

## ANN ARBOR HISTORIC DISTRICT COMMISSION

### Staff Report

**ADDRESS:** 403 Second Street, Application Number HDC25-0131

**DISTRICT:** Old West Side Historic District

**STATUS:** Contributing

**REPORT DATE:** September 11, 2025

**REPORT PREPARED BY:** Mariana Melin-Corcoran, City Planner

**REVIEW COMMITTEE DATE:** Monday, September 8, 2025

#### OWNER

**Name:** David Greiner  
**Address:** 4856 Birkdale  
Ann Arbor, MI 48103  
**Phone:** (734) 904-5972

#### APPLICANT

David Lewis  
Lewis Greenspoon Architects  
440 S Main St, Suite 2  
Ann Arbor, MI 48104  
(734) 786-3757

**BACKGROUND:** The house at 403 Second Street is first shown on the 1916 Sanborn Fire Insurance Map as a two-story dwelling with full-width front porch and a one-story rear section with a rear porch. By 1925, an accessory structure had been constructed near the southeast corner of the parcel. This is the current garage. There were no major changes to the house or garage during the period of significance.

Building permits were filed to enclose the front porch in 1973. It is unclear when the rear porch was enclosed.

**APPLICATION:** The applicant seeks HDC approval to construct a basement egress window and well on the north elevation and to convert a door opening on the west elevation into an egress window. Also included in the application are: an additional basement egress window on the south elevation, removal of non-original siding and trim, un-enclosing the porches, replacing the front door, removing the chain link fence, installing a new on-grade patio, and replacing the garage doors.

**LOCATION:** The house is at the southeast corner of William Street and Second Street, fronting Second Street.

#### APPLICABLE REGULATIONS:



### **From the Secretary of the Interior's Standards for Rehabilitation:**

- (1) A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces, and spatial relationships.
- (2) The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.
- (9) New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.
- (10) New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property will be unimpaired.

### **From the Secretary of the Interior's Guidelines for Rehabilitating Historic Buildings (other SOI Guidelines may also apply):**

#### **Building Site**

*Recommended:* Designing new exterior additions to historic buildings or adjacent new construction which is compatible with the historic character of the site and which preserve the historic relationship between a building or buildings, landscape features, and open space.

Retaining the historic relationship between buildings, landscape features, and open space.

Identifying, retaining, and preserving buildings and their features as well as features of the site that are important in defining its overall historic character.

*Not Recommended:* Introducing new construction onto the building site which is visually incompatible in terms of size, scale, design, materials, color and texture or which destroys historic relationships on the site.

Removing or radically changing buildings and their features or site features which are important in defining the overall historic character of the building site so that, as a result, the character is diminished.

#### **Windows**

*Recommended:* Designing and installing additional windows on rear or other non-character-defining elevations if required by the new use. New window openings may also be cut into exposed party walls. Such design should be compatible with the overall design of the building, but not duplicate the fenestration pattern and detailing of a character-defining elevation.

Repairing window frames and sash by patching, splicing, consolidating or otherwise reinforcing. Such repair may also include replacement in kind of those parts that are either extensively deteriorated or are missing when there are surviving prototypes such as architraves, hoodmolds, sash, sills, and interior or exterior shutters and blinds.

Protecting and maintaining the wood and architectural metal which comprise the window frame, sash, muntins, and surrounds through appropriate surface treatments such as cleaning, rust removal, limited paint removal, and reapplication of protective coating system.

Not Recommended: Introducing a new design that is incompatible with the historic character of the building.

### **Health and Safety**

Recommended: Identifying the historic building's character-defining spaces, features, and finishes so that code-required work will not result in their damage or loss.

Complying with health and safety codes, including seismic code requirements, in such a manner that character-defining spaces, features, and finishes are preserved.

Not Recommended: Altering, damaging, or destroying character-defining spaces, features, and finishes while making modifications to a building or site to comply with safety codes.

### **District or Neighborhood Setting**

Recommended: Designing and constructing a new feature of the building or landscape when the historic feature is completely missing, such as row house steps, a porch, a streetlight, or a terrace. It may be a restoration based on documentary or physical evidence; or be a new design that is compatible with the historic character of the setting.

### **Wood**

Recommended: Identifying, retaining, and preserving wood features that are important in defining the overall historic character of the building such as siding, cornices, brackets, window architraves, and doorway pediments; and their paints, finishes, and colors.

Recommended: Repairing wood features by patching, piecing-in, consolidating, or otherwise reinforcing the wood using recognized preservation methods. Repair may also include the limited replacement in kind – or with compatible substitute material – of those extensively deteriorated or missing parts of features where there are surviving prototypes such as brackets, molding, or sections of siding.

**From the Ann Arbor Historic District Design Guidelines (other guidelines may also apply):**

### **Windows**

Appropriate: Retaining and maintaining windows in good condition. Normal maintenance will include cleaning, sash cord replacement, limited paint removal, re-caulking where necessary, and new paint to make windows fully operable.

Not Appropriate: Changing the number, location, and size or glazing pattern of windows by cutting new openings, blocking-in, or installing replacement sash which does not fit the historic opening.

## **Safety Codes**

Appropriate: Complying with barrier free and safety codes in a manner that ensures the preservation of character-defining features.

## **Residential Porches**

Appropriate: Using replacement features that match the documented historic design. If no documentation exists, using a simple, plain design.

Painting or staining all exposed wood elements.

Not Appropriate: Enclosing a porch in a manner that results in a diminution or loss of historic character.

## **Residential Decks and Patios**

Appropriate: Using railings that have a chamfered top and bottom rail, and simple square or round spindles that are attached to the underside and top of the rails.

Installing a patio flush with grade using stone, brick pavers, or concrete. Custom materials will be considered on a case-by-case basis.

## **Wood Siding, Trim, & Architectural Details**

Appropriate: Preserving and maintaining wood siding, shingles, trim, and architectural features by protecting surfaces with paint or stain.

Repairing wood siding, shingles, trim, and architectural features by using recognized preservation methods for patching, consolidating, splicing, and reinforcing in order to exactly match the existing historic material appearance.

## **Residential Doors**

Appropriate: Retaining, repairing, and maintaining original doors, hardware, and trim, including transoms, sidelights, and surrounds.

Replacing a missing original or non-original door with a design that matches original doors remaining on the house, or with a compatible new design and material that fits the style and period of the house and the existing opening. The Commission will review materials on a



case-by-case basis.

## **Residential Fencing and Walls**

Appropriate: Using wood (picket or alternating board), wrought iron or metal (wrought iron style), or chain link (rear yards only) for fencing.

### **STAFF FINDINGS:**

- 1) The applicant proposes adding three new basement egress windows. The first will be on the south elevation of the one-story rear portion of the house and will not be visible from the street.

The second egress window will be at the rear (east) elevation of the house. The existing exterior basement door is proposed to be converted to a window. The existing well and stairs will be retained, so the change will not be very visible from the right of way.

The third egress window will be on the north elevation (facing William Street), near the front of the house. There is an existing window in this location, but the opening is proposed to be enlarged for egress purposes. New landscaping (3ft bushes scattered across the north side of the house) is proposed to screen the new window well. The grade of the site will also help shield the window well from the right of way.

All egress windows will be fiberglass. The new window wells will be timber. Dimensions were not included in the drawing set.

- 2) As part of the work, the walls on both the front and rear porches will be removed to un-enclose them and restore the original design. The existing roofs, floors, and stairs will remain and be repaired as necessary. On the front porch, new round 8in diameter wood posts will be used. A new wood railing and new square skirting will be installed, and the design shown on the drawing set meets the Design Guidelines. On the rear porch, simple 4x4in square wood posts will be used, and there will be no railing.

The non-original front door will be removed and replaced with a wood paneled door.

- 3) The siding on the garage will be repaired and repainted. The person door on the north elevation will be replaced with a new wood door in the same opening. A small paver landing will be added. The garage door will be replaced with a simple wood door in the existing opening. Wall sconces will be added for light on either side of the garage door, and a non-original light fixture will be removed.
- 4) The applicant proposes removing the non-original asbestos siding on the house and repairing the wood siding beneath. The non-original aluminum trim will also be removed and the original wood trim restored. The existing wood windows on the house and garage will be repaired.
- 5) A new on-grade paver patio will be added on the northeast corner of the site, at the rear

of the house. It will measure 12x12ft and will be set back 16ft8in from the sidewalk on William St.

- 6) The chain-link fence around the perimeter of the property will be removed.
- 7) Besides the egress windows, the rest of the proposed work could be staff approved. The applicant has chosen to include all work in one application.

The new egress window on the south elevation and the converted egress window on the east elevation are in appropriate locations. Egress windows on highly visible elevations are not appropriate, but the applicant has explained that the chosen location for the third egress well on the north elevation is the only possible location. There are limited possibilities given that the house is on a corner lot. Converting an existing basement window keeps the fenestration pattern, and the applicant has proposed new landscaping as screening.

The Staff believes that the rest of the work is appropriate and meets the Secretary of the Interior's Standards for Rehabilitation and the Ann Arbor Historic District Design Guidelines. In particular, un-enclosing the porches, removing the non-original siding, and removing the chain-link fence will restore important aspects of the house's historic character and have a positive impact on the setting and district.

## MOTION

(Note that the motion is only a suggestion. The Review Committee, consisting of staff and at least two Commissioners, will meet with the applicant on site and share their observations at the meeting.)

I move that the Commission issue a certificate of appropriateness for the application at 403 Second Street, a contributing property in the Old West Side Historic District, to create two new egress window wells, convert the basement door into an egress window, remove the non-original siding and trim and repair the original siding and trim, un-enclose the porches, replace the front door, replace the garage doors, add a paver patio, and remove the chain-link fence. As proposed, the work is compatible in exterior design, arrangement, materials, and relationship to the house and the surrounding area and meets *The Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings*, in particular standards 2, 9, and 10 and the guidelines for building site, windows, health and safety, district or neighborhood setting, and wood, as well as the *Ann Arbor Historic District Design Guidelines*.

