)	6'-0" (1829)	6'-6" (1981)	7'-0" (2134)	7'-6" (2286)	8'-0" (2438)



Wood Joining Material

Note: Stacking of windows is allowed to a maximum height of 12'-6" (3810). Contact your Andersen supplier for information about taller combination heights.

- Numerical values in charts represent structural pressure only.
- Structural performance of any combination is only as high as the lowest structural performance of any individual unit or joining material in the combination.
- Andersen® products must be installed and anchored properly according to joining and installation guides to meet rated structural performance. Refer to product joining and installation guides at andersenwindows.com.
- Additional wind load tables are available at andersenwindows.com.
- Dimensions in parentheses are in millimeters.

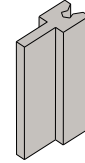
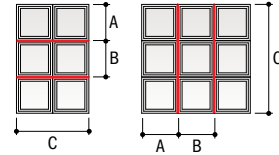
COMBINATION DESIGNS

Casement and Awning Windows

2-Way Wood Joining

400 Series Casement, Awning, Complementary Specialty and Flexiframe® Windows

Average Adjacent Window Dimension	(A + B) ÷ 2 = 8'-6" (2591)	20								
	(A + B) ÷ 2 = 8'-0" (2438)	21								
	(A + B) ÷ 2 = 7'-6" (2286)	23								
	(A + B) ÷ 2 = 7'-0" (2134)	24								
	(A + B) ÷ 2 = 6'-6" (1981)	26	20							
	(A + B) ÷ 2 = 6'-0" (1829)	28	22							
	(A + B) ÷ 2 = 5'-6" (1676)	31	24							
	(A + B) ÷ 2 = 5'-0" (1524)	34	26	20						
	(A + B) ÷ 2 = 4'-6" (1372)	38	29	23						
	(A + B) ÷ 2 = 4'-0" (1219)	43	33	26	21					
	(A + B) ÷ 2 = 3'-6" (1067)	49	37	29	24					
	(A + B) ÷ 2 = 3'-0" (914)	57	44	34	28	23				
	(A + B) ÷ 2 = 2'-6" (762)	69	52	41	33	27	23			
	(A + B) ÷ 2 = 2'-0" (610)	70	66	52	42	34	29	23		
	(A + B) ÷ 2 = 1'-6" (457)	70	70	69	56	46	39	31	24	20
C = (length of join)		3'-6" (1067)	4'-0" (1219)	4'-6" (1372)	5'-0" (1524)	5'-6" (1676)	6'-0" (1829)	6'-6" (1981)	7'-0" (2134)	7'-6" (2286)

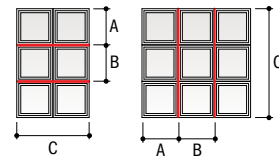


Wood Joining Material

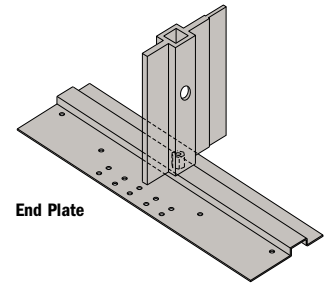
1-Way or 2-Way Aluminum Joining

400 Series Casement, Awning, Complementary Specialty and Flexiframe® Windows

Average Adjacent Window Dimension	(A + B) ÷ 2 = 9'-0" (2743)	70	56	41	31	23				
	(A + B) ÷ 2 = 8'-6" (2591)	70	60	43	32	25				
	(A + B) ÷ 2 = 8'-0" (2438)	70	63	46	34	26	21			
	(A + B) ÷ 2 = 7'-6" (2286)	70	67	49	36	28	22			
	(A + B) ÷ 2 = 7'-0" (2134)	70	70	52	39	30	23			
	(A + B) ÷ 2 = 6'-6" (1981)	70	70	56	42	32	25	20		
	(A + B) ÷ 2 = 6'-0" (1829)	70	70	60	45	35	27	21		
	(A + B) ÷ 2 = 5'-6" (1676)	70	70	66	49	38	29	23		
	(A + B) ÷ 2 = 5'-0" (1524)	70	70	70	54	41	32	26	21	
	(A + B) ÷ 2 = 4'-6" (1372)	70	70	70	59	45	35	28	23	
	(A + B) ÷ 2 = 4'-0" (1219)	70	70	70	66	50	39	31	25	
	(A + B) ÷ 2 = 3'-6" (1067)	70	70	70	70	57	44	35	28	
	(A + B) ÷ 2 = 3'-0" (914)	70	70	70	70	65	51	40	33	
	(A + B) ÷ 2 = 2'-6" (762)	70	70	70	70	70	60	48	39	
	(A + B) ÷ 2 = 2'-0" (610)	70	70	70	70	70	70	59	48	
	(A + B) ÷ 2 = 1'-6" (457)	70	70	70	70	70	70	70	63	
C = (length of join)		4'-0" (1219)	4'-6" (1372)	5'-0" (1524)	5'-6" (1676)	6'-0" (1829)	6'-6" (1981)	7'-0" (2134)	7'-6" (2286)	



Aluminum Joining Material



End Plate



For a join with a continuous jamb on one side, multiply psf by 1.2.



For a join with a continuous jamb on both sides, multiply psf by 1.4.

* Numerical values in charts represent structural pressure only.

* Structural performance of any combination is only as high as the lowest structural performance of any individual unit or joining material in the combination.

* Andersen® products must be installed and anchored properly according to joining and installation guides to meet rated structural performance. Refer to product joining and installation guides at andersenwindows.com.

* Additional wind load tables are available at andersenwindows.com.

* Dimensions in parentheses are in millimeters.

Casement and Awning Windows

1-Way or 2-Way Steel Joining

400 Series Casement, Awning, Complementary Specialty and Flexiframe® Windows

Average Adjacent Window Dimension

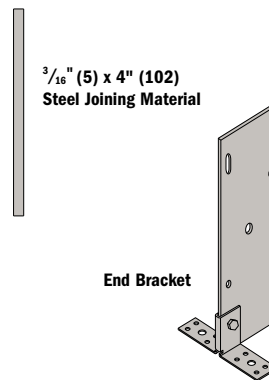
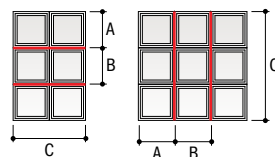
(A + B) ÷ 2 = 12'-6" (3810)	50	37	28	22																							
(A + B) ÷ 2 = 12'-0" (3658)	52	38	29	23																							
(A + B) ÷ 2 = 11'-6" (3505)	54	40	30	24																							
(A + B) ÷ 2 = 11'-0" (3353)	57	42	32	25	20																						
(A + B) ÷ 2 = 10'-6" (3200)	59	44	33	26	21																						
(A + B) ÷ 2 = 10'-0" (3048)	62	46	35	28	22																						
(A + B) ÷ 2 = 9'-6" (2896)	66	48	37	29	24																						
(A + B) ÷ 2 = 9'-0" (2743)	69	51	39	31	25	21																					
(A + B) ÷ 2 = 8'-6" (2591)	70	54	41	33	26	22																					
(A + B) ÷ 2 = 8'-0" (2438)	70	57	44	35	28	23																					
(A + B) ÷ 2 = 7'-6" (2286)	70	61	47	37	30	25	21																				
(A + B) ÷ 2 = 7'-0" (2134)	70	66	50	40	32	26	22																				
(A + B) ÷ 2 = 6'-6" (1981)	70	70	54	43	34	28	24	20																			
(A + B) ÷ 2 = 6'-0" (1829)	70	70	58	46	37	31	26	22																			
(A + B) ÷ 2 = 5'-6" (1676)	70	70	64	50	41	34	28	24	21																		
(A + B) ÷ 2 = 5'-0" (1524)	70	70	70	55	45	37	31	27	23	20																	
(A + B) ÷ 2 = 4'-6" (1372)	70	70	70	62	50	41	35	30	26	22																	
(A + B) ÷ 2 = 4'-0" (1219)	70	70	70	69	56	46	39	33	29	25	22																
(A + B) ÷ 2 = 3'-6" (1067)	70	70	70	70	64	53	45	38	33	28	25	22															
(A + B) ÷ 2 = 3'-0" (914)	70	70	70	70	70	62	52	44	38	33	29	26	23	21													
(A + B) ÷ 2 = 2'-6" (762)	70	70	70	70	70	70	62	53	46	40	35	31	28	25	22	20											
(A + B) ÷ 2 = 2'-0" (610)	70	70	70	70	70	70	70	66	57	50	44	39	35	31	28	26	23	21									
(A + B) ÷ 2 = 1'-6" (457)	70	70	70	70	70	70	70	70	70	66	58	52	46	42	37	34	31	28	25	24							

C = (length of join)

3'-0" (914)	3'-6" (1067)	4'-0" (1219)	4'-6" (1372)	5'-0" (1524)	5'-6" (1676)	6'-0" (1829)	6'-6" (1981)	7'-0" (2134)	7'-6" (2286)	8'-0" (2438)	8'-6" (2591)	9'-0" (2743)	9'-6" (2896)	10'-0" (3048)	10'-6" (3200)	11'-0" (3353)	11'-6" (3505)	12'-0" (3658)	12'-6" (3810)
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$\frac{3}{16}$ " (5) x 4" (102)
Steel Joining Material

End Bracket



**Combination Designs,
Product Performance
& Installation**



For a joint with a continuous jamb on one side, multiply psf by 1.2.



For a join with a continuous jamb on both sides, multiply psf by 1.4.

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- * Additional wind load tables are available at andersenwindows.com.
- * Dimensions in parentheses are in millimeters.

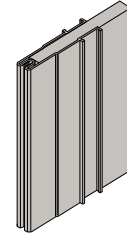
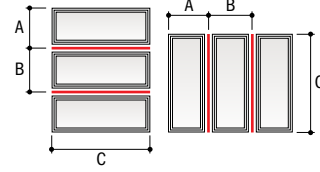
COMBINATION DESIGNS

Casement and Awning Windows

1-Way LVL Joining

400 Series Casement, Awning, Complementary Specialty and Flexiframe® Windows

4 9/16" (116) Minimum Wall Depth	Average Adjacent Window Dim.	(A + B) ÷ 2 = 6'-0" (1829)	70	70	56	45				
		(A + B) ÷ 2 = 5'-6" (1676)	70	70	61	50				
		(A + B) ÷ 2 = 5'-0" (1524)	70	70	68	55	45	36		
		(A + B) ÷ 2 = 4'-6" (1372)	70	70	70	61	51	43	37	
		(A + B) ÷ 2 = 4'-0" (1219)	70	70	70	70	58	49	42	35
		(A + B) ÷ 2 = 3'-6" (1067)	70	70	70	70	68	56	49	39
		(A + B) ÷ 2 = 3'-0" (914)	70	70	70	70	70	63	53	45
		(A + B) ÷ 2 = 2'-6" (762)	70	70	70	70	70	70	62	53
		(A + B) ÷ 2 = 2'-0" (610)	70	70	70	70	70	70	62	53
		(A + B) ÷ 2 = 1'-6" (457)	70	70	70	70	70	70	62	53
	C = (length of join)		3'-6" (1067)	4'-0" (1219)	4'-6" (1372)	5'-0" (1524)	5'-6" (1676)	6'-0" (1829)	6'-6" (1981)	7'-0" (2134)

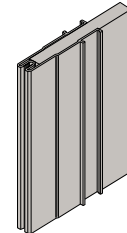
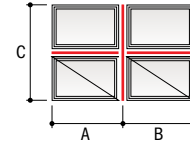


3/4" (19) x 5 3/4" (146)
LVL Joining Material
For 4 9/16" (116) base jamb depths.

2-Way LVL Joining

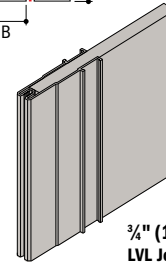
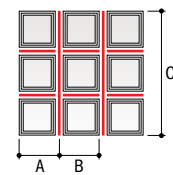
400 Series Casement, Awning, Complementary Specialty and Flexiframe® Windows

4 9/16" (116) Minimum Wall Depth	Average Adjacent Window Dim.	(A + B) ÷ 2 = 6'-0" (1829)	65	65	51	41				
		(A + B) ÷ 2 = 5'-6" (1676)	70	70	56	45				
		(A + B) ÷ 2 = 5'-0" (1524)	70	70	62	50	41	34		
		(A + B) ÷ 2 = 4'-6" (1372)	70	70	68	55	46	38	33	
		(A + B) ÷ 2 = 4'-0" (1219)	70	70	70	62	51	43	37	32
		(A + B) ÷ 2 = 3'-6" (1067)	70	70	70	70	59	49	42	36
		(A + B) ÷ 2 = 3'-0" (914)	70	70	70	70	69	58	49	42
		(A + B) ÷ 2 = 2'-6" (762)	70	70	70	70	70	69	59	51
		(A + B) ÷ 2 = 2'-0" (610)	70	70	70	70	61	69	59	51
		(A + B) ÷ 2 = 1'-6" (457)	70	70	70	70	61	69	59	51
		C = (length of join)	3'-6" (1067)	4'-0" (1219)	4'-6" (1372)	5'-0" (1524)	5'-6" (1676)	6'-0" (1829)	6'-6" (1981)	7'-0" (2134)



3/4" (19) x 5 3/4" (146)
LVL Joining Material
For 4 9/16" (116) base jamb depths.

6 9/16" (167) Minimum Wall Depth	Average Adjacent Window Dimension	(A + B) ÷ 2 = 10'-0" (3048)	70	70	63	56	48	44	37	31	24
		(A + B) ÷ 2 = 9'-6" (2896)	70	70	63	56	48	44	37	31	24
		(A + B) ÷ 2 = 9'-0" (2743)	70	70	63	56	48	44	37	31	24
		(A + B) ÷ 2 = 8'-6" (2591)	70	70	63	56	48	44	37	31	25
		(A + B) ÷ 2 = 8'-0" (2438)	70	70	63	56	48	44	37	31	25
		(A + B) ÷ 2 = 7'-6" (2286)	70	70	63	56	48	44	38	32	26
		(A + B) ÷ 2 = 7'-0" (2134)	70	70	63	56	49	45	39	33	26
		(A + B) ÷ 2 = 6'-6" (1981)	70	70	63	57	50	46	40	34	28
		(A + B) ÷ 2 = 6'-0" (1829)	70	70	64	58	51	47	41	35	29
		(A + B) ÷ 2 = 5'-6" (1676)	70	70	66	60	54	50	44	37	30
		(A + B) ÷ 2 = 5'-0" (1524)	70	70	68	63	56	52	46	39	32
		(A + B) ÷ 2 = 4'-6" (1372)	70	70	70	67	60	56	50	43	35
		(A + B) ÷ 2 = 4'-0" (1219)	70	70	70	70	64	60	53	46	38
		(A + B) ÷ 2 = 3'-6" (1067)	70	70	70	70	70	67	60	52	42
		(A + B) ÷ 2 = 3'-0" (914)	70	70	70	70	70	70	66	57	47
		(A + B) ÷ 2 = 2'-6" (762)	70	70	70	70	70	70	70	68	56
		(A + B) ÷ 2 = 2'-0" (610)	70	70	70	70	70	70	70	70	66
		(A + B) ÷ 2 = 1'-6" (457)	70	70	70	70	70	70	70	70	70
		C = (length of join)		6'-0" (1829) or less	6'-6" (1981)	7'-0" (2134)	7'-6" (2286)	8'-0" (2438)	8'-6" (2591)	9'-0" (2743)	9'-6" (2896)



3/4" (19) x 7 3/4" (197)
LVL Joining Material
For 6 9/16" (167) base jamb depths.

Note: 2-way joining must be assembled on the job site within the rough opening.

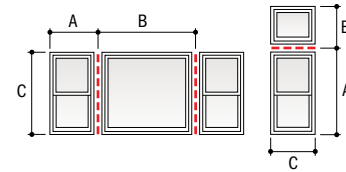
- Numerical values in charts represent structural pressure only.
- Structural performance of any combination is only as high as the lowest structural performance of any individual unit or joining material in the combination.
- Andersen® products must be installed and anchored properly according to joining and installation guides to meet rated structural performance. Refer to product joining and installation guides at andersenwindows.com.
- Additional wind load tables are available at andersenwindows.com.
- Dimensions in parentheses are in millimeters.

Double-Hung Insert Windows

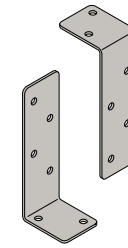
1-Way Joining with Joining Brackets

400 Series Woodwright® Double-Hung, Picture and Transom Insert Windows, and Tilt-Wash Double-Hung, Picture and Transom Insert Windows

Average Adjacent Window Dimension	(A + B) ÷ 2 = 12'-0" (3658)	50	34	24	18					
	(A + B) ÷ 2 = 11'-0" (3353)	50	34	24	18					
	(A + B) ÷ 2 = 10'-0" (3048)	50	34	24	18					
	(A + B) ÷ 2 = 9'-0" (2743)	50	34	24	18					
	(A + B) ÷ 2 = 8'-0" (2438)	50	34	25	19	15				
	(A + B) ÷ 2 = 7'-0" (2134)	50	35	26	20	16				
	(A + B) ÷ 2 = 6'-0" (1829)	50	38	28	22	18	15			
	(A + B) ÷ 2 = 5'-0" (1524)	50	42	32	26	21	17			
	(A + B) ÷ 2 = 4'-0" (1219)	50	50	39	31	25	21	17		
	(A + B) ÷ 2 = 3'-0" (914)	50	50	50	40	33	28	23	18	15
	(A + B) ÷ 2 = 2'-0" (610)	50	50	50	50	49	41	34	27	22
C = (length of join)		3'-6" (1067 or less)	4'-0" (1219)	4'-6" (1372)	5'-0" (1524)	5'-6" (1676)	6'-0" (1829)	6'-6" (1981)	7'-0" (2134)	7'-6" (2286)



Note: Only 1-way combinations similar to those shown above are allowed.



Joining Brackets

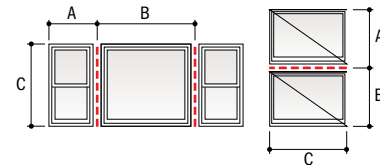
Joining brackets are used at the ends of each join to attach units to the opening.

Double-Hung Full-Frame Windows

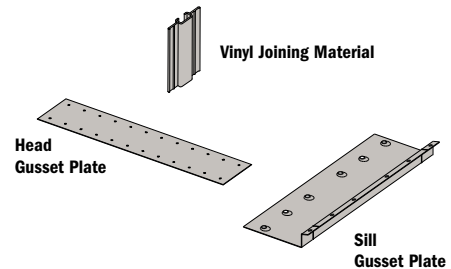
1-Way Vinyl Joining

400 Series Woodwright® Double-Hung, Picture and Transom Full-Frame Windows, and Tilt-Wash Double-Hung, Picture and Transom Full-Frame Windows

Average Adjacent Window Dimension	(A + B) ÷ 2 = 12'-6" (3810)	50	42	33	28	23	20												
	(A + B) ÷ 2 = 12'-0" (3658)	50	42	33	28	23	20												
	(A + B) ÷ 2 = 11'-6" (3505)	50	42	33	28	23	20												
	(A + B) ÷ 2 = 11'-0" (3353)	50	42	33	28	23	20												
	(A + B) ÷ 2 = 10'-6" (3200)	50	42	33	28	23	20												
	(A + B) ÷ 2 = 10'-0" (3048)	50	42	33	28	23	20												
	(A + B) ÷ 2 = 9'-6" (2896)	50	42	33	28	23	20												
	(A + B) ÷ 2 = 9'-0" (2743)	50	42	33	28	23	20												
	(A + B) ÷ 2 = 8'-6" (2591)	50	42	33	28	23	20												
	(A + B) ÷ 2 = 8'-0" (2438)	50	42	33	28	23	20												
	(A + B) ÷ 2 = 7'-6" (2286)	50	42	33	28	23	20												
	(A + B) ÷ 2 = 7'-0" (2134)	50	42	33	28	23	20												
	(A + B) ÷ 2 = 6'-6" (1981)	50	42	33	28	23	20												
	(A + B) ÷ 2 = 6'-0" (1829)	50	42	33	28	23	20												
	(A + B) ÷ 2 = 5'-6" (1676)	50	42	33	28	23	21												
	(A + B) ÷ 2 = 5'-0" (1524)	50	42	33	28	24	21												
	(A + B) ÷ 2 = 4'-6" (1372)	50	42	33	29	25	22	20											
	(A + B) ÷ 2 = 4'-0" (1219)	50	42	34	30	26	23	21											
	(A + B) ÷ 2 = 3'-6" (1067)	50	44	37	32	28	26	23	21										
	(A + B) ÷ 2 = 3'-0" (914)	50	47	39	35	30	28	25	23	21	20								
	(A + B) ÷ 2 = 2'-6" (762)	50	50	44	40	35	32	29	27	25	24	22	21						
	(A + B) ÷ 2 = 2'-0" (610)	50	50	50	46	41	37	34	32	29	27	25	24	23	22	20	20		
	(A + B) ÷ 2 = 1'-6" (457)	50	50	50	50	50	49	45	42	39	37	34	32	30	29	27	26	25	24
C = (length of join)		4'-0" (1219 or less)	4'-6" (1372)	5'-0" (1524)	5'-6" (1676)	6'-0" (1829)	6'-6" (1981)	7'-0" (2134)	7'-6" (2286)	8'-0" (2438)	8'-6" (2591)	9'-0" (2743)	9'-6" (2896)	10'-0" (3048)	10'-6" (3200)	11'-0" (3353)	11'-6" (3505)	12'-0" (3658)	12'-6" (3810)



Note: Only 1-way combinations similar to those shown above are allowed.



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- Additional wind load tables are available at andersenwindows.com.
- Dimensions in parentheses are in millimeters.

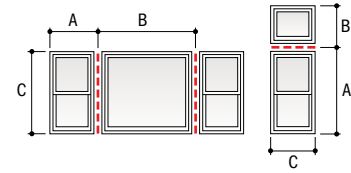
COMBINATION DESIGNS

Double-Hung Full-Frame Windows

1-Way Vinyl Joining with V-Notch Gusset Plates

400 Series Woodwright® Double-Hung, Picture and Transom Full-Frame Windows,
and Tilt-Wash Double-Hung, Picture and Transom Full-Frame Windows

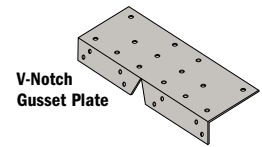
Average Adjacent Window Dimension	(A + B) ÷ 2 = 12'-6" (3810)	50	48	41	33	29	24	22										
	(A + B) ÷ 2 = 12'-0" (3658)	50	48	41	33	29	24	22										
	(A + B) ÷ 2 = 11'-6" (3505)	50	48	41	33	29	24	22										
	(A + B) ÷ 2 = 11'-0" (3353)	50	48	41	33	29	24	22										
	(A + B) ÷ 2 = 10'-6" (3200)	50	48	41	33	29	24	22										
	(A + B) ÷ 2 = 10'-0" (3048)	50	48	41	33	29	24	22										
	(A + B) ÷ 2 = 9'-6" (2896)	50	48	41	33	29	24	22										
	(A + B) ÷ 2 = 9'-0" (2743)	50	48	41	33	29	24	22										
	(A + B) ÷ 2 = 8'-6" (2591)	50	48	41	33	29	24	22										
	(A + B) ÷ 2 = 8'-0" (2438)	50	48	41	33	29	24	22										
	(A + B) ÷ 2 = 7'-6" (2286)	50	48	41	33	29	24	22										
	(A + B) ÷ 2 = 7'-0" (2134)	50	48	41	33	29	24	22										
	(A + B) ÷ 2 = 6'-6" (1981)	50	48	41	33	29	25	22										
	(A + B) ÷ 2 = 6'-0" (1829)	50	48	41	33	29	25	23	20									
	(A + B) ÷ 2 = 5'-6" (1676)	50	48	41	33	30	26	24	21									
	(A + B) ÷ 2 = 5'-0" (1524)	50	48	41	34	31	27	24	22	20								
	(A + B) ÷ 2 = 4'-6" (1372)	50	48	42	36	32	28	26	23	22								
	(A + B) ÷ 2 = 4'-0" (1219)	50	49	43	37	34	30	28	25	23	21							
	(A + B) ÷ 2 = 3'-6" (1067)	50	50	47	40	37	33	31	28	26	24	23	20					
	(A + B) ÷ 2 = 3'-0" (914)	50	50	50	44	40	36	33	30	29	26	25	22	20				
	(A + B) ÷ 2 = 2'-6" (762)	50	50	50	50	47	42	39	36	34	31	30	26	24	21	20		
	(A + B) ÷ 2 = 2'-0" (610)	50	50	50	50	50	49	46	42	40	37	35	31	31	27	25	22	
	(A + B) ÷ 2 = 1'-6" (457)	50	50	50	50	50	50	50	50	50	49	47	44	41	37	34	30	26
C = (length of join)		4'-6" (1372) or less	5'-0" (1524)	5'-6" (1676)	6'-0" (1829)	6'-6" (1981)	7'-0" (2134)	7'-6" (2286)	8'-0" (2438)	8'-6" (2591)	9'-0" (2743)	9'-6" (2896)	10'-0" (3048)	10'-6" (3200)	11'-0" (3353)	11'-6" (3505)	12'-0" (3658)	12'-6" (3810)



Note: Only 1-way combinations similar to those shown above are allowed.



Vinyl Joining Material

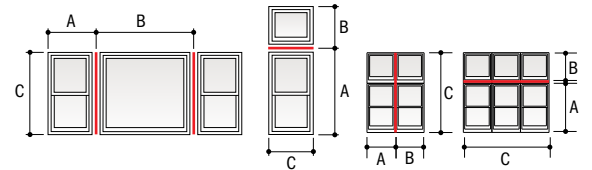


V-Notch Gusset Plate

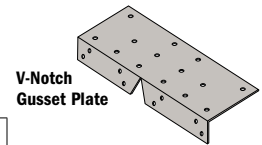
1-Way or 2-Way Steel Joining with V-Notch Gusset Plates

400 Series Woodwright® Double-Hung, Picture and Transom Full-Frame Windows,
and Tilt-Wash Double-Hung, Picture and Transom Full-Frame Windows

Average Adjacent Window Dimension	(A + B) ÷ 2 = 7'-6" (2286)	50	40	35	30	27	23	21										
	(A + B) ÷ 2 = 7'-0" (2134)	50	40	35	30	27	23	21										
	(A + B) ÷ 2 = 6'-6" (1981)	50	40	35	30	27	24	22	20									
	(A + B) ÷ 2 = 6'-0" (1829)	50	40	36	30	28	24	23	20									
	(A + B) ÷ 2 = 5'-6" (1676)	50	41	36	31	29	26	24	21	20								
	(A + B) ÷ 2 = 5'-0" (1524)	50	42	37	32	30	27	25	22	21								
	(A + B) ÷ 2 = 4'-6" (1372)	50	43	39	34	32	28	27	24	23	21							
	(A + B) ÷ 2 = 4'-0" (1219)	50	45	41	36	34	30	28	26	25	22	21						
	(A + B) ÷ 2 = 3'-6" (1067)	50	50	45	40	37	34	32	29	28	26	24	20					
	(A + B) ÷ 2 = 3'-0" (914)	50	50	50	44	41	37	35	32	30	28	26	22					
	(A + B) ÷ 2 = 2'-6" (762)	50	50	50	50	48	44	41	38	36	34	31	26	23				
	(A + B) ÷ 2 = 2'-0" (610)	50	50	50	50	50	50	48	44	41	38	36	34	30	24	21		
C = (length of join)		5'-6" (1676) or less	6'-0" (1829)	6'-6" (1981)	7'-0" (2134)	7'-6" (2286)	8'-0" (2438)	8'-6" (2591)	9'-0" (2743)	9'-6" (2896)	10'-0" (3048)	10'-6" (3200)	11'-0" (3353)	11'-6" (3505)	12'-0" (3658)	12'-6" (3810)		



³/₁₆" (5) x 4" (102)
Steel Joining Material



V-Notch Gusset Plate

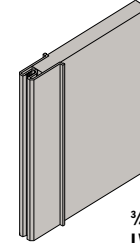
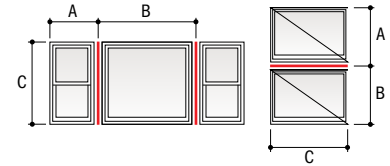
- Numerical values in charts represent structural pressure only.
- Structural performance of any combination is only as high as the lowest structural performance of any individual unit or joining material in the combination.
- Andersen® products must be installed and anchored properly according to joining and installation guides to meet rated structural performance. Refer to product joining and installation guides at andersenwindows.com.
- Additional wind load tables are available at andersenwindows.com.
- Dimensions in parentheses are in millimeters.

Double-Hung Full-Frame Windows

1-Way LVL Joining

400 Series Woodwright® Double-Hung, Picture and Transom Full-Frame Windows,
Tilt-Wash Double-Hung, Picture and Transom Full-Frame Windows, and Flexiframe® Windows

4 9/16" (116) Minimum Wall Depth	Average Adjacent Window Dimension	(A + B) ÷ 2 = 6'-0" (1829)	50	50	50	50	40	32
		(A + B) ÷ 2 = 5'-6" (1676)	50	50	50	50	42	33
		(A + B) ÷ 2 = 5'-0" (1524)	50	50	50	50	43	35
		(A + B) ÷ 2 = 4'-6" (1372)	50	50	50	50	46	38
		(A + B) ÷ 2 = 4'-0" (1219)	50	50	50	50	49	39
		(A + B) ÷ 2 = 3'-6" (1067)	50	50	50	50	50	44
		(A + B) ÷ 2 = 3'-0" (914)	50	50	50	50	50	48
		(A + B) ÷ 2 = 2'-6" (762)	50	50	50	50	50	50
		(A + B) ÷ 2 = 2'-0" (610)	50	50	50	50	50	50
		(A + B) ÷ 2 = 1'-6" (457)	50	50	50	50	50	50
		(A + B) ÷ 2 = 1'-0" (305)	50	50	50	50	50	50
		C = (length of join)	5'-6" (1676) or less	6'-0" (1829)	6'-6" (1981)	7'-0" (2134)	7'-6" (2286)	8'-0" (2438)



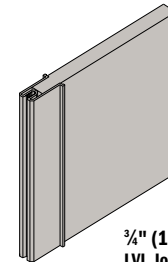
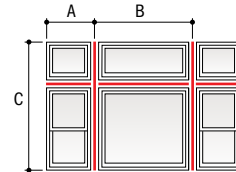
3/4" (19) x 5 3/4" (146)
LVL Joining Material

For 4 9/16" (116) base jamb depths.

2-Way LVL Joining

400 Series Woodwright® Double-Hung, Picture and Transom Full-Frame Windows,
Tilt-Wash Double-Hung, Picture and Transom Full-Frame Windows, and Flexiframe® Windows

6 9/16" (167) Minimum Wall Depth	Average Adjacent Window Dimension	(A + B) ÷ 2 = 10'-0" (3048)	50	50	50	50	48	44	37	31	24
		(A + B) ÷ 2 = 9'-6" (2896)	50	50	50	50	48	44	37	31	24
		(A + B) ÷ 2 = 9'-0" (2743)	50	50	50	50	48	44	37	31	24
		(A + B) ÷ 2 = 8'-6" (2591)	50	50	50	50	48	44	37	31	25
		(A + B) ÷ 2 = 8'-0" (2438)	50	50	50	50	48	44	37	31	25
		(A + B) ÷ 2 = 7'-6" (2286)	50	50	50	50	48	44	38	32	26
		(A + B) ÷ 2 = 7'-0" (2134)	50	50	50	50	49	45	39	33	26
		(A + B) ÷ 2 = 6'-6" (1981)	50	50	50	50	50	46	40	34	28
		(A + B) ÷ 2 = 6'-0" (1829)	50	50	50	50	50	47	41	35	29
		(A + B) ÷ 2 = 5'-6" (1676)	50	50	50	50	50	50	44	37	30
		(A + B) ÷ 2 = 5'-0" (1524)	50	50	50	50	50	50	46	39	32
		(A + B) ÷ 2 = 4'-6" (1372)	50	50	50	50	50	50	50	43	35
		(A + B) ÷ 2 = 4'-0" (1219)	50	50	50	50	50	50	50	46	38
		(A + B) ÷ 2 = 3'-6" (1067)	50	50	50	50	50	50	50	50	42
		(A + B) ÷ 2 = 3'-0" (914)	50	50	50	50	50	50	50	50	47
		(A + B) ÷ 2 = 2'-6" (762)	50	50	50	50	50	50	50	50	50
		(A + B) ÷ 2 = 2'-0" (610)	50	50	50	50	50	50	50	50	50
		(A + B) ÷ 2 = 1'-6" (457)	50	50	50	50	50	50	50	50	50
		C = (length of join)	6'-0" (1829) or less	6'-6" (1981)	7'-0" (2134)	7'-6" (2286)	8'-0" (2438)	8'-6" (2591)	9'-0" (2743)	9'-6" (2896)	10'-0" (3048)



3/4" (19) x 7 3/4" (197)
LVL Joining Material

For 6 9/16" (167) base jamb depths.

