Historic District Commission Staff Report

Wednesday, May 01, 2024



Project Address:44 GARDNER STREETPermit Requested:CERTIFICATE OF APPROVALApplication:PUBLIC HEARING 1

A. Property Information - General:

Existing Conditions:

- Zoning District: <u>General Residence B (GRB)</u>
- Land Use: <u>Residential</u>
- Land Area: <u>6,267 SF +/-</u>
- Estimated Age of Structure: <u>c.1895</u>
- Building Style: <u>Queen Anne</u>
- Number of Stories:2.5
- Historical Significance: <u>C</u>
- Public View of Proposed Work: Gardner Street
- Unique Features: <u>Wraparound one-story full width porch, parapet gable over entry bay, two story polygonal bay on the left side of the façade and a one story hipped roof garage to the rear of the property.</u>
- Neighborhood Association: <u>South End</u>

B. Proposed Work: to replace the existing windows with Marvin Elevate windows, replace the existing siding with Hardie siding, install HVAC equipment and ventilation.

C. Staff Comments and/ or Suggestions for Consideration:

The project proposal includes the following:

- Replacement of windows and siding
- Installation of HVAC equipment and venting.







D. Purpose and Intent:

- 1. Preserve the integrity of the District
- 2. Assessment of the Historical Significance
- 3. Conservation and enhancement of property values
- 4. Maintain the special character of the District
- 5. Complement and enhance the architectural and historic character
- 6. Promote the education, pleasure and welfare of the District and the city residents and visitors

E. Review Criteria/Findings of Fact:

- 1. Consistent with special and defining character of surrounding properties
- 2. Compatibility of design with surrounding properties
- 3. Relation to historic and architectural value of existing structures
- 4. Compatibility of innovative technologies with surrounding properties



South View



North View



Proposed HVAC condenser location



East view









Applicant:

Keith Dockham & Jeff Kisiel Dockham Builders, Inc 2060 Lafayette Road Portsmouth, NH 03801

Property:

44 Gardner Street Portsmouth, NH 03801

Property Owner:

Bernie and Emily Roesler

- I. Letter of Authorization
- II. Scope of work
- III. Window Replacement
- IV. Siding & Exterior Trim
- V. HVAC & Venting

I. Letter of Authorization:

See attached Letter of Authorization.



"Building your Future" Since 1988 2069 Lafayette Road Unit B Portsmouth, NH 03801

Member NAHB Lead safety certified Member HBRANH Email: office@dockhambuilders.com Telephone: 603-775-7035

March 14, 2023

City of Portsmouth Historic District Commission Ms. Reagan Ruedig, Chair **1** Junkins Avenue Portsmouth, NH 03801

RE: 44 Gardner Street Historic District Application

To whom it may concern:

This letter is submitted to authorize Jeff Kisiel and Dockham Builders to represent us before the City of Portsmouth and any of its boards with respect to an Application to the Historic District Commission in connection with our property located at 44 Gardner Street.

Sincerely,

hjociba Ser

Emily Ro

March 15, 2024

Date

Port

Bernie Roesler

March 15, 2024 Date

www.dockhambuilders.com

II. Project Summary:

The proposed scope of work includes:

-Remove the existing wood siding, exterior corner trim, window casing and windows

-Install new windows (III. Window Replacement), new siding (IV. Siding & Exterior Trim)

-Install new HVAC system, kitchen range hood and Bathroom Fans with vents (V. HVAC & Venting)

III. Window Replacement:

Install new Marvin Ultimate Windows on entire house.

See attached schedule and specification sheet for window details.

DOCKHAM 022024 ROESLER

Quote #: R3HN2NG

A Proposal for Window and Door Products prepared for: Job Site: 03801

Shipping Address: ELDREDGE LBR & HDWE–PORTSMOUTH 275 Constitution Ave Portsmouth, NH 03801-8600

Project Description: 44 GARDNER STREET PORTSMOUTH NH

Featuring products from:

MARVIN 🍥



The Choice For Building Professionals. TOM MCELREAVY ELDREDGE LBR & HDWE–PORTSMOUTH PO BOX 69 CAPE NEDDICK, ME 03902-0069 Phone: (603) 436-9663

Email: tmcelreavy@eldredgelumber.com

This report was generated on 2/21/2024 9:36:25 AM using the Marvin Order Management System, version 0004.06.00 (Current). Price in USD. Unit availability and price are subject to change. Dealer terms and conditions may apply.

UNIT SUMMARY

The following is a schedule of the windows and doors for this project. For additional unit details, please see Line Item Quotes.

Additional charges, tax or Terms and Conditions may apply. Detail pricing is per unit.

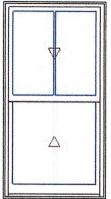
NUMB	ER OF LINES: 9		TOTAL UNIT QTY: 33	EXT NET PRICE: USD	
LINE	MARK UNIT	PRODUCT LINE	ITEM	NET PRICE	
1	KIT/ENTRY	Ultimate	Double Hung G2 RO 47" X 64" Entered as RO 47" X 64"		
2	1ST FLR	Ultimate	Double Hung G2 RO 36" X 66" Entered as	11	
3	KITCHEN SINK	Ultimate	RO 36" X 66" Marvin Assembly RO 67 63/64" X 46" Entered as		
4	1ST FLR BATH	Ultimate	Size by Units Double Hung G2 RO 33" X 66" Entered as		
5	STAIRS /FULL TEMP	Ultimate	RO 33" X 66" Double Hung G2 RO 36" X 62" Entered as		
6	2ND FLR	Ultimate	RO 36" X 62" Double Hung G2 RO 36" X 62" Entered as RO 36" X 62"	14	4 (1997)
7	3RD FLR BATH	Ultimate	RO 36 X 62 Double Hung G2 RO 36" X 62" Entered as RO 36" X 62"		
8	3RD FLR	Ultimate	Double Hung G2 RO 36" X 58" Entered as RO 36" X 58"	2	2
9	PLAYROOM	Ultimate	Double Hung G2 RO 34" X 62" Entered as RO 34" X 62"		

LINE ITEM QUOTES

The following is a schedule of the windows and doors for this project. For additional unit details, please see Line Item Quotes. Additional charges, tax or Terms and Conditions may apply. Detail pricing is per unit.

	,			
Line #1 Mark Unit: KIT/ENTRY		Net Price:		
Qty: 1		Ext. Net Price:	USD	
<image/>	Stone White Clad Exterior Painted Interior Finish - White - Pine Interi- Ultimate Double Hung G2 Rough Opening 47" X 64" Standard CN Height 28 Top Sash Stone White Clad Sash Exterior Painted Interior Finish - White - Pine IG Low E2 w/Argon Black Perimeter and Spacer Bar 5/8" SDL - With Spacer Bar - Black Rectangular - Special Cut 2W1H Stone White Clad Ext - Painted Inter Ogee Interior Glazing Profile Bottom Sash Stone White Clad Sash Exterior Painted Interior Finish - White - Pine IG - 1 Lite Tempered Low E2 w/Argon Black Perimeter Bar Ogee Interior Glazing Profile White Interior Weather Strip Package White Exterior Weather Strip Package White Sash Lock White Top Sash Strike Plate Assembly Extruded Aluminum Screen Stone White Surround Bright View Mesh ***Screen/Combo Ship Loose 4 9/16" Jambs Nailing Fin ***Note: Unit Availability and Price is Su	or e Sash Interior ior Finish - White - Pine Int e Sash Interior Color		Initials required Seller: Buyer:
Line #2 Mark Unit: 1ST FLR Qty: 11		Net Price: Ext. Net Price:	USD	
MARVIN 🝥	Stone White Clad Exterior Painted Interior Finish - White - Pine Interior Ultimate Double Hung G2 Rough Opening 36" X 66" Top Sash Stone White Clad Sash Exterior Painted Interior Finish - White - Pine IG Low E2 w/Argon Black Perimeter and Spacer Bar 5/8" SDL - With Spacer Bar - Black Rectangular - Special Cut 2W1H Stone White Clad Ext - Painted Interio Ogee Interior Glazing Profile Processed on: 2/21/2024 9:36:21	or • Sash Interior ior Finish - White - Pine Int 5 AM		Page 3 of 11
For product war	ranty information please visit, www.ma	rvin.com/support/warrant	ty.	

OMS Ver. 0004.06.00 (Current) Product availability and pricing subject to change.



As Viewed From The Exterior

Entered As: RO MO 35 1/2" X 65 3/4" FS 35" X 65 1/2" RO 36" X 66" Egress Information Width: 31 13/32" Height: 27 11/16" Net Clear Opening: 6.04 SqFt

Bottom Sash Stone White Clad Sash Exterior Painted Interior Finish - White - Pine Sash Interior IG - 1 Lite Tempered Low E2 w/Argon Black Perimeter Bar Ogee Interior Glazing Profile White Interior Weather Strip Package White Exterior Weather Strip Package White Sash Lock White Top Sash Strike Plate Assembly Color Extruded Aluminum Screen Stone White Surround **Bright View Mesh** ***Screen/Combo Ship Loose 4 9/16" Jambs Nailing Fin ***Note: Unit Availability and Price is Subject to Change

Initials required

Seller: _____

Buyer: _____

OMS Ver. 0004.06.00 (Current) Product availability and pricing subject to change.

Unit: A3 Ultimate Casement - Right Hand Basic Frame 22 21/64" X 45 1/2" Rough Opening 23 21/64" X 46" Stone White Clad Sash Exterior Painted Interior Finish - White - Pine Sash Interior IG - 3/4" - 1 Lite Tempered Low E2 w/Argon Black Perimeter Bar Ogee Interior Glazing Profile Standard Bottom Rail White Weather Strip White Folding Handle White Multi - Point Lock Stainless Steel Hardware Aluminum Screen White Surround **Bright View Mesh** ***Screen/Combo Ship Loose Standard Mull Charge 4 9/16" Jambs Nailing Fin ***Note: This configuration meets a minimum structural performance of DP 20 through either physical testing or calculations in accordance with AAMA 450 and building code requirements. Mull certification ratings may vary from individual unit certification ratings. Reference the mulling chapter of the ADM for additional information. ***Note: Unit Availability and Price is Subject to Change

Initials required

Seller: _____

Buyer: _____

Line #4 Mark Unit: 1ST FL	R BATH	Net Price:		
Qty: 1		Ext. Net Price:	USD	
	Stone White Clad Exterior			
MARVIN®	Painted Interior Finish - White - Pine Interio	or		
	Ultimate Double Hung G2			
	Rough Opening 33" X 66"			
	Top Sash			
	Stone White Clad Sash Exterior			
	Painted Interior Finish - White - Pine	Sash Interior		
	IG			
	Low E2 w/Argon			
	Black Perimeter and Spacer Bar			
	5/8" SDL - With Spacer Bar - Black			
	Rectangular - Special Cut 2W1H			
	Stone White Clad Ext - Painted Inter	ior Finish - White - Pine Int		
	Ogee Interior Glazing Profile			
	Bottom Sash			
	Stone White Clad Sash Exterior			
	Painted Interior Finish - White - Pine	Sash Interior		
	IG - 1 Lite			
	Tempered Low E2 w/Argon			
As Viewed From The Exterior	Black Perimeter Bar			
Entered As: RO	Ogee Interior Glazing Profile			
MO 32 1/2" X 65 3/4"	White Interior Weather Strip Package			
FS 32" X 65 1/2"	White Exterior Weather Strip Package			
RO 33" X 66"	White Sash Lock			
Egress Information	White Top Sash Strike Plate Assembly	Color		
Width: 28 13/32" Height: 27 11/16"	Extruded Aluminum Screen			
Net Clear Opening: 5.46 SqFt	Stone White Surround			
	Bright View Mesh			
	***Screen/Combo Ship Loose			
	4 9/16" Jambs			

Page 5 of 11

Nailing Fin ***Note: Unit Availability and Price is Subject to Change

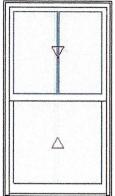
Initials required

Seller: ____

Buyer: ____

Line #5 Mark Unit: STAIRS /F		Net Deless		
	ULL TEIVIP	Net Price:		
Qty: 1		Ext. Net Price:	USD	
MARVIN OF Image: Constraint of the state of	Stone White Clad Exterior Painted Interior Finish - White - Pine Interi Ultimate Double Hung G2 Rough Opening 36" X 62" Top Sash Stone White Clad Sash Exterior Painted Interior Finish - White - Pine IG Tempered Low E2 w/Argon Black Perimeter and Spacer Bar 5/8" SDL - With Spacer Bar - Black Rectangular - Special Cut 2W1H Stone White Clad Ext - Painted Inter Ogee Interior Glazing Profile Bottom Sash Stone White Clad Sash Exterior Painted Interior Finish - White - Pine IG - 1 Lite Tempered Low E2 w/Argon Black Perimeter Bar Ogee Interior Glazing Profile White Interior Weather Strip Package White Sash Lock White Top Sash Strike Plate Assembly Extruded Aluminum Screen Stone White Surround Bright View Mesh ***Screen/Combo Ship Loose 4 9/16" Jambs Nailing Fin ***Note: Unit Availability and Price is Su	or e Sash Interior rior Finish - White - Pine Int e Sash Interior		
				Initials required
				Seller:
				Jellel .
				Buyer:
Line #6 Mark Unit: 2ND FLR		Net Price:		
Qty: 14		Ext. Net Price:	USD	

Qty: 14		Ext. Net Price:	USD	
MARVIN®	Stone White Clad Exterior Painted Interior Finish - White - Pine Interior Ultimate Double Hung G2 Rough Opening 36" X 62"			
	Top Sash			
	Stone White Clad Sash Exterior			
	Painted Interior Finish - White - Pine S	ash Interior		
	IG			
	Low E2 w/Argon			
	Black Perimeter and Spacer Bar			
	5/8" SDL - With Spacer Bar - Black			
OMS Ver. 0004.06.00 (Current) For p	Processed on: 2/21/2024 9:36:25 roduct warranty information please visit, www.marv		ty.	Page 6 of 11



As Viewed From The Exterior Entered As: RO MO 35 1/2" X 61 3/4" FS 35" X 61 1/2" RO 36" X 62" Egress Information Width: 31 13/32" Height: 25 11/16" Net Clear Opening: 5.60 SqFt

Rectangular - Special Cut 2W1H Stone White Clad Ext - Painted Interior Finish - White - Pine Int
Ogee Interior Glazing Profile
Bottom Sash
Stone White Clad Sash Exterior
Painted Interior Finish - White - Pine Sash Interior
IG - 1 Lite
Tempered Low E2 w/Argon
Black Perimeter Bar
Ogee Interior Glazing Profile
White Interior Weather Strip Package
White Exterior Weather Strip Package
White Sash Lock
White Top Sash Strike Plate Assembly Color
Extruded Aluminum Screen
Stone White Surround
Bright View Mesh
***Screen/Combo Ship Loose
4 9/16" Jambs
Nailing Fin
***Note: Unit Availability and Price is Subject to Change

Initials required

Seller: ____

Buyer: _____

Line #7	Mark Unit: 3RD FLR BATH	Net Price:		
Qty: 1		Ext. Net Price:	USD	
MARVIN () As Viewed I As Viewed I Entered As: RO MO 35 1/2" X 61 3/4 F\$ 35" X 61 1/2" RO 36" X 62" Egress Information Width: 31 13/32" H Net Clear Opening: 5	Ultimate Double Hung G2 Rough Opening 36" X 62" Top Sash Stone White Clad Sash Exterior Painted Interior Finish - White IG Low E2 w/Argon Black Perimeter and Spacer 5/8" SDL - With Spacer Bar - B Rectangular - Special Cut 2W3 Stone White Clad Ext - Painter Ogee Interior Glazing Profile Bottom Sash Stone White Clad Sash Exterior Painted Interior Finish - White IG - 1 Lite Tempered Low E2 w/Argon Black Perimeter Bar Ogee Interior Glazing Profile White Interior Weather Strip Pa White Exterior Weather Strip Pa White Sash Lock White Top Sash Strike Plate Asso Extruded Aluminum Screen Stone White Surround	or e - Pine Sash Interior Bar Black 1H d Interior Finish - White - Pine Int or e - Pine Sash Interior n ickage ackage embly Color		
				nitials required Seller:
				Buyer:
OMS Ver. 0004.06	0.00 (Current) Processed on: 2/21/2024 S For product warranty information please visit, ww		nty.	Page 7 of 11

Line #8	Mark Unit: 3RD FLR		Net Price:		
Qty: 2			Ext. Net Price:	USD	
	From The Exterior	Stone White Clad Exterior Painted Interior Finish - White - Pine Interi Ultimate Double Hung G2 Rough Opening 36" X 58" Top Sash Stone White Clad Sash Exterior Painted Interior Finish - White - Pine IG Low E2 w/Argon Black Perimeter and Spacer Bar 5/8" SDL - With Spacer Bar - Black Rectangular - Special Cut 2W1H Stone White Clad Ext - Painted Interio Ogee Interior Glazing Profile Bottom Sash Stone White Clad Sash Exterior Painted Interior Finish - White - Pine IG - 1 Lite Tempered Low E2 w/Argon Black Perimeter Bar Ogee Interior Glazing Profile White Interior Weather Strip Package White Exterior Weather Strip Package White Sash Lock White Top Sash Strike Plate Assembly Extruded Aluminum Screen Stone White Surround Bright View Mesh ***Screen/Combo Ship Loose 4 9/16" Jambs Nailing Fin ***Note: Unit Availability and Price is Su	or e Sash Interior rior Finish - White - Pine Int e Sash Interior Color		
					Initials required Seller: Buyer:
Line #9	Mark Unit: PLAYROOM	N	Net Price:		
Qty: 1			Ext. Net Price:	USD	
MARVIN		Stone White Clad Exterior Painted Interior Finish - White - Pine Interi Ultimate Double Hung G2 Rough Opening 34" X 62" Top Sash Stone White Clad Sash Exterior Painted Interior Finish - White - Pine IG Low E2 w/Argon Black Perimeter and Spacer Bar 5/8" SDL - With Spacer Bar - Black Rectangular - Special Cut 2W1H Stone White Clad Ext - Painted Inter Ogee Interior Glazing Profile Bottom Sash Stone White Clad Sash Exterior Painted Interior Finish - White - Pine IG - 1 Lite Tempered Low E2 w/Argon	e Sash Interior rior Finish - White - Pine Int		
OMS Ver. 0004.06		Processed on: 2/21/2024 9:36:2 rranty information please visit, www.ma		ity.	Page 8 of 11

OMS Ver. 0004.06.00 (Current) Product availability and pricing subject to change.

As Viewed From The Exterior

Entered As: RO MO 33 1/2" X 61 3/4" FS 33" X 61 1/2" RO 34" X 62" Egress Information Width: 29 13/32" Height: 25 11/16" Net Clear Opening: 5.25 SqFt Black Perimeter Bar Ogee Interior Glazing Profile White Interior Weather Strip Package White Exterior Weather Strip Package White Sash Lock White Top Sash Strike Plate Assembly Color Extruded Aluminum Screen Stone White Surround Bright View Mesh ***Screen/Combo Ship Loose 4 9/16" Jambs Nailing Fin ***Note: Unit Availability and Price is Subject to Change DOCKHAM 022024 ROESLER Quote Number: R3HN2NG

Initials required

Seller: _____

Buyer: _____

Project Subtotal Net Price: USD 0.000% Sales Tax: USD Project Total Net Price: USD



TERMS AND CONDITIONS

PRODUCT AND PERFORMANCE INFORMATION

NFRC Ratings:

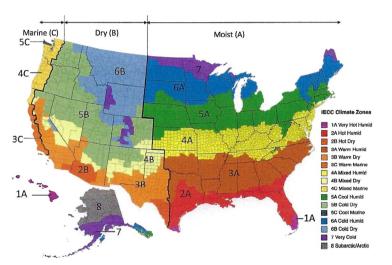
NFRC energy ratings may vary depending on the exact configuration of glass thickness used on the unit. NFRC energy values and ratings may change over time due to ongoing product changes, updated test results or requirements. NFRC values and ratings are finalized on the date of manufacture.

The National Fenestration Rating Council (NFRC) has developed and operates a uniform rating system for the energy performance of fenestration products, including windows, doors and skylights. For additional information regarding this rating system, see <u>www.nfrc.org</u>.

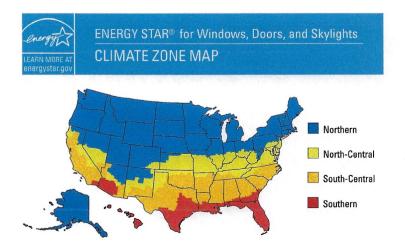
Code (residential, building or energy) Compliance:

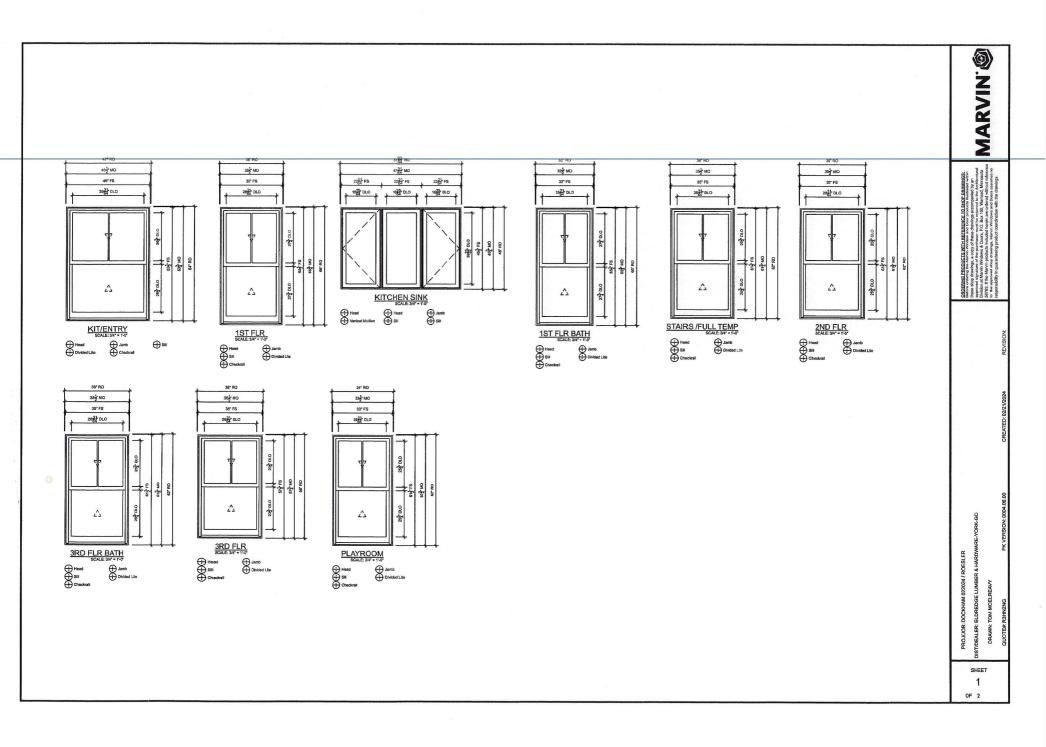
Determining the suitability and compliance with state, provincial, local, or other applicable building codes or standards, including energy codes, is the responsibility of the buyer, user, architect, contractor, installer, and/or other construction professional.