**ATTACHMENTS:** application materials, photos, drawings



403 Second Street (2007 staff photo)

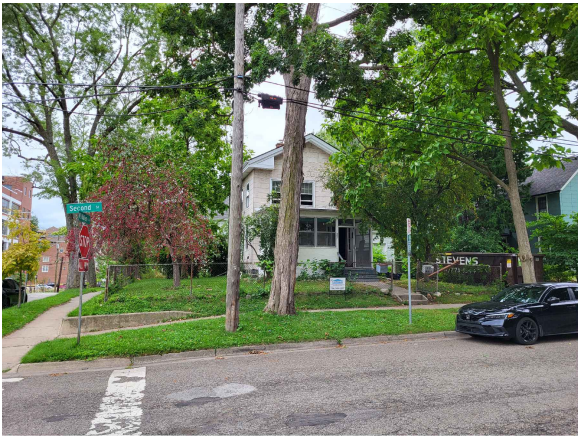




side / north (William Street)



front / west (Second Street)



front / west (Second Street)



existing front porch



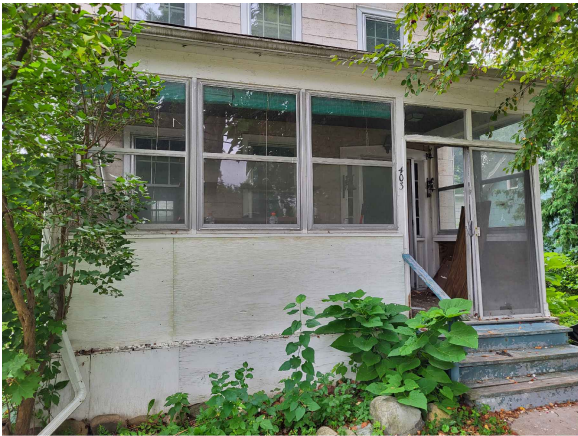
front / west (Second Street)



existing front porch



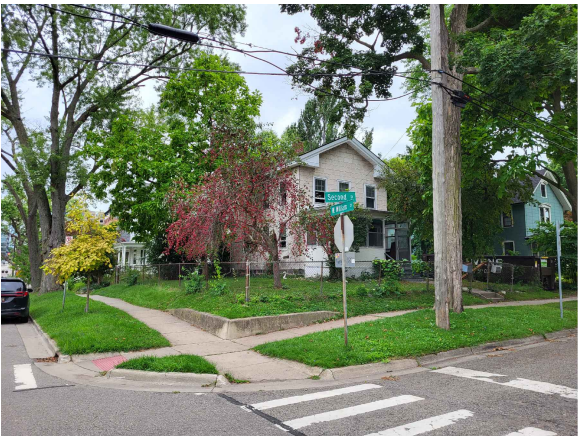
rear (from William)



existing front porch



side / north (William Street)



view from intersection



existing front porch

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ann arbor, mi 48104  
734 . 786 . 3757  
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**Greiner  
Realty  
Resources**

exterior  
improvements

403 Second Street  
Ann Arbor, MI 48103

21 AUG 2025

EX1

EXTERIOR PHOTOS  
project no. 25057





existing garage (west)



existing garage (west)



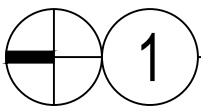
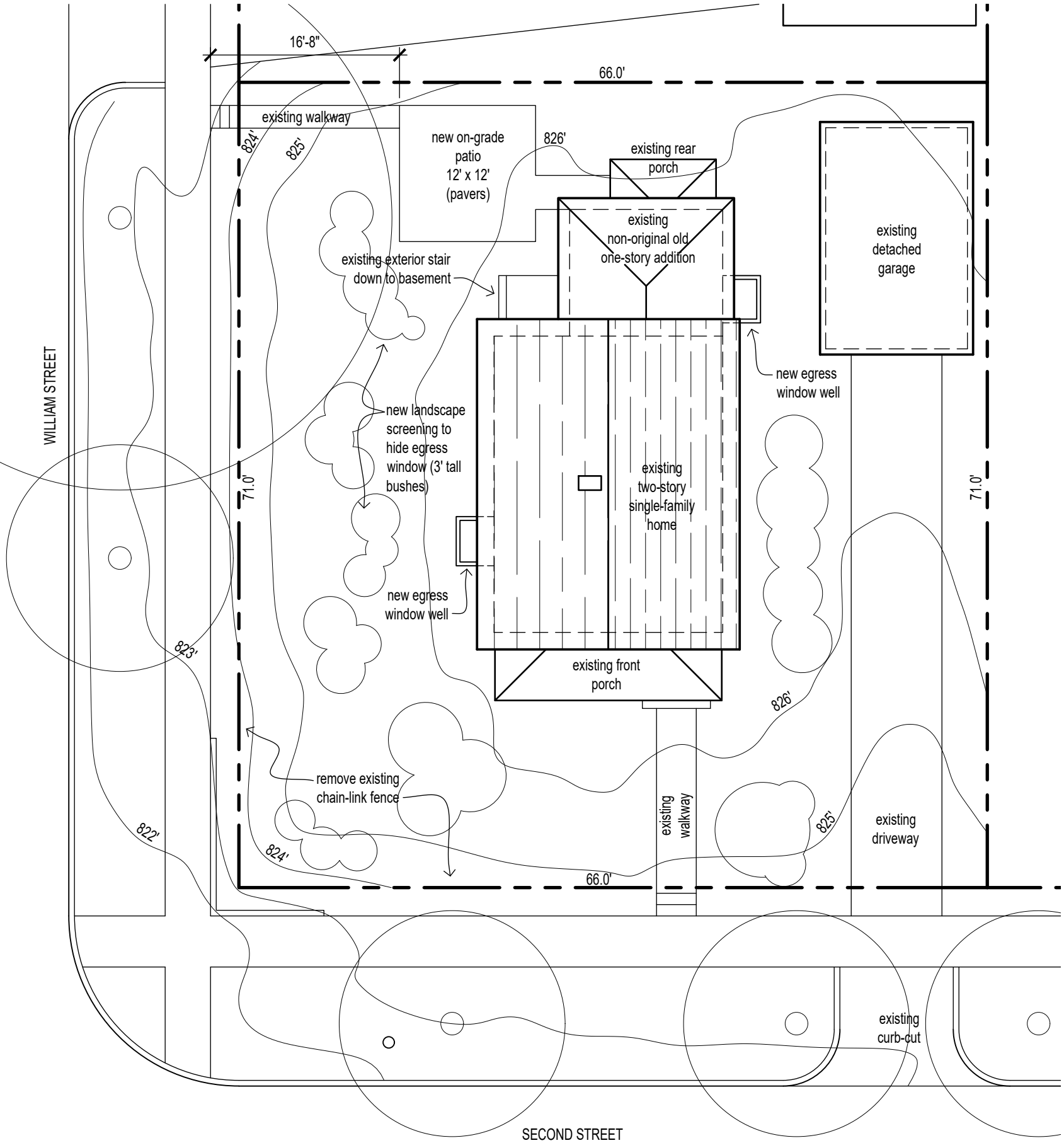
existing garage (north)



existing garage man-door  
note: existing door is in very poor condition with missing wood at the bottom and needs to be replaced

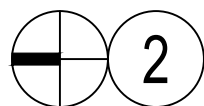
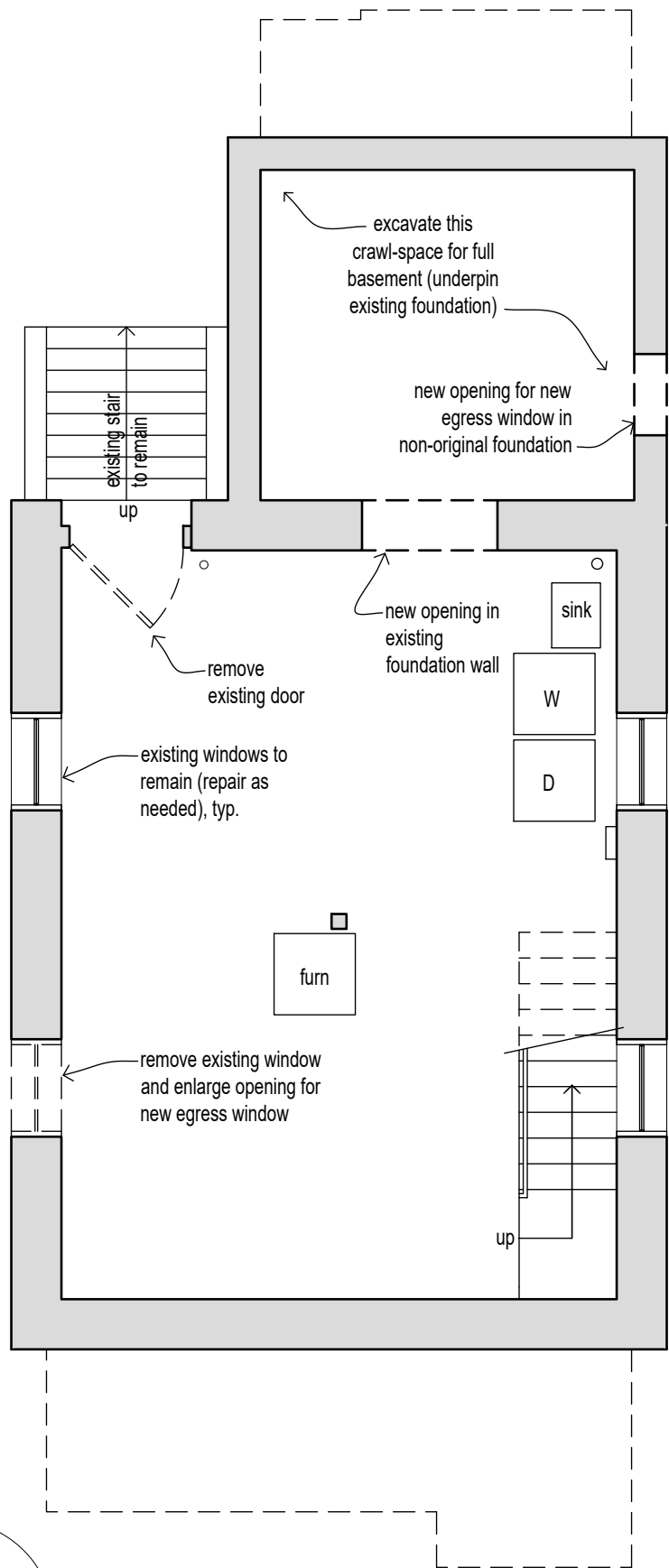
SCOPE OF WORK

1. remove existing non-original asbestos siding and restore original wood siding (house).
2. remove existing non-original aluminum trim and restore original wood trim.
3. repair existing non-original wood windows in house and garage.
4. add two new egress windows wells - one on the north side and one on the south side of the house.
5. convert the existing exterior basement door to an egress window (existing well to remain)
6. remove non-original walls and windows of front and rear porches - create open porches.
7. new patio (pavers) north-east of house
8. remove existing chain-link fence along property line.
9. repair and paint existing wood siding at garage.