Note: 2-way joining must be assembled on the job site within the rough opening. When creating 2-way combinations for 6 9/16" (167) minimum wall thickness, 6 9/16" (167) LVL joining material is required.

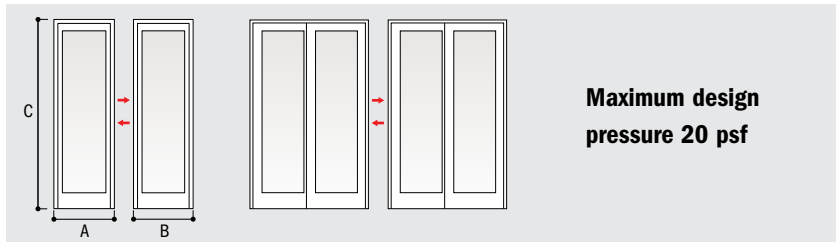
• Numerical values in charts represent structural pressure only.
• Structural performance of any combination is only as high as the lowest structural performance of any individual unit or joining material in the combination.
• Andersen® products must be installed and anchored properly according to joining and installation guides to meet rated structural performance. Refer to product joining and installation guides at andersenwindows.com.
• Additional wind load tables are available at andersenwindows.com.
• Dimensions in parentheses are in millimeters.

COMBINATION DESIGNS

Gliding Patio Doors

1-Way Jamb-to-Jamb Joining

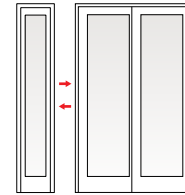
400 Series Stationary and Two-Panel Frenchwood® Gliding Patio Doors



1-Way Jamb-to-Jamb Vertical (Ribbon) Joining

400 Series Stationary and Two-Panel Frenchwood® Gliding Patio Doors, and Frenchwood Patio Door Sidelights

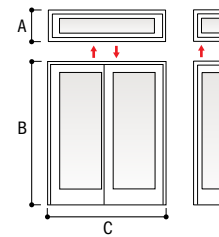
Average Adjacent Door Dimension	(A + B) ÷ 2 = 8'-0" (2438)	65	65	65	65	61	51	44	37	33	29
	(A + B) ÷ 2 = 7'-6" (2286)	65	65	65	65	61	51	44	37	33	29
	(A + B) ÷ 2 = 7'-0" (2134)	65	65	65	65	61	51	44	37	33	29
	(A + B) ÷ 2 = 6'-6" (1981)	65	65	65	65	61	51	44	38	33	30
	(A + B) ÷ 2 = 6'-0" (1829)	65	65	65	65	61	51	44	38	34	31
	(A + B) ÷ 2 = 5'-6" (1676)	65	65	65	65	61	52	45	39	35	32
	(A + B) ÷ 2 = 5'-0" (1524)	65	65	65	65	62	53	46	41	37	33
	(A + B) ÷ 2 = 4'-6" (1372)	65	65	65	65	63	55	48	43	39	35
	(A + B) ÷ 2 = 4'-0" (1219)	65	65	65	65	65	58	51	46	42	38
	(A + B) ÷ 2 = 3'-6" (1067)	65	65	65	65	65	62	55	50	46	42
	(A + B) ÷ 2 = 3'-0" (914)	65	65	65	65	65	65	62	56	51	47
	(A + B) ÷ 2 = 2'-6" (762)	65	65	65	65	65	65	65	64	59	55
	(A + B) ÷ 2 = 2'-0" (610)	65	65	65	65	65	65	65	65	65	65
	(A + B) ÷ 2 = 1'-6" (457)	65	65	65	65	65	65	65	65	65	65
C = (length of join)		3'-6" (1067)	4'-0" (1219)	4'-6" (1372)	5'-0" (1524)	5'-6" (1676)	6'-0" (1829)	6'-6" (1981)	7'-0" (2134)	7'-6" (2286)	8'-0" (2438)



1-Way Jamb-to-Jamb Horizontal (Stacked) Joining

400 Series Stationary and Two-Panel Frenchwood® Gliding Patio Doors, and Frenchwood Patio Door Transoms

Average Adjacent Door Dimension	(A + B) ÷ 2 = 12'-6" (3810)	65	65	65	65	52	40	31	25		
	(A + B) ÷ 2 = 12'-0" (3658)	65	65	65	65	52	40	31	25		
	(A + B) ÷ 2 = 11'-6" (3505)	65	65	65	65	52	40	31	25		
	(A + B) ÷ 2 = 11'-0" (3353)	65	65	65	65	52	40	31	25		
	(A + B) ÷ 2 = 10'-6" (3200)	65	65	65	65	52	40	31	25		
	(A + B) ÷ 2 = 10'-0" (3048)	65	65	65	65	52	40	31	25		
	(A + B) ÷ 2 = 9'-6" (2896)	65	65	65	65	52	40	31	25		
	(A + B) ÷ 2 = 9'-0" (2743)	65	65	65	65	52	40	31	25		
	(A + B) ÷ 2 = 8'-6" (2591)	65	65	65	65	52	40	31	25		
	(A + B) ÷ 2 = 8'-0" (2438)	65	65	65	65	52	40	31	25		
	(A + B) ÷ 2 = 7'-6" (2286)	65	65	65	65	52	40	31	25		
	(A + B) ÷ 2 = 7'-0" (2134)	65	65	65	65	52	40	31	25		
	(A + B) ÷ 2 = 6'-6" (1981)	65	65	65	65	52	40	31	25		
	(A + B) ÷ 2 = 6'-0" (1829)	65	65	65	65	52	40	32	25	20	
	(A + B) ÷ 2 = 5'-6" (1676)	65	65	65	65	52	40	32	26	20	
	(A + B) ÷ 2 = 5'-0" (1524)	65	65	65	65	53	41	34	28	22	
	(A + B) ÷ 2 = 4'-6" (1372)	65	65	65	65	54	44	36	29	23	
	(A + B) ÷ 2 = 4'-0" (1219)	65	65	65	65	58	47	39	32	25	21
	(A + B) ÷ 2 = 3'-6" (1067)	65	65	65	65	63	51	43	35	28	23
	(A + B) ÷ 2 = 3'-0" (914)	65	65	65	65	65	58	49	40	32	26
	(A + B) ÷ 2 = 2'-6" (762)	65	65	65	65	65	65	57	47	38	31
	(A + B) ÷ 2 = 2'-0" (610)	65	65	65	65	65	65	65	58	47	38
	(A + B) ÷ 2 = 1'-6" (457)	65	65	65	65	65	65	65	65	62	51
C = (length of join)	3'-6" (1067)	4'-0" (1219)	4'-6" (1372)	5'-0" (1524)	5'-6" (1676)	6'-0" (1829)	6'-6" (1981)	7'-0" (2134)	7'-6" (2286)	8'-0" (2438)	

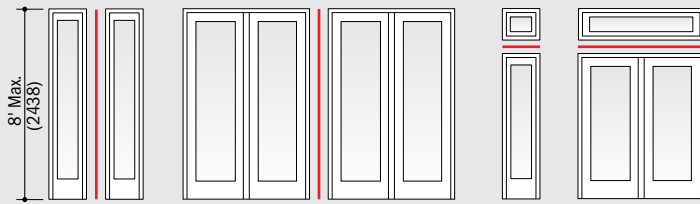


- * Numerical values in charts represent structural pressure only.
- * Structural performance of any combination is only as high as the lowest structural performance of any individual unit or joining material in the combination.
- * Andersen® products must be installed and anchored properly according to joining and installation guides to meet rated structural performance. Refer to product joining and installation guides at andersenwindows.com.
- * Additional wind load tables are available at andersenwindows.com.
- * Dimensions in parentheses are in millimeters.

Hinged Patio Doors

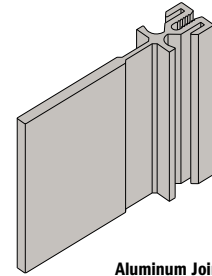
1-Way Aluminum Joining

400 Series Frenchwood® Hinged Inswing Patio Doors, and Frenchwood Patio Doors Sidelights and Transoms



Maximum design pressure 25 psf

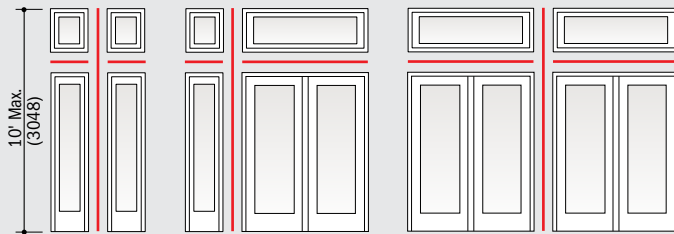
Note: When joining hinged inswing patio doors, do not join hinge jamb to hinge jamb.



Aluminum Joining Material

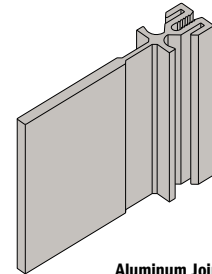
2-Way Aluminum Joining

400 Series Frenchwood® Hinged Inswing Patio Doors, and Frenchwood Patio Door Sidelights and Transoms



Maximum design pressure 20 psf

Note: When joining hinged inswing patio doors, do not join hinge jamb to hinge jamb.



Aluminum Joining Material

Combination Designs,
Product Performance
& Installation

• Structural performance of any combination is only as high as the lowest structural performance of any individual unit or joining material in the combination.
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• Additional wind load tables are available at andersenwindows.com.
• Dimensions in parentheses are in millimeters.

COMBINATION DESIGNS

1-Way Fiberglass Joining

400 Series Frenchwood® Gliding, Frenchwood Hinged Inswing Patio Doors, and Frenchwood Patio Door Sidelights and Transoms

4 ⁹/₁₆" (116) Minimum Wall Depth	Average Adjacent Window Dimension	(A + B) ÷ 2 = 12'-0" (3658)	70	70	70	70	70	70	70	70	70	70	70	67
		(A + B) ÷ 2 = 11'-6" (3505)	70	70	70	70	70	70	70	70	70	70	70	67
		(A + B) ÷ 2 = 11'-0" (3353)	70	70	70	70	70	70	70	70	70	70	70	67
		(A + B) ÷ 2 = 10'-6" (3200)	70	70	70	70	70	70	70	70	70	70	70	67
		(A + B) ÷ 2 = 10'-0" (3048)	70	70	70	70	70	70	70	70	70	70	70	67
		(A + B) ÷ 2 = 9'-6" (2896)	70	70	70	70	70	70	70	70	70	70	70	67
		(A + B) ÷ 2 = 9'-0" (2743)	70	70	70	70	70	70	70	70	70	70	70	67
		(A + B) ÷ 2 = 8'-6" (2591)	70	70	70	70	70	70	70	70	70	70	70	67
		(A + B) ÷ 2 = 8'-0" (2438)	70	70	70	70	70	70	70	70	70	70	70	67
		(A + B) ÷ 2 = 7'-6" (2286)	70	70	70	70	70	70	70	70	70	70	70	67
		(A + B) ÷ 2 = 7'-0" (2134)	70	70	70	70	70	70	70	70	70	70	70	68
		(A + B) ÷ 2 = 6'-6" (1981)	70	70	70	70	70	70	70	70	70	70	70	70
		(A + B) ÷ 2 = 6'-0" (1829)	70	70	70	70	70	70	70	70	70	70	70	70
		(A + B) ÷ 2 = 5'-6" (1676)	70	70	70	70	70	70	70	70	70	70	70	70
		(A + B) ÷ 2 = 5'-0" (1524)	70	70	70	70	70	70	70	70	70	70	70	70
		(A + B) ÷ 2 = 4'-6" (1372)	70	70	70	70	70	70	70	70	70	70	70	70
		(A + B) ÷ 2 = 4'-0" (1219)	70	70	70	70	70	70	70	70	70	70	70	70
		(A + B) ÷ 2 = 3'-6" (1067)	70	70	70	70	70	70	70	70	70	70	70	70
		(A + B) ÷ 2 = 3'-0" (914)	70	70	70	70	70	70	70	70	70	70	70	70
		(A + B) ÷ 2 = 2'-6" (762)	70	70	70	70	70	70	70	70	70	70	70	70
		(A + B) ÷ 2 = 2'-0" (610)	70	70	70	70	70	70	70	70	70	70	70	70
		(A + B) ÷ 2 = 1'-6" (457)	70	70	70	70	70	70	70	70	70	70	70	70
		C = (length of join)		2'-0" (610)	2'-6" (762)	3'-0" (914)	3'-6" (1067)	4'-0" (1219)	4'-6" (1372)	5'-0" (1524)	5'-6" (1676)	6'-0" (1829)	6'-6" (1981)	7'-0" (2134)

continued on next page

1-Way Fiberglass Joining

400 Series Frenchwood® Gliding, Frenchwood Hinged Inswing Patio Doors, and Frenchwood Patio Door Sidelights and Transoms

6 ⁹/₁₆" (167) Minimum Wall Depth	Average Adjacent Window Dimension	(A + B) ÷ 2 = 12'-0" (3658)	70	70	70	70	70	70	70	70	70	70	70	70	
		(A + B) ÷ 2 = 11'-6" (3505)	70	70	70	70	70	70	70	70	70	70	70	70	70
		(A + B) ÷ 2 = 11'-0" (3048)	70	70	70	70	70	70	70	70	70	70	70	70	70
		(A + B) ÷ 2 = 10'-6" (3200)	70	70	70	70	70	70	70	70	70	70	70	70	70
		(A + B) ÷ 2 = 10'-0" (3048)	70	70	70	70	70	70	70	70	70	70	70	70	70
		(A + B) ÷ 2 = 9'-6" (2896)	70	70	70	70	70	70	70	70	70	70	70	70	70
		(A + B) ÷ 2 = 9'-0" (2743)	70	70	70	70	70	70	70	70	70	70	70	70	70
		(A + B) ÷ 2 = 8'-6" (2591)	70	70	70	70	70	70	70	70	70	70	70	70	70
		(A + B) ÷ 2 = 8'-0" (2438)	70	70	70	70	70	70	70	70	70	70	70	70	70
		(A + B) ÷ 2 = 7'-6" (2286)	70	70	70	70	70	70	70	70	70	70	70	70	70
		(A + B) ÷ 2 = 7'-0" (2134)	70	70	70	70	70	70	70	70	70	70	70	70	70
		(A + B) ÷ 2 = 6'-6" (1981)	70	70	70	70	70	70	70	70	70	70	70	70	70
		(A + B) ÷ 2 = 6'-0" (1829)	70	70	70	70	70	70	70	70	70	70	70	70	70
		(A + B) ÷ 2 = 5'-6" (1676)	70	70	70	70	70	70	70	70	70	70	70	70	70
		(A + B) ÷ 2 = 5'-0" (1524)	70	70	70	70	70	70	70	70	70	70	70	70	70
		(A + B) ÷ 2 = 4'-6" (1372)	70	70	70	70	70	70	70	70	70	70	70	70	70
		(A + B) ÷ 2 = 4'-0" (1219)	70	70	70	70	70	70	70	70	70	70	70	70	70
		(A + B) ÷ 2 = 3'-6" (1067)	70	70	70	70	70	70	70	70	70	70	70	70	70
		(A + B) ÷ 2 = 3'-0" (914)	70	70	70	70	70	70	70	70	70	70	70	70	70
		(A + B) ÷ 2 = 2'-6" (762)	70	70	70	70	70	70	70	70	70	70	70	70	70
		(A + B) ÷ 2 = 2'-0" (610)	70	70	70	70	70	70	70	70	70	70	70	70	70
		(A + B) ÷ 2 = 1'-6" (457)	70	70	70	70	70	70	70	70	70	70	70	70	70
		C = (length of join)		2'-0" (610)	2'-6" (762)	3'-0" (914)	3'-6" (1067)	4'-0" (1219)	4'-6" (1372)	5'-0" (1524)	5'-6" (1676)	6'-0" (1829)	6'-6" (1981)	7'-0" (2134)	7'-6" (2286)

* Numeric value represents the certified Performance Grade (PG) rating of the combination.

* Structural performance of any combination is only as high as the lowest structural performance of any individual unit or joining material in the combination.

* Andersen® products must be installed and anchored properly according to joining and installation guides to meet rated structural performance. Refer to product joining and installation guides at andersenwindows.com.

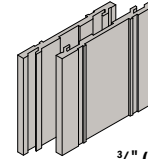
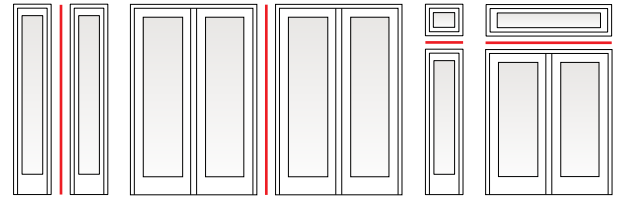
* Frenchwood® hinged inswing patio doors with a 6 9/16" (167) or greater exterior extension jamb depth require 7 3/4" (197) fiberglass joining material.

* Dimensions in parentheses are in millimeters.

continued on next page

1-Way Fiberglass Joining continued from previous page

52	42	33	27	22					
52	42	33	27	22					
52	42	33	27	22					
52	42	33	27	22					
52	42	33	27	22					
52	42	33	27	23					
52	42	34	27	23					
52	42	34	28	23	20				
53	42	35	29	24	20				
53	43	35	29	25	21				
55	44	37	31	26	22				
56	46	38	32	27	2	20			
59	48	40	34	29	25	21			
62	51	43	36	31	26	23	20		
66	55	46	39	33	28	25	21		
70	59	50	42	36	31	27	24		
70	65	55	47	40	35	30	26		
70	70	62	53	45	39	34	30		
70	70	70	61	52	45	39	34		
70	70	70	70	62	54	47	41		
70	70	70	70	70	67	58	51		
70	70	70	70	70	70	70	68		
8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"		
(2591)	(2743)	(2896)	(3048)	(3200)	(3353)	(3505)	(3658)		



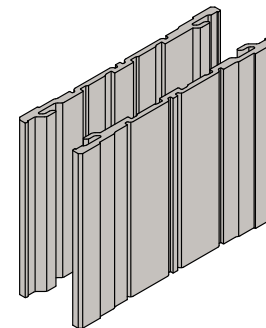
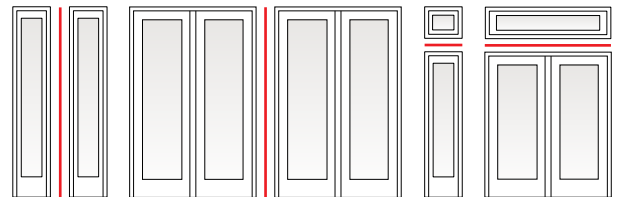
¾" (19) x 5 ¾" (146)
Fiberglass Joining Material
For 4 7/16" (116) base jamb depths.

Note: When joining hinged inswing patio doors, do not join hinge jamb to hinge jamb.

Combination Designs,
Product Performance
& Installation

1-Way Fiberglass Joining continued from previous page

70	70	66	58	47	39	33	28	23	20		
70	70	66	58	47	39	33	28	24	20		
70	70	66	58	47	39	33	28	24	21		
70	70	66	58	47	39	33	28	24	21		
70	70	66	58	48	40	34	29	25	21		
70	70	66	58	48	40	34	29	25	22		
70	70	66	59	49	41	35	30	26	23	20	
70	70	67	59	50	42	36	31	27	23	21	
70	70	68	61	51	43	37	32	28	24	21	
70	70	69	63	53	45	39	33	29	25	22	20
70	70	70	65	55	47	40	35	31	27	24	21
70	70	70	68	58	49	43	37	32	28	25	22
70	70	70	70	61	52	45	39	34	30	27	24
70	70	70	70	65	56	48	42	37	33	29	26
70	70	70	70	70	60	52	46	40	36	32	28
70	70	70	70	70	66	57	50	44	39	35	31
70	70	70	70	70	70	64	56	49	44	39	35
70	70	70	70	70	70	70	63	56	49	44	39
70	70	70	70	70	70	70	70	65	57	51	46
70	70	70	70	70	70	70	70	70	68	61	54
70	70	70	70	70	70	70	70	70	70	70	68
70	70	70	70	70	70	70	70	70	70	70	70
8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"	12'-6"	13'-0"	13'-6"	14'-0"
(2591)	(2743)	(2896)	(3048)	(3200)	(3353)	(3505)	(3658)	(3810)	(3962)	(4114)	(4267)



¾" (19) x 7 ¾" (197)
Fiberglass Joining Material
For higher performance for 1-way and 2-way joining. Required for Frenchwood® hinged inswing patio doors with 6 7/16" (167) or greater exterior extension jamb depths.

Note: When joining hinged inswing patio doors, do not join hinge jamb to hinge jamb.

- Numeric value represents the certified Performance Grade (PG) rating of the combination.
- Structural performance of any combination is only as high as the lowest structural performance of any individual unit or joining material in the combination.
- Andersen® products must be installed and anchored properly according to joining and installation guides to meet rated structural performance. Refer to product joining and installation guides at andersenwindows.com.
- Frenchwood® hinged inswing patio doors with a 6 7/16" (167) or greater exterior extension jamb depth require 7 ¾" (197) fiberglass joining material.
- Dimensions in parentheses are in millimeters.

COMBINATION DESIGNS

2-Way Fiberglass Joining

400 Series Frenchwood® Gliding, Frenchwood Hinged Inswing Patio Doors, and Frenchwood Patio Door Sidelights and Transoms

4 9/16" (116) Minimum Wall Depth	Average Adjacent Window Dimension	(A + B) ÷ 2 = 12'-0" (3658)	70	70	70	70	62	55	50	45	41	38	35	31	25
		(A + B) ÷ 2 = 11'-6" (3505)	70	70	70	70	65	58	52	47	43	40	37	32	27
		(A + B) ÷ 2 = 11'-0" (3353)	70	70	70	70	68	60	54	49	45	42	39	34	28
		(A + B) ÷ 2 = 10'-6" (3200)	70	70	70	70	70	63	57	51	47	44	40	35	29
		(A + B) ÷ 2 = 10'-0" (3048)	70	70	70	70	70	66	60	54	50	46	42	37	31
		(A + B) ÷ 2 = 9'-6" (2896)	70	70	70	70	70	70	63	57	52	48	45	39	32
		(A + B) ÷ 2 = 9'-0" (2743)	70	70	70	70	70	70	66	60	55	51	47	41	34
		(A + B) ÷ 2 = 8'-6" (2591)	70	70	70	70	70	70	70	64	58	54	50	44	36
		(A + B) ÷ 2 = 8'-0" (2438)	70	70	70	70	70	70	70	68	62	57	53	47	38
		(A + B) ÷ 2 = 7'-6" (2286)	70	70	70	70	70	70	70	70	66	61	57	50	41
		(A + B) ÷ 2 = 7'-0" (2134)	70	70	70	70	70	70	70	70	70	65	61	53	44
		(A + B) ÷ 2 = 6'-6" (1981)	70	70	70	70	70	70	70	70	70	70	65	58	47
		(A + B) ÷ 2 = 6'-0" (1829)	70	70	70	70	70	70	70	70	70	70	70	62	51
		(A + B) ÷ 2 = 5'-6" (1676)	70	70	70	70	70	70	70	70	70	70	70	68	56
		(A + B) ÷ 2 = 5'-0" (1524)	70	70	70	70	70	70	70	70	70	70	70	70	62
		(A + B) ÷ 2 = 4'-6" (1372)	70	70	70	70	70	70	70	70	70	70	70	70	69
		(A + B) ÷ 2 = 4'-0" (1219)	70	70	70	70	70	70	70	70	70	70	70	70	70
		(A + B) ÷ 2 = 3'-6" (1067)	70	70	70	70	70	70	70	70	70	70	70	70	70
		(A + B) ÷ 2 = 3'-0" (914)	70	70	70	70	70	70	70	70	70	70	70	70	70
		(A + B) ÷ 2 = 2'-6" (762)	70	70	70	70	70	70	70	70	70	70	70	70	70
		(A + B) ÷ 2 = 2'-0" (610)	70	70	70	70	70	70	70	70	70	70	70	70	70
		(A + B) ÷ 2 = 1'-6" (457)	70	70	70	70	70	70	70	70	70	70	70	70	70
		C = (length of join)	2'-0" (610)	2'-6" (762)	3'-0" (914)	3'-6" (1067)	4'-0" (1219)	4'-6" (1372)	5'-0" (1524)	5'-6" (1676)	6'-0" (1829)	6'-6" (1981)	7'-0" (2134)	7'-6" (2286)	8'-0" (2438)

continued on next page

2-Way Fiberglass Joining

400 Series Frenchwood® Gliding, Frenchwood Hinged Inswing Patio Doors, and Frenchwood Patio Door Sidelights and Transoms

6 9/16" (167) Minimum Wall Depth	Average Adjacent Window Dimension	(A + B) ÷ 2 = 12'-0" (3658)	70	70	70	70	62	55	50	45	41	38	35	33	31
		(A + B) ÷ 2 = 11'-6" (3505)	70	70	70	70	65	58	52	47	43	40	37	34	32
		(A + B) ÷ 2 = 11'-0" (3048)	70	70	70	70	68	60	54	49	45	42	39	36	34
		(A + B) ÷ 2 = 10'-6" (3200)	70	70	70	70	70	63	57	51	47	44	40	38	35
		(A + B) ÷ 2 = 10'-0" (3048)	70	70	70	70	70	66	60	54	50	46	42	40	37
		(A + B) ÷ 2 = 9'-6" (2896)	70	70	70	70	70	70	63	57	52	48	45	42	39
		(A + B) ÷ 2 = 9'-0" (2743)	70	70	70	70	70	70	66	60	55	51	47	44	41
		(A + B) ÷ 2 = 8'-6" (2591)	70	70	70	70	70	70	70	64	58	54	50	47	44
		(A + B) ÷ 2 = 8'-0" (2438)	70	70	70	70	70	70	70	68	62	57	53	50	46
		(A + B) ÷ 2 = 7'-6" (2286)	70	70	70	70	70	70	70	70	66	61	57	53	50
		(A + B) ÷ 2 = 7'-0" (2134)	70	70	70	70	70	70	70	70	70	65	61	57	53
		(A + B) ÷ 2 = 6'-6" (1981)	70	70	70	70	70	70	70	70	70	70	65	61	57
		(A + B) ÷ 2 = 6'-0" (1829)	70	70	70	70	70	70	70	70	70	70	70	66	62
		(A + B) ÷ 2 = 5'-6" (1676)	70	70	70	70	70	70	70	70	70	70	70	70	68
		(A + B) ÷ 2 = 5'-0" (1524)	70	70	70	70	70	70	70	70	70	70	70	70	70
		(A + B) ÷ 2 = 4'-6" (1372)	70	70	70	70	70	70	70	70	70	70	70	70	70
		(A + B) ÷ 2 = 4'-0" (1219)	70	70	70	70	70	70	70	70	70	70	70	70	70
		(A + B) ÷ 2 = 3'-6" (1067)	70	70	70	70	70	70	70	70	70	70	70	70	70
		(A + B) ÷ 2 = 3'-0" (914)	70	70	70	70	70	70	70	70	70	70	70	70	70
		(A + B) ÷ 2 = 2'-6" (762)	70	70	70	70	70	70	70	70	70	70	70	70	70
		(A + B) ÷ 2 = 2'-0" (610)	70	70	70	70	70	70	70	70	70	70	70	70	70
		(A + B) ÷ 2 = 1'-6" (457)	70	70	70	70	70	70	70	70	70	70	70	70	70
		C = (length of join)	2'-0" (610)	2'-6" (762)	3'-0" (914)	3'-6" (1067)	4'-0" (1219)	4'-6" (1372)	5'-0" (1524)	5'-6" (1676)	6'-0" (1829)	6'-6" (1981)	7'-0" (2134)	7'-6" (2286)	8'-0" (2438)

* Numeric value represents the certified Performance Grade (PG) rating of the combination.

* Structural performance of any combination is only as high as the lowest structural performance of any individual unit or joining material in the combination.

* Andersen® products must be installed and anchored properly according to joining and installation guides to meet rated structural performance. Refer to product joining and installation guides at andersenwindows.com.

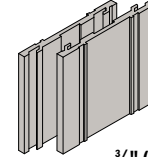
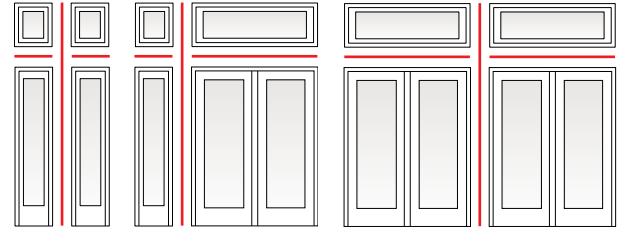
* Frenchwood® hinged inswing patio doors with a 6 9/16" (167) or greater exterior extension jamb depth require 7 3/4" (197) fiberglass joining material.

* Dimensions in parentheses are in millimeters.

continued on next page

2-Way Fiberglass Joining continued from previous page

21							
22							
23							
24	20						
25	21						
27	23						
28	24	20					
30	25	21					
32	27	23					
34	29	24	21				
37	31	26	22				
39	33	28	24	21			
43	36	30	26	22			
47	39	33	28	25	21		
51	43	37	31	27	23	20	
57	48	41	35	28	26	23	20
64	54	46	39	34	29	26	23
70	62	53	45	39	34	29	26
70	70	61	53	45	39	34	30
70	70	70	63	54	47	41	36
70	70	70	70	68	59	52	46
70	70	70	70	70	70	69	61
8'-6" (2591)	9'-0" (2743)	9'-6" (2896)	10'-0" (3048)	10'-6" (3200)	11'-0" (3353)	11'-6" (3505)	12'-0" (3658)



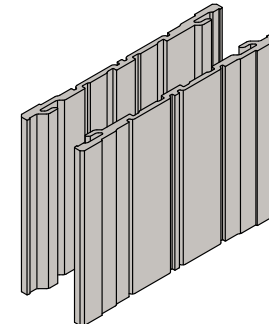
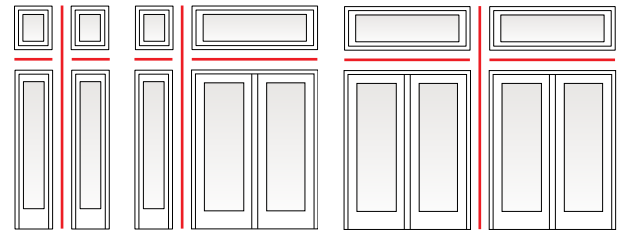
¾" (19) x 5 ¾" (146)
Fiberglass Joining Material
 For 4 ⅞" (116) base jamb depths.

Note: When joining hinged inswing patio doors, do not join hinge jamb to hinge jamb.

Combination Designs,
 Product Performance
 & Installation

2-Way Fiberglass Joining continued from previous page

29	27	26	25	22	20						
30	29	27	26	23	21						
32	30	28	27	25	22						
33	31	30	28	26	23	21					
35	33	31	30	27	25	22	21				
37	35	33	31	28	26	24	22				
39	37	35	33	30	27	25	23	21			
41	39	37	35	32	29	27	24	22			
44	41	39	37	34	31	28	26	24	22		
47	44	42	40	36	33	30	28	25	23	22	
50	47	45	42	39	35	32	30	27	25	23	22
54	51	48	46	42	38	35	32	29	27	25	23
58	55	52	50	45	41	38	35	32	29	27	25
64	60	57	54	50	45	41	38	35	32	30	28
70	66	63	60	55	50	45	42	38	35	33	30
70	70	70	66	61	55	50	46	43	39	37	34
70	70	70	70	68	62	57	52	48	44	41	38
70	70	70	70	70	70	65	60	55	51	47	44
70	70	70	70	70	70	70	70	64	59	55	51
70	70	70	70	70	70	70	70	70	70	66	61
70	70	70	70	70	70	70	70	70	70	70	70
70	70	70	70	70	70	70	70	70	70	70	70
8'-6" (2591)	9'-0" (2743)	9'-6" (2896)	10'-0" (3048)	10'-6" (3200)	11'-0" (3353)	11'-6" (3505)	12'-0" (3658)	12'-6" (3810)	13'-0" (3962)	13'-6" (4114)	14'-0" (4267)



¾" (19) x 7 ¾" (197)
Fiberglass Joining Material
 For higher performance for 1-way and 2-way joining. Required for Frenchwood® hinged inswing patio doors with 6 ⅞" (167) or greater exterior extension jamb depths.

Note: When joining hinged inswing patio doors, do not join hinge jamb to hinge jamb.

- Numeric value represents the certified Performance Grade (PG) rating of the combination.
- Structural performance of any combination is only as high as the lowest structural performance of any individual unit or joining material in the combination.
- Andersen® products must be installed and anchored properly according to joining and installation guides to meet rated structural performance. Refer to product joining and installation guides at andersenwindows.com.
- Frenchwood® hinged inswing patio doors with a 6 ⅞" (167) or greater exterior extension jamb depth require 7 ¾" (197) fiberglass joining material.
- Dimensions in parentheses are in millimeters.