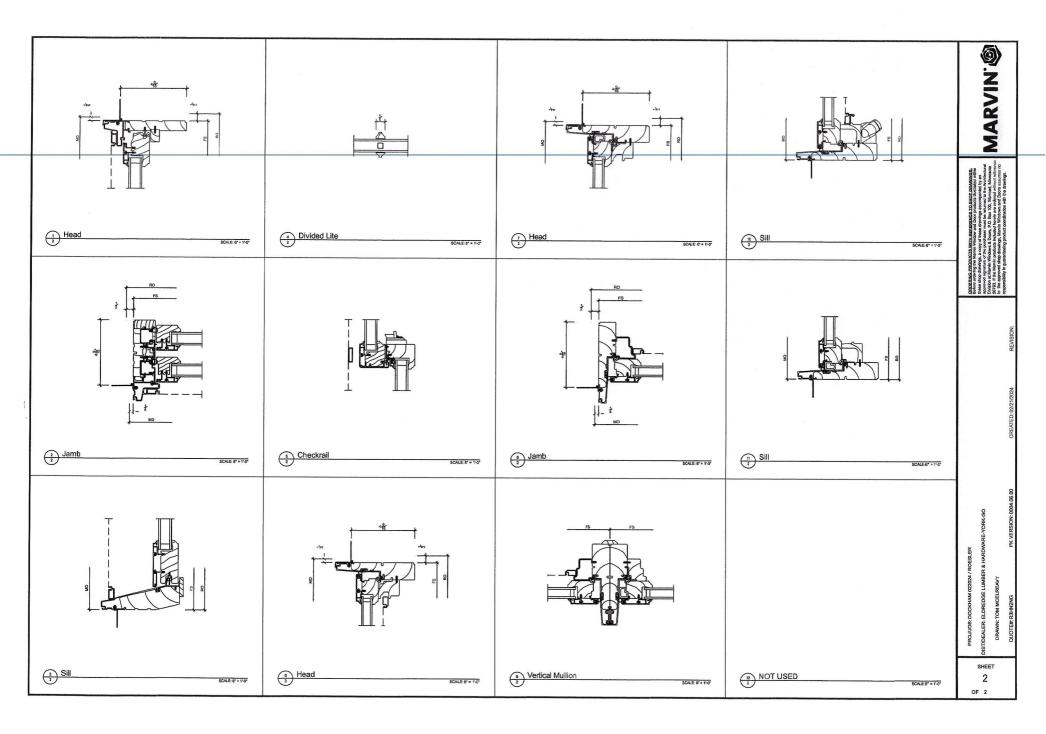
2021 IECC Climate Zone Map:



ENERGY STAR Version 7 Climate Zone Map:







IV. Siding and Exterior Trim

-Remove existing siding and install new 5 ¼" Hardie Plank Siding with smooth finish and a 4" reveal to match existing. See attached Hardie Specification Sheet for more details.

-Remove existing wood trim (corner boards and window casing) and install new Azek PVC trim to match existing profile. See attached Azek Specification Sheet for more details

-Corner Board: 5/4" x 6"

-Window Casing: 5/4" x 4" legs, 5/4" x 5" Header, 3" Crown AZM-52, Historic Sill AZM-6930

A classic look that stands the test of time.

Hardie® Plank

18

From Victorians to Colonials, Hardie® Plank is the perfect siding for your style, and has the durability and long-lasting beauty that can transform your home exterior. With endless gorgeous color and plank pairings available, you'll discover a Hardie® Plank style that transforms your home's aesthetic.



Hardie[®] Plank







Beaded Select Cedarmill*



Beaded Smooth

*9.25 in and 12 in widths do not feature the drip edge

a faith a lack and a strand state and a strand state.				Thickness	5/16 in Leng	ngth 12 ft planks	
Width	5.25 in	6.25 in	7.25 in	8.25 in	9.25 in*	12 in*	
Exposure	4in	5 in	6 in	7 in	8 in	10.75 in	
Prime Pcs/Pallet	360	308	252	230	190	152	
ColorPlus ^e Pcs/Pallet	324	280	252	210	-	_	
Pcs/Sq.	25.0	20.0	16.7	14.3	12.5	9.3	

Product Catalog

Select Cedarmill*

Width	5.25 in	6.25 in	7.25 in	8.25 in	9.25 in*	12 in*
Statement Collection ^e	٠	•			h i n	
Dream Collection®	•		٠	•		
Prime	•	•	•	4. (•)	•	•

Smooth

Prime

and the second			y 10, 11 mg/s \$6, 10, 10, 10, 10, 10, 10, 10, 10, 10, 10			
Width	5.25 in	6.25 in	7.25 in	8.25 in	9.25 in*	12 in*
Statement Collection®	•	•				
Dream Collection®	•	•	•	•		
Prime	•	•	٠	•	•	•

Beaded Select Cedarmill® & Beaded Smooth

Width	8.25 in
Exposure	7 in
ColorPlus ^e Pcs/Pallet	210
Pcs/Sq.	14.3
Statement	
Collection®	
Dream	
Collection®	•

19

ENDLESS DESIGN POSSIBILITIES

16

Product Catalog

STYLES

find your perfect mix of exterior products

VISUALIZE THE COLLECTION ON YOUR HOME



HARDIE° PANEL H & HARDIE° TRIM BATTEN	IARDIE° SHINGLE	HARDIE" PLANK	BIRCH TREE	WEATHERED CLIFFS	RUSTIC ROAD	RUGGED PATH
HARDIE* TRIM		titi titi titi titi titi titi titi tit				
	oduct size and availability informat meshardie.com/magnolia.	ion,	IT'S ABOUT THYME	STONE BEACH	STONE PAVER	WARM CLAY
	EXTURES he texture you prefer					
HARDIE® TRIM SMOOTH	HARDIE*	IDING SMOOTH*				
			DRIED EUCALYPTUS	CHISELED GREEN	WANDERING GREEN	MUDFLATS
HARDIE" TRIM RUSTIC GRAIN		5 SELECT CEDARMILL** bble for siding and soffit. offered in Select Cedarmill*.				The second
DESIGN the	6 · · · · ,				and a second	and any second and a second
HOME YOU'VE ALWAYS IM Visualize Hardie [®] products on a 3D model of your home HOVER [®] Design Studio, brought to you by James Hardi	with	in Sons				
Every home tells a story. What will yours be? Start your			SLATE STEPS	PEPPERY ASH	LAST EMBERS	MIDNIGHT SOOT

All products in this collection come prefinished with ColorPlus®Technology finishes by James Hardie.

WHITE OR READY-TO-PAINT TRIM AZEK OFFERS STYLE-BASED SOLUTIONS

Ready-to-Install Classic AZEK® Trim: Crisp, Bright White

The ultimate exterior matchmaker, AZEK Trim comes ready to install in brilliant white with two finish options (smooth and woodgrain) to complement and instantly elevate any surrounding. AZEK Classic Trim can be painted — but because paint is not required for a clean, finished look, installations go faster.



If your project requires painting trim, AZEK PVC Trim with PaintPro technology is the perfect choice. Ready to paint. No sanding. No priming. PaintPro Trim maintains the long-lasting, low-maintenance benefits of PVC trim while adding enhanced paintability. Paint bonds securely for lasting adhesion that resists splits, chips, and flakes.





*PaintPro must be painted within 180 days of installation. Visit AZEKexteriors.com/products/trim/trim-boards/paintpro-trim

AZEK TRIM OUTPERFORMS WOOD TRIM

AZEK Trim is made from 100% engineered polymer to provide a durable, long-lasting building material that is far more resistant to the elements than wood. No sealants are needed on surfaces or cut ends; every inch of our trim is equally protected against moisture. With superior uniformity, durability, workability, beauty, and much more, AZEK PVC Trim is the better choice for exteriors than wood.

	AZEK PVC TRIM	WOODTRIM
UNIFORMITY		
Square edges	*	*
No knots, no waste; every inch usable	*	
DURABILITY		
Will not rot, split, splinter, delaminate, warp, or swell excessively from moisture	\$	
Impervious to moisture and insect-resistant	索	
Suitable for ground and masonry contact	*	
Lifetime limited warranty	¢	
Handles easily without breakage	索	#
WORKABILITY		
Use standard woodworking tools	*	\$
Safely milled, shaped, and molded without special safety equipment	*	Ŕ
Can be heat-formed	*	
Fasten close to edge without predrilling	*	
3EAU TY		
Readily accepts paint*	*	*
Can be crafted for unique applications	Å	ł
EXTRAS		
wailable in trim boards, sheets, cornerboards, beadboard, and mouldings	南	
pecial labor-saving solution profiles available	À	

ALL PRODUCTS MEET CRITERIA SOME PRODUCTS MEET CRITERIA *PaintPro must be painted within 180 days of installation. Visit AZEKexteriors.com/products/trim/trim-boards/paintpro-trim.



GET FREE TRIM SAMPLES WITH PAINTPRO® TECHNOLOGY





PAINTPRO TECHNOLOGY

Reversible (one side smooth, one side woodgrain)

AZE

Woodgrain Finish

Smooth

Finish

All AZEK Trim is long-lasting, moisture-resistant, and keeps its appearance with very little maintenance. Easily mill and router our trim, or heat form it before painting, for exquisite customized or curved applications. Classic AZEK Trim's brilliant white complements any exterior while AZEK Trim with PaintPro* was made to be painted.

PROTECTIVE FILM KEEPS CLASSIC WHITE TRIM CLEAN

Classic AZEK Trim with protective film is available for smooth and woodgrain finishes. To ensure it looks as beautiful on your client's home as it does when it leaves our facilities, a protective film preserves AZEK Trim's crisp white semi-matte finish.

NOMINAL THICKNESS			NO	MINAL V	VIDTH		
	4	5	6	8	10	12	16
5/4	SW	SW	SW	SW	SW	SW	SW
4/4	SW	SW	SW	SW	SW	SW	SW
5/8	SW	SW	SW	SW	SW	SW	SW

The film protects AZEK Trim through every production phase:

 Shipping 	 Storage
 Repackaging 	 Handling
Installation	

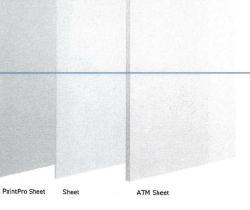
AZEK Trim with protective film should be kept dry prior to installation. Do not expose film to direct sunlight for extended periods. Protective film can be removed prior to, during, or immediately after installation.



8/4 X THICKN	ESS					
NOMINAL	ACTUAL		18'			
8/4 x 4	1 ½" x 3 ½"		s			
8/4 x 6	1 ½" x 5 ½"		s			
8/4 x 8	1 ½" x 7 ½"		s			
8/4 x 10	1 %" x 9 %"		S			
8/4 x 12	1 ½" x 11 ½"		s	-		_
6/4 X THICKN						
NOMINAL	ACTUAL		20'			
6/4 x 4	1 ¼" x 3 ½"		w			
6/4 x 6	1 ½" x 5 ½"		W			
6/4 x 8	1 %" x 7 %"		W			
6/4 x 10	1 %" x 9 %"		w			
6/4 x 12	1 %" x 11 %"		W			
5/4 X THICKN						
NOMINAL	ACTUAL	Contraction of the second	12'	16'	18'	20
5/4×4	1" x 3 ½"	1	SW	P	SW	SW
5/4 x 5	1"x 4 ½"		SW	F	SW	SW
5/4×6	1"x 5 ½"	Ca20-18	SW	P	SW	SM
5/4 x 8	1"×7%"		SW	P	SW	SW
5/4 x 10	1" x 9 %"		SW	P	SW	SW
5/4 x 12	1" × 11 %"		SW	P	SW	SIA
5/4 x 16	1" x 15 ½"		SW	P	SW	SW
4/4 X THICKNE	ss					
NOMINAL	ACTUAL	12		16	18	B.
×2	%" x 1 %"			P	SI	N
х 3	%" x 2 %"	1		P		
x 4	%" x 3 ½"	SV	v	P	SI	N
1 x 5	%" x 4 ½"	SV	V		SI	N
1 x 6	%" x 5 %"	SV	V	Р	S	N
1 x 8	%" x 7 %"	SV	v	Р	SI	N
I x 10	%" x 9 %"	SV	V	P	SV	N
x 12	%" x 11 %"	SV	v	P	SI	N
x 16	%" x 15 %"	SV	٧	P	SV	N
/8 X THICKN	ESS					
CTUAL	12'	18				
100 0 1/0	SW	SV	V			
/8 X 3 ½						
5/8" x 3 ½" 5/8" x 5 ½"	SW	SV	V			
5/8" x 5 ½" 5/8" x 7 ½"	SW	SV	v			
5/8" x 5 ½" 5/8" x 7 ¼" 5/8" x 9 ¼"	SW SW	SV SV	v v			
5/8" x 5 ½" 5/8" x 7 ½"	SW	SV	v v v			

AZEK[®] TRIM

8/4 X THICKNESS



AZEK SHEET

Applications over 16" wide are easy with AZEK Sheet. Use Sheet for bay windows, dormers, and raised panels.

SHEET					
ACTUAL	8'	10'	12'	18'	20
³/8" x 4'	SW	SW	S	S	
%" x 4'	SWP	SWP	SP	S	
[€] /8" x 4"	s	s	S	s	
%" x 4"	SWP	SWP	S	S	
1" x 4'	s	s	S	S	S

AZEK-TO-MILL (ATM)

ATM's thick profile makes it an ideal material for fabrication. Its consistent density offers a superior product for milling operations.

ACTUAL	8'	10'	12'	18'	20
1 ¼" x 9 ¼"				S	
1 ½" x 3 ½"				S	
1 ½" x 5 ½"				S	
1 ½" x 7 ½"				S	
1 %" x 9 %"				s	
1 ½" x 11 ½"			-	S	1
1 ¼" x 48" Sheet	S				
1 ½" x 48" Sheet	S	s	S		s

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AZEK[®] MOULDING

With over 30 different profiles to mix and match, you can customize any build with a distinctive look.



BED MOULDING = Similar to crown moulding, a bed mould is used to cover the joint between the ceiling and wall.

RAMS CROWN Consider installing Rams Crown at the top of a column or post, or use in place of a crown for a distinctive look.

CROWN MOULDING Crown Moulding is used for a classic look, bridging the corner between the wall and ceiling.

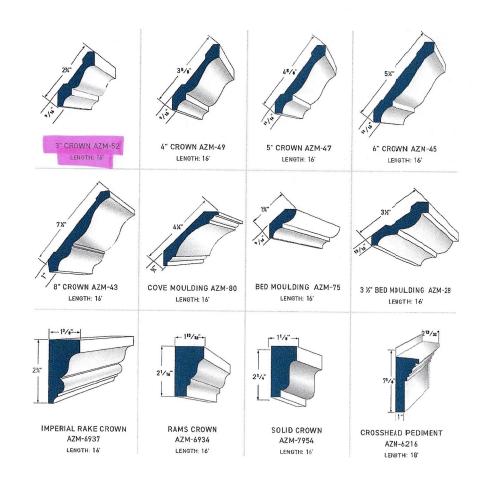
BAND MOULDING Band Moulding can be used alone or added to the base of a crown for a premium finish.

THE MOST BEAUTIFUL, HIGH-PERFORMANCE MOULDING LINE AVAILABLE

With crisp, architectural details reminiscent of premium wood mouldings, high-performance AZEK* Moulding will last beautifully without the maintenance hassles associated with wood. Backed by AZEK's promise of high quality and lasting performance, AZEK Moulding will retain a like-new appearance despite the tests of time and weather. AZEK Moulding offers greater stability and predictability when fastening. Unlike traditional wood moulding, AZEK Moulding resists moisture and insect damage and will not rot or split.

CROWN PROFILES

Crown moulding profiles are typically decorative mouldings designed for use along the intersection of a wall or ceiling. They may be combined with other mouldings to create a built-up profile.



AZEK EXTERIORS

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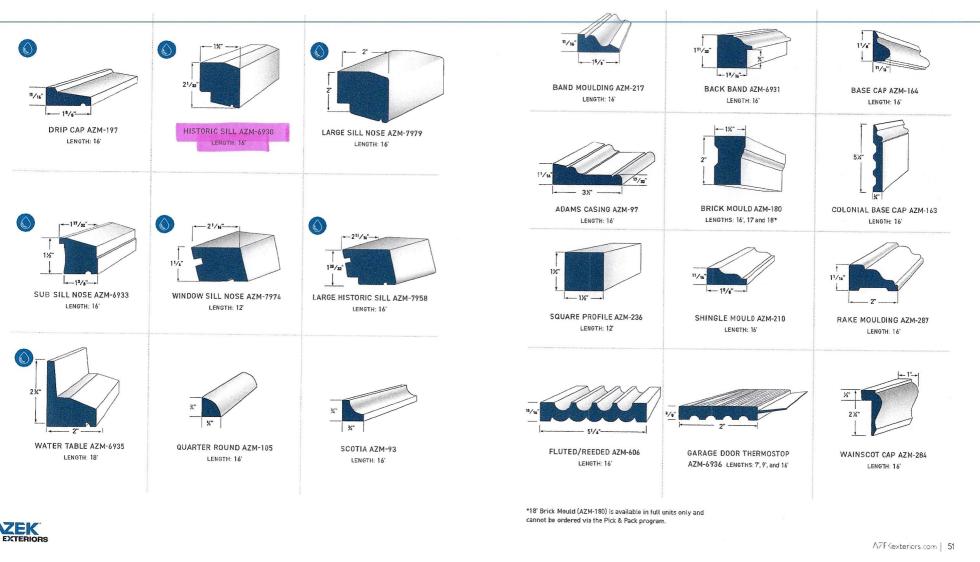
DETAIL & SILL/DRIP PROFILES

AZEK® Drip profiles can be used as a water table or brick ledge for separation and watershed against two different materials. AZEK Sill profiles shed water and offer architectural detail.



CASING PROFILES

Use AZEK® Casing Profiles as decorative moulding against a wall, door, or window to create surrounds. Elevate your framing with style and durability.



V. HVAC & Venting

-Install two new HVAC systems w/ condenser on north side of property along brick foundation,

-Bosch Thermotechnology, Bosch 2.0 IDS, 3.00 Ton, Heat Pump (2)

-See attached Bosch Specification Sheet for more details

IDS Family Quick Start Guide



Before Everything, There's Bosch. Simple, Reliable, Innovative,





BOVA15

IDS Light **15 SEER System**





IDS Premium 20 SEER System



BOVB20

IDS Premium Connected **20 SEER System**

Bosch IDS Family of Inverter Heat Pumps

The robust Bosch Inverter Ducted Split Air Source Heat Pump system utilizes just the right amount of energy to achieve ultimate comfort at maximum efficiency while keeping sound levels to a minimum.

Designed for easy installation & start-up | Support & spare parts readily available | Easy to maintain & service



Invented for life

Project Address:33 JOHNSON COURTPermit Requested:CERTIFICATE OF APPROVALApplication:PUBLIC HEARING 2

A. **Property Information - General:**

Existing Conditions:

- Zoning District: <u>General Residence B (GRB)</u>
- Land Use: <u>Residential</u>
- Land Area: <u>36,912 SF +/-</u>
- Estimated Age of Structure: <u>c.1910</u>
- Building Style: <u>Vernacular</u>
- Number of Stories:1.5
- Historical Significance: <u>Contributing</u>
- Public View of Proposed Work: Johnson Court and South Mill Pond
- Unique Features: <u>N/A</u>
- Neighborhood Association: <u>South End</u>
- B. Proposed Work: Install roof mounted solar panels.

C. Staff Comments and/ or Suggestions for Consideration:

The project proposal includes the following:

• Installation of roof top mounted solar panels. No other land use approvals are required.







D. Purpose and Intent:

- 7. Preserve the integrity of the District
- 8. Assessment of the Historical Significance
- 9. Conservation and enhancement of property values
- 10. Maintain the special character of the District
- 11. Complement and enhance the architectural and historic character
- 12. Promote the education, pleasure and welfare of the District and the city residents and visitors

E. Review Criteria/Findings of Fact:

- 5. Consistent with special and defining character of surrounding properties
- 6. Compatibility of design with surrounding properties
- 7. Relation to historic and architectural value of existing structures
- 8. Compatibility of innovative technologies with surrounding properties



January 26, 2024

То:	ReVision Energy 7 Commercial Drive Brentwood, NH 03833
Subject:	Structural Certification for Installation of Solar Panels Morales Residence 33 Johnson Court
	Portsmouth, NH. 03801

To Whom It May Concern,

A design check for the subject residence was done on the existing roofing and framing systems for the installation of solar panels over the roof. From a field inspection of the property, the existing roof support structures were observed by the client's auditors as follows:

The roof structure of (MP1) consists of composition shingle over plywood sheathing on 1x decking that is supported by nominal 2x6 rafters @ 24"o.c., paired with nominal 2x6 ceiling joists @ 24"o.c.. The rafters have a max projected horizontal span of 11'-6", with a slope of 30 degrees. The rafters are connected at the ridge to a continuous 1x8 ridge board and are supported at the eave by a load bearing wall. There are 2x4 vertical struts at 48" o.c. that connect the ridge to the ceiling joists.

The roof structure of (MP2) consists of composition shingle on roof plywood that is supported by nominal 2x8 rafters @ 16"o.c., paired with nominal 2x6 ceiling joists @ 16"o.c.. The rafters have a max projected horizontal span of 8'-8", with a slope of 30 degrees. The rafters are connected at the ridge to a continuous 2x12 ridge board and are supported at the eave by a load bearing wall.

The existing roof framing system of (MP1) is judged to be inadequate to withstand the loading imposed by the installation of the solar panels. Structural reinforcement is required. Sister upgrade is required for (MP1). Stitch new 10'-0" long 2x6 SPF#2 or DF#2 (min) to existing member with Simpson SDW 22300 screws @ 16"o.c. or 10d nails @ 6"o.c.

The existing roof framing system of (MP2) is judged to be adequate to withstand the loading imposed by the installation of the solar panels. No reinforcement is necessary.

The spacing of the solar standoffs should be kept at 48" o.c. with a staggered pattern to ensure proper distribution of loads in wind zones 1 and 2, and less than 32" o.c. in wind zone 3. For composition shingle roofs, each standoff shall have (1) #14 x 4" L roofing screw connecting to the rafters, or (6) #14 x 3" L roofing screws connecting to the roof sheathing.

I further certify that all applicable loads required by the codes and design criteria listed below were applied to the Ironridge solar rail system and analyzed by the manufacturer. Furthermore, the installation crews have been thoroughly trained to install the solar panels based on the specific roof installation instructions developed by Ironridge for the racking system and Ironridge for the roof connections. Finally, I accept the certifications indicated by the solar panel manufacturer for the ability of the panels to withstand high wind and snow loads.

Design Criteria:

- Applicable Codes = 2018 IBC/IRC, ASCE 7-16, and 2015 NDS
- Roof Dead Load = 10.8 psf (MP1) -- 8.77 psf (MP2)
- Roof Live Load = 20 psf



EAH Structural Consulting 11 Ponybrook Lane Lexington, MA 02421 PHONE 1.978.406.8921 Elaine@EAHstructural.com

- Wind Speed = 125 mph, Exposure C
- Ground Snow Load = 50 psf Roof Snow Load = 38.5 psf

Please contact me with any further questions or concerns regarding this project.

