Carriage Hill MetroPark Visitor Center Exterior Replacement Project
Project 24-006

Project Description

The project includes the replacement of exterior siding and trim, windows and interior trim, any damaged sheathing and gutters. Install new membrane layer, siding panels and battens, exterior and interior trim, windows, custom door, flashing and painting. The project may be completed in phases based on available budget.

Project Details

Contractor to provide all labor, equipment and materials required to complete the project. See Bid form for base bid and alternates. Base bid is anticipated to be significantly less than the project budget, however, the project will award up to full project budget by selecting from the alternates.

Demolition

Remove all wood siding, casing, trim, windows and 1 door that are to be replaced. Remove existing building wrap applied over OSB wall sheathing. Fascia, rake, and soffit to remain. Notify owner of any damaged sheathing, facia, rake, or sofit. Owner will work with the contractor to determine the need to replace and damaged building components and will direct the contractor to complete repairs per unit prices provided in the bid form. Remove existing gutters (Bid Alternate).

Note: Windows on the lower level in the masonry wall areas are not being replaced. Most doors are not being replaced.

Dispose demolished materials offsite in a legal manner. The interior of the building shall be protected from the elements during the entirety of the project. Contractor shall ensure that all openings are covered and secured each night to prevent moisture or other intrusion into the building.

Contractor is responsible for the removal, maintenance and re-installation of all devices such as antennas, vent covers and lighting protection on the exterior of the building for the replacement of the siding.

Materials and Installation

All materials required to complete the project shall be supplied and installed by the selected contractor per manufacturer's specifications and as outlined below.

Windows and One Door

Basis for Design: Pella Impervia Casement Windows with UV protection insulated glass. Window frames to be filled with insulation by manufacturer. Existing windows are Aluminum Clad Wood windows by Pella. See attached window schedule and as built drawings.

NOTE: 4 trapezoidal windows in the cupola will be replaced with sheathing and siding, insulation and interior finishes per wall detail Sheet A-501 of the as built drawings provided below and painted inside and outside to match and per specifications.

NOTE: Windows in all bathrooms to have translucent interior glazing per attached window schedule.

Bais for Design: Francis-Schulze Company- Door shall be per provided door schedule via Pella. The only door being replaced is the large access door on the northeast side of the building. All other doors are to remain. Existing clear opening size shall be maintained to allow for large items to be moved into and out of the building.

Windows located on the lower level in the masonry walls of the building are to remain.

Supplied windows shall fit existing openings.

Trim Color: White

Fasteners: Install windows using 2" 11 Guage Stainless Steel Roofing Nails. Every pre-punched hole shall have a fastener installed.

Installation: Install per manufacturers specifications and as found in the attached installation guide including but not limited to preparing the opening, setting and fastening the window, sealing and flashing.

Wall Membrane and Flashing

Basis for design: DuPont Tyvek DrainWrap. All membrane and sealing products are to be by the same manufacturer.

Provide and install new grooved air and water barrier membrane over all existing or repaired sheathing prior to installing new windows and siding. Overlap product a minimum of 6" both vertically and horizontally and fasten to manufacturer's specifications including taping seams using Tyvek Tape. Provide kick out flashing at the bottom of all walls per manufacturer's specifications. See installation guide below.

Ensure all gaps between framing and windows are filled using Great Stuff Pro Window and Door Polyurethane Foam Sealant or approved equal per manufacturer's specifications and installation guide.

Provide and install Flashing Tape and Flex Wrap around all windows and penetrations per manufacturer's specifications. See installation guide below.

Install Z flashing per manufacturer's installation specifications over all doors, windows and trim at all horizontal joints between siding panels. Z flashing shall extend a minimum of 4" up the wall behind the wall panels or trim and provide all required gaps per manufacturer's specifications.

Flashing shall be either aluminum or galvanized steel and either pre-painted or primed and painted in the field to match adjoining material color.

Replacement Wall Sheathing

Contractor shall notify owner if underlying wall sheathing is damaged and requires replacement. Upon the direction and approval of the owner, contractor shall supply and install materials, including fasteners and fastener spacing to match or exceed existing. Replacement will be based on the square foot price submitted by the contractor on the bid form.

Siding and Trim

Basis for Design: James Hardie HZ5 Hardie Panel, Cedarmill finish, factory applied color: Dream Collection Color "Rusty Nail" and Batten Boards, Rustic Grain Finish, factory applied color: Dream Collection Color "Rusty Nail" and Hardie Trim 5/4 Roughsawn, factory applied Color "Arctic White". All siding and Trim shall be from the same manufacturer.

Apply new Hardie panels (48" x 120") with 0.75" x 2.5" battens at 12" centers vertically on entire structure. Caulk all vertical joints between siding panels prior to installing batten boards using a paintable or color matched exterior grade silicone caulk per manufacturers specifications. All exposed caulk shall be color matched or painted to match adjoining color.

Install new Hardie Trim 5/4 Roughsawn 5.5" width, color "Artic White" around all windows and door. Proposed trim is wider than existing, but contractor shall match existing trim layout and joint details.

Install new (or reuse where possible) interior casing trim at all replaced windows and door. Install to match existing molding and joint pattern. Paint to match existing color and specification below.

Fasteners: Stainless steel, 0.090" shank x 0.215" HD x 1-1/2" long ring shank nails. All fasteners securing the wall panels shall be located under the batten boards a maximum of 13.75" vertically and 12" horizontally. Fasteners shall be nailed into wall studs at 24" O.C. Edges of panels shall be attached to existing studs. All exposed fasteners to be painted to match adjacent material color.

Louvers

Contractor shall supply and install new louvers to match existing using a metal, plastic or composite material. Provide cut sheet to owner for approval.

Paint

Interior trim shall be painted to match existing.

New door will require painting. Paint door and trim to match existing color scheme. Colors to match new exterior colors.

All trim and siding panels are to be delivered with factory applied COLORPLUS® TECHNOLOGY. Where touchup is required, the following specifications shall be used:

CUT EDGE TREATMENT

Caulk, prime and paint all field cut edges. James Hardie touch-up kits are required to touch-up ColorPlus products.

When touching up James Hardie products, the following surface preparation and topcoat application steps shall be taken:

• Ensure the surface is clean, dry, and free of any dust, dirt, or mildew
• On small touch up areas, repriming is normally not necessary
• DO NOT use stain, oil/alkyd base paint, or powder coating on James Hardie® Products.
• Apply finish coat in accordance with paint manufacturers written instructions regarding coverage, application methods, and application temperature
• DO NOT caulk nail heads when using ColorPlus products.
• Care should be taken when handling and cutting James Hardie ColorPlus® products. During installation use a wet soft cloth or soft brush to gently wipe off any residue or construction dust left on the product, then rinse with a garden hose.
• Touch up nicks, scrapes and nail heads using the ColorPlus® Technology touch-up applicator. Touch-up should be used sparingly. If large areas require touch-up, replace the damaged area with a new piece of siding with ColorPlus® Technology.
• Laminate sheet must be removed immediately after installation of each course.
• Terminate non-factory cut edges into trim where possible, and caulk. Color matched caulks are available from your ColorPlus® product dealer.
• Treat all other non-factory cut edges using the ColorPlus Technology edge coaters, available from your ColorPlus product dealer.

Gutters

Replace/re-secure loose J-clips at base of roof panels as required.

Replace all gutters, flashing and downspouts. Existing gutters are 5” half round steel galvanized gutters. New gutters to be minimum 24-gauge 6” half round steel galvanized gutters. Contractor to provide continuous runs of gutter with no joints. Ensure new gutters are properly sloped to drain water effectively off the building. Downspouts to match existing. See notes sheet A-402 South Elevation of as built drawings provided below.

Photos of the existing building

West Elevation

South Elevation

East Elevation

North Elevation

Photos of the existing building

West Elevation

South Elevation

East Elevation

North Elevation

MONT. COUNTY PARK PROJ. NO. 133 | RTPA PROJECT NUMBER 91052 | ODNR PROJ. NO. 3901152

CARRIAGE HILL RESERVE VISITORS CENTER

7860 SHULL ROAD
HUBER HEIGHTS, OHIO 45424

FOR

MONTGOMERY COUNTY PARK DISTRICT
1375 EAST SIEBENTHALER AVENUE
DAYTON, OHIO 45414

PREPARED BY

RICHARD TROTT AND PARTNERS INC.
77 EAST NATIONWIDE BLVD.
COLUMBUS, OHIO 43215

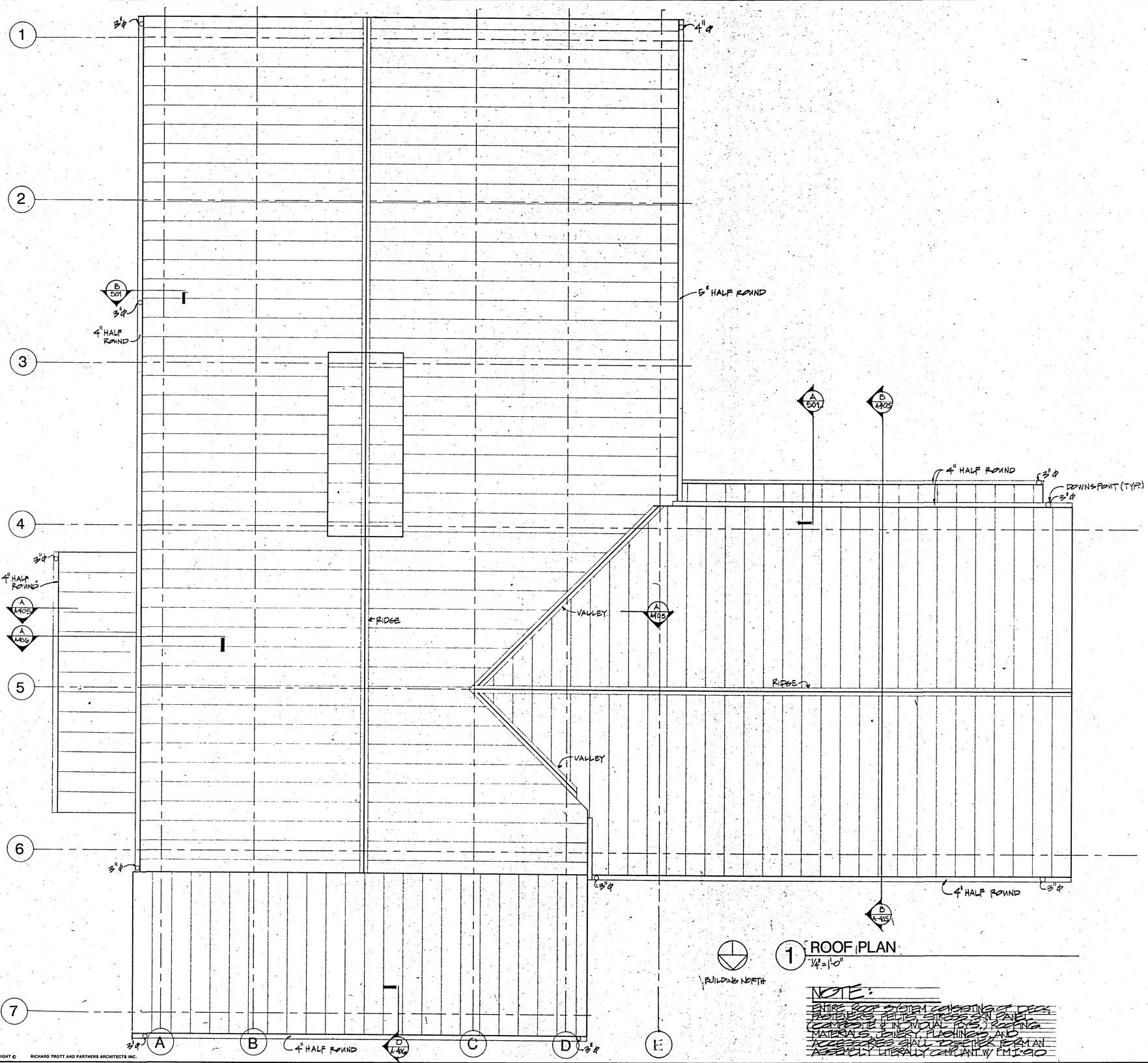
2 NOVEMBER, 1992
6 APRIL 1993 (REV)

DRAWING INDEX

CODE INFORMATION

EXTENT OF WORK	NEW FREESTANDING TWO STORY STRUCTURE.
TYPE OF CONSTUCTION	TYPE 4 HEAVY TIMBER (WITH LIMITED SUBSTITUTIONS)
USE GROUP	A3
AREA OF SPACE	GROSS AREA OF 9246 SQ. FT. NET USABLE AREA 7035 SQ. FT.
REMARKS	BUILDING COMPONENTS USED IN LIEU OF HEAVY TIMBER ARE AS FOLLOWS: – LOWER LEVEL: PROTECTED STEEL COLUMNS – LOWER LEVEL: PROTECTED STEEL BEAMS – UPPER LEVEL: FLOOR SYSTEM; 8" PRECAST CONCRETE PLANK WITH 2" STRUCTURAL CONCRETE TOPPING (UNPROTECTED) – 2x4 OR 2x6 (FIRE TREATED) WOOD TRUSSES UPPER LEVEL WITH 2 LAYERS TYPE X 5/8" GYPSUM WALLBOARD CEILINGS – CONVENTIONAL 2x12 RAFTER FRAMING (FIRE TREATED) ABOVE ROOMS 203, 204 AND 205 (UPPER LEVEL) WITH 2 LAYERS TYPE X 5/8" GYPSUM WALLBOARD CEILING
THERE WILL BE LIMITED AREA AUTOMATIC FIRE PROTECTION SYSTEMS IN STORAGE AREAS.	

CHM 19930406



1 ROOF PLAN
1/4"=1'-0"

BUILDING NORTH

NOTE:
ENTIRE ROOF SYSTEM CONSISTING OF DECK, FASTENERS, FELTS, STRESS-SKIN PANEL, COMPOSITE & INDIVIDUAL PLYS, ROOFING MATERIALS, JEWELRY, FLASHINGS AND ACCESSORIES SHALL BE TESTED AS AN ASSEMBLY LITERALLY COMPLIANT W/ FM 1-90

ATLAS BLUEPRINT 540371

STATE OF OHIO
Richard Trott
Partners
Architects, Inc.
#3633
REGISTERED ARCHITECT

RICHARD TROTT
AND PARTNERS
ARCHITECTS
INC
77 E. NATIONWIDE BLVD., COLUMBUS, OHIO 43215 (614) 221-1469

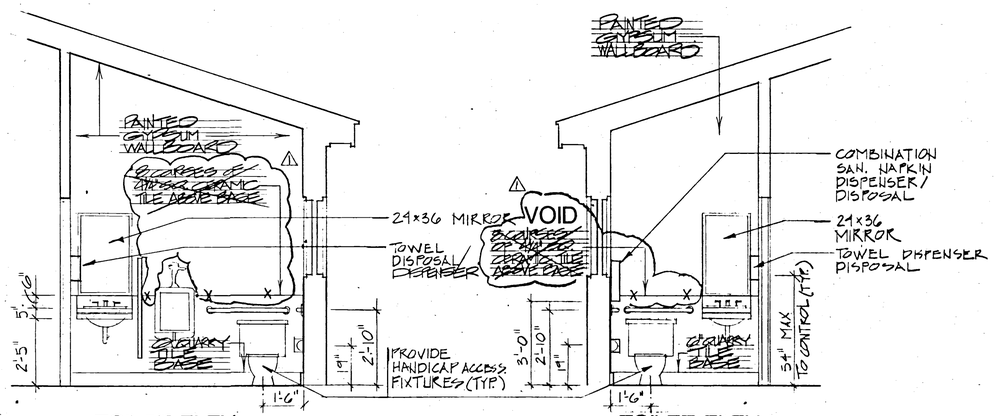
DATES/REVISIONS
2 NOVEMBER, 1992
⚠ 6 APRIL 1993 (REV)

PROJECT NAME
VISITOR CENTER
CARRIAGE HILL RESERVE
PARK DISTRICT OF DAYTON/
MONTGOMERY COUNTY

91052
PROJECT NUMBER

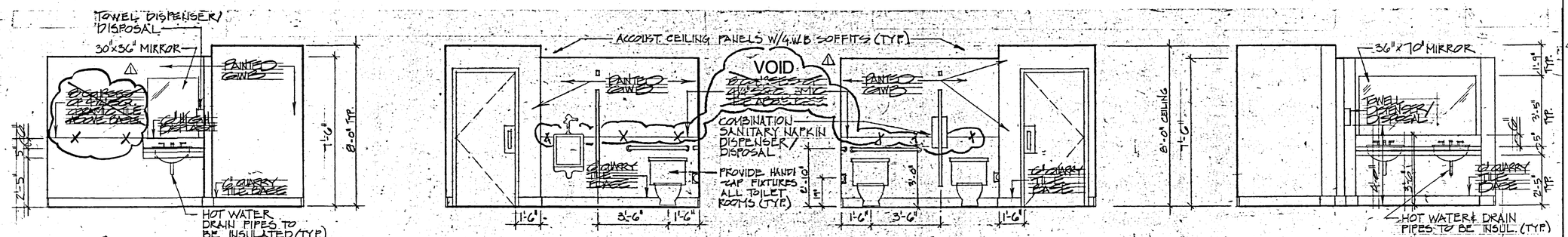
SHEET TITLE
ROOF PLAN

A-105
SHEET NUMBER



5 TOILET ELEV.
3/8" = 1'-0"

6 TOILET ELEV.
3/8" = 1'-0"



TOILET ELEVATION 1
3/8" = 1'-0"

TOILET ELEVATION 2
3/8" = 1'-0"

TOILET ELEVATION 3
3/8" = 1'-0"

TOILET ELEVATION 4
3/8" = 1'-0"

ATLAS BLUEPRINT 55164

STATE OF OHIO
Richard Trott
Partners
Architects, Inc.
#3633
REGISTERED ARCHITECT

RICHARD TROTT
AND PARTNERS
ARCHITECTS
77 E. NATIONWIDE BLVD., COLUMBUS, OHIO 43215 (614) 221-1469

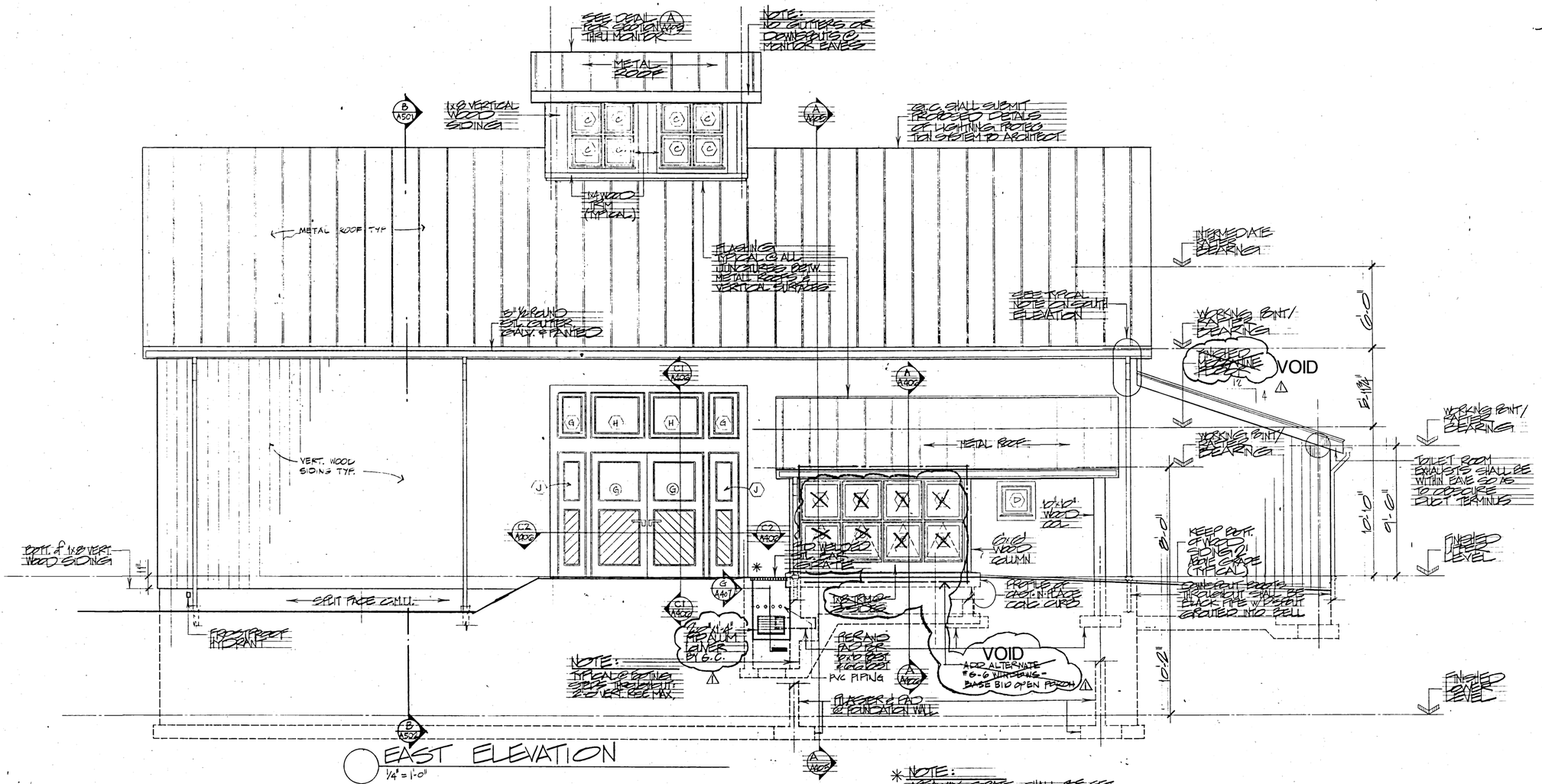
DATES/REVISIONS
2 NOVEMBER, 1992
⚠ 6 APRIL 1993 (REV)

PROJECT NAME
VISITOR CENTER
CARRIAGE HILL RESERVE
MONTGOMERY COUNTY
PARK DISTRICT OF DAYTON

91052
PROJECT NUMBER

SHEET TITLE
TOILET ROOMS

A-201
SHEET NUMBER



EAST ELEVATION

1/4" = 1'-0"

ATLAS BLUEPRINT 646231

STATE OF OHIO
Richard Trott
Partners
Architects, Inc.
#3633
REGISTERED ARCHITECT

RICHARD TROTT AND PARTNERS ARCHITECTS INC
77 E. NATIONWIDE BLVD., COLUMBUS, OHIO 43215 (614) 221-1469

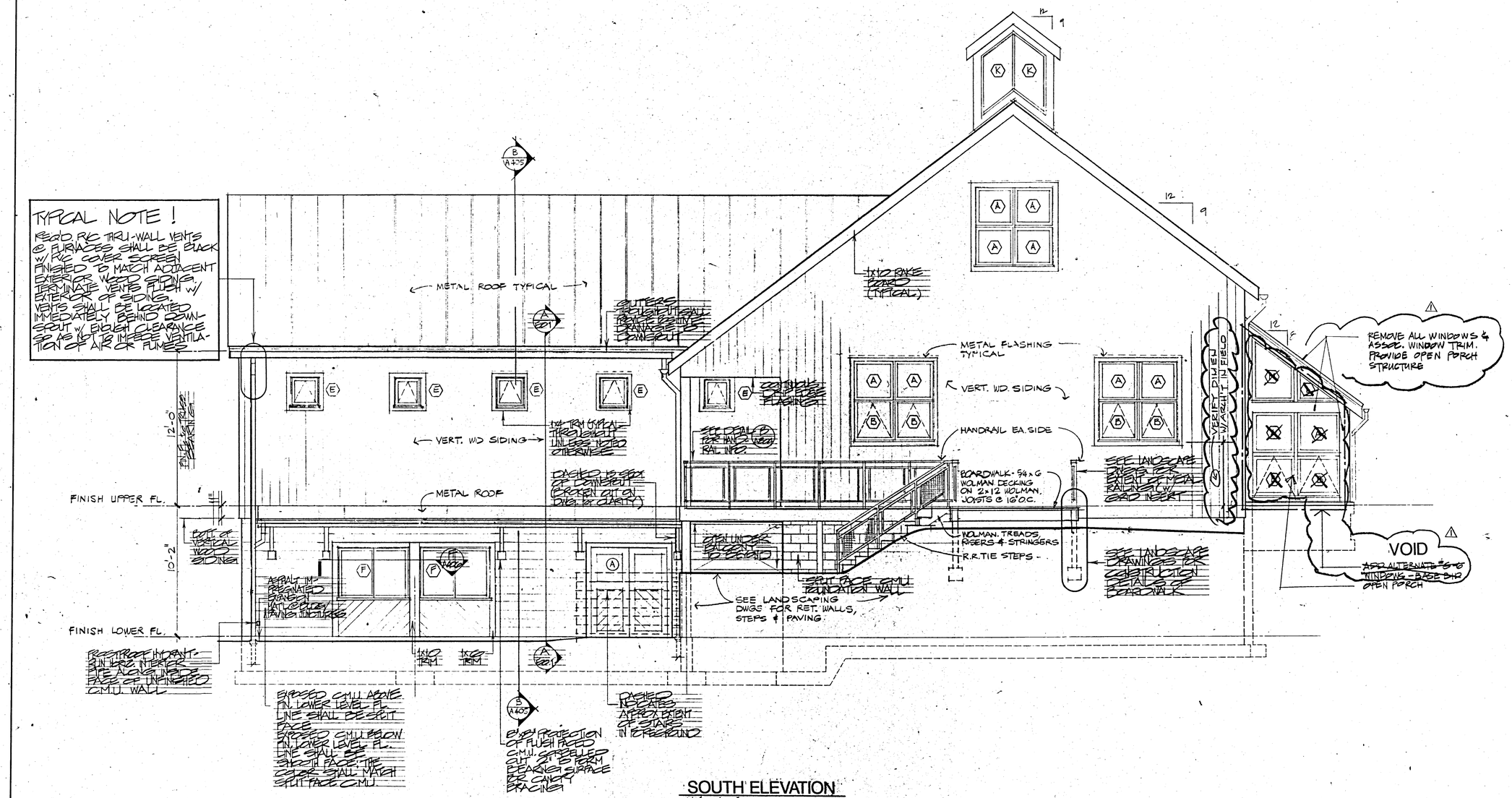
DATES/REVISIONS
2 NOVEMBER, 1992
⚠ 6 APRIL 1993 (REV)

PROJECT NAME
VISITOR CENTER
CARRIAGE HILL RESERVE
PARK DISTRICT OF DAYTON/ MONTGOMERY COUNTY

91052
PROJECT NUMBER

SHEET TITLE
EAST ELEVATION

A-401
SHEET NUMBER



SOUTH ELEVATION

3/8" = 1'-0"

ATLAS BLUEPRINT 648371

B

STATE OF OHIO
Richard Trott
Partners
Architects, Inc.
#3633
REGISTERED ARCHITECT

RICHARD TROTT
AND PARTNERS
ARCHITECTS
I N C
77 E. NATIONWIDE BLVD., COLUMBUS, OHIO 43215 (614) 221-1469

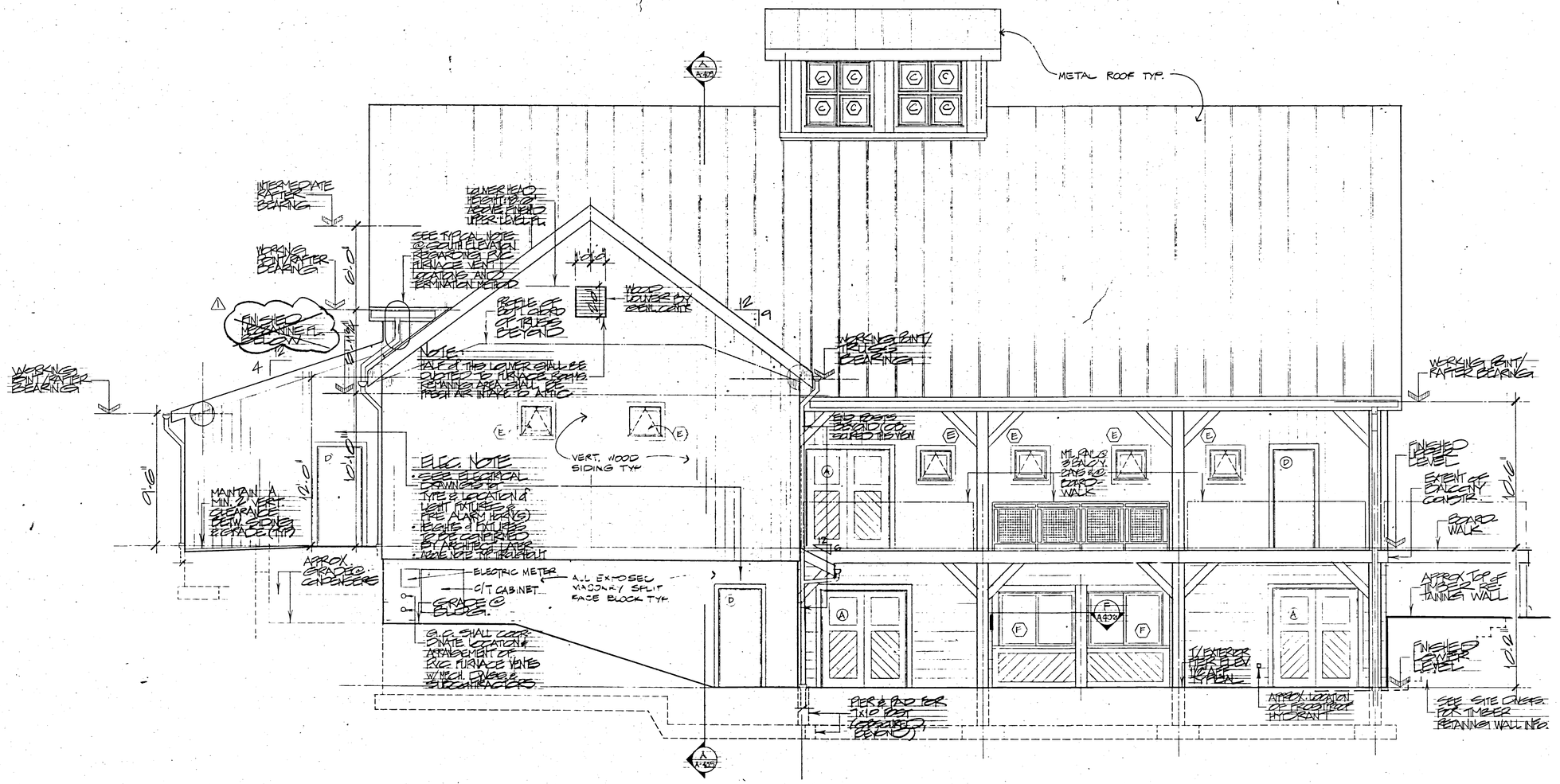
DATES/REVISIONS
2 NOVEMBER, 1992
⚠ 6 APRIL 1993 (REV)

PROJECT NAME
VISITOR CENTER
CARRIAGE HILL RESERVE
PARK DISTRICT OF DAYTON/
MONTGOMERY COUNTY

91052
PROJECT NUMBER

SHEET TITLE
SOUTH ELEVATION

A-402
SHEET NUMBER



WEST ELEVATION

1/4" = 1'-0"

ATLAS BLUEPRINT 440371

STATE OF OHIO
Richard Trott
Partners
Architects, Inc.
#3633
REGISTERED ARCHITECT

RICHARD TROTT
AND PARTNERS
ARCHITECTS
INC
77 E. NATIONWIDE BLVD., COLUMBUS, OHIO 43215 (614) 221-1469

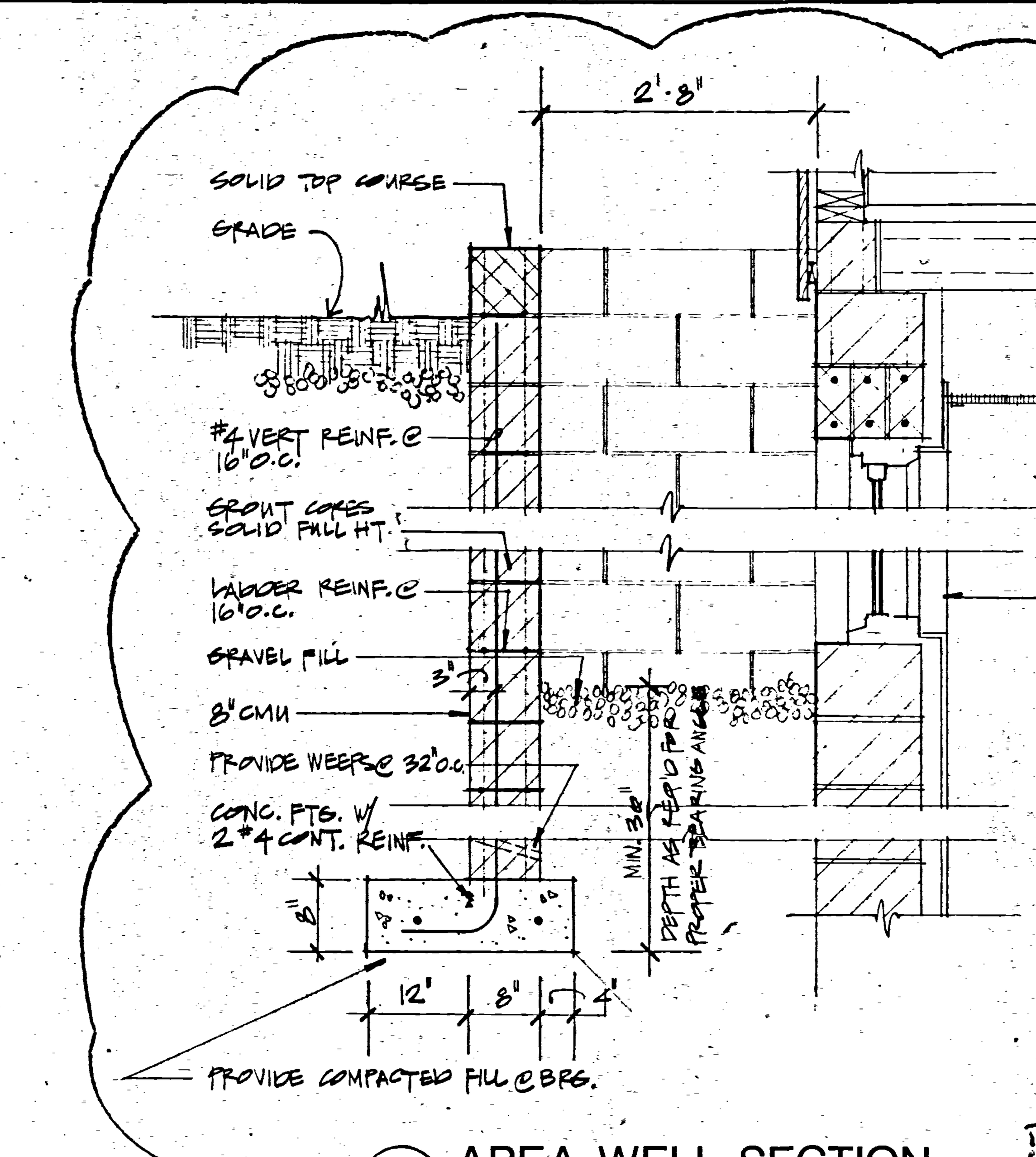
DATES/REVISIONS
2 NOVEMBER, 1992
⚠ 6 APRIL 1993 (REV)

PROJECT-NAME
VISITOR CENTER
CARRIAGE HILL RESERVE
PARK DISTRICT OF DAYTON/
MONTGOMERY COUNTY

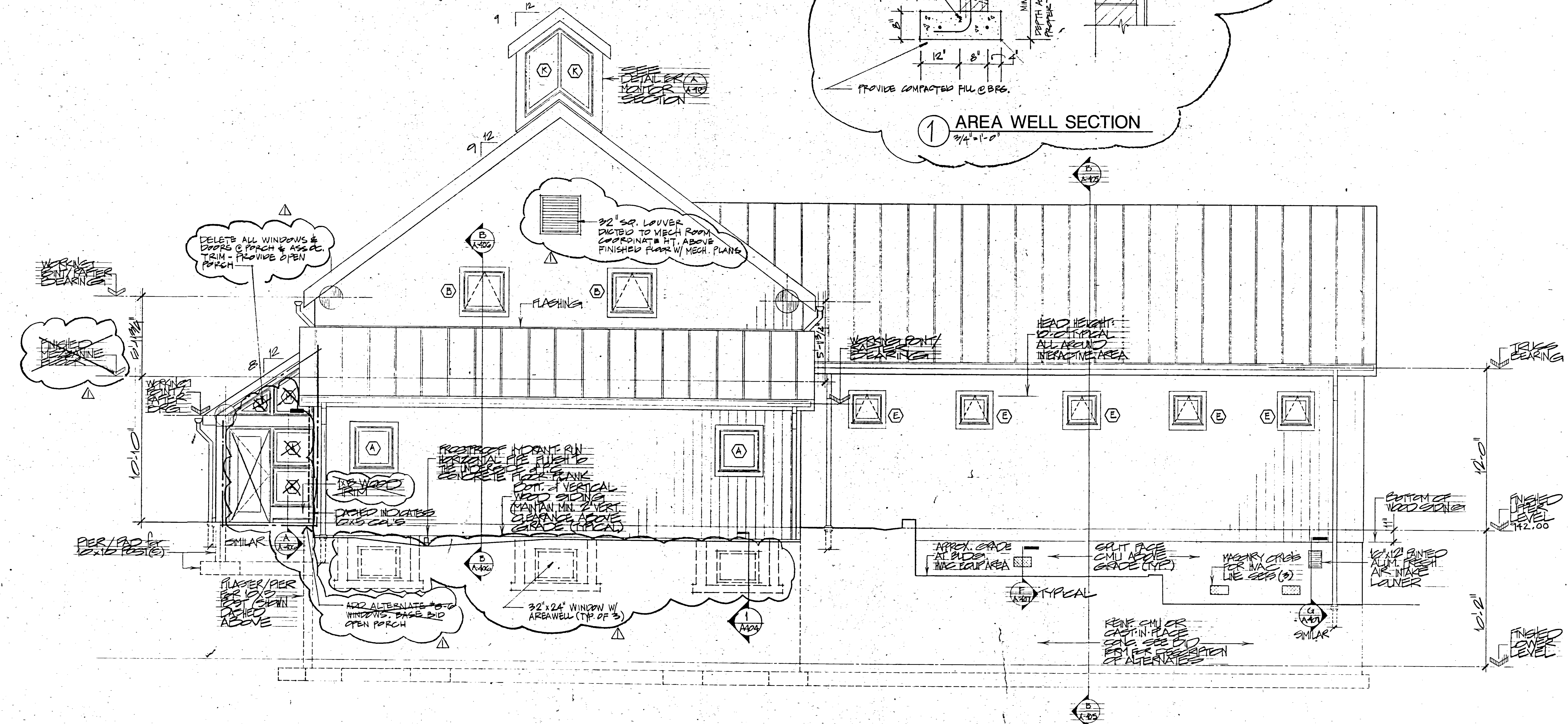
91052
PROJECT NUMBER

SHEET TITLE
WEST ELEVATION

A-403
SHEET NUMBER



1 AREA WELL SECTION
3/4"=1'-0"



NORTH ELEVATION
1/4"=1'-0"

STATE OF OHIO
Richard Trott Partners Architects, Inc. #3633
REGISTERED ARCHITECT

RICHARD TROTT AND PARTNERS ARCHITECTS

77 E. NATIONWIDE BLVD., COLUMBUS, OHIO 43215 (614) 221-1469

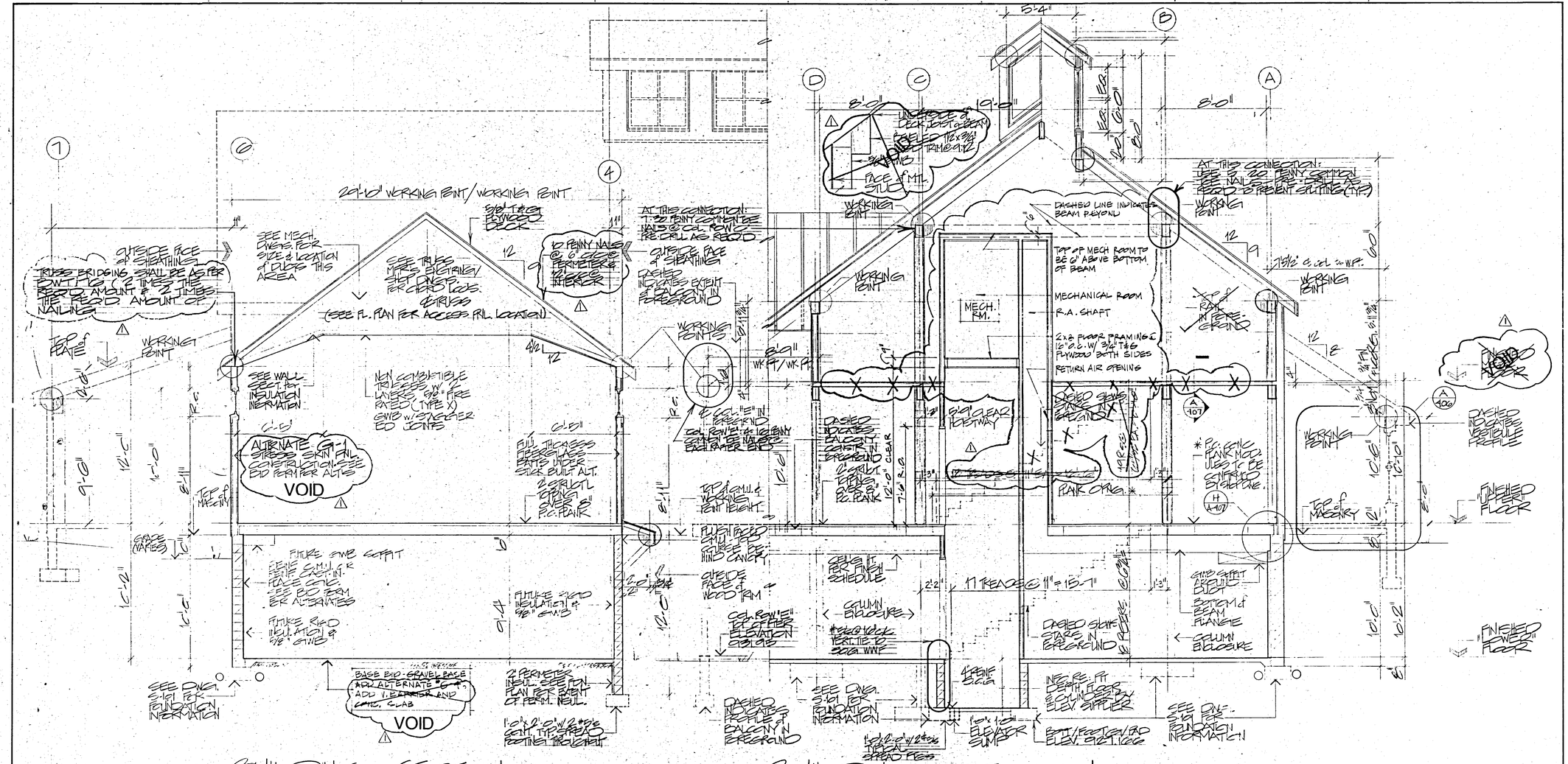
DATES/REVISIONS
2 NOVEMBER, 1992
6 APRIL 1993 (REV)

PROJECT NAME
VISITOR CENTER
CARRIAGE HILL RESERVE
PARK DISTRICT OF DAYTON/
MONTGOMERY COUNTY

91052
PROJECT NUMBER

SHEET TITLE
NORTH ELEVATION

A-404
SHEET NUMBER



B BUILDING SECTION

SCALE 1/4" = 1'-0"

A BUILDING SECTION

SCALE 1/4" = 1'-0"

NOTE: HEAVY TIMBER INFORMATION SHOWN ON THIS DRAWING SHOULD ONLY BE REFERRED TO FOR GENERAL ARRANGEMENT. STRUCTURAL DRWGS. SHALL DICTATE MEMBER SIZES.