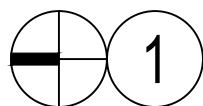
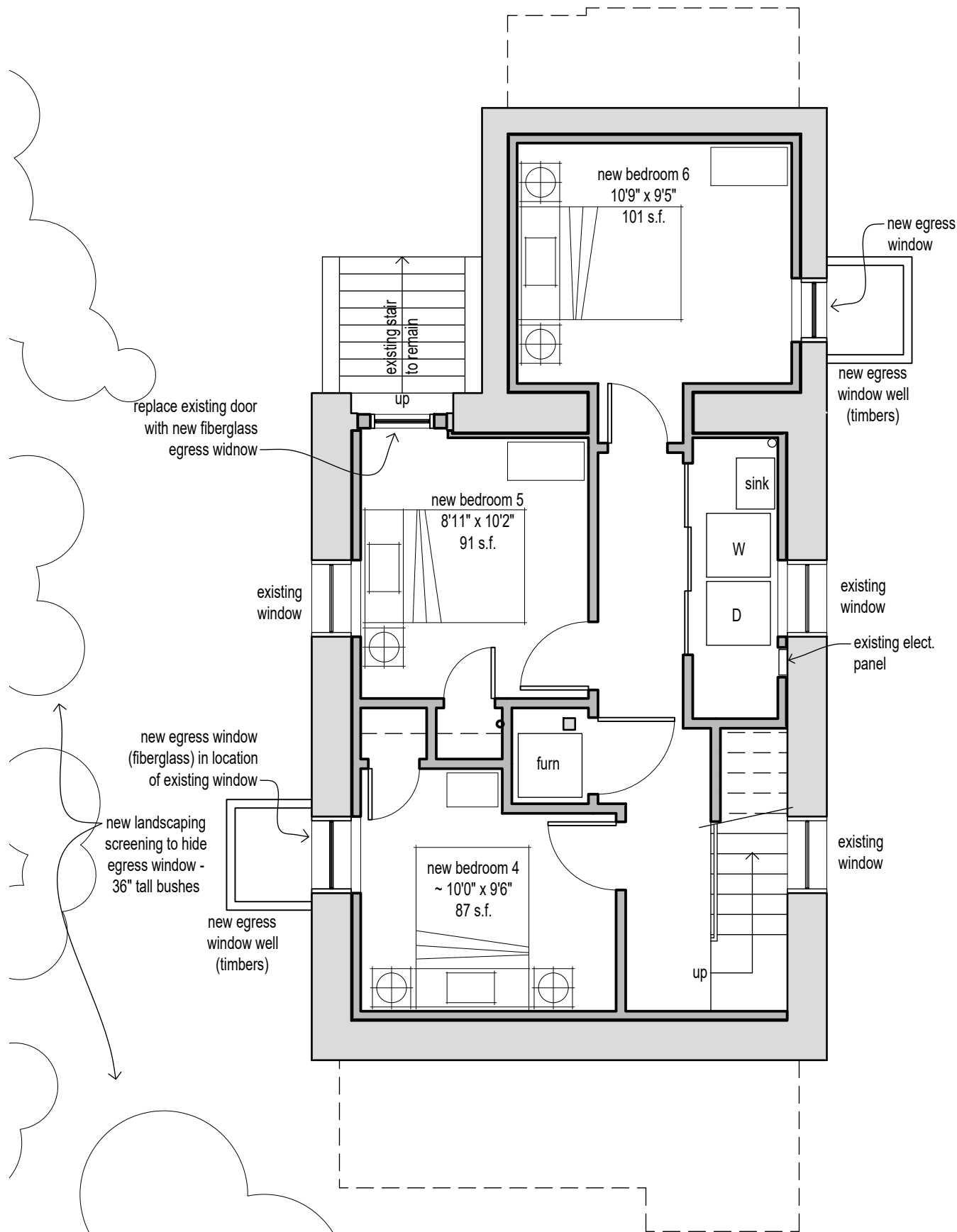
SITE PLAN

3/32" = 1'-0"



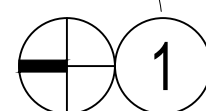
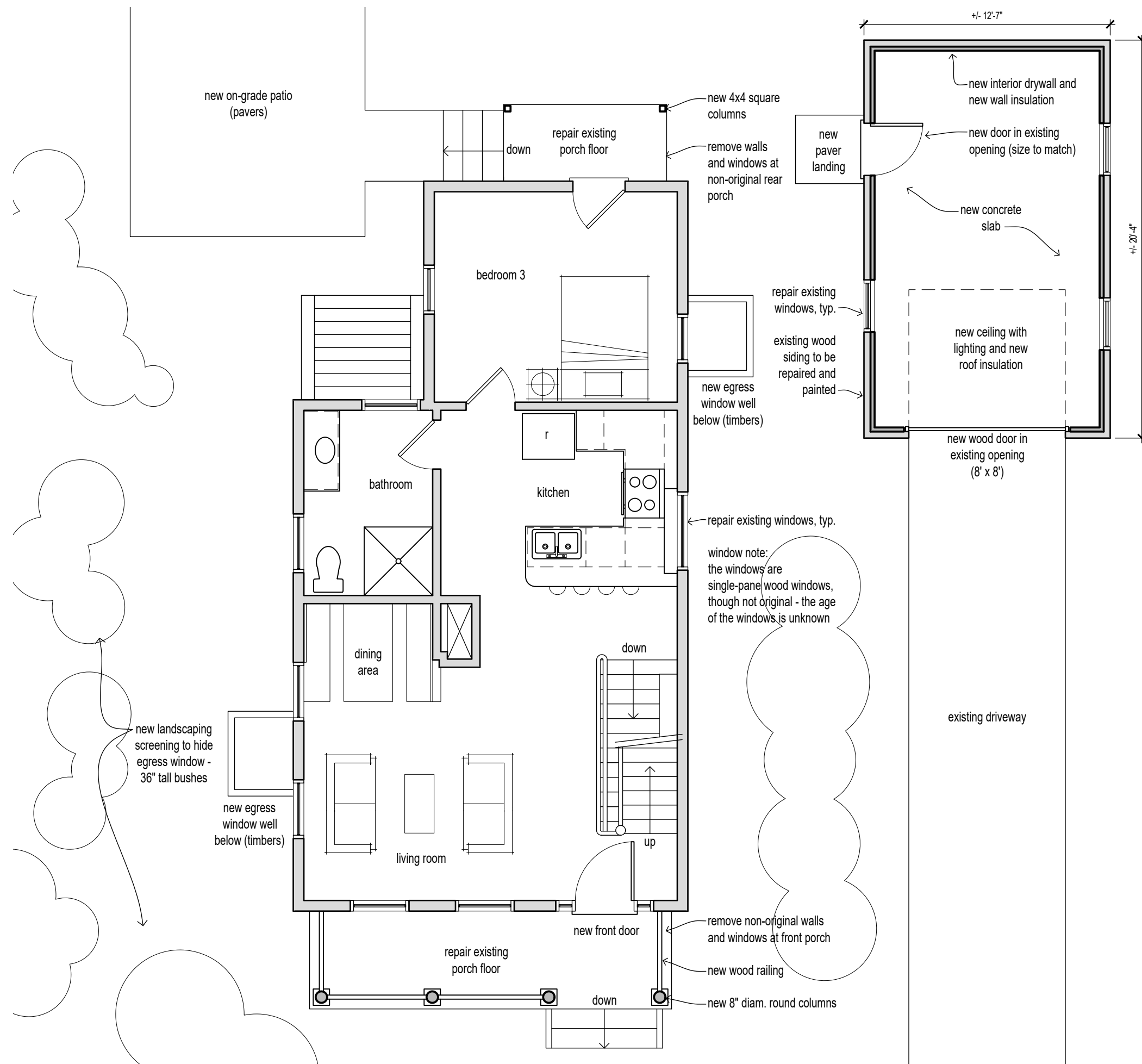
**BASEMENT PLAN - EXISTING / DEMO**

3/16" = 1'-0"



**BASEMENT PLAN - PROPOSED**

3/16" = 1'-0"



## FIRST FLOOR PLAN - PROPOSED

3/16" = 1'-0"