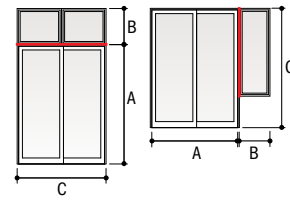
COMBINATION DESIGNS

Patio Doors and Windows

1-Way Steel Joining

400 Series Patio Doors and Windows

Average Adjacent Window/Door Dimension	(A + B) + 2 = 12'-6" (3810)	40	37	33	25	22													
	(A + B) + 2 = 12'-0" (3658)	40	37	34	26	23													
	(A + B) + 2 = 11'-6" (3505)	40	38	35	27	24													
	(A + B) + 2 = 11'-0" (3353)	40	39	36	29	25													
	(A + B) + 2 = 10'-6" (3200)	40	40	37	30	27	21												
	(A + B) + 2 = 10'-0" (3048)	40	40	37	32	28	22												
	(A + B) + 2 = 9'-6" (2896)	40	40	39	34	30	23	20											
	(A + B) + 2 = 9'-0" (2743)	40	40	40	36	32	25	21											
	(A + B) + 2 = 8'-6" (2591)	40	40	40	37	34	27	22											
	(A + B) + 2 = 8'-0" (2438)	40	40	40	39	36	28	24											
	(A + B) + 2 = 7'-6" (2286)	40	40	40	40	37	31	27	21										
	(A + B) + 2 = 7'-0" (2134)	40	40	40	40	40	32	28	22										
	(A + B) + 2 = 6'-6" (1981)	40	40	40	40	40	36	31	25	23									
	(A + B) + 2 = 6'-0" (1829)	40	40	40	40	40	39	36	27	24	20								
	(A + B) + 2 = 5'-6" (1676)	40	40	40	40	40	40	37	30	25	24								
	(A + B) + 2 = 5'-0" (1524)	40	40	40	40	40	40	40	36	28	25								
	(A + B) + 2 = 4'-6" (1372)	40	40	40	40	40	40	40	37	31	27	23	20						
	(A + B) + 2 = 4'-0" (1219)	40	40	40	40	40	40	40	40	37	30	26	25	21					
	(A + B) + 2 = 3'-6" (1067)	40	40	40	40	40	40	40	40	40	36	27	26	25					
	(A + B) + 2 = 3'-0" (914)	40	40	40	40	40	40	40	40	40	40	36	30	26	23				
	(A + B) + 2 = 2'-6" (762)	40	40	40	40	40	40	40	40	40	40	40	38	34	26	20			
	(A + B) + 2 = 2'-0" (610)	40	40	40	40	40	40	40	40	40	40	40	40	40	34	28			
C = (length of join)	5'-6" (1676) or less	6'-0" (1829)	6'-6" (1981)	7'-0" (2134)	7'-6" (2286)	8'-0" (2438)	8'-6" (2591)	9'-0" (2743)	9'-6" (2896)	10'-0" (3048)	10'-6" (3200)	11'-0" (3353)	11'-6" (3505)	12'-0" (3658)	12'-6" (3810)				



**3/16" (5) x 4" (102)
Steel Joining Material**

Intended for use with patio door to window joins only.

Please refer to patio door tables for further information regarding structural support between doors.

When using exterior extension jams on Frenchwood® hinged patio doors, special conditions apply. For complete installation details, visit andersenwindows.com.

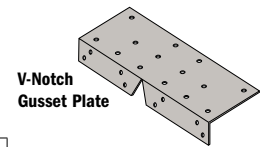


Figure 1

Andersen recommends use of a separating structural header between the door head and sill of any transom unit(s). If you choose not to use a header, and a single row of transom units is desired above the door, make sure the units are securely fastened to the adjacent framing and securely "hung" by screwing through the transom unit frame(s) into the header above. Steel joining may be required.

IMPORTANT: HEADER SAG MAY ADVERSELY AFFECT THE PROPER FUNCTIONING

AND PERFORMANCE OF THE DOOR AND/OR WINDOW. No weight from the transom unit(s) may be transferred to the door head if proper operation of the door is to be achieved. For four-panel gliding patio doors, see Figure 3.

Figure 2

Any transom combination made up of more than a single row of windows must have a separating header (by others).

Figure 3

Always use a structural header to separate transom windows from four-panel gliding patio doors. For all other door types, see Figure 1.

Figure 4

Steel reinforcing is recommended whenever transom or sidelight windows are placed above or beside door units.

Figure 1

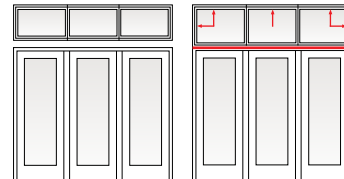


Figure 2



Figure 3

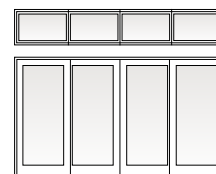
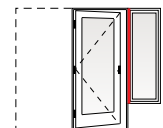


Figure 4



- * Numerical values in charts represent structural pressure only.
- * Structural performance of any combination is only as high as the lowest structural performance of any individual unit or joining material in the combination.
- * Andersen® products must be installed and anchored properly according to joining and installation guides to meet rated structural performance. Refer to product joining and installation guides at andersenwindows.com.
- * Additional wind load tables are available at andersenwindows.com.
- * Dimensions in parentheses are in millimeters.

Andersen® 400 Series Window and Patio Door Altitude Limits

The chart below gives the altitude limit in feet for most 400 Series products in this catalog. If the installation of a given product is at an altitude greater than that shown in this chart, a capillary breather tube must be ordered. Be aware that the use of a capillary breather tube eliminates argon gas blend fill and will result in a slightly lower thermal performance (approximately 0.02 increase in window U-Factor). For NFRC certified total unit performance on units with capillary breather tubes for higher altitude applications, please visit andersenwindows.com/nfrc.

The use of dual-pane insulating glass without capillary breather tubes at altitudes higher than its rating will result in severe glass distortion, increased glass breakage potential and a risk for seal failure.

Smaller windows are most affected by altitude changes. An increase in altitude results in a decrease in atmospheric pressure. A sealed insulating glass unit attempts to combat this change by increasing its volume to reduce its pressure. One way to increase its volume is by glass deflection. A smaller window is stiffer and does not deflect as much as a larger window; therefore, it cannot relieve the pressure as readily. Thus, the load applied to the glass is greater, resulting in a greater risk for breakage. Another way the window tries to increase its volume is by increasing the edge area; i.e., the seal area. The increased pressure applied to the edge seal load for a smaller window is therefore greater, increasing the chance for seal failure.

Product	2,000	3,000	4,000		5,000		6,000		7,000		8,000		9,000		10,000			
Casement and Awning Windows					CR12 CR13 CR135 CR14 CR15 CR16 CR45 CR155 CR125	CN12 CN13 CN135 CN14 CN145 CN15 CN155 CN16 AN251 AN281	C12 AN251 C13 C135 C145 A281 C125 CXW12	C14 C15 C155 C16 CW12			CW13 CW135 CW15 CW14 CX125 AX251 CW125 CXW125	CW145 CW15 CW155 CW16 AW251 AW281	CX13 CX135 CX14 CX145 CX15 CX155 CX16	AXW281 AX31 AX351 AX41 AX451 AX51 AX551 AX61	A335/CP353 CP3535 CXW3/CP303 CXW35 CXW4	CXW45 CXW5/CP305 CXW155 CXW6		
			4,000											10,000				
	Casement/Awning Transom and Picture Windows		CTR1510 CTR1810 CTR2010 CTR2410 CTR2810	CTR3010 CTR2910 CTR3410 CTR4010 CTR4810	CTR5010 CTR5210 CTR51110 CTR6010 CTR7010						P3030 P3035 P3040 P3045	P3050 P3055 P3060	P3535 P3540 P3545 P3550	P5050 P3555 P3560 P4040	P4045 P4050 P5055 P4055	P4060 P4545 P4550 P4555	P5060 P4560	
Woodwright® Double-Hung Windows				18210 20210 24210 30210 26210	34210 28210 210210 38210	1832 1836 18310 1842 2632 2636 2832 3436 1846 18410 1852 1856E 18510 21036	3032 3036 3832 1862 1856C 2032 2036 2432 2836 3432 21032 3836 2436	20310 2042 2046 20410 210310 21042 30310 3042 2052 2056E 20510 2062	2056C 3442 38310 3842 24310 2442 26310 2642 28310 34310 2842	2446 24410 2452 2456E 24510 2462 2456C	2646 2846 21046 3046 3048 3446 3846	26410 28410 2652 2852 2656E 2856E 26510 28510 24510 3052 34410 3452 38410 2662 2656C	28410 3056E 2852 2856E 28510 2862 2856C 210410 21052 3852 30410	21056E 210510 21062 21056C	3056E 3456E 3856E	30510 3062 3056C 34510 3456C	3456C 38510 3862 3856C	
	E = equal sash C = cottage sash																	
	Designate product code as WDH, WU, WH or WA.																	
Woodwright Transom Windows			4,000															
		WTR1810	WTR4210	WTR31015	WTR31017	WTR20111	WTR28121	WTR2423	WTR3823	WTR2827	WTR31027	WTR3031		WTR31031				
		WTR1815	WTR3410	WTR41010	WTR4217	WTR20121	WTR30111	WTR2427	WTR31023	WTR2831	WTR4227	WTR3431		WTR4231				
		WTR1817	WTR1823	WTR5610	WTR41017	WTR2023	WTR31021	WTR2431	WTR4223	WTR3027	WTR41027	WTR3831		WTR41031				
		WTR18111	WTR1827	WTR4215	WTR6210	WTR2027	WTR4221	WTR2823	WTR41023	WTR3427	WTR5627			WTR5631				
		WTR18121	WTR1831	WTR2017	WTR5617	WTR2031	WTR41021	WTR3023	WTR5623	WTR3827	WTR6227			WTR6231				
		WTR31010	WTR2010	WTR2410		WTR310111	WTR5621	WTR3423	WTR6223									
		WTR2815	WTR2015	WTR2415		WTR42111	WTR6221											
		WTR2817	WTR3415	WTR2417		WTR410111	WTR30121											
		WTR3010	WTR3417	WTR2810		WTR56111	WTR34111											
		WTR3015	WTR3810	WTR41015		WTR62111	WTR34121											
		WTR3017	WTR3815	WTR5615		WTR24111	WTR38111											
		WTR6217	WTR3817	WTR6215		WTR24121	WTR38121											
					WTR28111													
Woodwright Picture Windows			WPW10310 WPW1042 WPW1046 WPW10410 WPW1052 WPW1056 WPW10510 WPW1062									WPW30310 WPW3042 WPW3046 WPW30410 WPW3052	WPW3056 WPW30510 WPW3062	WPW34310 WPW3442 WPW3446 WPW34410 WPW3452	WPW3456 WPW34510 WPW3462	WPW310310 WPW31042 WPW31046 WPW310410 WPW4262 WPW410310 WPW41042 WPW41046 WPW410410 WPW5656 WPW31052	WPW31056 WPW310510 WPW31062 WPW42310 WPW41052 WPW41056 WPW410510 WPW41062 WPW56310 WPW4242 WPW42510	WPW42410 WPW4252 WPW4256 WPW5642 WPW5646 WPW56410 WPW5652 WPW56510 WPW5662 WPW42510 WPW4246
Tilt-Wash Double-Hung Windows			TW18210 TW1832 TW1836 TW18310 TW2432 TW26210 TW2632 TW28210	TW2828 TW1842 TW1846 TW18410 TW1852 TW1856E TW2832 TW210210	TW21032 TW3032 TW30210 TW18510 TW1862 TW1856C TW20210 TW2032	TW34210 TW3432 TW38210 TW3832 TW24210 TW1872 TW1876	TW2036 TW20410 TW20310 TW2042 TW2046 TW28310 TW21036 TW210310 TW3036 TW2072	TW2052 TW2056E TW2436 TW20510 TW2062 TW3436 TW34310 TW3836 TW2076	TW2442 TW2446 TW2642 TW2842 TW21042 TW2456E TW3042 TW3442 TW2456C TW2472 TW2476	TW2446 TW2846 TW21046 TW3046 TW3048 TW3446 TW3846	TW2646 TW26410 TW2652 TW2656E TW26510 TW2862 TW2856C TW210410 TW21052 TW30410 TW2662	TW2646 TW2846 TW21046 TW3046 TW3048 TW3446 TW3846	TW26410 TW2656C TW28410 TW2852 TW2856E TW3052 TW34410 TW3452 TW38410 TW3852 TW28510	TW2672 TW2676 TW2872 TW2876	TW21056E TW210510 TW21062 TW21056C TW3056E TW30510 TW3062 TW3056C	TW3456E TW34510 TW3462 TW3456C TW3856E TW38510 TW3856C TW3862	TW21072 TW21076 TW3072 TW3076 TW3472 TW3476 TW3872 TW3876	
	E = equal sash C = cottage sash																	

continued on next page

• Deflection of glass will occur on units with larger glass areas. If interior/exterior grilles are used on double-hung windows, gliding windows or gliding patio doors, some interference may occur, affecting operation of these units.
 • Altitude limits for patio doors shown in two-panel configurations. These limits also qualify for same size panels used in one or multiple panel configurations.
 • Contact your Andersen supplier for altitude limits for custom-sized windows and patio doors.

PRODUCT PERFORMANCE

Andersen® 400 Series Window and Patio Door Altitude Limits *(continued)*

Product	2,000	3,000	4,000		5,000		6,000		7,000		8,000		9,000		10,000		
Tilt-Wash Picture Windows		DP10310 DP1042 DP1046 DP10410 DP1052 DP1056 DP10510 DP1062									DP3062	DP30310 DP3042 DP30410 DP3052 DP3056 DP30510 DP3462	DP34310 DP3442 DP3446 DP34410 DP42310 DP4242 DP4246 DP42410 DP41062 DP56310 DP41042 DP5642 DP3452	DP3456 DP34510 DP310310 DP31042 DP4256 DP42510 DP4262 DP410310 DP5652 DP5656 DP410510 DP56410 DP4252 DP31046	DP310410 DP31052 DP31056 DP310510 DP41046 DP410410 DP41052 DP41056 DP5646 DP5662 DP56410 DP4252 DP31062		
		4,000															
Tilt-Wash Transom Windows	TWT1810 TWT1815 TWT1817 TWT18111 TWT1821 TWT1823 TWT1827 TWT1831 TWT2010 TWT2015	TWT2017 TWT2410 TWT2415 TWT2417 TWT2610 TWT2615 TWT2617 TWT2810 TWT2815 TWT2817	TWT21010 TWT21015 TWT21017 TWT3010 TWT3015 TWT3017 TWT3410 TWT3415 TWT3810 TWT3815	TWT3817 TWT31010 TWT4210 TWT41010 TWT5610 TWT6210 TWT3417	TWT20111 TWT2021 TWT2023 TWT2027 TWT2031 TWT24111	TWT26111 TWT28111 TWT21011 TWT31011 TWT34111 TWT38111	TWT2421 TWT2423 TWT2427 TWT2431 TWT2621 TWT2623 TWT2821 TWT2823	TWT21021 TWT21023 TWT3021 TWT3023 TWT3421 TWT3423 TWT3821 TWT3823	TWT2627 TWT2631 TWT2827 TWT2831 TWT21027 TWT3027 TWT3427 TWT3827	TWT21031 TWT3031	TWT3431 TWT3831						
Gliding Windows			G32 G33 G336 G34 G35 G42	G43 G44 G436 G45	G43 G44 G436 G45				G53 G54 G536 G55	G63	G636 G64 G65						
Half Circle, Quarter Circle and Elliptical Windows			CTC1 CTCW1 CTN20	CTN24 CTCX1	CTN28 CTN30	ET8	CTN34 CTC2	CTC42 CTQC1 CTCW2	CTCX2 CTQCW1	CTC3 CTN28-2 CTQCX	CTN30-2 CTQA3						
Circle and Oval Windows					OVL1824		CIR20 OVL2030		CIR24	OVL3048	CIR30						
Flexiframe® Windows Rectangular*	0-19" (0-483)	20-24" (508-610)	25-28" (635-711)	29-31" (737-787)	32-36" (508-610)	37-41" (508-610)	42-46" (1067-1168)	47-51" (1194-1295)	>51" (>1295)								
Flexiframe Windows Non-Rectangular*	0-35" (0-889)	36-46" (914-1168)	47-54" (1194-1372)	55-60" (1397-1524)	61-70" (1549-1778)	71-80" (1803-2032)	>80" (>2032)										
Arch Windows		AFC06 AFC11 AFCW06 AFCW11 AFCP3006 AFFW5006 AFCP301 AFCW206 AFC12	AFC13 AFC135 AFC14 AFFW801 AFC145 AFC15 AFC155 AFC16 AFC18 AFFW601	AFC206 AF21 AFCW21 AFFW501 AFFW6006 AFFW601 AFFW8006 AFFW801 AFFW1206	AFCW12 AFCW13 AFCW135 AFCW14 AFCW145 AFCW15	AFCW155 AFCW16 AFCW18 AFCP302 AFFW502	AFCP303 AFC22 AFCW22 AFFW502	AFCP3035 AFCP304 AFCP3045 AFCP305 AFCP3055	AFCP306 AFCP308 AFFW602 AFFW802	AFFW1202 AFC23 AFCW23	AFC235 AFFW5035 AFFW603 AFFW6035 AFC24	AFCW24 AFFW8045 AFC245 AFCW25 AFFW8055 AFC255 AFFW6055 AFFW806 AFC26 AFFW606 AFFW5055 AFC28 AFFW608 AFFW506 AFFW8035 AFFW508 AFFW803 AFCW26 AFFW604 AFCW28 AFFW6045 AFFW504 AFFW804 AFFW5045 AFFW605	AFFW505 AFFW8045 AFC245 AFC25 AFC255 AFC26 AFC28 AFCW235 AFFW803 AFCW26 AFFW604 AFCW28 AFFW6045 AFFW504 AFFW804 AFFW5045 AFFW605	AFC24 AFC245 AFC25 AFC255 AFC26 AFC28 AFCW235 AFFW803 AFCW26 AFFW604 AFCW28 AFFW6045 AFFW504 AFFW804 AFFW5045 AFFW605			
											9,000	10,000					
Springline® Windows				SE3106	SE311	SE312 SE313 SE3135 SE314 SE3145	SE315 SE3155 SE316 SE5406 SE5806 SE6006	SE541 SE581 SP402 SP403 SP4035	SE601 SP404 SP4045 SP405 SP4055 SP406 ELFW6006 ELFW8006	SE546 SE582 SE583 SE585 SE586 SE6055 SE542 SE543 SE5435 SP801 SE544 SE602 ELFW601 ELFW602	SE5845 SE585 SE5855 SE586 SE542 SE543 SE5435 SE544 SE602 ELFW801 ELFW802	SE603 SE6035 SE604 SE6045 SE545 SE5455 SP802 SE5445 SE605					
	3,000		4,000														
Springline Flanker Windows	SF CR3 SF CR35	SF CR4 SF CR5 SF CR6 SF CN3	SF CN35 SF CN4 SF CN5 SF CN6	SF CW35 SF CW4 SF CW5	SF CW6 SF C35 SF C4		SF CXW4 SF CXW5 SF CXW6										
Eyebrow Windows		3,000	4,000														
	FCD34 FCCXW3	FCCW2 FCFW50	FCD28 FCD30	FCD38 FCC2	FCFW60												
Extended Gothic, Octagon, Monumental Circle and Quarter Circle Windows	GT2036 GT2440 GT3046	OC20	OC24		GT4056					OC30			FR40 QR40 FR60				
Frenchwood® Gliding Patio Doors												FWG5068 FWG50611	FWG5080 FWG6068	FWG60611 FWG6080	FWG8068 FWG80611	FWG8080	
Frenchwood Hinged Inswing Patio Doors				4168 41611	4180							5068 50611	5080	5468 54611	5480 6068	60611 6080	
Frenchwood Patio Door Transoms	FWT6016 FWT6011 FWT5416 FWT5411	FWT5016 FWT2111 FWT5011 FWT4116	FWT4111 FWT3116 FWT3111 FWT2916	FWT2911 FWT2716 FWT2711 FWT2116	FWT60110 FWT54110 FWT50110 FWT41110	FWT31110 FWT29110 FWT27110 FWT21110											
Frenchwood Patio Door Sidelights	FWSL1368 FWSL13611	FWSL1380 FWSL1768	FWSL17611 FWSL1780														
Frenchwood Patio Door Sidelight Transoms	FWSLT17110 FWSLT1716	FWSLT1311 FWSLT1711	FWSLT13110 FWSLT1316														

- Deflection of glass will occur on units with larger glass areas. If interior/exterior grilles are used on double-hung windows, gliding windows or gliding patio doors, some interference may occur, affecting operation of these units.
- Altitude limits for patio doors shown in two-panel configurations. These limits also qualify for same size panels used in one or multiple panel configurations.
- **Contact your Andersen supplier for altitude limits for custom-sized windows and patio doors.**
- Dimensions in parentheses are in millimeters.
- Maximum short side window dimension. For Flexiframe units, use shortest dimension, width or length, and round to nearest whole number, then use limits given above for Flexiframe windows.

PERFORMANCE STANDARDS

The Window and Door Manufacturers Association (WDMA), the American Architectural Manufacturers Association (AAMA) and the Canadian Standards Association (CSA) jointly release the North American Fenestration Standard/Specification for Windows, Doors and Skylights (NAFS-11) where “-11” refers to the most recent publication year of 2011. NAFS is also referred to as AAMA/WDMA/CSA 101/I.S.2/A440, which is how the International Code Council (ICC) lists this standard in the 2012, 2015 and 2018 International Residential Code (IRC) and International Building Code (IBC) as the means to indicate the window, door or skylights design pressure rating used to determine compliance to the jobsite design pressure requirements.

A product only achieves a “Performance Grade” or “PG” rating when it complies with all of the NAFS performance requirements such as ease of operation, air infiltration resistance, resistance to water penetration and resistance to forced entry, etc. A “Design Pressure Rating” or “DP” rating only depicts the design and structural load performance.

Performance Classes

The NAFS Standard/Specification defines requirements for four performance classes. Performance classes are designated R, LC, CW and AW. This classification system provides for several levels of performance. Product selection is always based on the performance and building code requirements of the particular project.

Elements of Performance Grade (PG) Designations

In order to qualify for a given performance grade (PG), test specimens need to pass all required performance tests for the following, in addition to all required auxiliary (durability) and applicable material/component tests (not shown here) for the applicable product type and desired performance class:

(a) Operating force (if applicable): Maximum operating force varies by product type and performance class.

(b) Air leakage resistance: Tested in accordance with ASTM E283 at a test pressure of 1.57 psf. Allowable air infiltration for R, LC and CW class designations is 0.3 cubic feet per minute per square foot of frame (cfm/ft²).

(c) Water penetration resistance: Tested in accordance with ASTM E547 with the specified test pressure applied per NAFS-11. Test consists of four cycles. Each cycle consists of five minutes with pressure applied and one minute with the pressure released, during which the water spray is continuously applied. Water spray shall be uniformly applied at a constant rate of 5 U.S. gal/ft² · hr.

(d) Uniform load deflection test: Tested in accordance with ASTM E330 for both positive and negative pressure (pressure defined by NAFS-11) with the load maintained for a period of 10 seconds. The test specimen shall be evaluated for deflection during each load for permanent damage after each load and for any effects on the normal operation of the specimen. *Starting with the 2008 version of NAFS, design pressure (DP) will only represent the “uniform load deflection test.”*

(e) Uniform load structural test: Tested in accordance with ASTM E330 for both positive and negative pressure (pressure defined by NAFS-11) with the load maintained for a period of 10 seconds. After loads are removed, there shall be no permanent deformation in excess of 0.4% of its span and no damage to the unit, which would make it inoperable.

(f) Forced-entry resistance (if applicable): Tested in accordance with ASTM F588 (windows), F476 (swinging doors) and F842 (sliding doors) at a performance level 10 rating.

Performance Grades (PG) and Corresponding Test Pressures (psf)

Performance Class/ Performance Grade		Air Infiltration Test Pressure		Maximum Allowable Air Infiltration/ Exfiltration Rate		Water Penetration Resistance Test Pressure		Design Pressure		Structural Test Pressure	
R	LC	Pa	psf	L/s·m ²	cfm/ft ²	Pa	psf	Pa	psf	Pa	psf
15	-	75	1.57	1.5	0.30	140	2.92	720	15.04	1080	22.56
20	-	75	1.57	1.5	0.30	150	3.13	960	20.05	1440	30.08
25	25	75	1.57	1.5	0.30	180	3.76	1200	25.06	1800	37.59
30	30	75	1.57	1.5	0.30	220	4.59	1440	30.08	2160	45.11
35	35	75	1.57	1.5	0.30	260	5.43	1680	35.09	2520	52.63
40	40	75	1.57	1.5	0.30	290	6.06	1920	40.10	2880	60.15
45	45	75	1.57	1.5	0.30	330	6.89	2160	45.11	3240	67.67
50	50	75	1.57	1.5	0.30	360	7.52	2400	50.13	3600	75.19
55	55	75	1.57	1.5	0.30	400	8.35	2640	55.14	3960	82.71
60	60	75	1.57	1.5	0.30	440	9.19	2880	60.15	4320	90.23
65	65	75	1.57	1.5	0.30	470	9.82	3120	65.16	4680	97.74
70	70	75	1.57	1.5	0.30	510	10.65	3360	70.18	5040	105.26
75	75	75	1.57	1.5	0.30	540	11.28	3600	75.19	5400	112.78
80	80	75	1.57	1.5	0.30	580	12.11	3840	80.20	5760	120.30
85	85	75	1.57	1.5	0.30	580	12.11	4080	85.21	6120	127.82
90	90	75	1.57	1.5	0.30	580	12.11	4320	90.23	6480	135.34
95	95	75	1.57	1.5	0.30	580	12.11	4560	95.24	6840	142.86
100	100	75	1.57	1.5	0.30	580	12.11	4800	100.25	7200	150.38

HALLMARK CERTIFICATION

The Window and Door Manufacturers Association (WDMA)-sponsored Hallmark Certification Program provides manufacturers with certification to the AAMA/WDMA/CSA 101/I.S.2/A440-11 Standard and is designed to provide builders, architects, specifiers and consumers with an easily recognizable means of identifying products that have been manufactured and tested in accordance with NAFS (AAMA/WDMA/CSA 101/I.S.2/A440) industry standards and other applicable performance standards. Conformance is determined by periodic in-plant inspections by a third-party administrator. Inspections include auditing licensee quality control procedures and processes, and a review to confirm products are manufactured in accordance with the appropriate performance standards. Periodic testing of representative product constructions and components by an independent testing laboratory is also required. When all of the program requirements are met, the licensee is authorized to use the WDMA Hallmark registered logo on their certification label as a means of identifying products and their performance ratings.

Products successfully obtaining Hallmark Certification will be labeled with a three-part code, which includes performance class, performance grade and size tested. In addition to this mandatory requirement, you are allowed to list the design pressure on a separate line.

	Andersen Corporation 400 SERIES CASEMENT WINDOW Manufacturer stipulates certification as indicated below.
STANDARD	RATING
AAMA/WDMA/CSA 101/I.S.2/A440-11	Class LC ⁽¹⁾ – PG50 ⁽²⁾ – Size Tested 56 x 71.8 in. ⁽³⁾ DP+50/-50 ⁽⁴⁾
AAMA/WDMA/CSA 101/I.S.2/A440-08	Class LC ⁽¹⁾ – PG50 ⁽²⁾ – Size Tested 56 x 71.8 in. ⁽³⁾ DP+50/-50 ⁽⁴⁾

- (1) – Performance Class
- (2) – Performance Grade
- (3) – Size Tested
- (4) – Design Pressure

In the example above, the performance class is LC, the performance grade (PG) is 50 pounds per square foot (psf) and the size tested is 56" x 71.8". What this means to the specifier is, based on the performance grade chart, the laboratory-tested air infiltration was less than 0.3 cfm/ft² (test pressure is always 1.57 psf and the allowable airflow is 0.3 cfm/ft²), the product tested successfully resisted a laboratory water penetration test at a test pressure of 7.5 psf, the product tested successfully withstood a laboratory positive test pressure of 75 psf and a laboratory negative test pressure of 75 psf, and the product tested passed the laboratory requirements for operational force and forced-entry resistance. Based on this test, all products of the same design that are smaller than the tested size can be labeled with this product performance rating.

IMPORTANT

Building codes prescribe design pressure based on a variety of criteria (i.e., windspeed zone, building height, building type, jobsite exposure, etc.). Design pressures derived from Performance Grade (PG) test requirements should be used to determine compliance to building code required design pressures. Structural test pressures, which are tested at 1.5 times the design pressure, should not be used for determining design pressure code compliance. In the example above, a PG 50 performance grade rating, which passes a 50 psf design pressure, should be used for determining code compliance, not the structural test pressure of 75 psf.

If you need further details about how Andersen® products perform to this standard, contact your Andersen supplier.

If you need further information about the AAMA/WDMA/CSA 101/I.S.2/A440-11 standard or the Hallmark Certification Program, please contact: WDMA, 330 N. Wabash Avenue, Suite 2000, Chicago, IL 60611. Phone: 312-321-6802 Website: wdma.com

Where designated, Andersen products are tested, certified and labeled to the requirements of the Hallmark Certification Program. Actual performance may vary based on variations in manufacturing, shipping, installation, environmental conditions and conditions of use.

PRODUCT PERFORMANCE

Performance Grade and Air Infiltration Ratings — 400 Series Windows

For current performance information, please visit andersenwindows.com.

Andersen® Product	AAMA/WDMA/CSA 101/1.S.2/A440 Performance Grade (PG)	+/- Corresponding Design Pressure (DP)	Air Infiltration CFM/FT²
Casement Windows			
Single Stationary (CXW16)	Class LC-PG50 Size Tested 35" x 71"	50/50	< 0.2
Single Venting (CXW16-155, CX16-155)	Class LC-PG40 Size Tested 35" x 71"	40/40	< 0.2
Single Venting (CXW15)	Class LC-PG45 Size Tested 71" x 60"	45/45	< 0.2
Single Venting (CW16 and smaller)	Class LC-PG50 Size Tested 60" x 71"	50/50	< 0.2
Single Venting (CXW145 and smaller)	Class LC-PG50 Size Tested 71" x 52" *	50/50	< 0.2
Single Venting (CX15 and smaller)	Class LC-PG50 Size Tested 62" x 59" *	50/50	< 0.2
Twin Stationary (CXW245, CX25, CW26 and smaller)	Class LC-PG50 Size Tested 56" x 71" *	50/50	< 0.2
Twin Venting (CXW25)	Class LC-PG45 Size Tested 71" x 60"	45/45	< 0.2
Twin Venting (CXW245 and smaller)	Class LC-PG50 Size Tested 71" x 52"	50/50	< 0.2
Twin Venting (CX25 and smaller)	Class LC-PG50 Size Tested 62" x 59"	50/50	< 0.2
Twin Venting (CW26 and smaller)	Class LC-PG50 Size Tested 60" x 71"	50/50	< 0.2
Triple Venting (CW35 and smaller)	Class LC-PG40 Size Tested 84" x 60"	40/40	< 0.2
Triple Venting (C35 and smaller)	Class LC-PG50 Size Tested 71" x 60"	50/50	< 0.2
Casement/Awning Picture Windows (P5060 and smaller)	Class LC-PG70 Size Tested 59" x 71"	70/70	< 0.2
Casement/Awning Transom Windows (CTR32410 and smaller)	Class LC-PG70 Size Tested 84" x 12"	70/70	< 0.2
Casement Windows, PG Upgrade			
Single Stationary (tempered glass, CXW16)	Class LC-PG70 Size Tested 35" x 71"	70/70	< 0.2
Single Venting (CXW145 and smaller)	Class LC-PG70 Size Tested 35" x 52"	70/70	< 0.2
Single Venting (CX16 and smaller)	Class LC-PG70 Size Tested 31" x 71"	70/70	< 0.2
Twin Venting (CW26 and smaller)	Class LC-PG70 Size Tested 56" x 71"	70/70	< 0.2
Triple Venting (C35 and smaller)	Class LC-PG70 Size Tested 71" x 59"	70/70	< 0.2
Complementary Casement Windows			
Casement Venting	Class LC-PG50 Size Tested 35" x 84"	50/50	< 0.2
Casement Stationary	Class LC-PG60 Size Tested 120" x 78"	60/60	< 0.2
French Casement Venting	Class LC-PG30 Size Tested 56" x 72"	30/30	< 0.2
Awning Windows			
Single Stationary (AXW61)	Class LC-PG50 Size Tested 35" x 71"	50/50	< 0.2
Single Venting (AXW51 and smaller)	Class LC-PG35 Size Tested 59" x 35"	35/35	< 0.2
Single Venting (AX61 and smaller)	Class LC-PG35 Size Tested 72" x 31"	35/35	< 0.2
Twin Venting (AXW231 and smaller)	Class LC-PG35 Size Tested 71" x 36"	35/35	< 0.2
Triple Venting (AX3251 and smaller)	Class LC-PG35 Size Tested 84" x 31"	35/35	< 0.2
Triple Venting (A313 and smaller)	Class LC-PG35 Size Tested 35" x 71"	35/35	< 0.2
Picture Venting (PA4060 and smaller)	Class LC-PG35 Size Tested 48" x 71"	35/35	< 0.2
Awning Windows, PG Upgrade			
Single Stationary (tempered glass, AXW61)	Class LC-PG70 Size Tested 35" x 71"	70/70	< 0.2
Single, Twin and Triple Venting (AX3251 and smaller)	Class LC-PG60 Size Tested 84" x 31"	60/60	< 0.2
Triple Venting (A313 and smaller)	Class LC-PG60 Size Tested 35" x 71"	60/60	< 0.2

For sound transmission ratings, see page 202.