ATLAS BLUEPRINT #A5511

STATE OF OHIO
Richard Trott
Partners
Architects, Inc.
#3633
REGISTERED ARCHITECT

RICHARD TROTT AND PARTNERS ARCHITECTS INC.
77 E. NATIONWIDE BLVD., COLUMBUS, OHIO 43215 (614) 221-1469

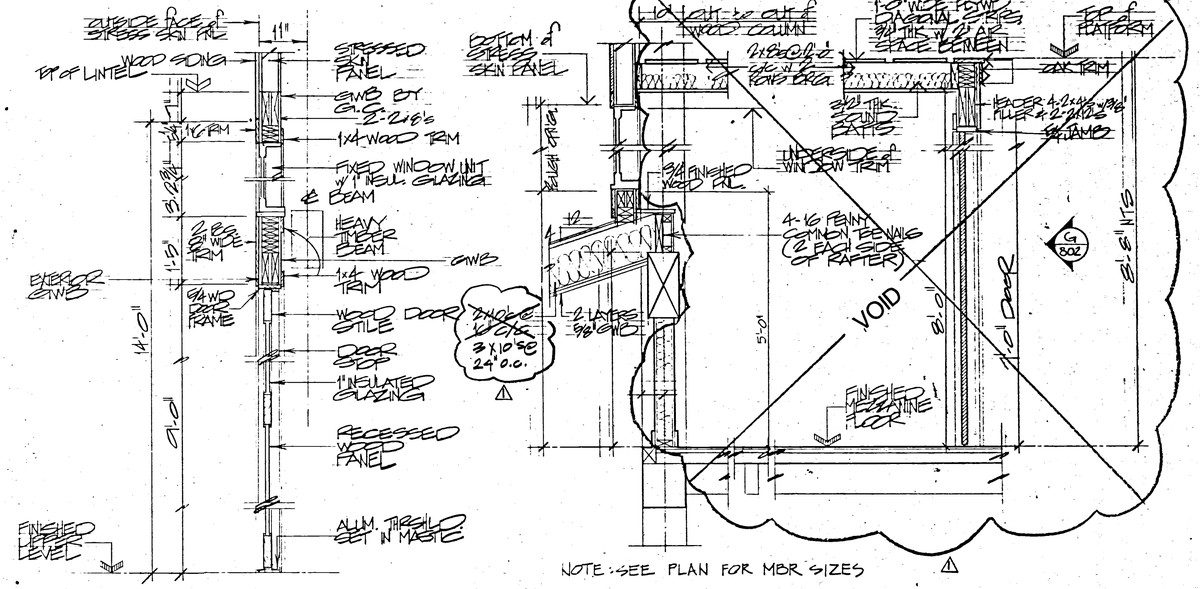
DATES/REVISIONS
2 NOVEMBER, 1992
⚠ 6 APRIL 1993 (REV)

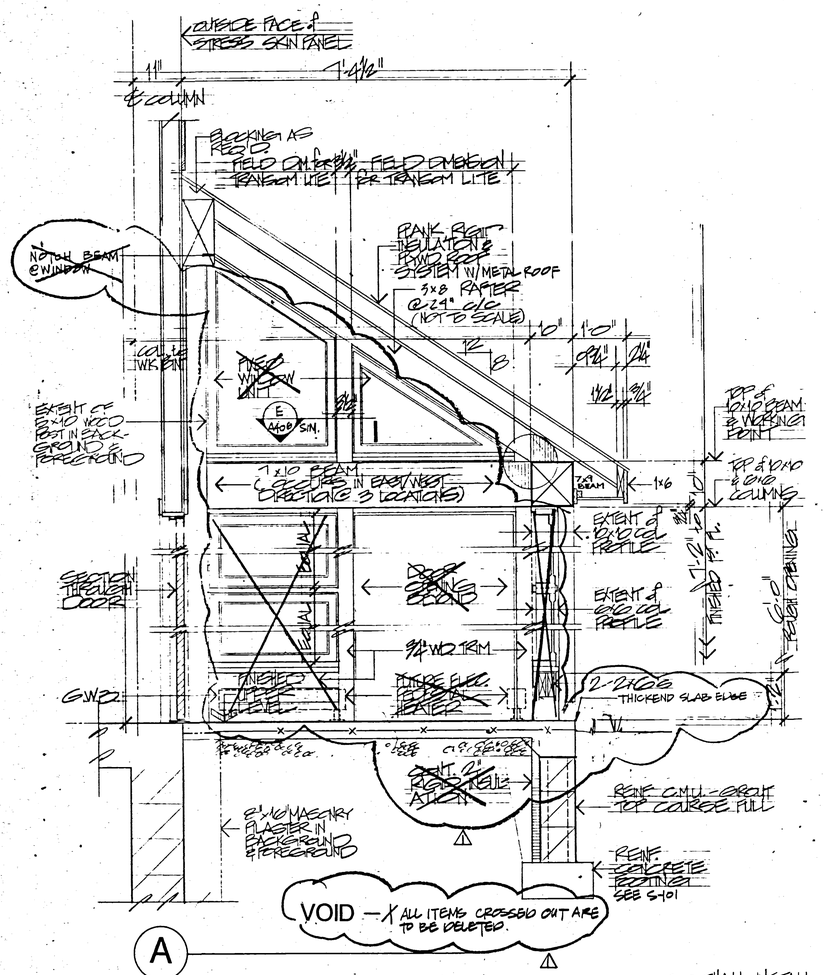
PROJECT NAME
VISITOR CENTER
CARRIAGE HILL RESERVE
MONTGOMERY COUNTY
PARK DISTRICT OF DAYTON

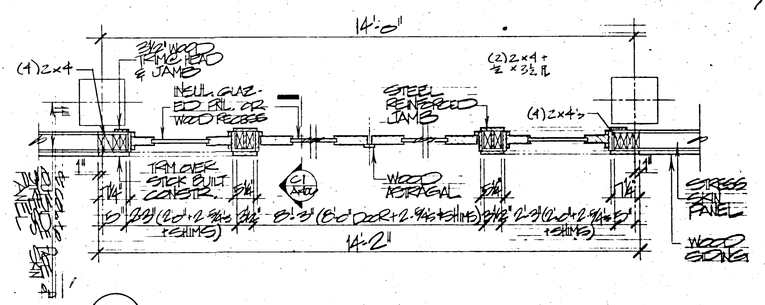
91052
PROJECT NUMBER

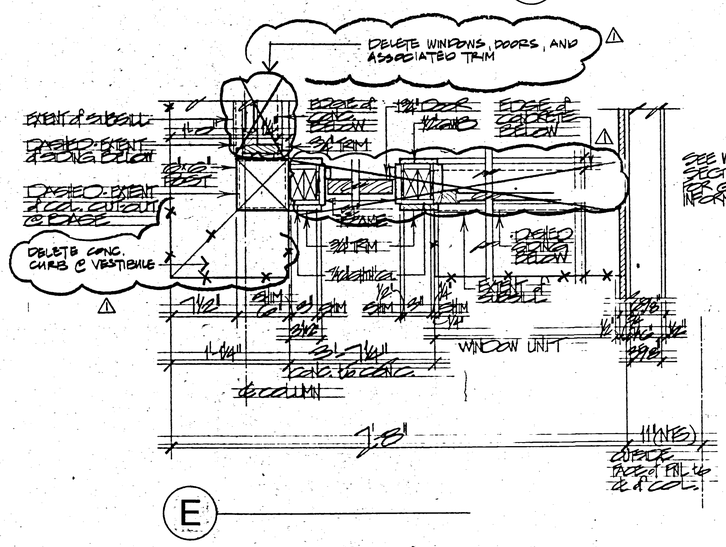
SHEET TITLE
BUILDING SECTIONS

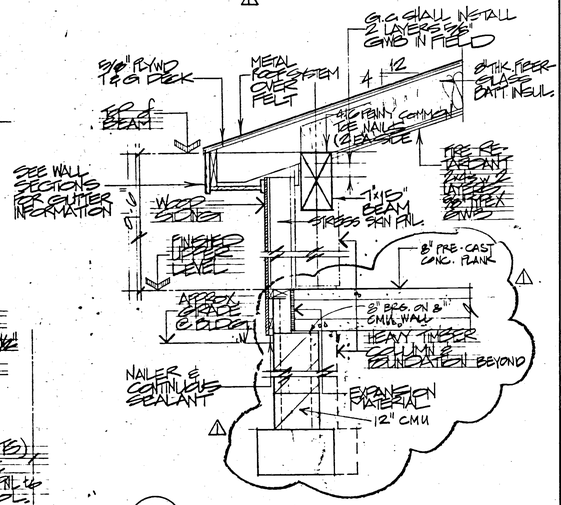
A-405
SHEET NUMBER

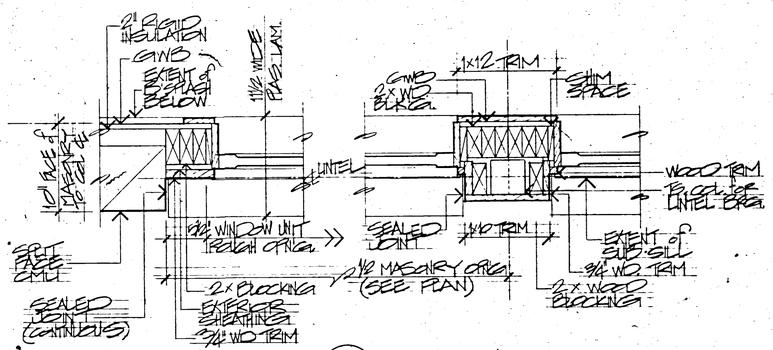












STATE OF OHIO
Richard Trott
Partners
Architects, Inc.
#3633
REGISTERED ARCHITECT

RICHARD TROTT
AND PARTNERS
ARCHITECTS
I N C

77 E. NATIONWIDE BLVD., COLUMBUS, OHIO 43215 (614) 221-1469

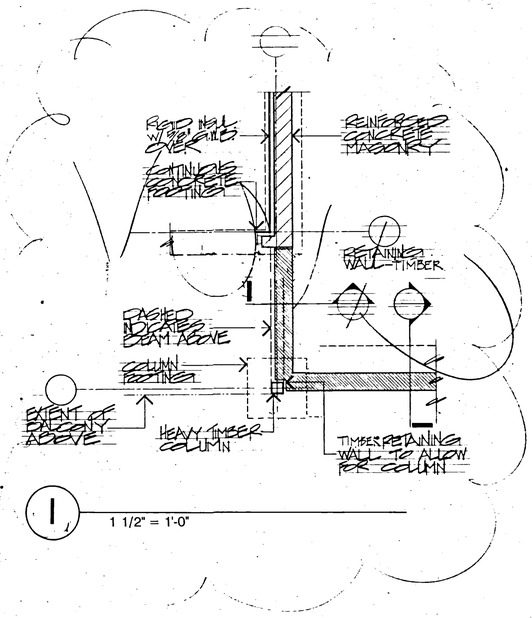
DATES/REVISIONS
2 NOVEMBER, 1992
⚠ 6 APRIL 1993 (REV)

PROJECT NAME
VISITOR CENTER
CARRIAGE HILL RESERVE
MONTGOMERY COUNTY
PARK DISTRICT OF DAYTON

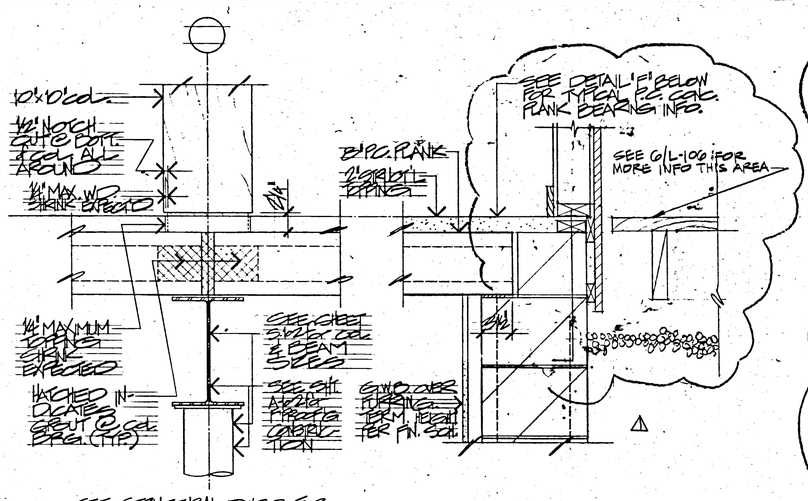
91052
PROJECT NUMBER

SHEET TITLE
SECTIONS AND DETAILS

A-406
SHEET NUMBER



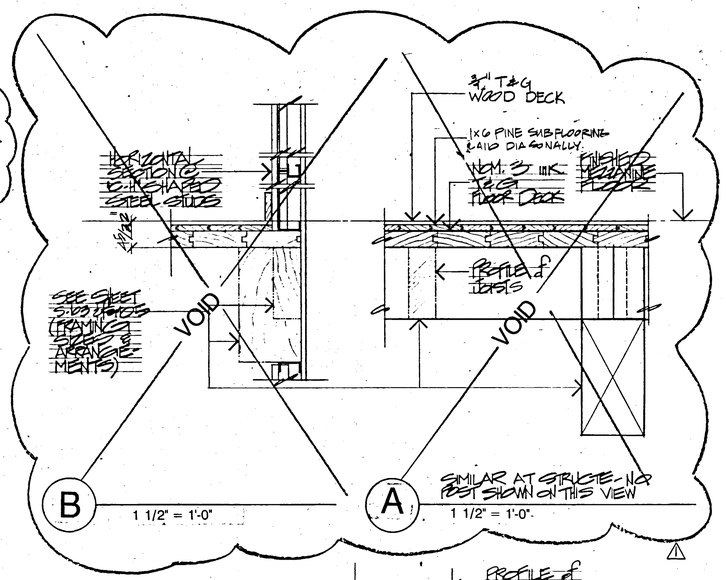
I 1 1/2" = 1'-0"



D 1 1/2" = 1'-0"

SEE STRUCTURAL DWGS. FOR DETAIL OF TEE CONN. @ WD POST

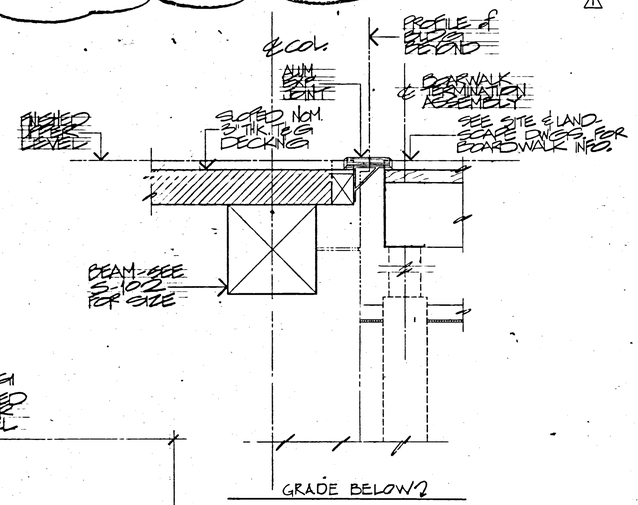
C 1 1/2" = 1'-0"



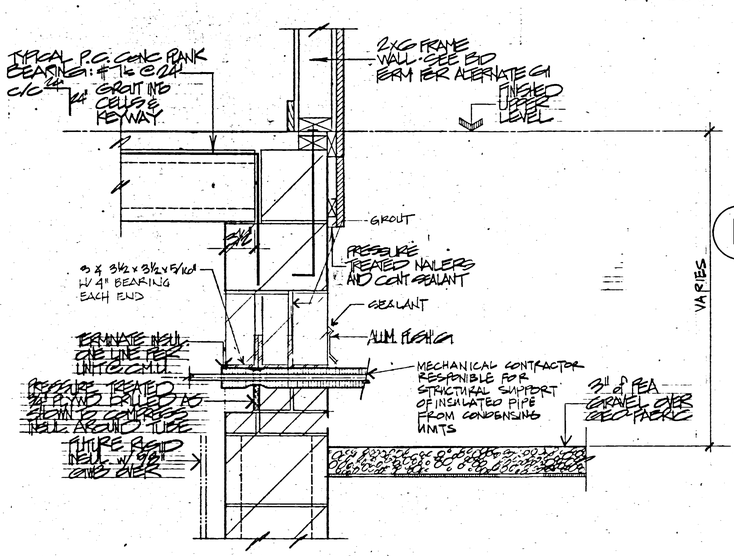
B 1 1/2" = 1'-0"

A 1 1/2" = 1'-0".

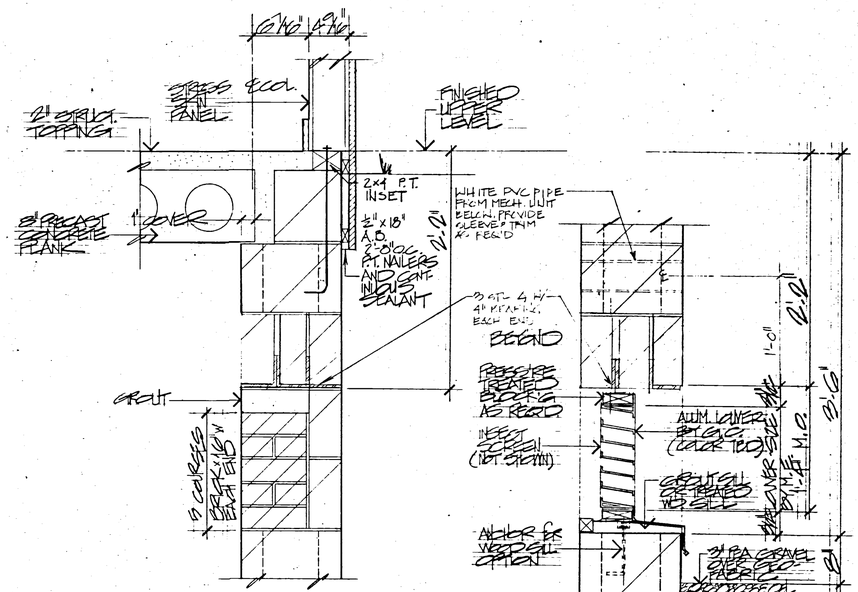
SIMILAR AT STRUCTURE - NO POST SHOWN ON THIS VIEW



E 1 1/2" = 1'-0"



F 1 1/2" = 1'-0"



H 1 1/2" = 1'-0"

G 1 1/2" = 1'-0"

ATLAS BLUEPRINT 333184

STATE OF OHIO
Richard Trott, Partners Architects, Inc. #3633
REGISTERED ARCHITECT

RICHARD TROTT AND PARTNERS ARCHITECTS INC
77 E. NATIONWIDE BLVD., COLUMBUS, OHIO 43215 (614) 221-1469

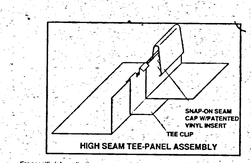
DATES REVISIONS
2 NOVEMBER, 1992
⚠ 6 APRIL 1993 (REV)

PROJECT NAME
VISITOR CENTER
CARRIAGE HILL RESERVE
MONTGOMERY COUNTY
PARK DISTRICT OF DAYTON

91052
PROJECT NUMBER

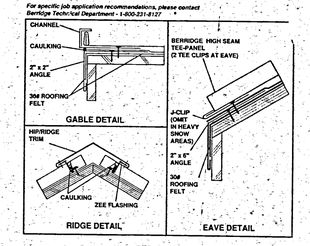
SHEET TITLE
SECTIONS AND DETAILS

A-407
SHEET NUMBER

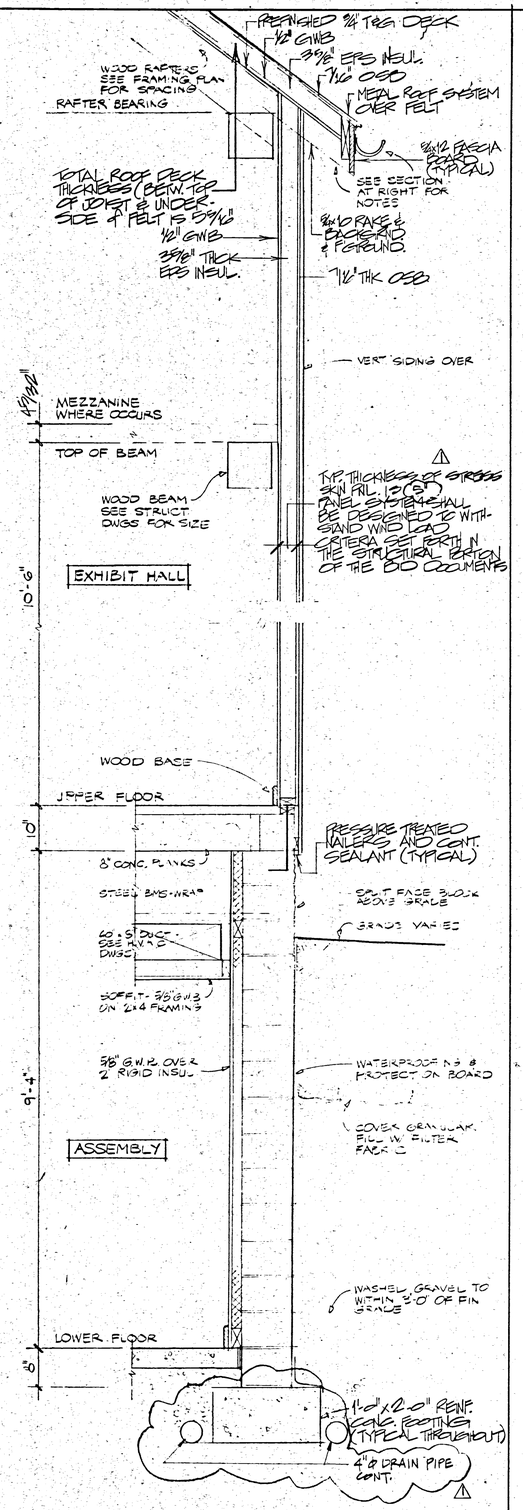


HIGH SEAM TEE-PANEL ASSEMBLY

For specific job application recommendations, please contact Berridge Technical Department - 1-800-231-8127

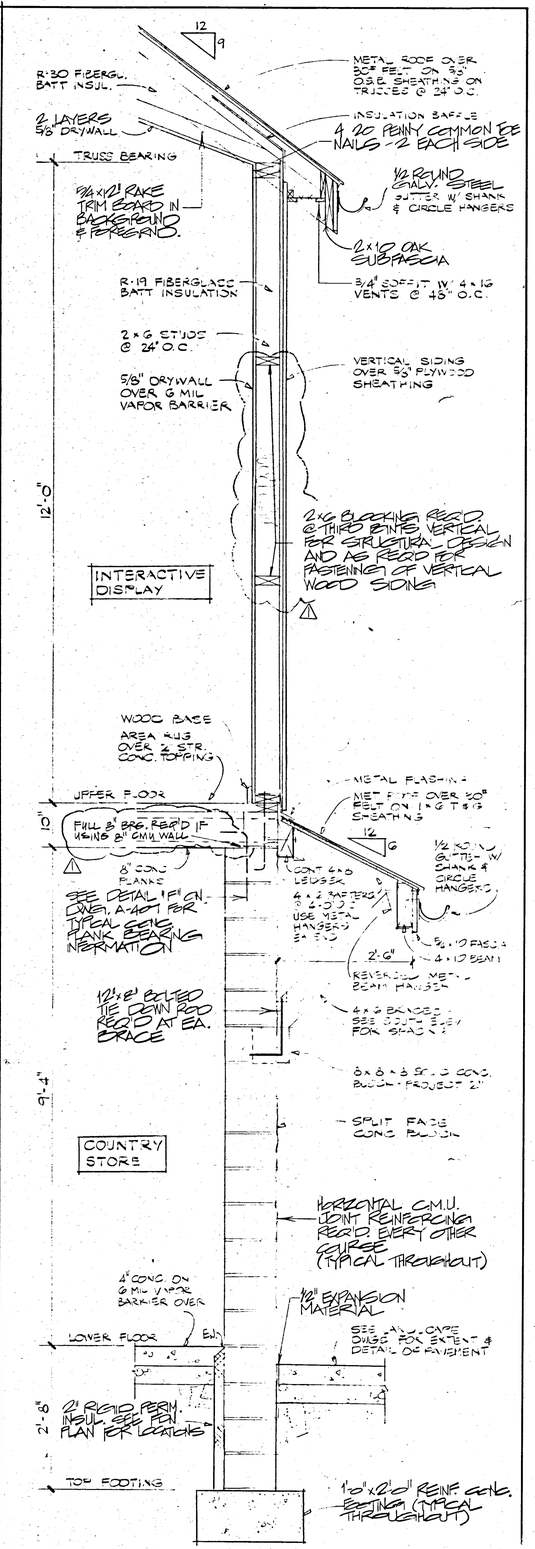


TYPICAL ROOF DETAILS



WALL SECTION B

3/4" = 1'-0"



WALL SECTION A

3/4" = 1'-0"

ATLAS BLUEPRINT 553164

STATE OF OHIO
Richard Trott
Partners
Architects, Inc.
#3533
REGISTERED ARCHITECT

RICHARD TROTT
AND PARTNERS
ARCHITECTS
INC.
77 E. NATIONWIDE BLVD., COLUMBUS, OHIO 43215 (614) 221-1469

DATES/REVISIONS
2 NOVEMBER, 1992
⚠ 6 APRIL 1993 (REV)

PROJECT NAME
VISITOR CENTER
CARRIAGE HILL RESERVE
MONTGOMERY COUNTY
PARK DISTRICT OF DAYTON

91052
PROJECT NUMBER

SHEET TITLE
WALL SECTIONS

A-501
SHEET NUMBER

SCHEDULE OF INTERIOR MATERIALS AND FINISHES

FLOOR LEVEL	ROOM NO.	ROOM NAME	FLOOR MATERIALS						BASE MATERIALS			NORTH WALL MATERIALS					EAST WALL MATERIALS					SOUTH WALL MATERIALS					WEST WALL MATERIALS					CEILING MATERIALS				NOTES	CLG. FINISH ELEVATION A.F.F.	ROOM NO.
	ROOM NO.		CONCRETE	WOOD	AREA RUG	FLOOR MAT	QUARRY TILE	CARPET	RESILIENT	WOOD BASE	QUARRY TILE	GYP. BOARD	CONC. BLOCK	CERAMIC TILE	ACOUSTIC	GLASS PANEL	GYP. BOARD	CONC. BLOCK	CERAMIC TILE	ACOUSTIC	GLASS PANEL	GYP. BOARD	CONC. BLOCK	CERAMIC TILE	ACOUSTIC	GLASS PANEL	GYP. BOARD	CONC. BLOCK	CERAMIC TILE	ACOUSTIC	GLASS PANEL	GYP. BOARD	ACOUSTIC TILE	WOOD PLANK	NO FINISH		CLG. FINISH ELEVATION A.F.F.	ROOM NO.
LOWER LEVEL	100	VESTIBULE	•			FM-1				T-1		P-3					P-3					P-3					P-3						AC-1			ELEV. SHAFT ON SOUTH EAST WALL FIN. P-7; FM-1 SIZE 8'x9'	8'-0"	100
	101	JANITOR CLOSET	•						RB-1			P-6					P-6					P-6					P-6								•		N.A.	101
	102A	R.R. VESTIBULE					CT-2				CT-3	P-5					P-5					P-5					P-5					P-8	AC-1			ADA COMPLIANT MARBLE THRESHOLD/TRANSITION AT FLOOR	8'-0"	102A
	102B	WOMEN'S R.R.					CT-2				CT-3	P-5					P-5					P-5					P-5						AC-1			COUNTER FINISH PL-1	7'-6" (R.V.)	102B
	103A	R.R. VESTIBULE					CT-2				CT-3	P-5					P-5					P-5					P-5					P-8	AC-1			ADA COMPLIANT MARBLE THRESHOLD/TRANSITION AT FLOOR	8'-0"	103A
	103B	MEN'S R.R.					CT-2				CT-3	P-5					P-5					P-5					P-5						AC-1			COUNTER FINISH PL-1	7'-6" (R.V.)	103B
	104	ELEVATOR EQUIP.	•						RB-1			P-6					P-6					P-6					P-6								•		UNDERSIDE OF STRINGERS TO HAVE 2 LAYERS 5/8" TYPE "X" GYP. BD., FINISH P-6	N.A.	104
	105	OFFICE						C-1	RB-2			P-6					P-6					P-6					P-6						AC-1			C-1, DIRECT GLUE WALL TO WALL, BY G.C.	8'-0"	105
	106	OFFICE						C-1	RB-2			P-6					P-6					P-6					P-6						AC-1			C-1, DIRECT GLUE WALL TO WALL, BY G.C.	8'-0"	106
	107	COAT ROOM	•							T-1		P-3					P-3					P-3					P-3					P-8	AC-1				8'-0"	107
	108	MECH/STORAGE	•						RB-1			P-6						P-6				P-6					P-6								•		UNDERSIDE OF STRINGERS TO HAVE 2 LAYERS 5/8" TYPE "X" GYP. BD., FINISH P-6	N.A.	108
	109	ASSEMBLY	•		C-1					T-1		P-3					P-3					P-3					P-3					P-8	AC-1			EQUIP. W/ PULL-DOWN PROJECTION SCREEN ON SOUTH WALL; C-1 19'-0" x 22'-0"	8'-0"	109
	110	FOOD SERVICE	•						RB-1			P-8					P-8					P-8					P-8						AC-1			WB-1 ON WEST WALL GLAZING	8'-0"	110
	111	STORAGE	•						RB-1			P-6					P-6					P-6					P-6						AC-1				8'-0"	111
	112	COUNTRY STORE											•				•						•					•							•		WALLS TAPED & SPACKLED, NO PAINT; WB-1 ON SOUTH WALL GLAZING	N.A.	112
	113	ELEC. ROOM	•						RB-1			P-6					P-6					P-6					P-6								•			N.A.	113
	114	CONF. LIBRARY						C-1	RB-2			P-6					P-6					P-6					P-6						AC-1				8'-0"	114
UPPER LEVEL	201	RECEPTION	•			FM-1				T-1		P-2					P-2					P-2					P-2								•	FM-1 SIZE 7'x8'; ELEVATOR SHAFT FIN. P-7 ALL SIDES; C-1 FIELD INSTALL IN ELEVATOR. ALL BY G.C.	10'-0"	201
	202	EXHIBIT HALL	•							T-1		P-2					P-2					P-2					P-2								•	PAINTED G.W.B.	VARIES	202
	203	AUDIO/VISUAL	•		C-1					T-1		P-1			AC-2		P-1			AC-2		P-1					P-1			AC-2		P-2				SEE PAGANI'S FOR AC-2 AND FIN. DETAILS; C-1 SIZE 13'-0" x 16'-0"	VARIES	203
	204A	R.R. ALCOVE	•							T-1		P-2					P-1					P-2					P-2					P-2					8'-0" (R.V.)	204A
	204B	MEN'S R.R.					CT-2				CT-3	P-5					P-5					P-5					P-5					P-5				CT-1 TO UNDERSIDE OF BEAM; P-5 FINISH ABOVE CERAMIC TILE, SAME AS T-ARCHITECTURAL RM. 104B	VARIES	204B
	205A	R.R. ALCOVE	•							T-1		P-2					P-2					P-2					P-1					P-2					8'-0" (R.V.)	205A
	205B	WOMEN'S R.R.					CT-2				CT-3	P-5					P-5					P-5					P-5					P-5				CT-1 TO UNDERSIDE OF BEAM; P-5 FINISH ABOVE CERAMIC TILE, SAME AS T-ARCHITECTURAL RM. 104B	VARIES	205B
	206	INTER. DISPLAY	•		C-1					T-1		P-8					P-8					P-8					P-8					P-6				C-1 SIZE 14'-0" x 12'-0"	VARIES	206
	207	STORAGE	•						RB-1			P-8					P-8					P-8					P-8					P-6					VARIES	207
	208	STORAGE	•						RB-1			P-8					P-8					P-8					P-8					P-6					VARIES	208
	209	VESTIBULE	•			FM-1						•					•					•					•							S-1		W. WALL EXT. 1 X 8 WOOD SIDING, FIN. S-1, FM-1 SIZE 6'x11' BY G.C.	VARIES	209
	210	BALCONY		•																														S-1		E. WALL EXT. 1 X 8 WOOD SIDING, FIN. S-1; CEILING SIM TO J/A8.3	VARIES	210
MEZZANINE	301	MEZZANINE		HF-1 C-3	X					T-1		P-2					P-2										P-2								•	ELEVATOR SHAFT FINISH P-7 ALL SIDES	VARIES	301
	302	STORAGE		HF-1 C-3					RB-1			P-2					P-2					P-6					P-6					P-6					8'-4"	302
	303	OFFICE		HF-1 C-3	X					T-1		P-2					P-8					P-8					P-8					P-6			•		8'-4"	303
	304	OFFICE		HF-1 C-3	X					T-1		P-2					P-8					P-8					P-8					P-6			•		8'-4"	304
	305	MECHANICAL		HF-1 C-3					RB-1			P-2					P-8					P-8					P-6					P-6					8'-4"	305

VOID

ADD ALTERNATE #4, V. BARRIER & CONC. SLAB

* # 's SEE SPEC. FOR MATERIAL FINISH OF CONC. & WOOD FLOORS.

FINISH SCHEDULE KEY:

CODE	MANUFACTURER	PRODUCT/COLOR	DIVISION/NOTES
PAINTS AND STAINS			
P-1	BENJAMIN MOORE PAINTS	#1581	09900
P-2	BENJAMIN MOORE PAINTS	#994	09900
P-3	BENJAMIN MOORE PAINTS	#1560	09900
P-4	BENJAMIN MOORE PAINTS	READY-MIX BLACK	09900
P-5	BENJAMIN MOORE PAINTS	READY-MIX WHITE	09900
P-6	BENJAMIN MOORE PAINTS	#975	09900
P-7	BENJAMIN MOORE PAINTS	#1042	09900
P-8	BENJAMIN MOORE PAINTS	#978	09900
S-1	CABOT STAINS	EXT. SEMI-SOLID DUNE GREY #0167	09900
S-2	CABOT STAINS	EXT. SEMI-SOLID SANDSTONE #0197 CLEAR POLYURETHANE SATIN FINISH	09900
S-3			09900
CARPET			
C-1	PRINCE ST. TECHNOLOGIES INC.	SISAL #SSL 80299 BLOND AMBITION 12' SCULPTED TEXTURAL PATTERN	
FLOOR MATS			
FM-1	USCOA INTERNATIONAL CORP.	VINA-COIR NAT. TAN MAT W/ BLACK SAFETY EDGE 5/8" THICK, W & L AS NOTED SURFACE MOUNTED	

CODE	MANUFACTURER	PRODUCT/COLOR	DIVISION/NOTES
CERAMIC TILE			
CT-1	AMERICAN OLEAN	VOID BRIGHT AND MATTE #25 ICE WHITE 4 1/4" X 4 1/4" X 5/16"	09310
CT-2	QUARRY TILE CO.	NORTHWEST SERIES COLUMBIA; FIRE SEALED 8" X 8" (NOMINAL)	09310
CT-3	QUARRY TILE CO.	NORTHWEST SERIES COLUMBIA; COVE BASE #93686 6"H X 1 3/4"L	09310 COVE BASE, STRAIGHT TOP
ACOUSTICAL CEILING AND WALL PANELS			
AC-1	ARMSTRONG WORLD INDUSTRIES	CORTEGA 24" X 48" X 3/4", SQUARE EDGE	09510 GRID COLOR WHITE
AC-2	VICRTEX VIRACOUSTIC	TRIMLINE WALL PANELS HADLEY I, ICED GREEN 1/2" THICK, SIZE AS NOTED	09510 BEVELED EDGE
PLASTIC LAMINATE			
PL-1	NEMAMAR	GEODE #GE-5-1T TEXTURED	06210
PL-2	NEVEMAR	HONEY MAPLE M-8-322T TEXTURED	06210 USED IN ELEVATOR CAB
WINDOW BLINDS AND TREATMENTS			
WB-1	LEVELOR	"RIVIERA" #168 ASH BRONZE NARROW SLAT BLIND	12510

CODE	MANUFACTURER	PRODUCT/COLOR	DIVISION/NOTES
RESILLENT FLOORING/BASE			
RB-1	ROPPE RUBBER CO.	#44 BURNT UMBER 4" RUBBER BASE COVE TOE	09660
RB-2	ROPPE RUBBER CO.	#80 BUCKSKIN 4" RUBBER BASE CARPET COVE	09660
WOOD FLOORING AND TRIM			
WF-1	VOID DESOTO HARDWOOD FLOORING CO.	4" PLANK T & G FLOORING #3741 WHITE OAK UNFINISHED	09550 FIELD FINISH W/ SATIN POLYEURETHANE
T-1		3 1/2" X 3/4" WOOD BASE POPLAR	
T-2A		3 1/2" X 3/4" MOULDING POPLAR	
T-2B		4 1/2" X 3/4" MOULDING POPLAR	

NOTE: OTHER WOOD TRIM PIECES AS SHOWN ON ARCHITECTURAL DETAILS. WHITE OR RED OAK TYP. ALL OAK TRIM SHALL BE FINISHED TO MATCH HEAVY TIMBER FRAMING.

NOTE: INTERIOR SKIN, JAMB & CASING OF WINDOWS TO BE FINISHED WITH P-6 TYP.

NOTE: ALL INTERIOR WOOD DOORS TO BE FINISHED TO MATCH HEAVY TIMBER FRAMING

ATLAS BLUEPRINT 553184

STATE OF OHIO
Richard Trott
Partners
Architects, Inc.
#3633
REGISTERED ARCHITECT

RICHARD TROTT AND PARTNERS ARCHITECTS INC
77 E. NATIONWIDE BLVD., COLUMBUS, OHIO 43215 (614) 221-1469

DATES/REVISIONS
2 NOVEMBER, 1992
6 APRIL 1993 (REV)

PROJECT NAME
VISITOR CENTER
CARRIAGE HILL RESERVE
PARK DISTRICT OF DAYTON/ MONTGOMERY COUNTY

91052
PROJECT NUMBER

SHEET TITLE
FINISH SCHEDULE

A-801
SHEET NUMBER

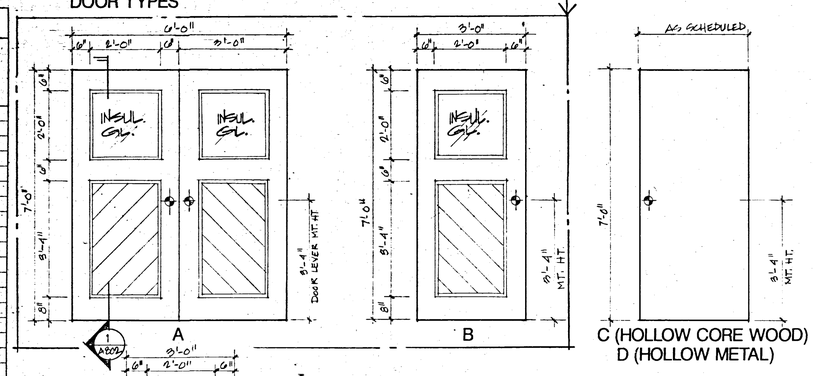
DOOR SCHEDULE

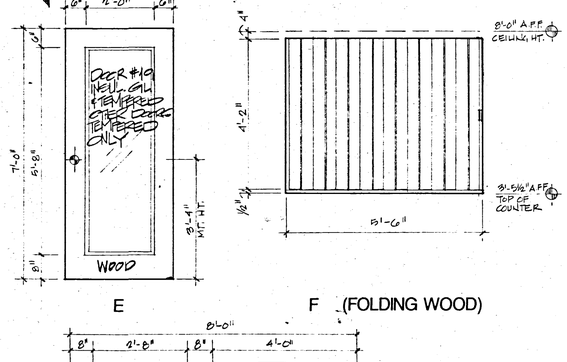
ROOM #	ROOM LOCATION	DOOR NO.	DOOR SIZE W	DOOR SIZE H	DOOR SIZE T	DOOR MAT	DOOR NOTE	DOOR TYPE	LOUV W	LOUV H	FRAME MAT	FRAME TYPE	FRAME DETAILS JAMB	FRAME DETAILS HEAD	FRAME DETAILS SILL	FIRE RATING LAB	FIRE RATING CON	HARDWARE ONLY ALLOWANCE PER SPEC. ARCH TO SELECT HDW. LATER	REMARKS
102A	WOMEN	1	3"	7"	1¾"	WD		C											
103A	MEN	2	3"	7"	1¾"	WD		C											
106	OFFICE	3	3"	7"	1¾"	WD		E											
105	OFFICE	4	3"	7"	1¾"	WD		E											
101	JANITOR	5	2⁸	7"	1¾"	WD		C											
104	ELEV. EQUIP	6	3"	7"	1¾"	WD		C											
108	MECH STO.	7	3"	7"	1¾"	WD		C											
107	COATS	8	PR. 3⁰	7"	1¾"	WD		C											MAGNETIC HOLD-OPEN DEVICE CONNECTED TO ALARM SYSTEM
100	VESTIBULE	9	PR. 3⁰	7"	1¾"	WD		E											S-1 FINISH, TYPE A AS ADD ALT. #6-3
109	ASSEMBLY	10	PR. 3⁰	7"	1¾"	WD		E											S-1 FINISH " "
112	COUNTRY ST.	11	PR. 3⁰	7⁰	1¾"	WD		E											S-1 FINISH " "
110	FOOD SERV.	12	3"	7"	1¾"	WD		C											MAGNETIC HOLD-OPEN DEVICE CONNECTED TO ALARM SYSTEM
111	STORAGE	13	3"	7"	1¾"	WD		C											
111	STORAGE	14	3"	7"	1¾"	WD		C											
110?	FOOD	15	5⁶	4²	WAFER DOOR	WD		F											
112	COUNTRY ST.	16	PR. 3⁰	7"	1¾"	WD		C											MAGNETIC HOLD-OPEN DEVICE CONNECTED TO ALARM SYSTEM
113	ELEC. CL.	17	2⁶	7"	1¾"	WD		C											
112	COUNTRY	18	3"	7"	1¾"	HM		D											PAINT TO MATCH CONC. BLOCK / INSULATED
114	CONF./LIBRARY	37	3⁶	7⁰	1¾"	WD		E											
~~206~~	~~VESTIBULE~~	~~19~~	~~3"~~	~~7"~~	~~1¾"~~	~~WD~~		~~E~~											~~INSULATED GLASS PANEL~~
201	RECEPTION	20	3⁰	7⁰	1¾"	WD		E											S-1 FINISH, TYPE B AS ADD ALT. #6-3
204B	MEN	21	3"	7"	1¾"	WD		C											
205B	WOMEN	22	3"	7"	1¾"	WD		C											
205A	WOMEN	23	2"	7"	1¾"	WD		C											INSULATED
204A	MEN	24	2"	7"	1¾"	WD		C											
205	ALCOVE	25	5"	7"	1¾"	HM		D											INT. FIN. P-2; EXT. PAINT TO MATCH S-1
200	INT. DISPLAY	26	3⁰	7⁰	1¾"	WD		E											
202	EXHIBIT	27	PR 4⁰	9"	1¾"	HD	custom	G											S-2 FINISH / INSULATED
202	EXHIBIT	28	PR 3⁰	7⁰	1¾"	WD		E											S-1 FINISH, TYPE A AS ADD ALT. #6-3
202	EXHIBIT	29	3"	7"	1¾"	HM		D											INT FIN P-2; EXT PAINT TO MATCH S-1
208	STORAGE	30	3"	7"	1¾"	WD		C											
207	STORAGE	31	3"	7"	1¾"	WD		C											
206	INT. DISPLAY	206	3⁰	7⁰	1¾"	WD		E											
302	STORAGE	32	2⁸	7"	1¾"	WD		C											
303	OFFICE	33	3"	7"	1¾"	WD		E											
304	OFFICE	34	3"	7"	1¾"	WD		E											
305	MECH.	35	2⁸	7"	1¾"	WD		C											

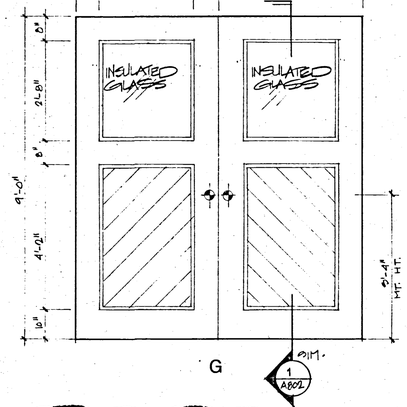
VOID

For clarification, for Bidding purposes, all door frames (except for doors 18, 25, and 29) shall be Wood Frames similar to Details B, D, and E on Drawing A-803 (as applicable) to suit wall/partition configurations shown. Door frames for doors 18, 25, and 29 shall be Hollow Metal Frames (to suit Hollow Metal Doors) per Spec Section 08100. Hollow Metal Frame depth shall be as required to suit wall configurations shown, with Wood Trim closure at Exterior, per West Elevation. For Bidding purposes, there shall be "NO FIRE RATED DOOR OPENINGS REQUIRED".
"ALL INTERIOR WOOD DOORS SHALL BE "PAINT GRADE" POPLAR. WOOD TRIM SHALL ALSO BE "PAINT GRADE" POPLAR.

DOOR TYPES







NOTE: INTERIOR DOORS, TRIM, ETC. TO BE POPLAR PAINT GRADE
EXTERIOR DOORS TO BE WHITE OAK, TRANSPARENT FINISH

WINDOW SCHEDULE

(A) 36" X 36" NOMINAL
FIXED UNIT
CLEAR GLAZING

(B) 36" X 36" NOMINAL
AWNING UNIT
CLEAR GLAZING
(* OPAQUE GLAZING IN RMS. 204B & 205B)

(C) 2'-10" X 2'-10" NOMINAL
FIXED UNIT
CLEAR GLAZING.