Sincerely,

Elaine Huang, P.E. Project Engineer





Gravity Loading

Roof Snow Load Calculations		
p _g = Ground Snow Load =	50 psf	-
$p_f = 0.7 C_e C_t I p_g$		(ASCE7 - Eq 7.3-1)
C _e = Exposure Factor =	1	(ASCE7 - Table 7.3-
C _t = Thermal Factor =	1.1	(ASCE7 - Table 7.4-
I = Importance Factor =	1	
p _f = Flat Roof Snow Load =	38.5 psf	
$p_s = C_s p_f$		(ASCE7 - Eq 7.4-1)
Cs = Slope Factor =	1	
p _s = Sloped Roof Snow Load =	38.5 psf	

PV Dead Load = 4 psf (Per ReVision Energy)

Roof Dead Load (MP1)		
Composition Shingle	2.50	
1x Decking	3.00	
Double 2x6 Rafters @ 24"o.c.	2.30	
Vaulted Ceiling	0.00	(Ceiling Not Vaulted)
Miscellaneous	3.00	
Total Roof DL (MP1)	10.8 psf	
DL Adjusted to 30 Degree Slope	12.5 psf	
Roof Dead Load (MP2)		
Roof Dead Load (MP2) Composition Shingle	2.50	
	2.50 2.00	
Composition Shingle		
Composition Shingle Roof Plywood	2.00	(Ceiling Not Vaulted)
Composition Shingle Roof Plywood 2x8 Rafters @ 16"o.c.	2.00 2.27	(Ceiling Not Vaulted)
Composition Shingle Roof Plywood 2x8 Rafters @ 16"o.c. Vaulted Ceiling	2.00 2.27 0.00	(Ceiling Not Vaulted)



Wind Calulations Per ASCE 7-16 Chapter 29.4

Input Variables					
Wind Speed	125 mph	Ultimate			
Exposure Category	С				
Roof Shape	gable				
Roof Slope	30 degrees				
Mean Roof Height	25 ft				
Building Least Width	40 ft				
Effective Wind Area	21.2 ft				
Design Win	d Pressure Cal	culations			
Wind Pressure P = q	h*(G*Cp) * rE *	ra	(Eq_29.4-7)		
qh = 0.00256 * Kz * Kz	t * Kd * Ke * V^2	2*1	(Eq_26.10-1)		
Kz (Exposur	e Coefficient) =	0.94	(Table 26.10-1)		
Kzt (topogr	aphic factor) =	1	(Fig. 26.8-1)		
Kd (Wind Direction	nality Factor) =	0.85	(Table 26.6-1)		
V (Design	Wind Speed) =	125 mph			
	rtance Factor =		(Table 1.5-1)		
	qh =	31.96	. ,		
	rE =	1.00	(Fig. 29.4-7)		
	r_a =	0.75	(Fig. 29.4-8)		
	Standoff Uplif		-		
	Standon Opin		15		
	Zono 1	Zono 2	Zono 2	Decitivo	•
CCn -	Zone 1	Zone 2	Zone 3	Positive	(Fig. 30 / 2)
GCp = Unlift Pressure =	-1.50	-1.80	-2.20	0.80	(Fig. 30.4-2)
Uplift Pressure =	-1.50 -35.96 psf	-1.80 -43.15 psf	-2.20 -52.73 psf		_ `
Uplift Pressure = 0.6 x Uplift Pressure	-1.50 -35.96 psf -21.57 psf	-1.80 -43.15 psf -25.89 psf	-2.20 -52.73 psf -31.64 psf	0.80	(Fig. 30.4-2) (ASCE-7 2.4.1.7)
Uplift Pressure = 0.6 x Uplift Pressure X Standoff Spacing =	-1.50 -35.96 psf -21.57 psf 4.00	-1.80 -43.15 psf -25.89 psf 4.00	-2.20 -52.73 psf -31.64 psf 2.67	0.80	_ `
Uplift Pressure = 0.6 x Uplift Pressure X Standoff Spacing = Y Standoff Spacing =	-1.50 -35.96 psf -21.57 psf 4.00 3.25	-1.80 -43.15 psf -25.89 psf 4.00 3.25	-2.20 -52.73 psf -31.64 psf 2.67 3.25	0.80	_ `
Uplift Pressure = 0.6 x Uplift Pressure X Standoff Spacing = Y Standoff Spacing = Tributary Area =	-1.50 -35.96 psf -21.57 psf 4.00	-1.80 -43.15 psf -25.89 psf 4.00	-2.20 -52.73 psf -31.64 psf 2.67	0.80	_ `
Uplift Pressure = 0.6 x Uplift Pressure X Standoff Spacing = Y Standoff Spacing = Tributary Area = Footing Uplift =	-1.50 -35.96 psf -21.57 psf 4.00 3.25 13.00 -280 lb	-1.80 -43.15 psf -25.89 psf 4.00 3.25 13.00 -337 lb	-2.20 -52.73 psf -31.64 psf 2.67 3.25 8.68	0.80	_ `
Uplift Pressure = 0.6 x Uplift Pressure X Standoff Spacing = Y Standoff Spacing = Tributary Area = Footing Uplift = Stan	-1.50 -35.96 psf -21.57 psf 4.00 3.25 13.00 -280 lb	-1.80 -43.15 psf -25.89 psf 4.00 3.25 13.00 -337 lb	-2.20 -52.73 psf -31.64 psf 2.67 3.25 8.68	0.80	_ `
Uplift Pressure = 0.6 x Uplift Pressure X Standoff Spacing = Y Standoff Spacing = Tributary Area = Footing Uplift = <u>Stan</u> Maximum	-1.50 -35.96 psf -21.57 psf 4.00 3.25 13.00 -280 lb doff Uplift Che Design Uplift =	-1.80 -43.15 psf -25.89 psf 4.00 3.25 13.00 -337 lb	-2.20 -52.73 psf -31.64 psf 2.67 3.25 8.68	0.80	_ `
Uplift Pressure = 0.6 x Uplift Pressure X Standoff Spacing = Y Standoff Spacing = Tributary Area = Footing Uplift = <u>Stan</u> Maximum Standoff U	-1.50 -35.96 psf -21.57 psf 4.00 3.25 13.00 -280 lb doff Uplift Che Design Uplift = plift Capacity =	-1.80 -43.15 psf -25.89 psf 4.00 3.25 13.00 -337 lb 400 lb	-2.20 -52.73 psf -31.64 psf 2.67 3.25 8.68 -275 lb	0.80	_ `
Uplift Pressure = 0.6 x Uplift Pressure X Standoff Spacing = Y Standoff Spacing = Tributary Area = Footing Uplift = <u>Stan</u> Maximum	-1.50 -35.96 psf -21.57 psf 4.00 3.25 13.00 -280 lb doff Uplift Che Design Uplift = plift Capacity =	-1.80 -43.15 psf -25.89 psf 4.00 3.25 13.00 -337 lb 400 lb	-2.20 -52.73 psf -31.64 psf 2.67 3.25 8.68 -275 lb	0.80	_ `
Uplift Pressure = 0.6 x Uplift Pressure X Standoff Spacing = Y Standoff Spacing = Tributary Area = Footing Uplift = Stan Maximum Standoff U 400 lb capacity >	-1.50 -35.96 psf -21.57 psf 4.00 3.25 13.00 -280 lb doff Uplift Che Design Uplift = plift Capacity =	-1.80 -43.15 psf -25.89 psf 4.00 3.25 13.00 -337 lb 400 lb Therefore, 0	-2.20 -52.73 psf -31.64 psf 2.67 3.25 8.68 -275 lb	0.80	_ `
Uplift Pressure = 0.6 x Uplift Pressure X Standoff Spacing = Y Standoff Spacing = Tributary Area = Footing Uplift = Stan Maximum Standoff U 400 lb capacity > Fastener	-1.50 -35.96 psf -21.57 psf 4.00 3.25 13.00 -280 lb doff Uplift Che Design Uplift = plift Capacity = 337 lb demand Uplift Capacity Fastener =	-1.80 -43.15 psf -25.89 psf 4.00 3.25 13.00 -337 lb 400 lb Therefore, 0 7 Check 1 - 5/16" dia	-2.20 -52.73 psf -31.64 psf 2.67 3.25 8.68 -275 lb	0.80	_ `
Uplift Pressure = 0.6 x Uplift Pressure X Standoff Spacing = Y Standoff Spacing = Tributary Area = Footing Uplift = Stan Maximum Standoff Up 400 lb capacity > Fastener Number	-1.50 -35.96 psf -21.57 psf 4.00 3.25 13.00 -280 lb doff Uplift Che Design Uplift = plift Capacity = 337 lb demand Uplift Capacity Fastener = of Fasteners =	-1.80 -43.15 psf -25.89 psf 4.00 3.25 13.00 -337 lb ck -337 lb 400 lb Therefore, C 7 Check 1 - 5/16" dia 1	-2.20 -52.73 psf -31.64 psf 2.67 3.25 8.68 -275 lb	0.80	_ `
Uplift Pressure = 0.6 x Uplift Pressure X Standoff Spacing = Y Standoff Spacing = Tributary Area = Footing Uplift = <u>Stan</u> Maximum Standoff Up 400 lb capacity > <u>Fastener</u> Number Embe	-1.50 -35.96 psf -21.57 psf 4.00 3.25 13.00 -280 lb doff Uplift Che Design Uplift = plift Capacity = 337 lb demand Uplift Capacity Fastener = of Fasteners = dment Depth =	-1.80 -43.15 psf -25.89 psf 4.00 3.25 13.00 -337 lb ck -337 lb 400 lb Therefore, C 7 Check 1 - 5/16" dia 1 2.5	-2.20 -52.73 psf -31.64 psf 2.67 3.25 8.68 -275 lb	0.80	_ `
Uplift Pressure = 0.6 x Uplift Pressure X Standoff Spacing = Y Standoff Spacing = Tributary Area = Footing Uplift = Stan Maximum Standoff U 400 lb capacity > Fastener Number Embe Pullout Capa	-1.50 -35.96 psf -21.57 psf 4.00 3.25 13.00 -280 lb doff Uplift Che Design Uplift = plift Capacity = 337 lb demand Uplift Capacity Fastener = of Fasteners = dment Depth = acity Per Inch =	-1.80 -43.15 psf -25.89 psf 4.00 3.25 13.00 -337 lb ck -337 lb 400 lb Therefore, C Check 1 - 5/16" dia 1 2.5 205 lb	-2.20 -52.73 psf -31.64 psf 2.67 3.25 8.68 -275 lb	0.80	_ `
Uplift Pressure = 0.6 x Uplift Pressure X Standoff Spacing = Y Standoff Spacing = Tributary Area = Footing Uplift = Stan Maximum Standoff Up 400 lb capacity > Fastener Number Embe Pullout Capa Faste	-1.50 -35.96 psf -21.57 psf 4.00 3.25 13.00 -280 lb doff Uplift Che Design Uplift = plift Capacity = 337 lb demand Uplift Capacity = asteners = of Fasteners = cof	-1.80 -43.15 psf -25.89 psf 4.00 3.25 13.00 -337 lb ck -337 lb 400 lb Therefore, C Check 1 - 5/16" dia 1 2.5 205 lb 513 lb	-2.20 -52.73 psf -31.64 psf 2.67 3.25 8.68 -275 lb	0.80	_ `
Uplift Pressure = 0.6 x Uplift Pressure X Standoff Spacing = Y Standoff Spacing = Tributary Area = Footing Uplift = Stan Maximum Standoff Up 400 lb capacity > Fastener Number Embe Pullout Capa Faste	-1.50 -35.96 psf -21.57 psf 4.00 3.25 13.00 -280 lb doff Uplift Che Design Uplift = plift Capacity = 337 lb demand Uplift Capacity = of Fasteners = odment Depth = acity Per Inch = ener Capacity = w/ F.S. of 1.0 =	-1.80 -43.15 psf -25.89 psf 4.00 3.25 13.00 -337 lb 400 lb Therefore, 0 Check 1 - 5/16" dia 1 2.5 205 lb 513 lb 513 lb	-2.20 -52.73 psf -31.64 psf 2.67 3.25 8.68 -275 lb DK Lag (NDS Eq 12.2-1) (NDS Eq 11.3-1)	0.80	_ `



$= 0.766 \text{ in}$ $= 0.766 \text{ in}$ $Actual Deflection (Total Load) = (5*w*L^4) / (384*E*I)$ $= 0.694 \text{ in}$ $= L/199 < L/180 \text{ Therefore OK}$ $Allowed Deflection (Live Load) = L/240$ 0.575 in $Actual Deflection (Live Load) = (5*w*L^4) / (384*E*I)$ 0.486 in $L/284 < L/240 \text{ Therefore OK}$ $\underline{Check Shear}$ $Member Area = 16.5 \text{ in}^{4}2 \text{ Fv (psi)} = 150 \text{ psi} (NDS Table 4)$	Framing Che	<u>ck</u>	(MP1) P	ASS - With Framing Upgrades
PV Load 4.0 psf Snow Load 38.5 psf Double 2x6 Rafters @ 24"o.c. Member Span = 11' - 6" Total Load 55.0 psf Member Properties - Based on Upgraded Section Member Size S (in ⁴) 1 (in ⁴) Lumber Sp/Gr Member Spacing Double 2x6 15.13 41.59 HF#1 @ 24"o.c. Check Bending Stress Fb (psi) = fb x Cd x Cf x Cr (NDS Table 4.3 975 x 1.15 x 1.3 x 1.15 Allowed Bending Stress = 1676.2 psi Maximum Moment = (wL ²) / 8 = 1817.47 ft# = 21809.7 in# Actual Bending Stress = (Maximum Moment) / S = 1442 psi Allowed > Actual - 86.1% Stressed Therefore, OK Check Deflection Allowed Deflection (Total Load) = U/180 (E = 1500000 psi Per ND = 0.766 in Deflection (Total Load) = (5*w ^L 4) / (384*E*1) = 0.694 in = L/199 < L/180 Therefore OK Allowed Deflection (Live Load) = L/240 Actual Deflection (Live Load) = L/240 Check Shear Member Area = 16.5 in ⁴ 2 Fv (psi) = 150 psi (NDS Table 4.3 No Stable 4.3 N	Dead Load	12.5 nsf		w = 110 plf
Member Span = 11' - 6" Member Spon Spin Spin Spin Spin Spin Spin Spin Spi		•		
Total Load55.0 psfMember Properties - Based on Upgraded SectionMember SizeS (in^3)I (in^4)Lumber Sp/GrMember Spacing @ 24°o.c.Double 2x615.1341.59HF#1@ 24°o.c.Check Bending StressFb (psi) = fb x Cd x Cf x Cr (NDS Table 4.3 975 x 1.15 x 1.3 x 1.15Allowed Bending Stress = 1676.2 psiMaximum Moment = (wL^2) / 8 = 1817.47 ft# = 21809.7 in#Actual Bending Stress = (Maximum Moment) / S = 1442 psi Allowed > Actual - 86.1% Stressed - Therefore, OKCheck DeflectionAllowed > Actual - 86.1% Stressed - Therefore, OKCheck DeflectionAllowed > Actual - 86.1% Stressed - Therefore, OKCheck DeflectionAllowed Deflection (Total Load) = $= 0.766$ in $= 0.766$ in $= 0.694$ in $= L/180$ Therefore OKAllowed Deflection (Live Load) = $= 0.575$ in $Actual Deflection (Live Load) == 0.575 inActual Deflection (Live Load) == 0.575 inActual Deflection (Live Load) =L/284 < L/240 Therefore OKCheck ShearMember Area = 16.5 in*2Fv (psi) = 150 psi(NDS Table 4.3(NDS Table 4.3)$	Snow Load	38.5 psf	Double 2	x6 Rafters @ 24"o.c.
Total Load55.0 psfMember Properties - Based on Upgraded SectionMember SizeS (in'3)I (in'4)Lumber Sp/GrMember SpacingDouble 2x615.1341.59HF#1@ 24"o.c.Check Bending StressFb (psi) =fbxCdxCfxCr975x1.15x1.3x1.15Allowed Bending Stress = 1676.2 psiMaximumMoment= (wL^2) / 8 = 1817.47ft# = 21809.7in#Actual Bending Stress = (Maximum Moment) / S = 1442 psiAllowed > Actual - 86.1% Stressed - Therefore, OKCheck DeflectionAllowed Deflection (Total Load) =L/180 = 0.766 in(E = 1500000 psi Per NE = 0.766 inSimple Span = 0.694 in = L/180Check Office OKAllowed Deflection (Live Load) =L/240 = 0.575 in $(5*w^*L^4) / (384*E^*1)$ = 0.694 in = L/180Therefore OKCheck ShearAllowed Deflection (Live Load) =L/240 $U/284 < L/240$ $U/240$ Therefore OKCheck ShearMember Area = 16.5 in'2Fv (psi) = 150 psi(NDS Table 4.3)				Ŏ
Member Properties - Based on Upgraded SectionMember SizeS (in^3)I (in^4)Lumber Sp/GrMember SpacingDouble 2x615.1341.59HF#1@ 24*o.c.Check Bending StressFb (psi) =fbxCdxCfxCr975x1.15x1.3x1.15Allowed Bending Stress = 1676.2 psiMaximumMoment= (wL^2) / 8= 1817.47ft#= 21809.7in#Actual Bending Stress = (Maximum Moment) / S= 1442 psiAllowed > Actual 86.1% Stressed Therefore, OKCheck DeflectionAllowed Deflection (Total Load) =U180(E = 1500000 psi Per NE= 0.766 inDeflection (Total Load) =U180= 0.694 in= U/199< L/180	•		Memb	er Span = 11' - 6"
Member SizeS (in^3)I (in^4)Lumber Sp/GrMember Spacing @ 24"o.c.Double 2x615.1341.59HF#1@ 24"o.c.Check Bending StressFb (psi) =fb xCd xCf xCr975x1.15x1.3x1.15Allowed Bending Stress = 1676.2 psiMaximumMoment= (wL^2) / 8=1817.47MaximumMoment= (wL^2) / 8=1817.47ft#= 21809.7in#Actual Bending Stress = (Maximum Moment) / S=1442 psiAllowed > Actual - 86.1% Stressed Therefore, OKCheck DeflectionAllowed Deflection (Total Load) =L/180(E = 1500000 psi Per NE= 0.766 in=0.766 inDeflection Criteria Based on =Simple SpanActual Deflection (Total Load) =(5*w*L^4) / (384*E*1)= 0.694 in== L/199 < L/180		55.0 p31		
Double 2x615.1341.59HF#1@ 24"o.c.Check Bending StressFb (psi) = fb x Cd x Cf x Cr (NDS Table 4.3 975 x 1.15 x 1.3 x 1.15Allowed Bending Stress = 1676.2 psiMaximum Moment = (wL^2) / 8 = 1817.47 ft# = 21809.7 in# Actual Bending Stress = (Maximum Moment) / S = 1442 psi Allowed > Actual 86.1% Stressed Therefore, OKCheck DeflectionAllowed > Actual 86.1% Stressed Therefore, OKCheck DeflectionAllowed Deflection (Total Load) = 0.766 in 0.694 in $= L/180$ (E = 1500000 psi Per NE $= 0.766$ in 0.694 in $= L/180$ Therefore OKAllowed Deflection (Total Load) = 0.575 in $Actual Deflection (Live Load) =0.575 inActual Deflection (Live Load) =0.575 inActual Deflection (Live Load) =0.486 inL/284 < L/240 Therefore OKCheck ShearMember Area = 16.5 in*2Fv (psi) = 150 psi(NDS Table 4.3$		Member Prop	perties - Based on Upgraded Section	on
Check Bending StressFb (psi) = fb x Cd x Cf x Cr (NDS Table 4.3 975 x 1.15 x 1.3 x 1.15Allowed Bending Stress = 1676.2 psiNaximum Moment = (wL^2) / 8 = 1817.47 ft# = 21809.7 in#Actual Bending Stress = (Maximum Moment) / S = 1442 psi Allowed > Actual 86.1% Stressed Therefore, OKCheck DeflectionAllowed Deflection (Total Load) = $(5^*w^+L^4) / (384^*E^*I)$ $= 0.694$ in $= L/190$ (E = 1500000 psi Per NE $= 0.766$ in Deflection Criteria Based on = $Simple Span$ Actual Deflection (Total Load) = $= L/190$ Allowed Deflection (Total Load) = $(5^*w^+L^4) / (384^*E^*I)$ $= 0.694$ in $= L/199$ < $L/180$ Therefore OKAllowed Deflection (Live Load) = $L/240$ $Actual Deflection (Live Load) =L/284 < L/240 Therefore OK$				
Fb (psi) = fb xCd xCf xCr(NDS Table 4.3 975 x975 x1.15 x1.3 x1.15Allowed Bending Stress = 1676.2 psiMaximumMoment = (wL^2) / 8 = 1817.47 ft# = 21809.7 in#Actual Bending Stress = (Maximum Moment) / S = 1442 psi Allowed > Actual 86.1% Stressed Therefore, OKCheck DeflectionAllowed Deflection (Total Load) = $= 0.766$ in Deflection (Total Load) =Deflection (Total Load) = $= L/180$ $= 0.766$ in $= 0.694$ in $= L/199 < L/180$ Therefore OKAllowed Deflection (Live Load) = 0.575 in Actual Deflection (Live Load) = 0.486 in $L/284 < L/240$ Therefore OKAllowed Deflection (Live Load) = 0.426 in $L/284 < L/240$ Therefore OKCheck Shear Member Area = 16.5 in*2	Double 2x6	15.13	41.59 HF#1	@ 24"o.c.
Fb (psi) = fb xCd xCf xCr(NDS Table 4.3 975 x975 x1.15 x1.3 x1.15Allowed Bending Stress = 1676.2 psiMaximumMoment = (wL^2) / 8 = 1817.47 ft# = 21809.7 in#Actual Bending Stress = (Maximum Moment) / S = 1442 psi Allowed > Actual 86.1% Stressed Therefore, OKCheck DeflectionAllowed Deflection (Total Load) = $= 0.766$ in Deflection (Total Load) =Deflection (Total Load) = $= L/180$ $= 0.766$ in $= 0.694$ in $= L/199 < L/180$ Therefore OKAllowed Deflection (Live Load) = 0.575 in Actual Deflection (Live Load) = 0.486 in $L/284 < L/240$ Therefore OKAllowed Deflection (Live Load) = 0.426 in $L/284 < L/240$ Therefore OKCheck Shear Member Area = 16.5 in*2			Obash Dandina Otasa	
$\begin{array}{rcl} 975 & x & 1.15 & x & 1.3 & x & 1.15 \\ \mbox{Allowed Bending Stress} = 1676.2 \mbox{psi} \\ \mbox{Maximum} & Moment & = (wL^2) / 8 \\ & = 1817.47 & ft# \\ & = 21809.7 & in# \\ \mbox{Actual Bending Stress} = (Maximum Moment) / S \\ & = 1442 \mbox{psi} \\ \mbox{Atual Bending Stress} = (Maximum Moment) / S \\ & = 1442 \mbox{psi} \\ \mbox{Allowed} > Actual 86.1\% \mbox{Stressed} \mbox{Therefore, OK} \\ \mbox{Check Deflection} \\ \mbox{Allowed Deflection (Total Load)} = & L/180 & (E = 1500000 \mbox{psi} \mbox{Per NE} \\ & = 0.766 \mbox{in} \\ \mbox{Actual Deflection (Total Load)} = & (5^*w^*L^4) / (384^*E^*1) \\ & = 0.694 \mbox{in} \\ \mbox{L}/199 & < L/180 \mbox{Therefore OK} \\ \mbox{Allowed Deflection (Live Load)} = & L/240 \\ \mbox{0.575 in} \\ \mbox{Actual Deflection (Live Load)} = & L/240 \\ \mbox{0.486 in} \\ \mbox{L}/284 & < L/240 \mbox{Therefore OK} \\ \mbox{Check Shear} \\ \mbox{Member Area} = 16.5 \mbox{in}^2 & \mbox{Fv (psi)} = 150 \mbox{psi} & \mbox{(NDS Table 4)} \\ \end{tabular}$	Eh (pai) -	fb y Cd		
Allowed Bending Stress = 1676.2 psi Maximum Moment = $(wL^{2}) / 8$ = 1817.47 ft# = 21809.7 in# Actual Bending Stress = (Maximum Moment) / S = 1442 psi Allowed > Actual 86.1% Stressed Therefore, OK Check Deflection Allowed Deflection (Total Load) = $L/180$ (E = 1500000 psi Per NE = 0.766 in Deflection Criteria Based on = Simple Span Actual Deflection (Total Load) = $(5^*w^*L^4) / (384^*E^*1)$ = 0.694 in = L/199 < L/180 Therefore OK Allowed Deflection (Live Load) = $L/240$ 0.575 in Actual Deflection (Live Load) = $L/240$ 0.575 in Actual Deflection (Live Load) = $L/240$ 0.486 in L/284 < L/240 Therefore OK Check Shear Member Area = 16.5 in ² Fv (psi) = 150 psi (NDS Table 4)				(1105 Table 4.5.1)
$= 1817.47 \text{ ft#}$ $= 21809.7 \text{ in#}$ Actual Bending Stress = (Maximum Moment) / S $= 1442 \text{ psi}$ Allowed > Actual 86.1% Stressed Therefore, OK $\frac{\text{Check Deflection}}{\text{Allowed Deflection (Total Load)} = \frac{L/180}{9} \text{ (E = 1500000 psi Per NE)}$ $= 0.766 \text{ in}$ Deflection Criteria Based on = Simple Span Actual Deflection (Total Load) = (5*w*L^4) / (384*E*1) $= 0.694 \text{ in}$ $= L/199 < L/180 \text{ Therefore OK}$ Allowed Deflection (Live Load) = $\frac{L/240}{0.575 \text{ in}}$ Actual Deflection (Live Load) = $\frac{L/240}{0.486 \text{ in}}$ $L/284 < L/240 \text{ Therefore OK}$ $\frac{\text{Check Shear}}{\text{Member Area = 16.5 in^{2}}}$ Fv (psi) = 150 psi (NDS Table 4)				
= 21809.7 in# Actual Bending Stress = (Maximum Moment) / S $= 1442 \text{ psi}$ Allowed > Actual 86.1% Stressed Therefore, OK $\frac{\text{Check Deflection}}{\text{Allowed Deflection (Total Load)} = \frac{L/180}{9} (E = 1500000 \text{ psi Per NE})$ $= 0.766 \text{ in}$ Deflection Criteria Based on = Simple Span Actual Deflection (Total Load) = (5*w*L^4) / (384*E*1) = 0.694 in $= L/199 < L/180 Therefore OK$ Allowed Deflection (Live Load) = L/240 0.575 in Actual Deflection (Live Load) = L/240 0.575 in $Actual Deflection (Live Load) = (5*w*L^4) / (384*E*1)$ 0.486 in $L/284 < L/240 \text{Therefore OK}$ $\frac{\text{Check Shear}}{\text{Member Area} = 16.5 \text{ in}^2} Fv (\text{psi}) = 150 \text{ psi}$ (NDS Table 4)	Maximum Mome	· · · /		
Actual Bending Stress = (Maximum Moment) / S = 1442 psi Allowed > Actual 86.1% Stressed Therefore, OK Check Deflection Allowed Deflection (Total Load) = $L/180$ (E = 1500000 psi Per NE = 0.766 in Deflection Criteria Based on = Simple Span Actual Deflection (Total Load) = $(5^*w^*L^4) / (384^*E^*I)$ = 0.694 in = L/199 < L/180 Therefore OK Allowed Deflection (Live Load) = $L/240$ 0.575 in Actual Deflection (Live Load) = $L/240$ 0.575 in Actual Deflection (Live Load) = $L/240$ 0.486 in L/284 < L/240 Therefore OK Check Shear Member Area = 16.5 in ² Fv (psi) = 150 psi (NDS Table 4)				
$= 1442 \text{ psi}$ Allowed > Actual 86.1% Stressed Therefore, OK $\frac{\text{Check Deflection}}{\text{Allowed Deflection (Total Load)} = \begin{array}{c} L/180 & (E = 1500000 \text{ psi Per NE})\\ = 0.766 \text{ in} & 0.694 \text{ in} & 0.575 \text{ in} & 0.486 \text{ in} & L/284 & < L/240 & 0.575 \text{ in} & 0.486 \text{ in} & L/284 & < L/240 & 0.575 \text{ in} & 0.486 \text{ in} & L/284 & < L/240 & 0.575 \text{ in} & 0.486 \text{ in} & L/284 & < L/240 & 0.575 \text{ in} & 0.486 \text{ in} & L/284 & < L/240 & 0.575 \text{ in} & 0.486 \text{ in} & L/284 & < L/240 & 0.575 \text{ in} & 0.486 \text{ in} & L/284 & < L/240 & 0.575 \text{ in} & 0.486 \text{ in} & L/284 & < L/240 & 0.575 \text{ in} & 0.486 \text{ in} & L/284 & < L/240 & 0.575 \text{ in} & 0.486 \text{ in} & L/284 & < L/240 & 0.575 \text{ in} & 0.575 i$				
Allowed > Actual 86.1% Stressed Therefore, OKCheck DeflectionAllowed Deflection (Total Load) = $L/180$ (E = 1500000 psi Per NE $= 0.766$ in $= 0.766$ inDeflection Criteria Based on =Simple SpanActual Deflection (Total Load) = $(5^*w^*L^4) / (384^*E^*I)$ $= 0.694$ in $= L/199 < L/180$ Therefore OKAllowed Deflection (Live Load) = $L/240$ 0.575 in 0.575 inActual Deflection (Live Load) = $(5^*w^*L^4) / (384^*E^*I)$ 0.486 in $L/284 < L/240$ Therefore OKCheck ShearMember Area = 16.5 in^2Fv (psi) = 150 psi(NDS Table 4)	Actual Bending Stress			
Check DeflectionAllowed Deflection (Total Load) =L/180(E = 1500000 psi Per NE= 0.766 in=0.766 inDeflection Criteria Based on =Simple SpanActual Deflection (Total Load) = $(5^*w^*L^4) / (384^*E^*I)$ = 0.694 in== L/199 <				. OK
Allowed Deflection (Total Load) =L/180(E = 1500000 psi Per NEDeflection Criteria Based on =Simple SpanActual Deflection (Total Load) = $(5^*w^*L^4) / (384^*E^*I)$ = 0.694 in= L/199 < L/180Allowed Deflection (Live Load) =Actual Deflection (Live Load) =L/2400.575 inActual Deflection (Live Load) =L/2400.575 inActual Deflection (Live Load) =L/2400.575 inActual Deflection (Live Load) =Check ShearMember Area = 16.5 in^2Fv (psi) = 150 psi(NDS Table 4)				,
$= 0.766 \text{ in}$ $= 0.766 \text{ in}$ $Simple Span$ $(5^*w^*L^4) / (384^*E^*l)$ $= 0.694 \text{ in}$ $= L/199 < L/180 \text{ Therefore OK}$ Allowed Deflection (Live Load) = $L/240$ 0.575 in $Actual Deflection (Live Load) = (5^*w^*L^4) / (384^*E^*l)$ 0.486 in $L/284 < L/240 \text{ Therefore OK}$ $\frac{Check Shear}{Prv (psi) = 150 psi}$ $(NDS Table 4)$				
Deflection Criteria Based on = $\frac{\text{Simple Span}}{(5^*w^*L^4) / (384^*E^*I)}$ = 0.694 in = L/199 < L/180 Therefore OK Allowed Deflection (Live Load) = $\frac{\text{L/240}}{0.575 \text{ in}}$ Actual Deflection (Live Load) = $\frac{(5^*w^*L^4) / (384^*E^*I)}{0.486 \text{ in}}$ $\frac{1}{284} < \frac{1}{240}$ Therefore OK Check Shear Member Area = 16.5 in^2 Fv (psi) = 150 psi (NDS Table 4)	Allowed Deflection (To	tal Load) =		(E = 1500000 psi Per NDS)
Actual Deflection (Total Load)= $(5^*w^*L^4) / (384^*E^*I)$ =0.694 in=L/199<		- d - a -		
= 0.694 in $= L/199 < L/180 Therefore OK$ Allowed Deflection (Live Load) = $L/2400.575 inActual Deflection (Live Load) = (5^*w^*L^4) / (384^*E^*I)0.486 inL/284 < L/240$ Therefore OK Check Shear Member Area = 16.5 in^2 Fv (psi) = 150 psi (NDS Table 4)				
= L/199 < L/180 Therefore OK Allowed Deflection (Live Load) = $L/2400.575 inActual Deflection (Live Load) = (5^*w^*L^4) / (384^*E^*I)0.486 inL/284 < L/240 Therefore OK\underline{Check Shear} Member Area = 16.5 in2 Fv (psi) = 150 psi (NDS Table 4)$		ii Load) -	, , , ,	
Allowed Deflection (Live Load) =L/240 $0.575 in$ $(5*w*L^4) / (384*E*I)$ $0.486 in$ $L/284 < L/240$ Therefore OKCheck ShearMember Area = 16.5 in^2Fv (psi) = 150 psi(NDS Table 4)				ore OK
Actual Deflection (Live Load) = 0.575 in (5*w*L^4) / (384*E*I) 0.486 in L/284 L/240 Therefore OK Check Shear Member Area = 16.5 in^2 Fv (psi) = 150 psi (NDS Table 4)				
Actual Deflection (Live Load) = (5*w*L^4) / (384*E*I) 0.486 in L/284 < L/240	Allowed Deflection (Liv	ve Load) =	L/240	
0.486 in L/284 < L/240 Therefore OK Check Shear Member Area = 16.5 in^2 Fv (psi) = 150 psi (NDS Table 4)				
L/284 Check Shear Member Area = 16.5 in^2 Fv (psi) = 150 psi (NDS Table 4)	Actual Deflection (Live	Load) =	. , . ,	
Check Shear Member Area = 16.5 in^2 Fv (psi) = 150 psi (NDS Table 4)				
Member Area = 16.5 in^2 Fv (psi) = 150 psi (NDS Table 4			L/284 < L/240 Therefo	ore UK
Member Area = 16.5 in^2 Fv (psi) = 150 psi (NDS Table 4			Check Shear	
	Member A	Area = 16.5 in^2		(NDS Table 4A)