- * "Performance Grade (PG)" ratings may vary from tested performance rating for larger or smaller units of a particular type.
- * This data is accurate as of May 2021. Due to ongoing product changes, updated test results or new industry standards, this data may change over time.
- * Where designated, Andersen products are certified and labeled to the requirements of the Hallmark Certification Program. Actual performance may vary based on variations in manufacturing, shipping, installation, environmental conditions and conditions of use.
- * Contact your Andersen supplier for more information.
- * Window size tested is an integral twin or triple window, and qualifies the window listed under the same test.

continued on next page

Performance Grade and Air Infiltration Ratings – 400 Series Windows *(continued)*

For current performance information, please visit andersenwindows.com.

Andersen® Product	AAMA/WDMA/CSA 101/1.S.2/A440 Performance Grade (PG)	+/- Corresponding Design Pressure (DP)	Air Infiltration CFM/FT ²
Woodwright® Full-Frame Windows			
Double-Hung (3862 and smaller)	Class LC-PG30 Size Tested 45" x 76"	30/30	< 0.2
Double-Hung (cottage sash, 3862 and smaller)	Class R-20 Size Tested 45" x 76"	20/20	< 0.2
Arch Double-Hung (3862 and smaller)	Class LC-PG30 Size Tested 45" x 76"	30/30	< 0.2
Springline™ Single-Hung (3872 and smaller)	Class LC-PG30 Size Tested 45" x 86"	30/30	< 0.2
Picture (5662 and smaller)	Class LC-PG65 Size Tested 67" x 76"	65/65	< 0.2
Transom (6231 and smaller)	Class LC-PG70 Size Tested 75" x 39"	70/70	< 0.2
Woodwright Full-Frame Windows, PG Upgrade			
Double-Hung (3052 and smaller)	Class LC-PG50 Size Tested 37" x 64"	50/50	< 0.2
Arch Double-Hung (3054)	Class LC-PG50 Size Tested 37" x 64"	50/50	< 0.2
Springline Single-Hung (3057)	Class LC-PG50 Size Tested 37" x 67"	50/50	< 0.2
Woodwright Insert Windows			
Double-Hung (3862 and smaller)	Class R-PG25 Size Tested 45" x 77"	25/25	< 0.2
Double-Hung (cottage sash, 3862 and smaller)	Class R-PG20 Size Tested 45" x 68"	20/20	< 0.2
Picture (5662 and smaller)	Class LC-PG30 Size Tested 68" x 78"	30/30	< 0.2
Transom (6878 and smaller)	Class LC-PG30 Size Tested 68" x 78"	30/35	< 0.2
Tilt-Wash Full-Frame Windows			
Double-Hung (3862 and smaller)	Class LC-PG40 Size Tested 45" x 76"	40/40	< 0.2
Double-Hung (cottage sash, 3856 and smaller)	Class LC-PG40 Size Tested 45" x 68"	40/40	< 0.2
Double-Hung** (3876 and smaller)	Class LC-PG30 Size Tested 45" x 92"	30/35	< 0.2
Picture (5662 and smaller)	Class LC-PG50 Size Tested 67" x 76"	50/65	< 0.2
Transom (6231 and smaller)	Class LC-PG50 Size Tested 75" x 39"	50/50	< 0.2
Tilt-Wash Windows, PG Upgrade			
Double-Hung	Class LC-PG50 Size Tested 45" x 76"	50/50	< 0.2
Tilt-Wash Insert Windows			
Double-Hung (double lock)	Class R-PG20 Size Tested 45" x 92"	20/20	< 0.2
Double-Hung (single lock)	Class R-PG20 Size Tested 35" x 92"	20/20	< 0.2
Double-Hung	Class LC-PG30 Size Tested 45" x 76"	30/30	< 0.2
Gliding Windows (G65 and smaller)	Class LC-PG30 Size Tested 71" x 59"	30/30	< 0.2
Specialty Windows			
Arch (AFFW6080 and smaller)	Class LC-PG50 Size Tested 71" x 105"	50/50	< 0.2
Flexiframe® (12050 and smaller)	Class LC-PG50 Size Tested 144" x 60"	50/50	< 0.2
Springline (SP802 and smaller)	Class LC-PG50 Size Tested 96" x 72"	50/50	< 0.2
Specialty Windows, PG Upgrade			
Arch (tempered glass, AFFW6080 and smaller)	Class LC-PG70 Size Tested 71" x 105"	70/70	< 0.2
Flexiframe (tempered glass, 12050 and smaller)	Class LC-PG70 Size Tested 144" x 60"	70/70	< 0.2
Springline (tempered glass, SP802 and smaller)	Class LC-PG70 Size Tested 96" x 72"	70/70	< 0.2
Complementary Specialty Windows (direct-set, fixed)	Class LC-PG50 Size Tested 125" x 84"	50/50	< 0.2

For sound transmission ratings, see page 202.

* "Performance Grade (PG)" ratings may vary from tested performance rating for larger or smaller units of a particular type.
 * This data is accurate as of May 2021. Due to ongoing product changes, updated test results or new industry standards, this data may change over time.
 * Where designated, Andersen products are certified and labeled to the requirements of the Hallmark Certification Program. Actual performance may vary based on variations in manufacturing, shipping, installation, environmental conditions and conditions of use.
 * Contact your Andersen supplier for more information.
 ** Window heights equal to or greater than 7'-4 1/8" (2250) and 7'-8 1/8" (2359) have interior and exterior brackets. Interior brackets, located on each side of the meeting rail, must be flipped up for proper product performance.

PRODUCT PERFORMANCE

Performance Grade and Air Infiltration Ratings — 400 Series Patio Doors

For current performance information, please visit andersenwindows.com.

Andersen® Product	AAMA/WDMA/CSA 101/I.S.2/A440 Performance Grade (PG)	+/- Corresponding Design Pressure (DP)	Air Infiltration CFM/FT²
Frenchwood® Gliding Patio Doors			
Single Stationary	Class LC-PG40 Size Tested 50" x 95"	40/40	< 0.2
Two-Panel	Class LC-PG40 Size Tested 95" x 95"	40/40	< 0.2
Four-Panel (8')	Class LC-PG35 Size Tested 189" x 95"	35/35	< 0.2
Four-Panel (6'-11", 6'-8")	Class LC-PG25 Size Tested 189" x 82"	25/25	< 0.2
Frenchwood Hinged Inswing Patio Doors			
Single Active	Class LC-PG40 Size Tested 107" x 95"	40/40	< 0.2
Two-Panel	Class LC-PG40 Size Tested 71" x 95"	40/40	< 0.2
Three-Panel	Class LC-PG40 Size Tested 107" x 95"	40/40	< 0.2
Frenchwood Patio Door Sidelights	Class LC-PG40 Size Tested 18" x 95"	40/40	< 0.2
Frenchwood Patio Door Transoms	Class LC-PG40 Size Tested 71" x 21"	40/40	< 0.2
Complementary Springline™ and Arch Hinged Inswing Patio Doors			
Single Stationary	Class LC-PG45 Size Tested 37" x 95"	45/45	< 0.2
Single Active¹	Class LC-PG45 Size Tested 37" x 95"	45/45	< 0.2
Two-Panel Stationary	Class LC-PG45 Size Tested 75" x 95"	45/45	< 0.2
Two-Panel Active¹	Class LC-PG45 Size Tested 75" x 95"	45/45	< 0.2
Complementary Springline and Arch Hinged Outswing Patio Doors			
Single Stationary	Class LC-PG45 Size Tested 37" x 95"	45/45	< 0.2
Single Active¹	Class LC-PG45 Size Tested 37" x 95"	45/45	< 0.2
Two-Panel Stationary	Class LC-PG45 Size Tested 75" x 95"	45/45	< 0.2
Two-Panel Active¹	Class LC-PG45 Size Tested 75" x 95"	45/45	< 0.2

For sound transmission ratings, see chart below.

• “Performance Grade (PG)” ratings may vary from tested performance rating for larger or smaller units of a particular type.
• This data is accurate as of May 2021. Due to ongoing product changes, updated test results or new industry standards, this data may change over time.
• Where designated, Andersen products are certified and labeled to the requirements of the Hallmark Certification Program. Actual performance may vary based on variations in manufacturing, shipping, installation, environmental conditions and conditions of use.
• Contact your Andersen supplier for more information.
† Tested with standard multi-point hardware.

Sound Transmission Ratings for 400 Series Windows and Patio Doors

For current performance information, please visit andersenwindows.com.

Andersen® Product	Test Size	Sound Transmission Class (STC)	Outdoor/Indoor Transmission Class (OITC)
Casement Windows	36" x 72"	26	22
Awning Windows	30" x 60"	26	21
Casement/Awning Picture Windows	60" x 72"	29	25
Woodwright® Double-Hung Windows			
Double-Hung Full-Frame	46" x 77"	28	23
Picture Full-Frame	48" x 48"	28	23
Transom Full-Frame	40" x 46"	28	22
Double-Hung Insert	20" x 60"	26	21
Picture Insert	53" x 78"	30	26
Transom Insert	53" x 78"	30	26
Tilt-Wash Double-Hung Windows			
Double-Hung Full-Frame	46" x 78"	29	24
Picture Full-Frame	68" x 77"	30	25
Transom Full-Frame	-	-	-
Double-Hung Insert	32" x 76"	27	24
Picture Insert	-	-	-
Transom Insert	-	-	-
Gliding Windows	72" x 60"	26	22
Specialty Windows	72" x 60"	30	25

Andersen® Product	Test Size	Sound Transmission Class (STC)	Outdoor/Indoor Transmission Class (OITC)
Complementary Specialty Windows	72" x 60"	30	25
Frenchwood® Gliding Patio Doors			
Single Stationary	50" x 80"	31	26
Two-Panel	72" x 80"	31	26
Four-Panel	-	-	-
Frenchwood Hinged Inswing Patio Doors			
Single Active	36" x 80"	30	26
Two-Panel	72" x 80"	30	26
Three-Panel	-	-	-
Frenchwood Patio Door Sidelights & Transoms			
Sidelight	18" x 82"	32	26
Transom	72" x 22"	29	25
Complementary Springline™ & Arch Hinged Inswing Patio Doors			
Single Active	38" x 90"	30	25
Two-Panel	75" x 90"	30	25
Complementary Springline & Arch Hinged Outswing Patio Doors			
Single-Panel	38" x 90"	31	25
Two-Panel	75" x 90"	31	25

• “Sound Transmission Class (STC)” and “Outdoor/Indoor Transmission Class (OITC)” ratings are for individual units based on independent tests and represent entire unit.
• This data is accurate as of May 2021. Due to ongoing product changes, updated test results or new industry standards, this data may change over time.
• Contact your Andersen supplier for more information.

Center of Glass Performance Data for products with Low-E4® Glass

For current performance information, please visit andersenwindows.com.

Andersen Product	VT ¹	SC ²	SHGC ³	RHG ⁴	Fading		%RH @ Center ⁷	IGST ⁸
					Tuv ⁵	Tdw ⁶		
400 Series Casement, Awning, and Tilt-Wash Double-Hung Full-Frame Windows	73%	0.48	0.42	100	17%	34%	61%	56°F
400 Series Gliding Window, Half Circle, Circle, and Oval Windows	73%	0.48	0.42	99	17%	34%	61%	56°F
400 Series Casement/Awning Picture and Transom, Woodwright® Double-Hung, Picture and Transom Full-Frame, Woodwright Double-Hung, Picture and Transom Insert, Tilt-Wash Picture and Transom Full-Frame, Tilt-Wash Double-Hung, Picture and Transom Insert Windows	72%	0.47	0.41	98	16%	33%	61%	56°F
400 Series Elliptical Windows, Frenchwood® Hinged Inswing Patio Doors, Frenchwood Patio Door Sidelights, Sidelight Transoms and Transoms	72%	0.48	0.41	98	16%	33%	61%	56°F
400 Series Frenchwood Gliding Patio Doors	71%	0.47	0.41	98	16%	33%	61%	56°F
400 Series Flexiframe®, Arch and Springline® Windows	70%	0.46	0.40	95	14%	31%	61%	56°F
400 Series Complementary Curved Top Springline and Arch Hinged Inswing Patio Doors	72%	0.48	0.41	310	16%	33%	61%	56°F

Center of Glass Performance Data for products with Low-E4® SmartSun™ Glass

For current performance information, please visit andersenwindows.com.

Andersen® Product	VT ¹	SC ²	SHGC ³	RHG ⁴	Fading		%RH @ Center ⁷	IGST ⁸
					Tuv ⁵	Tdw ⁶		
400 Series Casement, Awning, and Tilt-Wash Double-Hung Full-Frame Windows	66%	0.32	0.28	66	5%	21%	61%	56°F
400 Series Gliding Window, Half Circle, Circle, and Oval Windows	66%	0.31	0.27	66	5%	21%	61%	56°F
400 Series Casement/Awning Picture and Transom, Woodwright® Double-Hung, Picture and Transom Full-Frame, Woodwright Double-Hung, Picture and Transom Insert, Tilt-Wash Picture and Transom Full-Frame, Tilt-Wash Double-Hung, Picture and Transom Insert Windows	65%	0.31	0.27	65	5%	21%	61%	56°F
400 Series Elliptical Windows, Frenchwood® Hinged Inswing Patio Doors, Frenchwood Patio Door Sidelights, Sidelight Transoms and Transoms	65%	0.31	0.27	66	5%	21%	61%	56°F
400 Series Frenchwood Gliding Patio Doors	64%	0.32	0.27	66	5%	21%	61%	56°F
400 Series Flexiframe®, Arch and Springline® Windows	63%	0.31	0.27	65	4%	20%	61%	56°F
400 Series Complementary Curved Top Springline and Arch Hinged Inswing Patio Doors	65%	0.31	0.27	207	5%	21%	61%	56°F

Center of Glass Performance Data for products with Low-E4® Sun Glass

For current performance information, please visit andersenwindows.com.

Andersen Product	VT ¹	SC ²	SHGC ³	RHG ⁴	Fading		%RH @ Center ⁷	IGST ⁸
					Tuv ⁵	Tdw ⁶		
400 Series Casement, Awning, and Tilt-Wash Double-Hung Full-Frame Windows	40%	0.30	0.26	62	17%	25%	61%	56°F
400 Series Gliding Window, Half Circle, Circle, and Oval Windows	40%	0.29	0.26	62	17%	25%	59%	55°F
400 Series Casement/Awning Picture and Transom, Woodwright® Double-Hung, Picture and Transom Full-Frame, Woodwright Double-Hung, Picture and Transom Insert, Tilt-Wash Picture and Transom Full-Frame, Tilt-Wash Double-Hung, Picture and Transom Insert Windows	40%	0.29	0.25	61	16%	24%	59%	55°F
400 Series Elliptical Windows, Frenchwood® Hinged Inswing Patio Doors, Frenchwood Patio Door Sidelights, Sidelight Transoms and Transoms	40%	0.29	0.25	61	16%	24%	59%	55°F
400 Series Frenchwood Gliding Patio Doors	39%	0.29	0.25	61	15%	23%	61%	56°F
400 Series Flexiframe®, Arch and Springline® Windows	37%	0.28	0.24	59	13%	22%	61%	56°F
400 Series Complementary Curved Top Springline and Arch Hinged Inswing Patio Doors	40%	0.29	0.25	193	16%	24%	59%	55°F

* "Low-E4™", "Low-E4® SmartSun™" and "Low-E4® Sun" are Andersen trademarks for "Low-E" glass.

• Based on NFRC testing/simulation conditions using Windows v7.4.6.0 and NFRC validated spectral data. 0°F outside temperature, 70°F inside temperature and a 15 mph wind.

1) Visible Transmittance (VT) measures how much light comes through the glass. The higher the value, from 0 to 1, the more daylight the glass lets in. Visible Transmittance is measured over the 380 to 760 nanometer portion of the solar spectrum.

2) Shading Coefficient (SC) defines the amount of heat gain through the glass compared to a single light of clear 1/8" (3) glass.

3) Solar Heat Gain Coefficient (SHGC) defines the fraction of solar radiation admitted through the glass directly transmitted, as well as absorbed and subsequently released inward. The lower the value, the less heat is transmitted through the product.

4) Relative Heat Gain (RHG) is the amount of heat gain through a glazing incorporating U-Factor and Solar Heat Gain Coefficient.

5) Transmission Ultra-Violet Energy (Tuv). The transmission of short-wave energy in the 300-380 nanometer portion of the solar spectrum. The energy can cause fabric fading.

6) Transmission Damage Function (Tdw). The transmission of UV and visible light energy in the 300-600 nanometer portion of the solar spectrum. The value includes both the UV and visible light energy that can cause fabric fading. This rating has also been referred to as the Krochmann Damage Function. This rating better predicts fading potential than UV transmission alone. The lower the Damage Function rating, the less transmission of short-wave energy through the glass that can potentially cause fabric fading. Fabric type is also a key component of fading potential.

7) Percent relative humidity before condensation occurs at the center of glass, taken using center of glass temperature.

8) Inside glass surface temperatures are taken at the center of glass.

• This data is accurate as of May 2021. Due to ongoing product changes, updated test results or new industry standards, this data may change over time. Contact your Andersen supplier for current performance information or upgrade options.

• Contact your Andersen supplier or visit andersenwindows.com/nfrc for total unit performance data on windows and patio doors (including units with patterned glass, tempered glass and glass with capillary breather tubes).

PRODUCT PERFORMANCE

Andersen® NFRC Certified Total Unit Performance

For current performance information, please visit andersenwindows.com.

Andersen® Product	High-Performance Dual-Pane Glass Type		U-Factor ¹	SHGC ²	VT ³
400 Series Casement Windows AND-N-1	Low-E4*	Without Grilles	0.29	0.32	0.54
		Simulated Divided Light Grilles	0.29	0.29	0.49
		Finelight™ Grilles	0.30	0.29	0.49
		Full Divided Light Grilles	0.29	0.29	0.49
	Low-E4 w/HeatLock®	Without Grilles	0.25	0.31	0.53
		Simulated Divided Light Grilles	0.25	0.28	0.48
		Finelight Grilles	0.26	0.28	0.48
		Full Divided Light Grilles	0.26	0.28	0.48
	Low-E4 Sun	Without Grilles	0.29	0.20	0.30
		Simulated Divided Light Grilles	0.29	0.18	0.27
		Finelight Grilles	0.30	0.18	0.27
		Full Divided Light Grilles	0.30	0.18	0.27
	Low-E4 SmartSun™	Without Grilles	0.28	0.21	0.49
		Simulated Divided Light Grilles	0.28	0.20	0.44
		Finelight Grilles	0.29	0.20	0.44
		Full Divided Light Grilles	0.29	0.20	0.44
	Low-E4 SmartSun w/HeatLock	Without Grilles	0.25	0.21	0.47
		Simulated Divided Light Grilles	0.25	0.19	0.43
		Finelight Grilles	0.25	0.19	0.43
		Full Divided Light Grilles	0.26	0.19	0.43
400 Series Complementary Casement Windows AND-N-107	Low-E4*	Without Grilles	0.30	0.28	0.47
		Simulated Divided Light Grilles	0.30	0.25	0.42
		Finelight™ Grilles	0.31	0.25	0.42
		Full Divided Light Grilles	0.31	0.25	0.42
	Low-E4 w/HeatLock®	Without Grilles	0.27	0.27	0.46
		Simulated Divided Light Grilles	0.27	0.25	0.41
		Finelight Grilles	0.27	0.25	0.41
		Full Divided Light Grilles	0.28	0.25	0.41
	Low-E4 Sun	Without Grilles	0.30	0.17	0.26
		Simulated Divided Light Grilles	0.30	0.16	0.23
		Finelight Grilles	0.31	0.16	0.23
		Full Divided Light Grilles	0.31	0.16	0.23
	Low-E4 SmartSun™	Without Grilles	0.30	0.18	0.42
		Simulated Divided Light Grilles	0.30	0.17	0.38
		Finelight Grilles	0.30	0.17	0.38
		Full Divided Light Grilles	0.30	0.17	0.38
	Low-E4 SmartSun w/HeatLock	Without Grilles	0.26	0.18	0.41
		Simulated Divided Light Grilles	0.26	0.17	0.37
		Finelight Grilles	0.26	0.17	0.37
		Full Divided Light Grilles	0.28	0.17	0.37
400 Series Awning Windows AND-N-2	Low-E4*	Without Grilles	0.29	0.31	0.53
		Simulated Divided Light Grilles	0.29	0.29	0.48
		Finelight™ Grilles	0.29	0.29	0.48
		Full Divided Light Grilles	0.29	0.29	0.48
	Low-E4 w/HeatLock®	Without Grilles	0.26	0.30	0.52
		Simulated Divided Light Grilles	0.26	0.28	0.47
		Finelight Grilles	0.26	0.28	0.47
		Full Divided Light Grilles	0.27	0.28	0.47
	Low-E4 Sun	Without Grilles	0.29	0.19	0.29
		Simulated Divided Light Grilles	0.29	0.18	0.27
		Finelight Grilles	0.30	0.18	0.27
		Full Divided Light Grilles	0.30	0.18	0.27
	Low-E4 SmartSun™	Without Grilles	0.28	0.21	0.48
		Simulated Divided Light Grilles	0.28	0.19	0.43
		Finelight Grilles	0.29	0.19	0.43
		Full Divided Light Grilles	0.29	0.19	0.43
	Low-E4 SmartSun w/HeatLock	Without Grilles	0.25	0.20	0.47
		Simulated Divided Light Grilles	0.25	0.19	0.42
		Finelight Grilles	0.25	0.19	0.42
		Full Divided Light Grilles	0.26	0.19	0.42

Important information on NFRC Certified Total Unit Performance:

• “Low-E4;” “Low-E4” SmartSun™ “Low-E4” Sun” and “HeatLock™” are Andersen trademarks for “Low-E” glass.

1) U-Factor defines the amount of heat loss through the total unit in BTU/hr-ft². °F. The lower the value, the less heat is lost through the entire product. Window values represent non-tempered glass. Use of tempered glass can increase U-Factor ratings. See andersenwindows.com/nfrc for specific performance values. Door values represent tempered glass. 2) Solar Heat Gain Coefficient (SHGC) defines the fraction of solar radiation admitted through the glass directly transmitted, as well as absorbed and subsequently released inward. The lower the value, the less heat is transmitted through the product. 3) Visible Transmittance (VT) measures how much light comes through a product (glass and frame). The higher the value, from 0 to 1, the more daylight the product lets in over the product’s total unit area. Visible Light Transmittance is measured over the 380 to 760 nanometer portion of the solar spectrum.

• NFRC ratings are based on modeling by a third-party agency as validated by an independent test lab in compliance with NFRC program and procedural requirements.

• This data is accurate as of May 2021. Due to ongoing product changes, updated test results, or new industry standards or requirements, this data may change over time. Ratings are for sizes specified by NFRC for testing and certification. Ratings may vary depending on use of tempered glass, different grille options, glass with capillary breather tubes for high altitudes, etc.

Andersen® Product	High-Performance Dual-Pane Glass Type		U-Factor ¹	SHGC ²	VT ³
400 Series Casement/Awning Picture and Transom Windows AND-N-54	Low-E4*	Without Grilles	0.27	0.34	0.60
		Simulated Divided Light Grilles	0.27	0.31	0.53
		Finelight™ Grilles	0.27	0.31	0.53
		Full Divided Light Grilles	0.28	0.31	0.53
	Low-E4 w/HeatLock®	Without Grilles	0.22	0.34	0.58
		Simulated Divided Light Grilles	0.22	0.31	0.52
		Finelight Grilles	0.22	0.31	0.52
		Full Divided Light Grilles	0.25	0.31	0.52
	Low-E4 Sun	Without Grilles	0.27	0.21	0.33
		Simulated Divided Light Grilles	0.27	0.19	0.30
		Finelight Grilles	0.27	0.19	0.30
		Full Divided Light Grilles	0.29	0.19	0.30
	Low-E4 SmartSun™	Without Grilles	0.26	0.23	0.54
		Simulated Divided Light Grilles	0.26	0.21	0.48
		Finelight Grilles	0.26	0.21	0.48
		Full Divided Light Grilles	0.28	0.21	0.48
	Low-E4 SmartSun w/HeatLock	Without Grilles	0.22	0.22	0.52
		Simulated Divided Light Grilles	0.22	0.20	0.47
		Finelight Grilles	0.22	0.20	0.47
		Full Divided Light Grilles	0.24	0.20	0.47
400 Series Woodwright® Double-Hung Full-Frame Windows AND-N-66	Low-E4*	Without Grilles	0.30	0.30	0.52
		Simulated Divided Light Grilles	0.30	0.27	0.46
		Finelight™ Grilles	0.31	0.27	0.46
		Full Divided Light Grilles	0.31	0.27	0.46
	Low-E4 w/HeatLock®	Without Grilles	0.26	0.30	0.51
		Simulated Divided Light Grilles	0.26	0.27	0.45
		Finelight Grilles	0.27	0.27	0.45
		Full Divided Light Grilles	0.28	0.27	0.45
	Low-E4 Sun	Without Grilles	0.30	0.19	0.28
		Simulated Divided Light Grilles	0.30	0.17	0.25
		Finelight Grilles	0.31	0.17	0.25
		Full Divided Light Grilles	0.31	0.17	0.25
	Low-E4 SmartSun™	Without Grilles	0.29	0.21	0.47
		Simulated Divided Light Grilles	0.29	0.19	0.42
		Finelight Grilles	0.30	0.19	0.42
		Full Divided Light Grilles	0.30	0.19	0.42
	Low-E4 SmartSun w/HeatLock	Without Grilles	0.26	0.20	0.46
		Simulated Divided Light Grilles	0.26	0.18	0.41
		Finelight Grilles	0.26	0.18	0.41
		Full Divided Light Grilles	0.27	0.18	0.41
400 Series Woodwright® Picture Full-Frame Windows AND-N-67	Low-E4*	Without Grilles	0.27	0.32	0.55
		Simulated Divided Light Grilles	0.27	0.29	0.49
		Finelight™ Grilles	0.27	0.29	0.49
		Full Divided Light Grilles	0.28	0.29	0.49
	Low-E4 w/HeatLock®	Without Grilles	0.23	0.31	0.54
		Simulated Divided Light Grilles	0.23	0.28	0.48
		Finelight Grilles	0.23	0.28	0.48
		Full Divided Light Grilles	0.25	0.28	0.48
	Low-E4 Sun	Without Grilles	0.27	0.20	0.31
		Simulated Divided Light Grilles	0.27	0.18	0.27
		Finelight Grilles	0.27	0.18	0.27
		Full Divided Light Grilles	0.29	0.18	0.27
	Low-E4 SmartSun™	Without Grilles	0.26	0.21	0.50
		Simulated Divided Light Grilles	0.26	0.19	0.44
		Finelight Grilles	0.26	0.19	0.44
		Full Divided Light Grilles	0.28	0.19	0.44
	Low-E4 SmartSun w/HeatLock	Without Grilles	0.22	0.21	0.48
		Simulated Divided Light Grilles	0.22	0.19	0.43
		Finelight Grilles	0.22	0.19	0.43
		Full Divided Light Grilles	0.25	0.19	0.43
400 Series Woodwright® Transom Full-Frame Windows AND-N-68	Low-E4*	Without Grilles	0.27	0.33	0.57
		Simulated Divided Light Grilles	0.27	0.30	0.51
		Finelight™ Grilles	0.27	0.30	0.51
		Full Divided Light Grilles	0.29	0.30	0.51
	Low-E4 w/HeatLock®	Without Grilles	0.23	0.33	0.56
		Simulated Divided Light Grilles	0.23	0.29	0.50
		Finelight Grilles	0.23	0.29	0.50
		Full Divided Light Grilles	0.25	0.29	0.50
	Low-E4 Sun	Without Grilles	0.28	0.20	0.32
		Simulated Divided Light Grilles	0.28	0.18	0.29
		Finelight Grilles	0.28	0.18	0.29
		Full Divided Light Grilles	0.29	0.18	0.29
	Low-E4 SmartSun™	Without Grilles	0.27	0.22	0.52
		Simulated Divided Light Grilles	0.27	0.20	0.46
		Finelight Grilles	0.27	0.20	0.46
		Full Divided Light Grilles	0.28	0.20	0.46
	Low-E4 SmartSun w/HeatLock	Without Grilles	0.22	0.22	0.50
		Simulated Divided Light Grilles	0.22	0.20	0.45
		Finelight Grilles	0.22	0.20	0.45
		Full Divided Light Grilles	0.25	0.20	0.45

continued on next page

Andersen® NFRC Certified Total Unit Performance *(continued)*

For current performance information, please visit andersenwindows.com.

Andersen® Product		High-Performance Dual-Pane Glass Type	U-Factor ¹	SHGC ²	VT ³
400 Series Woodwright® Double-Hung Insert Windows AND-N-74	Low-E4* w/HeatLock®	Without Grilles	0.30	0.31	0.53
		Simulated Divided Light Grilles	0.30	0.28	0.47
		Finelight™ Grilles	0.30	0.28	0.47
		Full Divided Light Grilles	0.31	0.28	0.47
	Low-E4 w/HeatLock®	Without Grilles	0.26	0.30	0.52
		Simulated Divided Light Grilles	0.26	0.27	0.46
		Finelight Grilles	0.26	0.27	0.46
		Full Divided Light Grilles	0.28	0.27	0.46
	Low-E4 Sun	Without Grilles	0.30	0.19	0.30
		Simulated Divided Light Grilles	0.30	0.17	0.26
		Finelight Grilles	0.30	0.17	0.26
		Full Divided Light Grilles	0.31	0.17	0.26
	Low-E4 SmartSun™	Without Grilles	0.29	0.21	0.48
		Simulated Divided Light Grilles	0.29	0.19	0.43
		Finelight Grilles	0.29	0.19	0.43
		Full Divided Light Grilles	0.30	0.19	0.43
	Low-E4 SmartSun w/HeatLock	Without Grilles	0.26	0.20	0.47
		Simulated Divided Light Grilles	0.26	0.18	0.42
		Finelight Grilles	0.26	0.18	0.42
		Full Divided Light Grilles	0.27	0.18	0.42
400 Series Woodwright® Picture Insert Windows AND-N-77	Low-E4* w/HeatLock®	Without Grilles	0.29	0.32	0.55
		Simulated Divided Light Grilles	0.29	0.29	0.49
		Finelight™ Grilles	0.29	0.29	0.49
		Full Divided Light Grilles	0.30	0.29	0.49
	Low-E4 w/HeatLock®	Without Grilles	0.24	0.32	0.54
		Simulated Divided Light Grilles	0.24	0.29	0.48
		Finelight Grilles	0.24	0.29	0.48
		Full Divided Light Grilles	0.27	0.29	0.48
	Low-E4 Sun	Without Grilles	0.29	0.20	0.31
		Simulated Divided Light Grilles	0.29	0.18	0.27
		Finelight Grilles	0.29	0.18	0.27
		Full Divided Light Grilles	0.30	0.18	0.27
	Low-E4 SmartSun™	Without Grilles	0.28	0.21	0.50
		Simulated Divided Light Grilles	0.28	0.19	0.44
		Finelight Grilles	0.28	0.19	0.44
		Full Divided Light Grilles	0.29	0.19	0.44
	Low-E4 SmartSun w/HeatLock	Without Grilles	0.24	0.21	0.49
		Simulated Divided Light Grilles	0.24	0.19	0.43
		Finelight Grilles	0.24	0.19	0.43
		Full Divided Light Grilles	0.26	0.19	0.43
400 Series Woodwright® Transom Insert Windows AND-N-78	Low-E4* w/HeatLock®	Without Grilles	0.29	0.33	0.56
		Simulated Divided Light Grilles	0.29	0.30	0.50
		Finelight™ Grilles	0.29	0.30	0.50
		Full Divided Light Grilles	0.30	0.30	0.50
	Low-E4 w/HeatLock®	Without Grilles	0.24	0.32	0.55
		Simulated Divided Light Grilles	0.24	0.29	0.49
		Finelight Grilles	0.24	0.29	0.49
		Full Divided Light Grilles	0.27	0.29	0.49
	Low-E4 Sun	Without Grilles	0.29	0.20	0.31
		Simulated Divided Light Grilles	0.29	0.18	0.28
		Finelight Grilles	0.29	0.18	0.28
		Full Divided Light Grilles	0.31	0.18	0.28
	Low-E4 SmartSun™	Without Grilles	0.28	0.22	0.51
		Simulated Divided Light Grilles	0.28	0.20	0.45
		Finelight Grilles	0.28	0.20	0.45
		Full Divided Light Grilles	0.30	0.20	0.45
	Low-E4 SmartSun w/HeatLock	Without Grilles	0.24	0.21	0.50
		Simulated Divided Light Grilles	0.24	0.19	0.44
		Finelight Grilles	0.24	0.19	0.44
		Full Divided Light Grilles	0.26	0.19	0.44
400 Series Woodwright® Springline™ Single-Hung, Arch Double-Hung Full-Frame Windows AND-N-111	Low-E4* w/HeatLock®	Without Grilles	0.28	0.30	0.52
		Simulated Divided Light Grilles	0.28	0.27	0.46
		Finelight™ Grilles	0.29	0.27	0.46
		Full Divided Light Grilles	0.29	0.27	0.46
	Low-E4 w/HeatLock®	Without Grilles	0.24	0.30	0.51
		Simulated Divided Light Grilles	0.25	0.27	0.45
		Finelight Grilles	0.25	0.27	0.45
		Full Divided Light Grilles	0.26	0.27	0.45
	Low-E4 Sun	Without Grilles	0.28	0.19	0.29
		Simulated Divided Light Grilles	0.28	0.17	0.26
		Finelight Grilles	0.29	0.17	0.26
		Full Divided Light Grilles	0.29	0.17	0.26
	Low-E4 SmartSun™	Without Grilles	0.28	0.20	0.47
		Simulated Divided Light Grilles	0.27	0.18	0.42
		Finelight Grilles	0.28	0.18	0.42
		Full Divided Light Grilles	0.29	0.18	0.42
	Low-E4 SmartSun w/HeatLock	Without Grilles	0.24	0.20	0.46
		Simulated Divided Light Grilles	0.24	0.18	0.41
		Finelight Grilles	0.25	0.18	0.41
		Full Divided Light Grilles	0.26	0.18	0.41

Refer to notes on page 204 for important information on performance data.