(D) 24" X 24" NOMINAL
FIXED UNIT
CLEAR GLAZING

(E) 24" X 24" NOMINAL
AWNING UNIT
CLEAR GLAZING

(F) 5'-6" X 4'-0" NOMINAL
SLIDING UNIT
CLEAR GLAZING

(G) CUSTOM RECTANGULAR
SIZE TO BE COORDINATED W/ ARCHITECT
FIXED UNIT
CLEAR GLAZING

(H) CUSTOM RECTANGULAR
SIZE TO BE COORDINATED W/ ARCHITECT
FIXED UNIT
CLEAR GLAZING

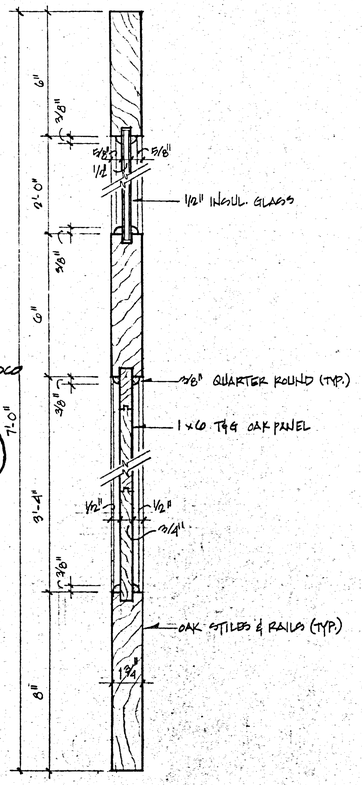
(J) CUSTOM RECTANGULAR
SIZE TO BE COORDINATED W/ ARCHITECT
FIXED UNIT
CLEAR GLAZING

(K) CUSTOM RECTANGULAR
SIZE AND SHAPE TO BE COORDINATED W/ ARCHITECT
FIXED UNIT
CLEAR GLAZING

(L) CUSTOM TRIANGULAR
SIZE TO BE COORDINATED W/ ARCHITECT
FIXED UNIT
CLEAR GLAZING

(M) CUSTOM TRAPEZOIDAL
SIZE TO BE COORIDINATED W/ ARCHITECT
FIXED UNIT
CLEAR GLAZING

NOTE:
BASIS FOR BIDDING SHALL BE PELLA "PROLINE" OR CARADCO ALUMINUM CLAD WOOD UNITS; COLOR-WHITE; FACTORY GLAZED W/ 5/8" CLEAR INSULATED GLASS (1/8" + 3/8" + 1/8") W/ MFR'S STD HARDWARE (EXCEPT WINDOWS IN RMS 204 & 205 SHALL HAVE OUTBOARD LITES GLAZED W/ OBSCURE GLASS.
EQUAL UNITS BY POZZI OF CINCINNATI, INC; CENTERVILLE OHIO, ARE ACCEPTABLE MANUFACTURER



1 CUSTOM DOOR DETAIL
NOT TO SCALE

RICHARD TROTT AND PARTNERS ARCHITECTS INC
77 E. NATIONWIDE BLVD., COLUMBUS, OHIO 43215 (614) 221-1469

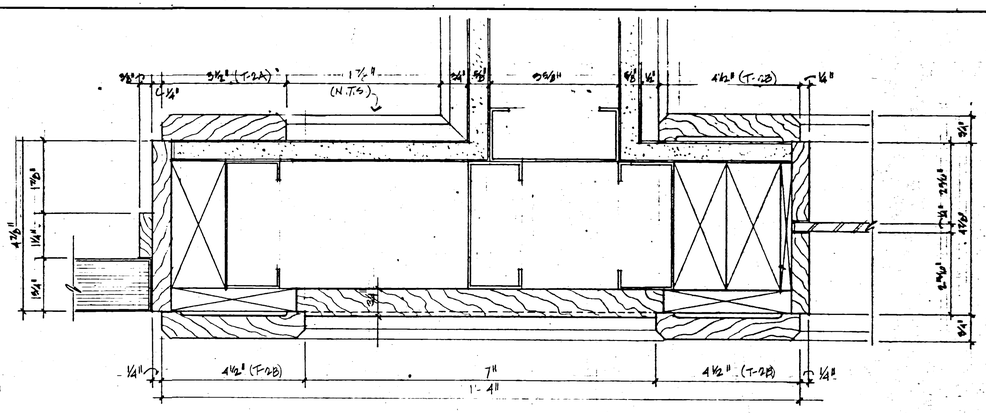
DATES REVISIONS
2 NOVEMBER, 1992
⚠ 6 APRIL 1993 (REV)

PROJECT NAME
VISITOR CENTER
CARRIAGE HILL RESERVE
MONTGOMERY COUNTY
PARK DISTRICT OF DAYTON

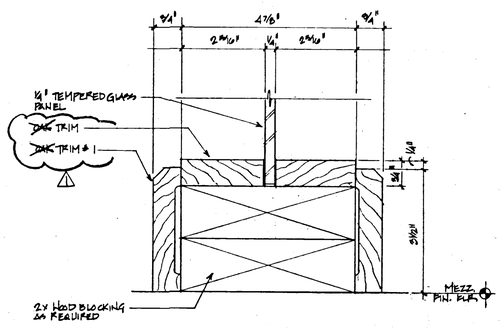
91052
PROJECT NUMBER

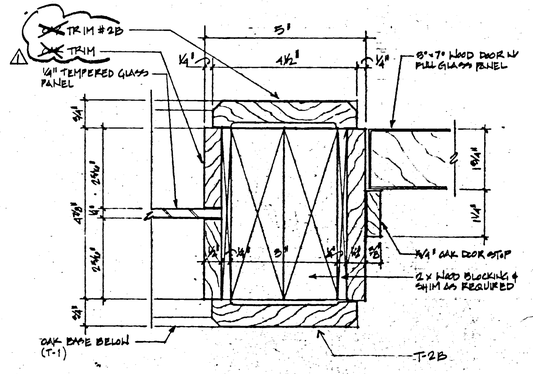
SHEET TITLE
DOOR SCHEDULE
WINDOW SCHEDULE

A-802
SHEET NUMBER



PLAN DETAIL
6"= 1'-0" (B)

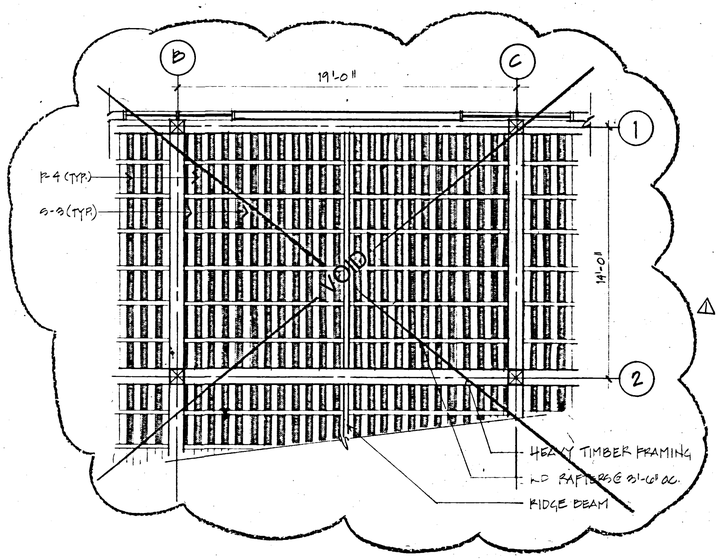




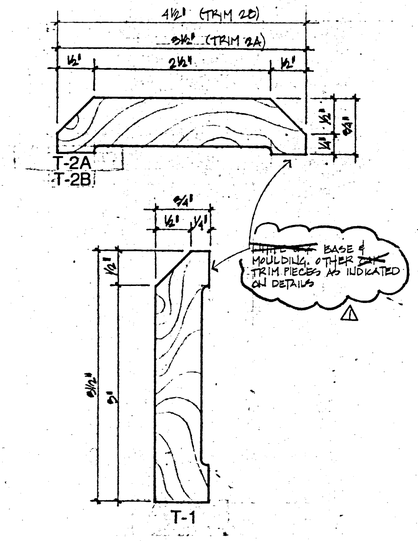
JAMB DETAIL
6"=1'-0" (D)

BASE DETAIL
6"=1'-0" (E)

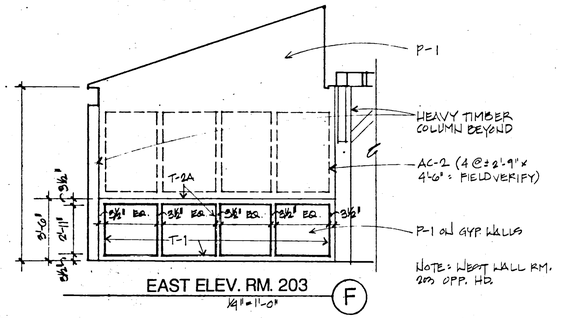
NOTE: ALL INTERIOR WOOD TRIM TO BE "PAINT GRADE" POPLAR (TYP.)



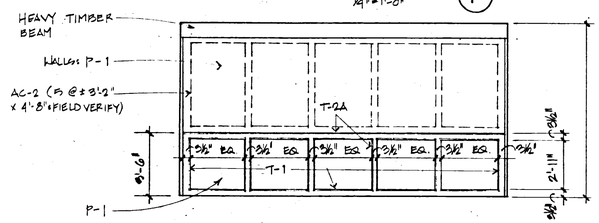
PARTIAL REFLECTED CEILING PLAN
¼"= 1'-0" (J)



TRIM DETAILS
FULL SCALE (H)



EAST ELEV. RM. 203
¼"= 1'-0" (F)



NORTH ELEV. RM. 203
¼"= 1'-0" (G)

ATLAS BLUEPRINT 825184

STATE OF OHIO
Richard Trott
Partners
Architects, Inc.
#3633
REGISTERED ARCHITECT

RICHARD TROTT AND PARTNERS ARCHITECTS
77 E. NATIONWIDE BLVD., COLUMBUS, OHIO 43215 (614) 221-1469

DATES REVISIONS
2 NOVEMBER, 1992
⚠ 6 APRIL 1993 (REV)

PROJECT NAME
VISITOR CENTER
CARRIAGE HILL RESERVE
MONTGOMERY COUNTY
PARK DISTRICT OF DAYTON

91052
PROJECT NUMBER

SHEET TITLE
FINISH DETAILS

A-803
SHEET NUMBER

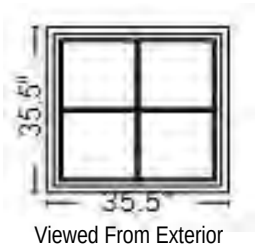
Contract - Detailed

Pella Window and Door Showroom of Kettering
4825 Gateway Circle
Kettering, OH 45440
Phone: (937) 435-0141 **Fax:** (937) 435-8634

Sales Rep Name: Sicilian, Stephen
Sales Rep Phone: 937-435-0141
Sales Rep Fax:
Sales Rep E-Mail: ssicilian@pelladayton.com

Customer Information	Project/Delivery Address	Order Information
Five Rivers MetroParks 409 E Monument Ave Ste 300 Dayton, OH 45402-1374 **Primary Phone:** (937) 2743017 **Mobile Phone:** **Fax Number:** **E-Mail:** **Great Plains #:** 1007635875 **Customer Number:** 1011374948 **Customer Account:** 1007635875	**Five Rivers - Carriage Hill Visitor Center** 7800 Shull Rd **Lot #** HUBER HEIGHTS, OH 45424 **County:** MONTGOMERY	**Quote Name:** Five Rivers - Carriage Hill Visitor Center **Order Number:** 282 **Quote Number:** **17709440** **Order Type:** Installed Sales **Payment Terms:** **Tax Code:** EXEMPT **Quoted Date:** 1/12/2024

Line #	Location:	Attributes	Qty
10	Type A	**Impervia, Sash Set, Fixed, 35.5 X 35.5, White**	2



Viewed From Exterior

PK #
2156

1: 3636 Fixed Sash Set
Frame Size: 35 1/2 X 35 1/2
General Information: Duracast®, Block, Foam Insulated, 3", 1 5/16", 1 11/16"
Exterior Color / Finish: White
Interior Color / Finish: White
Sash / Panel: Standard
Glass: Insulated Low-E Advanced Low-E Insulating Glass Argon Non High Altitude
Performance Information: U-Factor 0.26, SHGC 0.27, VLT 0.49, CPD PEL-N-104-01003-00004, Performance Class CW, PG 50, Calculated Positive DP Rating 50, Calculated Negative DP Rating 50, Year Rated 08
Grille: GBG, No Custom Grille, 3/4" Contour, Traditional (2W2H), White, White
Wrapping Information: Standard Fin, Factory Applied, No Exterior Trim, 3", Pella Recommended Clearance, Perimeter Length = 142".

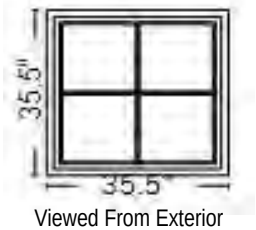
Frame Size: 35.5" X 35.5"

Line #	Location:	Attributes

15 Type A OBSC

Impervia, Sash Set, Fixed, 35.5 X 35.5, White

Qty: 2



Viewed From Exterior

PK # 2156

1: 3636 Fixed Sash Set
Frame Size: 35 1/2 X 35 1/2
General Information: Duracast®, Block, Foam Insulated, 3", 1 5/16", 1 11/16"
Exterior Color / Finish: White
Interior Color / Finish: White
Sash / Panel: Standard
Glass: Insulated Obscure Low-E Obscure Advanced Low-E Insulating Glass Argon Non High Altitude
Performance Information: U-Factor 0.26, SHGC 0.27, VLT 0.49, CPD PEL-N-104-01003-00002, Performance Class CW, PG 50, Calculated Positive DP Rating 50, Calculated Negative DP Rating 50, Year Rated 08, STC 27, OITC 23
Grille: GBG, No Custom Grille, 3/4" Contour, Traditional (2W2H), White, White
Wrapping Information: Standard Fin, Factory Applied, No Exterior Trim, 3", Pella Recommended Clearance, Perimeter Length = 142".

Obscure Glass Style: Pattern62(Standard)

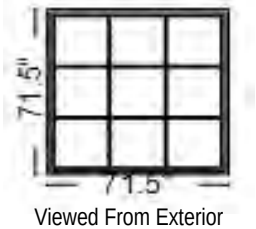
Frame Size: 35.5" X 35.5"

Line #	Location:	Attributes

20 Type C

Impervia, Sash Set, Fixed, 71.5 X 71.5, White

Qty: 7



Viewed From Exterior

PK # 2156

1: 7272 Fixed Sash Set
Frame Size: 71 1/2 X 71 1/2
General Information: Duracast®, Block, Foam Insulated, 3", 1 5/16", 1 11/16"
Exterior Color / Finish: White
Interior Color / Finish: White
Sash / Panel: Standard
Glass: Insulated Low-E Advanced Low-E Insulating Glass Argon Non High Altitude
Performance Information: U-Factor 0.29, SHGC 0.26, VLT 0.48, CPD PEL-N-104-01013-00002, Performance Class CW, PG 30, Calculated Positive DP Rating 30, Calculated Negative DP Rating 30, Year Rated 08, STC 27, OITC 23
Grille: GBG, No Custom Grille, 3/4" Contour, Traditional (3W3H), White, White
Wrapping Information: Standard Fin, Factory Applied, No Exterior Trim, 3", Pella Recommended Clearance, Perimeter Length = 286".

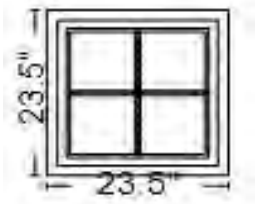
Frame Size: 71.5" X 71.5"

Line #	Location:	Attributes

25 Type D & E

Impervia, Sash Set, Fixed, 23.5 X 23.5, White

Qty: 17



Viewed From Exterior

PK # 2156

1: 2424 Fixed Sash Set
Frame Size: 23 1/2 X 23 1/2
General Information: Duracast®, Block, Foam Insulated, 3", 1 5/16", 1 11/16"
Exterior Color / Finish: White
Interior Color / Finish: White
Sash / Panel: Standard
Glass: Insulated Low-E Advanced Low-E Insulating Glass Argon Non High Altitude
Performance Information: U-Factor 0.26, SHGC 0.27, VLT 0.49, CPD PEL-N-104-01003-00004, Performance Class CW, PG 50, Calculated Positive DP Rating 50, Calculated Negative DP Rating 50, Year Rated 08
Grille: GBG, No Custom Grille, 3/4" Contour, Traditional (2W2H), White, White
Wrapping Information: Standard Fin, Factory Applied, No Exterior Trim, 3", Pella Recommended Clearance, Perimeter Length = 94".

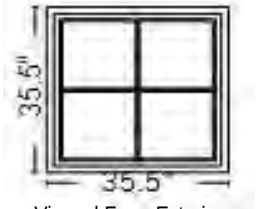
Frame Size: 23.5" X 23.5"

Line #	Location:	Attributes

30 Door Transom

Impervia, Sash Set, Fixed, 35.5 X 35.5, White

Qty: 2



Viewed From Exterior

PK # 2156

1: 3636 Fixed Sash Set
Frame Size: 35 1/2 X 35 1/2
General Information: Duracast®, Block, Foam Insulated, 3", 1 5/16", 1 11/16"
Exterior Color / Finish: White
Interior Color / Finish: White
Sash / Panel: Standard
Glass: Insulated Low-E Advanced Low-E Insulating Glass Argon Non High Altitude
Performance Information: U-Factor 0.26, SHGC 0.27, VLT 0.49, CPD PEL-N-104-01003-00004, Performance Class CW, PG 50, Calculated Positive DP Rating 50, Calculated Negative DP Rating 50, Year Rated 08
Grille: GBG, No Custom Grille, 3/4" Contour, Traditional (2W2H), White, White
Wrapping Information: Standard Fin, Factory Applied, No Exterior Trim, 3", Pella Recommended Clearance, Perimeter Length = 142".

Frame Size: 35.5" X 35.5"

Line #	Location:	Attributes	Qty
35	Door Transom	**Impervia, Sash Set, Fixed, 17.5 X 35.5, White**	2

Viewed From Exterior

PK #
2156

1: Non-Standard Size Fixed Sash Set
Frame Size: 17 1/2 X 35 1/2
General Information: Duracast®, Block, Foam Insulated, 3", 1 5/16", 1 11/16"
Exterior Color / Finish: White
Interior Color / Finish: White
Sash / Panel: Standard
Glass: Insulated Low-E Advanced Low-E Insulating Glass Argon Non High Altitude
Performance Information: U-Factor 0.26, SHGC 0.27, VLT 0.49, CPD PEL-N-104-01003-00004, Performance Class CW, PG 50, Calculated Positive DP Rating 50, Calculated Negative DP Rating 50, Year Rated 08
Grille: GBG, No Custom Grille, 3/4" Contour, Traditional (1W2H), White, White
Wrapping Information: Standard Fin, Factory Applied, No Exterior Trim, 3", Pella Recommended Clearance, Perimeter Length = 106".

Frame Size: 17.5" X 35.5"

Line #	Location:	Attributes	Qty
40	None Assigned	**CL20 - Window Installation Labor (Commercial)**	32

Thank You For Purchasing Pella® Products

PELLA WARRANTY:

Pella products are covered by Pella's limited warranties in effect at the time of sale. All applicable product warranties are incorporated into and become a part of this contract. Please see the warranties for complete details, taking special note of the two important notice sections regarding installation of Pella products and proper management of moisture within the wall system. Neither Pella Corporation nor the Seller will be bound by any other warranty unless specifically set out in this contract. However, Pella Corporation will not be liable for branch warranties which create obligations in addition to or obligations which are inconsistent with Pella written warranties.

Clear opening (egress) information does not take into consideration the addition of a Rolscreen [or any other accessory] to the product. You should consult your local building code to ensure your Pella products meet local egress requirements.

Per the manufacturer's limited warranty, unfinished mahogany exterior windows and doors must be finished upon receipt prior to installing and refinished annually, thereafter. Variations in wood grain, color, texture or natural characteristics are not covered under the limited warranty.

INSYNCTIVE PRODUCTS: In addition, Pella Insynctive Products are covered by the Pella Insynctive Products Software License Agreement and Pella Insynctive Products Privacy Policy in effect at the time of sale, which can be found at Insynctive.pella.com. By installing or using Your Insynctive Products you are acknowledging the Insynctive Software Agreement and Privacy Policy are part of the terms of sale.

Notice of Collection of Personal Information: We may collect your personal information when you interact with us. Under the California Consumer Privacy Act (CCPA), California residents have specific rights to request this information, request to delete this information, and opt out of the sharing or sale of this information to third parties. To learn more about our collection practices and your rights under the CCPA please visit our link https://www.pella.com/california-rights-policy/ at pella.com.

ARBITRATION AND CLASS ACTION WAIVER ("ARBITRATION AGREEMENT")

YOU and Pella and its subsidiaries and the Pella Branded Distributor **AGREE TO ARBITRATE DISPUTES ARISING OUT OF OR RELATING TO YOUR PELLA PRODUCTS (INCLUDES PELLA GOODS AND PELLA SERVICES) AND WAIVE THE RIGHT TO HAVE A COURT OR JURY DECIDE DISPUTES. YOU WAIVE ALL RIGHTS TO PROCEED AS A MEMBER OR REPRESENTATIVE OF A CLASS ACTION, INCLUDING CLASS ARBITRATION, REGARDING DISPUTES ARISING OUT OF OR RELATING TO YOUR PELLA PRODUCTS.** You may opt out of this Arbitration Agreement by providing notice to Pella no later than ninety (90) calendar days from the date You purchased or otherwise took ownership of Your Pella Goods. To opt out, You must send notice by e-mail to pellawebsupport@pella.com , with the subject line: "Arbitration Opt Out" or by calling (877) 473-5527. Opting out of the Arbitration Agreement will not affect the coverage provided by any applicable limited warranty pertaining to Your Pella Products. For complete information, including the full terms and conditions of this Arbitration Agreement, which are incorporated herein by reference, please visit www.pella.com/arbitration or e-mail to pellawebsupport@pella.com, with the subject line: "Arbitration Details" or call (877) 473-5527. D'ARBITRAGE ET RENONCIATION AU RECOURS COLLECTIF ("convention d'arbitrage") EN FRANÇAIS SEE PELLA.COM/ARBITRATION. DE ARBITRAJE Y RENUNCIA COLECTIVA ("acuerdo de arbitraje") EN ESPAÑOL VER PELLA.COM/ARBITRATION.

Seller shall not be held liable for failure or delay in the performance of its obligations under this Agreement, if such performance is hindered or delayed by the occurrence of an act or event beyond the Seller's reasonable control (force majeure event), including but not limited to earthquakes, unusually severe weather and other Acts of God, fire, strikes and labor unrest, epidemics, riots, war, civil unrest, and government interventions. Seller shall give timely notice of a force majeure event and take such reasonable action to mitigate the impacts of such an event.

Product Performance Information:

U-Factor, Solar Heat Gain Coefficient (SHGC), and Visible Light Transmittance (VLT) are certified by the National Fenestration Rating Council (NFRC). 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 products and does not warrant the suitability of any product

for any specific use.

Design Pressure (DP), Performance Class, and Performance Grade (PG) are certified by a third party organization, in many cases the Window and Door Manufacturers Association (WDMA). The certification requires the performance of at least one product of the product line to be tested in accordance with the applicable performance standards and verified by an independent party. The certification indicates that the product(s) of the product line passed the applicable tests. The certification does not apply to mulled and/or product combinations unless noted. Actual product results will vary and change over the products life.

For more performance information along with information on Florida Product Approval System (FPAS) Number and Texas Dept. of Insurance (TDI) number go to www.pella.com/performance.

Including during the construction period, casement windows should never be left open and unlocked for prolong periods or during high wind conditions to avoid sash detachment/damage.

Actual sizes tested for documented STC and OITC ratings may vary from the ASTM E 1425 sizes to better represent Pella product offering.

STC and OITC ratings shown may be conservatively based on products tested with thinner panes of glass.

STC and OITC ratings may be from test results from an equivalent product.

TAILGATE DELIVERY ONLY - DRIVER MUST HAVE HELP TO UNLOAD (Excluding Installed Sales)...CLEANING, PAINTING OR STAINING BY OTHERS...QUOTATION IS VALID FOR 30 DAYS. All products are built at the factory to your individual specifications. Any changes or cancellations must be made within 24 hours of placing your order. Any changes or cancellations after this time are subject to a 50% - 100% charge. Please review your order to verify the accuracy of the delivery address, payment terms and product specifications.
You, the buyer, hereby authorize Pella Corporation, its affiliates and/or subsidiaries to use, reproduce, and/or publish photographs and/or video that may pertain to me and my project, including materials described below, without compensation. I understand that this material may be used in various communications (e.g. Website, e-newsletters, promotional materials, etc).
YOU, THE BUYER, MAY CANCEL THIS TRANSACTION AT ANY TIME PRIOR TO MIDNIGHT OF THE THIRD BUSINESS DAY AFTER THE DATE OF THIS TRANSACTION. SEE THE ATTACHED NOTICE OF CANCELLATION FOR AN EXPLANATION OF THIS RIGHT.

☐ **Project Checklist has been reviewed**

Customer Name (Please print)

Customer Signature

Date

Credit Card Approval Signature

Pella Sales Rep Name (Please print)

Pella Sales Rep Signature

Date

Order Totals	
Taxable Subtotal	$21,213.31
Sales Tax @ 0%	$0.00
Non-taxable Subtotal	$7,776.00
Total	$28,989.31
Deposit Received	$0.00
Amount Due	**$28,989.31**

Quote

Quote Number: Date: 2/2/2024

Customer Information

Name:

Address:

Phone 1:

Phone 2:

Fax:

Contact:

Job Name:

Specifications

U.D. = 105" x 80-5/8"; R.O. = 105-3/4" x 81-1/8"

O.M. of Brick Mould = 107-1/2" x 81-7/8"

Image is viewed from Exterior!

Item Description	Qty	Price	Extended
6' 0" x 6' 8" HGS-217-010-2C Heritage Smooth Fiberglass Double Door w/Endura Ultimate Flip Lever - Non-Stainable Astragal w/Clear Glass - Left Hand Outswing	1		
No Bore	1		
Set of Black Outswing Hinges	1		
Set Double Sidelites 14" Wide HGS-617-010-1 w/Clear Glass	1		
Smooth Composite Frame (Boxed Units) - 4-9/16" Jamb w/Smooth Composite Brick Mould Exterior Trim (Loose)	1		
Bronze Compression Weatherstrip	1		
Handicap - Mill Finish Sill (Boxed Units)	1		
PREFINISH: Paint Door & Sidelite Panels Interior & Exterior WHITE ; Paint Frame Interior and Exterior (and Exterior Trim) WHITE	1		
MANUALLY ENTERED ITEM: Use 20 min slabs for panic prep/solid core *Non-Taxable Item	1		
MANUALLY ENTERED ITEM: by-pass astragal *Non-Taxable Item	1		
Item Total			

Quote

Quote Number: Date: 2/2/2024

Item Description	Qty	Price	Extended
Item #PB689VRBZ Yale push bar with vertical rod - dark bronze finish	2		
Item #BF689BZ Yale closer - dark bronze finish	2		
Item #AU441DA2BZ Yale - entry lever for push bar - dark bronze finish	1		
Item #AU441BZ Yale - passage lever for push bar - dark bronze finish	1		
Item Total			

Order Sub Total:

Tax:

Order Total:

Version #: 7.26
Version Date: 4/3/2023

HardiePanel® Vertical Siding

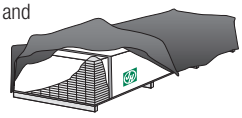
SINGLE FAMILY INSTALLATION REQUIREMENTS

EFFECTIVE SEPTEMBER 2019

IMPORTANT: FAILURE TO FOLLOW JAMES HARDIE WRITTEN INSTALLATION INSTRUCTIONS AND COMPLY WITH APPLICABLE BUILDING CODES MAY VIOLATE LOCAL LAWS, AFFECT BUILDING ENVELOPE PERFORMANCE AND MAY AFFECT WARRANTY COVERAGE. FAILURE TO COMPLY WITH ALL HEALTH AND SAFETY REGULATIONS WHEN CUTTING AND INSTALLING THIS PRODUCT MAY RESULT IN PERSONAL INJURY. BEFORE INSTALLATION, CONFIRM YOU ARE USING THE CORRECT HARDIEZONE® PRODUCT INSTRUCTIONS BY VISITING HARDIEZONE.COM OR CALL 1-866-942-7343 (866-9-HARDIE)

STORAGE & HANDLING:

Store flat and keep dry and covered prior to installation. Installing siding wet or saturated may result in shrinkage at butt joints. Carry planks on edge. Protect edges and corners from breakage. James Hardie is not responsible for damage caused by improper storage and handling of the product.



⚠ CUTTING INSTRUCTIONS

OUTDOORS

1. Position cutting station so that airflow blows dust away from the user and others near the cutting area.
2. Cut using one of the following methods:
   - a. Best: Circular saw equipped with a HardieBlade® saw blade and attached vacuum dust collection system. Shears (manual, pneumatic or electric) may also be used, not recommended for products thicker than 7/16 in.
   - b. Better: Circular saw equipped with a dust collection feature (e.g. Roan® saw) and a HardieBlade saw blade.
   - c. Good: Circular saw equipped with a HardieBlade saw blade.

INDOORS

DO NOT grind or cut with a power saw indoors. Cut using shears (manual, pneumatic or electric) or the score and snap method, not recommended for products thicker than 7/16 in.

- DO NOT dry sweep dust; use wet dust suppression or vacuum to collect dust.
- For maximum dust reduction, James Hardie recommends using the "Best" cutting practices. Always follow the equipment manufacturer's instructions for proper operation.
- For best performance when cutting with a circular saw, James Hardie recommends using HardieBlade® saw blades.
- Go to jameshardiepros.com for additional cutting and dust control recommendations.

IMPORTANT: The Occupational Safety and Health Administration (OSHA) regulates workplace exposure to silica dust. For construction sites, OSHA has deemed that cutting fiber cement with a circular saw having a blade diameter less than 8 inches and connected to a commercially available dust collection system per manufacturer's instructions results in exposures below the OSHA Permissible Exposure Limit (PEL) for respirable crystalline silica, without the need for additional respiratory protection.

If you are unsure about how to comply with OSHA silica dust regulations, consult a qualified industrial hygienist or safety professional, or contact your James Hardie technical sales representative for assistance. James Hardie makes no representation or warranty that adopting a particular cutting practice will assure your compliance with OSHA rules or other applicable laws and safety requirements.

GENERAL REQUIREMENTS:

- These instructions to be used for single family installations only. **For Commercial / Multi-Family installation requirements go to www.JamesHardieCommercial.com
- HardiePanel® vertical siding can be installed over braced wood or steel studs, 20 gauge (33 mils) minimum to 16 gauge (54 mils) maximum, spaced a maximum of 24 in o.c. or directly to minimum 7/16 in thick OSB sheathing. See General Fastening Requirements. Irregularities in framing and sheathing can mirror through the finished application. Correct irregularities before installing siding.
- Information on installing James Hardie products over non-nailable substrates (ex: gypsum, foam,etc.) can be located in JH Tech Bulletin 19 at www.jamehardie.com
- A water-resistive barrier is required in accordance with local building code requirements. The water-resistive barrier must be appropriately installed with penetration and junction flashing in accordance with local building code requirements. James Hardie will assume no responsibility for water infiltration. James Hardie does manufacture HardieWrap® Weather Barrier, a non-woven non-perforated housewrap[1], which complies with building code requirements.
- Adjacent finished grade must slope away from the building in accordance with local building codes - typically a minimum of 6 in. in the first 10 ft.
- Do not use HardiePanel lap siding in Fascia or Trim applications.
- Do not install James Hardie products, such that they may remain in contact with standing water.
- HardiePanel vertical siding may be installed on flat vertical wall applications only.
- For larger projects, including commercial and multi-family projects, where the span of the wall is significant in length, the designer and/or architect should take into consideration the coefficient of thermal expansion and moisture movement of the product in their design. These values can be found in the Technical Bulletin "Expansion Characteristics of James Hardie® Siding Products" at www.jameshardie.com.
- James Hardie Building Products provides installation /wind load information for buildings with a maximum mean roof height of 85 feet. For information on installations above 60 feet, please contact JH technical support.
- Minimum standard panel design size is 12" x 16". Note:Panels may be notched and cut to size to fit between windows, doors, corners, etc.

Figure 1

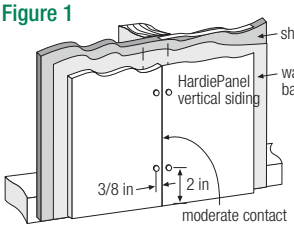
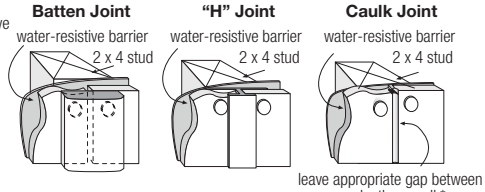


Figure 2

(Caulking Joints is not applicable to ColorPlus® Finish)



*Apply caulk in accordance with caulk manufacturer's written application instructions.
**James Hardie recommends installing a rainscreen (an air gap) between the HardiePanel siding and the water-resistive barrier as a best practice.
James Hardie recommends that you consult your design professional if you have questions regarding the use of rainscreen on your single family project.
[1]For additional information on HardieWrap™ Weather Barrier, consult James Hardie at 1-866-4Hardie or www.hardiewrap.com

INSTALLATION:

Fastener

Position fasteners 3/8 in from panel edges and no closer than 2 in away from corners. Do not nail into corners.

- HardiePanel vertical siding must be joined on stud.
- Double stud may be required to maintain minimum edge nailing distances.
- When screws are used to attach panels to steel studs/furring, the screws shall have wing tips. If screws do not have wing tips, then pre-drilling is required. (Not applicable when using pins) Follow chart below for pre-drilling:

SCREW	PRE-DRILL	HEAD DIAMETER
No. 8	7/32 in	Min 0.323 in
No. 10	1/4 in	Min 0.323 in

Joint Treatment

- Vertical Joints - Install panels in moderate contact (fig. 1), alternatively joints may also be covered with battens, PVC or metal jointers or caulked (Not applicable to ColorPlus® Finish) (fig. 2).
- Horizontal Joints - Provide Z-flashing at all horizontal joints (fig. 3).

Figure 3

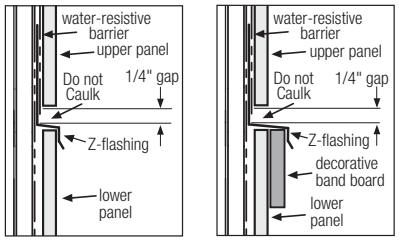
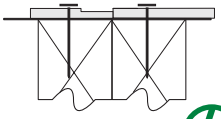


Figure 4



Recommendation: When installing Sierra 8, provide a double stud at panel joints to avoid nailing through grooves.

JamesHardie™

SMOOTH | CEDARMILL© | STUCCO | SIERRA 8

Visit jameshardiepros.com for the most recent version.

CLEARANCE AND FLASHING REQUIREMENTS

Figure 3
Roof to Wall

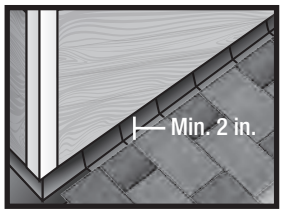


Figure 4
Horizontal Flashing

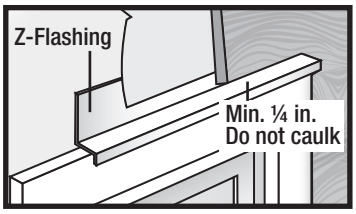


Figure 5
Kickout Flashing

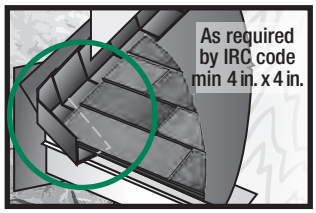


Figure 6
Slabs, Path, Steps to Siding

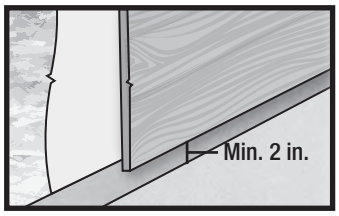


Figure 7
Deck to Wall

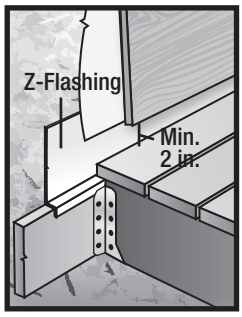


Figure 8
Ground to Siding

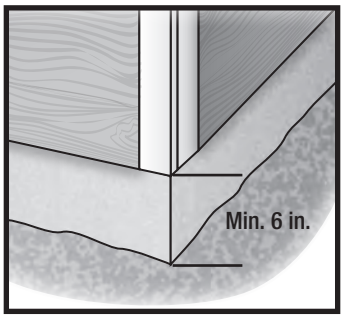


Figure 9
Gutter to Siding

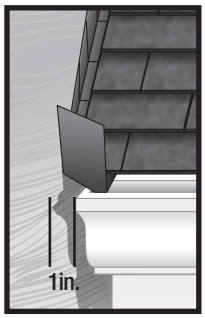


Figure 10
Sheltered Areas

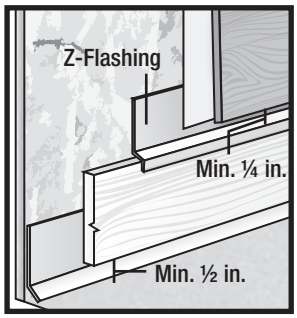


Figure 11
Mortar/Masonry

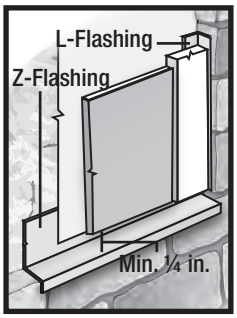


Figure 12
Drip Edge

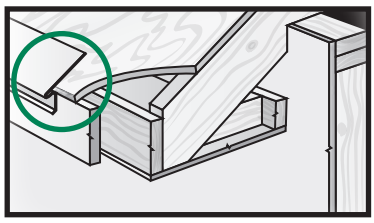


Figure 13
Block Penetration

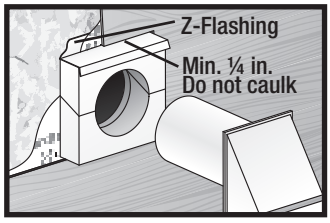
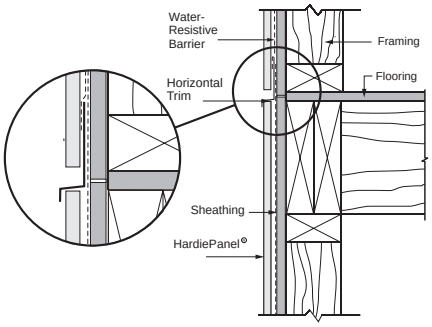


Figure 14
Valley/Shingle Extension

Do not bridge floors with HardiePanel® siding. Horizontal joints should always be created between floors, see below).



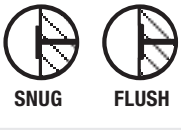
GENERAL FASTENING REQUIREMENTS

Refer to the applicable ESR report online to determine which fastener meets your wind load design criteria.

Fasteners must be corrosion resistant, galvanized, or stainless steel. Electro-galvanized are acceptable but may exhibit premature corrosion. James Hardie recommends the use of quality, hot-dipped galvanized nails. James Hardie is not responsible for the corrosion resistance of fasteners. Stainless steel fasteners are recommended when installing James Hardie® products near the ocean, large bodies of water, or in very humid climates.

Manufacturers of ACQ and CA preservative-treated wood recommend spacer materials or other physical barriers to prevent direct contact of ACQ or CA preservative-treated wood and aluminum products. Fasteners used to attach HardieTrim Tabs to preservative-treated wood shall be of hot dipped zinc-coated galvanized steel or stainless steel and in accordance to 2009 IRC R317.3 or 2009 IBC 2304.9.5

- Consult applicable product evaluation or listing for correct fasteners type and placement to achieve specified design wind loads.
- NOTE: Published wind loads may not be applicable to all areas where Local Building Codes have specific jurisdiction. Consult James Hardie Technical Services if you are unsure of applicable compliance documentation.
- Drive fasteners perpendicular to siding and framing.
- Fastener heads should fit snug against siding (no air space).
- NOTE: Whenever a structural member is present, HardiePanel® should be fastened with even spacing to the structural member. The tables allowing direct to OSB or plywood should only be used when traditional framing is not available.



DO NOT

UNDER DRIVE

IF, THEN

WOOD FRAME	STEEL FRAME
	
HAMMER FLUSH	*REMOVE & REPLACE*

DO NOT

OVER DRIVE | SLANT

IF, THEN ADDITIONAL NAIL

FACE NAIL

COUNTERSINK & FILL

DO NOT USE

ALUMINUM FASTENERS

CLIPPED HEAD NAILS

STAPLES

PNEUMATIC FASTENING

James Hardie products can be hand nailed or fastened with a pneumatic tool. Pneumatic fastening is highly recommended. Set air pressure so that the fastener is driven snug with the surface of the siding. A flush mount attachment on the pneumatic tool is recommended. This will help control the depth the nail is driven. If setting the nail depth proves difficult, choose a setting that under drives the nail. (Drive under driven nails snug with a smooth faced hammer - Does not apply for installation to steel framing).

CUT EDGE TREATMENT

Caulk, paint or prime all field cut edges. James Hardie touch-up kits are required to touch-up ColorPlus products.

CAULKING

For best results use an Elastomeric Joint Sealant complying with ASTM C920 Grade NS, Class 25 or higher or a Latex Joint Sealant complying with ASTM C834. Caulking/Sealant must be applied in accordance with the caulking/sealant manufacturer's written instructions. **Note: some caulking manufacturers do not allow "tooling".**

PAINTING

DO NOT use stain, oil/alkyd base paint, or powder coating on James Hardie® products. James Hardie products must be painted within 180 days for primed product and 90 days for unprimed. 100% acrylic topcoats are recommended. Do not paint when wet. For application rates refer to paint manufacturers specifications. Back-rolling is recommended if the siding is sprayed.

PAINTING JAMES HARDIE® SIDING AND TRIM PRODUCTS WITH COLORPLUS® TECHNOLOGY

When repainting ColorPlus products, James Hardie recommends the following regarding surface preparation and topcoat application:

- Ensure the surface is clean, dry, and free of any dust, dirt, or mildew
- Repriming is normally not necessary
- 100% acrylic topcoats are recommended
- DO NOT use stain, oil/alkyd base paint, or powder coating on James Hardie® Products.
- Apply finish coat in accordance with paint manufacturers written instructions regarding coverage, application methods, and application temperature
- DO NOT caulk nail heads when using ColorPlus products, refer to the ColorPlus touch-up section

COLORPLUS® TECHNOLOGY CAULKING, TOUCH-UP & LAMINATE

- Care should be taken when handling and cutting James Hardie ColorPlus® products. During installation use a wet soft cloth or soft brush to gently wipe off any residue or construction dust left on the product, then rinse with a garden hose.
- Touch up nicks, scrapes and nail heads using the ColorPlus® Technology touch-up applicator. Touch-up should be used sparingly. If large areas require touch-up, replace the damaged area with a new piece of siding with ColorPlus® Technology.
- Laminate sheet must be removed immediately after installation of each course.
- Terminate non-factory cut edges into trim where possible, and caulk. Color matchedcaulks are available from your ColorPlus® product dealer.
- Treat all other non-factory cut edges using the ColorPlus Technology edge coaters, available from your ColorPlus product dealer.

Note: James Hardie does not warrant the usage of third party touch-up or paints used as touch-up on James Hardie ColorPlus products.

Problems with appearance or performance arising from use of third party touch-up paints or paints used as touch-up that are not James Hardie touch-up will not be covered under the James Hardie ColorPlus Limited Finish Warranty.

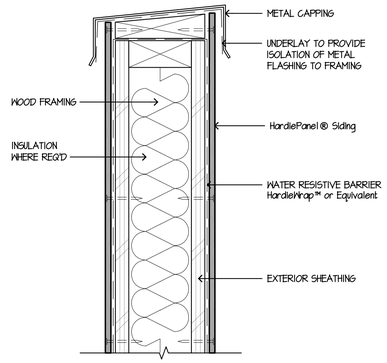
HS1237 P3/3 09/19

SILICA WARNING

DANGER: May cause cancer if dust from product is inhaled. Causes damage to lungs and respiratory system through prolonged or repeated inhalation of dust from product. Refer to the current product Safety Data Sheet before use. The hazard associated with fiber cement arises from crystalline silica present in the dust generated by activities such as cutting, machining, drilling, routing, sawing, crushing, or otherwise abrading fiber cement, and when cleaning up, disposing of or moving the dust. When doing any of these activities in a manner that generates dust you must (1) comply with the OSHA standard for silica dust and/or other applicable law, (2) follow James Hardie cutting instructions to reduce or limit the release of dust; (3) warn others in the area to avoid breathing the dust; (4) when using mechanical saw or high speed cutting tools, work outdoors and use dust collection equipment; and (5) if no other dust controls are available, wear a dust mask or respirator that meets NIOSH requirements (e.g. N-95 dust mask). During clean-up, use a well maintained vacuum and filter appropriate for capturing fine (respirable) dust or use wet clean-up methods - never dry sweep.