Allowed > Actual -- 38.4% Stressed -- Therefore, OK



Framing Check		(MP2	2)		PASS
Dead Load 10.1 psf				w = 70 g	blf
PV Load4.0 psfSnow Load38.5 psf				2x8 Rafters @) 16"o.c.
Governing Load Combo = DL + STotal Load52.6 psf	SL	←		Member Span	= 8' - 8"
		Member Prope	rties		
Member Size 2x8	S (in^3) 13.14	l (in^4) 47.63		ber Sp/Gr 6PF#2	Member Spacing @ 16"o.c.
	Cł	neck Bending	Stress		
= = Actual Bending Stress = (Maximu	(wL^2) / 8 658.809 ft# 7905.7 in# um Moment) / = 601.7 psi	1.2 x		herefore, OK	(NDS Table 4.3.1)
Allowed Deflection (Total Load)	=	L/180		(E :	= 1400000 psi Per NDS)
Deflection Criteria Based on = Actual Deflection (Total Load) =	: = =	= 0.577 in Simple Span (5*w*L^4) / (3 = 0.134 in = L/777 <	84*E*I) L/180	Therefore OK	
Allowed Deflection (Live Load)	=	L/240 0.433 in			
Actual Deflection (Live Load) =	:	(5*w*L^4) / (3 0.098 in	84*E*I) L/240	Therefore OK	
		Check Shea	ar		
Member Area = 1 Allowed Shear = Fv	0.9 in^2 * A/1.5 = 979		= (psi) = I	135 psi Max Shear (V) = v	(NDS Table 4A) w * L / 2 = 304 lb

Allowed > Actual -- 31.1% Stressed -- Therefore, OK

PROJECT SUMMARY:

THE PROJECT SCOPE INCLUDES THE DESIGN, SPECIFICATION, PROCUREMENT, INSTALLATION AND COMMISSIONING OF A COMPLETE, TURN-KEY, GRID-TIED PHOTOVOLTAIC ELECTRIC SYSTEM.

MODULE TYPE	(25) Q CELLS Q.PEAK DUO BLK ML-GI0+ 410W
INVERTER	(25) ENPHASE IQ8A-72-2-US
OPTIMIZER	N/A
STORAGE SYSTEM	N/A
ARRAY PITCH	30°
ARRAY AZIMUTH	229°
RACKING	BLACK IRONRIDGE XRIOO ALUMINUM RAIL
ATTACHMENT	ECOSFASTEN GREENFASTEN GFI WITH SS 4" X 5/16" LAG SCREWS

AUTHORITIES HAVING JURISDICTION:

BUILDING AUTHORITY	PORTSMOUTH NH
ELECTRICAL AUTHORITY	PORTSMOUTH NH
ZONING/PLANNING AUTHORITY	PORTSMOUTH NH
ELECTRICAL UTILITY	EVERSOURCE

DESIGN CRITERIA:

OCCUPANCY	RESIDENTIAL
DESIGN WIND LOAD	125 MPH
RISK CATEGORY	11
GROUND SNOW LOAD	50 PSF
EXPOSURE CATEGORY	В
ROOF HEIGHT	20' ABOVE GRADE TO EAVES
ROOF COMPOSITION	ASPHALT SHINGLE
RAFTER	MPI 2X6", MPI 2X8"
RAFTER SPACING	MPI 24" OC, MP2 16" OC

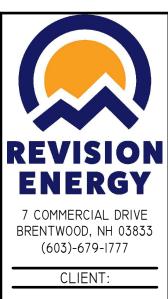
SHEET LIST:

G001	TITLE SHEET
E100	SITE PLAN
S100	ROOF MODULE LAYOUT
S200	RAIL CUT SHEET
E400	ONE-LINE DIAGRAM
A200	SAFETY PLAN
E700	STICKER MAP

GENERAL NOTES:

- ALL WORK SHALL COMPLY WITH LOCAL AND STATE ORDINANCES AND BUILDING CODES. Ι.
- 2. ELECTRICAL INSTALLATION SHALL COMPLY WITH STATE AND LOCALLY ADOPTED ELECTRICAL CODE.
- ROOFTOP PENETRATIONS SHALL BE SEALED. 3.
- ALL EQUIPMENT SHALL BE LISTED AND TESTED BY A RECOGNIZED LABORATORY. 4.
- 5. MODULE CONNECTORS MUST BE MATCHING BRAND AND TYPE OR BE A UL LISTED ASSEMBLY.
- 6. SYSTEM SHALL CONFORM TO RAPID SHUTDOWN REQUIREMENTS PER NEC 690.
- 7. CONDUIT RUNS BETWEEN SUB-ARRAYS, COMBINERS, AND DISCONNECTS SHALL BE INSTALLED IN THE MOST DIRECT ROUTE POSSIBLE.
- 8. ELECTRICAL EQUIPMENT SHALL BE INSTALLED TO MAINTAIN CLEARANCES REQUIRED BY NEC 110.
- EQUIPMENT SHALL BE LABELED PER NEC 2020 REQUIREMENTS. 9.
- 10. ENSURE INVERTER IS SET TO ISO-NE STANDARDS.





ALBERT MORALES 33 JOHNSON CT PORTSMOUTH NH, 03801

SYSTEM TYPE:

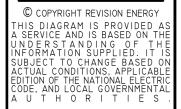
10.25KWDC, 8.725KWAC GRID TIED SOLAR PV SYSTEM

FOR CONSTRUCTION

DESIGNED BY:	MCF
PRINT SIZE:	" x 7"
SCALE:	NA
DATE:	3/6/2024
DWG TITLE	

TITLE SHEET

G001



PROJECT SUMMARY:

MODULE TYPE	(25) Q CELLS Q.PEAK DUO BLK ML-GIO+ 410W
INVERTER	(25) ENPHASE IQ8A-72-2-US
OPTIMIZER	N/A
STORAGE SYSTEM	N/A
ARRAY PITCH	30°
ARRAY AZIMUTH	229°
RACKING	BLACK IRONRIDGE XRIOO ALUMINUM RAIL
ATTACHMENT	ECOSFASTEN GREENFASTEN GFI WITH SS 4" X 5/16" LAG SCREWS

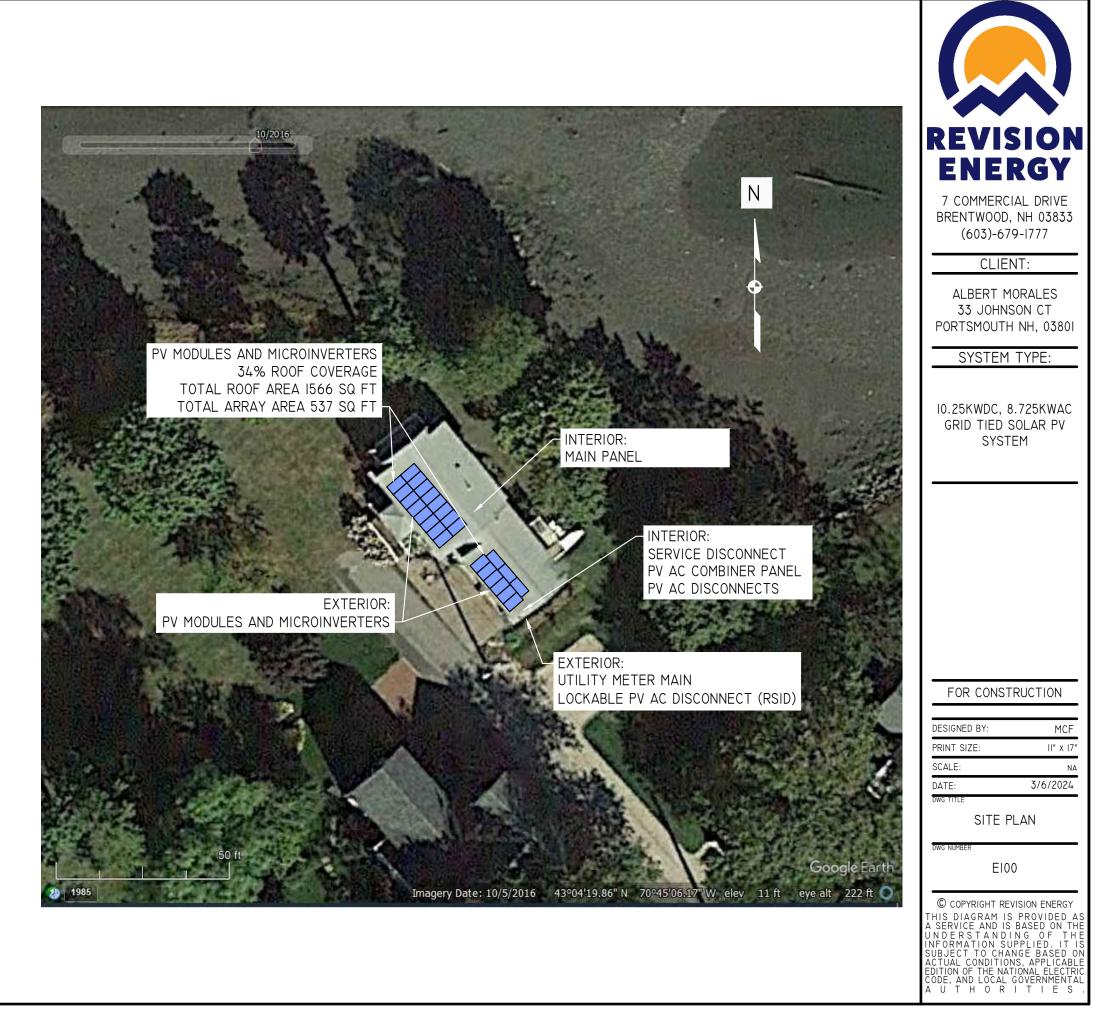
DESIGN CRITERIA:

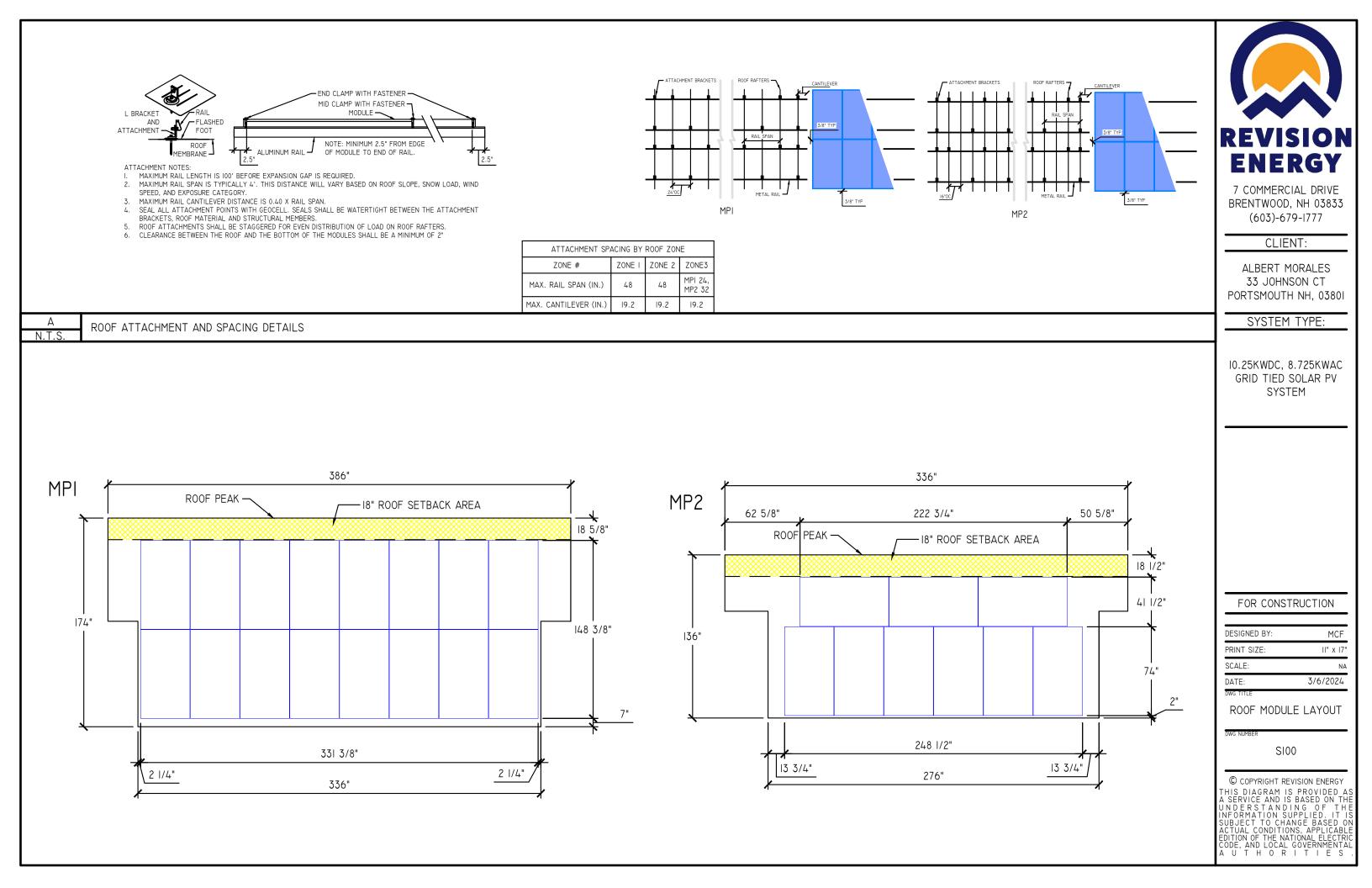
OCCUPANCY	RESIDENTIAL
DESIGN WIND LOAD	125 MPH
RISK CATEGORY	11
GROUND SNOW LOAD	50 PSF
EXPOSURE CATEGORY	В
ROOF HEIGHT	20' ABOVE GRADE TO EAVES
ROOF COMPOSITION	ASPHALT SHINGLE
RAFTER	MPI 2X6", MPI 2X8"
RAFTER SPACING	MPI 24" OC, MP2 16" OC

EQUIPMENT LOCATIONS:

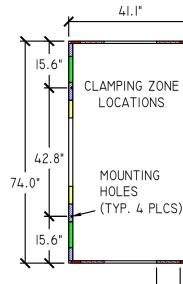
INTERIOR:

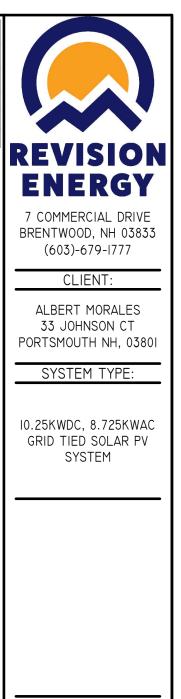
MAIN PANEL SERVICE DISCONNECT PV AC COMBINER PANEL PV AC SUPPLY SIDE DISCONNECT EXTERIOR: UTILITY NET METER LOCKABLE PV AC DISCONNECT (RSID) PV MODULES AND MICROINVERTERS



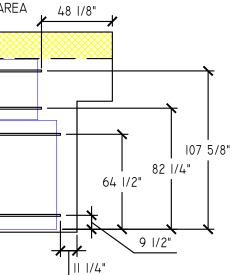


	CLIMANA DV													CUT LIS	r
	SUMMARY							RAIL LENGTH	1			1			i
TYPE	PRODUCT	DIMENSIONS	QUANTITY	RAIL SECTION TAG	NUMBER OF RAIL SECTIONS	QTY OF PANELS IN SECTION	RAFTER SPACING	MODULE ORIENTATION	RAIL ORIENTATION	RAIL LENGTH (IN)	FULL STICKS	CUT	PIECE (IN)	RAIL LENGTH (IN)	QTY
MODULE:	Q CELLS Q.PEAK DUO BLK ML-GIO+ 410W	41.14in x 73.98in x 32mm	25	P6	2	6	16''	PORTRAIT	HORIZONTAL	253 3/4	I	(1)	49 3/4	FULL (17')	8
RAIL:	IRON RIDGE XRI00 - 17'	204 IN	(8) FULL (8)	P8	4	8	24''	PORTRAIT	HORIZONTAL	336 3/4		()	132 3/4	49 3/4	2
			CUT	L3	2	4	16''	LANDSCAPE	HORIZONTAL	302	Ι	()	98	132 3/4	4
FASTENERS:	IRON RIDGE UFO	0.375 IN	60 MIN											98	2
				1											
	INVERTER	WATTS / MAX	MODS PER STRING												
E	ENPHASE IQ8A-72-2-US	N/A	II												
01 Z II	_ MPI				01 Z /	/ 11		MP2							
24 3/4	ROOF	PEAK —	18" ROC	F SETBACK ARE	A 24 3/4	4									
		\	1				14	60 1/8"	ROOF PEAK -	× 18	" ROOF SETE	ЗАСК 🖌	AREA	48 1/8"	
					*****		x						<u>x</u>		
							×			\rightarrow				/	
															,
						`									
		P8									5				
		P8									5				
		P8									5				1 07 5/8
		P8					/8"				5				107 5/
							/8"			P6	5				•
						138 7/ 83 7/8"	/8"				5				•
		P8 P8 P8			64	83 7/8"	/8"				5			64 1/2" 82 9 1/2	/4"
						83 7/8"	/8"				5	2"		64 1/2" 82 9 1/2	/4"
			7"			83 7/8"	/8"				5			64 1/2" 82 9 1/2	/4"
						83 7/8" . /2"	/8"				5			64 1/2" 82 9 1/2	/4"





	a cleb an LAN Doo		
	BLK ML GI0+ (405W) DESIGN LOADS	FOR CONSTRUCTION	١
ZONE NS	 ➡ +75 PSF, -55 PSF ➡ +75 PSF, -50 PSF 		1CF
	🖾 +33 PSF, -33 PSF	PRINT SIZE: II"	x 17"
Π	■ +33 PSF, -28 PSF	SCALE:	NA
	🖾 +33 PSF, -25 PSF	DATE: 3/6/2	024
	FOUR POINT BOLTING:	DWG TITLE	
IG	+75 PSF, -33 PSF	RAIL CUT SHEET	
PLCS)		DWG NUMBER	
Ĭ	19.7" I	S200	
	13.8" 25.6"		
		${\mathbb C}$ COPYRIGHT REVISION ENE	RGY
	0.8" 	THIS DIAGRAM IS PROVIDE A SERVICE AND IS BASED O UNDERSTANDING OF INFORMATION SUPPLIED. SUBJECT TO CHANGE BASE ACTUAL CONDITIONS, APPLID EDITION OF THE NATIONAL ELE CODE, AND LOCAL GOVERNME A U T H O R I T I E	N THE THE IT IS D ON CABLE CTRIC ENTAL

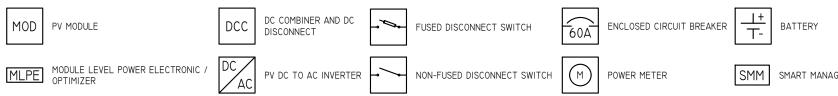


Q CELLS Q.PEAK DUO

MODULE SPECIF	ICATIONS				
Q CELLS Q.PEAK DUO BLK N	1L-G10+ 410W QT	Y 25			
STC RATING 410					
Vmp	38.48	V			
IMP	10.65	Α			
Voc	45.31	V			
Isc	.	Α			
TEMP COEFF. Voc	-0.27	%/°(
MODULE-LEVEL DC OPTIMIZ	ZER SPECIFICATIO	ONS			
NOMINAL DC RATING (WATTS)	N/A	w			
MAX OUTPUT CURRENT IDC	N/A	А			
GRID TIED INVERTER S	PECIFICATIONS				
ENPHASE IQ8A-72-	2-US QTY 25				
NOMINAL AC RATING (WATTS)	349	w			
NOMINAL VAC	240	V			
MAX IAC	1.45	Α			
		i			

	WIRING SCHEDULE											
TAG	FROM / TO	CONDUCTORS	WIRE TYPE	LENGTH (FT)	AS BUILT LENGTH (FT)	VOLTAGE DROP	CONDUIT	CONDUIT FILL				
Al	MPI PV ARRAY / JUNCTION BOX	L:(4) #12 G:(1) #6	Q-CABLE, PORT	25		0.15%						
BI	JUNCTION BOX / ENPHASE IQ COMBINER PANEL	L:(4) #10 G:(1) #10	THWN-2 600V Cu	70		0.81%	3/4" EMT	20%				
A2	MP2 PV ARRAY / JUNCTION BOX	L:(2) #12 G:(1) #6	Q-CABLE, PORT	20		0.15%						
B2	JUNCTION BOX / ENPHASE IQ COMBINER PANEL	L:(2) #10 G:(1) #10	THWN-2 600V Cu	60		0.78%	3/4" EMT	12%				
CI	ENPHASE IQ COMBINER PANEL / INTERIOR PV AC DISCONNECT	L:(2) #8 N:(1) #10 G:(1) #10	THWN-2 600V Cu	15		0.35%	3/4" EMT	22%				
DI	JUNCTION BOX / EXTERIOR PV AC DISCONNECT (RSID)	L:(4) #8 N:(2) #10 G:(1) #10	THWN-2 600V Cu	20		0.47%	I" EMT	24%				
EI	INTERIOR PV AC DISCONNECT / SUPPLY-SIDE INTERCONNECTION	L:(2) #6 N:(1) #6	THWN-2 600V Cu	10		0.15%	3/4" EMT	29%				
FI	ENPHASE IQ COMBINER PANEL / SUPPLY-SIDE INTERCONNECTION	L:(2)	Cat 5e	25		0.00%						

SYMBOLS:



STICKER CALCULATIONS						
MAXIMUM DC VOLTAGE	N/A	V				
MAXIMUM DC CIRCUIT CURRENT	N/A	А				
RATED AC OUTPUT CURRENT	36.25	А				

96.5

%

CEC EFFICIENCY

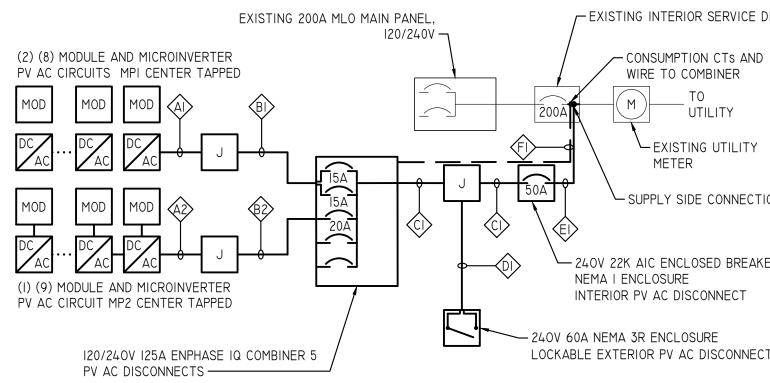
MONITORING	
HOME ROUTER	

DESIGN NOTES:

- I. ALL CONDUCTORS SHALL BE COPPER UNLESS NOTED OTHERWISE.
- SYSTEM VOLTAGE DROP SHALL NOT EXCEED 5%
 LOWEST EXPECTED AMBIENT TEMPERATURE IS
- BASED ON ASHRAE EXTREME MIN FOR THE SPECIFIED LOCATION.
- 4. AVERAGE HIGH TEMPERATURE IS BASED ON ASHRAE 2% AVG. FOR THE SPECIFIED LOCATION.

LINE TYPES:

- EXISTING - NEW



	REVISION ENERGY
	7 COMMERCIAL DRIVE BRENTWOOD, NH 03833 (603)-679-1777
	CLIENT:
I	ALBERT MORALES 33 JOHNSON CT PORTSMOUTH NH, 03801
	SYSTEM TYPE:
GEMENT MODULE	I0.25KWDC, 8.725KWAC GRID TIED SOLAR PV SYSTEM
DISCONNECT	
)	
	FOR CONSTRUCTION
TION	DESIGNED BY: MCF PRINT SIZE: II" x 17"
KER,	SCALE: NA DATE: 3/6/2024 DWG TITLE 3/6/2024
CT (RSID)	E400
	© COPYRIGHT REVISION ENERGY THIS DIAGRAM IS PROVIDED AS A SERVICE AND IS BASED ON THE UND ERSTANDING OF THE INFORMATION SUPPLIED. IT IS SUBJECT TO CHANGE BASED ON ACTUAL CONDITIONS. APPLICABLE EDITION OF THE NATIONAL ELECTRIC CODE, AND LOCAL GOVERNMENTAL A U T H O R I T I E S.



SAFETY SHEET NOTES:

- I. DRAW IN APPROXIMATE ANCHOR LOCATIONS AND SWING RADIUS
 2. DRAW IN APPROXIMATE RESTRICTED ACCESS ZONE(RULE OF THUMB 10' FOR EVERY STORY OF BUILDING
 3. DRAW IN MACHINERY OR PERSONNEL ACCESS PATHS

- ANCHOR POINT ATTACHMENT NOTES:
 I. ANCHOR POINTS REQUIRING FASTENERS MUST BE INSTALLED IN TO BUILDING STRUCTURE (RAFTERS OR PURLINS)
 2. ANCHOR POINTS TO BE INSTALLED A MINIMUM OF 72" FROM ROOF RAKE
 3. MAXIMUM SPACING BETWEEN ANCHOR POINTS IS 96"
 4. LEAVE BEHIND ANCHOR TO BE INSTALLED UNDER TOP LEFT AND TOP RIGHT PANELS TO FACILITATE SAFE ROOF EXIT
 5. 3 MINIMUM ANCHORS PER ROOF
 (AND ROMANDA LIC OUR DEPENDENT AT A TIME)
- ANCHOR POINTS I: (ONE PERSON PER ANCHOR POINT AT A TIME)
 WORK IS TO BE DONE WHILE WITHIN 30 DEGREES OF ANCHOR

COMMERCIAL DRIVE BRENTWOOD, NH 03833 (603)-679-1777 CLIENT: ALBERT MORALES 33 JOHNSON CT PORTSMOUTH NH, 03801 SYSTEM TYPE:
I0.25KWDC, 8.725KWAC GRID TIED SOLAR PV SYSTEM
FOR CONSTRUCTION DESIGNED BY: MCF PRINT SIZE: II" x 17" SCALE: NA DATE: 3/6/2024 DWG TITLE SAFETY PLAN DWG TITLE A200 © COPYRIGHT REVISION ENERGY THIS DIAGRAM IS PROVIDED AS A SERVICE AND IS BASED ON THE UN DERS TANDING OF THE INFORMATION SUPPLIED. IT IS SUBJECT TO CHANGE BASED ON ACTUAL CONDITIONS, APPLICABLE EDITION OF THE NATIONAL ELECTRIC CODE, AND LOCAL GOVERNMENTAL A U TH O R I TIES .

Q.PEAK DUO BLK ML-G10+ SERIES



385-410 Wp | 132 Cells 20.9 % Maximum Module Efficiency

MODEL Q.PEAK DUO BLK ML-G10+



6 busbar cell technology



12 busbar cell technology



Breaking the 20% efficiency barrier

Q.ANTUM DUO Z Technology with zero gap cell layout boosts module efficiency up to 20.9%.



A reliable investment Inclusive 25-year product warranty and 25-year linear



performance warranty¹.

Enduring high performance

Long-term yield security with Anti LeTID Technology, Anti PID Technology² and Hot-Spot Protect.



Extreme weather rating

High-tech aluminium alloy frame, certified for high snow (5400 Pa) and wind loads (4000 Pa).



Innovative all-weather technology

Optimal yields, whatever the weather with excellent low-light and temperature behaviour.



The most thorough testing programme in the industry

Qcells is the first solar module manufacturer to pass the most comprehensive quality programme in the industry: The new "Quality Controlled PV" of the independent certification institute TÜV Rheinland.

¹ See data sheet on rear for further information.
² APT test conditions according to IEC/TS 62804-1:2015, method A (~1500 V, 96 h)



The ideal solution for:

Rooftop arrays on residential buildings





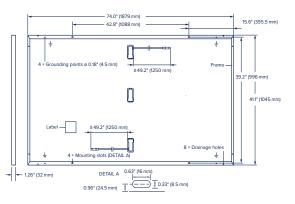




Q.PEAK DUO BLK ML-G10+ SERIES

Mechanical Specification

Format	74.0 in × 41.1 in × 1.26 in (including frame) (1879 mm × 1045 mm × 32 mm)
Weight	48.5 lbs (22.0 kg)
Front Cover	0.13 in (3.2 mm) thermally pre-stressed glass with anti-reflection technology
Back Cover	Composite film
Frame	Black anodised aluminium
Cell	6 × 22 monocrystalline Q.ANTUM solar half cells
Junction box	2.09-3.98 in × 1.26-2.36 in × 0.59-0.71 in (53-101 mm × 32-60 mm × 15-18 mm), IP67, with bypass diodes
Cable	4 mm^2 Solar cable; (+) \geq 49.2 in (1250 mm), (-) \geq 49.2 in (1250 mm)
Connector	Stäubli MC4; IP68



Electrical Characteristics

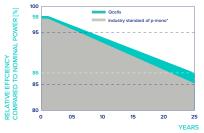
PC	WER CLASS			385	390	395	400	405	410		
MIN	MINIMUM PERFORMANCE AT STANDARD TEST CONDITIONS, STC ¹ (POWER TOLERANCE +5 W / -0 W)										
	Power at MPP ¹	P _{MPP}	[W]	385	390	395	400	405	410		
_	Short Circuit Current ¹	I _{sc}	[A]	11.04	11.07	11.10	11.14	11.17	11.20		
n n n	Open Circuit Voltage ¹	V _{oc}	[V]	45.19	45.23	45.27	45.30	45.34	45.37		
linir	Current at MPP	I _{MPP}	[A]	10.59	10.65	10.71	10.77	10.83	10.89		
2	Voltage at MPP	V_{MPP}	[V]	36.36	36.62	36.88	37.13	37.39	37.64		
	Efficiency ¹	η	[%]	≥19.6	≥19.9	≥20.1	≥20.4	≥20.6	≥20.9		

MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS, NMOT²

	Power at MPP	P _{MPP}	[W]	288.8	292.6	296.3	300.1	303.8	307.6
Ę	Short Circuit Current	I _{sc}	[A]	8.90	8.92	8.95	8.97	9.00	9.03
Ē	Open Circuit Voltage	V _{oc}	[V]	42.62	42.65	42.69	42.72	42.76	42.79
ž	Current at MPP	I _{MPP}	[A]	8.35	8.41	8.46	8.51	8.57	8.62
	Voltage at MPP	V	[V]	34.59	34.81	35.03	35.25	35.46	35.68

¹Measurement tolerances P_{MPP}±3%; I_{sc}; V_{oc}±5% at STC: 1000 W/m², 25±2 °C, AM 1.5 according to IEC 60904-3 • ²800 W/m², NMOT, spectrum AM 1.5

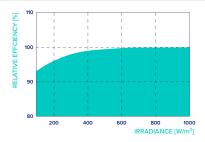
Qcells PERFORMANCE WARRANTY



At least 98% of nominal power during first year. Thereafter max. 0.5% degradation per year. At least 93.5% of nominal power up to 10 years. At least 86% of nominal power up to 25 years.

All data within measurement tolerances. Full warranties in accordance with the warranty terms of the Qcells sales organisation of your respective country.

PERFORMANCE AT LOW IRRADIANCE



Typical module performance under low irradiance conditions in comparison to STC conditions (25 °C, 1000 W/m²).

TEMPERATURE COEFFICIENTS					
Temperature Coefficient of I _{sc}	α	[%/K]	+0.04	Temperature Coefficient of $\rm V_{\rm oc}$	β
Temperature Coefficient of P _{MPP}	γ	[%/K]	-0.34	Nominal Module Operating Temperature	NMOT

Properties for System Design

*Standard terms of guarantee for the 5 PV companies with the highest production capacity in 2021 (February 2021)

Maximum System Voltage	V_{sys}	[V]	1000 (IEC)/1000 (UL)	PV module classification	Class II
Maximum Series Fuse Rating		[A DC]	20	Fire Rating based on ANSI/UL 61730	TYPE 2
Max. Design Load, Push/Pull ³		[lbs/ft ²]	75 (3600 Pa)/55 (2660 Pa)	Permitted Module Temperature	–40°F up to +185°F
Max. Test Load, Push/Pull ³		[lbs/ft ²]	113 (5400 Pa)/84 (4000 Pa)	on Continuous Duty	(-40°C up to +85°C)

³ See Installation Manual

Qualifications and Certificates

UL 61730, CE-compliant, Quality Controlled PV - TÜV Rheinland, IEC 61215:2016, IEC 61730:2016, U.S. Patent No. 9,893,215 (solar cells),





Qcells

-0.27

 109 ± 5.4

(43±3°C)

[%/K]

[°F]

Qcells pursues minimizing paper output in consideration of the global environment. Note: Installation instructions must be followed. Contact our technical service for further information on approved installation of this product. Hanwha Q CELLS America Inc. 400 Spectrum Center Drive, Suite 1400, Irvine, CA 92618, USA | TEL +1 949 748 59 96 | EMAIL hqc-inquiry@qcells.com | WEB www.qcells.com

IQ8 Series Microinverters

INPUT DATA (DC)		IQ8-60-2-US	IQ8PLUS-72-2-US	108M-72-2-US	108A-72-2-US	IQ8H-240-72-2-US	IQ8H-208-72-2-US1	
Commonly used module pairings ²	w	235 - 350	235 - 440	260 - 460	295 - 500	320 - 540+	295 - 500+	
Module compatibility		60-cell/120 half-cell	6	0-cell/120 half-cell, 6	6-cell/132 half-cell a	and 72-cell/144 half-ce	ell.	
MPPT voltage range	v	27 - 37	29 - 45	33 - 45	36 - 45	38 - 45	38 - 45	
Operating range	v	25 - 48			25 - 58			
Min/max start voltage	v	30 / 48			30 / 58			
Max input DC voltage	v	50			60			
Max DC current ³ [module lsc]	А			15	5			
Overvoltage class DC port		П						
DC port backfeed current	mA	0						
PV array configuration		1x1 Ungrounded	1x1 Ungrounded array; No additional DC side protection required; AC side protection requires max 20A per branch circuit					
OUTPUT DATA (AC)		IQ8-60-2-US	IQ8PLUS-72-2-US	108M-72-2-US	108A-72-2-US	IQ8H-240-72-2-US	108H-208-72-2-US1	
Peak output power	VA	245	300	330	366	384	366	
Max continuous output power	VA	240	290	325	349	380	360	
Nominal (L-L) voltage/range ⁴	v			240 / 211 - 264			208 / 183 - 250	
Max continuous output current	А	1.0	1.21	1.35	1.45	1.58	1.73	
Nominal frequency	Hz			60	C			
Extended frequency range	Hz			50 -	- 68			
AC short circuit fault current over 3 cycles	Arms			2			4.4	
Max units per 20 A (L-L) branch circuit⁵		16	13	11	11	10	9	
Total harmonic distortion				<5	%			
Overvoltage class AC port				Ш	I			
AC port backfeed current	mA			30	D			
Power factor setting				1.0	D			
Grid-tied power factor (adjustable)				0.85 leading -	0.85 lagging			
Peak efficiency	%	97.5	97.6	97.6	97.6	97.6	97.4	
CEC weighted efficiency	%	97	97	97	97.5	97	97	
Night-time power consumption	mW			60	C			
MECHANICAL DATA								
Ambient temperature range				-40°C to +60°C (-40°F to +140°F)			
Relative humidity range				4% to 100% (condensing)			
DC Connector type				МС	24			
Dimensions (HxWxD)			2	212 mm (8.3") x 175 mm	(6.9") x 30.2 mm (1.2	.")		
Weight				1.08 kg (2	2.38 lbs)			
Cooling				Natural convec	ction – no fans			
Approved for wet locations				Ye	es.			
Pollution degree				PD	03			
Enclosure			Class II dou	uble-insulated, corrosi	on resistant polymeri	ic enclosure		
Environ. category / UV exposure rating				NEMA Type	6 / outdoor			
COMPLIANCE								
		CA Rule 21 (UL 1741-	SA), UL 62109-1, UL174	11/IEEE1547, FCC Part 1	5 Class B, ICES-000	3 Class B, CAN/CSA-0	C22.2 NO. 107.1-01	
Certifications		690.12 and C22.1-20	018 Rule 64-218 Rapid	: Down Equipment and Shutdown of PV Syster				
(1) The IQ8H-208 variant will be operating	in gri	manufacturer's instr	ructions.				J. J	

(1) The IQ8H-208 variant will be operating in grid-tied mode only at 208V AC. (2) No enforced DC/AC ratio. See the compatibility calculator at https://link.enphase.com/module-compatibility (3) Maximum continuous input DC current is 10.6A (4) Nominal voltage range can be extended beyond nominal if required by the utility. (5) Limits may vary. Refer to local requirements to define the number of microinverters per branch in your area.

XR Rail Family

The XR Rail Family offers the strength of a curved rail in three targeted sizes. Each size supports specific design loads, while minimizing material costs. Depending on your location, there is an XR Rail to match.



XR10

XR10 is a sleek, low-profile mounting rail, designed for regions with light or no snow. It achieves 6 foot spans, while remaining light and economical.

- 6' spanning capability
- Moderate load capability
- Clear anodized finish
- Internal splices available



XR100

XR100 is the ultimate residential mounting rail. It supports a range of wind and snow conditions, while also maximizing spans up to 8 feet.

- 8' spanning capability
- Heavy load capability
- Clear & black anodized finish
- Internal splices available



XR1000

XR1000 is a heavyweight among solar mounting rails. It's built to handle extreme climates and spans 12 feet or more for commercial applications.