Andersen® Product	High-Performance Dual-Pane Glass Type		U-Factor ¹	SHGC ²	VT ³
400 Series Tilt-Wash Double-Hung Full-Frame Windows AND-N-24	Low-E4* w/HeatLock®	Without Grilles	0.30	0.31	0.53
		Simulated Divided Light Grilles	0.30	0.28	0.47
		Finelight™ Grilles	0.32	0.28	0.47
		Full Divided Light Grilles	0.31	0.28	0.47
	Low-E4 w/HeatLock®	Without Grilles	0.27	0.30	0.52
		Simulated Divided Light Grilles	0.27	0.27	0.46
		Finelight Grilles	0.28	0.27	0.46
		Full Divided Light Grilles	0.28	0.27	0.46
	Low-E4 Sun	Without Grilles	0.31	0.19	0.29
		Simulated Divided Light Grilles	0.31	0.17	0.26
		Finelight Grilles	0.32	0.17	0.26
		Full Divided Light Grilles	0.31	0.17	0.26
	Low-E4 SmartSun™	Without Grilles	0.30	0.21	0.48
		Simulated Divided Light Grilles	0.29	0.19	0.42
		Finelight Grilles	0.31	0.19	0.42
		Full Divided Light Grilles	0.30	0.19	0.42
Low-E4 SmartSun w/HeatLock	Without Grilles	0.26	0.20	0.47	
	Simulated Divided Light Grilles	0.26	0.18	0.41	
	Finelight Grilles	0.27	0.18	0.41	
	Full Divided Light Grilles	0.28	0.18	0.41	
400 Series Tilt-Wash Picture Full-Frame Windows AND-N-27	Low-E4* w/HeatLock®	Without Grilles	0.29	0.33	0.57
		Simulated Divided Light Grilles	0.29	0.30	0.51
		Finelight™ Grilles	0.29	0.30	0.51
		Full Divided Light Grilles	0.31	0.30	0.51
	Low-E4 w/HeatLock®	Without Grilles	0.25	0.32	0.56
		Simulated Divided Light Grilles	0.25	0.29	0.50
		Finelight Grilles	0.25	0.29	0.50
		Full Divided Light Grilles	0.27	0.29	0.50
	Low-E4 Sun	Without Grilles	0.30	0.20	0.32
		Simulated Divided Light Grilles	0.30	0.18	0.28
		Finelight Grilles	0.30	0.18	0.28
		Full Divided Light Grilles	0.31	0.18	0.28
	Low-E4 SmartSun™	Without Grilles	0.29	0.22	0.51
		Simulated Divided Light Grilles	0.29	0.20	0.46
		Finelight Grilles	0.29	0.20	0.46
		Full Divided Light Grilles	0.30	0.20	0.46
	Low-E4 SmartSun w/HeatLock	Without Grilles	0.25	0.21	0.50
		Simulated Divided Light Grilles	0.25	0.19	0.45
		Finelight Grilles	0.25	0.19	0.45
		Full Divided Light Grilles	0.27	0.19	0.45
400 Series Tilt-Wash Transom Full-Frame Windows AND-N-76	Low-E4* w/HeatLock®	Without Grilles	0.27	0.32	0.55
		Simulated Divided Light Grilles	0.27	0.29	0.49
		Finelight™ Grilles	0.27	0.29	0.49
		Full Divided Light Grilles	0.28	0.29	0.49
	Low-E4 w/HeatLock®	Without Grilles	0.22	0.31	0.54
		Simulated Divided Light Grilles	0.22	0.28	0.48
		Finelight Grilles	0.22	0.28	0.48
		Full Divided Light Grilles	0.25	0.28	0.48
	Low-E4 Sun	Without Grilles	0.27	0.19	0.31
		Simulated Divided Light Grilles	0.27	0.18	0.27
		Finelight Grilles	0.27	0.18	0.27
		Full Divided Light Grilles	0.28	0.18	0.27
	Low-E4 SmartSun™	Without Grilles	0.26	0.21	0.49
		Simulated Divided Light Grilles	0.26	0.19	0.44
		Finelight Grilles	0.26	0.19	0.44
		Full Divided Light Grilles	0.28	0.19	0.44
	Low-E4 SmartSun w/HeatLock	Without Grilles	0.22	0.21	0.48
		Simulated Divided Light Grilles	0.22	0.19	0.43
		Finelight Grilles	0.22	0.19	0.43
		Full Divided Light Grilles	0.24	0.19	0.43
Narroline® Double-Hung Window Conversion Kit AND-N-101	Low-E4* w/HeatLock®	Without Grilles	0.30	0.31	0.53
		Simulated Divided Light Grilles	0.32	0.28	0.47
		Finelight™ Grilles	0.30	0.28	0.47
		Full Divided Light Grilles	0.31	0.28	0.47
	Low-E4 w/HeatLock®	Without Grilles	0.26	0.31	0.52
		Simulated Divided Light Grilles	0.29	0.27	0.46
		Finelight Grilles	0.26	0.27	0.46
		Full Divided Light Grilles	0.28	0.27	0.46
	Low-E4 Sun	Without Grilles	0.30	0.19	0.30
		Simulated Divided Light Grilles	0.32	0.17	0.26
		Finelight Grilles	0.30	0.17	0.26
		Full Divided Light Grilles	0.31	0.17	0.26
	Low-E4 SmartSun™	Without Grilles	0.29	0.21	0.48
		Simulated Divided Light Grilles	0.31	0.19	0.43
		Finelight Grilles	0.29	0.19	0.43
		Full Divided Light Grilles	0.30	0.19	0.43
	Low-E4 SmartSun w/HeatLock	Without Grilles	0.26	0.20	0.47
		Simulated Divided Light Grilles	0.28	0.18	0.42
		Finelight Grilles	0.26	0.18	0.42
		Full Divided Light Grilles	0.28	0.18	0.42

Combination Designs,
Product Performance
& Installation

*This data is accurate as of May 2021. Due to ongoing product changes, updated test results, or new industry standards or requirements, this data may change over time.
Ratings are for sizes specified by NFRC for testing and certification. Ratings may vary depending on use of tempered glass, different grille options, glass for high altitudes, etc.

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PRODUCT PERFORMANCE

Andersen® NFRC Certified Total Unit Performance (continued)
For current performance information, please visit andersenwindows.com.

Andersen® Product	High-Performance Dual-Pane Glass Type		U-Factor ¹	SHGC ²	VT ³
400 Series Tilt-Wash Double-Hung Insert Windows AND-N-132	Low-E4* w/HeatLock®	Without Grilles	0.31	0.31	0.53
		Simulated Divided Light Grilles	0.31	0.28	0.47
		Finelight™ Grilles	0.32	0.28	0.47
		Full Divided Light Grilles	0.32	0.28	0.47
	Low-E4 w/HeatLock®	Without Grilles	0.27	0.31	0.52
		Simulated Divided Light Grilles	0.27	0.28	0.46
		Finelight Grilles	0.28	0.28	0.46
		Full Divided Light Grilles	0.29	0.28	0.46
	Low-E4 Sun	Without Grilles	0.31	0.19	0.30
		Simulated Divided Light Grilles	0.31	0.18	0.26
		Finelight Grilles	0.32	0.18	0.26
		Full Divided Light Grilles	0.32	0.18	0.26
	Low-E4 SmartSun™	Without Grilles	0.30	0.21	0.48
		Simulated Divided Light Grilles	0.30	0.19	0.43
		Finelight Grilles	0.31	0.19	0.43
		Full Divided Light Grilles	0.31	0.19	0.43
	Low-E4 SmartSun w/HeatLock	Without Grilles	0.27	0.20	0.47
		Simulated Divided Light Grilles	0.27	0.19	0.42
		Finelight Grilles	0.28	0.19	0.42
		Full Divided Light Grilles	0.29	0.19	0.42
400 Series Tilt-Wash Picture Insert Windows AND-N-133	Low-E4* w/HeatLock®	Without Grilles	0.29	0.32	0.55
		Simulated Divided Light Grilles	0.29	0.29	0.49
		Finelight™ Grilles	0.29	0.29	0.49
		Full Divided Light Grilles	0.30	0.29	0.49
	Low-E4 w/HeatLock®	Without Grilles	0.24	0.32	0.54
		Simulated Divided Light Grilles	0.24	0.29	0.48
		Finelight Grilles	0.24	0.29	0.48
		Full Divided Light Grilles	0.27	0.29	0.48
	Low-E4 Sun	Without Grilles	0.29	0.20	0.31
		Simulated Divided Light Grilles	0.29	0.18	0.27
		Finelight Grilles	0.29	0.18	0.27
		Full Divided Light Grilles	0.30	0.18	0.27
	Low-E4 SmartSun™	Without Grilles	0.28	0.21	0.50
		Simulated Divided Light Grilles	0.28	0.19	0.44
		Finelight Grilles	0.28	0.19	0.44
		Full Divided Light Grilles	0.29	0.19	0.44
	Low-E4 SmartSun w/HeatLock	Without Grilles	0.24	0.21	0.49
		Simulated Divided Light Grilles	0.24	0.19	0.43
		Finelight Grilles	0.24	0.19	0.43
		Full Divided Light Grilles	0.26	0.19	0.43
400 Series Tilt-Wash Transom Insert Windows AND-N-134	Low-E4* w/HeatLock®	Without Grilles	0.29	0.33	0.56
		Simulated Divided Light Grilles	0.29	0.30	0.50
		Finelight™ Grilles	0.29	0.30	0.50
		Full Divided Light Grilles	0.30	0.30	0.50
	Low-E4 w/HeatLock®	Without Grilles	0.24	0.32	0.55
		Simulated Divided Light Grilles	0.24	0.29	0.49
		Finelight Grilles	0.24	0.29	0.49
		Full Divided Light Grilles	0.27	0.29	0.49
	Low-E4 Sun	Without Grilles	0.29	0.20	0.31
		Simulated Divided Light Grilles	0.29	0.18	0.28
		Finelight Grilles	0.29	0.18	0.28
		Full Divided Light Grilles	0.31	0.18	0.28
	Low-E4 SmartSun™	Without Grilles	0.28	0.22	0.51
		Simulated Divided Light Grilles	0.28	0.20	0.45
		Finelight Grilles	0.28	0.20	0.45
		Full Divided Light Grilles	0.30	0.20	0.45
	Low-E4 SmartSun w/HeatLock	Without Grilles	0.24	0.21	0.50
		Simulated Divided Light Grilles	0.24	0.19	0.44
		Finelight Grilles	0.24	0.19	0.44
		Full Divided Light Grilles	0.26	0.19	0.44
400 Series Gliding Windows AND-N-19	Low-E4* w/HeatLock®	Without Grilles	0.30	0.29	0.50
		Simulated Divided Light Grilles	0.30	0.26	0.44
		Finelight™ Grilles	0.30	0.26	0.44
		Full Divided Light Grilles	0.31	0.26	0.44
	Low-E4 w/HeatLock®	Without Grilles	0.27	0.28	0.48
		Simulated Divided Light Grilles	0.27	0.25	0.43
		Finelight Grilles	0.27	0.25	0.43
		Full Divided Light Grilles	0.28	0.25	0.43
	Low-E4 Sun	Without Grilles	0.31	0.18	0.27
		Simulated Divided Light Grilles	0.31	0.16	0.24
		Finelight Grilles	0.31	0.16	0.24
		Full Divided Light Grilles	0.32	0.16	0.24
	Low-E4 SmartSun™	Without Grilles	0.30	0.19	0.45
		Simulated Divided Light Grilles	0.30	0.17	0.39
		Finelight Grilles	0.30	0.17	0.39
		Full Divided Light Grilles	0.31	0.17	0.39
	Low-E4 SmartSun w/HeatLock	Without Grilles	0.26	0.19	0.44
		Simulated Divided Light Grilles	0.26	0.17	0.39
		Finelight Grilles	0.26	0.17	0.39
		Full Divided Light Grilles	0.28	0.17	0.39

Refer to notes on page 207 for important information on performance data.

Andersen® Product	High-Performance Dual-Pane Glass Type		U-Factor ¹	SHGC ²	VT ³
400 Series Elliptical Windows AND-N-16	Low-E4* w/HeatLock®	Without Grilles	0.27	0.34	0.59
		Simulated Divided Light Grilles	0.27	0.31	0.53
		Finelight™ Grilles	0.27	0.31	0.53
		Full Divided Light Grilles	0.29	0.31	0.53
	Low-E4 w/HeatLock®	Without Grilles	0.23	0.34	0.58
		Simulated Divided Light Grilles	0.23	0.30	0.52
		Finelight Grilles	0.23	0.30	0.52
		Full Divided Light Grilles	0.25	0.30	0.52
	Low-E4 Sun	Without Grilles	0.28	0.21	0.33
		Simulated Divided Light Grilles	0.28	0.19	0.29
		Finelight Grilles	0.28	0.19	0.29
		Full Divided Light Grilles	0.29	0.19	0.29
	Low-E4 SmartSun™	Without Grilles	0.27	0.23	0.53
		Simulated Divided Light Grilles	0.27	0.21	0.48
		Finelight Grilles	0.27	0.21	0.48
		Full Divided Light Grilles	0.28	0.21	0.48
	Low-E4 SmartSun w/HeatLock	Without Grilles	0.22	0.22	0.52
		Simulated Divided Light Grilles	0.22	0.20	0.46
		Finelight Grilles	0.22	0.20	0.46
		Full Divided Light Grilles	0.25	0.20	0.46
400 Series Half Circle Windows Casement AND-N-147	Low-E4* w/HeatLock®	Without Grilles	0.27	0.35	0.60
		Simulated Divided Light Grilles	0.27	0.32	0.53
		Finelight™ Grilles	0.27	0.31	0.53
		Full Divided Light Grilles	0.28	0.31	0.53
	Low-E4 w/HeatLock®	Without Grilles	0.22	0.34	0.58
		Simulated Divided Light Grilles	0.22	0.31	0.52
		Finelight Grilles	0.22	0.31	0.52
		Full Divided Light Grilles	0.25	0.31	0.52
	Low-E4 Sun	Without Grilles	0.27	0.21	0.33
		Simulated Divided Light Grilles	0.27	0.19	0.30
		Finelight Grilles	0.27	0.19	0.30
		Full Divided Light Grilles	0.29	0.19	0.30
	Low-E4 SmartSun™	Without Grilles	0.26	0.23	0.54
		Simulated Divided Light Grilles	0.26	0.21	0.48
		Finelight Grilles	0.26	0.21	0.48
		Full Divided Light Grilles	0.27	0.21	0.48
	Low-E4 SmartSun w/HeatLock	Without Grilles	0.22	0.22	0.52
		Simulated Divided Light Grilles	0.22	0.20	0.47
		Finelight Grilles	0.22	0.20	0.47
		Full Divided Light Grilles	0.24	0.20	0.47
400 Series Circle and Oval Windows AND-N-148	Low-E4* w/HeatLock®	Without Grilles	0.27	0.35	0.60
		Simulated Divided Light Grilles	0.27	0.31	0.53
		Finelight™ Grilles	0.27	0.31	0.53
		Full Divided Light Grilles	0.28	0.31	0.53
	Low-E4 w/HeatLock®	Without Grilles	0.22	0.34	0.58
		Simulated Divided Light Grilles	0.22	0.31	0.52
		Finelight Grilles	0.22	0.31	0.52
		Full Divided Light Grilles	0.25	0.31	0.52
	Low-E4 Sun	Without Grilles	0.27	0.21	0.33
		Simulated Divided Light Grilles	0.27	0.19	0.30
		Finelight Grilles	0.27	0.19	0.30
		Full Divided Light Grilles	0.29	0.19	0.30
	Low-E4 SmartSun™	Without Grilles	0.26	0.23	0.54
		Simulated Divided Light Grilles	0.26	0.21	0.48
		Finelight Grilles	0.26	0.21	0.48
		Full Divided Light Grilles	0.28	0.21	0.48
	Low-E4 SmartSun w/HeatLock	Without Grilles	0.22	0.22	0.52
		Simulated Divided Light Grilles	0.22	0.20	0.47
		Finelight Grilles	0.22	0.20	0.47
		Full Divided Light Grilles	0.24	0.20	0.47
400 Series Arch Windows AND-N-18	Low-E4* w/HeatLock®	Without Grilles	0.27	0.33	0.58
		Simulated Divided Light Grilles	0.27	0.30	0.52
		Finelight™ Grilles	0.27	0.30	0.52
		Full Divided Light Grilles	0.28	0.30	0.52
	Low-E4 w/HeatLock®	Without Grilles	0.23	0.32	0.56
		Simulated Divided Light Grilles	0.23	0.29	0.50
		Finelight Grilles	0.23	0.29	0.50
		Full Divided Light Grilles	0.25	0.29	0.50
	Low-E4 Sun	Without Grilles	0.27	0.20	0.31
		Simulated Divided Light Grilles	0.27	0.18	0.28
		Finelight Grilles	0.27	0.18	0.28
		Full Divided Light Grilles	0.29	0.18	0.28
	Low-E4 SmartSun™	Without Grilles	0.26	0.23	0.52
		Simulated Divided Light Grilles	0.26	0.21	0.46
		Finelight Grilles	0.26	0.21	0.46
		Full Divided Light Grilles	0.28	0.21	0.46
	Low-E4 SmartSun w/HeatLock	Without Grilles	0.22	0.22	0.51
		Simulated Divided Light Grilles	0.22	0.20	0.45
		Finelight Grilles	0.22	0.20	0.45
		Full Divided Light Grilles	0.24	0.20	0.45

*This data is accurate as of May 2021. Due to ongoing product changes, updated test results, or new industry standards or requirements, this data may change over time.
Ratings are for sizes specified by NFRC for testing and certification. Ratings may vary depending on use of tempered glass, different grille options, glass for high altitudes, etc.

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Andersen® NFRC Certified Total Unit Performance (continued)

 For current performance information, please visit andersenwindows.com.

Andersen® Product		High-Performance Dual-Pane Glass Type	U-Factor ¹	SHGC ²	VT ³
400 Series Springline™ Windows AND-N-25	Low-E4* w/HeatLock™	Without Grilles	0.28	0.33	0.57
		Simulated Divided Light Grilles	0.28	0.30	0.51
		Finelight™ Grilles	0.28	0.30	0.51
		Full Divided Light Grilles	0.29	0.30	0.51
	Low-E4 w/HeatLock™	Without Grilles	0.24	0.32	0.56
		Simulated Divided Light Grilles	0.24	0.29	0.50
		Finelight Grilles	0.24	0.29	0.50
		Full Divided Light Grilles	0.26	0.29	0.50
	Low-E4 Sun	Without Grilles	0.28	0.20	0.31
		Simulated Divided Light Grilles	0.28	0.18	0.28
		Finelight Grilles	0.28	0.18	0.28
		Full Divided Light Grilles	0.30	0.18	0.28
	Low-E4 SmartSun™	Without Grilles	0.27	0.23	0.52
		Simulated Divided Light Grilles	0.27	0.21	0.46
		Finelight Grilles	0.27	0.21	0.46
		Full Divided Light Grilles	0.29	0.21	0.46
	Low-E4 SmartSun w/HeatLock™	Without Grilles	0.23	0.22	0.50
		Simulated Divided Light Grilles	0.23	0.20	0.45
		Finelight Grilles	0.23	0.20	0.45
		Full Divided Light Grilles	0.25	0.20	0.45
400 Series Flexiframe® Windows AND-N-17	Low-E4* w/HeatLock™	Without Grilles	0.27	0.33	0.58
		Simulated Divided Light Grilles	0.27	0.30	0.52
		Finelight™ Grilles	0.27	0.30	0.52
		Full Divided Light Grilles	0.28	0.30	0.52
	Low-E4 w/HeatLock™	Without Grilles	0.22	0.32	0.56
		Simulated Divided Light Grilles	0.22	0.29	0.50
		Finelight Grilles	0.22	0.29	0.50
		Full Divided Light Grilles	0.25	0.29	0.50
	Low-E4 Sun	Without Grilles	0.27	0.20	0.31
		Simulated Divided Light Grilles	0.27	0.18	0.28
		Finelight Grilles	0.27	0.18	0.28
		Full Divided Light Grilles	0.28	0.18	0.28
	Low-E4 SmartSun™	Without Grilles	0.26	0.23	0.52
		Simulated Divided Light Grilles	0.26	0.21	0.46
		Finelight Grilles	0.26	0.21	0.46
		Full Divided Light Grilles	0.27	0.21	0.46
	Low-E4 SmartSun w/HeatLock™	Without Grilles	0.22	0.22	0.51
		Simulated Divided Light Grilles	0.22	0.20	0.45
		Finelight Grilles	0.22	0.20	0.45
		Full Divided Light Grilles	0.24	0.20	0.45
400 Series Complementary Specialty Windows 400 Series Casement, Awning and Picture Windows AND-N-105	Low-E4* w/HeatLock™	Without Grilles	0.29	0.35	0.61
		Simulated Divided Light Grilles	0.29	0.32	0.55
		Finelight™ Grilles	0.29	0.32	0.55
		Full Divided Light Grilles	0.30	0.32	0.55
	Low-E4 w/HeatLock™	Without Grilles	0.24	0.35	0.60
		Simulated Divided Light Grilles	0.24	0.31	0.54
		Finelight Grilles	0.24	0.31	0.54
		Full Divided Light Grilles	0.26	0.31	0.54
	Low-E4 Sun	Without Grilles	0.29	0.22	0.34
		Simulated Divided Light Grilles	0.29	0.20	0.30
		Finelight Grilles	0.29	0.20	0.30
		Full Divided Light Grilles	0.30	0.20	0.30
	Low-E4 SmartSun™	Without Grilles	0.28	0.23	0.55
		Simulated Divided Light Grilles	0.28	0.21	0.49
		Finelight Grilles	0.28	0.21	0.49
		Full Divided Light Grilles	0.29	0.21	0.49
	Low-E4 SmartSun w/HeatLock™	Without Grilles	0.24	0.23	0.54
		Simulated Divided Light Grilles	0.24	0.21	0.48
		Finelight Grilles	0.24	0.21	0.48
		Full Divided Light Grilles	0.27	0.21	0.48
400 Series Complementary Specialty Windows 400 Series Double-Hung Windows and Patio Doors AND-N-105	Low-E4* w/HeatLock™	Without Grilles	0.28	0.37	0.64
		Simulated Divided Light Grilles	0.28	0.33	0.57
		Finelight™ Grilles	0.28	0.33	0.57
		Full Divided Light Grilles	0.29	0.33	0.57
	Low-E4 w/HeatLock™	Without Grilles	0.23	0.36	0.62
		Simulated Divided Light Grilles	0.23	0.33	0.56
		Finelight Grilles	0.23	0.33	0.56
		Full Divided Light Grilles	0.25	0.33	0.56
	Low-E4 Sun	Without Grilles	0.29	0.22	0.35
		Simulated Divided Light Grilles	0.29	0.20	0.32
		Finelight Grilles	0.29	0.20	0.32
		Full Divided Light Grilles	0.30	0.20	0.32
	Low-E4 SmartSun™	Without Grilles	0.27	0.24	0.57
		Simulated Divided Light Grilles	0.27	0.22	0.51
		Finelight Grilles	0.27	0.22	0.51
		Full Divided Light Grilles	0.28	0.22	0.51
	Low-E4 SmartSun w/HeatLock™	Without Grilles	0.23	0.24	0.56
		Simulated Divided Light Grilles	0.23	0.22	0.50
		Finelight Grilles	0.23	0.22	0.50
		Full Divided Light Grilles	0.25	0.22	0.50

Andersen® Product	High-Performance Dual-Pane Glass Type		U-Factor ¹	SHGC ²	VT ³	
400 Series Frenchwood® Two-Panel AND-N-6	Low-E4*	Without Grilles	0.30	0.26	0.45	
		Blinds-Between-the-Glass *	0.36	0.24	0.40	
		Simulated Divided Light Grilles	0.30	0.23	0.38	
		Finelight™ Grilles	0.30	0.23	0.38	
		Full Divided Light Grilles	0.32	0.23	0.38	
	Low-E4 w/HeatLock®	Without Grilles	0.27	0.26	0.44	
		Simulated Divided Light Grilles	0.27	0.23	0.37	
		Finelight Grilles	0.27	0.23	0.37	
		Full Divided Light Grilles	0.29	0.23	0.37	
	Low-E4 Sun	Without Grilles	0.31	0.16	0.25	
		Simulated Divided Light Grilles	0.31	0.14	0.21	
		Finelight Grilles	0.31	0.14	0.21	
		Full Divided Light Grilles	0.32	0.14	0.21	
	Low-E4 SmartSun™	Without Grilles	0.30	0.18	0.40	
		Simulated Divided Light Grilles	0.30	0.16	0.35	
		Finelight Grilles	0.30	0.16	0.35	
		Full Divided Light Grilles	0.31	0.16	0.35	
	Low-E4 SmartSun w/HeatLock	Without Grilles	0.27	0.17	0.39	
		Simulated Divided Light Grilles	0.27	0.15	0.34	
		Finelight Grilles	0.27	0.15	0.34	
		Full Divided Light Grilles	0.29	0.15	0.34	
	400 Series Frenchwood® Hinged Inswing Patio Doors AND-N-10	Low-E4*	Without Grilles	0.30	0.24	0.41
			Blinds-Between-the-Glass *	0.34	0.24	0.41
			Simulated Divided Light Grilles	0.30	0.21	0.35
Finelight™ Grilles			0.30	0.21	0.35	
Full Divided Light Grilles			0.32	0.21	0.35	
Low-E4 w/HeatLock®		Without Grilles	0.27	0.24	0.40	
		Simulated Divided Light Grilles	0.27	0.21	0.34	
		Finelight Grilles	0.27	0.21	0.34	
		Full Divided Light Grilles	0.29	0.21	0.34	
Low-E4 Sun		Without Grilles	0.31	0.15	0.23	
		Simulated Divided Light Grilles	0.31	0.13	0.19	
		Finelight Grilles	0.31	0.13	0.19	
		Full Divided Light Grilles	0.32	0.13	0.19	
Low-E4 SmartSun™		Without Grilles	0.30	0.16	0.37	
		Simulated Divided Light Grilles	0.30	0.14	0.31	
		Finelight Grilles	0.30	0.14	0.31	
		Full Divided Light Grilles	0.31	0.14	0.31	
Low-E4 SmartSun w/HeatLock		Without Grilles	0.27	0.16	0.36	
		Simulated Divided Light Grilles	0.27	0.14	0.31	
		Finelight Grilles	0.27	0.14	0.31	
		Full Divided Light Grilles	0.29	0.14	0.31	
400 Series Frenchwood® Patio Door Sidelights AND-N-64		Low-E4*	Without Grilles	0.30	0.22	0.37
			Simulated Divided Light Grilles	0.30	0.20	0.32
			Finelight™ Grilles	0.30	0.20	0.32
	Full Divided Light Grilles		0.31	0.20	0.32	
	Low-E4 w/HeatLock®	Without Grilles	0.27	0.22	0.36	
		Simulated Divided Light Grilles	0.27	0.20	0.32	
		Finelight Grilles	0.27	0.20	0.32	
		Full Divided Light Grilles	0.29	0.20	0.32	
	Low-E4 Sun	Without Grilles	0.30	0.14	0.20	
		Simulated Divided Light Grilles	0.30	0.13	0.18	
		Finelight Grilles	0.30	0.13	0.18	
		Full Divided Light Grilles	0.31	0.13	0.18	
	Low-E4 SmartSun™	Without Grilles	0.29	0.15	0.33	
		Simulated Divided Light Grilles	0.29	0.14	0.29	
		Finelight Grilles	0.29	0.14	0.29	
		Full Divided Light Grilles	0.30	0.14	0.29	
	Low-E4 SmartSun w/HeatLock	Without Grilles	0.27	0.15	0.32	
		Simulated Divided Light Grilles	0.27	0.13	0.28	
		Finelight Grilles	0.27	0.13	0.28	
		Full Divided Light Grilles	0.28	0.13	0.28	

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Important information on NFRC Certified Total Unit Performance:

- "Low-E4," "Low-E4 SmartSun," "Low-E4 Sun" and "HeatLock" are Andersen trademarks for "Low-E" glass.
- 1) U-Factor defines the amount of heat loss through the total unit in BTU/hr-ft²·°F. The lower the value, the less heat is lost through the entire product. Window values represent non-tempered glass. Use of tempered glass can increase U-Factor ratings. See andersenwindows.com/nfrc for specific performance values. Door values represent tempered glass. 2) Solar Heat Gain Coefficient (SHGC) defines the fraction of solar radiation admitted through the glass directly transmitted, as well as absorbed and subsequently released inward. The lower the value, the less heat is transmitted through the product. 3) Visible Transmittance (VT) measures how much light comes through a product (glass and frame). The higher the value, from 0 to 1, the more daylight the product lets in over the product's total unit area. Visible Light Transmittance is measured over the 380 to 760 nanometer portion of the solar spectrum.
- NFRC ratings are based on modeling by a third-party agency as validated by an independent test lab in compliance with NFRC program and procedural requirements.
- This data is accurate as of May 2021. Due to ongoing product changes, updated test results, or new industry standards or requirements, this data may change over time. Ratings are for sizes specified by NFRC for testing and certification. Ratings may vary depending on use of tempered glass, different grille options, glass with capillary breather tubes for high altitudes, etc.
- Available for select patio door sizes. Data based on blinds in full open position.

 Combination Designs,
 Product Performance
 & Installation

PRODUCT PERFORMANCE

Andersen® NFRC Certified Total Unit Performance (continued)
For current performance information, please visit andersenwindows.com.