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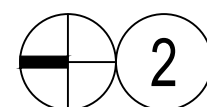
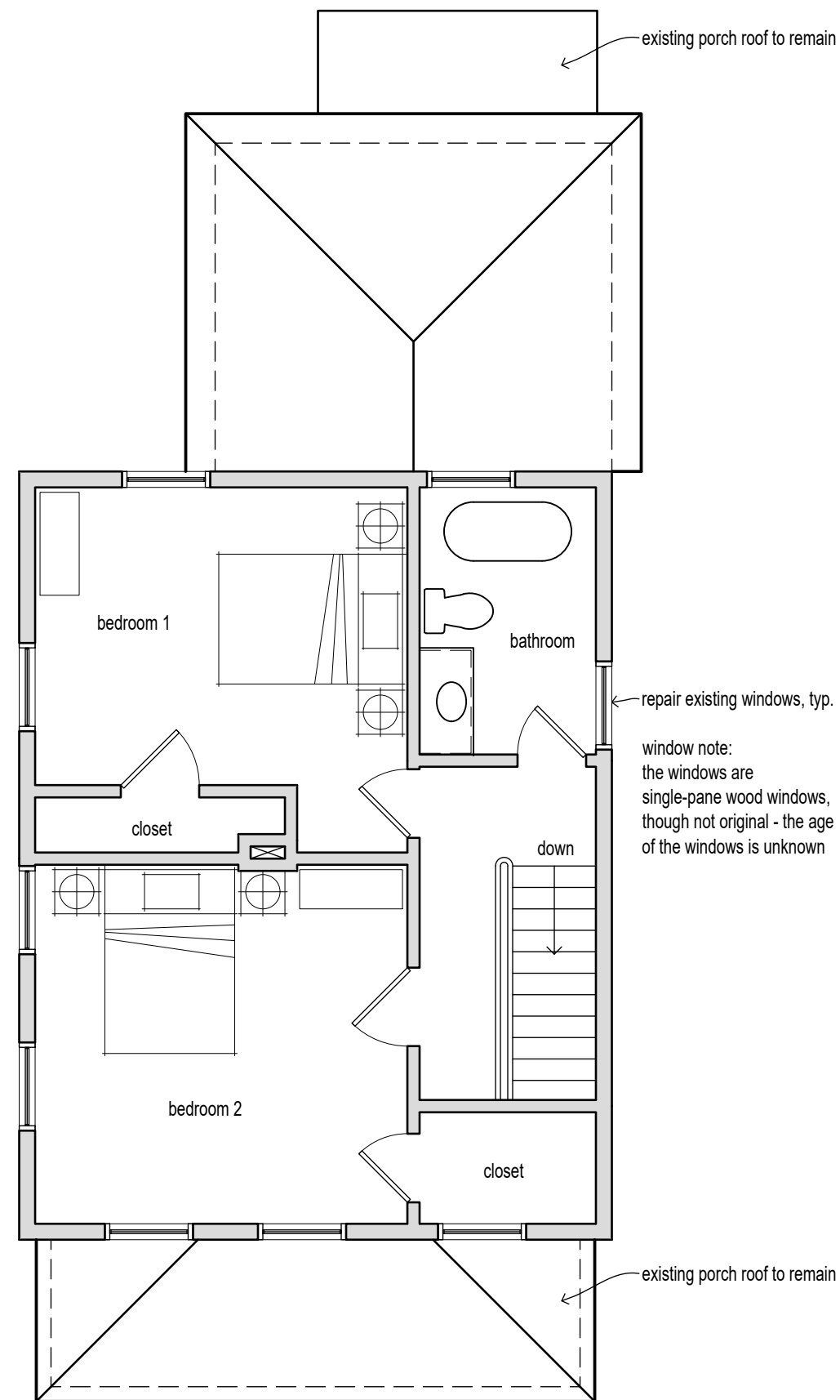
403 Second Street  
Ann Arbor, MI 48103

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A2.2

FLOOR PLANS  
project no. 25057





## SECOND FLOOR PLAN - PROPOSED

3/16" = 1'-0"

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**A2.3**

F L O O R   P L A N S  
project no. 25057

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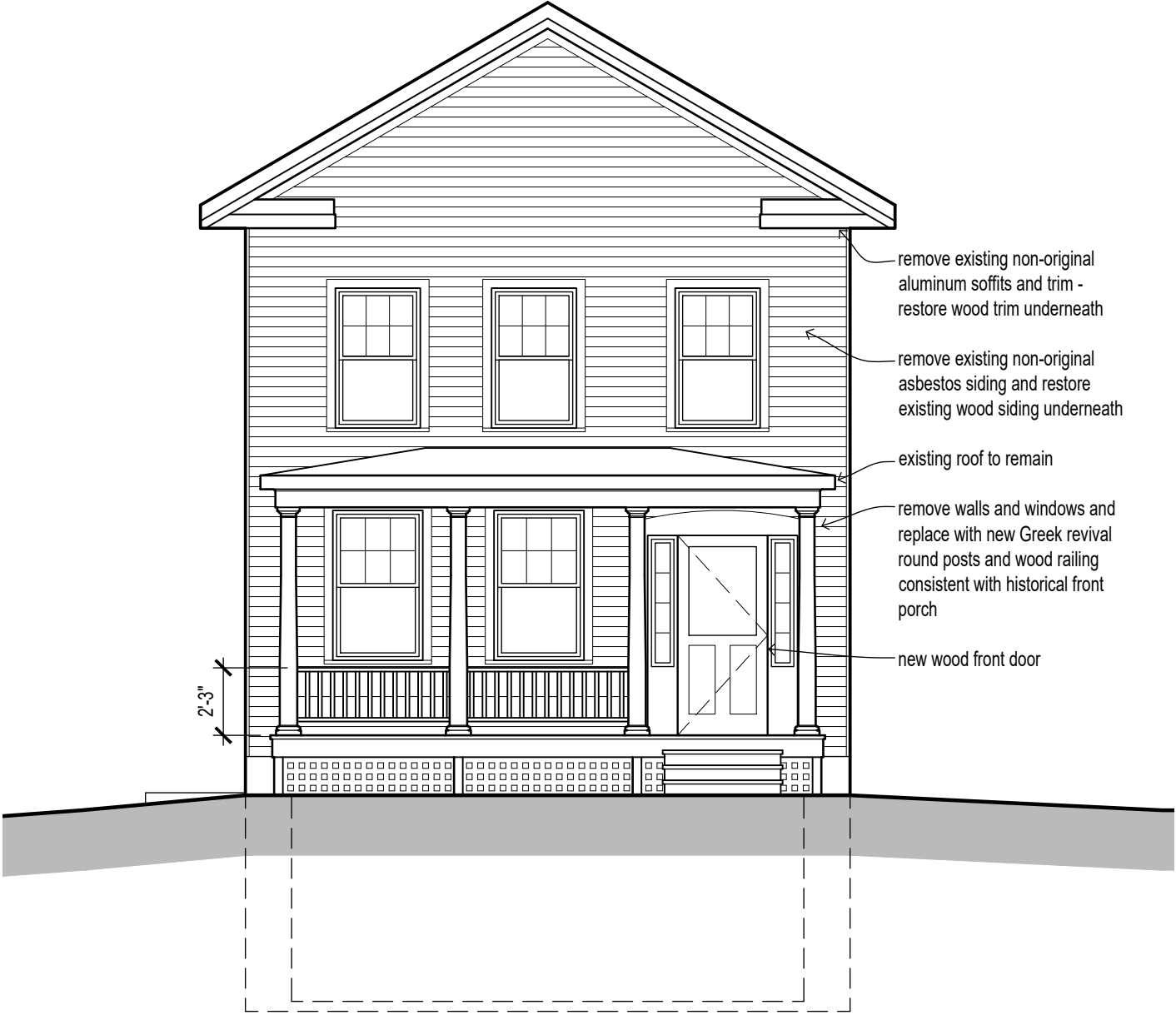
exterior  
improvements