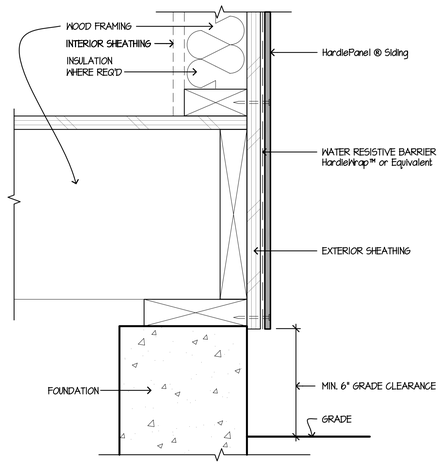
WARNING: This product can expose you to chemicals including respirable crystalline silica, which is known to the State of California to cause cancer. For more information go to P65Warnings.ca.gov.

RECOGNITION: In accordance with ICC-ES Evaluation Report ESR-1844, HardiePanel® vertical siding is recognized as a suitable alternate to that specified in the 2006, 2009, 2012 & 2015 International Residential Code for One-and Two-Family Dwellings and the 2006, 2009, 2012 & 2015 International Building Code. HardiePanel vertical siding is also recognized for application in the following: City of Los Angeles Research Report No. 24862, State of Florida Product Approval FL#13223, Miami-Dade County Florida NOA No. 17-0406.06, U.S. Dept. of HUD Materials Release 1263f, Texas Department of Insurance Product Evaluation EC-23, City of New York MEA 223-93-M, and California DSA PA-019. These documents should also be consulted for additional information concerning the suitability of this product for specific applications.



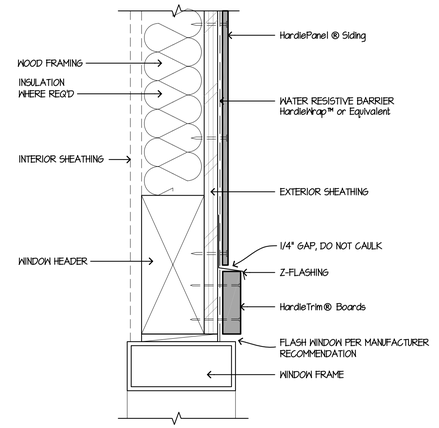
9 PARAPET

SCALE: 3"=1'-0"



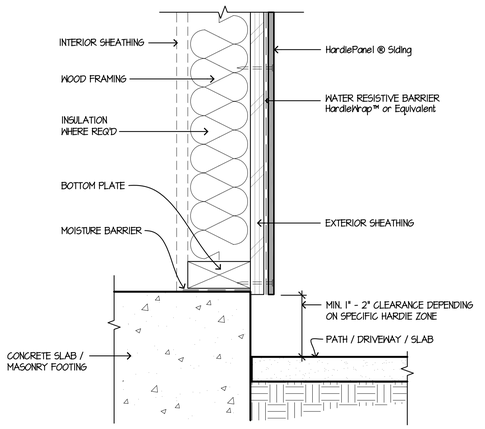
6 GRADE CLEARANCE

SCALE: 3"=1'-0"



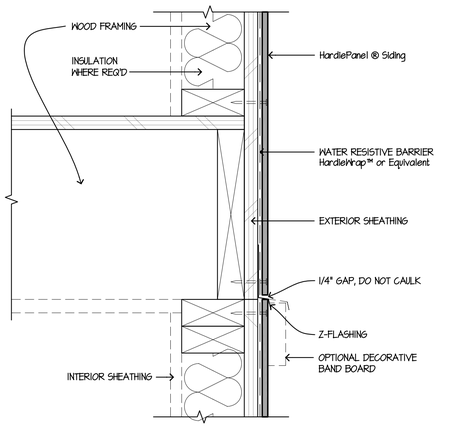
3 WINDOW/DOOR HEAD

SCALE: 3"=1'-0"



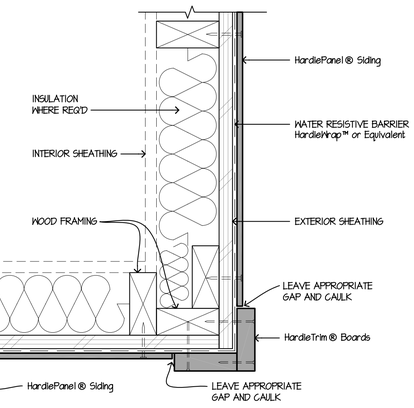
8 HARDSCAPE CLEARANCES, DECKS, PORCHES, PATIOS, WALKWAYS, ROOFS, ETC.

SCALE: 1/2"=1'-0"



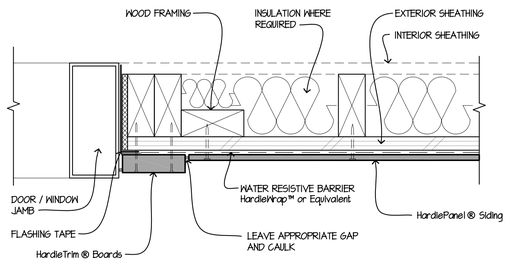
5 HORIZONTAL VIEW

SCALE: 3"=1'-0"



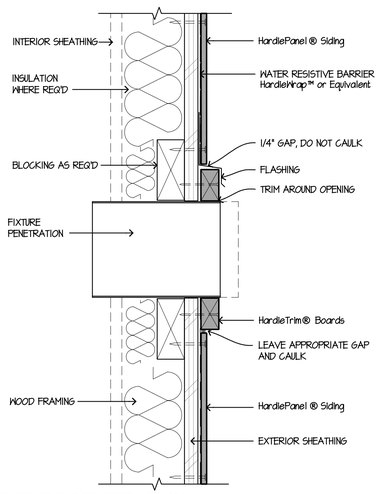
2 OUTSIDE CORNER

SCALE: 3"=1'-0"



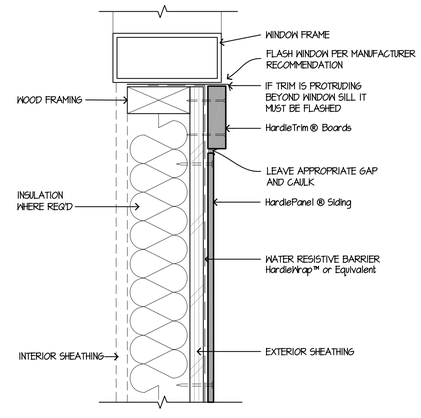
10 DOOR / WINDOW JAMB

SCALE: 3"=1'-0"



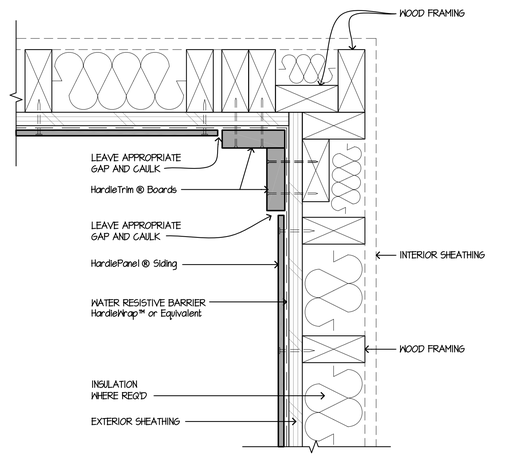
7 FIXTURE PENETRATION

SCALE: 3"=1'-0"



4 WINDOW SILL

SCALE: 3"=1'-0"



1 INSIDE CORNER

SCALE: 3"=1'-0"

These drawings are published as an information guide only. These CAD drawings are intended as templates to assist the designer. They do not contain the full details required for construction and must be read in conjunction with the installation instructions on www.jameshardie.com. You should obtain architectural, engineering or other technical advice to assess the suitability of these drawings to the requirements of your particular project. James Hardie accepts no liability in respect to the use of these drawings. For fastener specifications and complete installation instructions refer to appropriate documentation at www.JamesHardie.com

JamesHardie®

HardiePanel® Siding Details

- Wood Framing
- OSB or Plywood Sheathing
- Shown with Siding Nails into Framing

DRAWN	JamesHardie
CHECKED	JW
DATE	March 1, 2010
SCALE	AS NOTED
JOB NO.	-
SHEET	PANEL-1

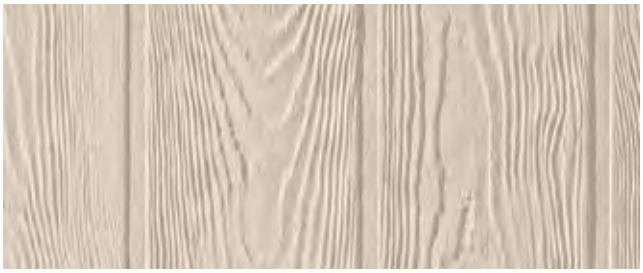
HardiePanel® Vertical Siding Product Description

HardiePanel® vertical siding is factory-primed fiber-cement vertical siding available in a variety of sizes and textures. Examples of these are shown below. Textures include smooth, stucco, Cedarmill® and Sierra 8. HardiePanel vertical siding is 5/16 in. thick and is available in 4x8, 4x9 and 4x10 sizes. Please see your local James Hardie dealer for texture and size availability.

HardiePanel vertical siding is available as a prefinished James Hardie® product with ColorPlus® Technology. The ColorPlus coating is a factory applied, oven baked finish available on a variety of James Hardie siding and trim products. See your local dealer for availability of products, color and accessories.

Stucco

Cedarmill©



Sierra 8

Smooth

Installation of HardiePanel® Vertical Siding

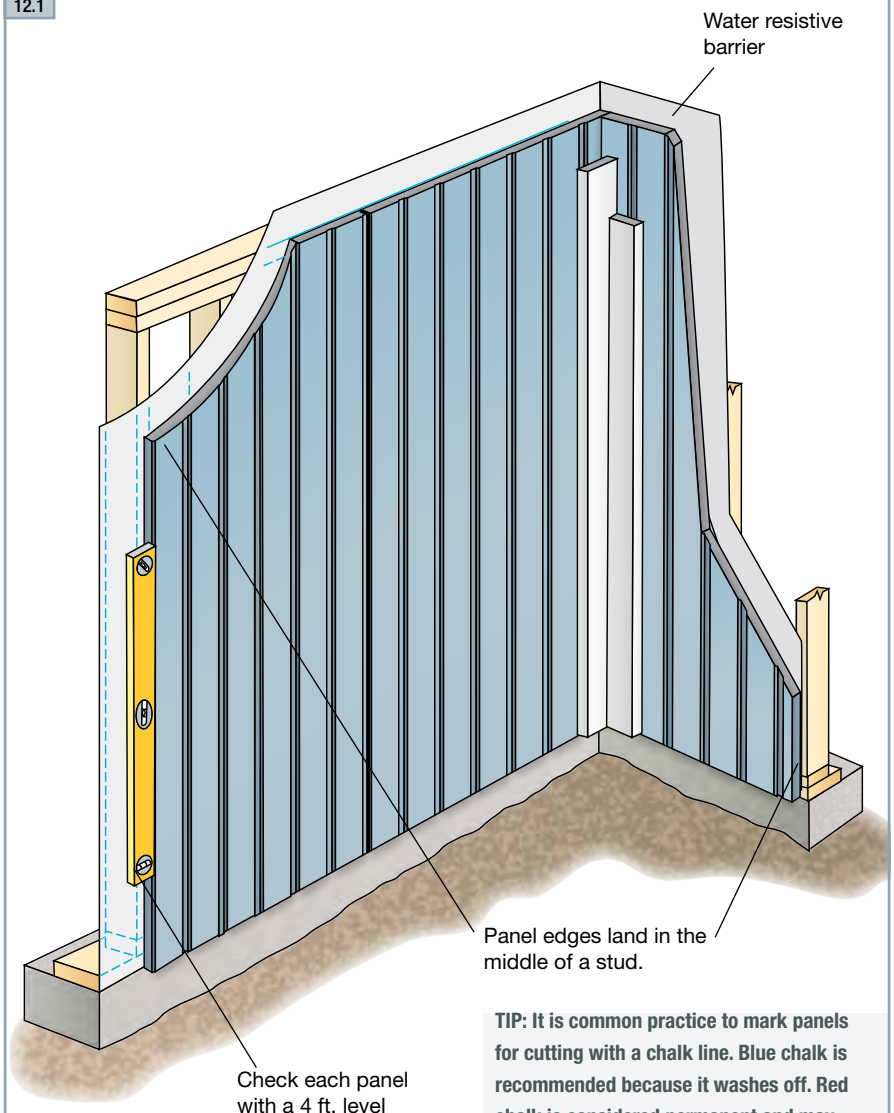
Note: James Hardie has a capillary break requirement when installing HardiePanel on a Multi-Family/ Commercial project. Please visit: www.jameshardiepros.com for further information.

GETTING STARTED

First locate the lowest point of the sheathing or sill plate, and begin. installation on that wall.

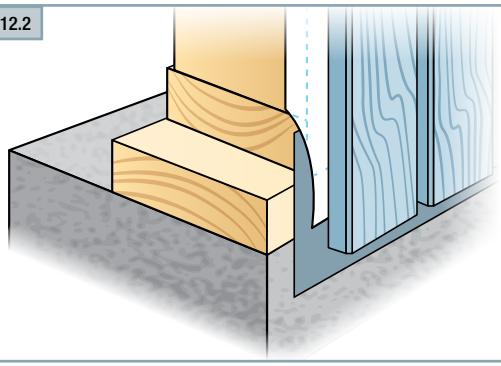
1. Measure up from the sill plate the height of the panels at either end of the wall and snap a straight, level chalk line between the marks as a reference line. That line is for guidance in positioning the top edge of the panels. Check the reference line with a 4 ft. level.
2. Starting on one end and working across the wall, measure and trim the first panel making sure that the edge falls in the middle of a stud.
3. Using the chalk line as a guide along the panel's top edge, carefully position the panel and secure it with suitable fasteners and fastener spacing for the particular application as noted in the ESR-1844.
4. As installation continues, check the vertical edge of each panel with a 4 ft. level.

12.1



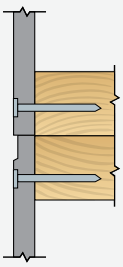
TIP: It is common practice to mark panels for cutting with a chalk line. Blue chalk is recommended because it washes off. Red chalk is considered permanent and may bleed through lighter colored paints.

12.2



TIP: Install flashing over the footing/foundation and extend the panel over the flashing just below the sill plate. Do not extend siding beyond the required grade clearances.

TIP: For Sierra 8 panels, double studs at each panel joint allows fasten- ers to be placed outside of panel grooves.



VERTICAL JOINT TREATMENT

Treat vertical joints in HardiePanel® vertical siding by using one of the following four methods:

1. Install the panels in moderate contact.
2. Leave an appropriate gap between panels (1/8 in. is the most common), and caulk using a high-quality paintable caulk, that meets ASTM C-834 or C-920 requirements. (Not recommended for ColorPlus)

Panels may be installed first with caulk applied in the joints after installation; or as an option, after the first panel is installed, apply a bead of caulk along the panel edge. When the next panel is installed against the first, the edge embeds in the applied caulk creating a thorough seal between the edges of the panels.

WARNING

The caulk joint method is not recommended for the ColorPlus® products

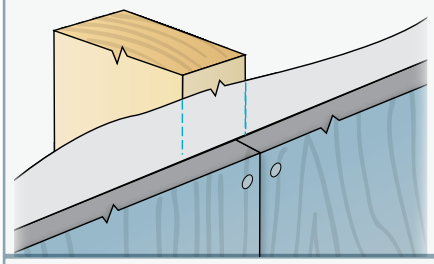
3. Vertical joints may be covered with wood or fiber-cement batten strips. If James Hardie® siding or trim products are ripped and used as batten strips, paint or prime the cut edges. Batten strips should span the vertical joint by at least ¾ in. on each side.
4. Metal or PVC "H" moldings can be used to join two sections of HardiePanel siding.

TIP: Stainless steel fasteners are recommended when installing James Hardie products.

12.3

1 Moderate contact joint

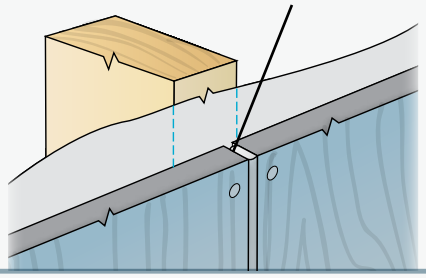
Panels are butted together lightly.



12.4

2 Caulked joint

1/8 in. gap left between panels is filled with caulk. (not applicable with ColorPlus)



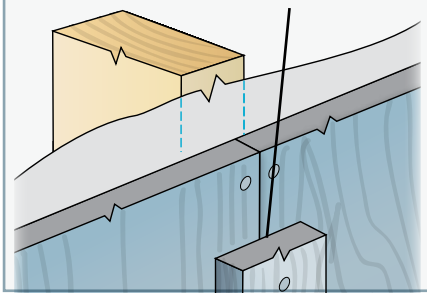
Note: The following outlines the recommended applications for ColorPlus and Primed panels. Not all designs will be suitable for every application:

- Exposed fasteners or battens is the recommended application for ColorPlus products
- Do not use touch-up over fastener heads for smooth ColorPlus products - primed panel recommended
- For ColorPlus panel applications that require fasteners in the field, it is acceptable to use touch-up over fasteners for Cedarmill and Stucco panel only, but correct touch-up application is important. Some colors may show touch-up when applied over fasteners. Trim is recommended to cover joints when appropriate.

12.5

3 Battened joint

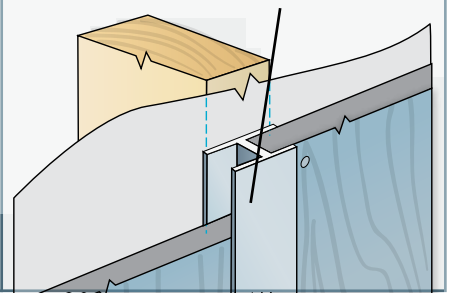
HardieTrim® batten board covers the joint between panels.



12.6

4 H-Channel joint

A manufactured H-channel captures the vertical edges of the panels.

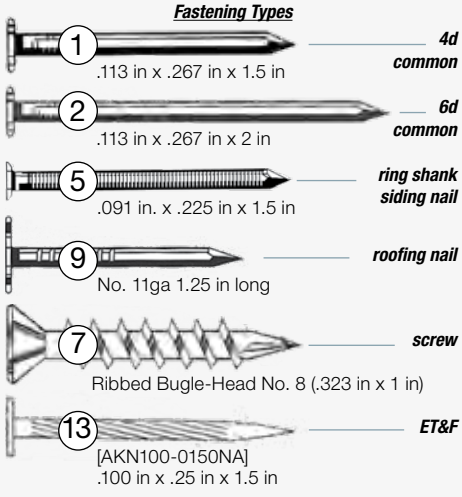


HARDIEPANEL SIDING FASTENER SPECIFICATIONS

The Fastener Specifications table shows fastener options for a variety of different nailing substrates. Please refer to the applicable ESR report online (see back page) to determine which fastener meets your wind load

Fastening Substrate		Approved Fastener
wood studs	16 in o.c.	1 2 5 9
	24 in o.c.	1 2 9
steel studs	16 in o.c or 24 in o.c.	7 13

Fastening Types



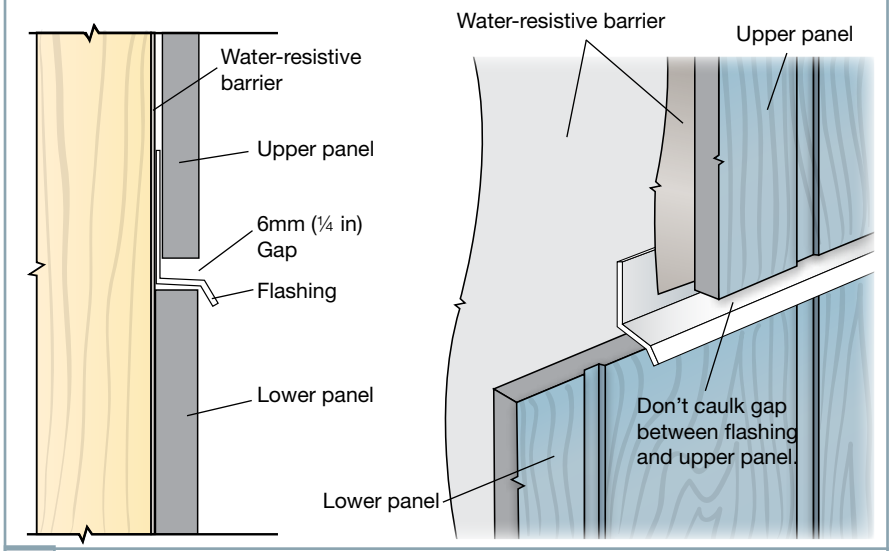
Installation of HardiePanel® Vertical Siding (cont.)

HORIZONTAL JOINT TREATMENT

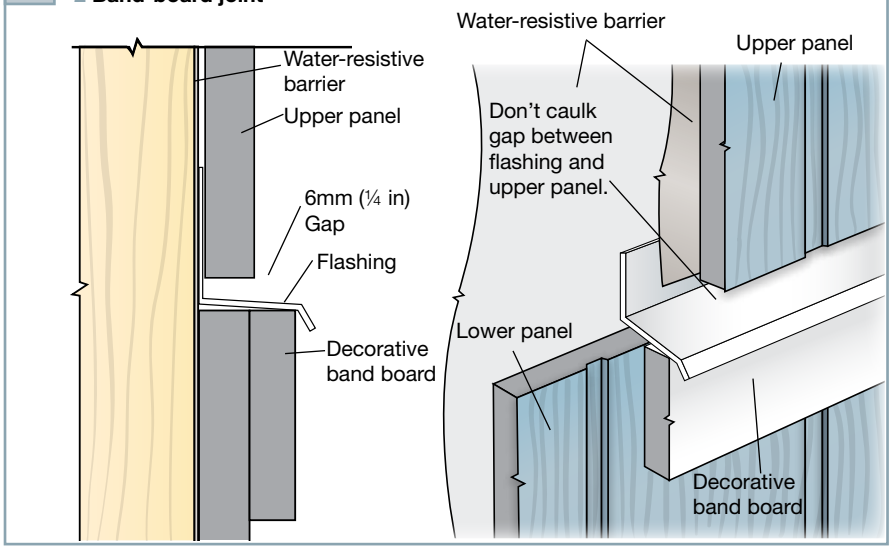
In some applications such as multi-story structures or at gable ends, it may be necessary to stack HardiePanel® siding. The horizontal joints created between panels must be flashed properly to minimize water penetration. Treat horizontal panel joints by using one of the following methods:

1. After installing the lower course of panel siding, install vinyl or coated aluminum "Z" flashing at the top edge of the panel. Make sure that the flashing is sloped away from the wall and does not rest flat on the top edge of the panel. Install the second level or gable panels leaving a ¼ in. minimum gap between the bottom of the panel and the Z flashing. This gap should never be caulked.
2. As an alternative, if a horizontal band board is used at the horizontal joint, flashing must extend over the panel edge and trim attachment. Flashing for both treatments must slip behind the water-resistive barrier.

12.7 1 **Simple horizontal joint**



12.8 2 **Band-board joint**

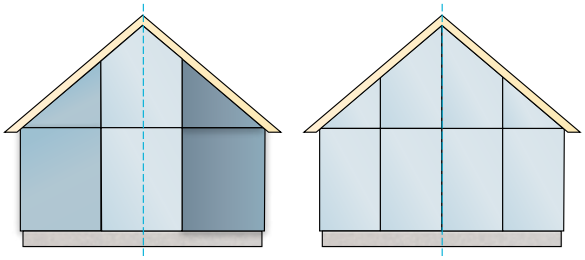


TIP: For best looking installation of HardiePanel Select Sierra 8 siding, carefully align vertical panel grooves at 1st to 2nd story or gable junctures.

WARNING

Do not bridge floors with panel siding. A horizontal joint shall always be created between floors.

TIP: For the most symmetrical looking wall, plan the installation so that a full panel is centered on the wall or gable with equal-size panels cut for each end. As an alternative, plan the installation so that a full panel is located on either side of the wall center, again leaving equal-size panels on each end. These strategies might entail a centered framing layout. Choose the strategy that looks the best and uses material most efficiently.

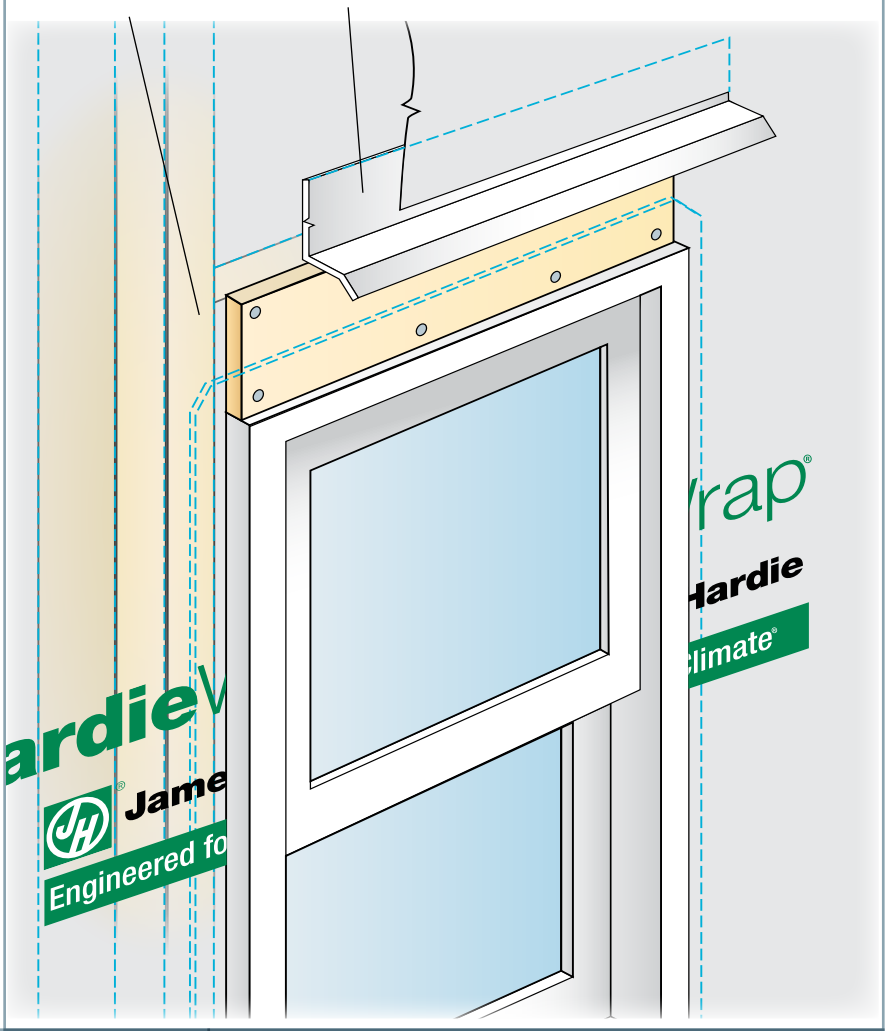


WINDOWS, DOORS, AND OTHER WALL PENETRATIONS

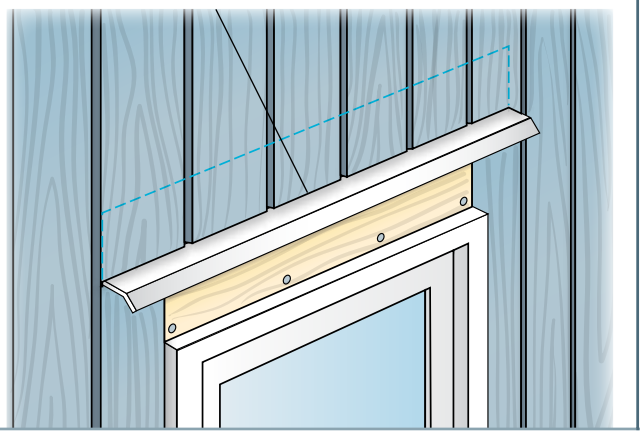
In panel installations, trim is typically overlaid on top of the panel. Special attention needs to be paid to trim flashing at the tops of openings. Below is one method for properly flashing trim in a panel application:

1. After installing the window, cut and install a ¼ in thick shim above the window. The shim should be the same width as the trim, and it should be as long as the width of the window.
2. Over the shim, install flashing wide enough to cover thickness of the trim and long enough to cover the trim head piece.
3. Install the panel to the window and around the shim taking care not to damage the flashing and leaving a ¼ in gap between the panel and the horizontal part of the flashing.
4. Install the trim around the window, slipping the head piece under the installed flashing.

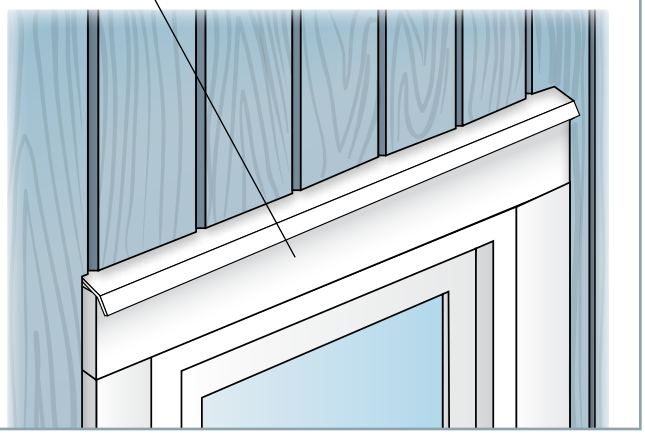
12.9



12.10



12.11



HardiePanel® Vertical Siding

SINGLE FAMILY INSTALLATION REQUIREMENTS

EFFECTIVE SEPTEMBER 2019

IMPORTANT: FAILURE TO FOLLOW JAMES HARDIE WRITTEN INSTALLATION INSTRUCTIONS AND COMPLY WITH APPLICABLE BUILDING CODES MAY VIOLATE LOCAL LAWS, AFFECT BUILDING ENVELOPE PERFORMANCE AND MAY AFFECT WARRANTY COVERAGE. FAILURE TO COMPLY WITH ALL HEALTH AND SAFETY REGULATIONS WHEN CUTTING AND INSTALLING THIS PRODUCT MAY RESULT IN PERSONAL INJURY. BEFORE INSTALLATION, CONFIRM YOU ARE USING THE CORRECT HARDIEZONE® PRODUCT INSTRUCTIONS BY VISITING HARDIEZONE.COM OR CALL 1-866-942-7343 (866-9-HARDIE)

STORAGE & HANDLING:

Store flat and keep dry and covered prior to installation. Installing siding wet or saturated may result in shrinkage at butt joints. Carry planks on edge. Protect edges and corners from breakage. James Hardie is not responsible for damage caused by improper storage and handling of the product.

⚠ CUTTING INSTRUCTIONS

OUTDOORS

1. Position cutting station so that airflow blows dust away from the user and others near the cutting area.
2. Cut using one of the following methods:
   - a. Best: Circular saw equipped with a HardieBlade® saw blade and attached vacuum dust collection system. Shears (manual, pneumatic or electric) may also be used, not recommended for products thicker than 7/16 in.
   - b. Better: Circular saw equipped with a dust collection feature (e.g. Roan® saw) and a HardieBlade saw blade.
   - c. Good: Circular saw equipped with a HardieBlade saw blade.

INDOORS

DO NOT grind or cut with a power saw indoors. Cut using shears (manual, pneumatic or electric) or the score and snap method, not recommended for products thicker than 7/16 in.

- DO NOT dry sweep dust; use wet dust suppression or vacuum to collect dust.
- For maximum dust reduction, James Hardie recommends using the "Best" cutting practices. Always follow the equipment manufacturer's instructions for proper operation.
- For best performance when cutting with a circular saw, James Hardie recommends using HardieBlade® saw blades.
- Go to jameshardiepros.com for additional cutting and dust control recommendations.

IMPORTANT: The Occupational Safety and Health Administration (OSHA) regulates workplace exposure to silica dust. For construction sites, OSHA has deemed that cutting fiber cement with a circular saw having a blade diameter less than 8 inches and connected to a commercially available dust collection system per manufacturer's instructions results in exposures below the OSHA Permissible Exposure Limit (PEL) for respirable crystalline silica, without the need for additional respiratory protection.

If you are unsure about how to comply with OSHA silica dust regulations, consult a qualified industrial hygienist or safety professional, or contact your James Hardie technical sales representative for assistance. James Hardie makes no representation or warranty that adopting a particular cutting practice will assure your compliance with OSHA rules or other applicable laws and safety requirements.

GENERAL REQUIREMENTS:

- These instructions to be used for single family installations only. **For Commercial / Multi-Family installation requirements go to www.JamesHardieCommercial.com
- HardiePanel® vertical siding can be installed over braced wood or steel studs, 20 gauge (33 mils) minimum to 16 gauge (54 mils) maximum, spaced a maximum of 24 in o.c. or directly to minimum 7/16 in thick OSB sheathing. See General Fastening Requirements. Irregularities in framing and sheathing can mirror through the finished application. Correct irregularities before installing siding.
- Information on installing James Hardie products over non-nailable substrates (ex: gypsum, foam,etc.) can be located in JH Tech Bulletin 19 at www.jamehardie.com
- A water-resistive barrier is required in accordance with local building code requirements. The water-resistive barrier must be appropriately installed with penetration and junction flashing in accordance with local building code requirements. James Hardie will assume no responsibility for water infiltration. James Hardie does manufacture HardieWrap® Weather Barrier, a non-woven non-perforated housewrap[1], which complies with building code requirements.
- Adjacent finished grade must slope away from the building in accordance with local building codes - typically a minimum of 6 in. in the first 10 ft.
- Do not use HardiePanel lap siding in Fascia or Trim applications.
- Do not install James Hardie products, such that they may remain in contact with standing water.
- HardiePanel vertical siding may be installed on flat vertical wall applications only.
- For larger projects, including commercial and multi-family projects, where the span of the wall is significant in length, the designer and/or architect should take into consideration the coefficient of thermal expansion and moisture movement of the product in their design. These values can be found in the Technical Bulletin "Expansion Characteristics of James Hardie® Siding Products" at www.jameshardie.com.
- James Hardie Building Products provides installation /wind load information for buildings with a maximum mean roof height of 85 feet. For information on installations above 60 feet, please contact JH technical support.
- Minimum standard panel design size is 12" x 16". Note:Panels may be notched and cut to size to fit between windows, doors, corners, etc.

Figure 1

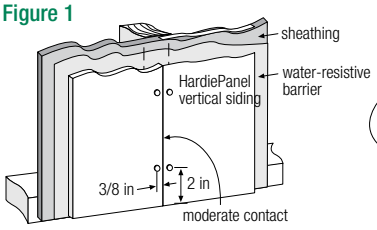
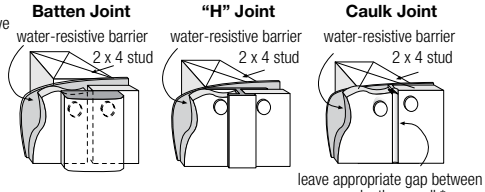


Figure 2

(Caulking Joints is not applicable to ColorPlus® Finish)



*Apply caulk in accordance with caulk manufacturer's written application instructions.
**James Hardie recommends installing a rainscreen (an air gap) between the HardiePanel siding and the water-resistive barrier as a best practice.
James Hardie recommends that you consult your design professional if you have questions regarding the use of rainscreen on your single family project.
[1]For additional information on HardieWrap™ Weather Barrier, consult James Hardie at 1-866-4Hardie or www.hardiewrap.com

INSTALLATION:

Fastener

Position fasteners 3/8 in from panel edges and no closer than 2 in away from corners. Do not nail into corners.

- HardiePanel vertical siding must be joined on stud.
- Double stud may be required to maintain minimum edge nailing distances.
- When screws are used to attach panels to steel studs/furring, the screws shall have wing tips. If screws do not have wing tips, then pre-drilling is required. (Not applicable when using pins) Follow chart below for pre-drilling:

SCREW	PRE-DRILL	HEAD DIAMETER
No. 8	7/32 in	Min 0.323 in
No. 10	1/4 in	Min 0.323 in

Joint Treatment

- Vertical Joints - Install panels in moderate contact (fig. 1), alternatively joints may also be covered with battens, PVC or metal jointers or caulked (Not applicable to ColorPlus® Finish) (fig. 2).
- Horizontal Joints - Provide Z-flashing at all horizontal joints (fig. 3).

Figure 3

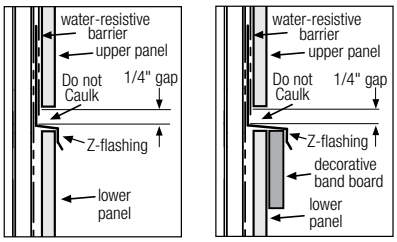
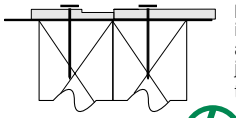


Figure 4



Recommendation: When installing Sierra 8, provide a double stud at panel joints to avoid nailing through grooves.

JamesHardie™

SMOOTH | CEDARMILL© | STUCCO | SIERRA 8

Visit jameshardiepros.com for the most recent version.

HS1237 P1/3 09/19

CLEARANCE AND FLASHING REQUIREMENTS

Figure 3
Roof to Wall

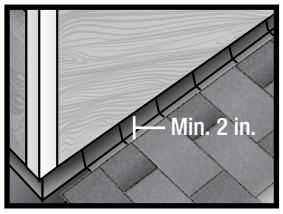


Figure 4
Horizontal Flashing

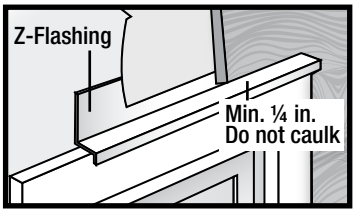


Figure 5
Kickout Flashing

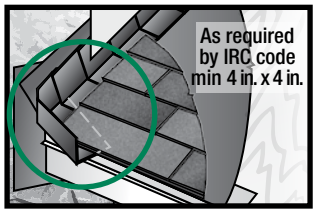


Figure 6
Slabs, Path, Steps to Siding

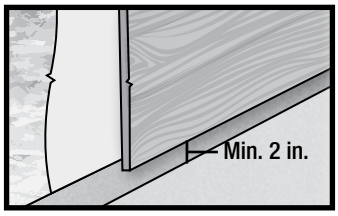


Figure 7
Deck to Wall

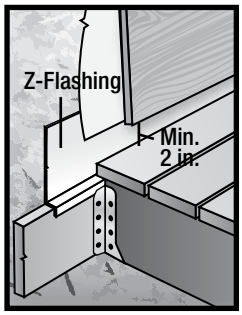


Figure 8
Ground to Siding

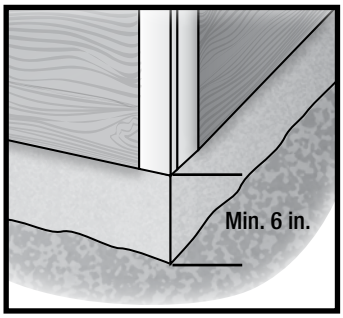


Figure 9
Gutter to Siding

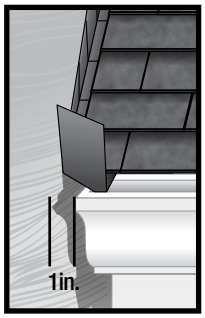


Figure 10
Sheltered Areas

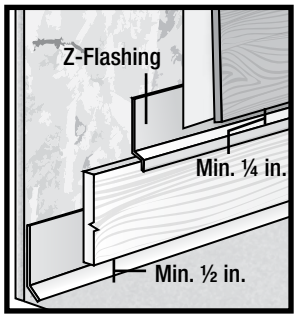


Figure 11
Mortar/Masonry

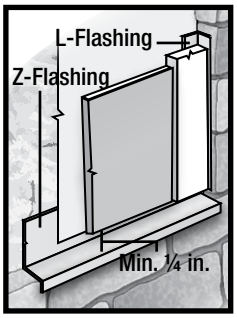


Figure 12
Drip Edge

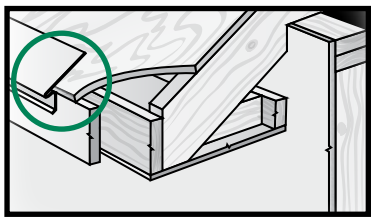


Figure 13
Block Penetration

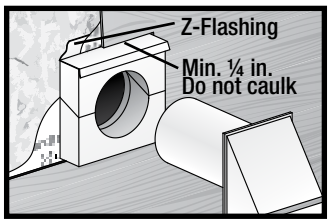
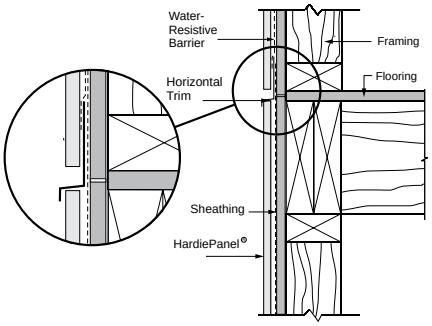


Figure 14
Valley/Shingle Extension

Do not bridge floors with HardiePanel® siding. Horizontal joints should always be created between floors, see below).



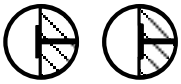
GENERAL FASTENING REQUIREMENTS

Refer to the applicable ESR report online to determine which fastener meets your wind load design criteria.

Fasteners must be corrosion resistant, galvanized, or stainless steel. Electro-galvanized are acceptable but may exhibit premature corrosion. James Hardie recommends the use of quality, hot-dipped galvanized nails. James Hardie is not responsible for the corrosion resistance of fasteners. Stainless steel fasteners are recommended when installing James Hardie® products near the ocean, large bodies of water, or in very humid climates.

Manufacturers of ACQ and CA preservative-treated wood recommend spacer materials or other physical barriers to prevent direct contact of ACQ or CA preservative-treated wood and aluminum products. Fasteners used to attach HardieTrim Tabs to preservative-treated wood shall be of hot dipped zinc-coated galvanized steel or stainless steel and in accordance to 2009 IRC R317.3 or 2009 IBC 2304.9.5

- Consult applicable product evaluation or listing for correct fasteners type and placement to achieve specified design wind loads.
- NOTE: Published wind loads may not be applicable to all areas where Local Building Codes have specific jurisdiction. Consult James Hardie Technical Services if you are unsure of applicable compliance documentation.
- Drive fasteners perpendicular to siding and framing.
- Fastener heads should fit snug against siding (no air space).
- NOTE: Whenever a structural member is present, HardiePanel® should be fastened with even spacing to the structural member. The tables allowing direct to OSB or plywood should only be used when traditional framing is not available.



DO NOT

UNDER DRIVE

IF, THEN

WOOD FRAME	STEEL FRAME
	
HAMMER FLUSH	*REMOVE & REPLACE*

DO NOT

OVER DRIVE | SLANT

IF, THEN ADDITIONAL NAIL

FACE NAIL

COUNTERSINK & FILL

DO NOT USE

ALUMINUM FASTENERS

CLIPPED HEAD NAILS

STAPLES

PNEUMATIC FASTENING

James Hardie products can be hand nailed or fastened with a pneumatic tool. Pneumatic fastening is highly recommended. Set air pressure so that the fastener is driven snug with the surface of the siding. A flush mount attachment on the pneumatic tool is recommended. This will help control the depth the nail is driven. If setting the nail depth proves difficult, choose a setting that under drives the nail. (Drive under driven nails snug with a smooth faced hammer - Does not apply for installation to steel framing).

CUT EDGE TREATMENT

Caulk, paint or prime all field cut edges. James Hardie touch-up kits are required to touch-up ColorPlus products.

CAULKING

For best results use an Elastomeric Joint Sealant complying with ASTM C920 Grade NS, Class 25 or higher or a Latex Joint Sealant complying with ASTM C834. Caulking/Sealant must be applied in accordance with the caulking/sealant manufacturer's written instructions. **Note: some caulking manufacturers do not allow "tooling".**

PAINTING

DO NOT use stain, oil/alkyd base paint, or powder coating on James Hardie® products. James Hardie products must be painted within 180 days for primed product and 90 days for unprimed. 100% acrylic topcoats are recommended. Do not paint when wet. For application rates refer to paint manufacturers specifications. Back-rolling is recommended if the siding is sprayed.