- · 12' spanning capability
- · Extreme load capability
- Clear anodized finish
- Internal splices available

Rail Selection

The following table was prepared in compliance with applicable engineering codes and standards. Values are based on the following criteria: ASCE 7-10, Roof Zone 1, Exposure B, Roof Slope of 7 to 27 degrees and Mean Building Height of 30 ft. Visit IronRidge.com for detailed span tables and certifications.

Lo	ad	Rail Span					
Snow (PSF)	Wind (MPH)	4'	5' 4"	6'	8'	10'	12'
	100						
None	120						
NOTE	140	XR10		XR100		XR1000	
	160						
	100						
10.00	120						
10-20	140						
	160						
30	100						
30	160						
40	100						
40	160						
50-70	160						
80-90	160						



Project Address:66 SOUTH STREET, UNIT #2Permit Requested:CERTIFICATE OF APPROVALApplication:PUBLIC HEARING 3

A. **Property Information - General:**

Existing Conditions:

- Zoning District: <u>General Residence B (GRB)</u>
- Land Use: <u>Residential/Condominium</u>
- Land Area: <u>4,750 SF +/-</u>
- Estimated Age of Structure: <u>c.1820</u>
- Building Style: Federal
- Number of Stories: <u>2.5</u>
- Historical Significance: <u>C</u>
- Public View of Proposed Work: <u>South Street</u>
- Unique Features: <u>Rear unit of the Condominium Building</u>
- Neighborhood Association: <u>South End</u>

B. Proposed Work: To replace the remaining siding and windows on the unit with Matthews Brothers Windows and Hardie Siding and to replace a fence that as been damaged.

C. Staff Comments and/ or Suggestions for Consideration:

The project proposal includes the following:

• This property received approval to replace a small portion of siding at the rear of the unit and to replace an existing doorway with a window and replace an existing picture window with a French door system.







D. Purpose and Intent:

- 1. Preserve the integrity of the District
- 2. Assessment of the Historical Significance
- 3. Conservation and enhancement of property values
- 4. Maintain the special character of the District
- 5. Complement and enhance the architectural and historic character
- 6. Promote the education, pleasure and welfare of the District and the city residents and visitors

E. Review Criteria/Findings of Fact:

- 1. Consistent with special and defining character of surrounding properties
- 2. Compatibility of design with surrounding properties
- 3. Relation to historic and architectural value of existing structures
- 4. Compatibility of innovative technologies with surrounding properties





2020

THE WAY



Double-Hung Windows

Traditional, classic, durable — double-hungs give you all of that plus energy efficiency and peace of mind. Top and bottom sash operate smoothly allowing you to control air flow, and they both tilt-in for easy cleaning and care. Grilles can be added to further enhance the traditional look of your home.



Used singly, or factory mulled with transoms or other fixed or hung units to add a dramatic accent to your home's appearance, while providing a brighter, more open interior.

Single-Hung Windows

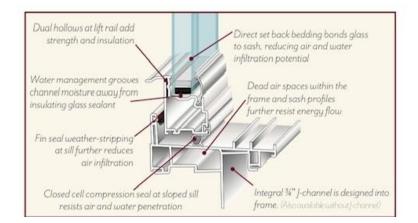
Our single-hung windows are built with a fixed top sash, while the lower sash moves up and down to allow ventilation.

In addition, the bottom sash conveniently tilts-in for easy cleaning.





Structural interlock at meeting rails provides an additional layer of protection and weather resistance.









Actual Mathews Brothers window approved at 12/13/23 HDC meeting



BILL TO:

Mathews Brothers

Tel: Fax: Email:



Customer QUOTATION

SHIP TO:

DATE QUOTED **QUOTE #** STATUS **CUSTOMER PO#** 684206 4/10/2024 10:50:07 AM None QUOTE NAME **QUOTED BY** TERMS **PROJECT NAME** KS-Amarosa PHASE II Stott Kenny 66 South Street PHASE II SUB-LINES LINE # QTY 100 2 X EXTD. PRICE DESCRIPTION LIST PRICE NET PRICE LINE # QTY 100-1 \$1,369.25 \$894.55 \$1,789.10 X Sanford Hills Dual Pane Casement 31 X 58.5 Unit Size, Left Operating, Black Interior, Extruded White Exterior Frame, Black Exterior Sash, Dual Pane Low E Argon, PG65, 12 Lite Contoured GBG, Black Int/Black Ext Grille in Airspace, Special Hinge, 21.5 X 51.625 Clear Opening, 7.707 SQFT, No Window Opening Control Device, Black Handle & Lock, Fiberglass Mesh Black Screen Shipped Loose w/J-Channel, 3-1/2" Flat Matches Exterior Frame Color, w/ Nailing Fin, w/Historical Sill Nose, w/ Installation Screws Unit 1: UFactor: 0.24, SHG: 0.22, VLT: 0.42, CR: 61 31.5" X 59" Opening: Tag: EGRESS O.S.M.: 31" X 58.5" QTY LIST PRICE NET PRICE EXTD. PRICE DESCRIPTION LINE # \$0.00 \$0.00 \$0.00 100-2 Screenl X

Fiberglass Mesh Black Insert Screen Shipped Loose

Opening: 0" X 0" O.S.M.:

Tag: None Assigned

QUOTE #	#	STATUS	CUST	FOMER PO#	DATE	E QUOTED
684206		None			4/10/202	4 10:50:07 AM
QUOTED I	and the second	TERMS		JECT NAME		TE NAME
Stott Kenn	ny		66 South	Street PHASE II	KS-Ama	rosa PHASE II
NE # 200			1.6.10.20.81	a sand a start	QTY	SUB-LINES
	N	58				
JINE # 00-1	DES	SCRIPTION	QTY	LIST PRICE \$1,179 91	NET PRICE \$770.86	EXTD. PRICE \$3,083.44
Sanford Hill 28.5 X 56.5 Exterior Fra Dual Pane L Black Int/Bl X 23.25 Cle Dual Black Device, Fib w/J-Channe Nailing Fin,	ume, Black Ext Low E Argon, lack Ext Grille ear Opening, 3 Robo-Tilt Loc erglass Mesh il, 3-1/2" Flat 1 , w/Historical	Double Hung ack Interior, Extruded White terior Sash, Exterior Pocket Cover, PG50, 6/6 Lite Contoured GBG, in Airspace, No Lift Rail, 23.187 .743 SQFT, Hidden Tilt Latch, ek, No Window Opening Control White Half Screen Shipped Loose Matches Exterior Frame Color, w/ Sill Nose, w/ Installation Screws .G: 0.27, VLT: 0.5, CR: 58	5 ~			
Opening:	29" X 57"					
O.S.M.:	28.5" X 56	.5"			Tag: None Assig	gned
LINE #	DE	SCRIPTION	QTY	LIST PRICE	NET PRICE	EXTD. PRICE
00-2 Screen1	DE Screen Shippe		<u>оту</u> 5 *	LIST PRICE \$0.00	NET PRICE \$0.00	EXTD. PRICE \$0.00
00-2 Screen1			W			\$0.00
00-2 Screen1 Insert Half Opening: O.S.M.: LINE #	Screen Shippe 0" X 0"		5 ¥ QTY	\$0.00	\$0 00 Tag: None Assi NET PRICE	\$0.00 gned EXTD. PRICE
Opening: Opening: O.S.M.: UINE # 300-1 Sanford Hil 26.5 X 18 U White Exte E Argon, P4 Grille in Ai Black Scree w/J-Channe Nailing Fin	Screen Shippe 0" X 0" DE Ils Dual Pane - Unit Size, Ope prior Frame, B G80, 4 Lite Co irspace, Black en Applied el, 3-1/2" Flat n, w/Historical	d Loose	5 X <u>QTY</u> 2	\$0.00	\$0 00 Tag: None Assi	\$0.00 gned
00-2 Screen1 Insert Half Opening: O.S.M.: LINE # 300-1 Sanford Hil 26.5 X 18 U White Exte E Argon, P4 Grille in Ai Black Scree w/J-Channe Nailing Fin	Screen Shippe 0" X 0" DE Ils Dual Pane - Unit Size, Ope prior Frame, B G80, 4 Lite Co irspace, Black en Applied el, 3-1/2" Flat n, w/Historical	SCRIPTION Awning rating, Black Interior, Extruded lack Exterior Sash, Dual Pane Low ontoured GBG, Black Int/Black Ext Handle & Lock, Fiberglass Mesh Matches Exterior Frame Color, w/ Sill Nose, w/ Installation Screws 4G: 0.22, VLT: 0.42, CR: 59	5 X <u>QTY</u> 2	\$0.00	\$0 00 Tag: None Assi NET PRICE	\$0.00 gned EXTD. PRICI

QUOTE #	#	STATUS	CUST	FOMER PO#	DATE	E QUOTED
684206		None			4/10/202	4 10:50:07 AM
QUOTED I	and the second se	TERMS		JECT NAME	and the second se	TE NAME
Stott Kenn	ny		66 South	Street PHASE II	KS-Ama	rosa PHASE II
NE # 200			1.6.10.20.816	a sand a start	QTY	SUB-LINES
	N	58				
JINE # 00-1	DES	SCRIPTION	QTY	LIST PRICE \$1,179 91	NET PRICE \$770.86	EXTD. PRICE \$3,083.44
Sanford Hill 28.5 X 56.5 Exterior Fra Dual Pane L Black Int/Bl X 23.25 Cle Dual Black Device, Fib w/J-Channe Nailing Fin,	ume, Black Ext Low E Argon, lack Ext Grille ear Opening, 3 Robo-Tilt Loc erglass Mesh il, 3-1/2" Flat 1 , w/Historical	Double Hung ack Interior, Extruded White terior Sash, Exterior Pocket Cover, PG50, 6/6 Lite Contoured GBG, in Airspace, No Lift Rail, 23,187 .743 SQFT, Hidden Tilt Latch, ek, No Window Opening Control White Half Screen Shipped Loose Matches Exterior Frame Color, w/ Sill Nose, w/ Installation Screws .G: 0.27, VLT: 0.5, CR: 58	5 ~			
Opening:	29" X 57"					
O.S.M.:	28.5" X 56	.5"			Tag: None Assig	gned
LINE #	DE	SCRIPTION	QTY	LIST PRICE	NET PRICE	EXTD. PRICE
00-2 Screen1	DE Screen Shippe		<u>оту</u> 5 *	LIST PRICE \$0.00	NET PRICE \$0.00	EXTD. PRICE \$0.00
00-2 Screen1			W			\$0.00
00-2 Screen1 Insert Half Opening: O.S.M.: LINE #	Screen Shippe 0" X 0"		5 ¥ QTY	\$0.00	\$0 00 Tag: None Assi NET PRICE	\$0.00 gned EXTD. PRICE
Opening: Opening: O.S.M.: UINE # 300-1 Sanford Hil 26.5 X 18 U White Exte E Argon, P4 Grille in Ai Black Scree w/J-Channe Nailing Fin	Screen Shippe 0" X 0" DE Ils Dual Pane - Unit Size, Ope prior Frame, B G80, 4 Lite Co irspace, Black en Applied el, 3-1/2" Flat n, w/Historical	d Loose	5 X <u>QTY</u> 2	\$0.00	\$0 00 Tag: None Assi	\$0.00 gned
00-2 Screen1 Insert Half Opening: O.S.M.: LINE # 300-1 Sanford Hil 26.5 X 18 U White Exte E Argon, P4 Grille in Ai Black Scree w/J-Channe Nailing Fin	Screen Shippe 0" X 0" DE Ils Dual Pane - Unit Size, Ope prior Frame, B G80, 4 Lite Co irspace, Black en Applied el, 3-1/2" Flat n, w/Historical	SCRIPTION Awning rating, Black Interior, Extruded lack Exterior Sash, Dual Pane Low ontoured GBG, Black Int/Black Ext Handle & Lock, Fiberglass Mesh Matches Exterior Frame Color, w/ Sill Nose, w/ Installation Screws 4G: 0.22, VLT: 0.42, CR: 59	5 X <u>QTY</u> 2	\$0.00	\$0 00 Tag: None Assi NET PRICE	\$0.00 gned EXTD. PRICI

QUOTE #	STATUS	CUSTOMER PO#	DATE QUOTED
684206	None		4/10/2024 10:50:07 AN
QUOTED BY	TERMS	PROJECT NAME	QUOTE NAME
Stott Kenny		66 South Street PHASE II	KS-Amarosa PHASE II

All Prices are net. Please review all quantities, specifications, and information for accuracy. Special orders can not be returned for credit. Signature implies acceptance of these specifications. Your order will not be processed without authorized signature.

Thank you for all of your efforts!

CUSTOMER SIGNATURE_

DATE_

SUB-TOTAL:

LABOR:

TOTAL:

FREIGHT:

SALES TAX:

\$11,026.67

\$11,026.67

\$0.00

\$0.00

\$0.00

We appreciate the opportunity to provide you with this quote!

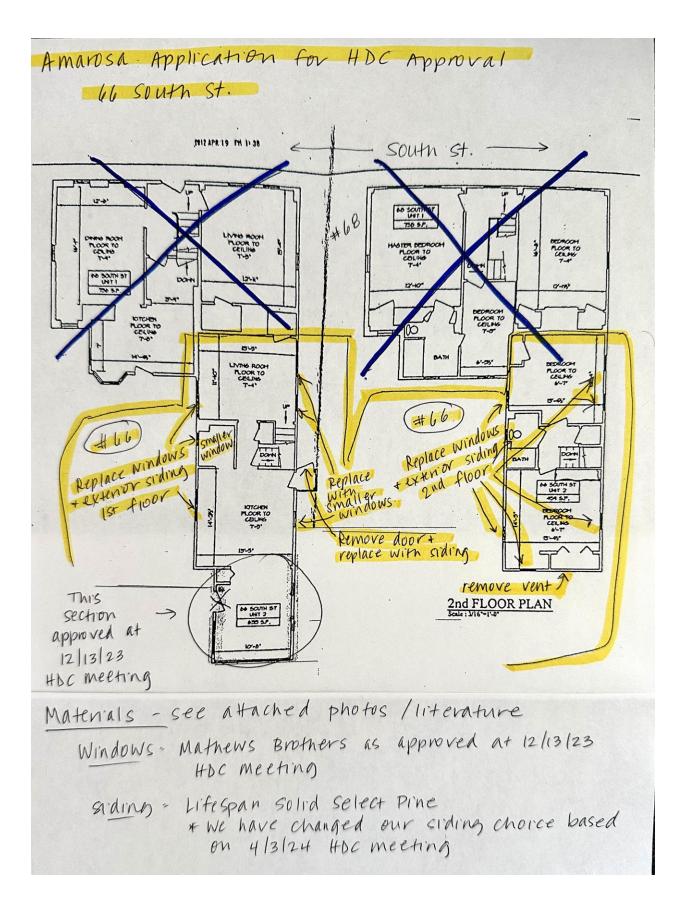


66 South St. is not located directly on the street. The unit is in the back, located behind # 68, and is not visible from South Street.

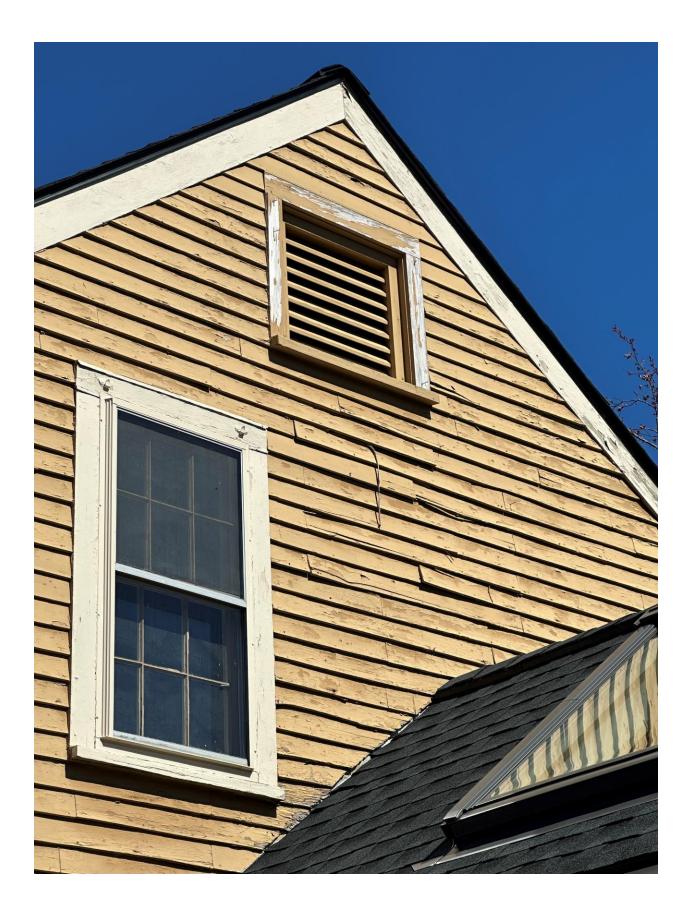




We would like to replace broken fencing in backyard - With new fencing to match this fence in front yard









Lifespan[®] Solid Select at a glance

Wood has long been the choice of builders. It is beautiful, versatile and easy to work with. However, wood in an exterior situation is also subject to rot, fungal decay and insect attack. With LIFESPAN SOLID SELECT pressure treated, primed boards, wood now comes with long-lasting durability and lowmaintenance peace of mind.

Read more

LIFESPAN SOLID SELECT is protected with the combination of a pressure treatment using organic biocides to ward off insects and fungal decay, a proprietary water repellency system to maximize dimensional stability and an alkyd-based primer to provide superior durability against the elements. This allows LIFESPAN SOLID SELECT to be offered with a limited lifetime warranty against fungal decay and insect damage, including termites.

The raw material for LIFESPAN SOLID SELECT comprises high grade clear lumber produced from pruned radiata pine logs. These come only from renewable sources and we utilize leading technology and innovative techniques to maximize the recovery of logs into finished products and minimize waste in our mills.

LIFESPAN SOLID SELECT is manufactured in our Forest Stewardship Council[®] (FSC[®]) certified mills (FSC[®] SCS-COC-00199).

- Limited lifetime substrate warranty against fungal decay and insect damage, including termites
- · Manufactured from solid high grade wood with no fingerjoints or knots
- Pressure treated with an EPA approved organic preservative, delivering treatment to the core
- · Non-corrosive to fasteners
- FSC[®] certified
- · Multi-layer protection resists water uptake and enhances dimensional stability
- · Alkyd primer provides smooth defect-free surface ready for top-coating
- · Suitable for exterior and interior needs
- Real wood!!



Real Wood. Redefined.

LIFESPAN[®] SOLID SELECT is a premium solid wood exterior trim product – offering a superior clean finish, outstanding performance, and the benefits of real wood.



The advantages are clear

Sourced from New Zealand's renowned radiata pine forests,

LIFESPAN[®] SOLID SELECT is made from only the highest quality, long-length clear boards. This superior product features an EPA-approved non-metallic preservative that protects against rot, fungal attack and insects (including termites). It also offers superior moisture resistance and resin stabilization – with a proprietary water repellant system, two coats of alkyd primer and patented resin stabilization additive CODIL™. This proven protection is backed by a limited lifetime warranty.

Combining outstanding durability with the beauty of real wood, $\mathsf{LIFESPAN}^{(\!\!\!B\!)} \text{ SOLID SELECT is the choice for a lifetime.}$

Project Address:258 MAPLEWOOD AVENUEPermit Requested:CERTIFICATE OF APPROVALApplication:WORK SESSION/PUBLIC HEARING 4

A. Property Information - General:

Existing Conditions:

- Zoning District: <u>Character District 4-L1</u>, <u>General Residence A (GRA)</u>
- Land Use: <u>Residential</u>
- Land Area: <u>5,100 SF +/-</u>
- Estimated Age of Structure: <u>c.1850</u>
- Building Style: <u>Greek Revival</u>
- Number of Stories:2.5
- Historical Significance: <u>Contributing</u>
- Public View of Proposed Work: <u>Maplewood Avenue</u>
- Unique Features: <u>NA</u>
- Neighborhood Association: West End

B. Proposed Work: replace (2) rear gable ends with roof decks and a dormer between, rebuild the front chimneys and remove the rear secondary chimneys.

C. Staff Comments and/ or Suggestions for Consideration:

The project proposal includes the following:

- Demolition of the (2) rear gable ends to be replaced with roof decks
- Create dormer between (2) new rood decks
- Rebuild (2) front chimneys and remove (2) rear chimneys.





HISTORIC

SURVEY

RATING

D. Purpose and Intent:

- 13. Preserve the integrity of the District
- 14. Assessment of the Historical Significance
- 15. Conservation and enhancement of property values
- 16. Maintain the special character of the District
- 17. Complement and enhance the architectural and historic character
- 18. Promote the education, pleasure and welfare of the District and the city residents and visitors

E. Review Criteria/Findings of Fact:

- 9. Consistent with special and defining character of surrounding properties
- 10. Compatibility of design with surrounding properties
- 11. Relation to historic and architectural value of existing structures
- 12. Compatibility of innovative technologies with surrounding properties

	DRAWING INDEX
Sheet Number	Sheet Name
H1.0	COVER PAGE
H1.1	CONTEXT 3D
H1.2	EXISTING CONDITIONS
H1.3	CONTEXT PHOTOS
H1.4	HISTORIC
H1.5	EXISTING CONDITIONS - ATTIC
H2.0	DEMO - BACK (SOUTH) ELEVATION
H2.1	DEMO - SIDE ELEVATIONS
H2.2	DEMO - ROOF LEVEL
H2.3	ROOF PLAN
H2.4	BACK (SOUTH) ELEVATION
H2.5	SIDE ELEVATIONS
H2.6	LONGITUDINAL SECTION
H3.1	RENDERING
H3.2	RENDERING
H3.3	3D VIEWS
H3.4	3D VIEWS





H3.5

3D VIEWS



PROJECT NARRATIVE

- Add rear shed dormer.
- Replace two rear gables with roof decks.
- Rebuild two primary front chimneys.
- Remove two secondary rear chimneys.

NOTE: DUE TO SEVERE ROOF AND CHIMNEY AND ROOF STRUCTURE DECAY AND DETERIORATION, EXPEDITIOUS REPLACEMENT IS NECESSARY.