403 Second Street  
Ann Arbor, MI 48103

21 AUG 2025

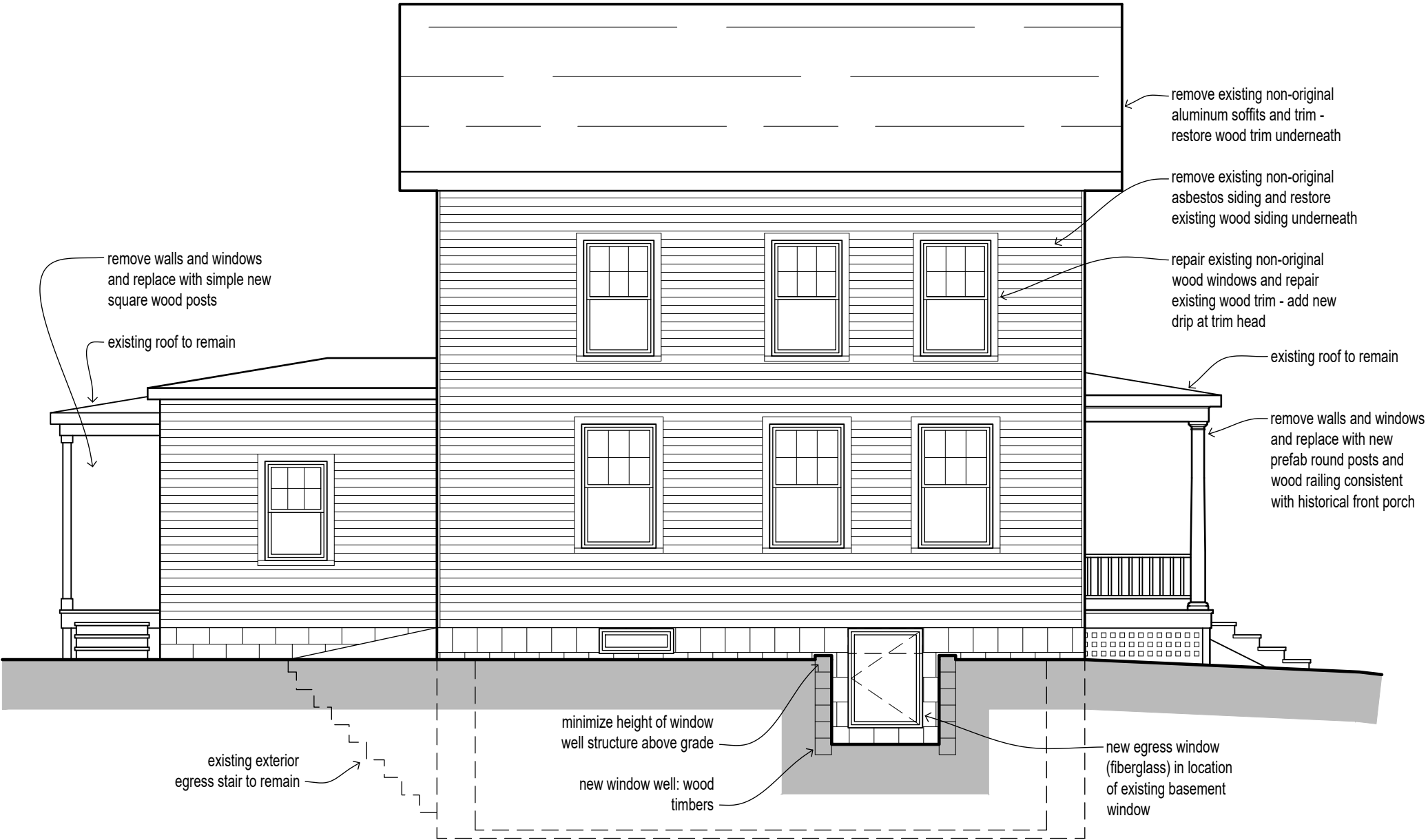
A3.1

EXTERIOR ELEVATIONS  
project no. 25057

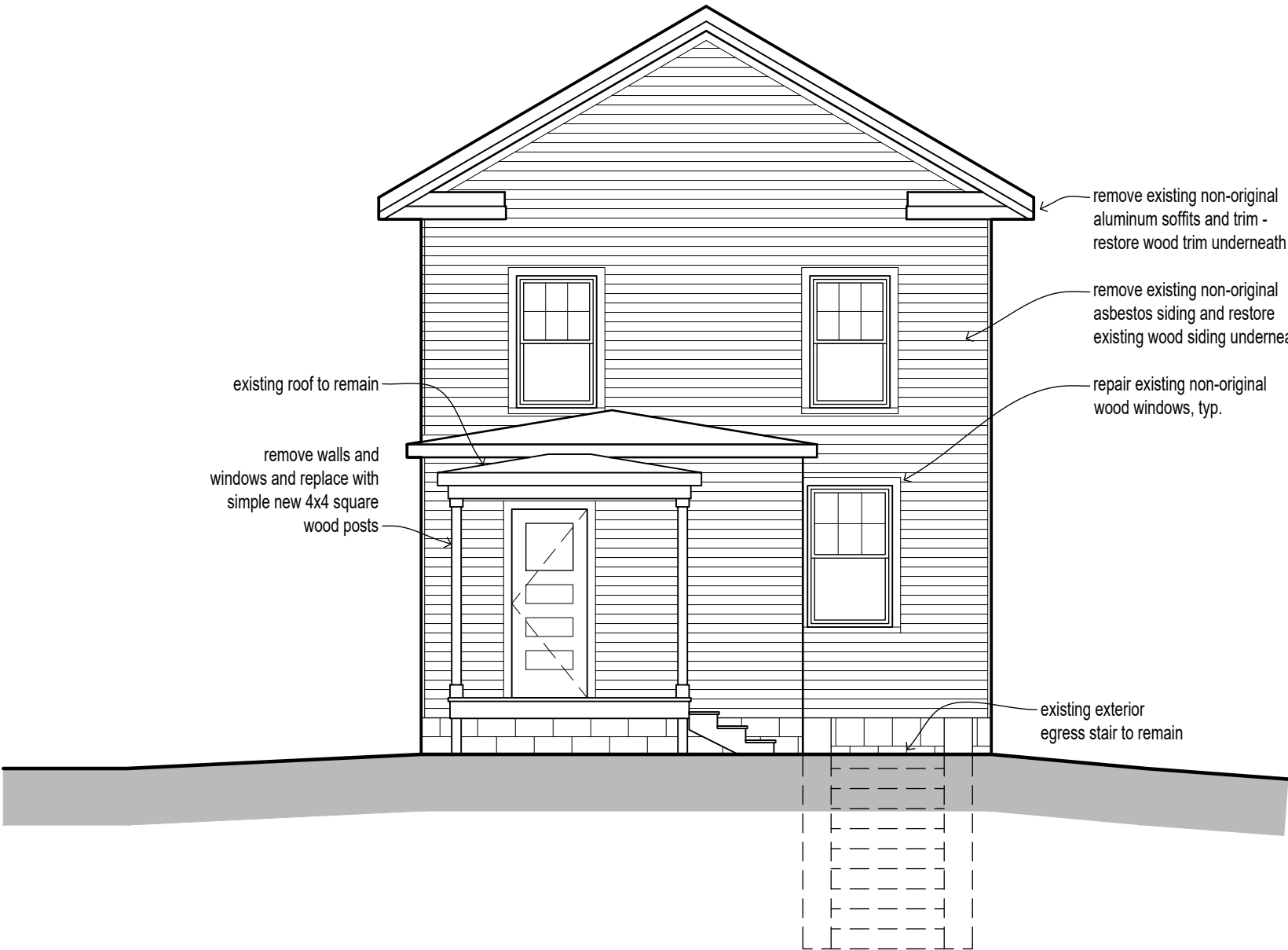


S

1 FRONT / WEST ELEVATION  
3/16" = 1'-0"



1 SIDE / NORTH ELEVATION  
3/16" = 1'-0"



1

REAR / WEST ELEVATION

3/16" = 1'-0"

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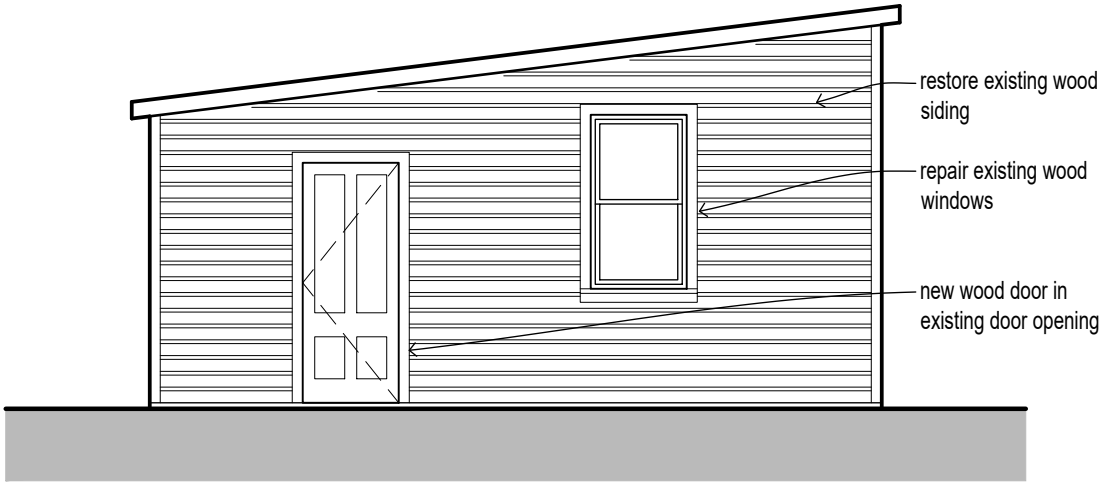
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A3.4

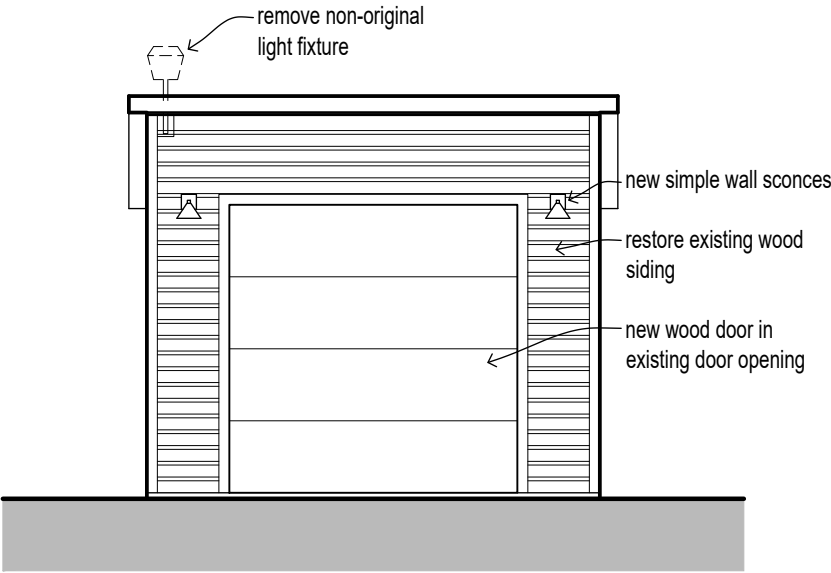
EXTERIOR ELEVATIONS  
project no. 25057



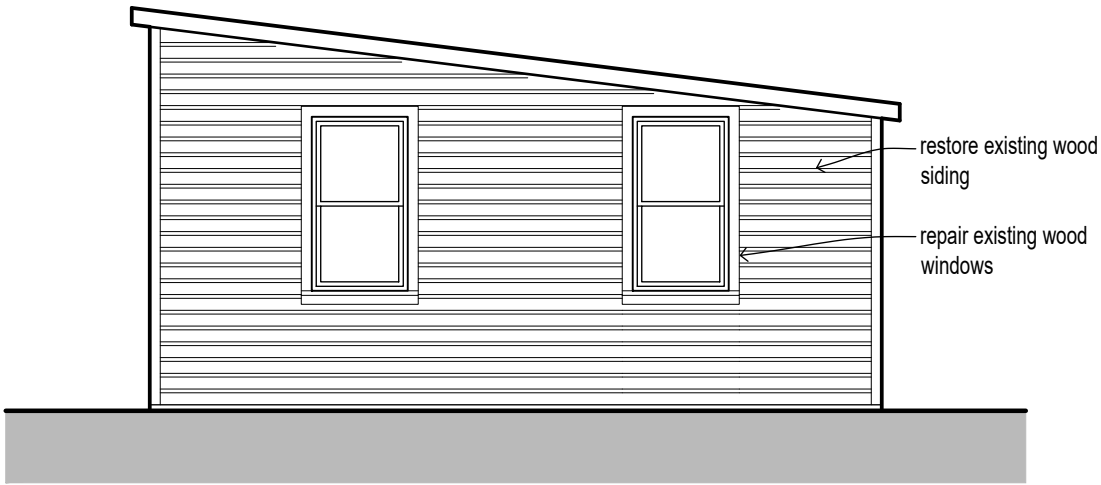
1 SIDE / SOUTH ELEVATION  
3/16" = 1'-0"