Andersen® Product	High-Performance Dual-Pane Glass Type		U-Factor ¹	SHGC ²	VT ³
400 Series Frenchwood® Patio Door Transoms AND-N-65	Low-E4* w/HeatLock®	Without Grilles	0.29	0.24	0.40
		Simulated Divided Light Grilles	0.29	0.21	0.35
		Finelight™ Grilles	0.29	0.21	0.35
		Full Divided Light Grilles	0.30	0.21	0.35
	Low-E4 w/HeatLock®	Without Grilles	0.26	0.23	0.39
		Simulated Divided Light Grilles	0.26	0.21	0.34
		Finelight Grilles	0.26	0.21	0.34
		Full Divided Light Grilles	0.28	0.21	0.34
	Low-E4 Sun	Without Grilles	0.29	0.15	0.22
		Simulated Divided Light Grilles	0.29	0.13	0.20
		Finelight Grilles	0.29	0.13	0.20
		Full Divided Light Grilles	0.30	0.13	0.20
	Low-E4 SmartSun™	Without Grilles	0.29	0.16	0.36
		Simulated Divided Light Grilles	0.29	0.14	0.32
		Finelight Grilles	0.29	0.14	0.32
		Full Divided Light Grilles	0.29	0.14	0.32
	Low-E4 SmartSun w/HeatLock	Without Grilles	0.26	0.16	0.35
		Simulated Divided Light Grilles	0.26	0.14	0.31
		Finelight Grilles	0.26	0.14	0.31
		Full Divided Light Grilles	0.27	0.14	0.31
400 Series Complementary Springline™ and Arch Hinged Inswing Patio Doors AND-N-127	Low-E4* w/HeatLock®	Without Grilles	0.32	0.24	0.41
		Simulated Divided Light Grilles	0.32	0.21	0.35
		Finelight™ Grilles	0.32	0.21	0.35
		Full Divided Light Grilles	0.33	0.21	0.35
	Low-E4 w/HeatLock®	Without Grilles	0.29	0.24	0.40
		Simulated Divided Light Grilles	0.29	0.21	0.34
		Finelight Grilles	0.29	0.21	0.34
		Full Divided Light Grilles	0.30	0.21	0.34
	Low-E4 Sun	Without Grilles	0.33	0.15	0.23
		Simulated Divided Light Grilles	0.33	0.13	0.20
		Finelight Grilles	0.33	0.13	0.20
		Full Divided Light Grilles	0.34	0.13	0.20
	Low-E4 SmartSun™	Without Grilles	0.32	0.16	0.37
		Simulated Divided Light Grilles	0.32	0.14	0.32
		Finelight Grilles	0.32	0.14	0.32
		Full Divided Light Grilles	0.33	0.14	0.32
	Low-E4 SmartSun w/HeatLock	Without Grilles	0.29	0.16	0.36
		Simulated Divided Light Grilles	0.29	0.14	0.31
		Finelight Grilles	0.29	0.14	0.31
		Full Divided Light Grilles	0.31	0.14	0.31
400 Series Complementary Springline™ and Arch Hinged Outswing Patio Doors AND-N-127	Low-E4* w/HeatLock®	Without Grilles	0.33	0.25	0.41
		Simulated Divided Light Grilles	0.33	0.22	0.35
		Finelight™ Grilles	0.33	0.22	0.35
		Full Divided Light Grilles	0.34	0.22	0.35
	Low-E4 w/HeatLock®	Without Grilles	0.30	0.24	0.40
		Simulated Divided Light Grilles	0.30	0.21	0.34
		Finelight Grilles	0.30	0.21	0.34
		Full Divided Light Grilles	0.32	0.21	0.34
	Low-E4 Sun	Without Grilles	0.33	0.16	0.23
		Simulated Divided Light Grilles	0.33	0.14	0.20
		Finelight Grilles	0.33	0.14	0.20
		Full Divided Light Grilles	0.34	0.14	0.20
	Low-E4 SmartSun™	Without Grilles	0.33	0.17	0.37
		Simulated Divided Light Grilles	0.33	0.15	0.32
		Finelight Grilles	0.33	0.15	0.32
		Full Divided Light Grilles	0.34	0.15	0.32
	Low-E4 SmartSun w/HeatLock	Without Grilles	0.28	0.16	0.36
		Simulated Divided Light Grilles	0.30	0.14	0.31
		Finelight Grilles	0.30	0.14	0.31
		Full Divided Light Grilles	0.31	0.14	0.31
400 Series Complementary Arch Patio Door Sidelights AND-N-131	Low-E4* w/HeatLock®	Without Grilles	0.32	0.23	0.39
		Simulated Divided Light Grilles	0.32	0.21	0.34
		Finelight™ Grilles	0.32	0.21	0.34
		Full Divided Light Grilles	0.33	0.21	0.34
	Low-E4 w/HeatLock®	Without Grilles	0.29	0.23	0.38
		Simulated Divided Light Grilles	0.29	0.21	0.34
		Finelight Grilles	0.29	0.21	0.34
		Full Divided Light Grilles	0.30	0.21	0.34
	Low-E4 Sun	Without Grilles	0.33	0.15	0.22
		Simulated Divided Light Grilles	0.33	0.13	0.19
		Finelight Grilles	0.33	0.13	0.19
		Full Divided Light Grilles	0.34	0.13	0.19
	Low-E4 SmartSun™	Without Grilles	0.32	0.16	0.35
		Simulated Divided Light Grilles	0.32	0.14	0.31
		Finelight Grilles	0.32	0.14	0.31
		Full Divided Light Grilles	0.33	0.14	0.31
	Low-E4 SmartSun w/HeatLock	Without Grilles	0.29	0.15	0.34
		Simulated Divided Light Grilles	0.29	0.14	0.30
		Finelight Grilles	0.29	0.14	0.30
		Full Divided Light Grilles	0.30	0.14	0.30

Andersen® Products Total Unit Recycled Content Percentages
For current product certificates, please visit andersenwindows.com.

Andersen® Product	% Pre-Consumer Recycled Content
400 Series Windows	
Casement Window	4%
Awning Window	4%
Casement/Awning Picture Window	8%
Complementary Casement Window	5%
Woodwright® Double-Hung Full-Frame Window	13%
Woodwright Picture Full-Frame Window	14%
Woodwright Transom Full-Frame Window	13%
Woodwright Double-Hung Insert Window	9%
Woodwright Picture Insert Window	11%
Woodwright Transom Insert Window	10%
Woodwright Arch Double-Hung Window	9%
Woodwright Springline™ Single-Hung Window	8%
Tilt-Wash Double-Hung Full-Frame Window	6%
Tilt-Wash Picture Full-Frame Window	10%
Tilt-Wash Double-Hung Insert Window	6%
Gliding Window	4%
Specialty Window (all, based on Flexiframe® windows)	8%
Complementary Specialty Window (rectangular)	7%
400 Series Patio Doors	
Frenchwood® Gliding Patio Door	4%
Frenchwood Hinged Inswing Patio Door	4%
Frenchwood Patio Door Sidelight	3%
Frenchwood Patio Door Transom	3%
Complementary Springline Hinged Inswing Patio Door	3%
Complementary Arch Hinged Inswing Patio Door	3%

* “% Pre-Consumer Recycled Content” is calculated to meet ISO 14021 standards based on NFRC sizing. Actual recycled content dependent on product size.

* “Low-E4;” “Low-E4 SmartSun;” “Low-E4 Sun” and “HeatLock™” are Andersen trademarks for “Low-E” glass.
1) U-Factor defines the amount of heat loss through the total unit in BTU/hr-ft²-°F. The lower the value, the less heat is lost through the entire product. Window values represent non-tempered glass. Use of tempered glass can increase U-Factor ratings. See andersenwindows.com/nfrc for specific performance values. Door values represent tempered glass. 2) Solar Heat Gain Coefficient (SHGC) defines the fraction of solar radiation admitted through the glass directly transmitted, as well as absorbed and subsequently released inward. The lower the value, the less heat is transmitted through the product. 3) Visible Transmittance (VT) measures how much light comes through a product (glass and frame). The higher the value, from 0 to 1, the more daylight the product lets in over the product’s total unit area. Visible Light Transmittance is measured over the 380 to 760 nanometer portion of the solar spectrum.
• NFRC ratings are based on modeling by a third-party agency as validated by an independent test lab in compliance with NFRC program and procedural requirements.
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About the NFRC

The National Fenestration Rating Council (NFRC) is a nonpartisan coalition of professionals whose purpose is to provide fair, accurate and credible energy performance ratings for fenestration products. NFRC's membership includes manufacturers, suppliers, designers, specifiers, utility companies, government agencies and other building industry representatives.

Andersen Corporation is a founding member of the NFRC and continues to support its work by providing fair, accurate and credible energy performance ratings to consumers and the building industry. If you have any questions about the NFRC, its program or energy performance ratings, write them at: NFRC, 6305 Ivy Lane, Suite 140, Greenbelt, MD 20770. Phone: 301-589-1776 Website: www.nfrc.org

About the Label

Look for this certification label on every window and patio door you buy. The NFRC section was designed by the National Fenestration Rating Council to provide accurate information that helps you promote the energy efficiency of the homes you build. These ratings allow you — and your customers — to measure and compare the energy performance of similar products. If the product does not have this label, the NFRC has not verified its claims.

Combination Designs,
Product Performance
& Installation

U-Factor indicates how well a product prevents heat from escaping (the lower the number, the better).

Visible Transmittance refers to how much visible light comes through a product (the closer to 1.0, the more light is transmitted).

WDMA Hallmark Certification verifies the performance ratings of this product were tested by an independent testing laboratory and verified by a third-party certification program.

Test Standards

Do not remove until final code inspection. Save label for future reference.

ENERGY STAR® Certified in Highlighted Regions Certifié ENERGY STAR dans les régions en surbrillance	
Canada energystar.gc.ca ENERGY STAR U.S. / É.U. energystar.gov	ER/RE 18
DO NOT REMOVE UNTIL FINAL INSPECTION / NE PAS RETIRER AVANT L'INSPECTION FINALE	
 National Fenestration Rating Council® CERTIFIED	 400 Series Casement Window AND-N-1-01592-00001 Vinyl-Clad Wood Frame, Dual-Pane Low-E SmartSun Glazing with Argon Product Type: Casement
ENERGY PERFORMANCE RATINGS	
U-Factor 0.27 (U.S./I-P)	Solar Heat Gain Coefficient 0.21
ADDITIONAL PERFORMANCE RATINGS	
Visible Transmittance 0.49	
Manufacturer stipulates that these ratings conform to applicable NFRC procedures for determining whole product performance. NFRC ratings are determined for a fixed set of environmental conditions and a specific product size. NFRC does not recommend any product and does not warrant the suitability of any product for any specific use. Consult manufacturer's literature for other product performance information. www.nfrc.org	
 WINDOW & DOOR MANUFACTURERS ASSOCIATION Hallmark Certified www.wdma.com Licensee: 129-H-861 Andersen Corporation 400 Series Casement Window Manufacturer stipulates Hallmark Certification as indicated below.	
STANDARD AAMA/WDMA/CSA 101/LS2/A440-11 AAMA/WDMA/CSA 101/LS2/A440-08 AAMA/WDMA/CSA 101/LS2/A440-08 A440S1-09	RATING Class LC-PG50 Size Tested 55" x 71" DP+50/-50 Class LC-PG50 Size Tested 55" x 71" DP+50/-50 Class LC-PG50 - 1435mm x 1622mm Positive/Negative Design Pressure (DP) = 2400 Pa/-2400 Pa Water Penetration Resistance Test Pressure = 360 Pa Canadian Air Infiltration/Exfiltration = A3
FL 12496 Glazing: 2.2mm AN outer/2.3mm HS inner	
WARNING This product can expose you to chemicals including titanium dioxide, which is known in the state of California to cause cancer, and methanol, which is known in the state of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov	
Meets or exceeds CEC & IECC Air Infiltration Requirements of 0.2 CFM/sq. ft. or lower. WDMA Hallmark Certification Program. Complies with HUD UM Bulletin No. 111.	

Energy Rating (ER) represents "Energy Rating" and is a rating used in Canada for product comparison purposes (the higher the ER number, the more energy saved during the heating season).

ENERGY STAR® Climate Zone Map is based on U-Factor and solar heat gain coefficient criteria for specific ENERGY STAR climate zones within the United States and Canada. The shading of the map shows which climate zone(s) a particular product and glass type is ENERGY STAR certified in.

Solar Heat Gain Coefficient measures how well a product blocks heat caused by sunlight (the lower the number, the more it will help reduce the use of air conditioning and as a result, reduce electrical bills and energy use).

Performance Grade (PG) and Design Pressure (DP) Ratings

Glass Construction used with this product type.

• NFRC ratings are based on modeling by a third-party agency as validated by an independent test lab in compliance with NFRC program and procedural requirements.
 • "ENERGY STAR" is a registered trademark of the U.S. Environmental Protection Agency.

INSTALLATION ACCESSORIES

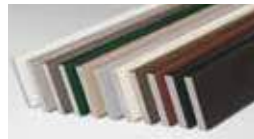
Optional accessories available for the installation of Andersen® windows and patio doors. Keep instruction guidelines and safety information in mind when considering the installation and use of any Andersen product. For questions, contact your local Andersen supplier.

COIL STOCK



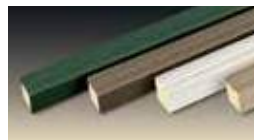
Andersen aluminum coil stock can be ordered to match any of our 11 exterior trim colors. Made from .018" thick aluminum, coil stock is available in 24" (610) x 50' (15240) rolls. Color-matched 1 1/4" (32)-long stainless steel trim nails are also available and can be ordered in 1 lb/454 kg boxes.

FIBREX® TRIM BOARD



Available in the same 11 colors as our exterior trim, this solid cellular Fibrex trim board can be cut or ripped to size, and be fastened using nails or screws. 3 1/2" (89) x 3/4" (19) thick in 10' (3048) lengths.

AUXILIARY CASING



Made of cellular Fibrex material. Available in white, canvas, Sandtone, Terratone, forest green, dark bronze and black. 1 3/16" (30) x 1 3/16" (30) in 150" (3810) lengths.

DRIP CAP



Included on 400 Series windows with vertical (ribbon) joins. Heavy 24-gauge corrosion-resistant aluminum construction. Available in 6' (1829), 10' (3048) and 12'-7 1/2" (3848) lengths, and in any of our 11 exterior trim colors.

EXTENSION JAMBS



Available for most Andersen products. See product sections for details.

VINYL CHANNELS



Rigid vinyl "J" and "h" channels are available in white, Sandtone and Terratone. "J" and "h" channels are 1/2" (13) deep and come in 150" (3810) lengths. "J" channels are 3/4" (19) wide and "h" channels are 1" (25) wide. "H" channels are 3/4" (19) deep and come in 84" (2134) and 150" (3810) lengths. White "H" channels are 3/4" (19) wide. Sandtone and Terratone "H" channels are 1" (25) wide.

COLOR-MATCHED SEALANT

Color-matched sealant is available in Andersen exterior colors. This high-quality sealant can be used during the installation of all Andersen products.

INSTALLATION INFORMATION

ROUGH OPENINGS

The purpose of a rough opening is to allow for proper spacing between the window or patio door unit and the building structure. The space is required for locating, leveling and squaring the unit during installation and to provide an area for insulation. A rough opening that is incorrectly sized may affect unit operation and may not allow for adequate fastening of the unit to the building structure. Andersen rough opening dimensions are provided as a guideline to help determine the minimum amount of space needed between the window or patio door and the building structure. See appropriate product sections for rough opening guidelines for each product.

Keep in mind that rough opening dimensions may need to be altered from published guidelines, depending on installation methods, joining methods, replacement methods, etc. For example, flashing systems can reduce the amount of available rough opening space and should be factored in when calculating rough opening dimensions. The use of support or joining materials will encroach on the rough opening and may require additional rough opening space between the unit and the building structure, depending on the thickness of the flashing system and joining materials used. To facilitate drainage, the rough opening sill plate should never slope toward the interior. For challenging environments and other information, refer to EEBA's (Energy and Environmental Building Association) Water Management Guide (www.eeba.org).

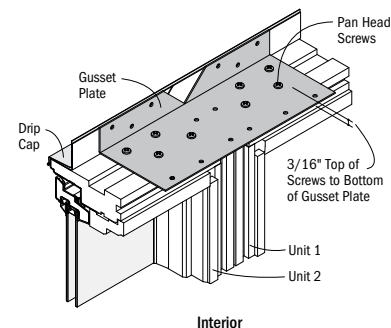
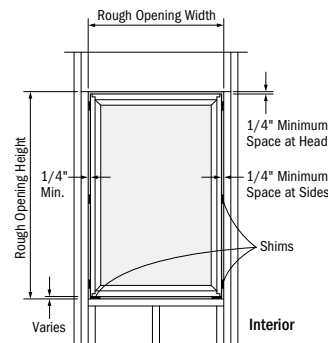
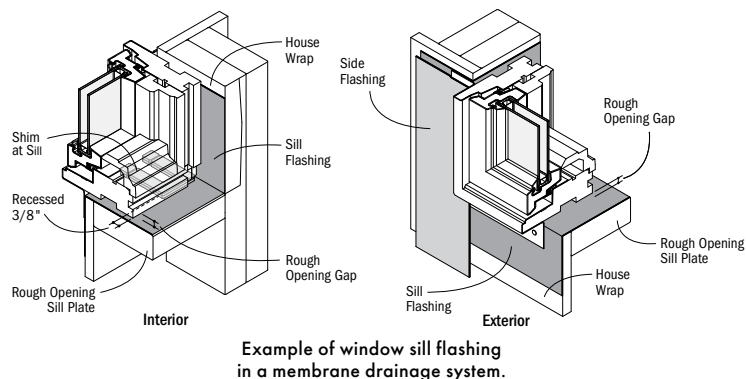
IMPORTANCE OF PROPER INSTALLATION

Proper installation and maintenance of Andersen products is essential to attain optimum performance and operation. Installation instructions that provide guidelines for proper installation are typically provided with Andersen products. They are also available by visiting andersenwindows.com. Remember that every installation is different, and Andersen strongly recommends consultation with the local supplier or an experienced contractor, architect or structural engineer prior to the installation of any Andersen product. The method of attachment for Andersen products, fastener selection and code compliance is the responsibility of the architect, building owner, contractor, installer and/or consumer. For more complete installation details, visit andersenwindows.com or see your Andersen supplier.

GENERAL NOTES

When ordering, make certain you specify, then verify, the exact product, unit dimensions, configuration requirements, color and options you desire on each window or patio door. Before installing the product, we suggest you verify that it includes the features and options you ordered. Visit andersenwindows.com for product installation and joining guides. Printing limitations prohibit exact color duplication of products. View actual samples for building specifications. Andersen Corporation reserves the right to change details, specifications or sizes without notice. The customer assumes all risk of alterations made to Andersen products.

Dimensions in parentheses are in millimeters.



CODES

Appropriate selection of Andersen products that conform to all applicable laws, ordinances, building codes and safety requirements is the sole responsibility of the architect, designer, building owner and/or contractor. Check with your local building code officials for specific information. Unit wind load, performance grade and energy performance information is provided on pages 181-209. For up-to-date product performance information, visit andersenwindows.com. The performance of any building system depends on the design and construction of the building system in its entirety, which should meet building code requirements, as well as address product and material limitations, and local environment and climate.

DRIP CAPS

Drip caps are a specific type of flashing or trim used at the head of a window or door to direct water from the drainage plane out beyond the face of the unit.

FLASHING

Flashing is an important element in a building's water management system. It is used to shed and direct water to the building exterior or to the drainage plane. Flashing materials are typically applied starting from the bottom and working upward, with each successive layer overlapping the previous one in shingle fashion. Water infiltration problems in any type of building can be reduced by properly flashing and/or sealing around all building openings, including windows and doors.

USE OF SHIMS

Shims are used along the side jambs of windows and doors to center the unit in the rough opening and to position it plumb, level and square. In addition, shims are always required for windows under the sill at the side jambs to lift it off the rough opening sill plate. Shims also enable a straight frame for proper weatherstrip contact and unit operation. If not placed properly, unit performance and operation can be affected. Use waterproof shims capable of supporting the weight of the product. When using tapered shims, use them in pairs with the tapers opposing each other to avoid tilting the unit or twisting (rotating) of the jambs.

SEALANTS

Sealants are elastic materials used to block the passage of water and/or air while allowing movement between the two sides of the joint. A sealant should bond tightly, and be able to expand and contract to accommodate joint movement without cracking or tearing away from the substrate. Surfaces must be clean, dry and sound for adequate sealant adhesion. Choose a sealant that is compatible with, and that will adhere adequately to, all building materials used in the window and patio door area. Proper sealant joint design is based upon the expected movement of adjacent materials and the movement capability of the sealant. A general rule of thumb is that the depth of the sealant joint should be equal to half the width ($D = W/2$), but generally not less than $1/4"$ (6) or more than $1/2"$ (13). Foam-plastic backer rod can be used to limit the depth of the sealant joint, to provide a backstop for tooling the sealant without damage to the bond. It also acts as a bond breaker to help minimize stress in the sealant. Sealants should be maintained seasonally, and repaired and/or replaced as needed.

GENERAL INSTALLATION GUIDELINES

1. Read and follow the installation guide in its entirety.
2. Decide whether you are integrating to a surface barrier or a membrane drainage system before installing the product. The appropriate method for your installation may vary based on building design, application and industry practices.
3. Make certain the drainage plane is continuous (proper overlaps to shed water, taped seams, etc.).
4. Andersen products should be installed only in the vertical position.
5. Check the rough opening to make sure it is sized properly, is square and is level.
6. Install the window or door plumb.
7. Install the window or door level.
8. Install the window or door square. Diagonal measurements should be within $1/8"$ (3).
9. Follow installation instructions to properly locate shims and to make sure that units are plumb, level and square. Shims are always required under the window jambs at the sill and along the jambs on the sides for windows and doors.
10. Check for squareness of unit before final anchoring of the product into the wall.
11. Anchor unit as directed with appropriate fasteners.
12. Integrate the window and door into the drainage plane of the wall using quality flashing and sealing materials. All flashing materials should be properly overlapped to shed water.
13. Allow $1/4"$ (6) minimum space for a sealant joint around perimeter of unit between exterior finish materials and unit.
14. Insulate and seal the interior cavity between the window or door frame and the rough opening.
15. Check operation before application of interior trim.
16. Stain and/or seal all unfinished wood surfaces promptly to minimize moisture absorption.

EXTERIOR PAINTING/SEALING OF ANDERSEN® PRODUCTS

The exterior of some Andersen products may be painted or stained. However, improper painting and staining may cause damage to vinyl, aluminum and other exterior materials. Please refer to the individual product sections for details on painting Andersen product exteriors.

CAUTIONS

1. Do not apply any type of film to insulating glass. Thermal stress and glass damage can result. Andersen Corporation is not responsible for product performance when films are applied to Andersen products.
2. The use of removable insulating materials such as insulated window coverings, shutters and other shading devices may also cause thermal stress conditions and/or deformation of protective vinyl. In addition, excessive condensation may result, which can have a deteriorating effect on the window or door unit(s) involved. Andersen Corporation is not responsible for product performance when these kinds of materials or devices are applied to or used in conjunction with Andersen products.

3. In wall construction utilizing brick facades, leave adequate clearance between sill, jambs and brick for sealing and dimensional change of framework.
4. Acid solutions commonly used to wash brick and other masonry materials will damage glass, fasteners, hardware and metal flashing. Protect unit and follow cleaning product instructions carefully. Damage caused by acid solution is not covered under the Andersen limited warranty.
5. Andersen windows may be combined in almost unlimited ribbons or stacks if each unit is positively secured to structural elements on opposing sides and if the proper joining system is used. See page 181 for more information.

SAFETY GLASS

Unless specifically ordered, Andersen windows are not made with safety glass and, if broken, the glass could fragment, causing injury. Andersen windows may be ordered with tempered glass which may reduce the likelihood of injury when broken. All Andersen patio doors are made with tempered glass. Differences in appearance between tempered and non-tempered glass can be expected. Slight visual distortions may be noticeable and occur normally as a result of the tempering process. Building codes require safety glass in locations adjacent to or near doors and other locations.

WINDOW AND PATIO DOOR SAFETY

Windows may provide a secondary avenue of escape or rescue in an emergency, such as a fire. Every family should develop an escape plan and make sure family members know how to escape from the home in an emergency. In your plan, include two ways to escape from every room in case one way is blocked by fire or smoke, and make sure you have a designated meeting place outside. A window or a patio door is an alternate means of escape or rescue. Practice your plan until each member of the family understands it and is able to escape without assistance. Remember, you may not be able to reach children during a fire emergency. Teach children – even very young children – that they must escape from a fire in the home and never hide from the fire or from emergency personnel.

LOOKOUT FOR KIDS® PROGRAM

The Consumer Product Safety Commission has said: "Keep children away from open windows to prevent falls. Don't depend on insect screens to keep the child from falling out of the window. They are designed to keep insects out, not children in. Avoid placing furniture near windows to keep children from climbing to a window seat or sill." In an effort to educate consumers about the potential for child falls from windows, Andersen Corporation created the LookOut For Kids Program. It combines a window and door safety brochure and specific product instructions to help make window and door safety an important priority for consumers. For more information on child safety, write:

Andersen Corporation
LookOut For Kids Program
100 Fourth Avenue North
Bayport, MN 55003
Call 800-313-8889 or email
lofk@andersencorp.com

**Look
OUT!**
for kids®

Andersen® windows and patio doors can make significant contributions to the success of sustainable design strategies

As a charter member of the U.S. Green Building Council, we're active supporters of certified green buildings. Our products can help customers in pursuing green building programs, such as Leadership in Energy and Environmental Design (LEED®), the National Green Building Standard, Green Globes, GreenStar and more. Below is an overview of how our products may assist project teams with pursuing LEED v4 or the NAHB National Green Building Standard rating systems. More detailed credit summaries, as well as information about how Andersen products can support earlier versions of LEED certification (e.g., LEED v3 or LEED 2008), are available at andersenwindows.com.

LEED V4 FOR BUILDING DESIGN AND CONSTRUCTION: NEW CONSTRUCTION AND MAJOR RENOVATIONS

Integrative Process Credit:

Energy & Atmosphere

- Minimum energy performance prerequisite
- Optimize energy performance credit
- Renewable energy production credit
- Green power and carbon offsets credit

Materials & Resources

- Construction and demolition waste management planning credit
- Building product disclosure and optimization sourcing of raw materials credit
- Construction and demolition waste management credit

Indoor Environmental Quality

- Minimum indoor air quality performance prerequisite
- Minimum acoustic performance prerequisite – schools
- Enhanced indoor air quality strategies credit
- Low-emitting materials credit
- Thermal comfort credit
- Daylight credit
- Quality views credit
- Acoustic performance credit (option 2)

LEED V4 FOR BUILDING DESIGN AND CONSTRUCTION: HOMES AND MULTI-FAMILY MIDRISES

Energy & Atmosphere

- Minimum energy performance prerequisite
- Education of the homeowner, tenant or building prerequisite
- Annual energy use credit
- Building orientation for passive solar credit
- Air infiltration credit
- Windows credit

Materials & Resources

- Durability management prerequisite
- Environmentally preferable products credit
- Construction waste management credit

Indoor Environmental Quality

- Ventilation prerequisite
- Low-emitting products credit

ANSI ICC/ASHRAE 700-2015 NATIONAL GREEN BUILDING STANDARD

NGBS section numbers are referenced in parentheses.

Resource Efficiency

- Prefinished materials (601.7)
- Flashing (602.12)
- Exterior doors, including storm doors (602.1.10)
- Recycled construction materials (605.3)
- Bio-based products (606.1)
- Wood-based products (606.2)
- Manufacturer's environmental management system concepts (611.1)

Energy Efficiency

- Mandatory requirements (701.1)
- Building thermal envelope air sealing (701.4.3.1)
- Multi-family air leakage alternative (701.4.3.3)
- Fenestration air leakage (701.4.3.4)
- ICC IECC analysis (702.2.1)
- Energy performance analysis (702.2.2)
- UA improvement (703.2.1)
- Fenestration (703.2.5)
- Sun-tempered design (703.7.1)
- Passive cooling design (703.7.3)
- Passive solar heating design (703.7.4)

Indoor Environmental Quality

- Wood materials (901.4)
- Interior architectural coatings (901.9)
- Interior adhesives & sealants (901.9)
- Operable windows & sliding glass doors (902.1.5)

Energy Efficient

- Homeowner's manual (1001.1)
- Building construction manual (1002.1)



THE ENVIRONMENT HAS A BUSINESS PARTNER

Respect for the environment is nothing new at Andersen. For more than a century, it has been part of who we are. Our commitment to recycle and reclaim materials began simply because it was good business. Now it's part of our broader commitment to sustainability and responsible stewardship of all of our resources. Andersen is committed to providing you with long-lasting,* energy-efficient windows and patio doors. Visit andersenwindows.com/sustainability for more information.



Andersen® products are certified under the National Fenestration Rating Council (NFRC) voluntary third-party certification program designed to ensure accurate energy performance ratings and labeling.



Andersen was one of the first U.S. window manufacturers to receive the Forest Stewardship Council® (FSC®) Chain-of-Custody certification (FSC CO16636). This certification is awarded to companies that meet FSC standards for traceability in their wood supply chain. Ask your sales representative about the availability of FSC certified products.



The Window & Door Manufacturers Association (WDMA) Hallmark Certification program includes product testing and quality-control process audits to verify that Andersen windows and doors are produced in conformance with the industry standards for air, water resistance and structural performance.



Andersen was the first window manufacturer to certify our products for indoor air quality, beginning in 2008. Our Indoor Advantage™ Gold certification by SCS Global Services (SCS) meets the rigorous high standards for healthier indoor air quality set by California Specification 01350.



Under U.S. Green Building Council (USGBC) guidelines, Andersen is able to claim a percentage of material in its Fibrex® product as pre-consumer recycled content. SCS Global Services (SCS) has certified this amount for Andersen.



Andersen Corporation is proud to be an ENERGY STAR® partner. For over 115 years, Andersen has built a reputation for environmental stewardship and energy-efficient products. In fact, Andersen has been part of the ENERGY STAR program since it started and was the first window manufacturer to be named an ENERGY STAR National Window Partner of the Year in 1999.

*Visit andersenwindows.com/warranty for details.
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89 400 Series Tilt-Wash Double-Hung Insert Windows	87 400 Series Narroline® Double-Hung Window Conversion Kit	75 400 Series Tilt-Wash Double-Hung Full-Frame Windows	67 400 Series Woodwright Double-Hung Insert Windows	47 400 Series Woodwright® Double-Hung Full-Frame Windows	41 400 Series Complementary Casement Windows	37 400 Series Replacement Casement & Awning Windows	19 400 Series Casement & Awning Windows
163 400 Series Complementary Curved Top Patio Doors	159 400 Series Frenchwood Patio Door Sidelights & Transoms	149 400 Series Frenchwood Hinged Inswing Patio Doors	141 400 Series Frenchwood® Gliding Patio Doors	137 400 Series Complementary Specialty Windows	117 400 Series Specialty Windows	111 400 Series Gliding Windows	97 400 Series Bay & Bow Windows
					181 Combination Designs, Product Performance & Installation	175 Exterior Trim	173 Art Glass



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PDF NAVIGATION TIPS

Welcome to an overview of the enhanced navigation tools available in this PDF. Here are some simple tips on PDF navigation. Before you begin be sure you are using the latest version of Adobe Acrobat Reader DC, available at – <https://get.adobe.com/reader/>

To watch a 3-minute tutorial on navigating catalog PDFs, go to: <https://youtu.be/sWWnYn6ON3Y>

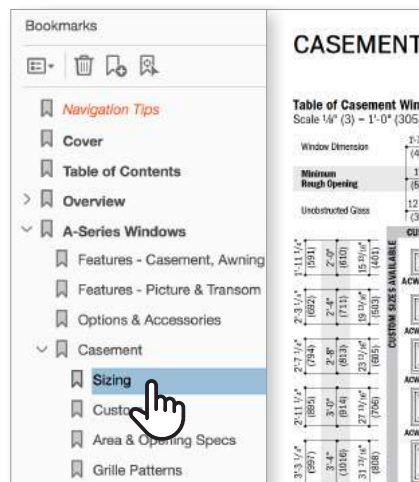
BOOKMARK NAVIGATION

①

Acrobat will display the bookmarks panel when you open the PDF.

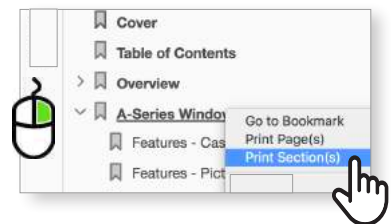
Bookmarks are the easiest way to find specific product information.

Select a topic and that page will be displayed.



②

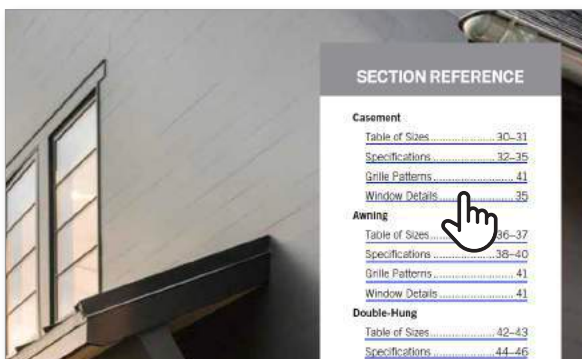
If you need to print a specific section, **right click on that section** within in the bookmarks panel and choose “**Print Section.**”



LINKS AND URL NAVIGATION

①

You can also use the **embedded links** to navigate between sections. All links are underlined in blue.



②

Website links automatically open in your web browser.



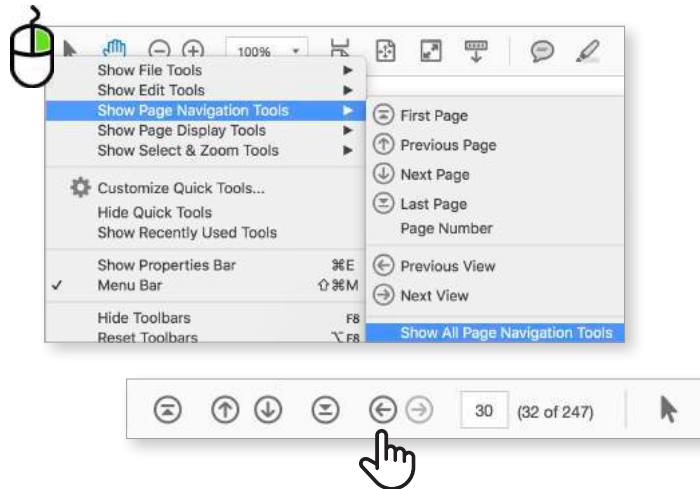
Add additional navigation tools by adjusting the default settings in Acrobat.