COVER PAGE

258 MAPLEWOOD AVENUE

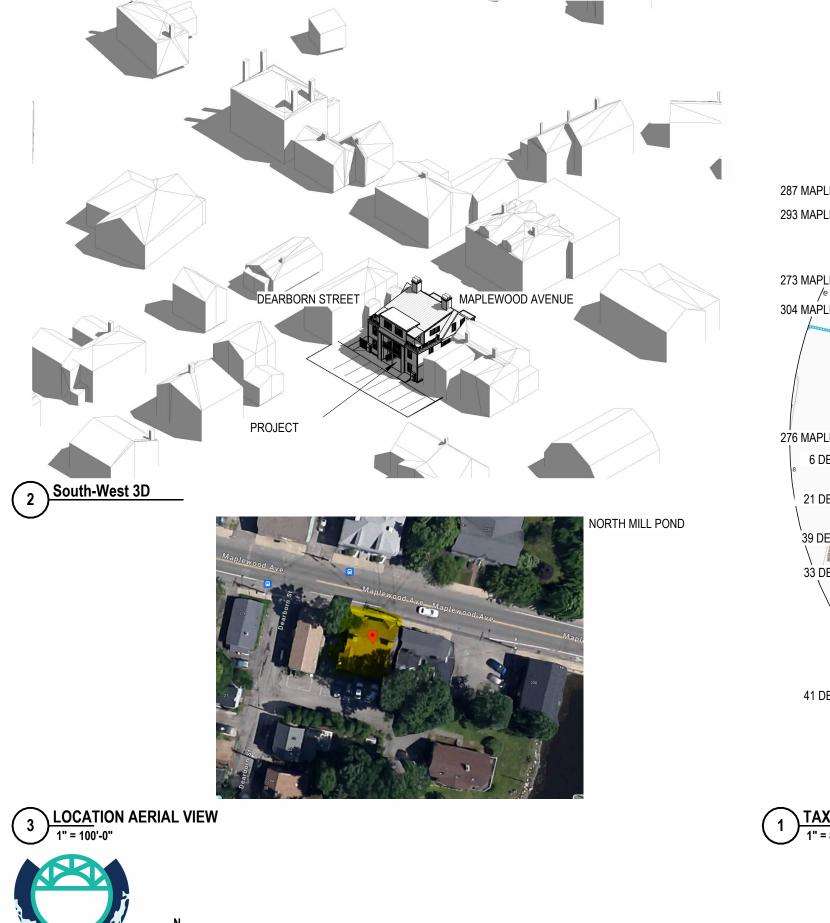
258 MAPLEWOOD AVENUE

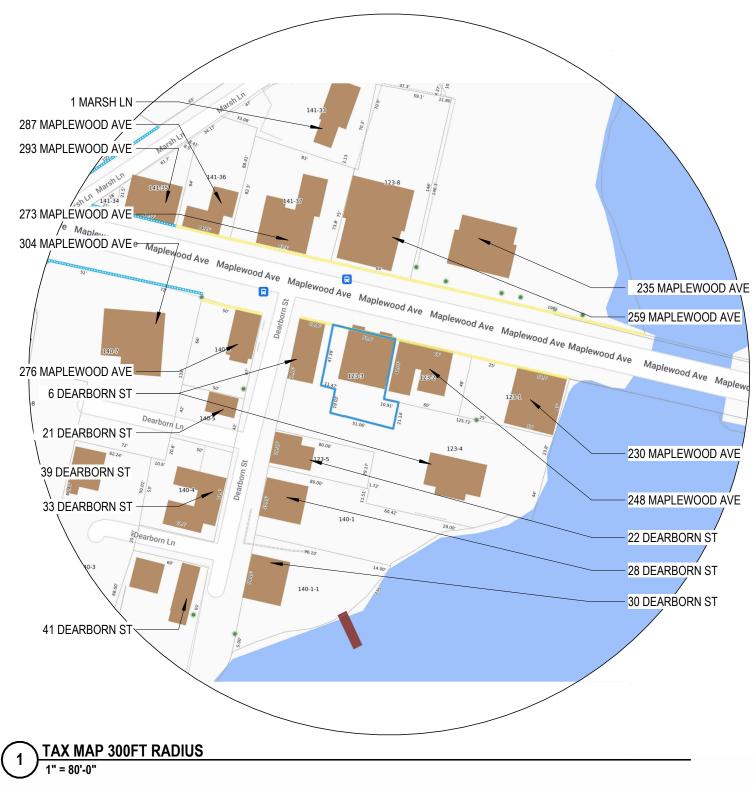
RENOVATION+RESTORATION

HISTORIC DISTRICT COMISSION PUBLIC HEARING

H1.0

04/24/2024 PROJECT NO:1036





CONTEXT 3D







ARCOVE





EXISTING CONDITIONS 258 MAPLEWOOD AVENUE





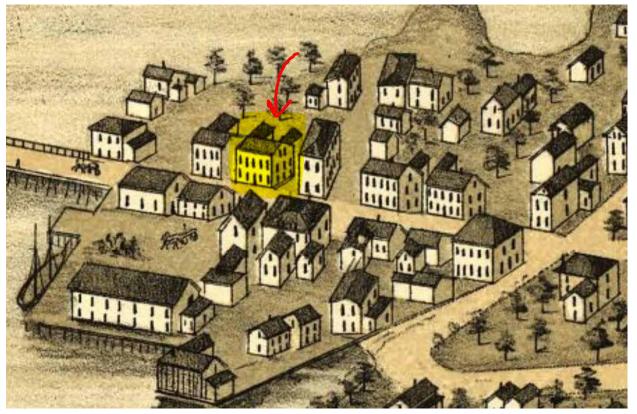




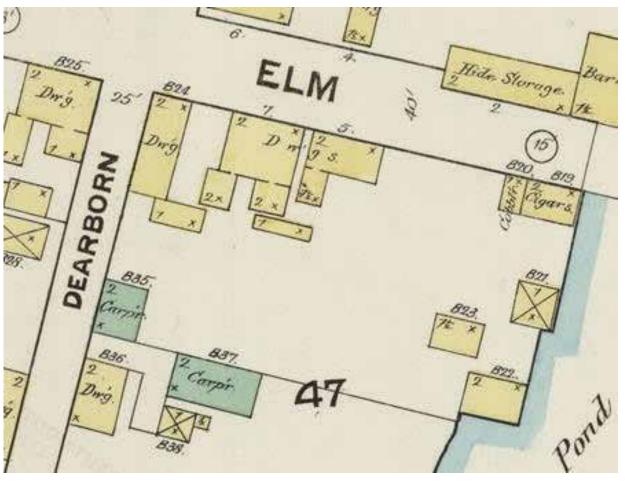


CONTEXT PHOTOS





1877





1887



Photo roll Negative with Description Date taken

1.Style Greek

2. Overall pla

3.Foundation: Artificial

4.Wall struct If wood: F

5.Wall coveri Brick_ St Sheet meta

6.Roof: Gable

7.Specific fe chimnies, Two protrudi side. Greek one window of 8.Outbuilding

Description:

A good late $2\frac{1}{2}$ story Greek Revival story gable roofed rear ell offset with roofs at right angles. Two la at ridge of main block. The center triangular pediment and corner pils original Greek Revival door. The with granite steps to doorway. On either side of door are two story is paired front windows each floor (a side each floor. Two attic gable y ell has one each floor within the

HISTORIC 258 MAPLEWOOD AVENUE

N.H. HISTORIC DISTRICT SURVEY	Site number:	
	Address 258 Maplewood Avenue	
	New tax map(1979)U23 lot 3 Old tax map 77 lot 21	size 5100sq.ft.
	Owner REGAN, Michael Address 572 Post Rd., Green	land 03840
	ocation of legal description ockingham County Registry of ampton Road; Exeter, New Har 03833 epresentation in existing s ABS	f Deeds mpshire urveys: :
TREE	Aved Date	
20 no. 8 th: Portsmouth Advocates	Effect: Focal Contributing Intrusi	
by		
k Revival No. of stories $2\frac{1}{2}$	No. of bays <u>5 x 4</u>	
an: Rectangle with two story r	rear ell across whole rear off	set N.
: Brick_ Stonex Foured conc. al stone_ Other_		
ture:Woodframe_x Brick Ston Post and beam Balloon frame	e Other	
ring: Clapboard <u>x</u> Wood shingle StoneStucco_Composition b talAsphalt shinglesOther	FlushboardImitation ash] oardAluminumVinyl	ar
le_x Hip_ Shed_ Mansard_ El	at Cambrel Other	
features (location, no., appea	rance of porches, windows, doo o description), decorative ele- with hipped roofs on either windows each floor both bays,	ors, ments:
	ADVOCÁTES,	
-		
house, squarish in p	olan with two	
t beyond N wall across large (rebuilt) inset er doorway is inset be lasters with sidelight house sits on a cut g he 2/2 sash in window bays with hipped roof all 2/2) and one on ea windows, three on eac	chimney stacks whind a low ts and the granite foundation over door. On is which have ach N and S	
offset S wall.	MI LICOL DELOW,	
		H1 <i>1</i>

H1.4



- DETERIORATED BRICK

MOISTURE DAMAGED ROOF STRUCTURE -----





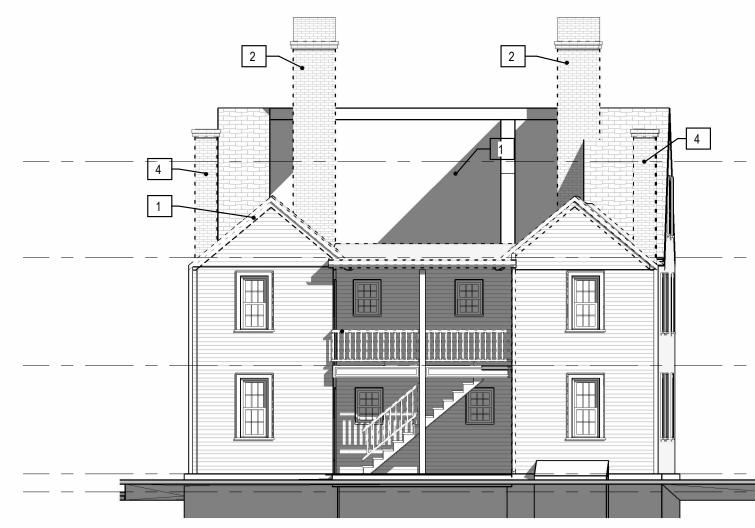


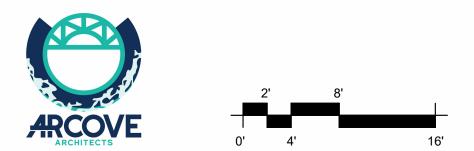
EXISTING CONDITIONS - ATTIC



NOTES

1	Demolition part of the roof based on the drawings.
2	Rebuild the existing chimney with brick veneer to match the existing color texture and details.
4	Demolition chimney

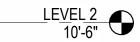


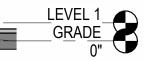


DEMO - BACK (SOUTH) ELEVATION





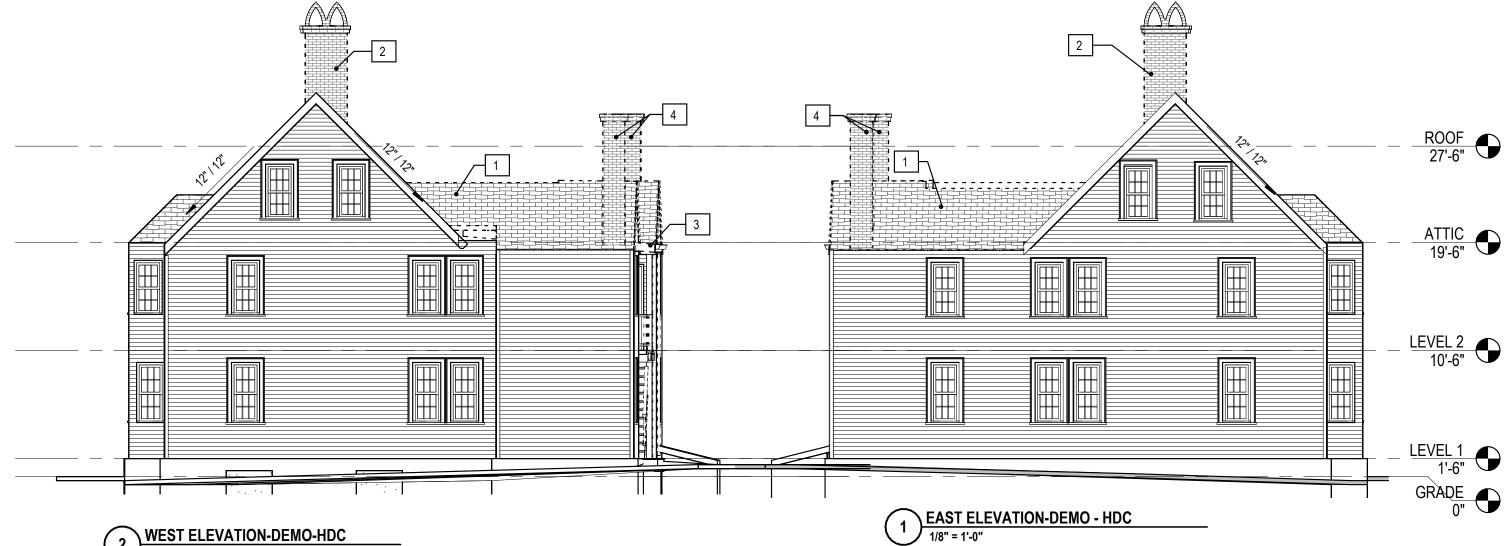




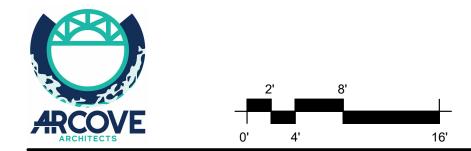


NOTES

1	Demolition part of the roof based on the drawings.
2	Rebuild the existing chimney with brick veneer to match the existing color texture and details.
3	Demolition roof.
4	Demolition chimney







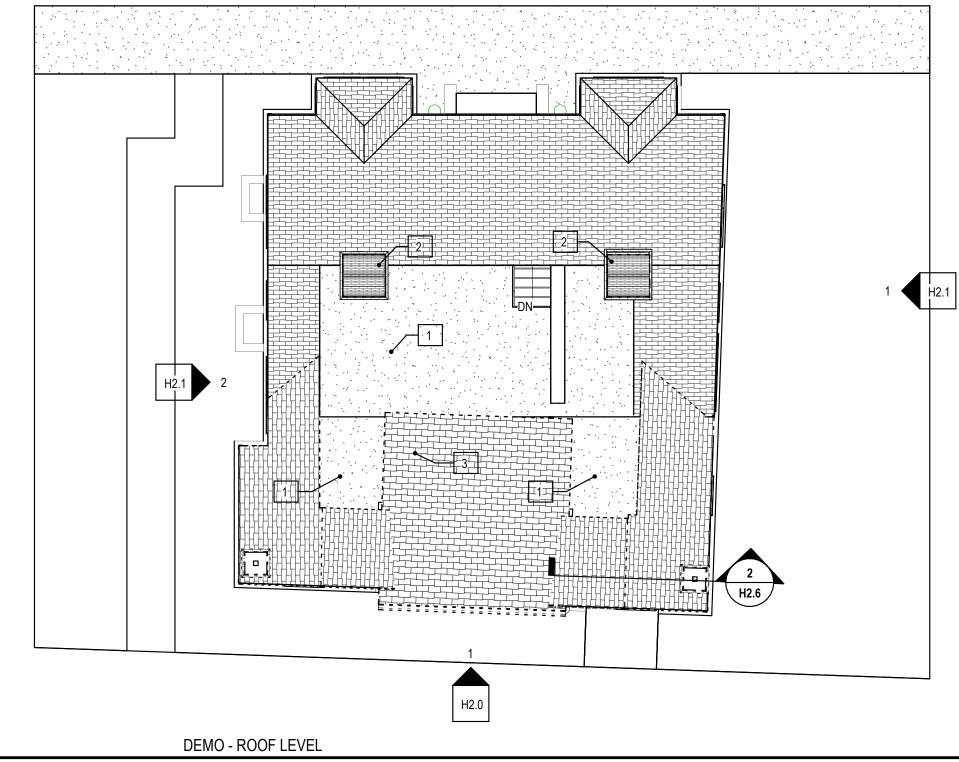
DEMO - SIDE ELEVATIONS

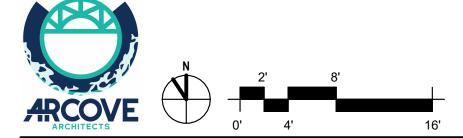
258 MAPLEWOOD AVENUE

H2.1

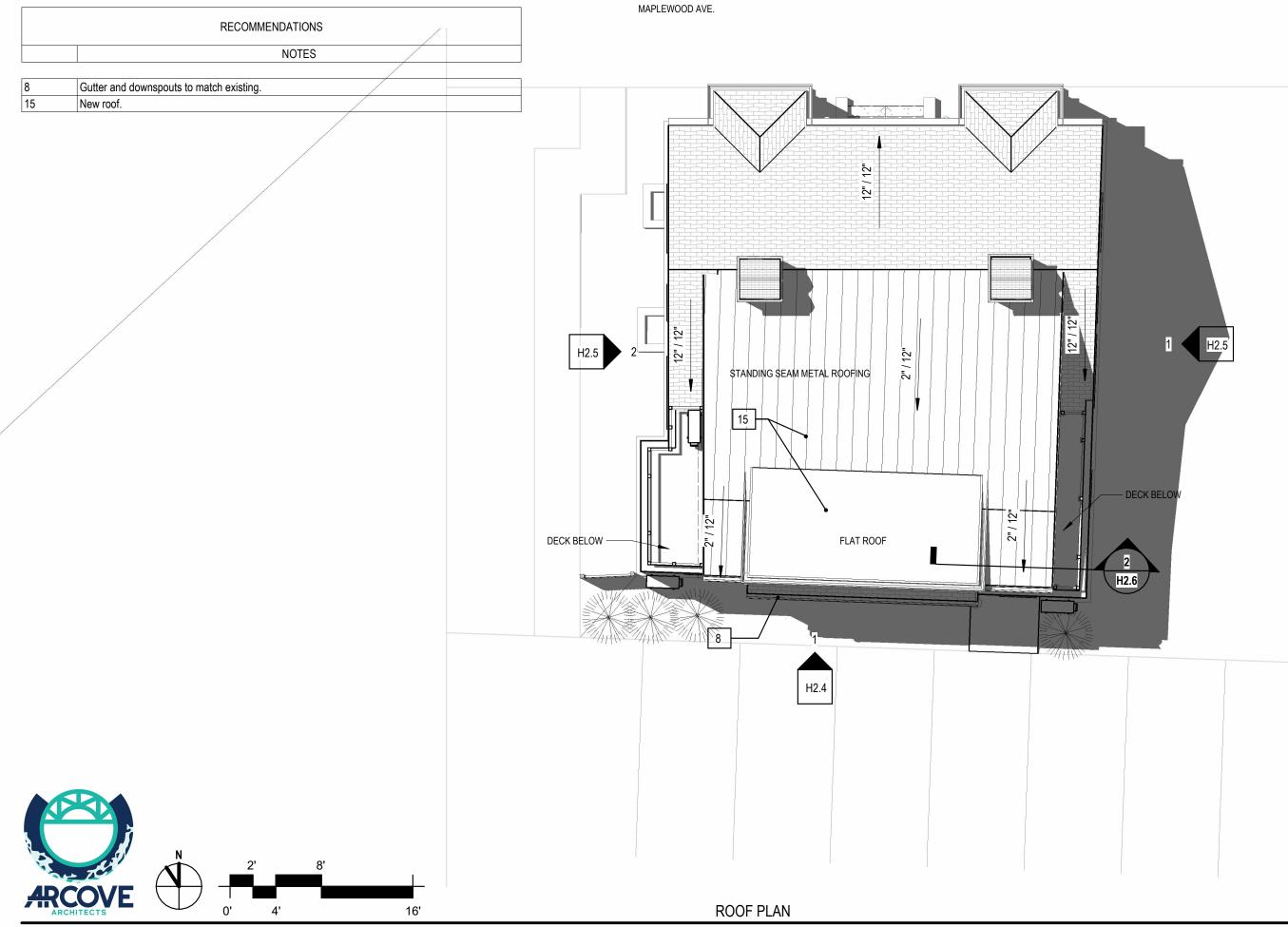
NOTES

1	Demolition part of the roof based on the drawings.
2	Rebuild the existing chimney with brick veneer to match the existing color texture and details.
3	Demolition roof.









²⁵⁸ MAPLEWOOD AVENUE

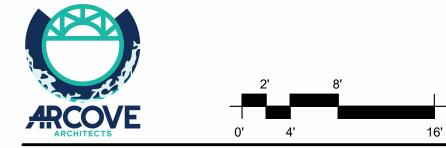


RECOMMENDATIONS

NOTES

2	Rebuild the existing chimney with brick veneer to match the existing color texture and details.
5	Adding new dormer.
6	New windows aluminum clad wood.
7	Aluminum railing (black).
8	Gutter and downspouts to match existing.
9	Wood clapboard siding to match existing.
10	Composite trim (AZEK) to match existing profiles.
11	Composite 4 inches casing with band molding, 2 inches sill nosing.
12	Patio doors are aluminum clad wood.
13	Future added outdoor air source heat pump.
14	Landscape plants to hide the outdoor air source heat pump.
16	New column to match existing.