2 SIDE / NORTH ELEVATION  
3/16" = 1'-0"



3 FRONT / WEST ELEVATION  
3/16" = 1'-0"



1 SIDE / SOUTH ELEVATION  
3/16" = 1'-0"

**Constructed from high-quality, kiln-dried western woods with a polystyrene insulation core, our flush-style wood door combines expert craftsmanship and durable materials to enhance your home's appeal while complementing a broad range of architectural designs.**



# DOOR CONSTRUCTION

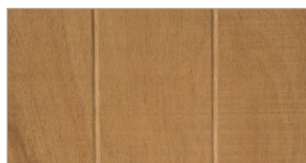
EXTERIOR	INTERIOR	FRAME	TOTAL THICKNESS	PRIMING
3/8" Rough Sawn Ply-wood	1/4" Smooth Plywood	1-1/16"	1.6875"	Not Primed, Standard
5/8" T1-11 Plywood with 1/4" Grooves	1/4" Smooth Plywood	1-1/16"	1.9375"	Not Primed, Standard
1/4" Smooth Plywood	1/4" Smooth Plywood	1-1/16"	1.5625"	Not Primed, Standard
3/8" Marine Grade	1/4" Smooth Plywood	1-1/16"	1.6875"	Not Primed, Standard

- Distinctive exteriors to personalize your home
- Shiplap construction minimizes air infiltration
- Hand assembled
- External panels are pressure-bonded to framework with high-strength, waterproof adhesive

## WOOD TYPES



Rough Sawn Plywood



T1-11 Plywood



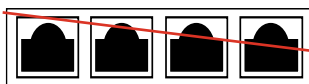
Smooth Plywood



Marine Grade

**Wood swatches shown have been treated with an after market stain. All doors will arrive unfinished.**

## WINDOWS



Cathedral\*



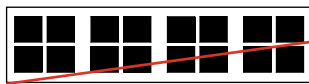
Real Sunray



False Sunray\*



2 Panel – 2 over 2



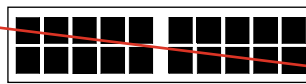
4 Panel – 2 over 2



2 Panel – 3 over 3



2 Panel – 4 over 4



2 Panel – 5 over 5

*Windows shown for 1 car panel designs. Not all window will fit all door sizes. Factory will advise if there is a problem with fitting.*

*\*Molded designs with plastic inserts may not fit all panel sizes. Consult your distributor for availability.*



### Limited Warranty

The manufacturer warrants wood doors will be free from defects in material and workmanship for a period of one year from time of delivery.

**Wayne Dalton**

DISTRIBUTED BY:

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Lewisville, TX 75067

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# JELD-WEN®

AUTHENTIC WOOD  
EXTERIOR DOORS







# THE WARMTH AND BEAUTY OF REAL WOOD

Crafted to bring the warmth and beauty of real wood to any residential architectural style, JELD-WEN® Authentic Wood exterior doors are available in an array of designs and wood species, and feature a dense engineered core shielded with premium veneers for lasting performance.

AUTHENTIC WOOD HEMLOCK PREMIUM SASH 12-LITE (5112)

# AUTHENTIC WOOD EXTERIOR DOOR DESIGNS

## MERANTI MAHOGANY PREMIUM

---

Meranti Mahogany is a highly durable hardwood that's naturally more resistant to insects, rot, and weather conditions compared to other wood options. Its rich color and deep graining looks beautiful with both clear stain and pigmented stain, offering a variety of aesthetic options. Meranti Mahogany Premium Doors feature 1-1/8" thick internal panels for a stronger and more energy-efficient build.

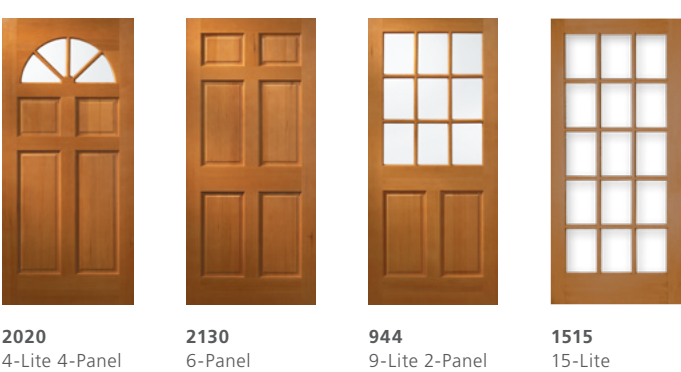


Craftsman doors feature 5/8" thick internal panels

## HEMLOCK TRADITIONAL

---

Hemlock features a finely textured, straight grained appearance. The light, even color takes stain beautifully and will not darken over time. Hemlock Traditional Doors feature 3/4" thick internal panels for a lightweight and affordable design.



HEMLOCK PREMIUM

Hemlock features a finely textured, straight grained appearance. The light, even color takes stain beautifully and will not darken over time. Hemlock Premium Doors feature 1-1/8" thick internal panels for a stronger and more energy-efficient build.



**5001**  
Full Lite



**5010**  
10-Lite



**5015**  
15-Lite



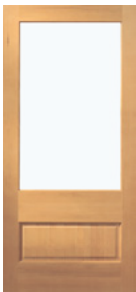
**5018**  
18-Lite



**5001SL**  
(Clear or Low-E  
insulating glass)



**5005SL**



**5101**  
1-Lite 1-Panel



**5404**  
4-Lite 4-Panel



**5201**  
1-Lite 2-Panel



**5209**  
9-Lite 2-Panel



**5112**  
12-Lite



**5101SL**



**5201SL**



**5203SL**



**5104SL**



**6201**  
Craftsman  
2-Panel



**6203**  
Craftsman  
3-Lite 2-Panel



**6206**  
Craftsman  
6-Lite 2-Panel



**5066**  
6-Panel



**6101SL**

Craftsman doors feature 5/8" thick internal panels

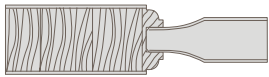
Actual colors may vary from samples shown due to printing process and/or differing monitor calibrations.



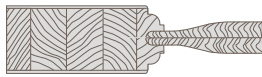
# AUTHENTIC WOOD EXTERIOR DOOR FEATURES

## PANEL PROFILE OPTIONS

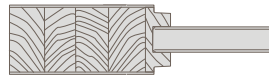
Whether you prefer traditional or contemporary, JELD-WEN has panel profile options that will distinguish your home's exterior door with beautiful quality and attention-to-detail design.



1-1/8" SINGLE-HIP  
RAISED PANEL PROFILE

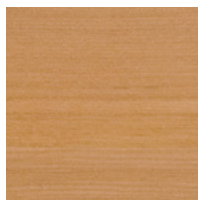


3/4" SINGLE-HIP  
RAISED PANEL PROFILE

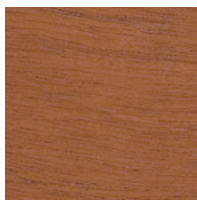


5/8" FLAT PANEL PROFILE

## WOOD SPECIES OPTIONS

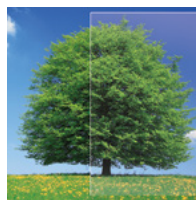


HEMLOCK



MERANTI  
MAHOGANY

## GLASS OPTIONS



CLEAR

Clear insulating glass maximizes natural light to create a clean, open, and inviting feel at the home's entryway.



BEVELED

Clear insulating beveled glass allows light to flow into or out of the home and adds visual interest to your door.

## CRAFTSMAN SHELF



Available with Craftsman designs only



AUTHENTIC WOOD MERANTI-MAHOGANY  
PREMIUM SASH 6-LITE 1-PANEL (5106)



AUTHENTIC WOOD MERANTI-MAHOGANY  
PREMIUM SASH 4-LITE 1-PANEL (5104)



AUTHENTIC WOOD HEMLOCK  
PREMIUM CRAFTSMAN 6-LITE 2-PANEL (6206)

For more information, contact your JELD-WEN sales representative today.

**JELD-WEN**

\*For warranty details, visit [jeld-wen.com](https://jeld-wen.com), click Support, and select JELD-WEN Warranties.



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10-99444 12/24

LIMITED  
**5-YEAR** \*  
WARRANTY

8" Diameter x 9' Overall Height - Round Tapered Smooth (FRP), Smooth Finish - Ready to be Painted, with Tuscan Capital and Tuscan Base

Part Number: ES0809ATPSATUTU



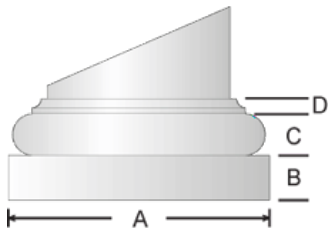
EnduraStone® FRP Columns with Flame Guard set a new industry standard:

Flame Spread Index (FSI) Smoke Developed Index (SDI)

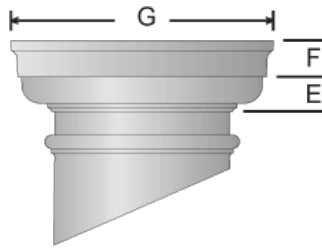
Industry-Standard for FRP Columns	70-85	900-1025
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Endura-Stone® Columns	15*	335**
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\*Class I Flame-Spread classification under 1997 uniform fire code.  
\*\*Well below the allowable SDI index of 450.