← → TOOL BAR NAVIGATION

①

To add a **“Jump Back” Button** to your tool bar, **right click on tool bar**, select **Show Page Navigation Tools** and choose **Show All Page Navigation Tools**.

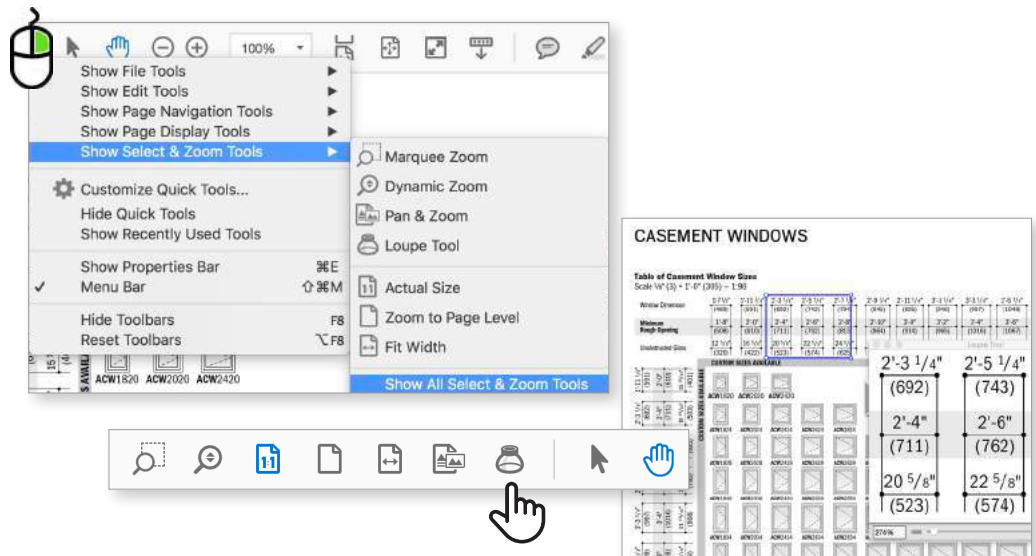
Right and left facing arrows are added to the tool bar allowing you to go back or forward to the last page you viewed.



②

Another helpful tool is the **Loupe Tool**. It allows you to zoom in on the page without having to increase the page size.

To add a **Loupe Tool** to your tool bar, **right click on tool bar**, select **Show Select & Zoom Tools** and then choose **Show All Select & Zoom Tools**.



③

You can also use the **commenting tools**. Add a post-it-note with your comments or highlight important information.

Be sure to save the file.



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We are always looking for ways to improve.
Please send feedback to webmarketing@andersencorp.com.



**HISTORIC PRESERVATION CERTIFICATION APPLICATION
STATE HISTORIC PRESERVATION OFFICE
REVIEW & RECOMMENDATION SHEET
REHABILITATION - PART 2 / PART 3**



SECTION 1. APPLICATION INFORMATION

PROJECT NUMBER

Property Name Stern & Cetlin Block

Property Address 5 Alfred Street, Biddeford, ME

Certified Historic Structure (select one) ☒ Yes ☐ Pending

☒ Part 2

☐ Preliminary (date) _____

☒ Applying for state tax credit

☐ Part 3 (Part 2 previously reviewed)

☐ Completed rehabilitation work conforms to work previously approved

☐ Completed rehabilitation work differs substantively from work previously approved
(describe divergences from Part 2 scope of work in Section 5)

☐ Part 3 (Part 2 not previously reviewed)

☐ Amendment

☐ Advisory determination that a phase meets the Standards

☐ Property visited by State staff (dates):

Before _____, during _____, and/or after _____ rehab.

Date application received by SHPO 07/14/2022

Date(s) additional information requested by SHPO _____

Date complete information received by SHPO 07/14/2022

Date of transmittal to NPS 08/08/2022

SHPO REVIEW SUMMARY

☒ No outstanding concerns

☐ In-depth NPS review requested

☒ Applicant informed of SHPO
recommendation

SECTION 2. APPLICATION MATERIALS

Sent previously: ☐ Photographs ☐ Other (list) _____

Attachments: ☒ Photographs ☐ Rolled plans ☐ Flat plans, large size ☒ Flat plans, 11" x 17" or smaller ☒ Other (list) catalogue cuts

Sent separately: ☐ Photographs ☐ Rolled plans ☐ Flat plans, large size ☐ Flat plans, 11" x 17" or smaller ☐ Other (list)

Documentation remaining on file in SHPO (e.g., masonry repointing samples, specifications) _____

SECTION 3. SHPO RECOMMENDATION

Mike Johnson, who meets the Secretary of the Interior's Professional Qualification Standards, has reviewed this application.

This rehabilitation work (select only one):

☐ meets the Standards.

☐ meets the Standards with concerns.

☒ meets the Standards *only* if the attached conditions are met (Part 2 only).

☐ does not meet Standard number(s) _____ and for the reasons described in Section 5.

☐ does not meet Standard number(s) _____ as completed, but could be brought into conformance with the Standards if the remedial work recommended in Section 5 is completed (Part 3 only).

☐ warrants denial for lack of information.

☐ is being forwarded without recommendation.

8/9/2022

Date

Kurt F. Mohney

State Historic Preservation Office Signature

SECTION 4. ISSUES

- | | |
|---|--|
| ☐ Alteration of significant exterior features or surfaces | ☐ Alteration, removal, or covering of significant interior features or finishes |
| ☐ Window replacement | ☐ Changes in significant interior plan, spaces, or circulation patterns |
| ☐ Additions, including rooftop | ☐ Other (explain) _____ |
| ☐ Extensive site work, adjacent new construction, or demolition of adjacent structures | |
-

SECTION 5. SHPO EVALUATION

Explain the recommendation and any concerns, particularly issues checked in Section 4. Where denial is recommended, explain fully. For Part 3s, describe any work that differs substantially from the approved work. For Part 3s that do not meet the Standards as completed, describe remedial work, if any, that could enable the project to meet the Standards. Comment on notable aspects of the project, such as technical design innovations or creative solutions.

The first phase of the proposed rehabilitation will convert the second-floor offices of the Stern & Cetlin Block to apartment units. This phase of the project is well-designed to fit the apartment units within the perimeter walls of the eight existing office spaces and will restore most of the remaining character-defining features of the building's second floor, including wood floors, tin ceilings and skylights. Remaining historic trim is primarily restricted to remnants of baseboards and wood and tin ceiling cornices. There are three historic doors remaining at the second floor, all of which will be reused near their original locations. Virtually all of the perimeter walls and remaining partition walls have been stripped of their historic trim and had drywall applied. Asbestos tile has been applied over nearly all of the wood flooring and tile drop ceilings currently conceal historic tin ceilings and skylights throughout.

The proposed work will leave the historic corridor and stair intact. The corridor has been modified in modern times by enlargement of the former office entries to incorporate sidelites and double-doors and, with the exception of the inset utility closet door, no historic doors or trim remain visible along the corridor. Most of the modified doorways along the corridor remain in their historic locations, including the bathroom door entries at east and west ends of the corridor. Wood wainscot and door trim along the stair and second floor corridor is believed to be approximately 30 years old and will be retained and painted. The historic locations of the office entries will be moved approximately three feet for proposed apartment units 4 and 5, but all other historic office entry locations will be retained at their current locations and will serve as entries to the new apartments. The former bathroom entries at the east and west ends of the corridor are proposed to be walled over and matching wainscot applied. The only other modification to the corridor will be to wall off a very short section that provided access to a bathroom and utility closet. Rubber covers will be removed from the historic stair treads and risers and the historic handrail will be retained. Stone baseboards at the bottom of the stairs at the first floor will be retained and replaced in kind where broken. Historic tin ceilings, wood flooring and skylights along the corridor will be exposed and restored as part of the rehabilitation.

Modifications to historic features within the former office spaces is primarily restricted the partial demolition of some remaining original and modern partition walls within the office spaces. Where original sections of walls are proposed to be removed, a soffit will be retained so that tin and wood crown mouldings can be preserved. Historic tin ceilings, skylights, wood flooring and remaining trim remnants will be preserved, restored and re-exposed within these spaces. Sprinkler systems will be installed as part of this project due to the proposed residential use.

Exterior work in this phase is restricted to removal of an existing incompatible entry awning, replacing the roof, and the installation of rooftop heat pump condensers and related cupolas, which will be hidden from street level visibility by the parapet.

In consideration of the existing conditions and appearance of the Stern & Cetlin Block, compatible new construction proposed to the interior second floor, and the proposed retention and restoration of historic fabric, the Commission has determined that the first phase of the proposed rehabilitation is in accordance with the Standards provided the following conditions are met.

SECTION 6. NATIONAL PARK SERVICE EVALUATION

**HISTORIC PRESERVATION CERTIFICATION APPLICATION
NATIONAL PARK SERVICE
CONDITIONS**

Property Name Stern & Cetlin Block Project Number _____
Property Address 5 Alfred Street, Biddeford, ME

The rehabilitation of this property as described in the Historic Preservation Certification Application will meet the Secretary of the Interior's Standards for Rehabilitation provided that the following condition(s) is/are met:

Light Fixtures

If light fixtures will be installed as part of this project, they must be submitted for review and approval by the Commission and/or the National Park Service,

Sprinkler Pipes

Sprinkler pipes must be painted to match the ceiling color where they will be exposed.

Photographs documenting that the conditions have been met must be submitted with the Request for Certification of Completed Work.

Any substantive change in the work as described in the application should be brought to the attention of the State Historic Preservation Office and the National Park Service in writing, using the Amendment/Advisory Determination form, prior to execution to ensure that the proposed project continues to meet the Standards.

8/9/2022
Date

Kitt. Mahoney
State Historic Preservation Office Signature

The National Park Service has determined that this project will meet the Secretary of the Interior Standards for Rehabilitation if the condition(s) listed above are met.



HISTORIC PRESERVATION CERTIFICATION APPLICATION
STATE HISTORIC PRESERVATION OFFICE
REVIEW & RECOMMENDATION SHEET
REHABILITATION - PART 2 / PART 3



SECTION 1. APPLICATION INFORMATION

PROJECT NUMBER 45321

Property Name Stern & Cetlin Block

Property Address 5 Alfred Street, Biddeford, ME

Certified Historic Structure (select one) ☒ Yes ☐ Pending

☐ Part 2

☐ Preliminary (date) _____

☐ Applying for state tax credit

☐ Part 3 (Part 2 previously reviewed)

☐ Completed rehabilitation work conforms to work previously approved

☐ Completed rehabilitation work differs substantively from work previously approved
(describe divergences from Part 2 scope of work in Section 5)

☐ Part 3 (Part 2 not previously reviewed)

Date application received by SHPO 11/22/2022

☒ Amendment

Date(s) additional information requested by SHPO _____

☐ Advisory determination that a phase meets the Standards

Date complete information received by SHPO 11/22/2022

☐ Property visited by State staff (dates):

Date of transmittal to NPS 12/22/2022

Before _____, during _____, and/or after _____ rehab.

SHPO REVIEW SUMMARY

☒ No outstanding concerns

☐ In-depth NPS review requested

☒ Applicant informed of SHPO recommendation

SECTION 2. APPLICATION MATERIALS

Sent previously: ☐ Photographs ☐ Other (list) _____

Attachments: ☒ Photographs ☐ Rolled plans ☐ Flat plans, large size ☒ Flat plans, 11" x 17" or smaller ☒ Other (list) catalogue cuts; detail drawings

Sent separately: ☐ Photographs ☐ Rolled plans ☐ Flat plans, large size ☐ Flat plans, 11" x 17" or smaller ☐ Other (list)

Documentation remaining on file in SHPO (e.g., masonry repointing samples, specifications) _____

SECTION 3. SHPO RECOMMENDATION

Mike Johnson, who meets the Secretary of the Interior's Professional Qualification Standards, has reviewed this application.

This rehabilitation work (select only one):

☐ meets the Standards.

☐ meets the Standards with concerns.

☒ meets the Standards *only* if the attached conditions are met (Part 2 only).

☐ does not meet Standard number(s) _____ and for the reasons described in Section 5.

☐ does not meet Standard number(s) _____ as completed, but could be brought into conformance with the Standards if the remedial work recommended in Section 5 is completed (Part 3 only).

☐ warrants denial for lack of information.

☐ is being forwarded without recommendation.

12/22/2022

Date

Kitt A. Mahoney

State Historic Preservation Office Signature

This is a review sheet only and does not constitute an official certification of rehabilitation.

SECTION 4. ISSUES

- | | |
|---|--|
| ☐ Alteration of significant exterior features or surfaces | ☐ Alteration, removal, or covering of significant interior features or finishes |
| ☐ Window replacement | ☐ Changes in significant interior plan, spaces, or circulation patterns |
| ☐ Additions, including rooftop | ☐ Other (explain) _____ |
| ☐ Extensive site work, adjacent new construction, or demolition of adjacent structures | |
-

SECTION 5. SHPO EVALUATION

Explain the recommendation and any concerns, particularly issues checked in Section 4. Where denial is recommended, explain fully. For Part 3s, describe any work that differs substantially from the approved work. For Part 3s that do not meet the Standards as completed, describe remedial work, if any, that could enable the project to meet the Standards. Comment on notable aspects of the project, such as technical design innovations or creative solutions.

The amendment addresses the second phase of the proposed rehabilitation, which will rehabilitate the first-floor retail spaces, replace the modern storefront and all of the first and second floor vinyl windows. The existing storefront is proposed to be replaced with a more compatible storefront that will be loosely based on a very poor-quality historic photo from a newspaper article, the only historic image of the building available. The second floor façade windows are currently vinyl and will be replaced with composite clad wood windows that match the existing tripartite configuration with a fixed center windows and double-hung one-over-one flanking windows. While this configuration is compatible, it appears that the original tripartite windows likely had single pane casement windows flanking the fixed pane central window. The one-over-one double-hung vinyl windows on the rear elevation are proposed to be replaced with windows that will largely replicate the current appearance and dimension from the exterior.

Interior work throughout the first floor will primarily include the removal of non-historic partition walls and finishes and the restoration of historic wall, floor and ceiling finishes where they exist, with compatible new finishes proposed where historic finishes no longer remain. Perimeter walls are to be insulated by blowing in insulation between studs and modern or historic finishes; walls are not proposed to be furred out and historic trim will be retained where it exists. New partition walls are compatibly designed and located. Work on the interior will also include the temporary removal of tin ceilings in order to provide a fire rated ceiling assembly and reinstallation of the tin ceilings. HVAC upgrades will result in the removal ductwork so that original ceiling heights and finishes will be restored and heat pump vents are proposed in discreet locations as necessary. The project includes a number of other utility upgrades including new wiring, better water management, basement vapor barriers, asbestos abatement, etc.

Exterior work in this phase is restricted to the aforementioned storefront and window replacement, compatible replacement of a secondary entrance on the east elevation, as well as masonry and chimney maintenance.

The Commission has determined that the first phase of the proposed rehabilitation is in accordance with the Standards provided the following conditions are met.

SECTION 6. NATIONAL PARK SERVICE EVALUATION

Date

National Park Service Signature

**HISTORIC PRESERVATION CERTIFICATION APPLICATION
NATIONAL PARK SERVICE
CONDITIONS**

Property Name Stern & Cetlin Block Project Number 45321

Property Address 5 Alfred Street, Biddeford, ME

The rehabilitation of this property as described in the Historic Preservation Certification Application will meet the Secretary of the Interior's Standards for Rehabilitation provided that the following condition(s) is/are met:

Masonry

Repointing mortar must match the color, texture, strength, joint width and joint profile of the existing historic mortar(s). Repointing samples and any proposed replacement brick should be reviewed and approved by the SHPO prior to proceeding with this work.

Good quality overall and close-up photos of the masonry before and after repointing and repair must be submitted with the Request for Certification of Completed Work.

Photographs documenting that the conditions have been met must be submitted with the Request for Certification of Completed Work.

Any substantive change in the work as described in the application should be brought to the attention of the State Historic Preservation Office and the National Park Service in writing, using the Amendment/Advisory Determination form, prior to execution to ensure that the proposed project continues to meet the Standards.

12/22/2022
Date

Krist A. Mahoney
State Historic Preservation Office Signature

The National Park Service has determined that this project will meet the Secretary of the Interior Standards for Rehabilitation if the condition(s) listed above are met.











Whitten, Nan

From: Rachael Harkness <harkness.rachael@gmail.com>
Sent: Thursday, February 23, 2023 9:32 AM
To: Favreau, Brad
Cc: Seth Harkness
Subject: Re: 5 Alfred St

EXTERNAL: This email originated from outside of the City of Biddeford email system. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi Brad,

Thanks for your email. To clarify:

- Rear exterior windows are black vinyl exterior/wooden clad interior.
- 2nd story facade windows are aluminum. I'm not sure why the SHPO referred to them as wood but we'll correct that with them.
- Panels below the storefront glass are marble. We can bring a sample of the marble to the meeting.
- We were not given a sample of the Aquaglass but can try to track something down for the meeting. If we can't get a sample, we will bring a high quality photograph.

Please copy me on these emails, I'm trying to manage this part of the project as Seth is hands-on at the building all day, every day.

best,

Rachael

On Wed, Feb 22, 2023 at 4:14 PM Seth Harkness <seth.harkness@gmail.com> wrote:

----- Forwarded message -----

From: Favreau, Brad <Brad.Favreau@biddefordmaine.org>
Date: Wed, Feb 22, 2023, 4:13 PM
Subject: 5 Alfred St
To: Seth Harkness <seth.harkness@gmail.com>

Hi Seth,

I'm writing a report of your project for the HPC. A few questions:

In the SHPO application the narrative describes 'composite clad wood windows' will be used for the upper story front façade. The window drawings appear to indicate aluminum. Which is correct? Will the clad wood windows be installed at the rear of the building? Aluminum at the front?

Panels below storefront glass are called our as marble. Is this correct? Can you get a sample of this as well as of Aquaglass?

Thanks for your help.

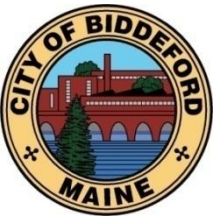
Brad Favreau

Biddeford Economic Development Coordinator

207 571 1612

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CITY OF BIDDEFORD

PLANNING DEPARTMENT

2023.06

205 Main Street PO Box 586 Biddeford, ME 04005 (207) 284-9115

HISTORIC PRESERVATION COMMISSION REPORT

TO: The Biddeford Historic Preservation Commission

FROM: Brad Favreau, Economic Development Coordinator

MEETING DATE: Wednesday March 8, 2023, 4 PM

RE: **Item 4.2: 2023.06 HPC Review for True Storage** to make exterior alterations at 32 – 40 Main Street, Building 36 Tax Map 71, Lot 10-5, in the MSRD-3 Zone.

1. INTRODUCTION

Building 36 is located at the west end of a line of mill buildings on Main Street, adjacent to Pepperell Center, Building 13. Originally constructed for cotton storage, new owners have proposed alterations that would allow the building to be used for commercial self-storage. This building was constructed in the years from 1890 to 1916.

It is a **Contributing** Structure according to the Russell Wright Survey.

2. PROJECT DATA/INFORMATION

	SUBJECT	DATA/INFORMATION
1.	Applicant:	True Storage LLC 670 N Commercial St. #212 Manchester NH 03101 jsullivan@truestorage.com (603) 622-6223
2.	Owner of Property:	Presidium Real Estate 74 Neptune Dr. Brunswick ME 04011 mhiggins@presidium.com (207) 282-5577
3.	Agent:	N/A
4.	Engineer/Architect:	Gorrill Palmer 300 South Borough Dr. South Portland ME 04106 apalmer@gorrillpalmer.com (307) 772-2515
4.	Project Location:	32 – 40 Main Street
5.	Project Tax Map #/Lot #:	Tax Map 71, Lot 10-5
6.	Existing Zoning:	MSRD-3
7.	Overlay Zoning:	Biddeford Saco Mills Historic District
7.	Contributing Structure?	Yes
8.	Existing Use:	Vacant
9.	Proposed Use:	Commercial Self Storage
10.	Uses in the Vicinity:	Mixed-use
11.	Parcel Size:	0.31 acre
12.	Front Setback Required:	None
13.	Side Setbacks Required:	None
14.	Rear Setback Requires:	None
15.	Height Requirements:	Minimum 2 stories or 26 feet
16.	LDR Attachment A: Fess Paid:	Yes
17.	Historic Preservation Commission Review History:	March 8, 2023 Meeting Date. Posted March 1, 2023; Mail Notices to all abutters within 100' Sent 5 notices March 1, 2023.

3. EXISTING CONDITIONS

Building 36 is a an integral part of Biddeford’s historic Mill District, forming, in part, what has become known as the ‘great wall’ on Main Street. It is a highly-visible 7 story building at 32 – 40 Main Street. West of the building is a small parking lot at the entrance to Pepperell Mill Center, Building 13. The east end of Building 36 adjoins Building 19. This building is described in the National Register of Historic Places:

...The #5 Cloth Store House adjoins the Office Building and is connected to the Laconia Weave Shop by two enclosed bridges. The building was constructed in two phases, the lower two floors around 1890 and the upper five floors in 1916. It is constructed in red

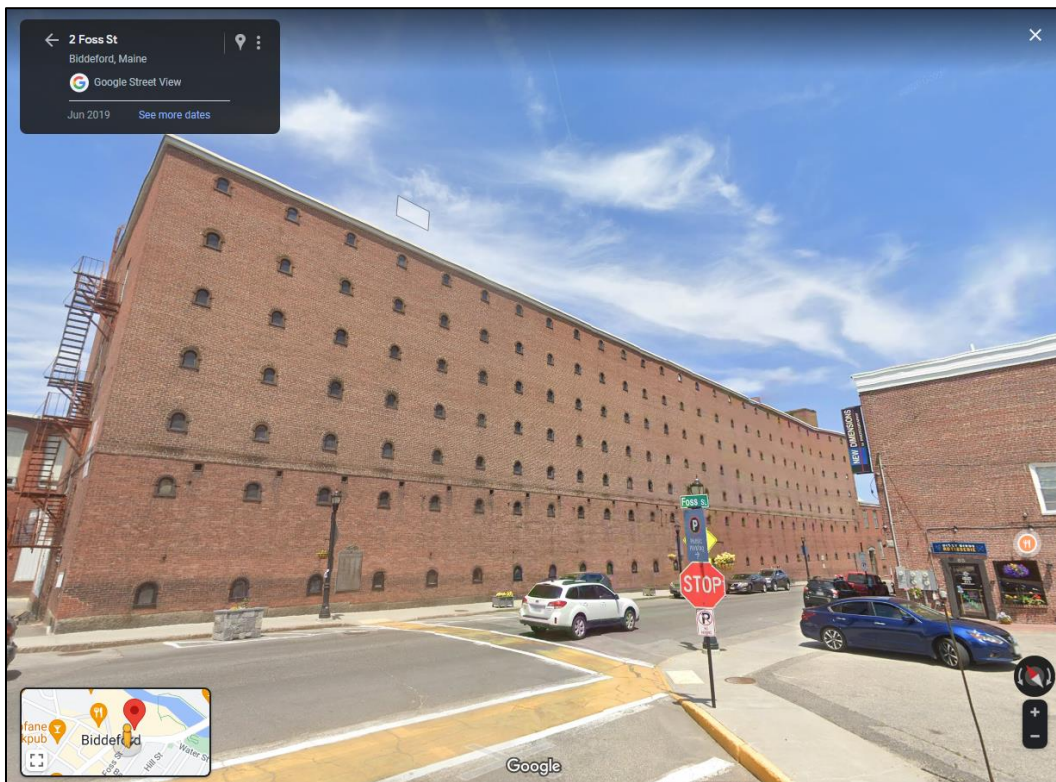
brick and is 27 bays long and four bays deep. The warehouse is strictly utilitarian its design, with unadorned brick walls and very small arched windows. Windows have slightly projecting brick heads, the only suggestion of architectural ornament on the building. Small arched windows of this type were used on most of the storage buildings in the district.

From the “Statement of Significance,” in the National Register of Historic Places Continuation Sheet:

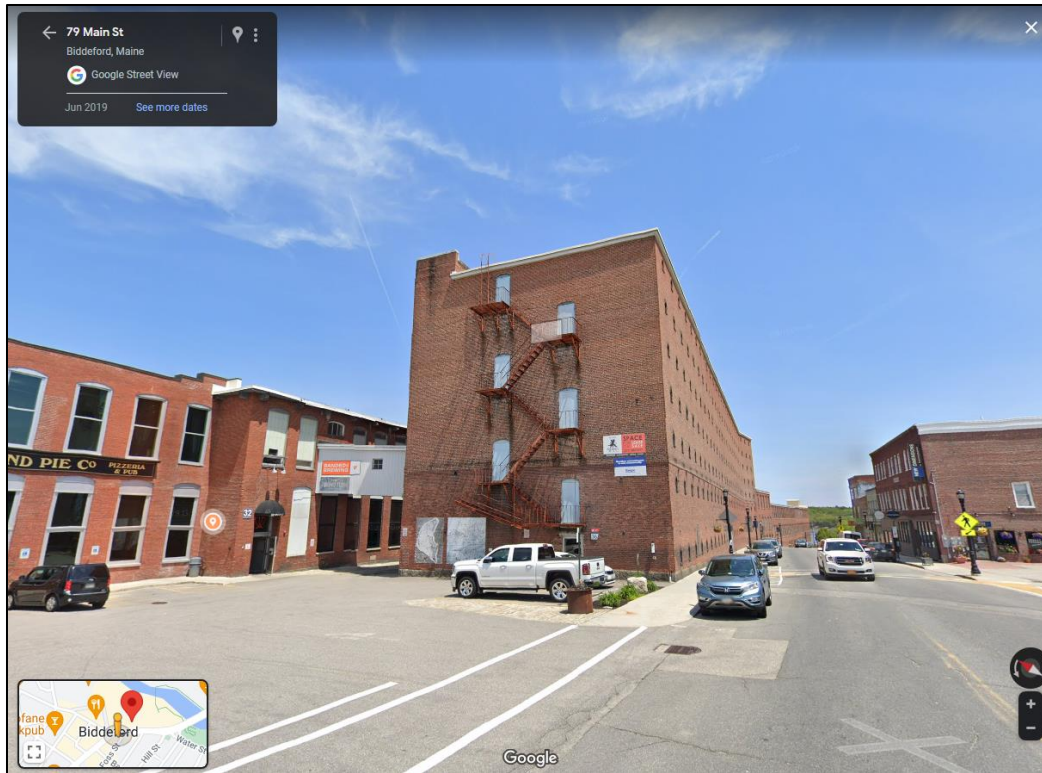
The Biddeford Saco Mills Historic District possesses integrity of location, design, materials, workmanship, feeling, setting, and association. It is significant for its association with the development of Biddeford/Saco region from a remote seventeenth-century maritime settlement to a major industrial center in the nineteenth century.

The district is noted for its industrial significance and its architectural significance.

Building 36 as seen from Foss Street:



Source: [2 Foss Street](#). Google Street View. Image date June 2019. Accessed February 28, 2023.



Source: [79 Main Street](#). Google Street View. Image date June 2019. Accessed February 28, 2023.

Source:

4. PROJECT PROPOSAL

While the exterior of this building will remain largely unchanged, there are several alterations that must be considered. Much of this work is proposed for the west elevation of the building, and is very visible from the surrounding area:

Demolition:

Summary - The applicant proposes to remove existing fire escape at the west elevation, remove existing egress doors at floors two through seven, remove existing first floor doors at the west and north elevations, create new bay opening at lower left of west elevation and remove existing second floor door at the north elevation and infill opening with brick. See drawings as keyed below for further details.

Drawing A0021

<u>Key</u>	<u>Description</u>
001	EXG. EXTERIOR FIRE ESCAPE ASSEMBLY TO BE REMOVED
006	EXG. First Floor DOORS TO BE REMOVED; OPENING TO REMAIN & BE REPLACED W/ NEW DOOR (West and North elevations)
013	EXG. EGRESS DOOR TO BE REMOVED & OPENING TO BE INFILLED W/ BRICK VENEER TO MATCH EXG. ADJACENT BRICK WALL

- 027 NEW OPENING IN EXG. EXTERIOR WALL AS INDICATED FOR NEW AUTOMATIC SLIDING ENTRY DOOR
- 031 EXG. DOOR TO BE REMOVED; OPENING TO BE INFILLED W/ BRICK VENEER TO MATCH EXG. ADJACENT BRICK WALL.

New construction:

Summary - Most visible new work will be at west elevation. New aluminum paneled accent wall will be installed in place of existing fire escape and egress doors from floors one through roof, new galvanized metal canopy will be installed over new first floor openings. (See lower image on title page of drawing set.) At the north elevation, along the alley between this building and Building 13-W, new concrete loading ramp, aluminum railing, and new door with galvanized metal canopy will be installed at existing first floor opening near the northwest corner of building. New concrete loading dock with aluminum railing, door and galvanized metal canopy will be installed at existing opening adjacent to Building 19. New signage will be installed at South elevation near the top of the elevator tower adjacent to Building 19. Brick and mortar will be cleaned and repointed as needed.

Drawing A0201 and A0202

<u>Key</u>	<u>Description</u>
301	WALL MOUNTED LIT EXTERIOR SIGNAGE; PROVIDE ELEC. WHIP FOR POWER
306	ALL EXG. BRICK TO BE WASHED, REPAIRED, PAINTED & REPOINTED AS REQ'D.; G.C. TO V.I.F. CONDITION OF ALL EXTERIOR BRICK WORK
307	NEW WALL SUSPENDED ROOF CANOPY OVER MAIN ENTRANCE
311	NEW WALL SUSPENDED ROOF CANOPY OVER REAR LOADING/UNLOADING ENTRANCE
312	METAL STUD FRAMED ACCENT WALL W/ ALUMINUM PANEL FINISH
315	NEW FULLY GLAZED AUTOMATIC SINGLE SLIDING ENTRY DOOR INSTALLED IN NEW OPENING (REFER TO SELECTIVE REMOVAL FLOOR PLAN & ELEVATION)
316	NEW FULL LITE ENTRY DOOR INTO ADMINISTRATION AREA INSTALLED IN EXG. OPENING
317	NEW RAILING @ REAR LOADING/UNLOADING ENTRY RAMP
318	NEW ENTRY RAMP @ REAR LOADING/UNLOADING ENTRANCE; REFER TO SHEET A0502 FOR RAMP DETAILING
319	FORMER EXTERIOR DOOR TO BE REMOVED & INFILLED W/ BRICK VENEER TO MATCH EXG. ADJACENT BRICK WALL
320	NEW EXTERIOR CONC. LOADING DOCK; REFER TO SHEET A0501 FOR LOADING DOCK DETAILING

5. PUBLIC COMMENT

The notice was posted on the city website on March 1, 2023. Four abutter notices were sent on March 1, 2023.

As of March 1, 2023, no Public Comments had been received regarding the proposed project.

6. STAFF REVIEW:

A. REVIEW STANDARDS: Article XV (Historic Preservation Ordinance),

Section 13. Evaluation standards for certificate of appropriateness.

A. Reconstruction and alterations.

1. A building or structure classified as an historic landmark or located within an historic district, or any part thereof, or any appurtenance related to such structures, including but not limited to walls, fences, light fixtures, steps, paving and signs, shall not be reconstructed or altered unless a certificate of appropriateness has been issued for such activity. No certificate of appropriateness for a structure or building identified as contributing to the district shall be issued unless the proposed activity is found to preserve or enhance a building's or structures historical or architectural character. No certificate of appropriateness shall be issued for a noncontributing structure or building unless the proposed activity is complementary to the historic character of surrounding structures and buildings and meets the intent of this ordinance.

2. The standards and requirements in the United States Secretary of the Interior's Standards of Rehabilitation as well as the following factors shall be considered when reviewing applications for reconstruction or alteration of buildings or structures subject to review under this ordinance:

a. Every reasonable effort shall be made to use a property for its historic purpose and in a way which will require minimum alteration to the structure and its environment;

b. Rehabilitation work shall not destroy the distinguishing qualities nor character of the structure and its environment. The removal or alteration of any historic material or architectural features should be avoided;

c. Deteriorated architectural features should be repaired rather than replaced, wherever possible. In the event that replacement is necessary, the new material should match the material being replaced in composition, design, texture and other visual qualities. Repair or replacement of missing architectural features should be based on physical or pictorial evidence rather than on conjectural designs or the availability of different architectural features from other buildings;

d. Distinctive stylistic features or examples of skilled craftsmanship which characterize historic structures and often predate the mass production of building materials shall be treated with sensitivity;

e. Changes which may have taken place in the course of time are evidence of the history and development of the structure and its environment, and these changes shall be recognized and respected;

f. All structures shall be recognized as products of their own time. Alterations to create an earlier appearance shall be discouraged;

g. Contemporary design for additions to existing structures shall be encouraged if such design is compatible with the size, scale, material and character of the neighborhood, the structure or its environment; and,

h. Wherever possible, new additions or alterations to structures shall be done in such a manner that if they were to be removed in the future the essential form and integrity of the original structure would be unimpaired.