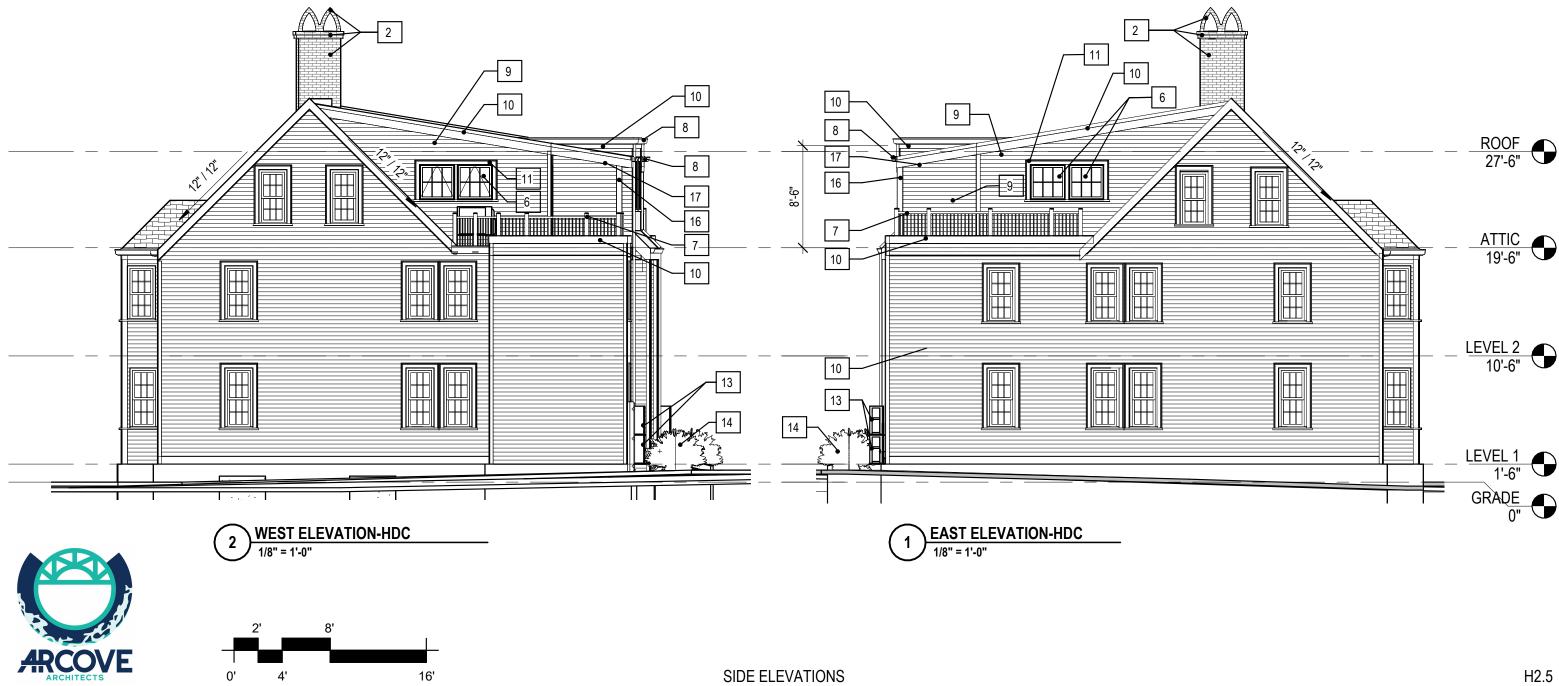


BACK (SOUTH) ELEVATION

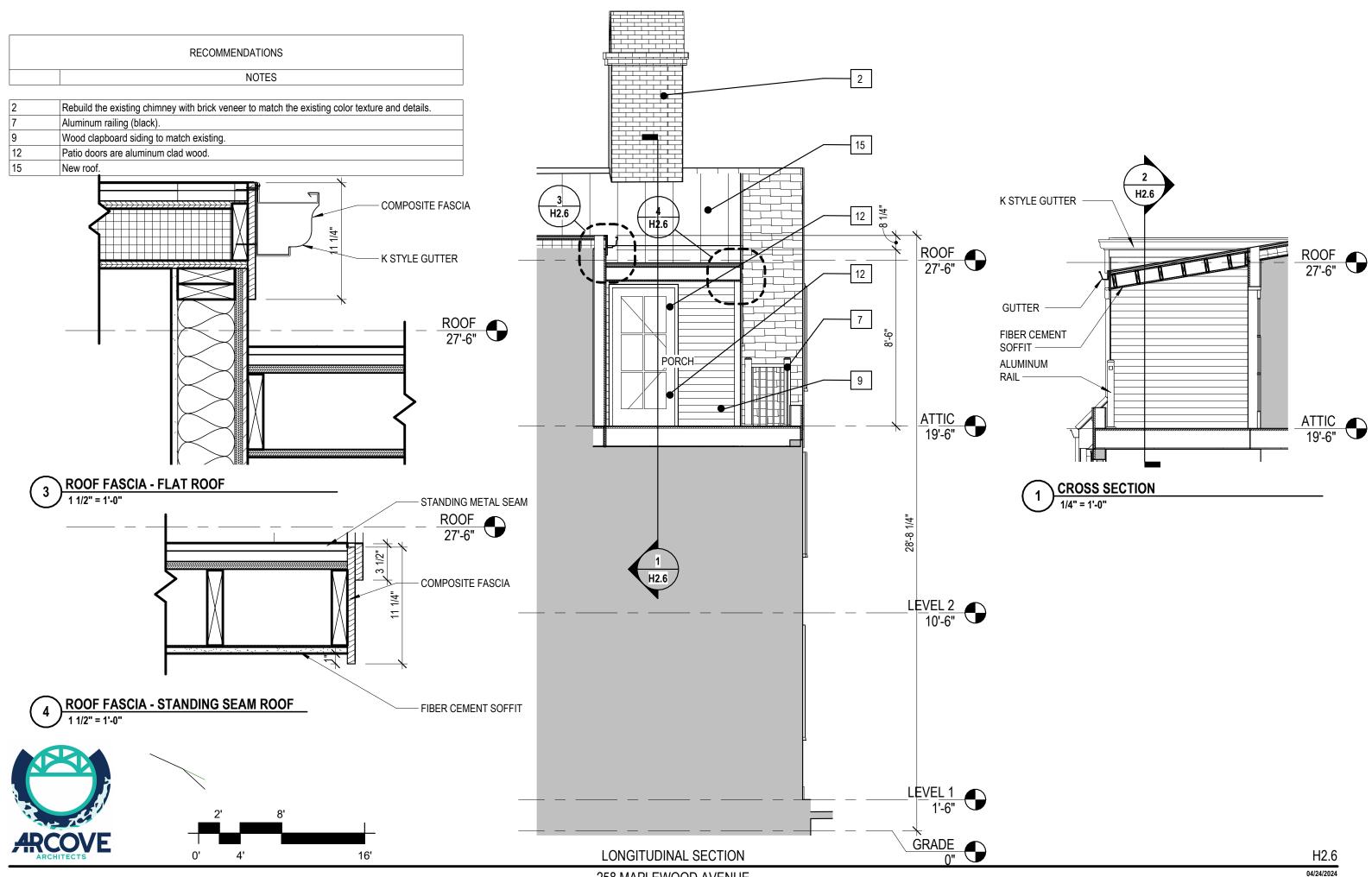


NOTES

2	Debuild the evicting phinage with brief concerts match the evicting color texture and details
2	Rebuild the existing chimney with brick veneer to match the existing color texture and details.
6	New windows aluminum clad wood.
7	Aluminum railing (black).
8	Gutter and downspouts to match existing.
9	Wood clapboard siding to match existing.
10	Composite trim (AZEK) to match existing profiles.
11	Composite 4 inches casing with band molding, 2 inches sill nosing.
13	Future added outdoor air source heat pump.
14	Landscape plants to hide the outdoor air source heat pump.
16	New column to match existing.
17	Composite trim and fiber cement soffit.







258 MAPLEWOOD AVENUE

04/24/2024 PROJECT NO:1036





RENDERING





RENDERING 258 MAPLEWOOD AVENUE









3D VIEWS







3D VIEWS







3D VIEWS

258 MAPLEWOOD AVENUE

H3.5 04/24/2024 PROJECT NO:1036

Project Address:466 MARCY STREETPermit Requested:CERTIFICATE OF APPROVALApplication:PUBLIC HEARING 5

A. **Property Information - General:**

Existing Conditions:

- Zoning District: <u>General Residence B (GRB)</u>
- Land Use: <u>Residential</u>
- Land Area: <u>1,550 SF +/-</u>
- Estimated Age of Structure: <u>c.1890</u>
- Building Style: <u>Vernacular Greek</u>
- Number of Stories:2.5
- Historical Significance: <u>C</u>
- Public View of Proposed Work: <u>Marcy Street</u>
- Unique Features: <u>N/A</u>
- Neighborhood Association: <u>South End</u>

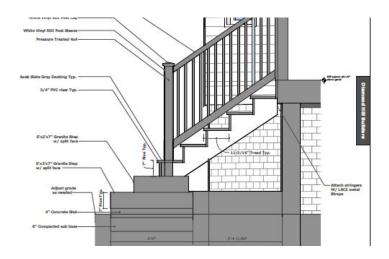


B. Proposed Work: For the removal of the existing staircase and the installation of a new wood and granite staircase.

C. Staff Comments and/ or Suggestions for Consideration:

The project proposal includes the following:

• Removal and replacement of the front stairs.





D. Purpose and Intent:

- 19. Preserve the integrity of the District
- 20. Assessment of the Historical Significance
- 21. Conservation and enhancement of property values
- 22. Maintain the special character of the District
- 23. Complement and enhance the architectural and historic character
- 24. Promote the education, pleasure and welfare of the District and the city residents and visitors

E. Review Criteria/Findings of Fact:

- 13. Consistent with special and defining character of surrounding properties
- 14. Compatibility of design with surrounding properties
- 15. Relation to historic and architectural value of existing structures
- 16. Compatibility of innovative technologies with surrounding properties



 Left View

 Scale: 1/2" = 1' Scale
 A
 001



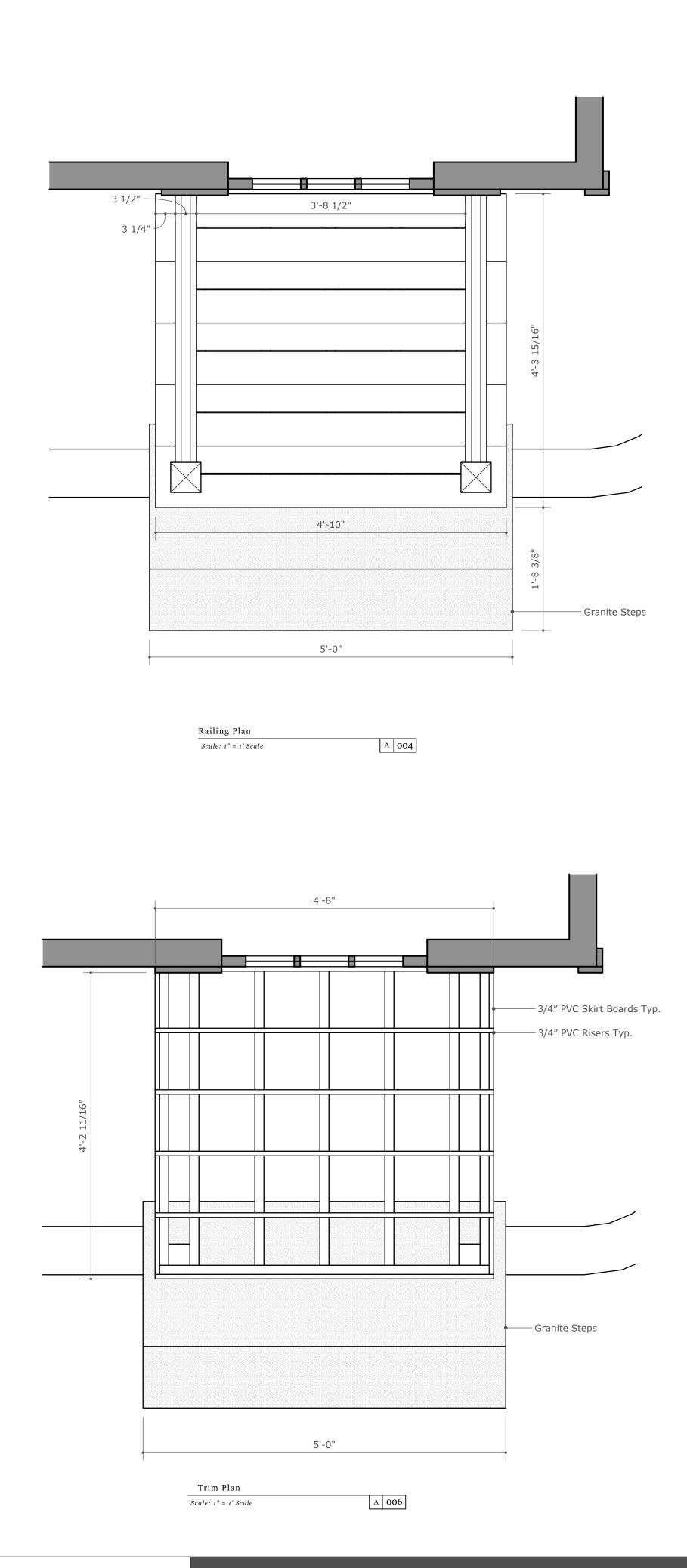
 Front View

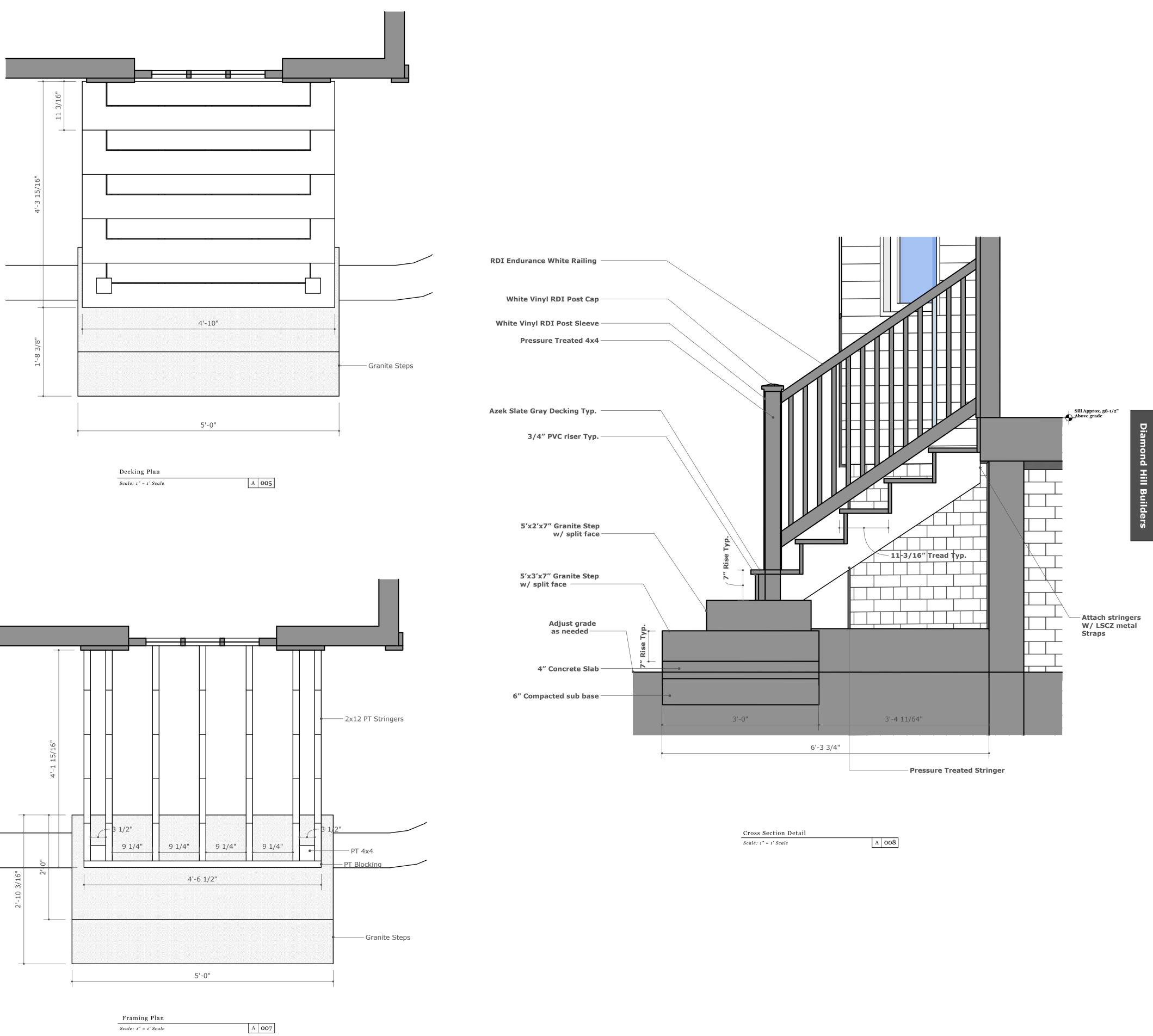
 Scale: 1/2" = 1' Scale
 A 002



Right View Scale: 1/2" = 1' Scale

A 003





Scale: 1" = 1' Scale

A 02

Project Address:	235 MARCY STREET
Permit Requested:	WORK SESSION
Application:	WORK SESSION A

A. **Property Information - General:**

Existing Conditions:

- Zoning District: General Residence B (GRB)
- Land Use: <u>Residential</u>
- Land Area: <u>3,688 SF +/-</u>
- Estimated Age of Structure: <u>c.1850</u>
- Building Style: <u>Greek Revival</u>
- Number of Stories:2.5
- Historical Significance: <u>C</u>
- Public View of Proposed Work: Marcy Street
- Unique Features: <u>Asphalt single siding</u>
- Neighborhood Association: <u>South End</u>



TING WEST ELEVATION

2) EXISTING SOUTH ELEVATION

B. Proposed Work: For exterior renovations (replace siding, windows, repair or replace trim and casings, install wood corner boards and install copper gutter system). This proposal also includes the removal of the 1-story rear shed and add a new 2-story rear garage addition.

C. Staff Comments and/ or Suggestions for Consideration:

The project proposal includes the following:

- Replace windows, siding, install gutter system and wood corner boards.
- Remove 1 story rear shed.
- Construct 2 story rear garage addition.



PROPOSED SOUTHEAST VIEW



D. Purpose and Intent:

- 25. Preserve the integrity of the District
- 26. Assessment of the Historical Significance
- 27. Conservation and enhancement of property values
- 28. Maintain the special character of the District
- 29. Complement and enhance the architectural and historic character
- 30. Promote the education, pleasure and welfare of the District and the city residents and visitors

E. Review Criteria/Findings of Fact:

- 17. Consistent with special and defining character of surrounding properties
- 18. Compatibility of design with surrounding properties
- 19. Relation to historic and architectural value of existing structures
- 20. Compatibility of innovative technologies with surrounding properties





1) EXISTING WEST ELEVATION

2) EXISTING SOUTH ELEVATION





We respectfully submit this Application for Work Session #1 to review Renovation of the existing Historic 1896 structure at 235 Marcy Street, demolition of an existing one story unconditioned shed, and the addition of an attached garage with living space above.

Renovation of the Historic 1896 structure at 235 Marcy Street Considerations:

- 1. Remove asphalt siding and roofing.
- 2. Restore and reinstall windows found to be original.
- 3. Repair or replace in kind existing original trim and casings.
- 4. Install new clapboard siding and corner boards.
- 5. Remove existing attached one story unconditioned shed on loose brick.
- 6. Install new k-style gutters and down spouts.

Thank you for your consideration. Sincerely, Carla Goodknight, AIA, NCARB Principal, CJ Architects



3) EXISTING EAST ELEVATION

4) EXISTING NORTH ELEVATION

235 MARCY STREET PORTSMOUTH, NEW HAMPSHIRE

AGENDA, AERIAL VIEW & **EXISTING ELEVATIONS** HISTORIC DISTRICT COMMISSION WORK SESSION #1: MAY 1, 2024

Addition of an Attached Garage with Living Space above

Considerations:

- 1. Construct new attached single car garage.
- 2. Replicate existing trim, rake, and eave details.
- 3. Install new k-style gutters and down spouts.
- 4. Install new metal clad windows as required.





1) VIEW FROM SITE LOOKING NORTH

2) VIEW FROM SITE LOOKING SOUTH





3) VIEW FROM SOUTH OF MARCY STREET



4) VIEW FROM NORTH OF MARCY STREET

EXISTING STREET VIEWS

HISTORIC DISTRICT COMMISSION WORK SESSION #1: MAY 1, 2024

235 MARCY STREET

PORTSMOUTH, NEW HAMPSHIRE

EXISTING AERIAL VIEW



EXISTING AERIAL VIEW





1) VIEW OF EXISTING FRONT ENTRY



4) VIEW OF EXISTING WINDOW CASING

235 MARCY STREET PORTSMOUTH, NEW HAMPSHIRE

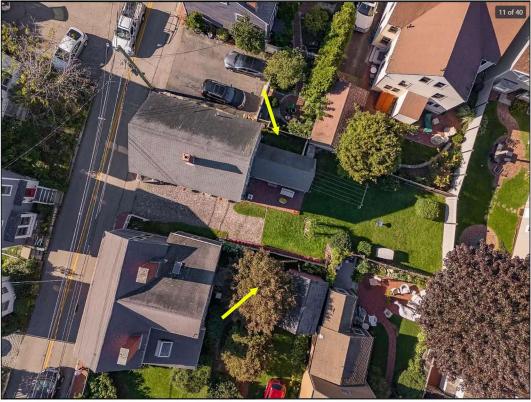


2) VIEW OF TYPICAL ABUTTERS DORMERS



5) VIEW OF EXISTING FOUNDATION AT ATTACHED SHED





EXISTING CONDITIONS

HISTORIC DISTRICT COMMISSION WORK SESSION #1: MAY 1, 2024

3) VIEW OF ABUTTERS GARAGE TO THE EAST

6) AERIAL VIEW OF ABUTTERS AND SURROUNDING GARAGES





EXISTING NORTHWEST VIEW







EXISTING & PROPOSED VIEWS

PORTSMOUTH, NEW HAMPSHIRE

235 MARCY STREET

HISTORIC DISTRICT COMMISSION WORK SESSION #1: MAY 1, 2024

EXISTING SOUTHWEST VIEW

PROPOSED SOUTHWEST VIEW





EXISTING SOUTHEAST VIEW







PROPOSED SOUTHEAST VIEW

235 MARCY STREET

EXISTING & PROPOSED VIEWS

HISTORIC DISTRICT COMMISSION WORK SESSION #1: MAY 1, 2024

PORTSMOUTH, NEW HAMPSHIRE

EXISTING NORTHEAST VIEW

PROPOSED NORTHEAST VIEW



235 MARCY STREET PORTSMOUTH, NEW HAMPSHIRE

EXISTING & PROPOSED ELEVATIONS SCALE: 1/8" = 1'-0" HISTORIC DISTRICT COMMISSION WORK SESSION #1: MAY 1, 2024







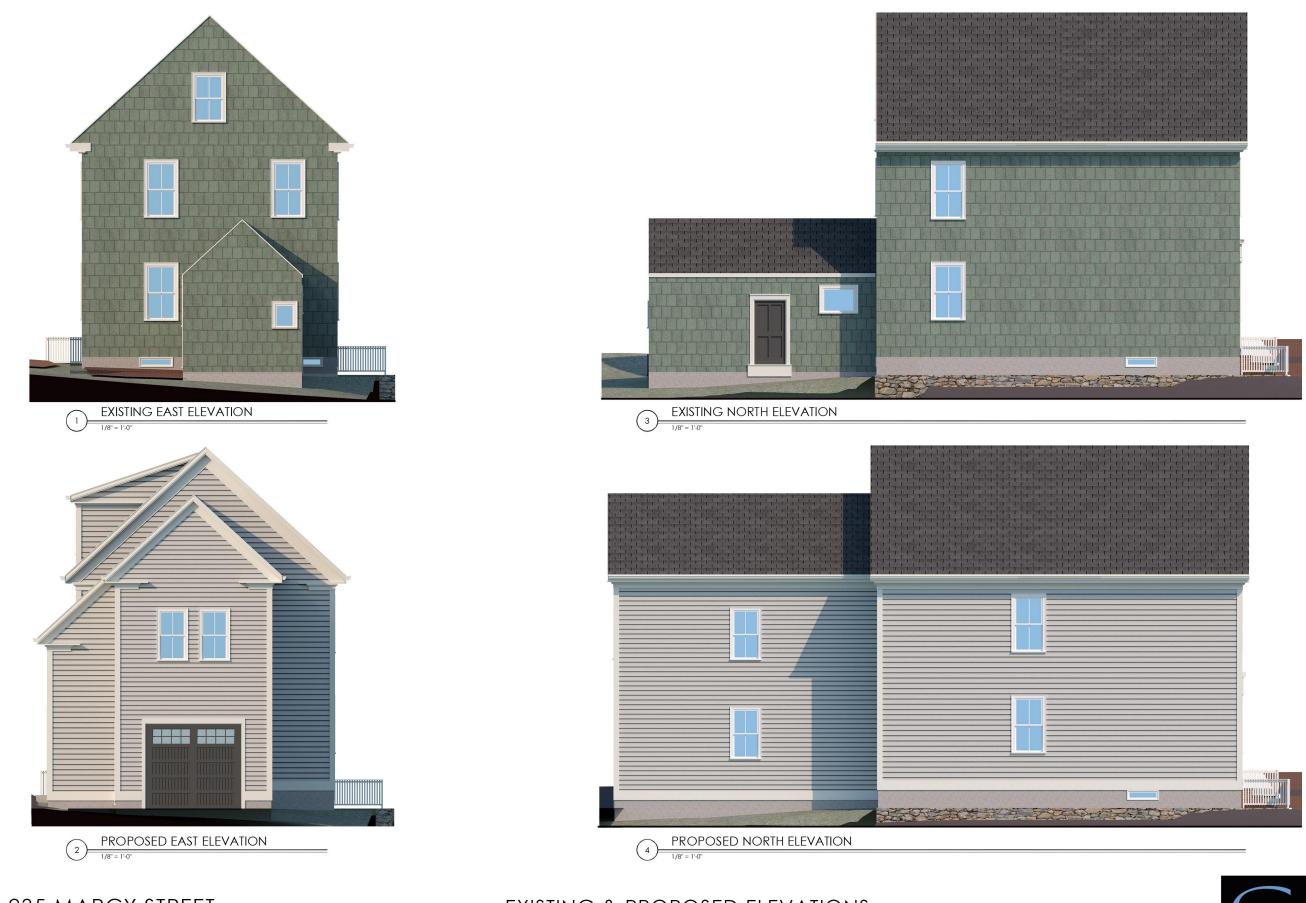












235 MARCY STREET

PORTSMOUTH, NEW HAMPSHIRE

EXISTING & PROPOSED ELEVATIONS SCALE: 1/8" = 1'-0" HISTORIC DISTRICT COMMISSION WORK SESSION #1: MAY 1, 2024





235 MARCY STREET

SITE PLAN

PORTSMOUTH, NEW HAMPSHIRE

HISTORIC DISTRICT COMMISSION WORK SESSION #1: MAY 1, 2024