**TUSCAN BASE**




**TUSCAN CAPITAL**

Plinth		Torus		Total Height
A	B	C	D	B-D
10- 7/8"	1- 7/8"	1- 3/4"	5/8"	4- 1/4"

Echinus	Abacus		Total Height
E	F	G	E-F
1- 1/4"	1- 3/8"	9- 7/8"	2- 5/8"

**COLUMN SPECIFICATIONS**

Plan Type A <sup>1</sup>		Trimming from bottom of shaft <sup>2</sup>				Load Bearing Capacity <sup>3</sup>
Unsplit / Whole	Column Height	w/o Interfering w/Taper		w/o Interfering w/Panels		
	A	B	w/base	E	w/base	
	108"	62"	57- ¾"	108"	103- ¾"	
						10,000 lbs.

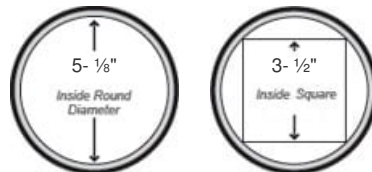
**SHAFT SPECIFICATIONS**

Shaft Bottom		Shaft Top			
Outside	Inside	Outside	Inside	Astragal	Neck Height
C*	D**	H*	I**	F	G
8"	6- 3/4"	6- 1/2"	5- 1/2"	1/2"	4- 3/8"

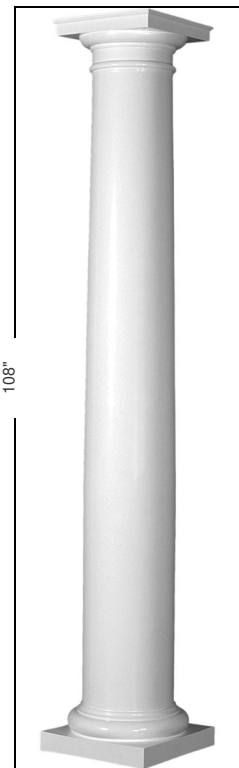
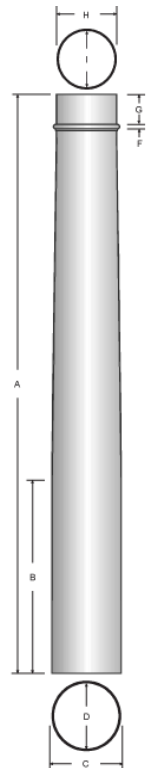
\*Actual outside diameters are approximately 5/16" to 1/2" less than shown

\*\*Actual inside diameters may vary by 3/8"

**OTHER INFORMATION**



Material <sup>4</sup>			Wraps Post Size <sup>5</sup>		Weight			
Shaft	Capital	Base	Round (Fits up to)	Square (Fits up to)	Shaft	Capital	Base	Total
FRP	Urethane	FRP	5- 1/8"	3- 1/2"	70.00 lbs.	1.30 lbs.	3.50 lbs.	74.8 lbs.



EXTERIOR COLUMNS



INTERIOR COLUMNS



SQUARE COLUMNS



COMMERCIAL COLUMNS



# ABOUT ENDURA-STONE COLUMN MATERIALS

Endura-Stone™ column shafts are manufactured of one-piece rotocast fiberglass reinforced polymer (FRP) with marble dust. Our proprietary method of manufacturing our column shafts is patented. This one-piece construction, combined with the inherent strength of FRP (pound for pound, FRP is stronger than concrete, steel, or aluminum), provides an exceptionally high load-bearing capacity, and a column that is impervious to rot, decay and insect damage. Unlike wood columns, the non-porous, waterproof shafts can be used as channels for downspouts, wiring, and plumbing.

Endura-Stone™ columns include Flame Guard, and were the first in the industry to pass the ASTME, 84-01 Class 1 Flame-Spread Classification tests, achieving a Flame Spread index of 15, and Smoke Developed Index of 335, well below the allowable SDI index of 450.

Six-inch through twelve-inch diameter (up to twelve foot in height) standard FRP shafts are factory sanded. Larger shafts (and square shafts) may require field-sanding prior to installation. All shafts are shipped unfinished, and need to be finished with a high quality 100% acrylic latex primer and paint.

Standard FRP column shafts are the same height as the listed size. Tuscan and Roman Doric caps and bases, and Attic bases go around the shaft, and do not affect the overall height. Ornamental capitals are set on top of the shaft (after the shaft is trimmed to the astragal), and do affect the overall height: see the Ornamental Capitals for Round Columns specifications for more information.

## HELPFUL INFORMATION

### 1. Plan Types

Endura Series Columns are as unique as the different types of installations that are available. We offer our Endura Series Columns in a wide variety of "Plan Types". These "Plan Types" are the style and type of shaft, capital, and base you will receive. If you are using them as half columns against a wall, you would want to select a "D" plan type for round or "F" plan type for square. This would give you a column that could be installed against a wall. These are the most common plan types, however, we can do custom plan types if your project requires it.



### 2. Trimming from Bottom of Shaft

- i. w/o Interfering w/Taper:  
This is the amount that can be trimmed, from the bottom of the column, before it will cut into the taper of the column.  
**w/base:** The base of the column "wraps" around the column shaft. If you are using a base, we recommend this dimension as the maximum amount to trim off the column shaft.
- ii. w/o Interfering w/Flutes or Panels:  
This is the amount that can be trimmed, from the bottom of the column, before it will cut into the fluting or panels of the column.  
**w/base:** The base of the column "wraps" around the column shaft. If you are using a base, we recommend this dimension as the maximum amount to trim off the column shaft.

### 3. Load Bearing Capacity

See "Calculated Safe-Load **Capacities** for Endura-Stone Columns" below for details.

### 4. Material Information

- i. FRP (Fiberglass Reinforced Polymer):
- ii. Urethane (Polyurethane):
- iii. ABS (Acrylonitrile Butadiene Styrene):
- iv. PVC (Expanded Cellular PVC):
- v. Endura-Glass (Fiberglass):

### 5. Wraps Post Size

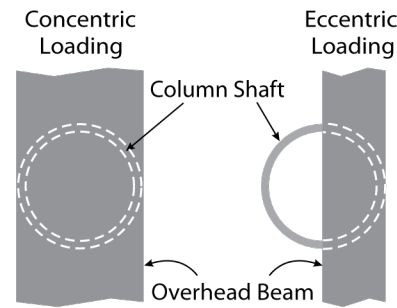
This is the size post this column can wrap around. The column can be ordered in halves to wrap around an existing post, or if you are installing the post and the column at the same time, you can slide the post through the column shaft, capital, and base.

## CALCULATED SAFE-LOAD **CAPACITIES** FOR ENDURA-STONE COLUMNS

The sample columns tested supported loads at least four times the calculated value above prior to failure. The load was applied concentrically through the axis of the column. Loads shown are valid only if there is uniform contact between the full area of column ends and the cap & base units. Loads are provided for your convenience only and are not exact values. Consult a structural engineer for the most accurate load estimates.

**\*Concentric Load:** A load which passes through the centroid of the cross section of a structural member and acts normal to the cross section.

**\*\*Eccentric Load:** A load imposed on a structural member at some point other than the centroid of the section.



Safe-Load Capacities					
Tapered Shafts			Non-Tapered Shafts		
Shaft Dia.	*Concentric Load	**Eccentric Load	Shaft Dia.	Concentric Load	Eccentric Load
6"	6,000	6,000	6"	6,000	6,000
8"	10,000	6,600	8"	10,000	10,000
10"	14,000	10,720	10"	12,800	11,520
12"	18,000	13,200	12"	18,000	11,520
14"	20,000	11,520	14"	20,000	17,320
16"	20,000	13,200	16"	20,000	13,200
18"	20,000	9,040	18"	20,000	9,040
20"	20,000	18,960	20"	20,000	18,960
24"	20,000	13,200	24"	20,000	13,200



## Unmatched strength and lasting durability

Achieve commercial-grade strength and lasting durability for your customers' long-term return on investment. Pella Impervia products are made from our proprietary fiberglass material, the strongest material for windows and patio doors, engineered for lasting durability.<sup>1</sup>

## Revolutionary hardware

The patented Easy-Slide Operator simply slides to open, without the effort of cranking, on casement and awning windows.

# Pella® Impervia®

Fiberglass windows and patio doors

## Sleek profiles and more glass

Create bold designs from sleek profiles and more glass with our intentionally-designed products made from our exceptionally strong proprietary fiberglass.

- **73x more impact resistant<sup>2</sup>**

Pella's fiberglass is 73x more impact-resistant than Andersen's Fibrex windows. You can trust our fiberglass products to be better equipped to stand up to a hammer misfire and other jobsite conditions.

- **Proven performance**

Engineered for the rigorous performance requirements of a commercial building, Pella Impervia products provide outstanding resistance to water, wind and outside noise.<sup>3</sup>

- **Installation solutions and expertise**

With 100 years in business, we've got you covered with products and installation solutions for your exact situation.

- **Exceptional mulling capabilities**

With both interior and exterior accessory grooves on all Pella fiberglass products, you can create larger, unique combinations specifically for your remodel or new construction project. Our extensive factory-mulled options will come preassembled, saving you time on the jobsite.

- **Up-to-date color palette**

Achieve your design style with up-to-date frame color options, including Black.

- **Tested beyond requirements**

Tested beyond industry standards and to extremes from -40°F to 180°F, our proprietary fiberglass can handle the most extreme heat and sub-zero cold.<sup>4</sup> Our products are tested beyond industry standards to help ensure less maintenance with fewer callbacks.