PAINTING JAMES HARDIE® SIDING AND TRIM PRODUCTS WITH COLORPLUS® TECHNOLOGY

When repainting ColorPlus products, James Hardie recommends the following regarding surface preparation and topcoat application:

- Ensure the surface is clean, dry, and free of any dust, dirt, or mildew
- Repriming is normally not necessary
- 100% acrylic topcoats are recommended
- DO NOT use stain, oil/alkyd base paint, or powder coating on James Hardie® Products.
- Apply finish coat in accordance with paint manufacturers written instructions regarding coverage, application methods, and application temperature
- DO NOT caulk nail heads when using ColorPlus products, refer to the ColorPlus touch-up section

COLORPLUS® TECHNOLOGY CAULKING, TOUCH-UP & LAMINATE

- Care should be taken when handling and cutting James Hardie ColorPlus® products. During installation use a wet soft cloth or soft brush to gently wipe off any residue or construction dust left on the product, then rinse with a garden hose.
- Touch up nicks, scrapes and nail heads using the ColorPlus® Technology touch-up applicator. Touch-up should be used sparingly. If large areas require touch-up, replace the damaged area with a new piece of siding with ColorPlus® Technology.
- Laminate sheet must be removed immediately after installation of each course.
- Terminate non-factory cut edges into trim where possible, and caulk. Color matchedcaulks are available from your ColorPlus® product dealer.
- Treat all other non-factory cut edges using the ColorPlus Technology edge coaters, available from your ColorPlus product dealer.

Note: James Hardie does not warrant the usage of third party touch-up or paints used as touch-up on James Hardie ColorPlus products.

Problems with appearance or performance arising from use of third party touch-up paints or paints used as touch-up that are not James Hardie touch-up will not be covered under the James Hardie ColorPlus Limited Finish Warranty.

HS1237 P3/3 09/19

SILICA WARNING

DANGER: May cause cancer if dust from product is inhaled. Causes damage to lungs and respiratory system through prolonged or repeated inhalation of dust from product. Refer to the current product Safety Data Sheet before use. The hazard associated with fiber cement arises from crystalline silica present in the dust generated by activities such as cutting, machining, drilling, routing, sawing, crushing, or otherwise abrading fiber cement, and when cleaning up, disposing of or moving the dust. When doing any of these activities in a manner that generates dust you must (1) comply with the OSHA standard for silica dust and/or other applicable law, (2) follow James Hardie cutting instructions to reduce or limit the release of dust; (3) warn others in the area to avoid breathing the dust; (4) when using mechanical saw or high speed cutting tools, work outdoors and use dust collection equipment; and (5) if no other dust controls are available, wear a dust mask or respirator that meets NIOSH requirements (e.g. N-95 dust mask). During clean-up, use a well maintained vacuum and filter appropriate for capturing fine (respirable) dust or use wet clean-up methods - never dry sweep.

WARNING: This product can expose you to chemicals including respirable crystalline silica, which is known to the State of California to cause cancer. For more information go to P65Warnings.ca.gov.

RECOGNITION: In accordance with ICC-ES Evaluation Report ESR-1844, HardiePanel® vertical siding is recognized as a suitable alternate to that specified in the 2006, 2009, 2012 & 2015 International Residential Code for One-and Two-Family Dwellings and the 2006, 2009, 2012 & 2015 International Building Code. HardiePanel vertical siding is also recognized for application in the following: City of Los Angeles Research Report No. 24862, State of Florida Product Approval FL#13223, Miami-Dade County Florida NOA No. 17-0406.06, U.S. Dept. of HUD Materials Release 1263f, Texas Department of Insurance Product Evaluation EC-23, City of New York MEA 223-93-M, and California DSA PA-019. These documents should also be consulted for additional information concerning the suitability of this product for specific applications.

Product warranties, safety information and additional installation information are available at jameshardiepros.com

JamesHardie™

IMPORTANT SAFETY AND PRODUCT INFORMATION – WINDOW

CAUTION: Many windows in older homes are painted with lead-based paint. Removal of old windows may disturb this paint. Proper precautions must be taken to minimize exposure to dust and debris. Consult state or local authorities and/or go to www.epa.gov/lead for more information.

WARNING: To ensure safety and security and help prevent property damage, including possible damage to your window or door, close and lock windows and doors any time they are not being used for venting on a nice day, and particularly during high winds or rain.

Important Notice

Because all construction must anticipate some water infiltration, it is important that the wall system be designed and constructed to properly manage moisture. Pella Corporation is not responsible for claims or damages caused by anticipated and unanticipated water infiltration; deficiencies in building design, construction and maintenance; failure to install Pella products in accordance with Pella's installation instructions; or the use of Pella products in wall systems which do not allow for proper management of moisture within the wall systems. The determination of the suitability of all building components, including the use of Pella products, as well as the design and installation of flashing and sealing systems are the responsibility of the Buyer or User, the architect, contractor, installer, or other construction professional and are not the responsibility of Pella.

Pella products should not be used in barrier wall systems which do not allow for proper management of moisture within the wall systems, such as barrier Exterior Insulation and Finish Systems (EIFS) (also known as synthetic stucco) or other non-water managed systems. Except in the states of California, New Mexico, Arizona, Nevada, Utah and Colorado, Pella makes no warranty of any kind on and assumes no responsibility for Pella windows and doors installed in barrier wall systems. In the states listed above, the installation of Pella Products in barrier wall or similar systems must be in accordance with Pella's installation instructions. Product modifications that are not approved by Pella Corporation will void the warranty.

Care and Maintenance

Care and maintenance information is available by contacting your local Pella retailer. This information is also available at **www.pella.com.**

Cleaning Instructions

GLASS: Remove any protective film and labels and clean the glass, using a soft, clean, grit-free cloth and mild soap or detergent. Be sure to remove all liquid by wiping dry or use a clean squeegee.

FACTORY FINISHED PRODUCT: Pella product that has been prefinished with stain or paint from the factory requires no additional finishing. Clean the surface with mild soap and water.

PELLA® ALUMINUM CLAD OR IMPERVIA FRAMES: The interior and exterior frame and sash are protected with a tough factory finish. Clean this surface with mild soap and water. Stubborn stains and deposits may be removed with mineral spirits. DO NOT use abrasives. DO NOT scrape or use tools that might damage the surface.

ENCOMPASS BY PELLA®, PELLA® 150 SERIES AND PELLA® 250 SERIES WINDOWS FRAMES: The vinyl frame may be cleaned using the same method as the glass. For stubborn dirt, a "non-abrasive" cleaner such as Bon-Ami® or Soft Scrub® may be used. Do not use solvents such as mineral spirits, toluene, xylene, naphtha or muriatic acid as they can dull the finish, soften the vinyl and/or cause failure of the insulated unit seal. Do not use Isopropyl Alcohol on laminated surfaces as it will damage the finish. Keep door tracks clear of dirt and debris. Keep weep holes open and clear of obstructions.

DO NOT use abrasives. DO NOT scrape or use tools that might damage the surface.

Notice: DO NOT use inappropriate solvents or brickwash or cleaning chemicals. If you do, permanent damage can result and the product failure, loss or damage would not be covered by the Limited Warranty.

Interior Finish (Wood Windows)

Paint or finish immediately after installation.

If products cannot be finished immediately, cover with clear plastic to protect from dirt, damage and moisture. Remove any construction residue before finishing. Sand all wood surfaces lightly with 180 grit or finer sandpaper. DO NOT use steel wool. BE CAREFUL NOT TO SCRATCH THE GLASS. Remove sanding dust. Pella products must be finished per the below instructions; failure to follow these instructions voids the Limited Warranty.

Note: To maintain proper product performance do not paint, finish or remove the weatherstripping, mohair dust pads, gaskets or vinyl parts. Air and water leakage will result if these parts are removed. After finishing, allow venting windows and doors to dry completely before closing them. If paint, stain or finish gets on the weatherstripping, wipe it off immediately with a damp cloth.

Window Cleaning and Prep Instructions for Unfinished or Primed windows: Dry wipe dust from windows gently. Examine window for possible smudges or fingerprints made from normal handling or construction. To remove smudges, lightly wipe surface with warm water. Scuff sand with light grade sand paper or abrasive pad (220 grit or higher). Rinse surface with warm water. Let window surfaces dry completely before applying finish.

Finish the windows as soon as possible after installation.

- On casement and awnings, it is optional to paint, stain or finish the vertical and horizontal sash edges.
- On single-hungs and double-hungs, do not paint, stain or finish the vertical sash edges, any finish on the vertical sash edges may cause the sash to stick; it is optional to paint, stain or finish the horizontal sash edges.

Pella Corporation is not responsible for interior paint and stain finish imperfections for any product that is not factory-applied by Pella Corporation. For additional information on finishing see the Pella Owner's Manual or go to **www.pella.com.**

The use of unapproved finishes, solvents or cleaning chemicals may cause adverse reactions with door materials. Pella will not be responsible for problems caused by the use of unapproved materials. If in doubt, contact your local retailer or representative.

Exterior Finish of Existing Frame (Pocket Replacement)

It is the responsibility of the homeowner, contractor or installer to ensure any exposed unfinished wood is covered or finished. Possible methods include, however are not limited to, covering with aluminum coil stock or painting.

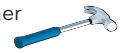
For Casement Hardware Installation go to: *www.installpella.com/trimaccessory/hardware*

FULL FRAME REMOVAL WHEN PREPARING TO INSTALL A NEW NAIL FIN WINDOW

This method of Full Frame Removal involves removing the sash and entire frame of the existing window from the wall. The resulting opening is the original rough opening. The existing window nailing fins are usually nailed to the studs in frame construction with siding, brick veneer or other exterior material applied over the fin on the outside. The interior may have a drywall return from the wall to the window frame.

CAUTION: Many windows in older homes are painted with lead-based paint. Removal of old windows may disturb this paint. Proper precautions must be taken to minimize exposure to dust and debris. Consult state or local authorities and/or go to ***www.epa.gov/lead*** for more information.

TOOLS REQUIRED:

- Utility knife 
- Phillips and Standard screwdrivers 
- Pry bar 
- Circular saw 
- Hammer 
- Putty knife 

REMEMBER TO USE APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT.

EXISTING WOOD BRICKMOULD FRAME WINDOW

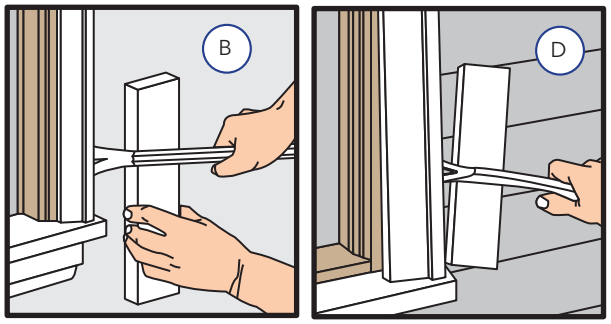
A. **Score paint or varnish** between the interior trim and the wall with a sharp utility knife.
NOTE: This will minimize the damage to the interior wall and trim.

B. **Remove the interior trim.** Using a pry bar and block of wood, remove the interior trim from all four sides of the window including the stool at the bottom of the window. If the interior trim is being reused, pull the nails out through the back side of the board with nipper pliers.

C. **Cut the exterior sealant line** between the exterior brickmould or trim and the exterior siding or wall cladding.

D. **Remove the exterior brickmould** or flat trim using a pry bar and block of wood.
Caution: Some windows may come out of the opening as the exterior trim is removed.

E. **Remove the window frame** using a pry bar if necessary.



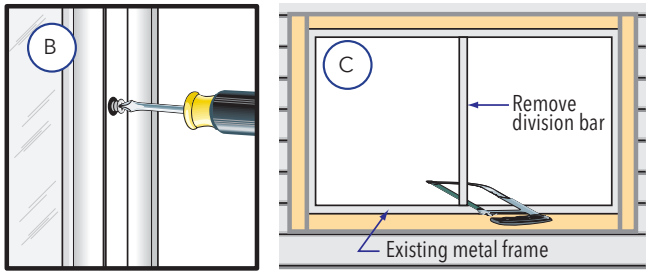
EXISTING NAIL FIN WINDOW REMOVAL

Sash Removal:

A. **Remove the vent sash and screen** from the old window.

B. **Remove the fixed sash.** In some cases, there are screws holding in the fixed sash. Remove the screws and take out the fixed sash.
NOTE: There may be a need to break the caulking free from around the fixed sash before it can be removed.

C. **Remove the division bar** by unscrewing the fasteners holding it to the frame. If the screws are not accessible, then use a hacksaw to cut the division bar off at the head and sill flush with the old window frame.

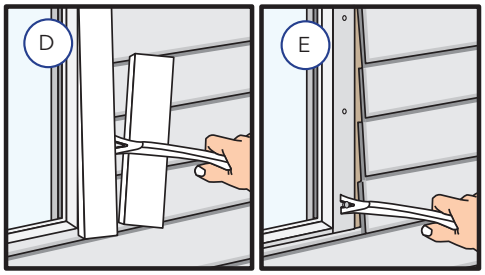


WINDOW WITH EXTERIOR TRIM

D. **Remove the existing exterior trim** (if applicable). Use a block of wood to protect the exterior wall material. Use a pry bar to remove the existing exterior trim.

E. **Remove the nails or screws** attaching the window nailing fin to the wall.

F. **Remove the window** from the opening.



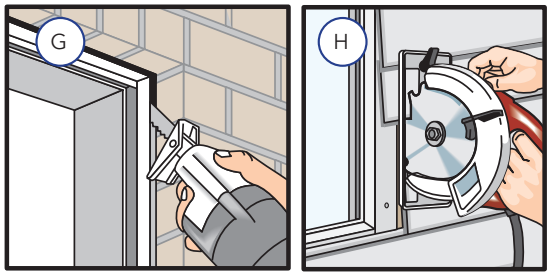
WINDOW WITH NO EXTERIOR TRIM

G. **Use a reciprocating saw to cut through sealant line and the nailing fin.**

OR

H. **Remove siding or cut back the siding** a minimum of 3" or far enough to expose the nailing fin. Remove the fasteners attaching the window to the wall.
NOTE: When cutting back the siding, set the saw blade depth 1/8" less than the thickness of the siding. Break the cut ends of the siding off after sawing. DO NOT cut through the existing building wrap.

I. **Remove the window from the wall.**



Consult with local providers and authorities to recycle or properly dispose of old window components.

PREPARING FOR NAIL FIN WINDOW INSTALLATION

YOU WILL NEED TO SUPPLY:

- Moisture resistant shims/spacers 
- Fasteners (see nail fin anchor instructions and tables at the end of this booklet)
- Closed cell foam backer rod/sealant backer 
- Pella® SmartFlash™ foil backed butyl window and door flashing tape or equivalent 
- Low expansion, low pressure polyurethane insulating window and door foam sealant. DO NOT use high pressure or latex foams. 

- Pella Window and Door Installation Sealant or equivalent high quality, multi-purpose sealant 

TOOLS REQUIRED:

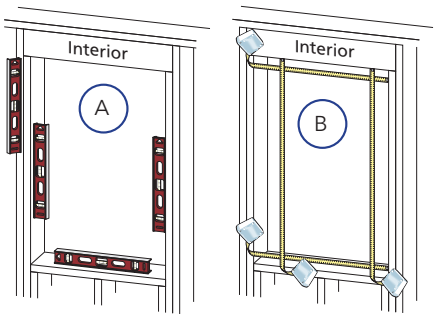
- Tape measure 
- Level 
- Square 
- Hammer 
- Stapler 
- Scissors or utility knife 
- Small flat blade screwdriver 
- Sealant Gun 
- Screw Gun with a Phillips Driver bit
- Drill with 1/8", 5/32", 3/16" and 3/8" drill bits 
- 1/8" Allen wrench 

Other construction materials may be required. Read and understand the instructions and inspect the wall conditions before you begin.

INSTALLATION WILL REQUIRE (2) OR MORE PERSONS FOR SAFETY REASONS.

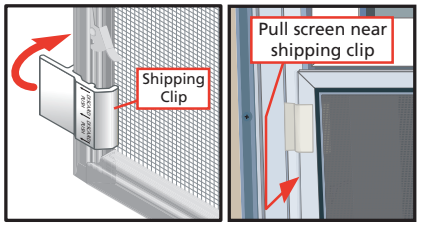
Store windows in upright position, out of direct sunlight.

ROUGH OPENING VERIFICATION

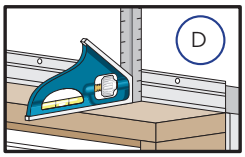


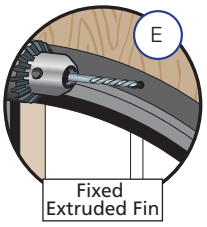
A. **Confirm the opening is plumb and level.**
   NOTE: It is critical the bottom is level and it does not slope to the interior.
B. **Remove dirt, oil or debris from the opening and surrounding wall surfaces.**
C. **Confirm the window will fit the opening.** Measure all four sides of the opening to make sure it is 1/2" to 3/4" larger than the window in both width and height. On larger openings measure the width and height in several places to ensure the header or studs are not bowed.
   NOTE: 1-1/2" or more of solid wood blocking is typically required around the perimeter of the opening. Fix any problems with the rough opening before proceeding.
   NOTE: For product with Flat Casing, measure all four sides of the opening to make sure it is 1-1/2'' to 1-3/4'' larger than the window in both width and height.
D. **For continuous exterior insulation panels up to 1" thick**, utilize standard installation methods. For insulating panels 1.5" to 2" thick, Rough Opening Support Brackets or solid wood blocking is required.

PREPARE THE WINDOW FOR INSTALLATION

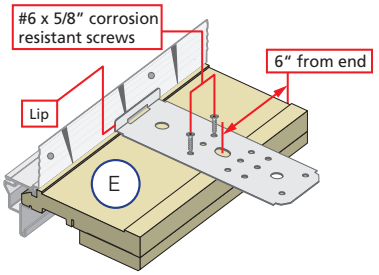


A. **Remove plastic wrap and cardboard packaging from window.** DO NOT cut checkrail bands (if present) or remove plastic or foam shipping spacers located between the window sash and frame. DO NOT open the window until it is securely fastened.
B. **Inspect the product for any damage** such as cracks, dents or scratches. DO NOT install damaged windows.
C. **Remove screens and hardware (if necessary).** Label them and set them aside in a protected area.
   Windows with Half Screens: From the exterior, pull one side of the screen near the shipping clips until the clips disengage from the frame. Rotate the shipping clips toward the exterior of the screen until they snap free from the screen.
   Half screens of some vinyl windows can be removed from the interior.





D. **Fold out installation fin to 90° (units with fold up fin only).**
   Be careful not to remove or tear the fin corners.
   NOTE: If the fin is not at 90°, the window will not line up correctly on the interior.
E. **Units with painted head drip cap fin and no pre-punched holes:** Pre-drill holes through the fin (refer to the anchor page for spacing)
   Curved top units with flexible fins: Prepare the window frame for attachment by pilot drilling through the frame or securing installation clips (refer to the anchor page).
   Units with EnduraClad Exterior trim and narrow fins with NO pre-punched holes: Install clips or pre-drill holes for frame screws.
   See the anchor instruction pages at the end of this booklet.
   Additional preparation may be required for performance upgrade, impact-resistant products or to comply with local building code requirements.

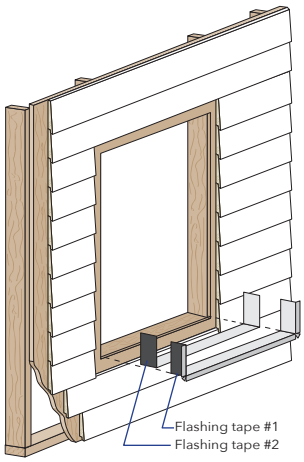


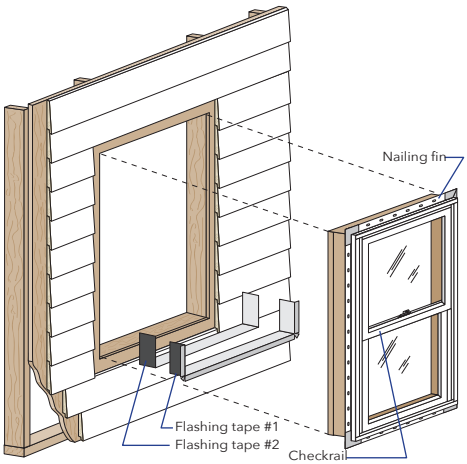
F. **Read the entire instruction before proceeding.**

These instructions were developed and tested for use with wall systems designed to manage water. These instructions are not to be used with any other construction methods or window frame types. Installation instructions for use with other construction methods or frame types may be obtained from Pella Corporation, your local Pella® retailer or www.installpella.com. Building designs, construction methods, building materials, and site conditions unique to your project may require an installation method different from these instructions and/or additional care. Determining the appropriate installation method is the responsibility of you, your architect, or construction professional.

FULL FRAME REPLACEMENT WITH NAIL FIN

INSTALLATION OF NEW NAIL FIN WINDOWS AFTER THE REMOVAL OF EXISTING WINDOWS AND THE SURROUNDING TRIM OR SIDING





1 PREPARE THE OPENING

Refer to the existing frame removal instruction and nail fin installation preparation sections at the beginning of this booklet.

A. **Repair the wall surface around the opening** (if necessary) by installing new blocking flush with the surface of the existing sheathing and/or repairing the existing building wrap with flashing tape.

B. **Cut 2 pieces of flashing tape** 12" longer than opening width.

C. **Apply sill flashing tape #1** extending far enough onto the wall surface to overlap the building wrap 1" or onto the top edge of the siding and 6" up each jamb.

D. **Cut 1" wide tabs at each corner** by tearing the foil 1/2" each way from corner.

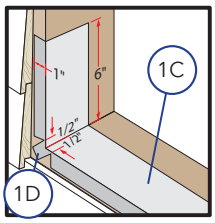
E. **Apply sill flashing tape #2** overlapping tape #1 by 1" minimum.

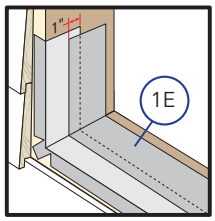
If existing building wrap is folded into the opening at the jambs, skip to step 1H.

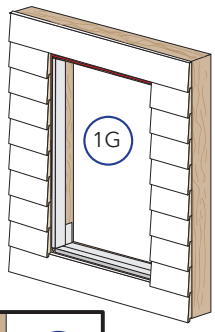
F. **Cut 2 pieces of flashing tape.** Make one equal to the height of each side of the opening.

G. **Apply one piece on each jamb starting 1"** from the exterior of the framing, over the edge of the sheathing and onto the surface of the sheathing.

NOTE: Press all flashing tape down firmly.

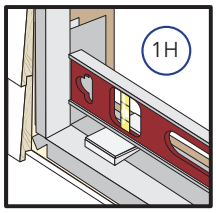






H. **Install and level sill shims.** Place 1" wide x 1/4" to 3/8" thick shims 1/2" from each side. Keep shims back from interior face of window. Place additional shims under each mullion and sliding window interlocker.

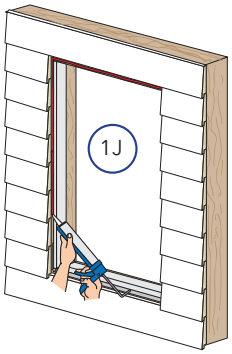
For vinyl windows, add shims so maximum spacing is 18".



I. **Attach shims to prevent movement after they are level.**

NOTE: Improper placement of shims may result in bowing the bottom of the window.

J. **Apply a continuous, 3/8" tall bead of sealant** 1/2" from the edge of the opening at the sides and top only. Do NOT apply sealant at the sill. This step may be omitted if there will be at least 3" of wall surface between the edge of the window frame and the siding after installation.

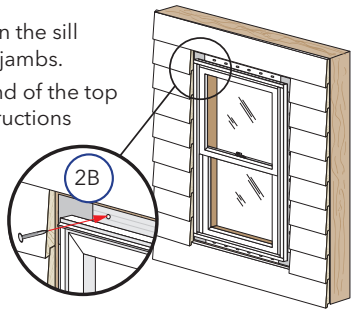


2 SETTING AND FASTENING THE WINDOW

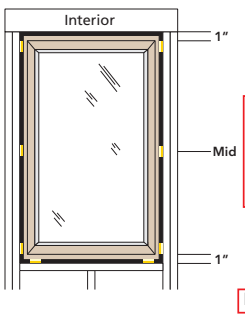
A. **Insert the window into the opening** on the sill spacers. Center the window between jambs.

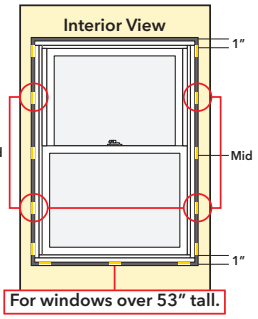
B. **Drive two fasteners,** one near each end of the top nailing fin. See the nail fin anchor instructions at the end of this booklet for fastener requirements.

C. **Plumb and square the window** using shims at the locations shown. Adjust shims to plumb and square the window. Keep shims 1/2" short of window frame depth.

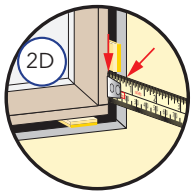


NOTE: DO NOT shim above the window. Additional shims are required at screw locations for large units and combinations. See the nail fin anchor instructions at the end of this booklet.

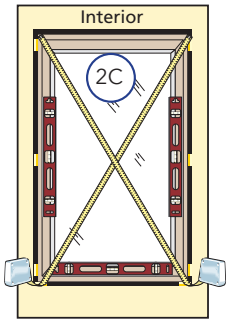




D. **Check the window placement** by measuring from the interior surface of the window frame or jamb extension to the interior surface of the wall for consistency. If the dimensions are not equal, confirm the fins are folded fully to 90° (if applicable).



E. **Drive two fasteners** one near each end of the sill nailing fin.



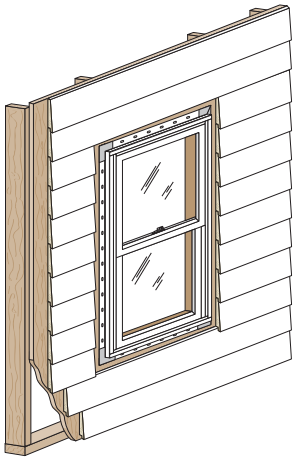
F. **Check window operation.**
Vent Awning and Casement: Refer to applicable hardware instructions. Unlock and open the window to remove the shipping spacers. Open and close the window to test for proper operation.

Double-Hung: Cut the checkrail bands (if applicable) and remove shipping spacers. Open, close and tilt the sashes to test for proper operation. Check for equal sash to frame reveal from top to bottom.

NOTE: Adjust shims to correct any issues with plumb, square, operation or reveal. If necessary, secure window frame to ensure window placement and sash to frame reveal is maintained.

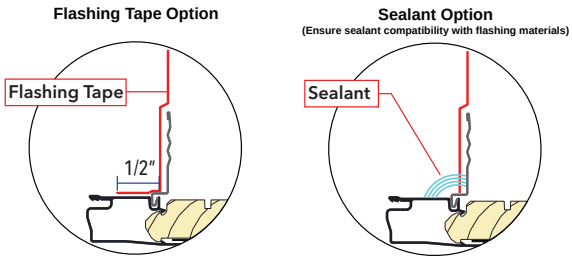
G. **Close and lock the window**.

H. **Finish driving fasteners** into the nailing fin. Refer to the nail fin anchor instructions at the end of this booklet.



3 SEALING THE TOP AND SIDE NAILING FINS

NOTE: For fold-up or slide-in fins, seal the fin to frame joint by either applying flashing tape 1/2" onto the frame, or sealing the joint with installation sealant after placing flashing tape.



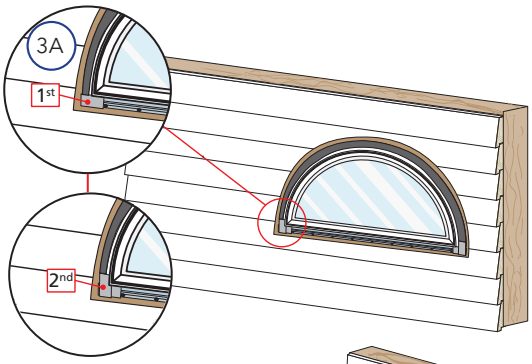
Curved and angle top units without pre-applied fin corners:

A. **Cut four 1-1/2" long pieces of flashing tape.**

Apply one to each end of sill fin to extend it 1-1/2" past each jamb.

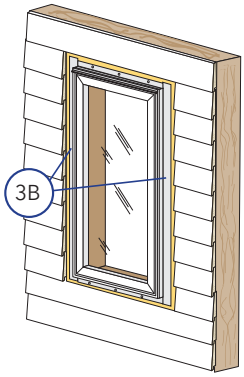
Apply one to the bottom end of each jamb fin beginning 1-1/2" from the end of the fin and lapping over the first piece of flashing tape.

If there is less than 3" between the window frame and the siding, skip to step 3C.



B. **Apply straight side flashing tape.** Cut two pieces of flashing tape 4" taller than straight sides. Apply tape over the fin and onto weather resistive barrier. Extend tape 2" above and below straight sides.

Angle top units: On the short side, do not allow the side tape to extend higher than what the top tape will cover.

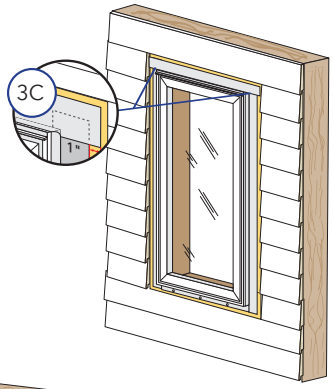


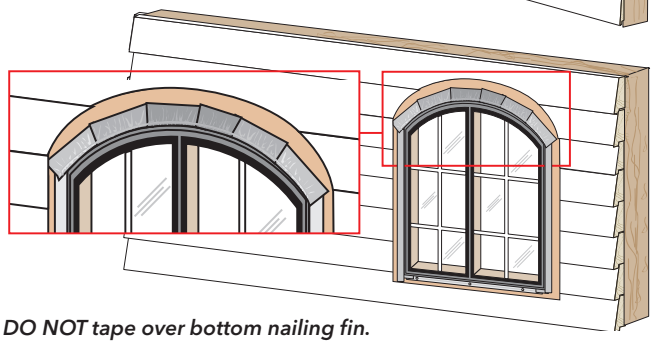
C. **Apply top flashing tape.**

Rectangular Units: Cut one piece of flashing tape to extend 1" past both side flashing tapes.

Curved Top Units: Using several short pieces, start taping from the sides of the window working towards the peak.

Cut each piece short enough so each piece overlaps the previous piece. Tighter curved frames will require shorter pieces of tape.





NOTE: DO NOT tape over bottom nailing fin.

NOTE: Press all flashing tape down firmly.

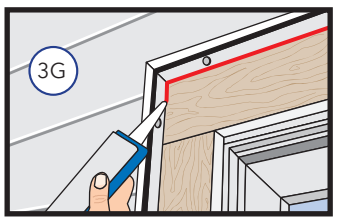
D. **Install head flashing if none exists,** properly incorporating it with the siding and building wrap according to applicable code requirements.

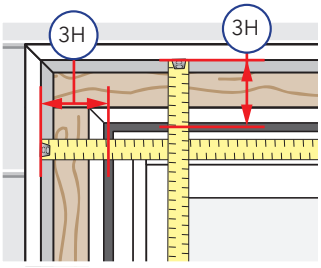
E. **Install blocking for frame expander** support or solid trim at this time, if applicable.

F. **Install interior sealant.** Refer to the interior sealant instructions at the end of this booklet.

G. **Install exterior sealant.** Refer to the exterior sealant instructions at the end of this booklet.

H. **Install frame expander and receptor** (if applicable). See separate instructions.

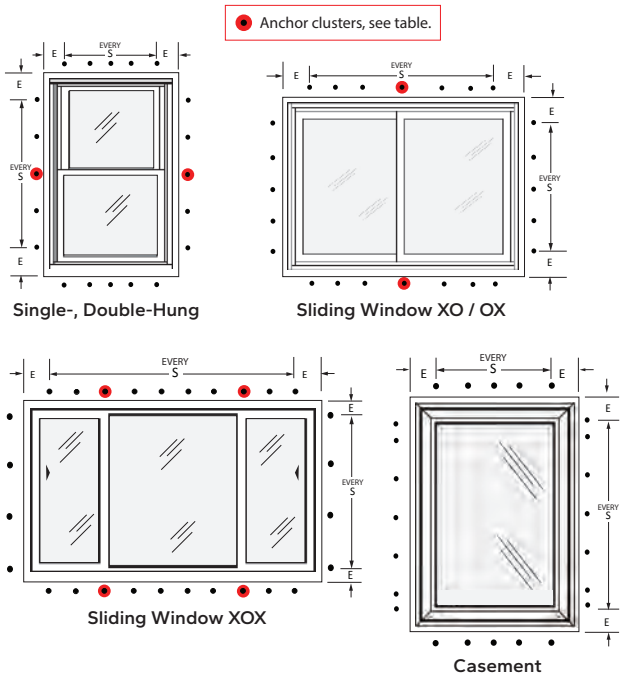




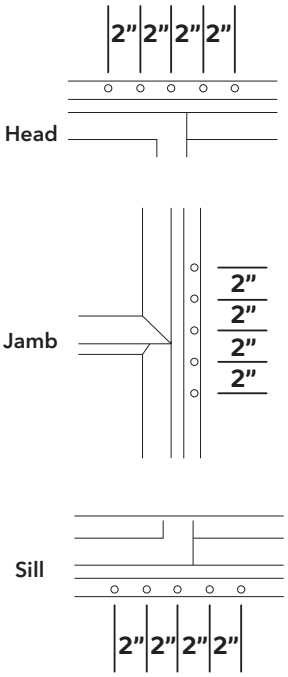
NAIL FIN WINDOW ANCHOR INSTRUCTIONS

Note: Standard performance only. Additional anchoring may be required for performance upgrade, impact-resistant products or to comply with local building code requirements.

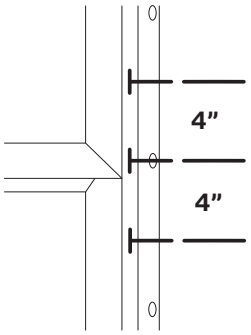
PLACE FASTENERS AT THE LOCATIONS INDICATED:



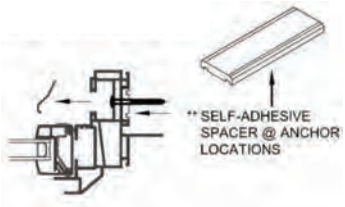
NAIL FIN ANCHOR CLUSTERS (IF APPLICABLE):

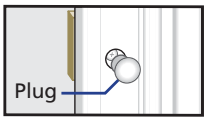


THROUGH FRAME ANCHOR CLUSTERS (PERFORMANCE UPGRADE DH ONLY):



3 anchors, 4" apart**





ENCOMPASS BY PELLA® / PELLA® 150 SERIES / PELLA® 250 SERIES WINDOWS

	Product	PG Rating	Edge Spacing (E)	Max. Intermediate Spacing (S)	Anchor Type: Wood *	Special Notes
ENCOMPASS, 150 SERIES	All Windows and Composites	≤35	Every other Pre-Punched Hole		2" 11 Ga. Roofing Nail or #8 x 2" screw	(5) fin anchors, 2-3" apart at ends of integral mullion (if applicable).
	Performance Upgrade SH	50	Every Pre-Punched Hole		#8 x 2" Screw with Washer	(1) additional fin anchor, center at ends of checkrail. (5) fin anchors, 2-3" apart at ends of integral mullion (if applicable).
	Performance Upgrade DH					(3) #10 x 2" screws through frame at check rail ends, 4" apart at ends of integral mulls (if applicable). **
250 SERIES	All Windows and Composites	≤35	Every other Pre-Punched Hole		1.5" 11 Ga. Roofing Nail or #8 x 2" Screw	Only DH >71.5 tall: (5) fin anchors, 2-3" apart at ends of checkrail.
	Performance Upgrade SH/SW	50	Every Pre-Punched Hole		#8 x 2" Screw with Washer	(5) fin anchors, 2-3" apart at ends of checkrails or interlockers.
	Performance Upgrade DH					(3) #10 x 2" screws through frame at checkrail ends, 4" apart. (5) fin anchors, 2-3" apart at ends of integral mulls (if applicable). **
	CM/AW/FX					(5) fin anchors, 2-3 apart at ends of integral mulls (if applicable)
	Windows with Flat Casing	≤20	Every other Pre-Punched Hole		1.5" 11 Ga. Roofing Nail or #8 x 2" Screw	(5) fin anchors, 2-3" apart at ends of all checkrails, interlockers, or integral mullions.
	Combinations	≤35	Every other Pre-Punched Hole			(5) fin anchors, 2-3" apart at ends of 1/2" Structural Mulls OR (4) #10 x 2" screws through 1" Structural Mullion end anchors.***
	Combinations	> 35	Every Pre-Punched Hole		#8 x 2" Screw with Washer	

IMPORTANT: For installations over continuous exterior insulation, the anchor length must be increased by the thickness of the insulating panels.

* For light gauge steel framing, use #10 self-drilling modified truss head screws with 3 thread min embedment.

** High Performance Frame Fillers (self-adhesive spacers) are required at each jamb anchor location.

NOTE: Do not over-drive fasteners, but allow for movement of building materials.

*** Refer to the supplemental instruction included with the unit for securing mullion end anchors (if applicable). End anchor quantity depended upon project design pressure requirements.

When screws are used in the nail fin and PG >35, a 1" fender washer is required at each screw anchor location.

Fastening requirements are applicable to J-channel frame types.

NAIL FIN WINDOW ANCHOR INSTRUCTIONS (CONTINUED)

Note: Standard performance only. Additional anchoring may be required for performance upgrade, impact-resistant products or to comply with local building code requirements.

PELLA® IMPERVIA, ARCHITECT SERIES® (850) AND PELLA® LIFESTYLE SERIES NAIL FIN ANCHOR SPACING INSTRUCTIONS

Units with Pella EnduraClad exterior trim with narrow fins and no pre-punched holes must be anchored with frame screws or installation clips. The fins are for flashing purposes only.

Product	PG Rating	Max Frame Width (inches)	Max Frame Height (inches)	Edge Spacing (E)	Max. Intermediate Spacing (S)	Anchor Type Wood *	Frame Anchors
Impervia Windows	All	Any	Any	3"	7"	2" 11 Ga. Roofing Nail	None
Impervia Direct Set	All	Any	Any	Every pre-punched hole		2" 11 Ga Roofing Nail	**>50 sq. ft.** requires screw through frame or clip anchors in addition to nail fin fasteners. Refer to block frame anchor instructions for further details. (See Illustration below.) **40-50 sq. ft.** see note below.
Architect Series & Lifestyle Series Clad Wood CM, AW or FX Windows	All	73"	73"	Every Pre-Punched		2" 11 Ga. Roofing Nail	None
	All	>73"	>73"	Every Pre-Punched Hole		2" 11 Ga. Roofing Nail	#10 x 3-1/2" Screws at 1/3 points along head and jambs
Architect Series & Lifestyle Series SH or DH Windows	All	Any	Any	Every Pre-Punched Hole		2" 11 Ga. Roofing Nail	None
Monumental DH	All	<54	<96	Every Pre-Punched Hole		1-1/2" 11 Ga. Roofing Nail	Refer to the next page for units larger than 54 x 96
Clad wood Direct Set	<PG60	Any	Any	Every Pre-Punched Hole		2" 11 Ga. Roofing Nail	See note below
Clad Wood Curved Windows with Flexible Fin	All	Any	Any	Every Pre-Punched Hole		(2) #6 x 1-1/2" screw per clip	Must be anchored with frame screws or installation clips. Refer to next page for anchoring instructions.
Clad Wood Curved Windows with Rigid Fin	All	Any	Any	6"	12"	2" 11 Ga. Roofing Nail	None

IMPORTANT: For installations over continuous exterior insulation, the anchor length must be increased by the thickness of the insulating panels.

* = For light gauge steel framing, use #10 self-drilling modified truss head screws.

NOTE: Do not over-drive fasteners in vinyl fins, but allow for movement of building materials.

Impervia Direct Set 40-50 Sq. Ft. use #10 x 3" screws required on longest edge spaced 6" from each end and on center. For integral mullion units, screws required 6" from the center of the mull on each side.

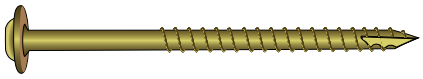
Refer to the supplemental instruction included with the unit for securing mullion end anchors (if applicable).

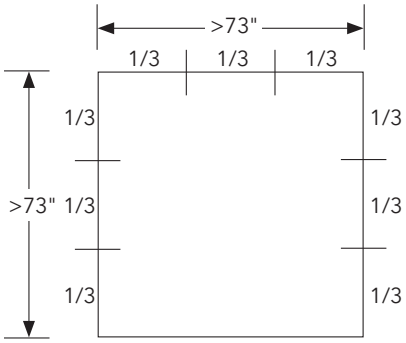
Clad wood direct set windows achieve PG50 up to 60" x 60" with standard anchoring. Larger sizes achieve PG40. Refer to advanced performance/impact-resistant instructions for other options.

EXAMPLE ANCHOR TYPES

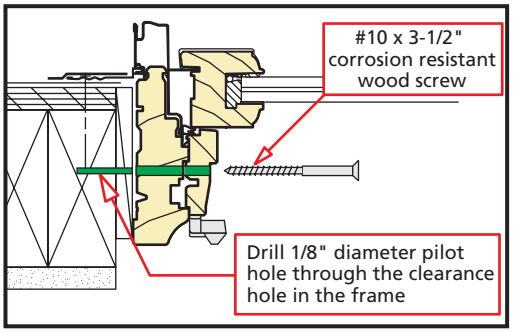
Roofing Nail

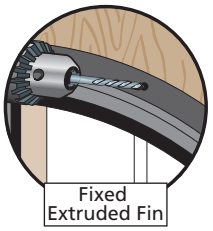
K-Lath/Modified Truss Head Screw





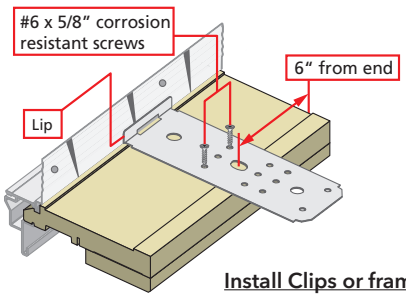
Screws not required at the sill.

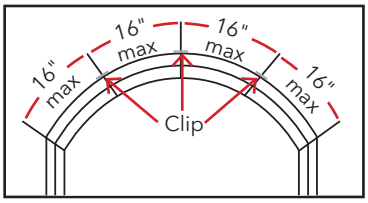


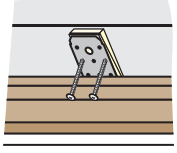


Drill 1/8" diameter Holes for windows with curved rigid fins

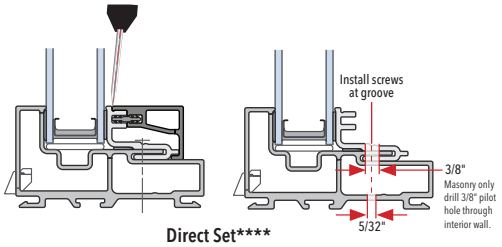
Add installation clips or frame anchor screws for vent and fixed clad-wood casements over 73".







Install Clips or frame screws for windows with non-structural curved flex fins.



Direct Set****

****Use putty knife; insert where indicated and slide cover to interior.

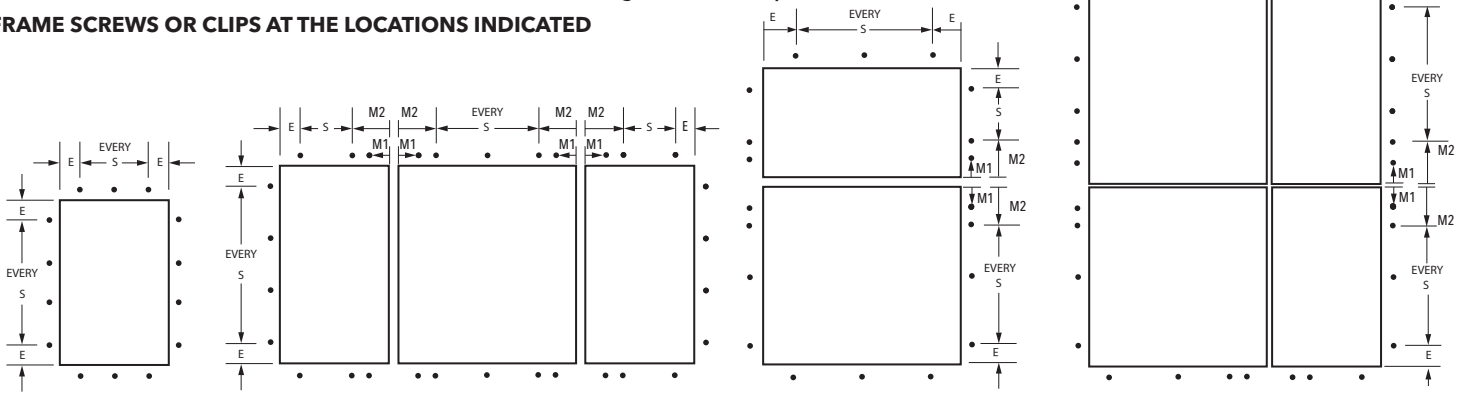
UNITS WITH WIDE PELLA® ENDURACLAD® EXTERIOR TRIM WITH NARROW FINS AND NO PRE-PUNCHED HOLES ANCHOR INSTRUCTIONS AND MONUMENTAL HUNG > 54" X 96"

Note: Standard performance only. Additional anchoring may be required for performance upgrade, impact-resistant products or to comply with local building code requirements.