7. STAFF RECOMMENDATION

If the Board approves the project, Staff recommends doing so with the following minimum Conditions of Approval:

1. *All permits must be obtained from Code Enforcement prior to beginning any work.*
2. *Other* _____.

8. SAMPLE MOTIONS

Demolition

- A. Motion to approve Certificate of Appropriateness for True Storage, LLC to make select exterior demolitions as described to the building at 32 – 40 Main Street, based on materials and assertions submitted, and conditioned on the following:
 1. *All permits must be obtained from Code Enforcement prior to beginning any work.*
 2. _____
- B. Motion to deny the Certificate of Appropriateness for True Storage, LLC to make select exterior demolitions to the building at 32 – 40 Main Street, based on the following:
 1. _____
 2. _____
- C. Motion to postpone the Certificate of Appropriateness for True Storage, LLC to make select exterior demolitions to the building at 32 - 40 Main Street, pending additional information as requested:
 1. _____
 2. _____

Alterations

- A. Motion to approve Certificate of Appropriateness for True Storage, LLC to make alterations as described to the building at 32 – 40 Main Street, based on materials and assertions submitted, and conditioned on the following:
 1. *All permits must be obtained from Code Enforcement prior to beginning any work.*
 2. _____
- B. Motion to deny the Certificate of Appropriateness for True Storage, LLC to make alterations to the building at 32 – 40 Main Street, based on the following:
 1. _____
 2. _____
- C. Motion to postpone the Certificate of Appropriateness for True Storage, LLC to make alterations to the building at 32 - 40 Main Street, pending additional information as requested:
 1. _____
 2. _____



CITY OF BIDDEFORD
PLANNING DEPARTMENT

Project Information:

Project Address: Pepperell Mill Building #36 (32-40 main st)
Project Zone: MSRD3 Property Map & Lot Number(s): 71-10-5

Existing Use of Property:

☐ Residential ☒ Commercial ☐ Mixed Use ☐ Industrial ☐ Institutional
Storage

COMMISSION Full Review Project Activities \$275.00 Fee (check all that apply):

Alterations and Repair

- ☐ Removal and/or replacement of architectural detailing (for example porch spindles and columns, railings, windows and window moldings, and cornices)
- ☐ Installation or replacement of siding
- ☐ Porch replacement or construction of new porches
- ☐ Installation or replacement of either roofing or gutters when they are a significant and integral feature of the structure
- ☐ Alteration of accessory structures such as garages
- ☒ Other: Remove fire escape

Additions and New Construction

- ☐ New Construction
- ☐ Building additions, including rooftop additions, dormers or decks
- ☐ Construction of accessory structures
- ☐ Installation of exterior access stairs or fire escapes
- ☐ Installation of antennas and satellite receiving dishes
- ☐ Installation of solar collectors
- ☒ Rooftop mechanicals (e.g., HVAC)

Other: _____



CITY OF BIDDEFORD PLANNING DEPARTMENT

HISTORIC PRESERVATION COMMISSION APPLICATION FOR A CERTIFICATE OF APPROPRIATENESS

Applicant's/Owner's Information:

Applicant's Name: True Storage LLC
Applicant's Address: 670 N commercial St #212 Manchester, NH 03101
Applicant's Phone(s): 603 622 6223
Applicant's E-mail: JSullivan@truestorage.com

Applicant's Legal Interest in the Property:

☐

Owner

☒

Purchase and Sale

☐

Tenant - Lease/Rental Agreement

Owner's Name: Presidium Real Estate
Owner's Address: 74 Neptune Dr Brunswick ME 04011
Owner's Phone(s): 207-282-5577
Owner's E-mail: mhiggins@presidiumre.com

Representative(s) - Agent, Engineer, Architect, and/or Contractor Information:

Agent's Name: Gorrell Palmer
Agent's Address: 300 South Borough Dr #200 South Portland ME 04106
Agent's Phone(s): 207-772-2515
Agent's E-mail: apalmer@gorrellpalmer.com

Attach separate pages where multiple representatives are involved.



CITY OF BIDDEFORD PLANNING DEPARTMENT

Moving and Demolition

- ☐ Moving of structures or objects on the same site or to another site
- ☐ Any demolition or relocation of a landmark contributing and/or contributing structure within a district
- ☐ Other: _____

SUBCOMMITTEE Review Project Activities \$50.00 Fee (check all that apply):

Alterations and Repair

- ☒ Masonry work, including repointing, sandblasting, chemical cleaning, painting where the masonry has never been painted, or conversely, removal of paint where the masonry historically has been painted
- ☐ Other: _____

Signage and Exterior Utilities

- ☒ Installation or alteration of any exterior sign, awning, or related lighting
- ☐ Exterior lighting where proposed in conjunction with commercial and institutional signage or awnings
- ☐ Exterior utilities, including mechanical, plumbing, and electrical, where placed on or near clearly visible facades
- ☐ Other: _____

Note: In cases where the project is minor in nature, the Planning Department may determine that even if the activity qualifies for full Commission review it would be more appropriate to have it delegated to Subcommittee review.

Note: Your project may also require a building permit. Please call the Code Enforcement Office (284-9236) to make this determination.



CITY OF BIDDEFORD PLANNING DEPARTMENT

Submittal Information Checklist:

- ☐ Required Application Fee: If full Commission review is required - \$275.00
If Subcommittee review is required – \$50.00
- ☐ Completed Application Form
- ☐ Description of Proposed Activity
- ☐ Photographs of the building involved as well as adjacent buildings
- ☐ Samples of materials proposed for use in the activity
- ☐ Drawings (i.e., exterior elevations) and/or plans to illustrate the proposed activity for which the certificate is being applied for, including lettering styles (if applicable)

Signature of applicant:

A handwritten signature in black ink, appearing to be "J. S.", written over a horizontal line.

Date: 2/21/23

Signature of
property owner (Required):

A handwritten signature in blue ink, appearing to be "CV", written over a horizontal line.

Date: 2/21/23

Cross Mocer, Authorized Person of
Pepperell Mill Development, LLC

Pepperell Mill Building #36 Project Description

True Storage is proposing to convert building #36 to indoor climate-controlled self-storage. We plan to perform an interior renovation of the facility, while leaving the exterior façade largely untouched. We do plan to remove the fire escape on the Western side of the building, add HVAC units to the roof, and perform minor repointing work where it is required on the façade. We also plan to add signage and lighting that is compliant with the City's ordinance.

Regarding site work, we will also have to establish new utility connections as the building doesn't have water, gas or sewer access currently. We are exploring those connections with Public Works and Engineering as we speak.

I have included preliminary architectural drawings for your review that can provide additional detail regarding our proposed renovation.

Best,

True Storage Team

22 Main St. Bldg. #36 Biddeford, ME 04005



AERIAL MAP

PROJECT LOCATION

200' SCALE BAR

N

SITE LOCUS

PROJECT LOCATION

200' SCALE BAR

N

PROJECT CONTACT LIST

OWNER/ENGINEER
CONSTRUCTION MANAGER
 670 N. COMMERCIAL ST.
 MANCHESTER, NH 03101
 603.232.4232

ARCHITECT
 670 N. COMMERCIAL ST.
 MANCHESTER, NH 03101
 603.232.4232

STRUCTURAL ENGINEER
 1505
 603.232.4232

CONSTRUCTION MANAGER
 670 N. COMMERCIAL ST.
 MANCHESTER, NH 03101
 603.232.4232

60000 SHEET LIST - 24x36

Sheet Number	Sheet Name	Sheet Date
00	TITLE SHEET	1/20/20
01	ARCHITECTURAL	1/20/20
02	STRUCTURAL	1/20/20
03	ELECTRICAL	1/20/20
04	Mechanical	1/20/20
05	Plumbing	1/20/20
06	Site	1/20/20
07	Foundation	1/20/20
08	Roof	1/20/20
09	Exterior	1/20/20
10	Interior	1/20/20
11	Detail	1/20/20
12	Section	1/20/20
13	Elevation	1/20/20
14	Foundation	1/20/20
15	Roof	1/20/20
16	Exterior	1/20/20
17	Interior	1/20/20
18	Detail	1/20/20
19	Section	1/20/20
20	Elevation	1/20/20
21	Foundation	1/20/20
22	Roof	1/20/20
23	Exterior	1/20/20
24	Interior	1/20/20
25	Detail	1/20/20
26	Section	1/20/20
27	Elevation	1/20/20
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29	Roof	1/20/20
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31	Interior	1/20/20
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92	Roof	1/20/20
93	Exterior	1/20/20
94	Interior	1/20/20
95	Detail	1/20/20

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Sheet Title Date	M / S
Project No.	RC001/CG
Approved By	C
Drawn By	DC

Scale: As indicated

[illegible]

REFER TO SHEET A0001 FOR ADDITIONAL GENERAL NOTES

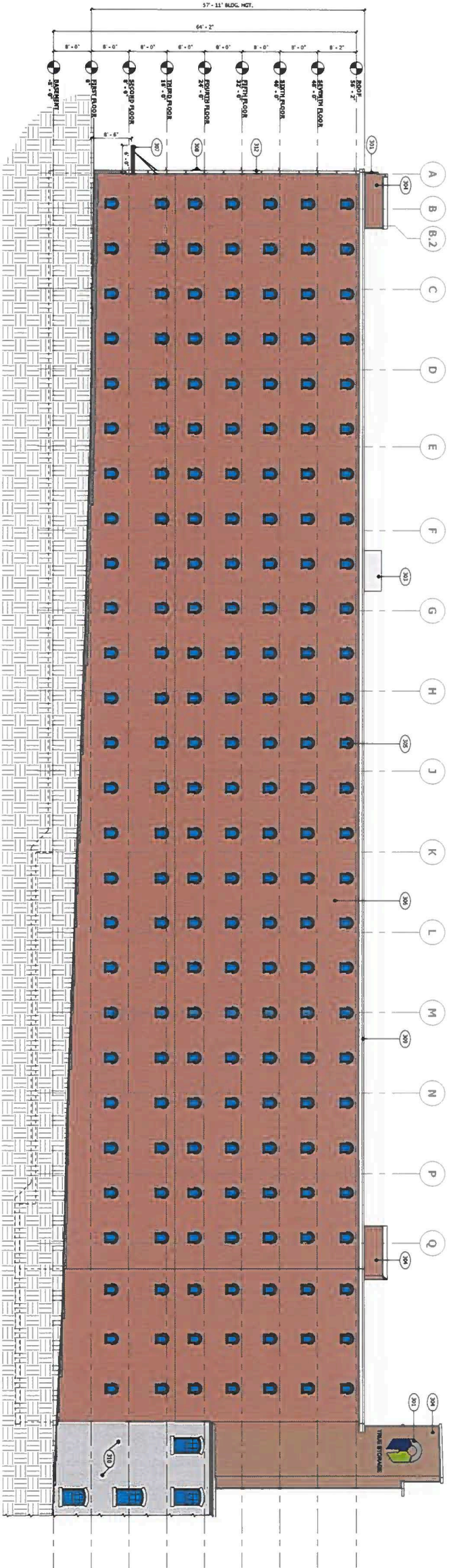
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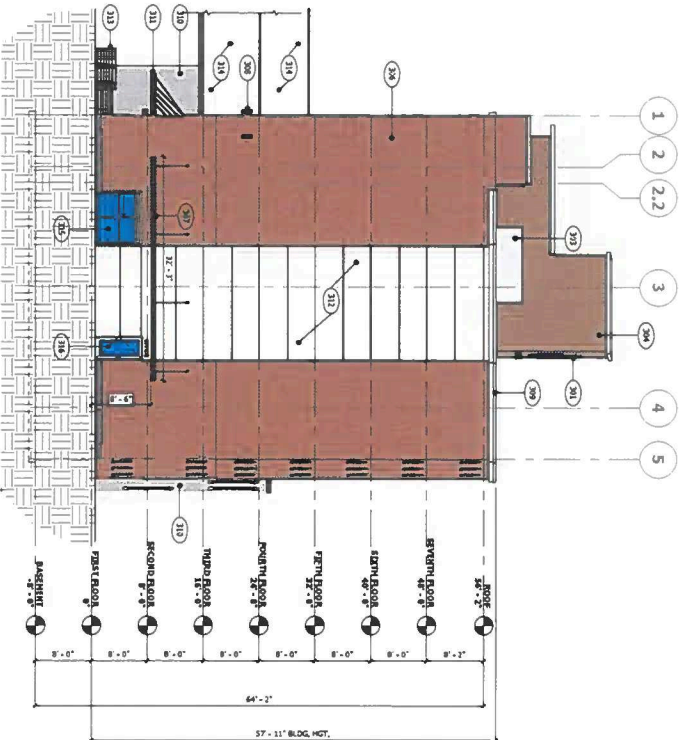
EXTENSIVE BATHROOMS WITH

5

ELEVATIONS KEYNOTES



1 SOUTH EXTERIOR ELEVATION
A0201 3/22' = 1'-0"



1 WEST EXTERIOR ELEVATION
A0201 3/22' = 1'-0"

GENERAL NOTES

REFER TO SHEET TYPING FOR EXTERIOR WALL GENERAL NOTES.

STEEL LINTEL SCHEDULE @ MAS. OPNGS

TYPE	1" (FORM) THIN WALL	1" (FORM) THIN WALL	1" (FORM) THIN WALL	1" (FORM) THIN WALL
1-43	11'3\"	11'3\"	11'3\"	11'3\"
1-44	11'3\"	11'3\"	11'3\"	11'3\"
1-45	11'3\"	11'3\"	11'3\"	11'3\"
1-46	11'3\"	11'3\"	11'3\"	11'3\"
1-47	11'3\"	11'3\"	11'3\"	11'3\"
1-48	11'3\"	11'3\"	11'3\"	11'3\"
1-49	11'3\"	11'3\"	11'3\"	11'3\"
1-50	11'3\"	11'3\"	11'3\"	11'3\"
1-51	11'3\"	11'3\"	11'3\"	11'3\"
1-52	11'3\"	11'3\"	11'3\"	11'3\"
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1-54	11'3\"	11'3\"	11'3\"	11'3\"
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1-64	11'3\"	11'3\"	11'3\"	11'3\"
1-65	11'3\"	11'3\"	11'3\"	11'3\"
1-66	11'3\"	11'3\"	11'3\"	11'3\"
1-67	11'3\"	11'3\"	11'3\"	11'3\"
1-68	11'3\"	11'3\"	11'3\"	11'3\"
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1-72	11'3\"	11'3\"	11'3\"	11'3\"
1-73	11'3\"	11'3\"	11'3\"	11'3\"
1-74	11'3\"	11'3\"	11'3\"	11'3\"
1-75	11'3\"	11'3\"	11'3\"	11'3\"
1-76	11'3\"	11'3\"	11'3\"	11'3\"
1-77	11'3\"	11'3\"	11'3\"	11'3\"
1-78	11'3\"	11'3\"	11'3\"	11'3\"
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1-96	11'3\"	11'3\"	11'3\"	11'3\"
1-97	11'3\"	11'3\"	11'3\"	11'3\"
1-98	11'3\"	11'3\"	11'3\"	11'3\"
1-99	11'3\"	11'3\"	11'3\"	11'3\"
1-100	11'3\"	11'3\"	11'3\"	11'3\"

1. PROVIDE A 30\"

EXTERIOR ELEVATIONS KEYNOTES

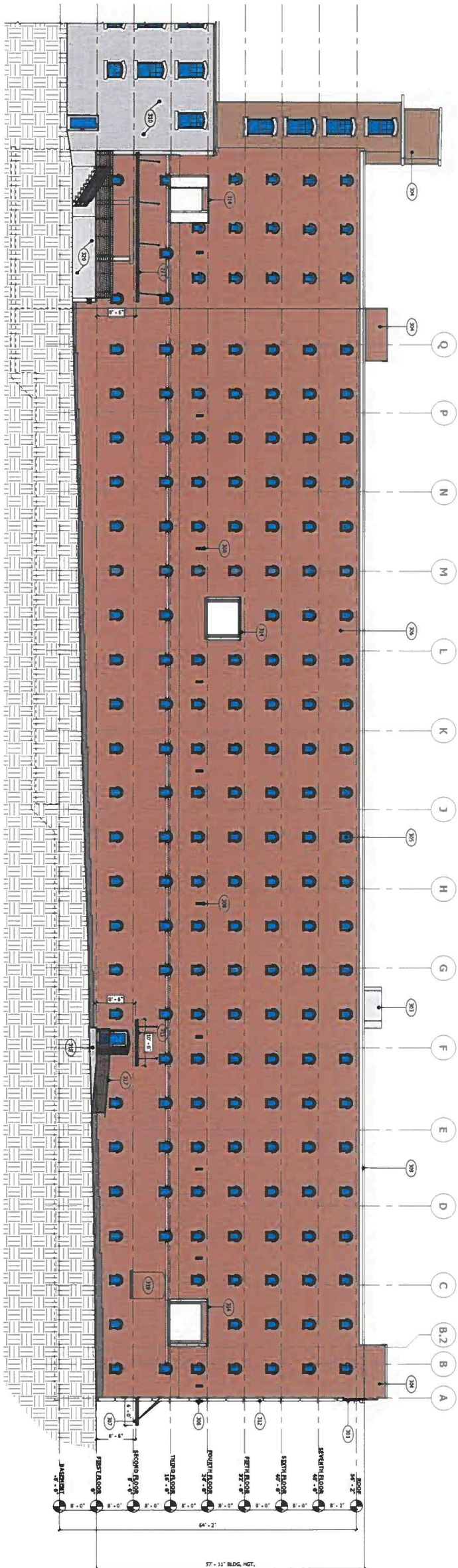
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- 100. PROVIDE A 30\"



True Storage Biddeford
22 Main Street Bldg. #36
Biddeford, ME 04005

EXTERIOR ELEVATIONS

A0201



1 NORTH EXTERIOR ELEVATION
MO202 3/32" = 1'-0"

GENERAL NOTES

REFER TO SHEET 1 ABOVE FOR ADDITIONAL GENERAL NOTES

STEEL LINTEL SCHEDULE @ MAS. OPN'GS

[illegible]

INTERESTING NOTE

[illegible]

EXTERIOR ELEVATIONS KEYNOTES

EXTERIOR ELEVATIONS KEYNOTES

- [illegible]



THE STORAGE
 670 N. CONNECTA ST.
 WILMINGTON, NH 03188
 F. 603.212.4292
www.the-storage.com

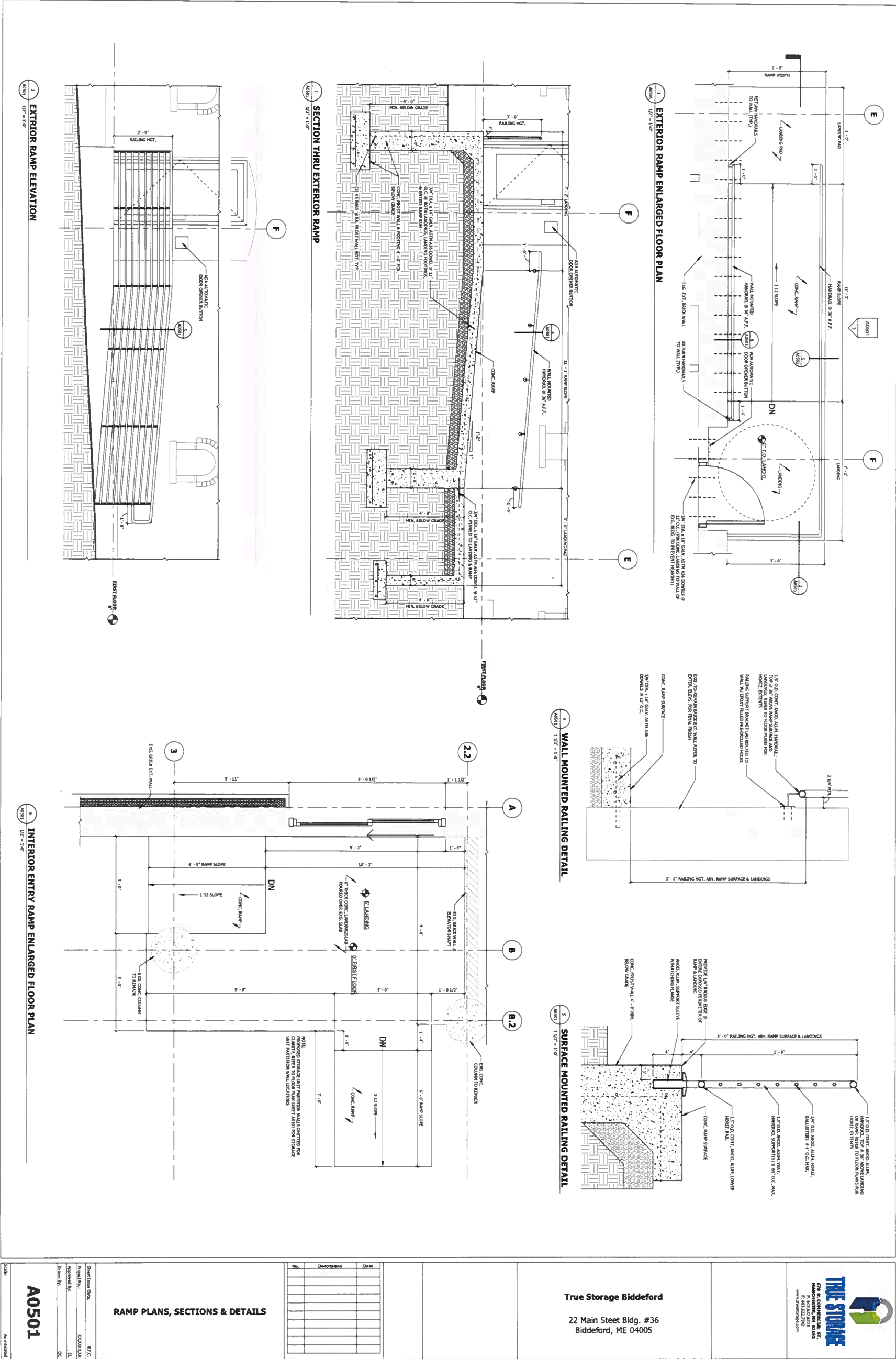
True Storage Biddeford
22 Main Steet Bldg. #36
Biddeford, ME 04005

EXTERIOR ELEVATIONS

[illegible]

Sheet Issue Date:	M.F.C.
Project No.:	KC0000000
Approved By:	Approved
Drawn By:	Author

A0202

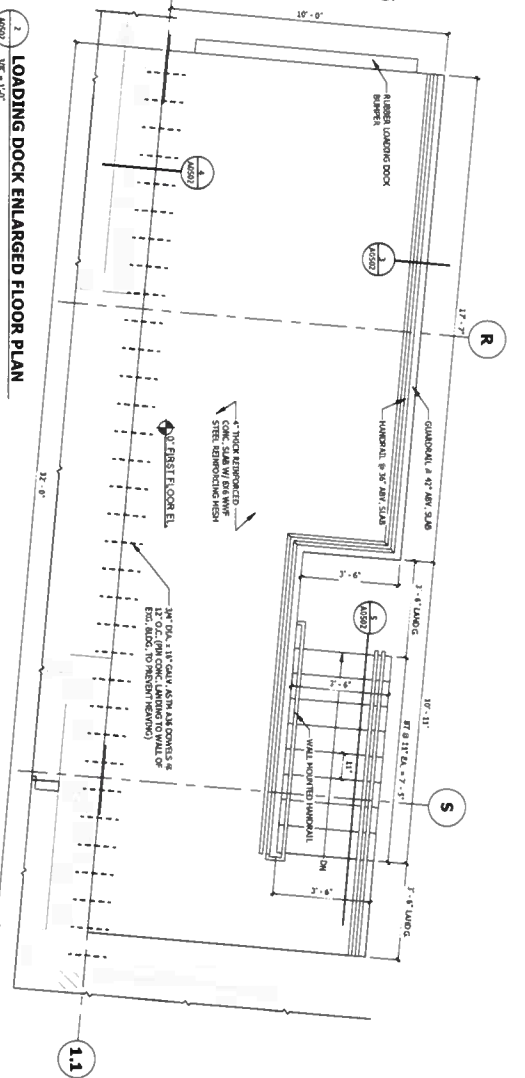


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Sheet Issue Date:	M.F.C.
Project No.:	XXJ00XJ0X
Approved By:	CL
Drawn By:	MY

LOADING DOCK PLANS, SECTIONS & DETAILS

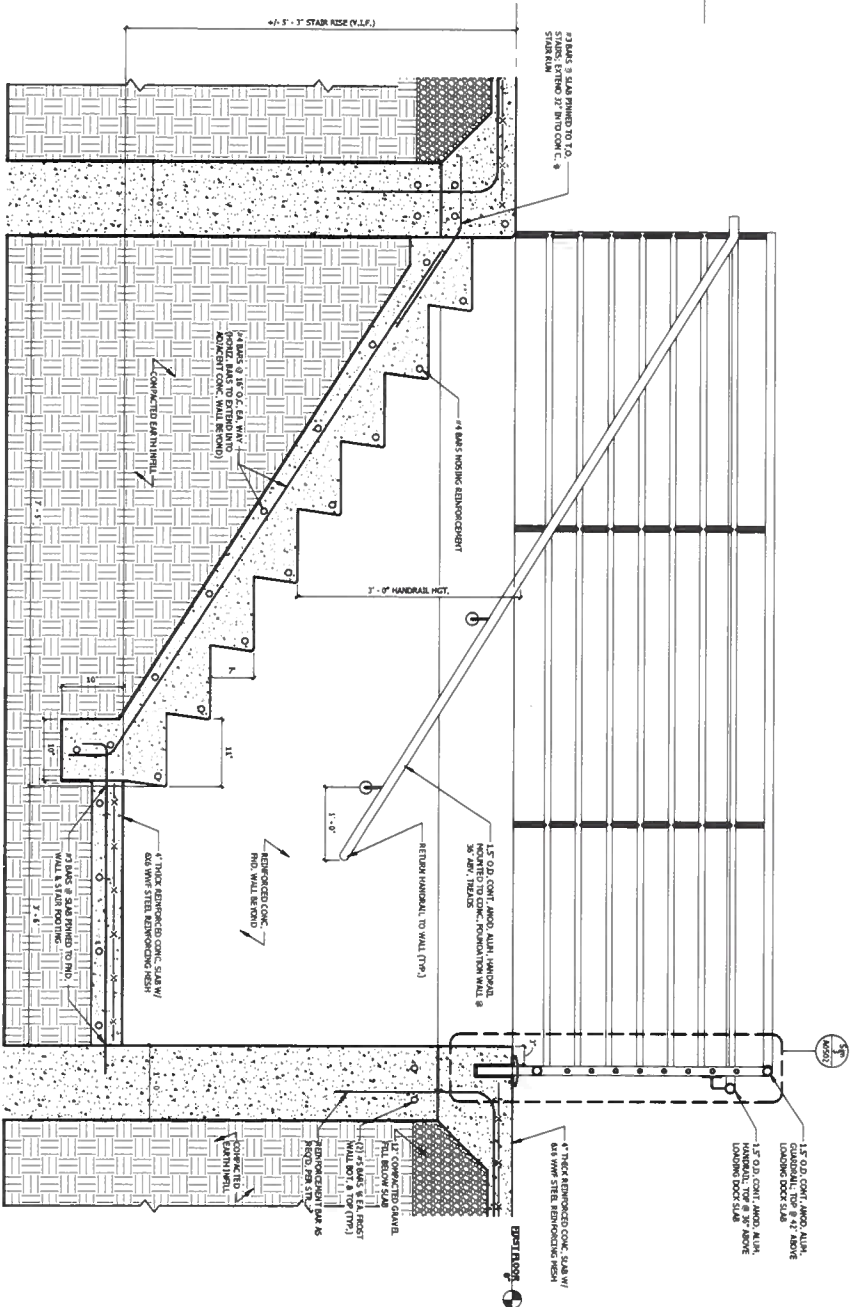
A0502



1
A0502
LOADING DOCK ENLARGED FOUNDATION PLAN
3/8" = 1'-0"

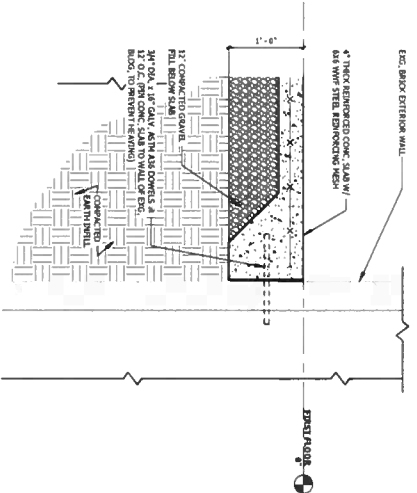
2
10503
1/8" = 1' 0"

LOADING DOCK ENLARGED FLOOR PLAN

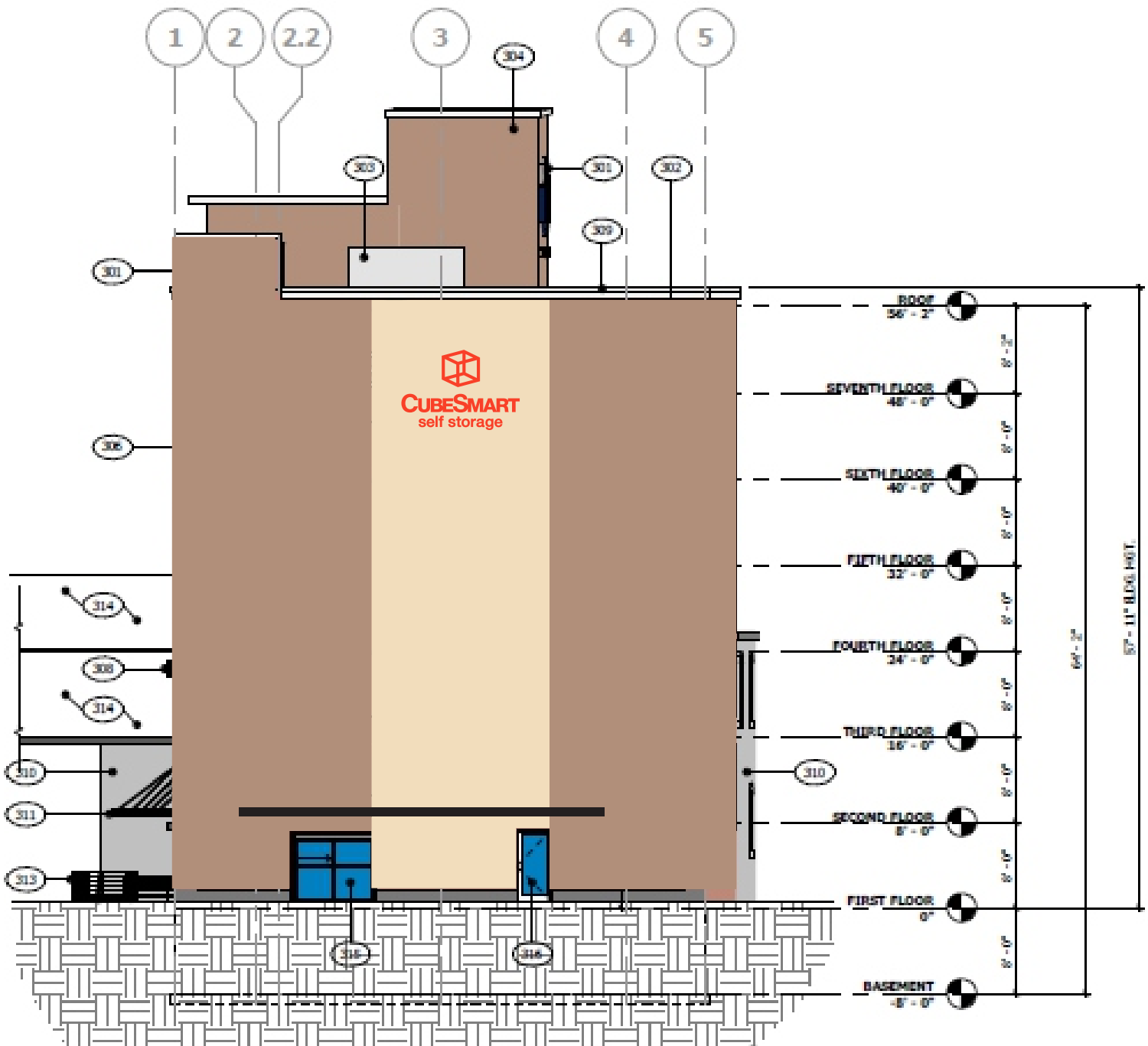


SECTION DETAIL @ LOADING DOCK FND. WALL

CONCRETE STAIR SECTION DETAIL



SECTION DETAIL @ EXG. EXT. WALL



Fabricated dimensional letters - 50 square feet
 - stainless steel with a factory-applied red enamel finish

PAGE 1

FIRST
SIGN INC.

Date: 03/02/2023

Scale:

107 Hollis Street | Manchester, NH 03101 | 603-627-0003

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Fabricated dimensional letters
 - stainless steel with a factory-applied white enamel finish

PAGE 3

**FIRST
SIGN INC.**

Date: 03/02/2023

Scale:

107 Hollis Street | Manchester, NH 03101 | 603-627-0003

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281