- **Durable three-way corner joints**

For added strength, durability and reliable water performance, Pella Impervia products feature corner locks and sashes injected with sealant and fastened with screws.

- **The confidence of a strong warranty<sup>5</sup>**

We know your reputation matters, so we have one of the strongest warranties in the business.

Available in these window and patio door styles:



Special shape windows also available.

<sup>1,2,3,4,5</sup> See back cover for disclosures.



Delivering unmatched strength, engineered for lasting durability.<sup>1</sup>

Pella’s proprietary fiberglass vs. Andersen Fibrex<sup>2, 6, 7</sup>  
Pella Impervia products won’t dent, bend or break as much as the competition.

Won't dent.

73x

more impact-resistant

Won't bend.

7.8x

stronger

Won't break.

19x

the tensile strength

Product Specifications


Window & Patio Door Styles	Min. Width	Min. Height	Max. Width	Max. Height	Design Pressure	Performance Values			FL #
						U-Factor	SHGC	HVHZ	
Vent Awning	20"	17-1/2"	59-1/2"	59-1/2"	+50/-50	0.21-0.49	0.16-0.55	No	35281
Fixed Awning	13-1/2"	11-1/2"	71-1/2"	79-1/2"	+50/-50	0.18-0.51	0.18-0.63	No	35284
Vent Casement	17-1/2"	20"	37-1/2" <sup>8</sup>	79-1/2"	+50/-50	0.20-0.48	0.18-0.55	No	35278
Fixed Casement	13-1/2"	11-1/2"	71-1/2"	79-1/2"	+50/-50	0.18-0.51	0.20-0.62	No	35284
Vent Double-Hung	17-1/2"	29-1/2"	47-1/2"	77-1/2"	LC30-LC50	0.23-0.52	0.19-0.58	No	12600
Vent Single-Hung	17-1/2"	23-1/2"	47-1/2"	77-1/2"	LC40-LC50	0.23-0.51	0.19-0.59	No	12602
Sliding Window (OX, XO)	23-1/2"	11-1/2"	71-11/2"	71-1/2"	LC30-LC50	0.23-0.51	0.19-0.59	No	12604
Sliding Window (XOX)	47-1/2"	17-1/2"	107-1/2"	71-1/2"	LC30-LC50	0.23-0.51	0.19-0.59	No	12604
Fixed Frame Direct Set	11-1/2"	11-1/2"	143-1/2"	143-1/2"	+50/-55	0.15-0.47	0.18-0.69	No	26584
Sliding Patio Door (One Panel)	27"	71-1/2"	50-5/8"	119-1/2"	+50/-50	0.20-0.49	0.19-0.59	No	39352
Sliding Patio Door (Two Panel)	59-1/4"	71-1/2"	95-1/4"	119-1/2"	+50/-50	0.20-0.49	0.19-0.59	No	39352
Sliding Patio Door (Three Panel)	91-7/8"	71-1/2"	145-7/8"	119-1/2"	+50/-50	0.20-0.49	0.19-0.59	No	39352

Window sizes available in 1/8" increments  
Maximum square footage rules apply. Maximum width and height cannot exceed the maximum square footage. Special shapes available.  
Two and three-panel sliding patio door configurations that are greater than or equal to 95.5" in height will come knock-down and require field assembly.  
Knock-down will be optional for two and three-panel configurations until 95.5" in height.


Glass & Additional Energy Efficiency Upgrades

InsulShield®  
Low-E Glass<sup>9</sup>


Pella Impervia products offer energy-efficient options that will meet or exceed ENERGY STAR guidelines in all 50 states.<sup>10</sup>




Advanced Low-E insulating dual- or triple-pane glass with argon




Advanced Comfort Low-E insulating dual-pane glass with argon




Natural Sun Low-E insulating dual- or triple-pane glass with argon



Natural Sun+ Low-E insulating dual-pane glass with argon

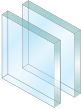


SunDefense™ Low-E insulating dual- or triple-pane glass with argon

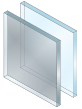


SunDefense+™ Low-E insulating dual-pane glass with argon

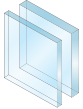
Additional Glass Options



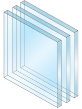
Tempered glass



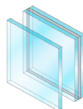
Laminated (non-impact-resistant)<sup>11</sup> tinted<sup>12</sup> or obscure glass also available on select products



STC (Sound Transmission Class) dual-pane sound control glass<sup>13</sup>




Triple Pane<sup>14</sup>



Impact-resistant glass<sup>8,15</sup>

Foam Insulation Options

Optional foam-insulated frame and sash are available to increase energy efficiency.

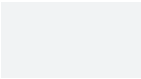


Color & Finishes


Frame Colors

Our long-lasting powder-coat finish resists chipping and fading and meets AAMA 624, which is a highly-rated fiberglass finish that will never need to be repainted or refinished.


Solid-Color:




White




Brown



Black




Tan




Morning Sky Gray


Dual-Color:




White Interior with Brown Exterior



White Interior with Black Exterior



White Interior with Tan Exterior




White Interior with Morning Sky Gray Exterior


Window Hardware

Casement & Awning

The patented Easy-Slide Operator is a revolutionary way to operate casement and awning windows. Simply slide to open, without the effort of cranking. With precision venting technology, the window will open to an exact location. Or select the fold-away crank, that folds neatly away, against the window frame. Neither solution will interfere with roomside window treatments.




Easy-Slide Operator




Fold-Away Crank

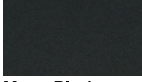
Color-Matched Finishes:




White




Brown



Matte Black




Tan



Morning Sky Gray


Additional Finish:<sup>16</sup>



Satin Nickel


Sliding, Single & Double-Hung

Pella's cam-action lock pulls the sashes against the weatherstripping on single-hung, double-hung and sliding windows for a tighter seal.




Cam-Action Lock

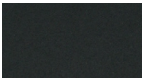
Color-Matched Finishes:




White




Brown



Matte Black




Tan




Morning Sky Gray


Additional Finishes:



Satin Nickel



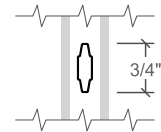
Bright Brass



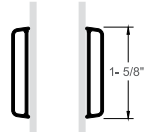
Oil-Rubbed Bronze

Grilles

Grilles are color-matched to window or patio door interior and exterior frame color.



Aluminum Grilles-Between-the-Glass ¾"<sup>17</sup>



Applied Grilles<sup>18</sup>

<sup>1, 2, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15</sup> See back cover for disclosures.

<sup>16, 17, 18</sup> See back cover for disclosures.

Patio Door Hardware

Sliding Patio Door

Elevate a home’s style with sleek hardware selections.



Sliding Patio Door Handle

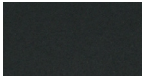
Color-Matched Finishes:



White



Brown



Matte Black



Tan



Morning Sky Gray

Additional Finish:



Satin Nickel

Secure Vent Lock

A secure vent lock comes standard on all Pella Impervia sliding doors and provides security in both the closed and venting positions. Secure vent lock is color-matched to the interior of the frame.



Secure Vent Lock

Color-Matched Finishes:



White



Brown



Matte Black



Tan

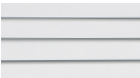


Morning Sky Gray

Patio Door Blinds

Blinds-Between-the-Glass<sup>19</sup>

Give your homeowners more privacy by adding blinds-between-the-glass. Located between panes of glass, blinds are protected from dust, dirt and damage.



White



Slate Gray



Espresso

**NOTE:** Product specifications may change without notice.

Actual colors may vary from those shown and products may vary slightly from illustrations and photos.

<sup>1</sup> Pella’s proprietary fiberglass material has displayed superior strength over wood, vinyl, aluminum, wood/plastic composites, and other fiberglass materials used by leading national brands in tensile and 3-point bend tests performed in accordance with ASTM D638 and D790 testing standards.

<sup>2</sup> Impact testing performance based on testing 10 samples of each material using ASTM D256, Method C.

<sup>3</sup> Pella® Impervia® windows and patio doors have a performance class of LC or higher. For information on product ratings see [www.pella.com/performance](http://www.pella.com/performance).

<sup>4</sup> In testing performed in accordance with ASTM testing standards, Pella’s fiberglass has displayed superior performance in strength, ability to withstand extreme heat and cold and resistance to dents and scratches. Special shape windows are made from a fiberglass resin material.

<sup>5</sup> See written limited warranty for details, including exceptions and limitations, at [installpella.com/warranties](http://installpella.com/warranties)

<sup>6</sup> Tensile testing performance based on testing 5 samples of each material using ASTM D638 test methodology.

<sup>7</sup> 3-point bend testing performance based on testing 7 samples of each material using ASTM D790 test methodology.

<sup>8</sup> Vent casement with impact glass max width is 35-1/2".

<sup>9</sup> Optional high-altitude Low-E insulating glass available with or without argon on select products.

<sup>10</sup> Some Pella products may not meet ENERGY STAR® guidelines in Canada. For more information, contact your local Pella sales representative or go to [energystar.gc.ca](http://energystar.gc.ca).

<sup>11</sup> For best performance, the laminated glass may be in the interior or exterior pane of the insulating glass, depending on the product.

<sup>12</sup> Available with Advanced Low-E insulating glass with argon with bronze, gray or green tint on select products.

<sup>13</sup> Sound control glass consists of dissimilar glass thickness (3mm/5mm or 5mm/3mm).

<sup>14</sup> Available on direct set, awning and casement windows and sliding patio doors. Not available with Advanced Comfort Low-E glass.

<sup>15</sup> Available on direct set, casement and awning windows and sliding patio doors only. Not available with grilles-between-the-glass.

<sup>16</sup> Only available for fold-away crank.

<sup>17</sup> Appearance of exterior grille color may vary depending on the Low-E insulating glass selection.

<sup>18</sup> Available on direct set windows only.

<sup>19</sup> Available on all two-panel and select sizes for three-panel sliding patio doors only.