Units with narrow fins and NO pre-punched holes must be anchored using frame screws or installation clips. These fins are for flashing purposes only.

Units installed over continuous exterior insulation must be anchored using installation clips

PLACE FRAME SCREWS OR CLIPS AT THE LOCATIONS INDICATED

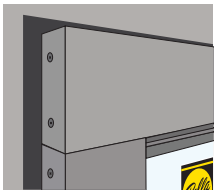


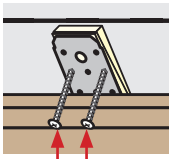
ARCHITECT SERIES® (850) AND PELLA® LIFESTYLE SERIES WINDOW ANCHOR SPACING INSTRUCTIONS

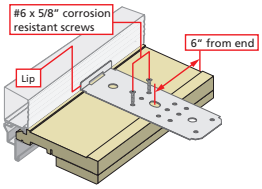
Product	Edge Spacing (E)	Max. Intermediate Spacing (S)	First Mullion Anchor (M1)	Second Mullion Anchor (M2)	Fastener	Special Notes
					Wood **	
Casement/ Awning	6"	16"	3"*	6"	#8 x 3" Finish Screw	
Double- or Single- Hung	6"	16"	3"*	6"	#8 x 3" Finish Screw	For windows with integrated Rolscreen® retractable screen, drive jamb screws at each factory pre-punched hole in the jamb liner. Add fasteners as necessary, driving the head past flush of the jamb liner. Avoid Rolscreen components in the head and sill.
Fixed Frame	6"	16"	3"*	6"	#8 x 3" Finish Screw	
Monumental DH > 54" x 96"	6" (head)	16" (head)	3" *	6" *	#8 x 3" Screw	Remove sashes and jamb liners. Drive 1 screw though each jamb liner support clip (top, bottom, checkrail and center of each sash). Drive 2 additional screws through the frame (or secure clips) 3" above and below the checkrail on each jamb. Drive additional screws through the frame (or secure clips) centered between each jamb liner support clip.

* M1 anchor required if design pressure exceeds 20 psf.

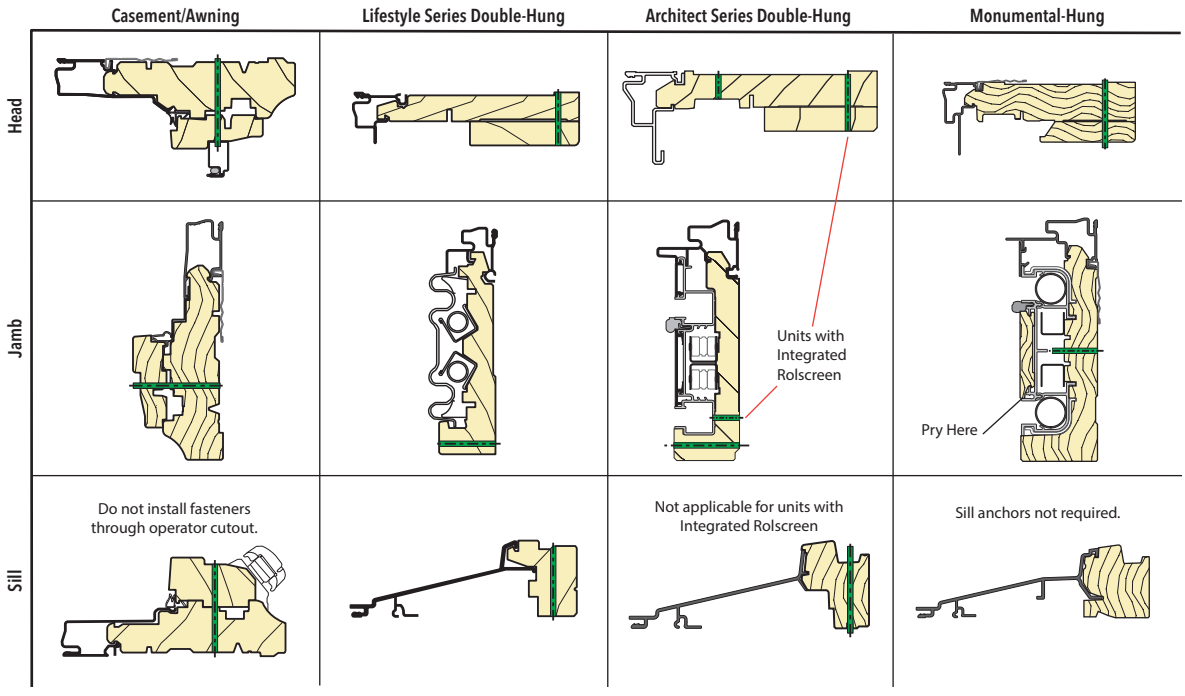
** For light gauge steel framing, use #10 self-drilling/self-tapping screws; For concrete or masonry, use 3/16" masonry screws with 1-1/4" minimum embedment.


Exterior trim with narrow fin

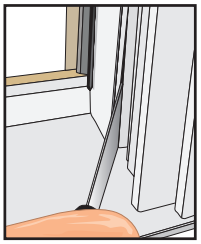

#6 x 1-1/2" screw

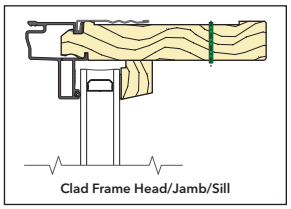


1/8" Pilot Hole Locations




Monumental Hung jamb liner support clip

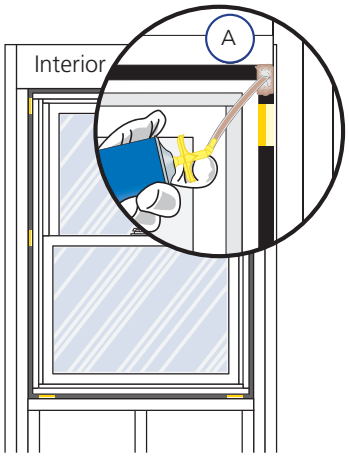

Pry off Monumental Double-Hung jamb liner


Clad Frame Head/Jamb/Sill

INTERIOR AND EXTERIOR SEALANT

Interior Sealant Instructions

CAUTION: Continuous backer rod (as necessary) and a high quality, low-odor interior sealant such as Pella Window and Door Installation Sealant (or equivalent) is recommended for commercial or high performance installations to create the continuous interior seal. Follow the directions on the cartridge. For standard performance or products with factory applied jamb extensions, use low pressure polyurethane insulating foams. Follow the directions on the can. Do not use high pressure or latex foams. Fiberglass batt or similar insulation is not recommended as it can absorb water and does not act as an air seal.



A. **Insert the nozzle or straw** between the rough opening and window frame from the interior. Use a pliers (if necessary) to compress the end of a straw tube to allow it to fit in tight openings.

B. **Place a 1" deep bead of foam approximately 1" from the interior of the frame** to allow for expansion. DO NOT fill the entire depth of the rough opening cavity.

NOTE: Apply foam between the frame and rough opening, NOT between jamb extensions and the rough opening.

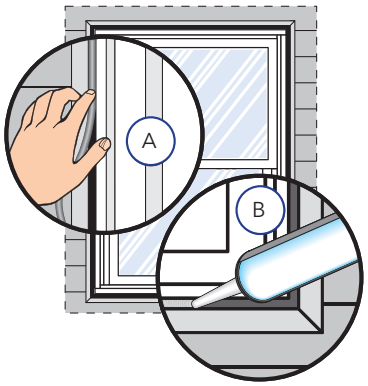
C. **Re-Check window operation** and remove remaining shipping spacers after foam installation. Excess foam may be removed with a serrated knife after it cures.

D. **To ensure a continuous interior seal,** apply sealant over or around any shims or clips interrupting the foam seal.

Exterior Sealant Instructions

CAUTION: Use a high quality, multi-purpose exterior sealant such as Pella Window and Door Installation Sealant. Follow the directions on the cartridge.

When applying siding, brick veneer , flashing, or other exterior finish materials, leave adequate space between the window frame and the material for sealant application.

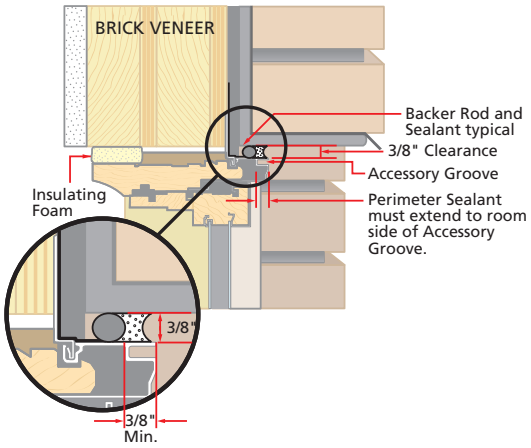


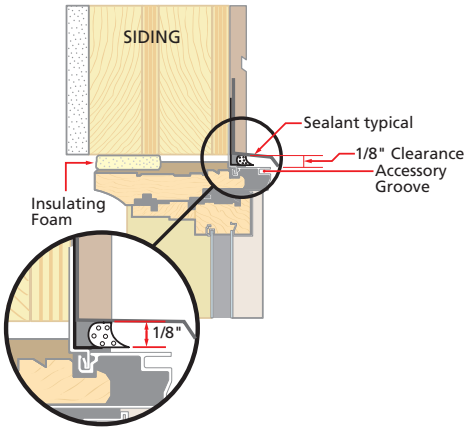
A. **Insert backer rod** 3/8" deep in the space around the window. Backer rod adds shape and controls the depth of the sealant line.

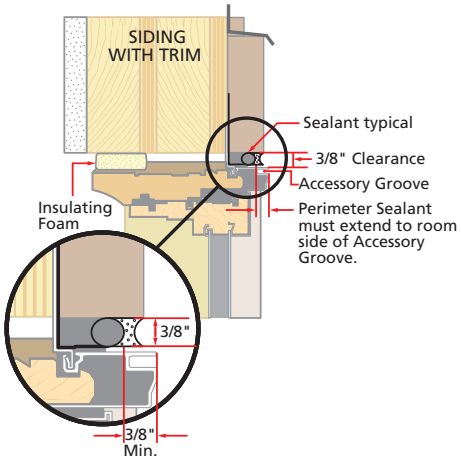
B. **Apply a continuous bead of sealant to the entire perimeter of the window.** Do not block weep holes or weep hoods with sealant.

C. **Shape, tool and clean excess sealant.** When finished, the sealant should be the shape of an hourglass.

NOTE: The siding details below apply to windows without a J-mould as part of the frame. The J-mould frame is only intended for vinyl or metal sidings where the siding is extended behind the J-mould portion of the frame. The J-mould should be removed and replaced with backer rod and sealant with all other siding or trim types.



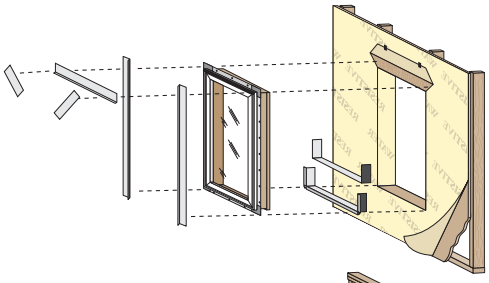




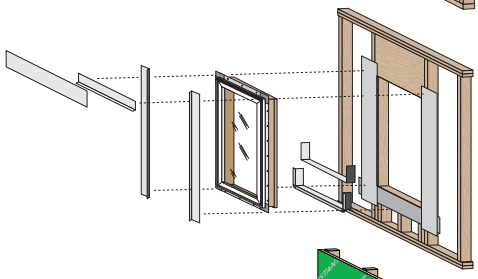
PELLA WINDOW INSTALLATION INSTRUCTIONS
NAIL FIN, NAIL FIN WITH J-CHANNEL AND NEW CONSTRUCTION ENDURACLAD EXTERIOR TRIM

THE FOLLOWING INSTALLATION METHODS ARE INCLUDED IN THIS BOOKLET:

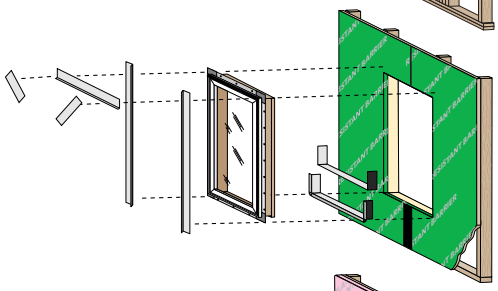
New Construction Installation After Building Wrap for Nail Fin Windows



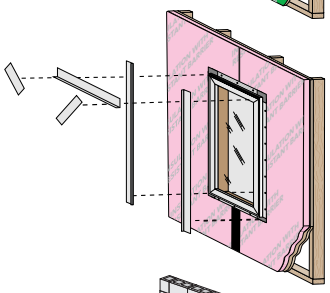
New Construction Installation Before Building Wrap for Nail Fin Windows



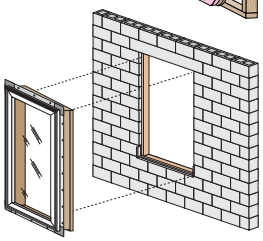
New Construction Installation with Water Resistant Sheathing for Nail Fin Windows



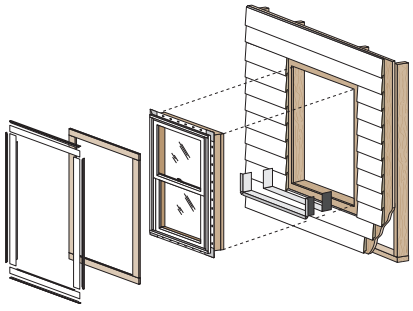
New Construction Installation with Nail Fin over 1-1/2" – 2" Continuous Exterior Insulation Using Rough Opening Support Brackets. (Patent Pending)



New Construction Installation in Masonry Construction for Nail Fin Windows



Full Frame Replacement after Brickmould/trim Removal or Siding cut-back for Nail Fin Windows



These instructions were developed and tested for use with wall systems designed to manage water. These instructions are not to be used with any other construction methods or window frame types. Installation instructions for use with other construction methods or frame types may be obtained from Pella Corporation, your local Pella® retailer or www.installpella.com. Building designs, construction methods, building materials, and site conditions unique to your project may require an installation method different from these instructions and/or additional care. Determining the appropriate installation method is the responsibility of you, your architect, or construction professional.

IMPORTANT SAFETY AND PRODUCT INFORMATION – WINDOW

CAUTION: Many windows in older homes are painted with lead-based paint. Removal of old windows may disturb this paint. Proper precautions must be taken to minimize exposure to dust and debris. Consult state or local authorities and/or go to www.epa.gov/lead for more information.

WARNING: To ensure safety and security and help prevent property damage, including possible damage to your window or door, close and lock windows and doors any time they are not being used for venting on a nice day, and particularly during high winds or rain.

Important Notice

Because all construction must anticipate some water infiltration, it is important that the wall system be designed and constructed to properly manage moisture. Pella Corporation is not responsible for claims or damages caused by anticipated and unanticipated water infiltration; deficiencies in building design, construction and maintenance; failure to install Pella products in accordance with Pella's installation instructions; or the use of Pella products in wall systems which do not allow for proper management of moisture within the wall systems. The determination of the suitability of all building components, including the use of Pella products, as well as the design and installation of flashing and sealing systems are the responsibility of the Buyer or User, the architect, contractor, installer, or other construction professional and are not the responsibility of Pella.

Pella products should not be used in barrier wall systems which do not allow for proper management of moisture within the wall systems, such as barrier Exterior Insulation and Finish Systems (EIFS) (also known as synthetic stucco) or other non-water managed systems. Except in the states of California, New Mexico, Arizona, Nevada, Utah and Colorado, Pella makes no warranty of any kind on and assumes no responsibility for Pella windows and doors installed in barrier wall systems. In the states listed above, the installation of Pella Products in barrier wall or similar systems must be in accordance with Pella's installation instructions. Product modifications that are not approved by Pella Corporation will void the warranty.

Care and Maintenance

Care and maintenance information is available by contacting your local Pella retailer. This information is also available at **www.pella.com.**

Cleaning Instructions

GLASS: Remove any protective film and labels and clean the glass, using a soft, clean, grit-free cloth and mild soap or detergent. Be sure to remove all liquid by wiping dry or use a clean squeegee.

FACTORY FINISHED PRODUCT: Pella product that has been prefinished with stain or paint from the factory requires no additional finishing. Clean the surface with mild soap and water.

PELLA® ALUMINUM CLAD OR IMPERVIA FRAMES: The interior and exterior frame and sash are protected with a tough factory finish. Clean this surface with mild soap and water. Stubborn stains and deposits may be removed with mineral spirits. DO NOT use abrasives. DO NOT scrape or use tools that might damage the surface.

ENCOMPASS BY PELLA®, PELLA® 150 SERIES AND PELLA® 250 SERIES WINDOWS FRAMES: The vinyl frame may be cleaned using the same method as the glass. For stubborn dirt, a "non-abrasive" cleaner such as Bon-Ami® or Soft Scrub® may be used. Do not use solvents such as mineral spirits, toluene, xylene, naphtha or muriatic acid as they can dull the finish, soften the vinyl and/or cause failure of the insulated unit seal. Do not use Isopropyl Alcohol on laminated surfaces as it will damage the finish. Keep door tracks clear of dirt and debris. Keep weep holes open and clear of obstructions.

DO NOT use abrasives. DO NOT scrape or use tools that might damage the surface.

Notice: DO NOT use inappropriate solvents or brickwash or cleaning chemicals. If you do, permanent damage can result and the product failure, loss or damage would not be covered by the Limited Warranty.

Interior Finish (Wood Windows)

Paint or finish immediately after installation.

If products cannot be finished immediately, cover with clear plastic to protect from dirt, damage and moisture. Remove any construction residue before finishing. Sand all wood surfaces lightly with 180 grit or finer sandpaper. DO NOT use steel wool. BE CAREFUL NOT TO SCRATCH THE GLASS. Remove sanding dust. Pella products must be finished per the below instructions; failure to follow these instructions voids the Limited Warranty.

Note: To maintain proper product performance do not paint, finish or remove the weatherstripping, mohair dust pads, gaskets or vinyl parts. Air and water leakage will result if these parts are removed. After finishing, allow venting windows and doors to dry completely before closing them. If paint, stain or finish gets on the weatherstripping, wipe it off immediately with a damp cloth.

Window Cleaning and Prep Instructions for Unfinished or Primed windows: Dry wipe dust from windows gently. Examine window for possible smudges or fingerprints made from normal handling or construction. To remove smudges, lightly wipe surface with warm water. Scuff sand with light grade sand paper or abrasive pad (220 grit or higher). Rinse surface with warm water. Let window surfaces dry completely before applying finish.

Finish the windows as soon as possible after installation.

- On casement and awnings, it is optional to paint, stain or finish the vertical and horizontal sash edges.
- On single-hungs and double-hungs, do not paint, stain or finish the vertical sash edges, any finish on the vertical sash edges may cause the sash to stick; it is optional to paint, stain or finish the horizontal sash edges.

Pella Corporation is not responsible for interior paint and stain finish imperfections for any product that is not factory-applied by Pella Corporation. For additional information on finishing see the Pella Owner's Manual or go to **www.pella.com.**

The use of unapproved finishes, solvents or cleaning chemicals may cause adverse reactions with door materials. Pella will not be responsible for problems caused by the use of unapproved materials. If in doubt, contact your local retailer or representative.

Exterior Finish of Existing Frame (Pocket Replacement)

It is the responsibility of the homeowner, contractor or installer to ensure any exposed unfinished wood is covered or finished. Possible methods include, however are not limited to, covering with aluminum coil stock or painting.

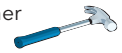
For Casement Hardware Installation go to: *www.installpella.com/trimaccessory/hardware*

FULL FRAME REMOVAL WHEN PREPARING TO INSTALL A NEW NAIL FIN WINDOW

This method of Full Frame Removal involves removing the sash and entire frame of the existing window from the wall. The resulting opening is the original rough opening. The existing window nailing fins are usually nailed to the studs in frame construction with siding, brick veneer or other exterior material applied over the fin on the outside. The interior may have a drywall return from the wall to the window frame.

CAUTION: Many windows in older homes are painted with lead-based paint. Removal of old windows may disturb this paint. Proper precautions must be taken to minimize exposure to dust and debris. Consult state or local authorities and/or go to ***www.epa.gov/lead*** for more information.

TOOLS REQUIRED:

- Utility knife 
- Phillips and Standard screwdrivers 
- Pry bar 
- Circular saw 
- Hammer 
- Putty knife 

REMEMBER TO USE APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT.

EXISTING WOOD BRICKMOULD FRAME WINDOW

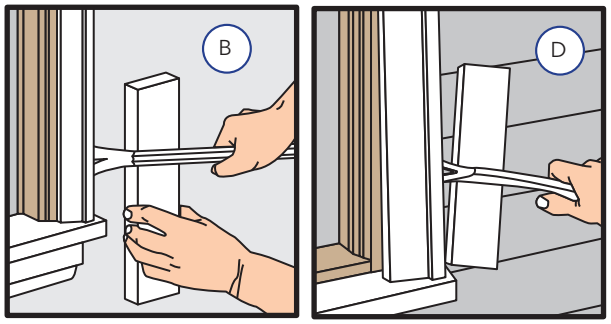
A. **Score paint or varnish** between the interior trim and the wall with a sharp utility knife.
NOTE: This will minimize the damage to the interior wall and trim.

B. **Remove the interior trim.** Using a pry bar and block of wood, remove the interior trim from all four sides of the window including the stool at the bottom of the window. If the interior trim is being reused, pull the nails out through the back side of the board with nipper pliers.

C. **Cut the exterior sealant line** between the exterior brickmould or trim and the exterior siding or wall cladding.

D. **Remove the exterior brickmould** or flat trim using a pry bar and block of wood.
Caution: Some windows may come out of the opening as the exterior trim is removed.

E. **Remove the window frame** using a pry bar if necessary.



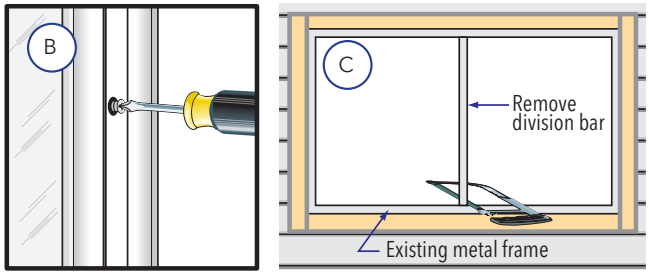
EXISTING NAIL FIN WINDOW REMOVAL

Sash Removal:

A. **Remove the vent sash and screen** from the old window.

B. **Remove the fixed sash.** In some cases, there are screws holding in the fixed sash. Remove the screws and take out the fixed sash.
NOTE: There may be a need to break the caulking free from around the fixed sash before it can be removed.

C. **Remove the division bar** by unscrewing the fasteners holding it to the frame. If the screws are not accessible, then use a hacksaw to cut the division bar off at the head and sill flush with the old window frame.

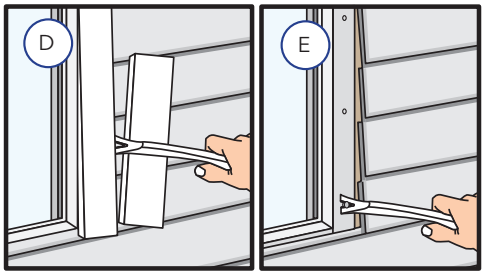


WINDOW WITH EXTERIOR TRIM

D. **Remove the existing exterior trim** (if applicable). Use a block of wood to protect the exterior wall material. Use a pry bar to remove the existing exterior trim.

E. **Remove the nails or screws** attaching the window nailing fin to the wall.

F. **Remove the window** from the opening.



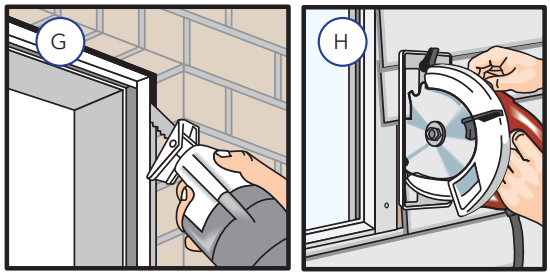
WINDOW WITH NO EXTERIOR TRIM

G. **Use a reciprocating saw to cut through sealant line and the nailing fin.**

OR

H. **Remove siding or cut back the siding** a minimum of 3" or far enough to expose the nailing fin. Remove the fasteners attaching the window to the wall.
NOTE: When cutting back the siding, set the saw blade depth 1/8" less than the thickness of the siding. Break the cut ends of the siding off after sawing. DO NOT cut through the existing building wrap.

I. **Remove the window from the wall.**



Consult with local providers and authorities to recycle or properly dispose of old window components.

PREPARING FOR NAIL FIN WINDOW INSTALLATION

YOU WILL NEED TO SUPPLY:

- Moisture resistant shims/spacers 
- Fasteners (see nail fin anchor instructions and tables at the end of this booklet)
- Closed cell foam backer rod/sealant backer 
- Pella® SmartFlash™ foil backed butyl window and door flashing tape or equivalent 
- Low expansion, low pressure polyurethane insulating window and door foam sealant. DO NOT use high pressure or latex foams. 

- Pella Window and Door Installation Sealant or equivalent high quality, multi-purpose sealant 

TOOLS REQUIRED:

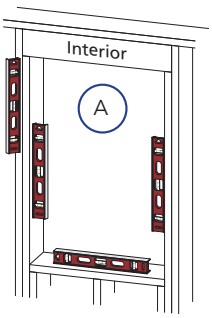
- Tape measure 
- Level 
- Square 
- Hammer 
- Stapler 
- Scissors or utility knife 
- Small flat blade screwdriver 
- Sealant Gun 
- Screw Gun with a Phillips Driver bit
- Drill with 1/8", 5/32", 3/16" and 3/8" drill bits 
- 1/8" Allen wrench 

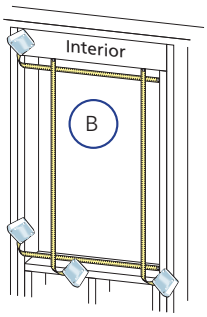
Other construction materials may be required. Read and understand the instructions and inspect the wall conditions before you begin.

INSTALLATION WILL REQUIRE (2) OR MORE PERSONS FOR SAFETY REASONS.

Store windows in upright position, out of direct sunlight.

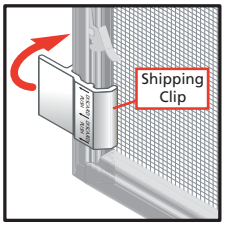
ROUGH OPENING VERIFICATION

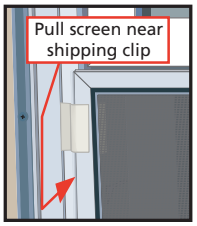




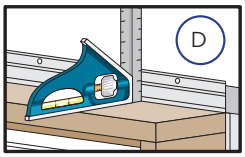
A. **Confirm the opening is plumb and level.**
   NOTE: It is critical the bottom is level and it does not slope to the interior.
B. **Remove dirt, oil or debris from the opening and surrounding wall surfaces.**
C. **Confirm the window will fit the opening.** Measure all four sides of the opening to make sure it is 1/2" to 3/4" larger than the window in both width and height. On larger openings measure the width and height in several places to ensure the header or studs are not bowed.
   NOTE: 1-1/2" or more of solid wood blocking is typically required around the perimeter of the opening. Fix any problems with the rough opening before proceeding.
   NOTE: For product with Flat Casing, measure all four sides of the opening to make sure it is 1-1/2'' to 1-3/4'' larger than the window in both width and height.
D. **For continuous exterior insulation panels up to 1" thick**, utilize standard installation methods. For insulating panels 1.5" to 2" thick, Rough Opening Support Brackets or solid wood blocking is required.

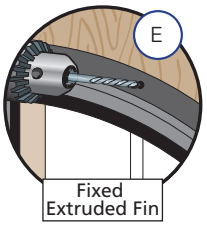
PREPARE THE WINDOW FOR INSTALLATION



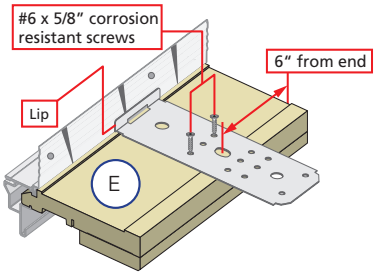


A. **Remove plastic wrap and cardboard packaging from window.** DO NOT cut checkrail bands (if present) or remove plastic or foam shipping spacers located between the window sash and frame. DO NOT open the window until it is securely fastened.
B. **Inspect the product for any damage** such as cracks, dents or scratches. DO NOT install damaged windows.
C. **Remove screens and hardware (if necessary).** Label them and set them aside in a protected area.
   Windows with Half Screens: From the exterior, pull one side of the screen near the shipping clips until the clips disengage from the frame. Rotate the shipping clips toward the exterior of the screen until they snap free from the screen.
   Half screens of some vinyl windows can be removed from the interior.





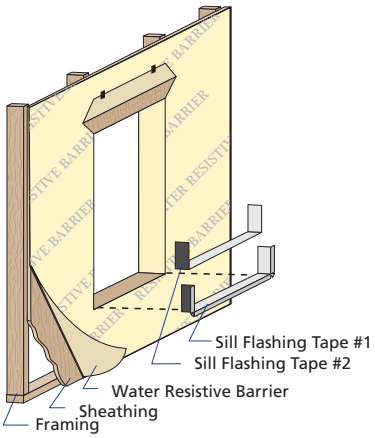
D. **Fold out installation fin to 90° (units with fold up fin only).**
   Be careful not to remove or tear the fin corners.
   NOTE: If the fin is not at 90°, the window will not line up correctly on the interior.
E. **Units with painted head drip cap fin and no pre-punched holes:** Pre-drill holes through the fin (refer to the anchor page for spacing)
   Curved top units with flexible fins: Prepare the window frame for attachment by pilot drilling through the frame or securing installation clips (refer to the anchor page).
   Units with EnduraClad Exterior trim and narrow fins with NO pre-punched holes: Install clips or pre-drill holes for frame screws.
   See the anchor instruction pages at the end of this booklet.
   Additional preparation may be required for performance upgrade, impact-resistant products or to comply with local building code requirements.

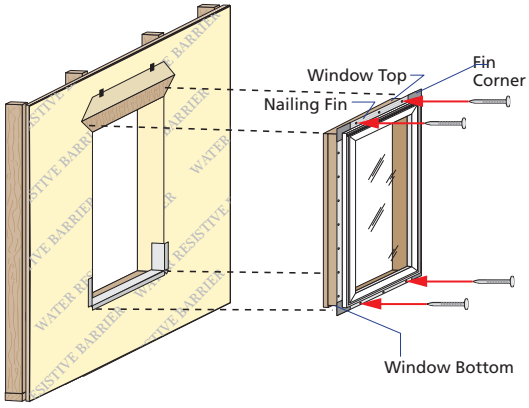


F. **Read the entire instruction before proceeding.**

These instructions were developed and tested for use with wall systems designed to manage water. These instructions are not to be used with any other construction methods or window frame types. Installation instructions for use with other construction methods or frame types may be obtained from Pella Corporation, your local Pella® retailer or www.installpella.com. Building designs, construction methods, building materials, and site conditions unique to your project may require an installation method different from these instructions and/or additional care. Determining the appropriate installation method is the responsibility of you, your architect, or construction professional.

NEW CONSTRUCTION INSTALLATION WITH NAIL FIN AFTER BUILDING WRAP

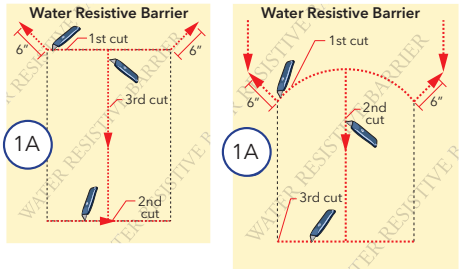




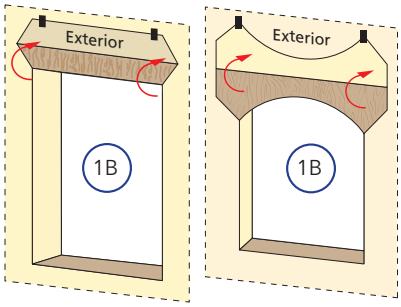
1 PREPARE THE OPENING

Refer to the nail fin installation preparation section at the beginning of this booklet.

A. **Cut the building wrap.** Refer to the diagram for other window shapes on the next page.



B. **Fold the building wrap** in at the jambs and staple it in place. Fold the top flap up and temporarily fasten with flashing tape.



C. **Cut 2 pieces of flashing tape** 12" longer than opening width.

D. **Apply sill flashing tape #1** at the sill extending 1" to the exterior and 6" up each jamb.

E. **Cut 1" wide tabs at each corner** by tearing the foil 1/2" each way from corner.

F. **Apply sill flashing tape #2** overlapping tape #1 by 1" minimum.

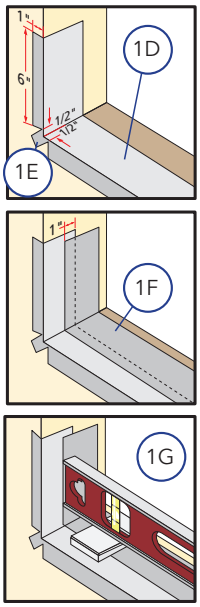
NOTE: Press all tape down firmly.

G. **Install and level sill shims.** Place 1" wide x 1/4" to 3/8" thick shims 1/2" from each side. Keep shims back 1/2" from interior face of window. Place additional shims under each mullion and sliding window interlocker.

For vinyl windows, add shims so maximum spacing is 18".

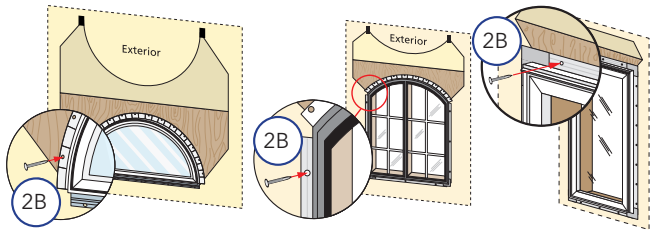
H. **Attach shims to prevent movement** after they are level.

NOTE: Improper placement of shims may result in bowing the bottom of the window.



2 SETTING AND FASTENING THE WINDOW

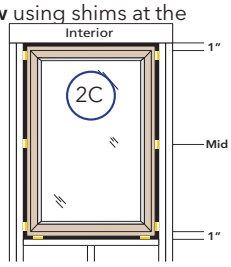
A. **Insert the window into the opening on the sill spacers.** Center the window between jambs.

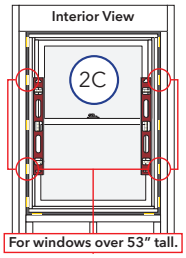


B. **Drive two fasteners,** one near each end of the top nailing fin. (See nail fin anchor instructions at the end of this booklet)

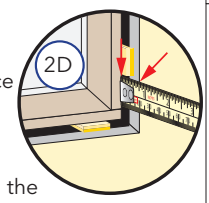
C. **Plumb and square the window** using shims at the locations shown. Adjust shims to plumb and square the window. Keep shims 1/2" short of window frame depth.

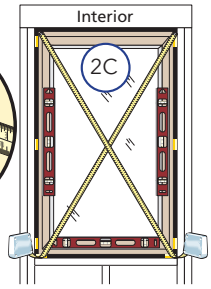
NOTE: DO NOT shim above the window. Additional shims are required at screw locations for large units and combinations. See the nail fin anchor instructions at the end of this booklet.





D. **Check the window placement by measuring** from the interior surface of the window frame or jamb extension to the interior surface of the wall for consistency. If the dimensions are not equal, confirm the fins are folded fully to 90° (if applicable).





E. **Drive two fasteners,** one near each end of the sill nailing fin.

F. **Check window operation.**

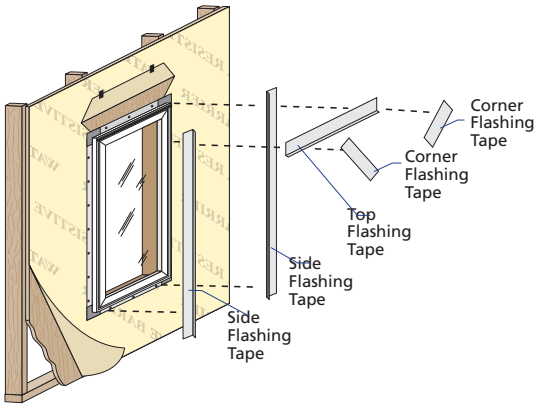
Vent Awning and Casement: Refer to applicable hardware instructions. Unlock and open the window to remove the shipping spacers. Open and close the window to test for proper operation.

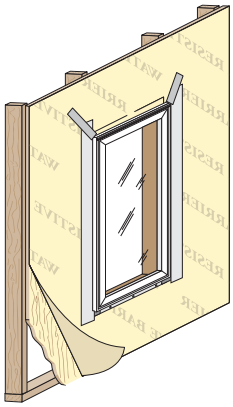
Double-Hung: Cut the checkrail bands (if applicable) and remove shipping spacers. Open, close and tilt the sashes to test for proper operation. Check for equal sash to frame reveal from top to bottom.

NOTE: Adjust shims to correct any issues with plumb, square, operation or reveal. If necessary, secure window frame to ensure window placement and sash to frame reveal is maintained.

G. **Close and lock the window.**

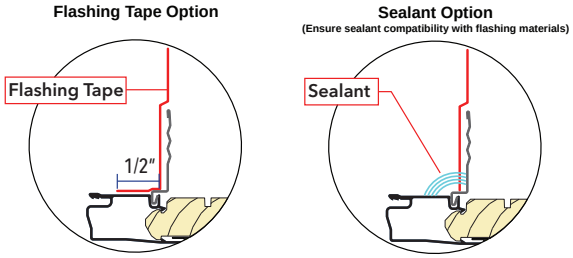
H. **Finish driving fasteners** into the nailing fin. Refer to the nail fin anchor instructions at the end of this booklet.





3 INTEGRATING WITH THE BUILDING WRAP

NOTE: For fold-up or slide-in fins, seal the fin to frame joint by either applying flashing tape 1/2" onto the frame, or sealing the joint with installation sealant after placing flashing tape.

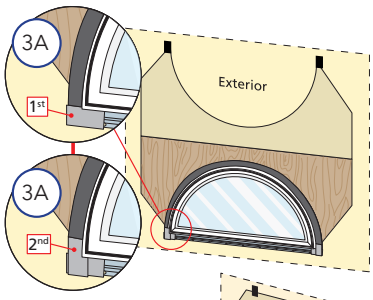


Curved and angle top units without pre-applied fin corners:

A. **Cut four 1-1/2" long pieces of flashing tape.**

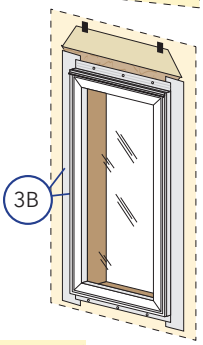
Apply one to each end of sill fin to extend it 1-1/2" past each jamb.

Apply one to the bottom end of each jamb fin beginning 1-1/2" from the end of the fin and lapping over the first piece of flashing tape.

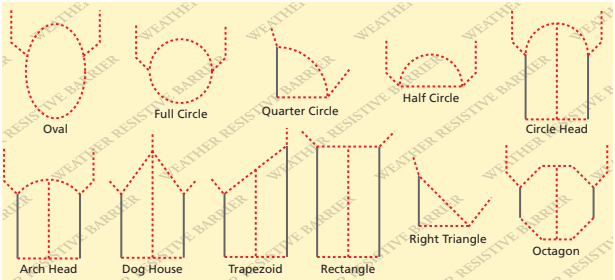


B. **Apply straight side flashing tape.** Cut two pieces of flashing tape 4" taller than straight sides. Apply tape over the fin and onto weather resistive barrier. Extend tape 2" above and below straight sides.

Angle top Units: On the short side, do not allow the side tape to extend higher than what the top tape will cover.

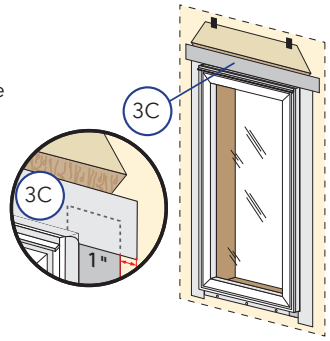


Building Wrap Cutting Patterns for Window Shapes:

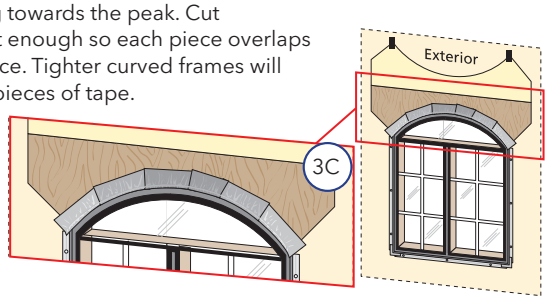


C. **Apply top flashing tape.**

Rectangular Units: Cut one piece of flashing tape to extend 1" past both side flashing tapes.



Curved Top Units: Using several short pieces, start taping from the sides of the window working towards the peak. Cut each piece short enough so each piece overlaps the previous piece. Tighter curved frames will require shorter pieces of tape.

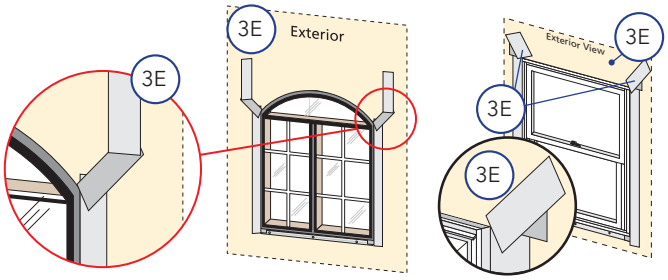


NOTE: DO NOT tape over bottom nailing fin.

D. **Fold down top flap** of weather resistive barrier.

E. **Apply flashing tape to top diagonal cuts.** Cut pieces of flashing tape at least 1" longer than each diagonal cut. Lap tape 1" past end of cut onto weather barrier. Overlap multiple pieces of tape by 1" when necessary.

NOTE: PRESS ALL FLASHING TAPE DOWN FIRMLY.

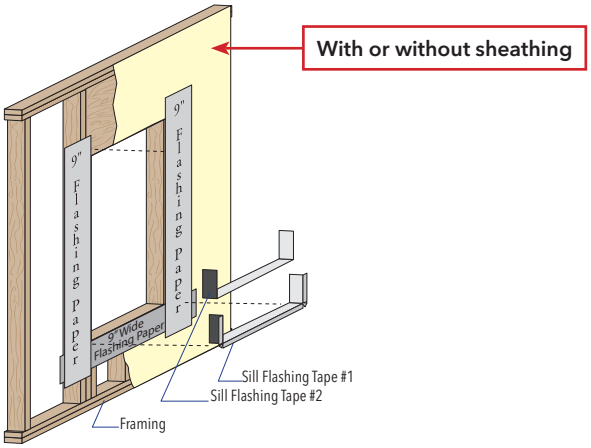


F. **Install interior sealant.** Refer to the interior sealant instructions at the end of this booklet.

G. **Install head flashing,** properly incorporating it with the siding and building wrap according to applicable code requirements.

H. **Install exterior sealant.** (After wall cladding is installed) Refer to the exterior sealant instructions at the end of this booklet.

NEW CONSTRUCTION INSTALLATION WITH NAIL FIN BEFORE BUILDING WRAP

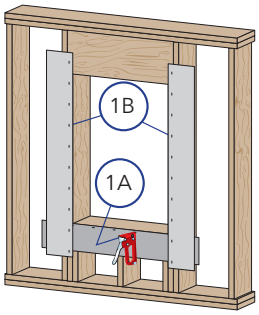


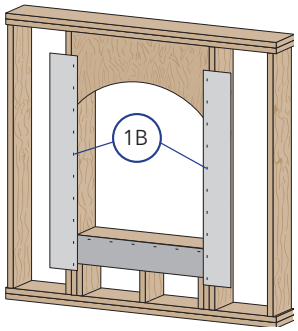
1 PREPARE THE OPENING

Refer to the nail fin installation preparation section at the beginning of this booklet.

A. **Apply flashing paper at the bottom.** Cut one piece of 9" minimum width flashing paper 18" longer than the width of the opening. Staple it flush with the top of the sill plate.

B. **Apply flashing paper to the sides.** Cut 2 pieces of 9" minimum width flashing paper 18" longer than the longest straight side of the opening. Center the flashing paper with the opening height and staple one piece flush with the inside edge on both sides.





C. **Cut 2 pieces of flashing tape** 12" longer than opening width.

D. **Apply sill flashing tape #1** at the sill extending 1" to the exterior and 6" up each jamb.

E. **Cut 1" wide tabs at each corner** by tearing the foil 1/2" each way from corner.

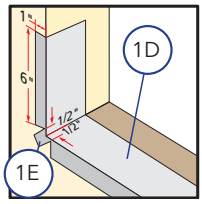
F. **Apply sill flashing tape #2** overlapping tape #1 by 1" minimum.

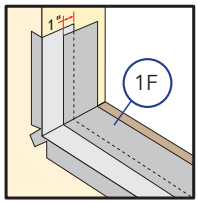
NOTE: Press all tape down firmly.

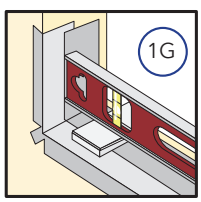
G. **Install and level sill shims.** Place 1" wide x 1/4" to 3/8" thick shims 1/2" from each side. Place additional shims under each mullion and sliding window interlocker.
For vinyl windows, add shims so maximum spacing is 18".

H. **Attach shims to prevent movement** after they are level.

NOTE: Improper placement of shims may result in bowing the bottom of the window.



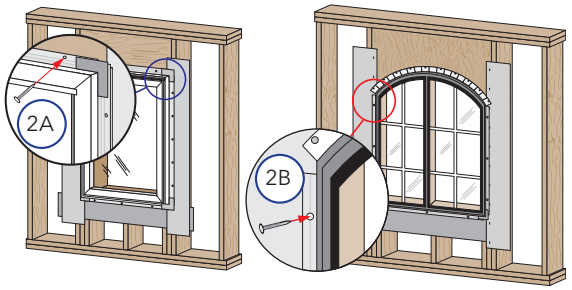




2 SETTING AND FASTENING THE WINDOW

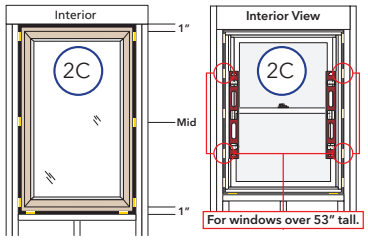
A. **Insert the window into the opening** on the sill spacers. Center the window between jambs.

B. **Drive two fasteners,** one near each end of the top nailing fin. (See nail fin anchor instructions at the end of this booklet).

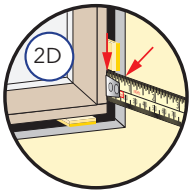


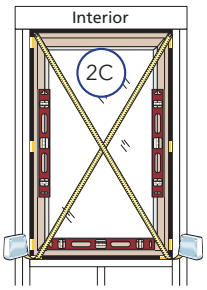
C. **Plumb and square the window** using shims at the locations shown. Adjust shims to plumb and square the window. Keep shims 1/2" short of window frame depth.

NOTE: DO NOT shim above the window. Additional shims are required at screw locations for large units and combinations. See the nail fin anchor instructions at the end of this booklet.



D. **Check the window placement** by measuring from the interior surface of the window frame or jamb extension to the interior surface of the wall for consistency. If the dimensions are not equal, confirm the fins are folded fully to 90° (if applicable).





E. **Drive two fasteners,** one near each end of the sill nailing fin.

F. **Check window operation.**

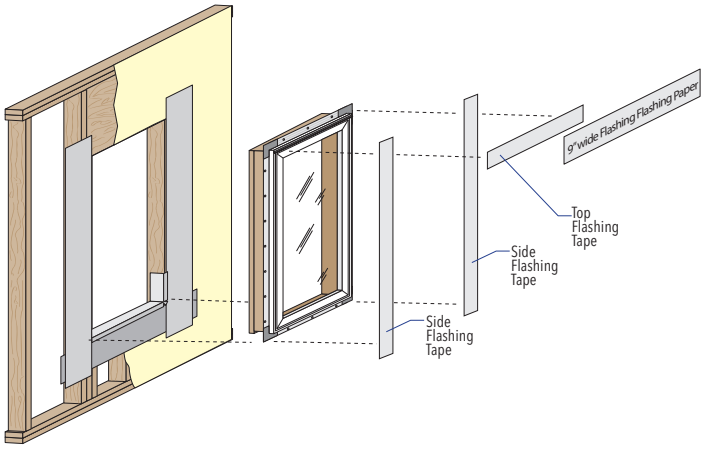
Vent Awning and Casement: Refer to applicable hardware instructions. Unlock and open the window to remove the shipping spacers. Open and close the window to test for proper operation.

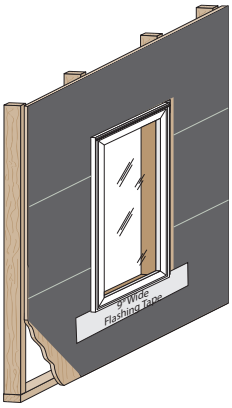
Double-Hung: Cut the checkrail bands (if applicable) and remove shipping spacers. Open, close and tilt the sashes to test for proper operation. Check for equal sash to frame reveal from top to bottom.

NOTE: Adjust shims to correct any issues with plumb, square, operation or reveal. If necessary, secure window frame to ensure window placement and sash to frame reveal is maintained.

G. **Close and lock the window**.

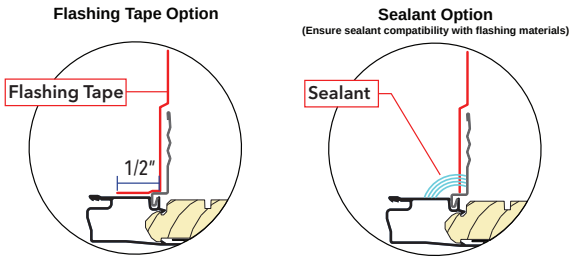
H. **Finish driving fasteners into the nailing fin.** Refer to the nail fin anchor instructions at the end of this booklet.





3 INTEGRATING WITH THE FLASHING PAPER

NOTE: For fold-up or slide-in fins, seal the fin to frame joint by either applying flashing tape 1/2" onto the frame, or sealing the joint with installation sealant after placing flashing tape.

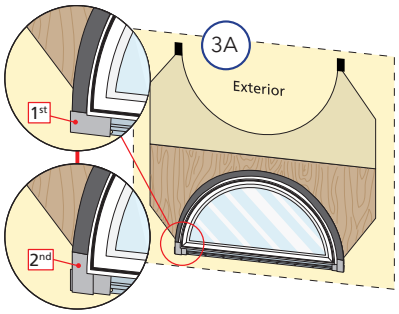


Curved and angle top units without pre-applied fin corners:

A. **Cut four 1-1/2" long pieces of flashing tape.**

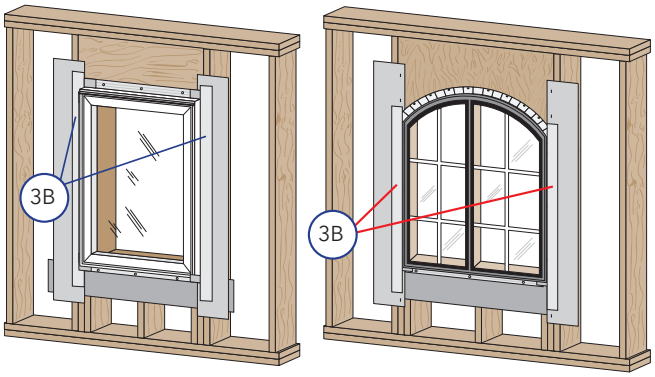
Apply one to each end of sill fin to extend it 1-1/2" past each jamb.

Apply one to the bottom end of each jamb fin beginning 1-1/2" from the end of the fin and lapping over the first piece of flashing tape.



B. **Apply straight side flashing tape.** Cut two pieces of flashing tape 4" taller than straight sides. Apply tape over the fin and onto the flashing paper. Extend tape 2" above and below straight sides.

Angle top Units: On the short side, do not allow the side tape to extend higher than what the top tape will cover.

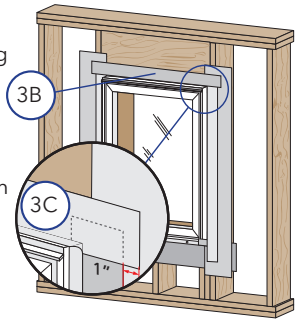


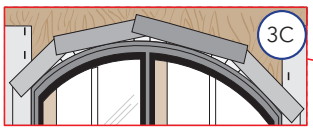
C. **Apply top flashing tape.**

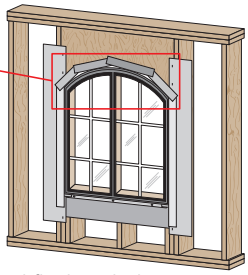
Rectangular Units: Cut one piece of flashing tape to extend 1" past both side flashing tapes.

Curved Top Units: Using several short pieces, start taping from the sides of the window working towards the peak. Cut each piece short enough so each piece overlaps the previous piece. Tighter curved frames will require shorter pieces of tape.

NOTE: Press all flashing tape down firmly.





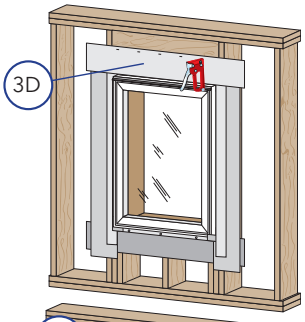


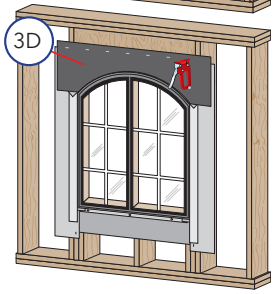
NOTE: DO NOT tape over bottom nailing fin.

D. **Apply top flashing paper.**

Rectangular windows: Cut one piece of 9" minimum width flashing paper 21" longer than the window width. Center it above the window and flush with the top. Staple it to the header.

Shaped windows: Cut one piece of flashing paper long enough to overlap the side flashing paper by 2" on each side. Cut the bottom of the paper to match the shape of the window (curved only). Center it above the window and flush with the top. Staple it to the header. Ensure the top of the side flashing paper is completely covered by the top flashing paper on each side. Apply multiple pieces of top flashing paper if necessary, overlapping them 6" in watershed fashion.





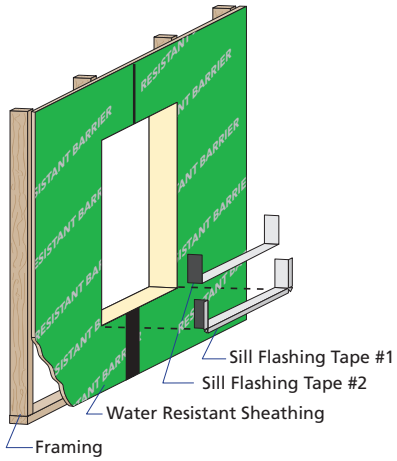
NOTE: When apply building paper to the wall, ensure the sill flashing paper overlaps the building paper to create a watershed effect.

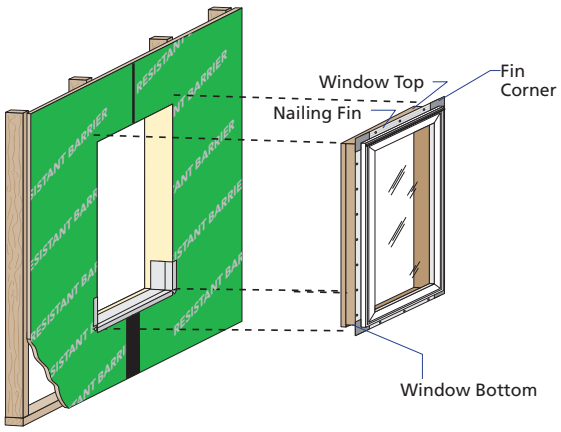
E. **Install interior sealant.** Refer to the interior sealant instructions at the end of this booklet.

F. **Install head flashing,** properly incorporating it with the siding and building wrap according to applicable code requirements.

G. **Install exterior sealant.** (After wall cladding is installed) Refer to the exterior sealant instructions at the end of this booklet.

NEW CONSTRUCTION INSTALLATION WITH NAIL FIN OVER WATER RESISTANT SHEATHING





1 PREPARE THE OPENING

Refer to the nail fin installation preparation section at the beginning of this booklet.

A. **Inspect the joints of the water resistant sheathing.** Joints must be sealed according to the sheathing manufacturer's instructions. Pella Corporation assumes no responsibility for the design, quality or durability of the sheathing system or its joints. Taped joints intersecting with the bottom or sides of the opening must have tape installed before beginning installation.

B. **Cut 2 pieces of flashing tape 12"** longer than opening width.

C. **Apply sill flashing tape #1** at the sill extending 2" to the exterior and 6" up each jamb.

D. **Cut 1" wide tabs** at each corner by tearing the foil 1/2" each way from corner.

E. **Apply sill flashing tape #2** overlapping tape #1 by 1" minimum.

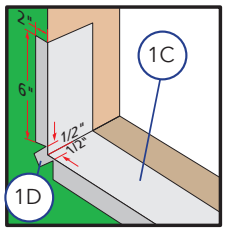
F. **Cut 2 pieces of flashing tape.** Make one equal to the height of each side of the opening.

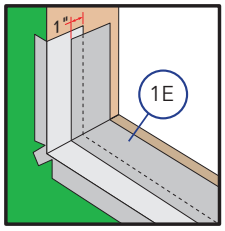
G. **Apply one piece on each jamb extending 1" onto the surface of the sheathing, over the edge of the sheathing and into the opening.**

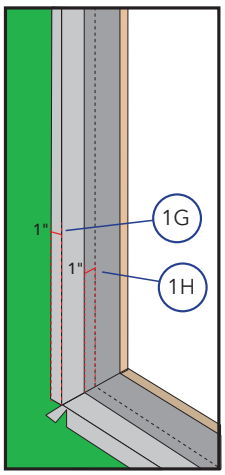
H. **Apply a second piece on each jamb overlapping the first piece by 1".**
IMPORTANT: Use a roller to firmly press all flashing tape down until the texture of the sheathing can be seen through the tape.

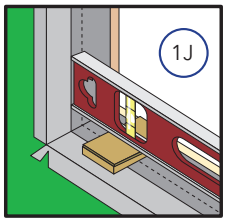
I. **Install and level sill shims.** Place 1" wide x 1/4" to 3/8" thick shims 1/2" from each side. Keep shims back 1/2" from interior face of window. Place additional shims under each mullion and sliding window interlocker.
For vinyl windows, add shims so maximum spacing is 18".

J. **Attach shims to prevent movement after they are level.**
NOTE: Improper placement of shims may result in bowing the bottom of the window.



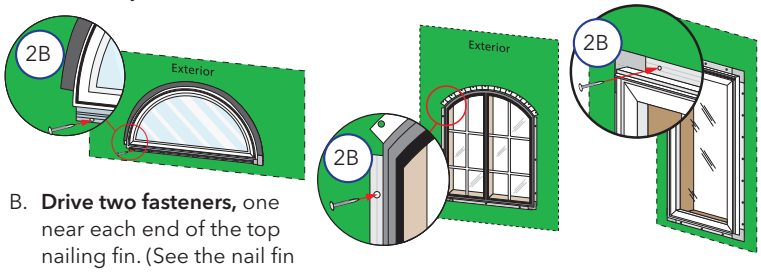






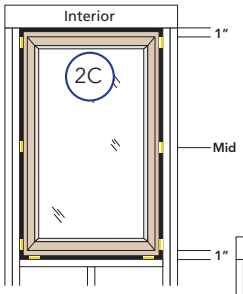
2 SETTING AND FASTENING THE WINDOW

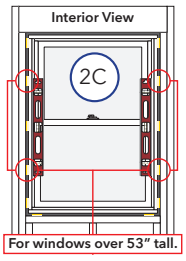
A. **Insert the window into the opening** on the sill spacers. Center the window between jambs.



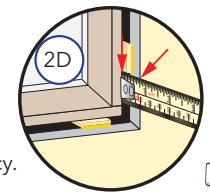
B. **Drive two fasteners,** one near each end of the top nailing fin. (See the nail fin anchor instructions at the end of this booklet.)

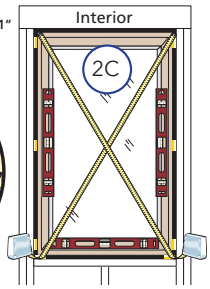
C. **Plumb and square the window** using shims at the locations shown. Adjust shims to plumb and square the window. Keep shims 1/2" short of window frame depth.
NOTE: DO NOT shim above the window. Additional shims are required at screw locations for large units and combinations. See the anchor schedule at the end of this booklet.





D. **Check the window placement** by measuring from the interior surface of the window frame or jamb extension to the interior surface of the wall for consistency. If the dimensions are not equal, confirm the fins are folded fully to 90° (if applicable).





E. **Drive two fasteners** one near each end of the sill nailing fin.

F. **Check window operation.**

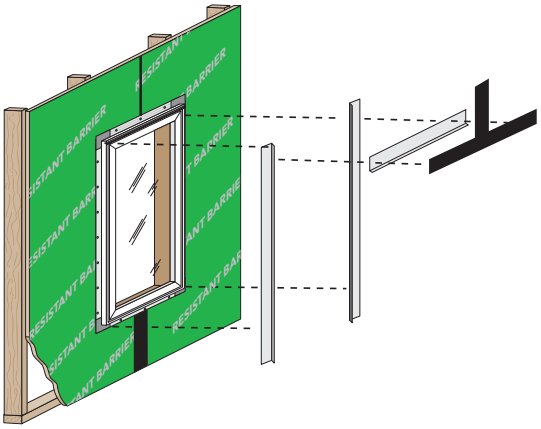
Vent Awning and Casement: Refer to applicable hardware instructions. Unlock and open the window to remove the shipping spacers. Open and close the window to test for proper operation.

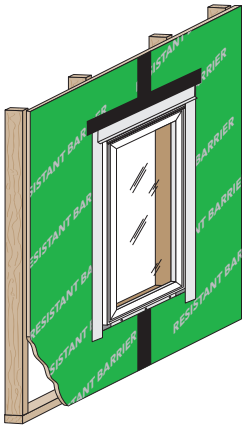
Double-Hung: Cut the checkrail bands (if applicable) and remove shipping spacers. Open, close and tilt the sashes to test for proper operation. Check for equal sash to frame reveal from top to bottom.

NOTE: Adjust shims to correct any issues with plumb, square, operation or reveal. If necessary, secure window frame to ensure window placement and sash to frame reveal is maintained.

G. **Close and lock the window.**

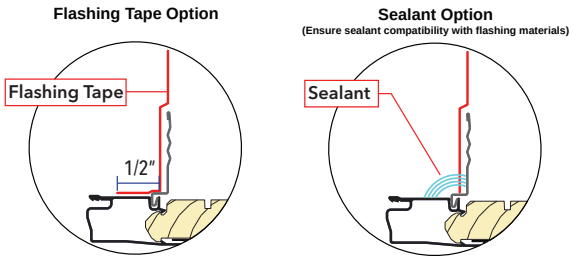
H. **Finish driving fasteners into the nailing fin.** Refer to the nail fin anchor instructions at the end of this booklet.





3 SEALING TO THE SHEATHING

NOTE: For fold-up or slide-in fins, seal the fin to frame joint by either applying flashing tape 1/2" onto the frame, or sealing the joint with installation sealant after placing flashing tape.

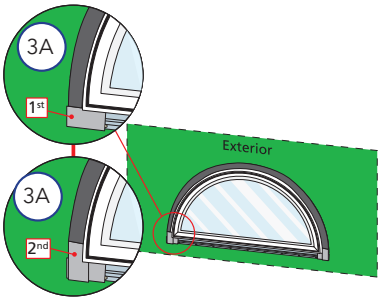


Curved and angle top units without pre-applied fin corners:

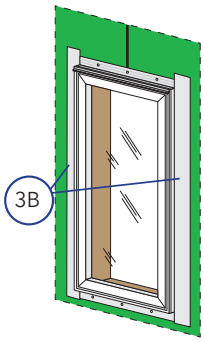
A. **Cut four 1-1/2" long pieces of flashing tape.**

Apply one to each end of sill fin to extend it 1-1/2" past each jamb.

Apply one to the bottom end of each jamb fin beginning 1-1/2" from the end of the fin and lapping over the first piece of flashing tape.



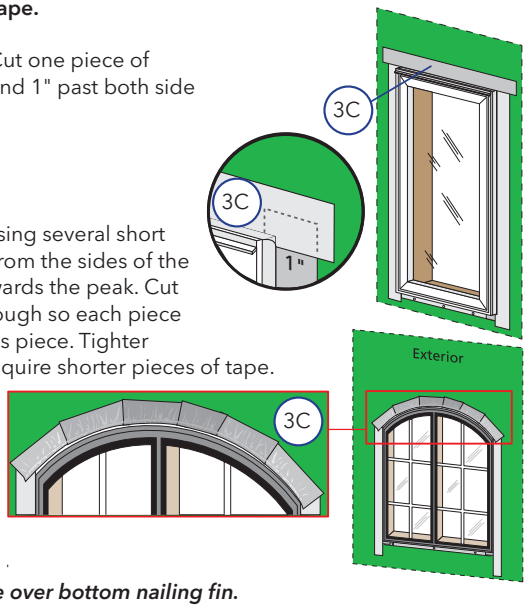
B. **Apply straight side flashing tape.** Cut two pieces of flashing tape 4" taller than straight sides. Apply tape over the fin and onto weather resistive barrier. Extend tape 2" above and below straight sides.
Angle top Units: On the short side, do not allow the side tape to extend higher than what the top tape will cover.



C. **Apply top flashing tape.**

Rectangular Units: Cut one piece of flashing tape to extend 1" past both side flashing tapes.

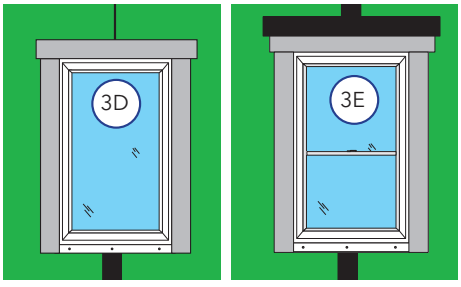
Curved Top Units: Using several short pieces, start taping from the sides of the window working towards the peak. Cut each piece short enough so each piece overlaps the previous piece. Tighter curved frames will require shorter pieces of tape.



NOTE: DO NOT tape over bottom nailing fin.

D. **Apply a second layer of sheathing manufacturer's joint sealant tape.** Cut one piece so it will extend 1" past the first layer of flashing tape on each side. Overlap the first layer of tape by 1" to create a water shed effect.

E. **Apply sheathing manufacturer's joint sealant tape** to any joints intersecting with the top of the opening, overlapping the head sealant tape in accordance with the manufacturer's instructions.



IMPORTANT: Use a roller to firmly press all flashing tape down until the texture of the sheathing can be seen through the tape.

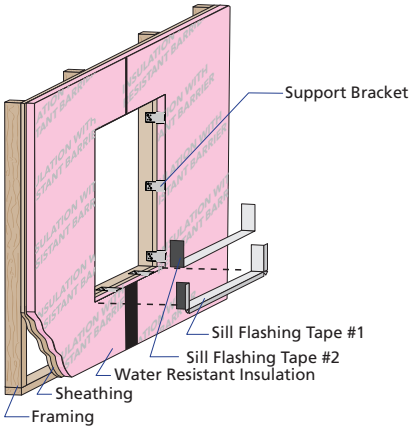
F. **Install interior sealant.** Refer to the interior sealant instructions at the end of this booklet.

G. **Install head flashing,** properly incorporating it with the siding and sheathing according to applicable code requirements.

H. **Install exterior sealant.** (After wall cladding is installed) Refer to the exterior sealant instructions at the end of this booklet.

NEW CONSTRUCTION INSTALLATION WITH NAIL FIN OVER 1-1/2"–2" THICK CONTINUOUS EXTERIOR INSULATION USING ROUGH OPENING SUPPORT BRACKETS (PATENT PENDING)

Contact Pella Corporation or your local Pella retailer for additional information regarding this installation accessory.



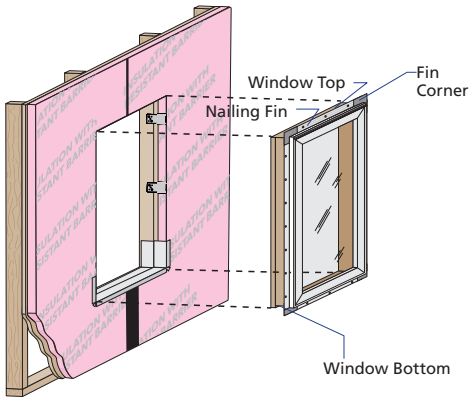
Package # 05CB

2" Pella Insulation support Bracket

 # 51GH

 # 51GG

1 1/2" Pella Insulation support Bracket



1 PREPARE THE OPENING

Refer to the nail fin installation preparation section at the beginning of this booklet.

A. **Inspect the joints of the water resistant exterior insulation.** The insulation must be fastened and sealed according to the insulation manufacturer's instructions. Pella Corporation assumes no responsibility for the design, quality or durability of the exterior insulation system or its joints.
Taped joints intersecting with the bottom or sides of the opening must have tape installed before beginning window installation.

B. **Insert the Rough Opening Support Brackets** by pressing the support bracket into the edge of the insulation panel. Insure that the bracket is tight against the wall system's sheathing or rough opening framing.
Support brackets are required at each shim location:
- Sill: 1/2" from each bottom corner.
- Jambs: Refer to Step 2C.

Place additional support brackets at each mullion or interlocker.
Refer to the anchor schedule at the end of the booklet for all additional shim and support bracket locations.
For vinyl windows, add support brackets so maximum spacing is 18" along the sill.
NOTE: No support brackets are required above the window.

C. **Fasten the support bracket to the rough opening framing.**
- For wood framing, use either two roofing nails or two #6 or #8 screws with minimum 1-1/2" embedment. Stagger the fasteners.
- For light gauge steel framing, use one #10 or two #8 self-drilling / tapping screws.
- For concrete or masonry, use one 3/16" masonry screw with 1-1/4" minimum embedment.

D. **Cut 6" pieces of flashing tape and apply tape over each support bracket,** covering each bracket completely.

E. **Cut 2 pieces of flashing tape 12"** longer than the opening width.

F. **Apply sill flashing tape #1** at the sill extending 2" to the exterior and 6" up each jamb.

G. **Cut 1" wide tabs** at each corner by tearing the foil 1/2" each way from corner.

H. **Apply sill flashing tape #2** overlapping tape #1 by 1" minimum.

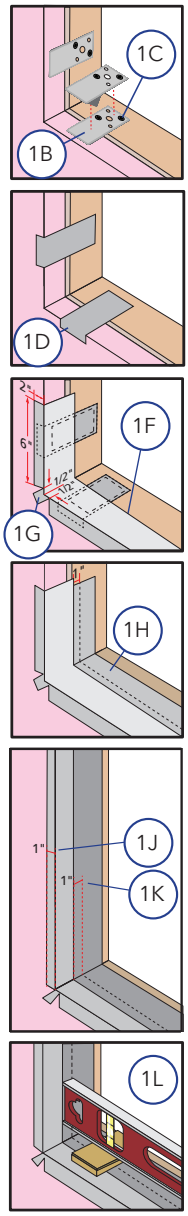
I. **Cut 4 pieces of flashing tape** equal to the height of the opening.

J. **Apply one piece on each jamb** extending 1" onto the surface of the insulating panel, over the edge of the panel and into the opening.

K. **Apply a second piece on each jamb** overlapping the first piece by 1". Press tape down firmly.

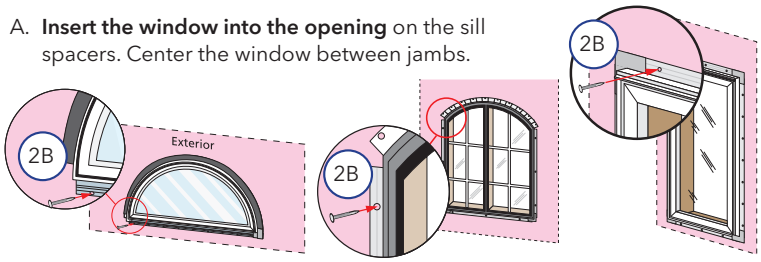
L. **Install and level sill shims.** Place 1" wide x 1/4" to 3/8" thick shims onto each rough opening support bracket on the sill. Keep shims back 1/2" from interior face of the window.

M. **Use flashing tape to attach shims** to prevent movement after they are level.
NOTE: Improper placement of shims may result in bowing the bottom of the window.



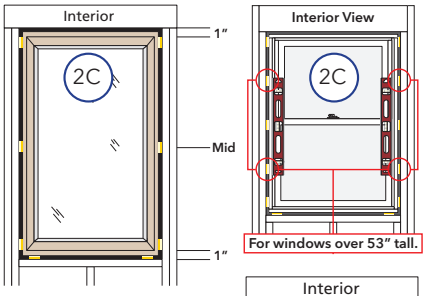
2 SETTING AND FASTENING THE WINDOW

A. **Insert the window into the opening** on the sill spacers. Center the window between jambs.

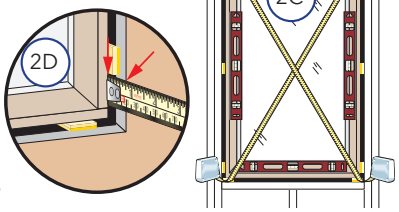


B. **Drive two fasteners,** one near each end of the top nailing fin. (Longer fasteners required, see the nail fin anchor instructions at the end of this booklet.)

C. **Plumb and square the window** using shims at the locations shown. Adjust shims to plumb and square the window. Keep shims 1/2" short of window frame depth.
NOTE: DO NOT shim above the window. Additional shims are required at screw locations for large units and combinations. See the anchor schedule at the end of this booklet.



D. **Check the window placement** by measuring from the interior surface of the window frame or jamb extension to the interior surface of the wall for consistency. If the dimensions are not equal, confirm the fins are folded fully to 90° (if applicable).

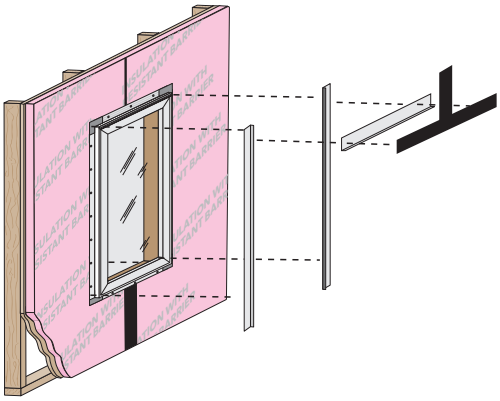


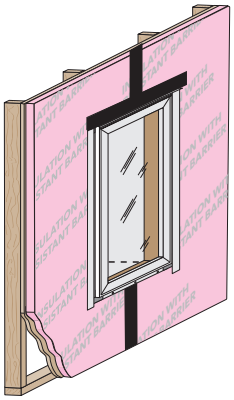
E. **Drive two fasteners** one near each end of the sill nailing fin.

F. **Check window operation.**
Vent Awning and Casement: Refer to applicable hardware instructions. Unlock and open the window to remove the shipping spacers. Open and close the window to test for proper operation.
Double-Hung: Cut the checkrail bands (if applicable) and remove shipping spacers. Open, close and tilt the sashes to test for proper operation. Check for equal sash to frame reveal from top to bottom.
NOTE: Adjust shims to correct any issues with plumb, square, operation or reveal. If necessary, secure window frame to ensure window placement and sash to frame reveal is maintained.

G. **Close and lock the window.**

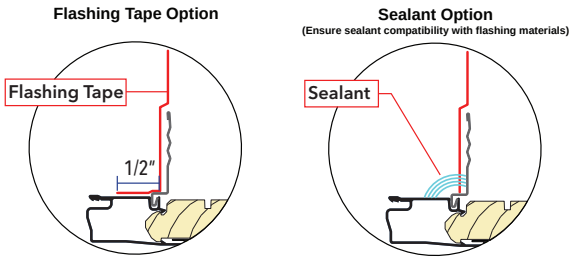
H. **Finish driving fasteners into the nailing fin.** Do not over-drive fasteners. Refer to the nail fin anchor instructions at the end of this booklet.





3 SEALING TO THE INSULATION

NOTE: For fold-up or slide-in fins, seal the fin to frame joint by either applying flashing tape 1/2" onto the frame, or sealing the joint with installation sealant after placing flashing tape.

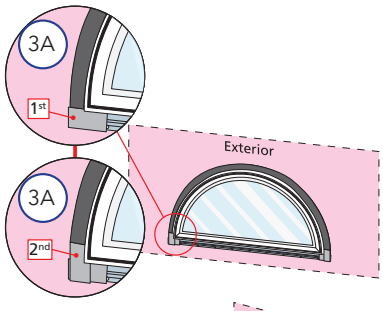


Curved and angle top units without pre-applied fin corners:

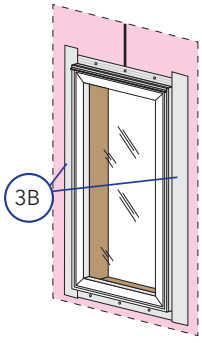
A. **Cut four 1-1/2" long pieces of flashing tape.**

Apply one to each end of sill fin to extend it 1-1/2" past each jamb.

Apply one to the bottom end of each jamb fin beginning 1-1/2" from the end of the fin and lapping over the first piece of flashing tape.



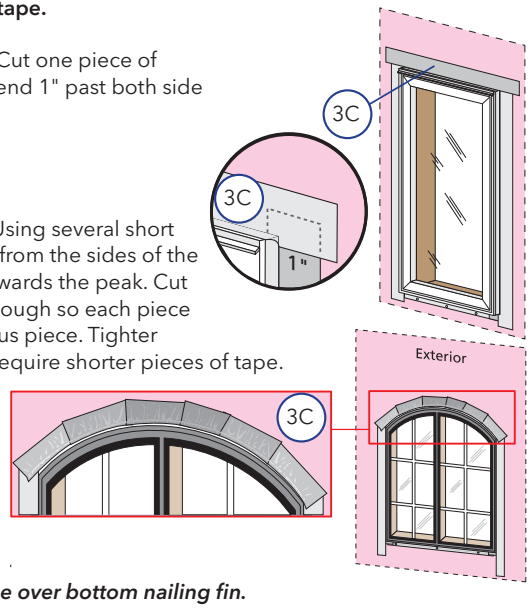
B. **Apply straight side flashing tape.** Cut two pieces of flashing tape 4" taller than straight sides. Apply tape over the fin and onto weather resistive barrier. Extend tape 2" above and below straight sides. **Angle top Units:** On the short side, do not allow the side tape to extend higher than what the top tape will cover.



C. **Apply top flashing tape.**

Rectangular Units: Cut one piece of flashing tape to extend 1" past both side flashing tapes.

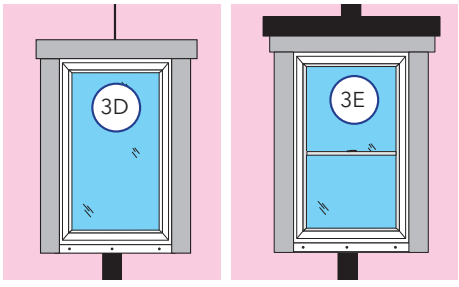
Curved Top Units: Using several short pieces, start taping from the sides of the window working towards the peak. Cut each piece short enough so each piece overlaps the previous piece. Tighter curved frames will require shorter pieces of tape.



NOTE: DO NOT tape over bottom nailing fin.

D. **Apply a second layer of insulation manufacturer's joint sealant tape.** Cut one piece so it will extend 1" past the first layer of flashing tape on each side. Overlap the first layer of tape by 1" to create a water shed effect.

E. **Apply insulation manufacturer's joint sealant tape** to any joints intersecting with the top of the opening, overlapping the head sealant tape in accordance with the manufacturer's instructions.



IMPORTANT: Use a roller to firmly press all flashing tape.

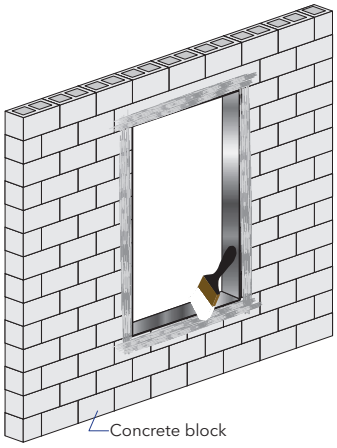
F. **Install interior sealant.** Refer to the interior sealant instructions at the end of this booklet.

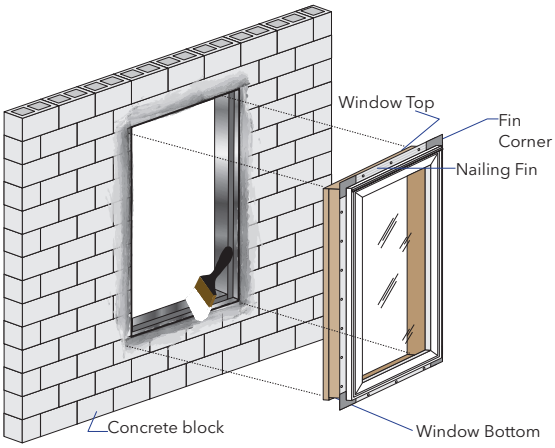
G. **Install head flashing,** properly incorporating it with the siding and sheathing according to applicable code requirements.

H. **Install exterior sealant.** (After wall cladding is installed) Refer to the exterior sealant instructions at the end of this booklet.

NEW CONSTRUCTION INSTALLATION INTO MASONRY CONSTRUCTION

FOR THE INSTALLATION OF NEW NAIL FIN WINDOWS INTO MASONRY OPENINGS WITH WOOD BUCKS



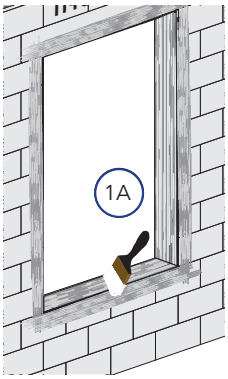


1 PREPARE THE OPENING

Refer to the nail fin installation preparation section at the beginning of this booklet.

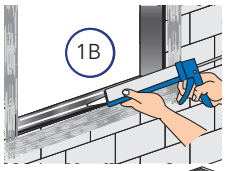
A. **Apply water resistant coating.** Extend the coating into the opening on all four sides and onto the wall surface at least 9". The water resistant coating may be a self-adhered sheet membrane (SASM) or a liquid applied flashing. Ensure continuity between the water resistant coating in the opening and the rest of the wall surface. SASM's must be overlapped in a water shed fashion. Apply all water resistant coatings according to the manufacturer's directions.

NOTE: Allow liquid flashing to dry according to the manufacturer's recommendations.



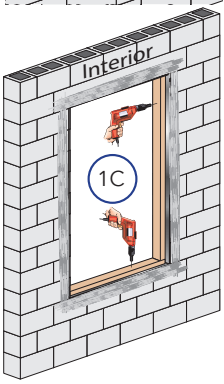
B. **Apply 2 beads of sealant** to the masonry opening where the wood buck will be attached.

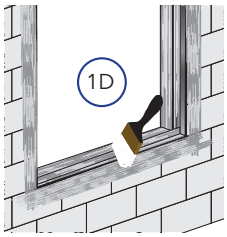
NOTE: Ensure the sealant is compatible with the water resistant coating.



C. **Pre-drill and fasten the treated** wood buck to the masonry opening using code-approved fasteners and spacing.

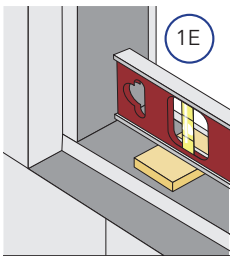
D. **Apply water resistant coating (optional)** over the wood buck and onto the masonry opening. If using liquid applied flashing, allow it to dry according to the manufacturer's recommendations before proceeding.





E. **Install and level sill shims.** Place 1" wide x 1/4" to 3/8" thick shims 1/2" from each side. Keep shims back 1/2" from interior face of window. Place additional shims under each mullion and sliding window interlocker.

For vinyl windows, add shims so maximum spacing is 18".



F. **Attach shims to prevent movement after they are level.**

NOTE: Improper placement of shims may result in bowing the bottom of the window.

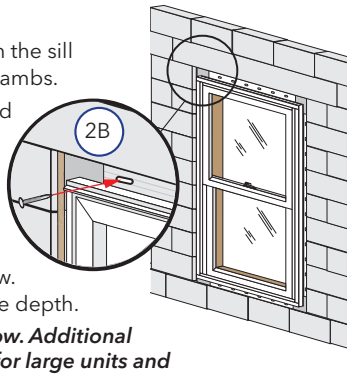
2 SETTING AND FASTENING THE WINDOW

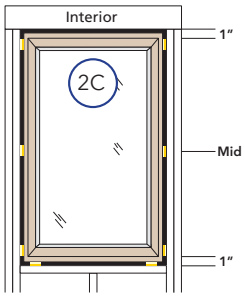
A. **Insert the window into the opening** on the sill spacers. Center the window between jambs.

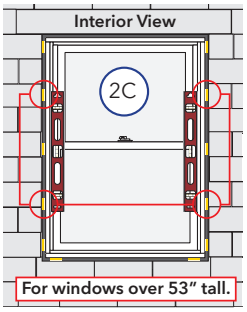
B. **Drive two fasteners,** one near each end of the top nailing fin. See the anchor schedule at the end of this booklet for fastener requirements.

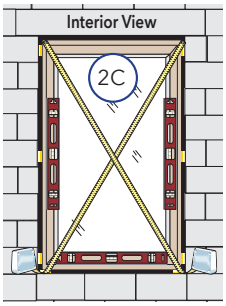
C. **Plumb and square the window** using shims at the locations shown. Adjust shims to plumb and square the window. Keep shims 1/2" short of window frame depth.

NOTE: DO NOT shim above the window. Additional shims are required at screw locations for large units and combinations. See the nail fin anchor instructions at the end of this booklet.

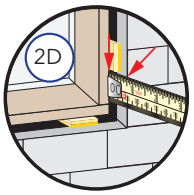








D. **Check the window placement by measuring** from the interior surface of the window frame or jamb extension to the interior surface of the wall for consistency. If the dimensions are not equal, confirm the fins are folded fully to 90° (if applicable).



E. **Drive two fasteners** one near each end of the sill nailing fin.

F. **Check window operation.**

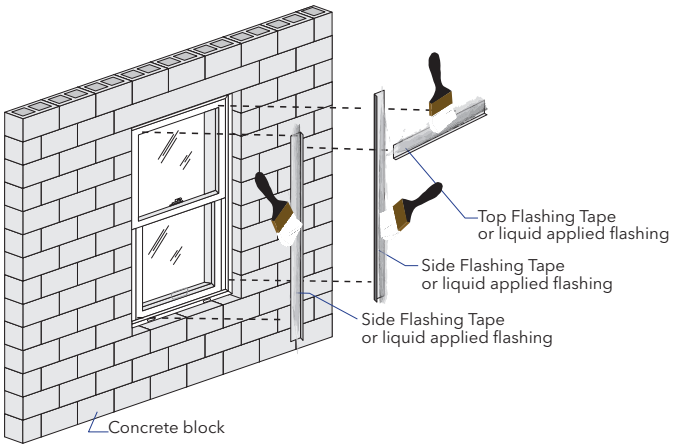
Vent Awning and Casement: Refer to applicable hardware instructions. Unlock and open the window to remove the shipping spacers. Open and close the window to test for proper operation.

Double-Hung: Cut the checkrail bands (if applicable) and remove shipping spacers. Open, close and tilt the sashes to test for proper operation. Check for equal sash to frame reveal from top to bottom.

NOTE: Adjust shims to correct any issues with plumb, square, operation or reveal. If necessary, secure window frame to ensure window placement and sash to frame reveal is maintained.

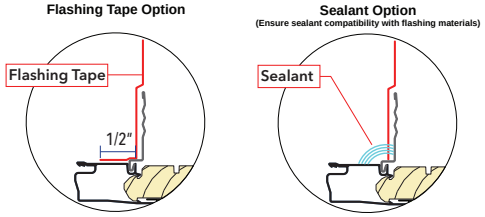
G. **Close and lock the window**.

H. **Finish driving fasteners into the nailing fin.** Refer to the nail fin anchor instructions at the end of this booklet.



3 SEALING THE TOP AND SIDE NAILING FINS

NOTE: For fold-up or slide-in fins, seal the fin to frame joint by either applying flashing tape 1/2" onto the frame, or sealing the joint with installation sealant after placing flashing tape.

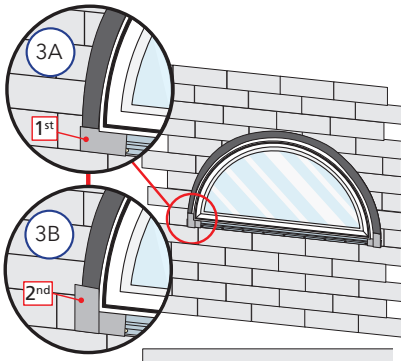


Curved and angle top units without pre-applied fin corners:

A. **Cut four 1-1/2" long pieces** of flashing tape.

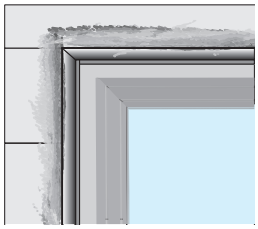
Apply one to each end of sill fin to extend it 1-1/2" past each jamb.

B. **Apply one to the bottom end of each jamb fin** beginning 1-1/2" from the end of the fin and lapping over the first piece of flashing tape.



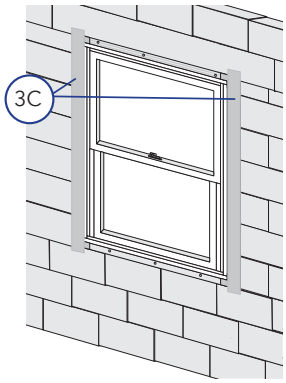
If liquid applied flashing was used to prepare the opening, apply it over the nail fin at jambs and head at this time according to the manufacturer's instructions. Leave the sill nailing fin uncovered. Skip to step 3E.

If the opening was prepared using SASM, follow steps C-D.



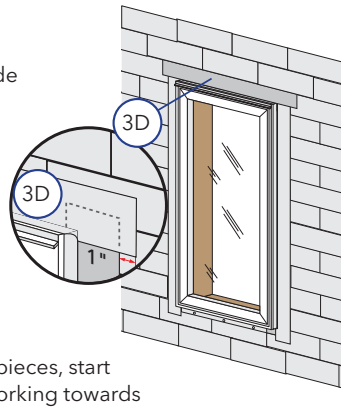
C. **Apply straight side flashing tape.** Cut two pieces of flashing tape 4" taller than straight sides. Apply tape over the fin and onto liquid applied flashing or SASM. Extend tape 2" above and below straight sides.

Angle top Units: On the short side, do not allow the side tape to extend higher than what the top tape will cover.

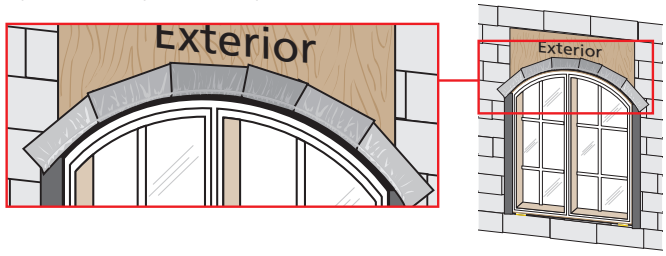


D. **Apply top flashing tape.**

Rectangular Units: Cut one piece of flashing tape to extend 1" past both side flashing tapes.



Curved Top Units: Using several short pieces, start taping from the sides of the window working towards the peak. Cut each piece short enough so each piece overlaps the previous piece. Tighter curved frames will require shorter pieces of tape.



NOTE: Insert shims under the sill nailing fin to ensure the nail fin does not seal to the liquid applied flashing.

NOTE: DO NOT tape over bottom nailing fin.

NOTE: Press all flashing tape down firmly.

Apply SASM or liquid applied water management system in water-shed fashion with head flashing and in accordance with manufacturer's recommendations.

E. **Install interior sealant.** Refer to the interior sealant instructions at the end of this booklet.

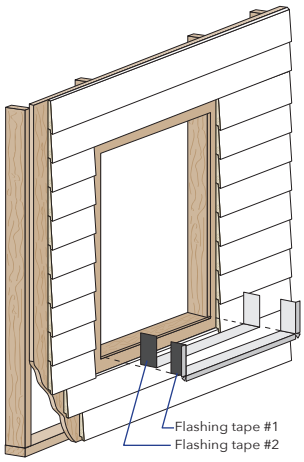
F. **Install head flashing,** properly incorporating it with the siding and water management system according to applicable code requirements.

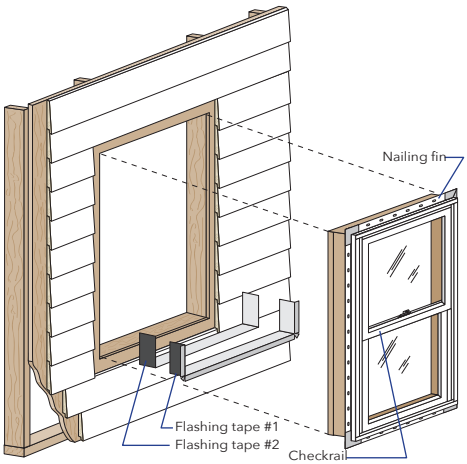
G. **Install exterior sealant.** (After wall cladding is installed) Refer to the exterior sealant instructions at the end of this booklet.

NOTE: Frame curved portions of rough opening to support window and wind loads (if applicable).

FULL FRAME REPLACEMENT WITH NAIL FIN

INSTALLATION OF NEW NAIL FIN WINDOWS AFTER THE REMOVAL OF EXISTING WINDOWS AND THE SURROUNDING TRIM OR SIDING





1 PREPARE THE OPENING

Refer to the existing frame removal instruction and nail fin installation preparation sections at the beginning of this booklet.

A. **Repair the wall surface around the opening** (if necessary) by installing new blocking flush with the surface of the existing sheathing and/or repairing the existing building wrap with flashing tape.

B. **Cut 2 pieces of flashing tape** 12" longer than opening width.

C. **Apply sill flashing tape #1** extending far enough onto the wall surface to overlap the building wrap 1" or onto the top edge of the siding and 6" up each jamb.

D. **Cut 1" wide tabs at each corner** by tearing the foil 1/2" each way from corner.

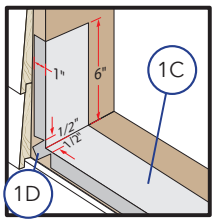
E. **Apply sill flashing tape #2** overlapping tape #1 by 1" minimum.

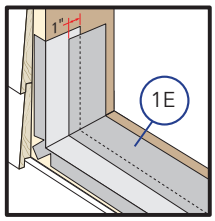
If existing building wrap is folded into the opening at the jambs, skip to step 1H.

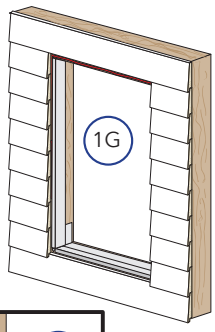
F. **Cut 2 pieces of flashing tape.** Make one equal to the height of each side of the opening.

G. **Apply one piece on each jamb starting 1"** from the exterior of the framing, over the edge of the sheathing and onto the surface of the sheathing.

NOTE: Press all flashing tape down firmly.

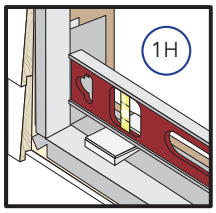






H. **Install and level sill shims.** Place 1" wide x 1/4" to 3/8" thick shims 1/2" from each side. Keep shims back from interior face of window. Place additional shims under each mullion and sliding window interlocker.

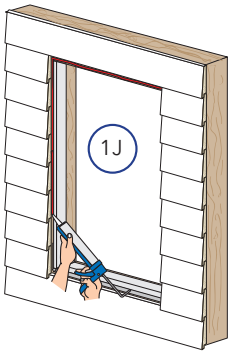
For vinyl windows, add shims so maximum spacing is 18".



I. Attach shims to prevent movement after they are level.

NOTE: Improper placement of shims may result in bowing the bottom of the window.

J. Apply a continuous, 3/8" tall bead of sealant 1/2" from the edge of the opening at the sides and top only. Do NOT apply sealant at the sill. This step may be omitted if there will be at least 3" of wall surface between the edge of the window frame and the siding after installation.

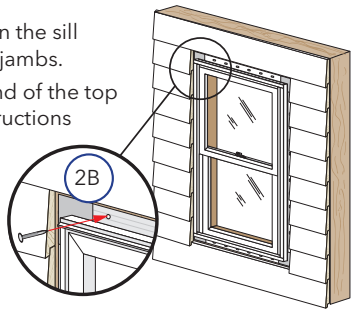


2 SETTING AND FASTENING THE WINDOW

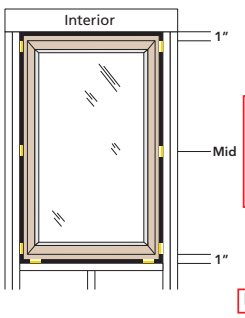
A. **Insert the window into the opening** on the sill spacers. Center the window between jambs.

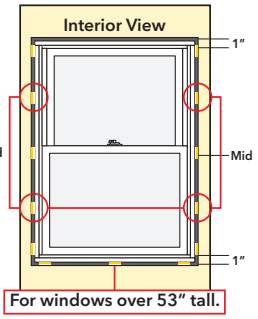
B. **Drive two fasteners,** one near each end of the top nailing fin. See the nail fin anchor instructions at the end of this booklet for fastener requirements.

C. **Plumb and square the window** using shims at the locations shown. Adjust shims to plumb and square the window. Keep shims 1/2" short of window frame depth.

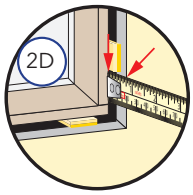


NOTE: DO NOT shim above the window. Additional shims are required at screw locations for large units and combinations. See the nail fin anchor instructions at the end of this booklet.

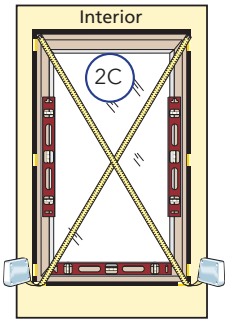




D. **Check the window placement** by measuring from the interior surface of the window frame or jamb extension to the interior surface of the wall for consistency. If the dimensions are not equal, confirm the fins are folded fully to 90° (if applicable).



E. **Drive two fasteners** one near each end of the sill nailing fin.



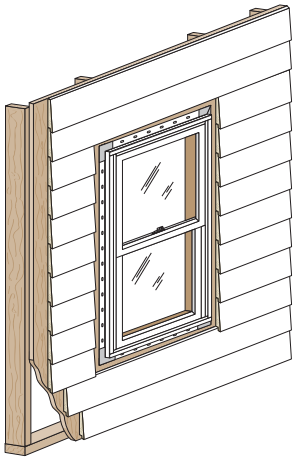
F. **Check window operation.**
Vent Awning and Casement: Refer to applicable hardware instructions. Unlock and open the window to remove the shipping spacers. Open and close the window to test for proper operation.

Double-Hung: Cut the checkrail bands (if applicable) and remove shipping spacers. Open, close and tilt the sashes to test for proper operation. Check for equal sash to frame reveal from top to bottom.

NOTE: Adjust shims to correct any issues with plumb, square, operation or reveal. If necessary, secure window frame to ensure window placement and sash to frame reveal is maintained.

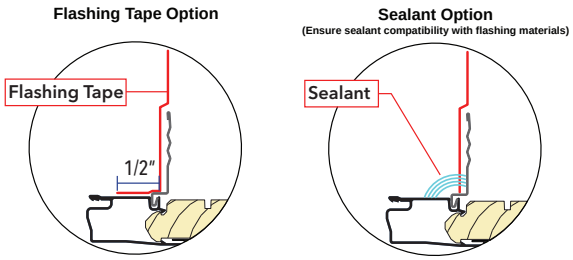
G. **Close and lock the window**.

H. **Finish driving fasteners** into the nailing fin. Refer to the nail fin anchor instructions at the end of this booklet.



3 SEALING THE TOP AND SIDE NAILING FINS

NOTE: For fold-up or slide-in fins, seal the fin to frame joint by either applying flashing tape 1/2" onto the frame, or sealing the joint with installation sealant after placing flashing tape.



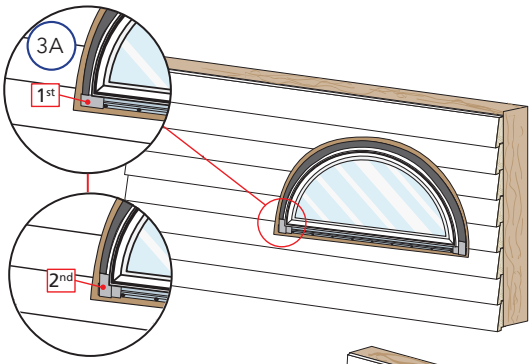
Curved and angle top units without pre-applied fin corners:

A. **Cut four 1-1/2" long pieces of flashing tape.**

Apply one to each end of sill fin to extend it 1-1/2" past each jamb.

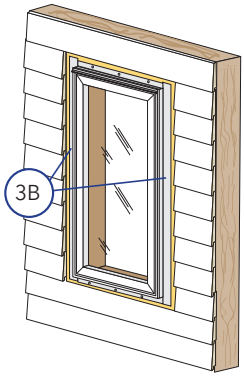
Apply one to the bottom end of each jamb fin beginning 1-1/2" from the end of the fin and lapping over the first piece of flashing tape.

If there is less than 3" between the window frame and the siding, skip to step 3C.



B. **Apply straight side flashing tape.** Cut two pieces of flashing tape 4" taller than straight sides. Apply tape over the fin and onto weather resistive barrier. Extend tape 2" above and below straight sides.

Angle top units: On the short side, do not allow the side tape to extend higher than what the top tape will cover.

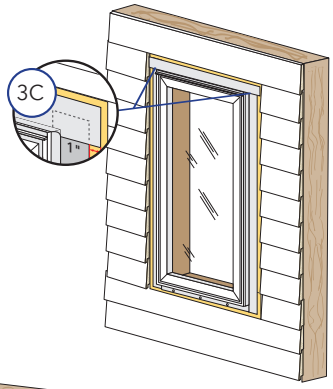


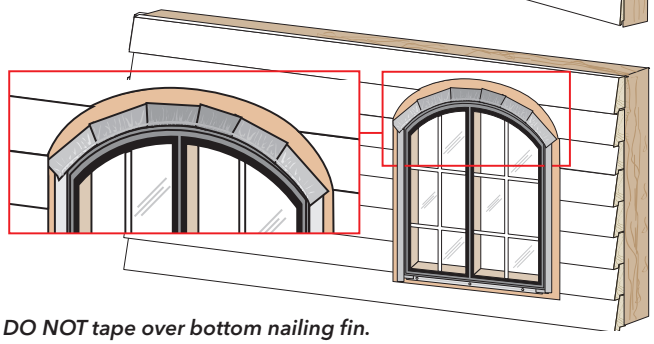
C. **Apply top flashing tape.**

Rectangular Units: Cut one piece of flashing tape to extend 1" past both side flashing tapes.

Curved Top Units: Using several short pieces, start taping from the sides of the window working towards the peak.

Cut each piece short enough so each piece overlaps the previous piece. Tighter curved frames will require shorter pieces of tape.





NOTE: DO NOT tape over bottom nailing fin.

NOTE: Press all flashing tape down firmly.

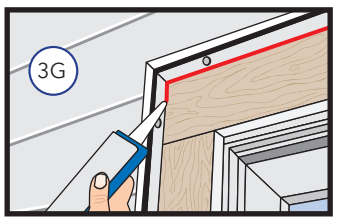
D. **Install head flashing if none exists,** properly incorporating it with the siding and building wrap according to applicable code requirements.

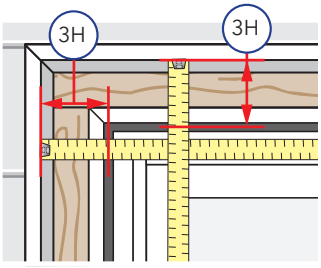
E. **Install blocking for frame expander** support or solid trim at this time, if applicable.

F. **Install interior sealant.** Refer to the interior sealant instructions at the end of this booklet.

G. **Install exterior sealant.** Refer to the exterior sealant instructions at the end of this booklet.

H. **Install frame expander and receptor** (if applicable). See separate instructions.

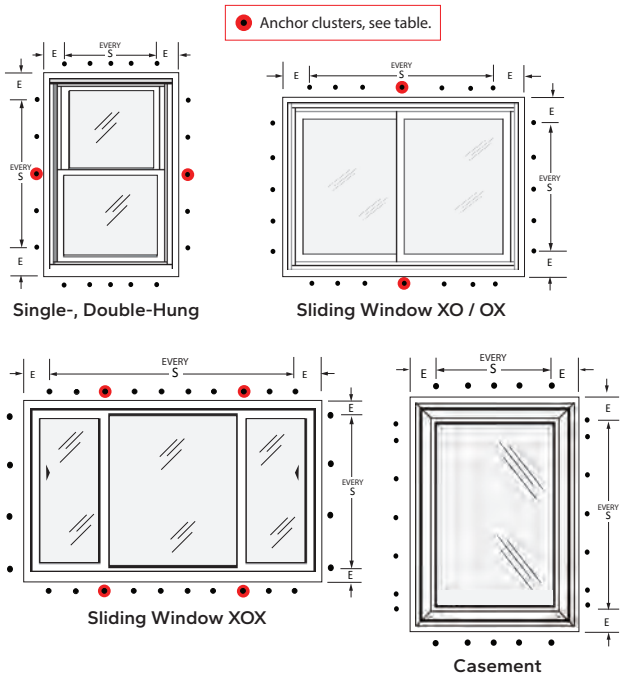




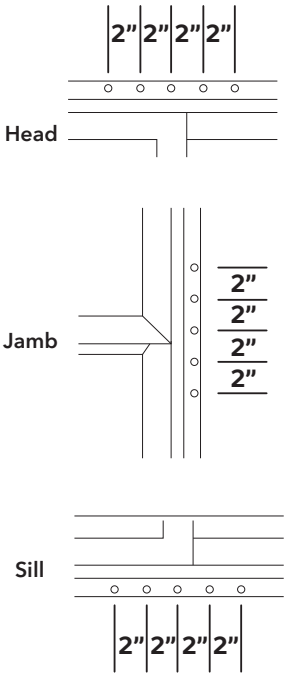
NAIL FIN WINDOW ANCHOR INSTRUCTIONS

Note: Standard performance only. Additional anchoring may be required for performance upgrade, impact-resistant products or to comply with local building code requirements.

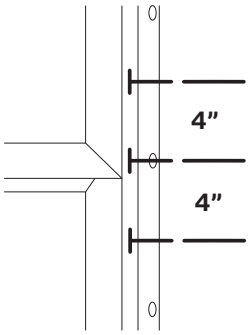
PLACE FASTENERS AT THE LOCATIONS INDICATED:



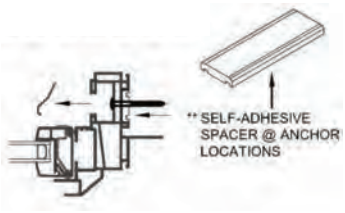
NAIL FIN ANCHOR CLUSTERS (IF APPLICABLE):

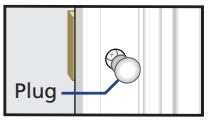


THROUGH FRAME ANCHOR CLUSTERS (PERFORMANCE UPGRADE DH ONLY):



3 anchors, 4" apart**





ENCOMPASS BY PELLA® / PELLA® 150 SERIES / PELLA® 250 SERIES WINDOWS

	Product	PG Rating	Edge Spacing (E)	Max. Intermediate Spacing (S)	Anchor Type Wood *	Special Notes
ENCOMPASS, 150 SERIES	All Windows and Composites	≤35	Every other Pre-Punched Hole		2" 11 Ga. Roofing Nail or #8 x 2" screw	(5) fin anchors, 2-3" apart at ends of integral mullion (if applicable).
	Performance Upgrade SH	50	Every Pre-Punched Hole		#8 x 2" Screw with Washer	(1) additional fin anchor, center at ends of checkrail. (5) fin anchors, 2-3" apart at ends of integral mullion (if applicable).
	Performance Upgrade DH					(3) #10 x 2" screws through frame at check rail ends, 4" apart at ends of integral mulls (if applicable). **
250 SERIES	All Windows and Composites	≤35	Every other Pre-Punched Hole		1.5" 11 Ga. Roofing Nail or #8 x 2" Screw	Only DH >71.5 tall: (5) fin anchors, 2-3" apart at ends of checkrail.
	Performance Upgrade SH/SW	50	Every Pre-Punched Hole		#8 x 2" Screw with Washer	(5) fin anchors, 2-3" apart at ends of checkrails or interlockers.
	Performance Upgrade DH					(3) #10 x 2" screws through frame at checkrail ends, 4" apart. (5) fin anchors, 2-3" apart at ends of integral mulls (if applicable). **
	CM/AW/FX					(5) fin anchors, 2-3 apart at ends of integral mulls (if applicable)
	Windows with Flat Casing	≤20	Every other Pre-Punched Hole		1.5" 11 Ga. Roofing Nail or #8 x 2" Screw	(5) fin anchors, 2-3" apart at ends of all checkrails, interlockers, or integral mullions.
	Combinations	≤35	Every other Pre-Punched Hole			(5) fin anchors, 2-3" apart at ends of 1/2" Structural Mulls OR (4) #10 x 2" screws through 1" Structural Mullion end anchors.***
	Combinations	> 35	Every Pre-Punched Hole		#8 x 2" Screw with Washer	

IMPORTANT: For installations over continuous exterior insulation, the anchor length must be increased by the thickness of the insulating panels.

* For light gauge steel framing, use #10 self-drilling modified truss head screws with 3 thread min embedment.

** High Performance Frame Fillers (self-adhesive spacers) are required at each jamb anchor location.

NOTE: Do not over-drive fasteners, but allow for movement of building materials.

*** Refer to the supplemental instruction included with the unit for securing mullion end anchors (if applicable). End anchor quantity depended upon project design pressure requirements.

When screws are used in the nail fin and PG >35, a 1" fender washer is required at each screw anchor location.

Fastening requirements are applicable to J-channel frame types.

NAIL FIN WINDOW ANCHOR INSTRUCTIONS (CONTINUED)

Note: Standard performance only. Additional anchoring may be required for performance upgrade, impact-resistant products or to comply with local building code requirements.

PELLA® IMPERVIA, ARCHITECT SERIES® (850) AND PELLA® LIFESTYLE SERIES NAIL FIN ANCHOR SPACING INSTRUCTIONS

Units with Pella EnduraClad exterior trim with narrow fins and no pre-punched holes must be anchored with frame screws or installation clips. The fins are for flashing purposes only.

Product	PG Rating	Max Frame Width (inches)	Max Frame Height (inches)	Edge Spacing (E)	Max. Intermediate Spacing (S)	Anchor Type Wood *	Frame Anchors
Impervia Windows	All	Any	Any	3"	7"	2" 11 Ga. Roofing Nail	None
Impervia Direct Set	All	Any	Any	Every pre-punched hole		2" 11 Ga Roofing Nail	**>50 sq. ft.** requires screw through frame or clip anchors in addition to nail fin fasteners. Refer to block frame anchor instructions for further details. (See Illustration below.) **40-50 sq. ft.** see note below.
Architect Series & Lifestyle Series Clad Wood CM, AW or FX Windows	All	73"	73"	Every Pre-Punched		2" 11 Ga. Roofing Nail	None
	All	>73"	>73"	Every Pre-Punched Hole		2" 11 Ga. Roofing Nail	#10 x 3-1/2" Screws at 1/3 points along head and jambs
Architect Series & Lifestyle Series SH or DH Windows	All	Any	Any	Every Pre-Punched Hole		2" 11 Ga. Roofing Nail	None
Monumental DH	All	<54	<96	Every Pre-Punched Hole		1-1/2" 11 Ga. Roofing Nail	Refer to the next page for units larger than 54 x 96
Clad wood Direct Set	<PG60	Any	Any	Every Pre-Punched Hole		2" 11 Ga. Roofing Nail	See note below
Clad Wood Curved Windows with Flexible Fin	All	Any	Any	Every Pre-Punched Hole		(2) #6 x 1-1/2" screw per clip	Must be anchored with frame screws or installation clips. Refer to next page for anchoring instructions.
Clad Wood Curved Windows with Rigid Fin	All	Any	Any	6"	12"	2" 11 Ga. Roofing Nail	None

IMPORTANT: For installations over continuous exterior insulation, the anchor length must be increased by the thickness of the insulating panels.

* = For light gauge steel framing, use #10 self-drilling modified truss head screws.

NOTE: Do not over-drive fasteners in vinyl fins, but allow for movement of building materials.

Impervia Direct Set 40-50 Sq. Ft. use #10 x 3" screws required on longest edge spaced 6" from each end and on center. For integral mullion units, screws required 6" from the center of the mull on each side.

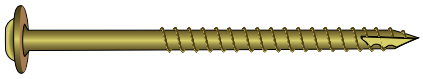
Refer to the supplemental instruction included with the unit for securing mullion end anchors (if applicable).

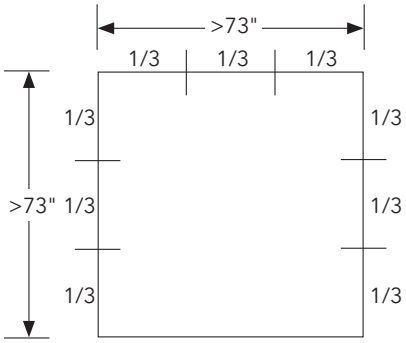
Clad wood direct set windows achieve PG50 up to 60" x 60" with standard anchoring. Larger sizes achieve PG40. Refer to advanced performance/impact-resistant instructions for other options.

EXAMPLE ANCHOR TYPES

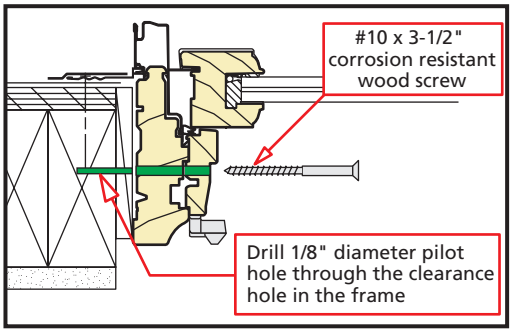
Roofing Nail

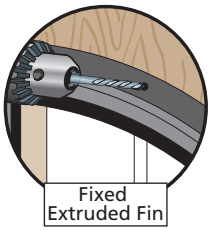
K-Lath/Modified Truss Head Screw





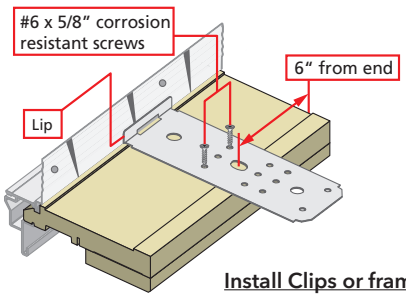
Screws not required at the sill.

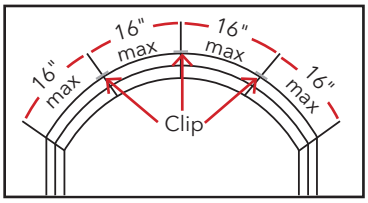


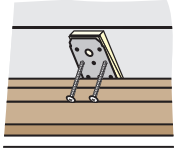


Drill 1/8" diameter Holes for windows with curved rigid fins

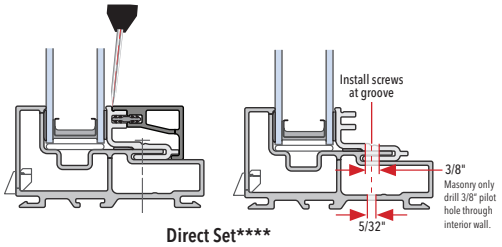
Add installation clips or frame anchor screws for vent and fixed clad-wood casements over 73".







Install Clips or frame screws for windows with non-structural curved flex fins.



Direct Set****

****Use putty knife; insert where indicated and slide cover to interior.

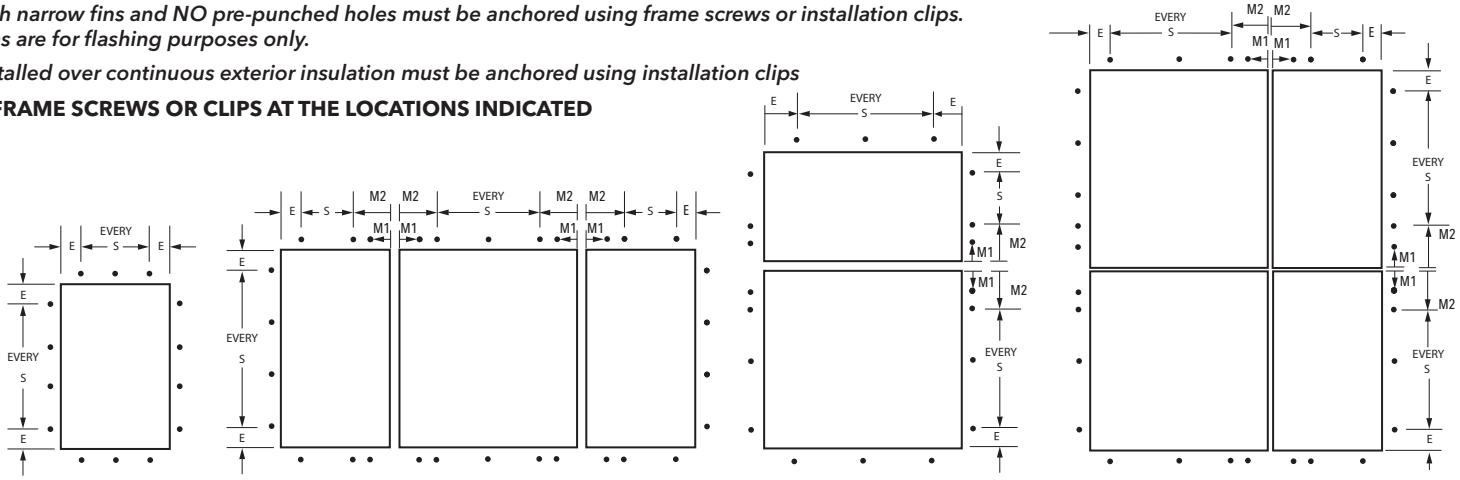
UNITS WITH WIDE PELLA® ENDURACLAD® EXTERIOR TRIM WITH NARROW FINS AND NO PRE-PUNCHED HOLES ANCHOR INSTRUCTIONS AND MONUMENTAL HUNG > 54" X 96"

Note: Standard performance only. Additional anchoring may be required for performance upgrade, impact-resistant products or to comply with local building code requirements.

Units with narrow fins and NO pre-punched holes must be anchored using frame screws or installation clips. These fins are for flashing purposes only.

Units installed over continuous exterior insulation must be anchored using installation clips

PLACE FRAME SCREWS OR CLIPS AT THE LOCATIONS INDICATED

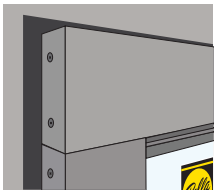


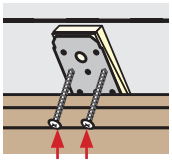
ARCHITECT SERIES® (850) AND PELLA® LIFESTYLE SERIES WINDOW ANCHOR SPACING INSTRUCTIONS

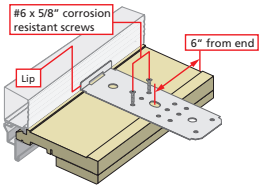
Product	Edge Spacing (E)	Max. Intermediate Spacing (S)	First Mullion Anchor (M1)	Second Mullion Anchor (M2)	Fastener Wood **	Special Notes
Casement/ Awning	6"	16"	3"*	6"	#8 x 3" Finish Screw	
Double- or Single- Hung	6"	16"	3"*	6"	#8 x 3" Finish Screw	For windows with integrated Rolscreen® retractable screen, drive jamb screws at each factory pre-punched hole in the jamb liner. Add fasteners as necessary, driving the head past flush of the jamb liner. Avoid Rolscreen components in the head and sill.
Fixed Frame	6"	16"	3"*	6"	#8 x 3" Finish Screw	
Monumental DH > 54" x 96"	6" (head)	16" (head)	3" *	6" *	#8 x 3" Screw	Remove sashes and jamb liners. Drive 1 screw though each jamb liner support clip (top, bottom, checkrail and center of each sash). Drive 2 additional screws through the frame (or secure clips) 3" above and below the checkrail on each jamb. Drive additional screws through the frame (or secure clips) centered between each jamb liner support clip.

* M1 anchor required if design pressure exceeds 20 psf.

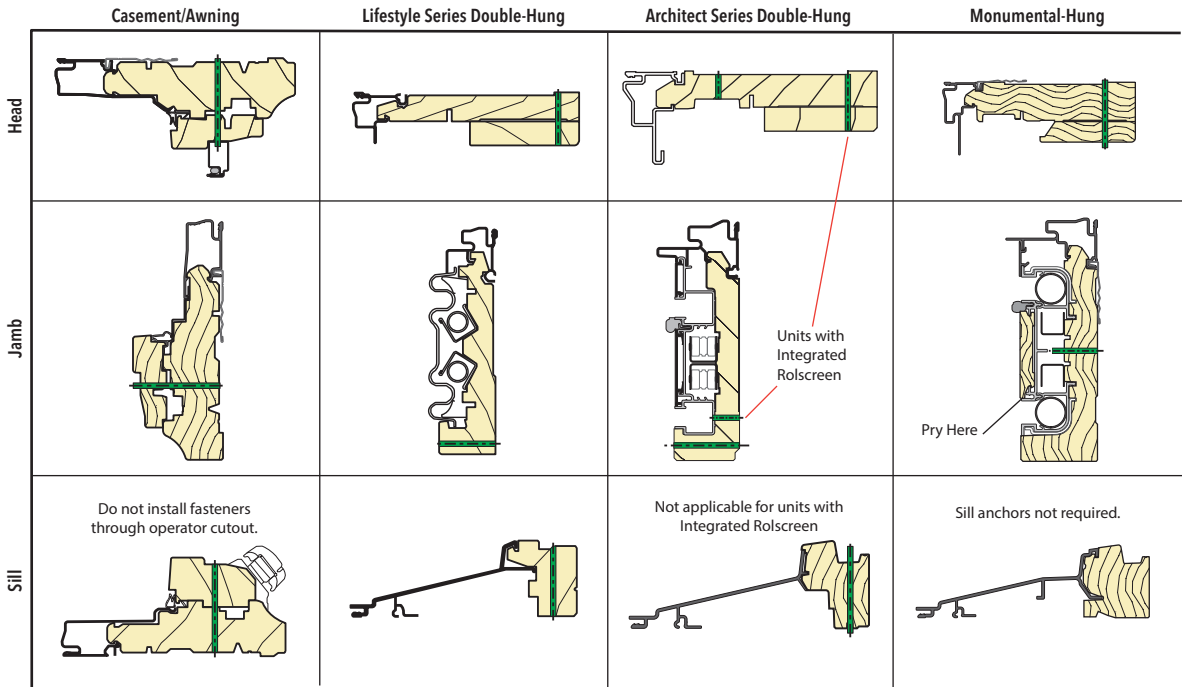
** For light gauge steel framing, use #10 self-drilling/self-tapping screws; For concrete or masonry, use 3/16" masonry screws with 1-1/4" minimum embedment.

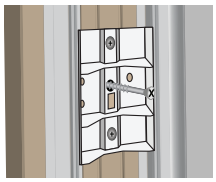

Exterior trim with narrow fin

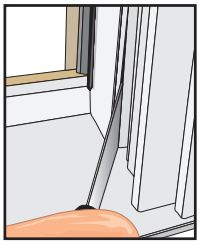


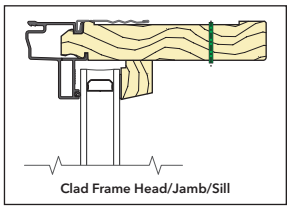


1/8" Pilot Hole Locations



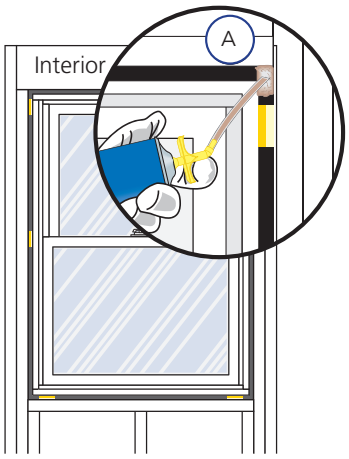

Monumental Hung jamb liner support clip


Pry off Monumental Double-Hung jamb liner


Clad Frame Head/Jamb/Sill

INTERIOR AND EXTERIOR SEALANT

Interior Sealant Instructions



CAUTION: Continuous backer rod (as necessary) and a high quality, low-odor interior sealant such as Pella Window and Door Installation Sealant (or equivalent) is recommended for commercial or high performance installations to create the continuous interior seal. Follow the directions on the cartridge. For standard performance or products with factory applied jamb extensions, use low pressure polyurethane insulating foams. Follow the directions on the can. Do not use high pressure or latex foams. Fiberglass batt or similar insulation is not recommended as it can absorb water and does not act as an air seal.

A. **Insert the nozzle or straw** between the rough opening and window frame from the interior. Use a pliers (if necessary) to compress the end of a straw tube to allow it to fit in tight openings.

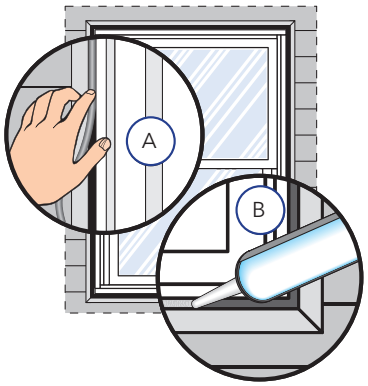
B. **Place a 1" deep bead of foam approximately 1" from the interior of the frame** to allow for expansion. DO NOT fill the entire depth of the rough opening cavity.

NOTE: Apply foam between the frame and rough opening, NOT between jamb extensions and the rough opening.

C. **Re-Check window operation** and remove remaining shipping spacers after foam installation. Excess foam may be removed with a serrated knife after it cures.

D. **To ensure a continuous interior seal,** apply sealant over or around any shims or clips interrupting the foam seal.

Exterior Sealant Instructions



CAUTION: Use a high quality, multi-purpose exterior sealant such as Pella Window and Door Installation Sealant. Follow the directions on the cartridge.

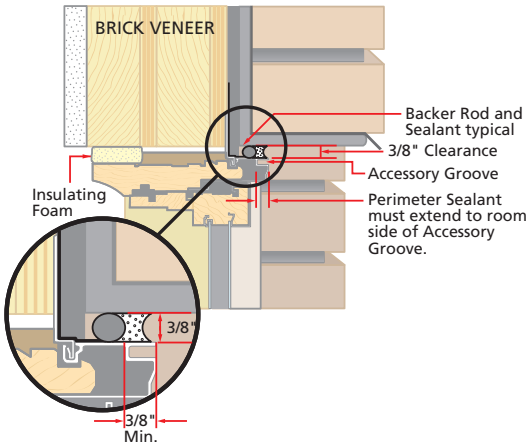
When applying siding, brick veneer , flashing, or other exterior finish materials, leave adequate space between the window frame and the material for sealant application.

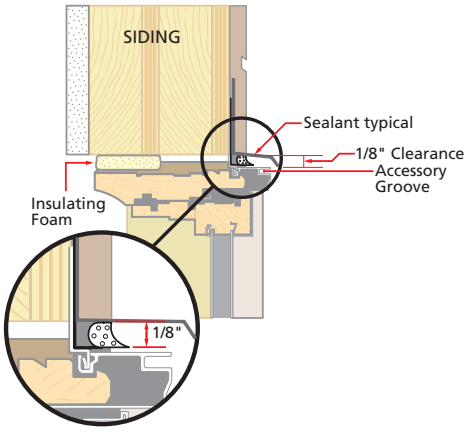
A. **Insert backer rod** 3/8" deep in the space around the window. Backer rod adds shape and controls the depth of the sealant line.

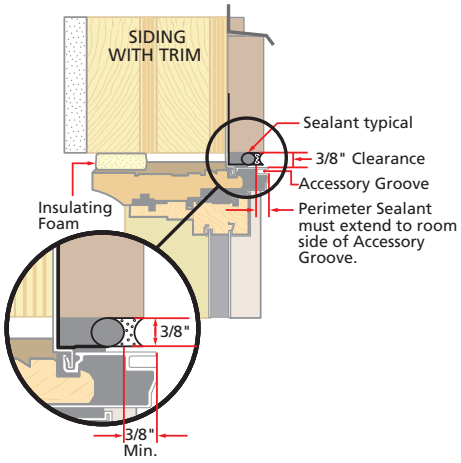
B. **Apply a continuous bead of sealant to the entire perimeter of the window.** Do not block weep holes or weep hoods with sealant.

C. **Shape, tool and clean excess sealant.** When finished, the sealant should be the shape of an hourglass.

NOTE: The siding details below apply to windows without a J-mould as part of the frame. The J-mould frame is only intended for vinyl or metal sidings where the siding is extended behind the J-mould portion of the frame. The J-mould should be removed and replaced with backer rod and sealant with all other siding or trim types.







Product Information Sheet

DuPont™ Tyvek® DrainWrap™

Grooved Air and Water Barrier Engineered to Enhance Drainage

FEATURES/BENEFITS

Description

DuPont™ Tyvek® DrainWrap™ offers excellent drainage and durability for homes. Vertical grooves on the surface of **Tyvek® DrainWrap™** make it a superior moisture barrier, engineered to channel bulk water away from wall systems and drain safely to the outside.

Combined with the superior air and water resistance, vapor permeability and strength of the Tyvek® brand, **Tyvek® DrainWrap™** provides enhanced drainage behind claddings such as primed wood (all six sides), fiber cement siding, and foam board applied over flat substrates.

Air and Water Barrier Performance

- **Tyvek® DrainWrap™** helps hold out bulk water, while allowing water vapor to pass through it, promoting drying in the wall system, which can help prevent mold and water damage.
- The unique non-woven fiber structure of **Tyvek® DrainWrap™** also helps prevent air movement through the walls, contributing to a more energy efficient home.
- **Tyvek® DrainWrap™** is Air Barrier Association of America evaluated to exceed ABAA, ASHRAE 90.1 and IECC air leakage requirements when tested in accordance with ASTM E2357.
- Offers > 98% drainage efficiency when tested in accordance with ASTM E2273.
- Withstands up to four months (120 days) of UV exposure.

Ease of Installation

Tyvek® DrainWrap™ is easy to install. It is pliable, so it wraps around corners with ease. It is also light weight, easier to handle, and faster to install than the average house wrap. In addition, because it's flexible, **Tyvek® DrainWrap™** easily interfaces at joints, and over architectural elements.

Available Sizes

Tyvek® DrainWrap™ is available in 9- and 10-foot width rolls for use behind a variety of claddings. This width minimizes seams and offers the potential for reduction in labor costs, compared to narrower rolls.

High Performance Durability

Compared to other textured moisture barriers, **Tyvek® DrainWrap™** provides superior performance in tests where bulk water was applied between a flat acrylic panel and the moisture barrier. When compared to Grade D building paper and #15 felt, **Tyvek® DrainWrap™** provides superior sustained performance.

Sustainable Solutions

DuPont™ Tyvek® DrainWrap™ may contribute toward LEED® points in the areas of Energy and Atmosphere (EA): Optimizing the Building Envelope and Indoor Environmental Air Quality (EQ): Construction IAQ Management Plan and Low Emitting Materials. In addition, the use of a continuous air barrier is a prerequisite for LEED® applications requiring compliance with ASHRAE 90.1-2010.

By helping to effectively seal the building envelope, **Tyvek® DrainWrap™** helps to reduce the amount of energy required for heating and cooling.

Complete System

Tyvek® DrainWrap™ can be integrated with DuPont self-adhered flashing products and Tyvek® Fluid Applied products to offer seamless protection for wall systems that require mechanically fastened and fluid applied air and water barriers.

PROPERTIES

Review all instructions and (Material) Safety Data Sheet ((M)SDS) before use. Please contact your local DuPont™ Tyvek® Specialist before writing specifications around this product. Product properties are as follows:

Test Method	Property	Typical Value	Units
ASTM E2178 Gurley Hill (TAPPI T-460) ASTM E1677	Air Penetration Resistance	.004 >300 Type 1	cfm/ft²@1.57 psf sec/100cc –
ICC-ES AC 24 Section 6.11 ASTM E2273 ICC-ES AC 235 Section 4.5	Drainage	Pass >98 Pass	– % –
ASTM E96-00	Water Vapor Transmission	Method A 250 36	 g/m²-24 hrs perms
ASTM E96-00	Water Vapor Transmission	Method B 350 50	 g/m²-24 hrs perms
ATTCC 127	Water Penetration Resistance	210	cm
TAPPI T-410	Basis Weight	2.1	oz/yd²
ASTM D882	Breaking Strength	30/30	lbs/in
ASTM D1117	Tear Resistance (Trapezoid)	7/9	lbs
ASTM E84 Flame Spread Index Smoke Developed Index	Surface Burning Characteristics	5 25	Class A Class A
	Ultra Violet Light Exposure (UV)	120 (4)	days (months)

Test results shown represent roll averages. Individual results may vary either above or below averages due to normal manufacturing variations, while continuing to meet product specifications.

WARNING: DuPont™ Tyvek® is combustible and should be protected from an open flame and other high heat sources. If the temperature of DuPont™ Tyvek® reaches 750°F (400°C), it will burn and the fire may spread and fall away from the point of ignition.

DUPONT Tyvek®

For more information visit us at tyvek.com or call 1-800-448-9835

43-D100061-enUS-0221 CDP