



5515 Abercorn St. Savannah, GA
31405

**916 MLK
BLVD.**

916 MLK BLVD.
Savannah, Ga 31415

**HPC
SUBMISSION**

916 MLK BLVD. APARTMENTS AND CENTER

916 MLK BLVD. SAVANNAH, GA 31415

REVISIONS

Date	#	Description

NOT FOR CONSTRUCTION

COVER SHEET

Job No. 2109
Date JANUARY 25, 2024
Reviewed by GMSHAY

G000



5515 Abercorn St. Savannah, GA 31405

916 MLK BLVD.

916 MLK BLVD.
Savannah, Ga 31415

HPC SUBMISSION

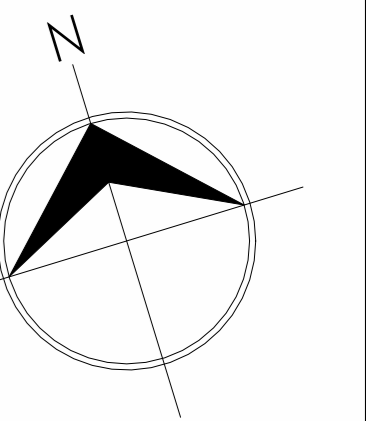


REVISIONS

Date	#	Description

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3D VIEWS



REVISIONS

Date	#	Description
Date 2	2	Revision 2

NOT FOR CONSTRUCTION

LEVEL 1-3

Job No. 2109
Date JANUARY 25, 2024
Reviewed by GMSHAY

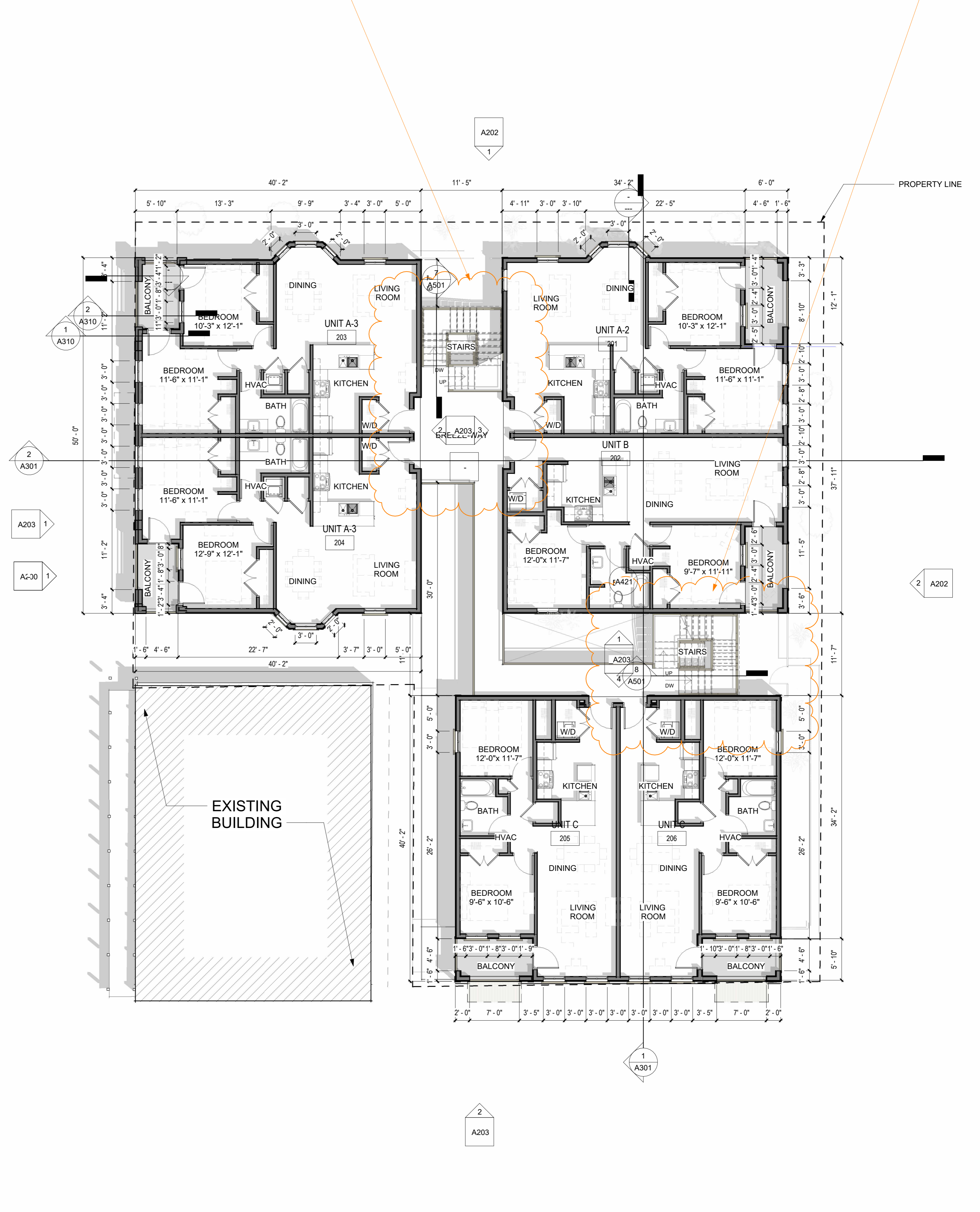
COMMENT # 5 - SCREEN THE REFUSE STORAGE AREA FROM ALL PUBLIC RIGHTS AWAY INCLUDING LANE

COMMENT #7 - CONNECTING STAIR ON EAST TO BE SET BACK FURTHER AND ROOF REDESIGNED WITH MINIMAL VISIBILITY

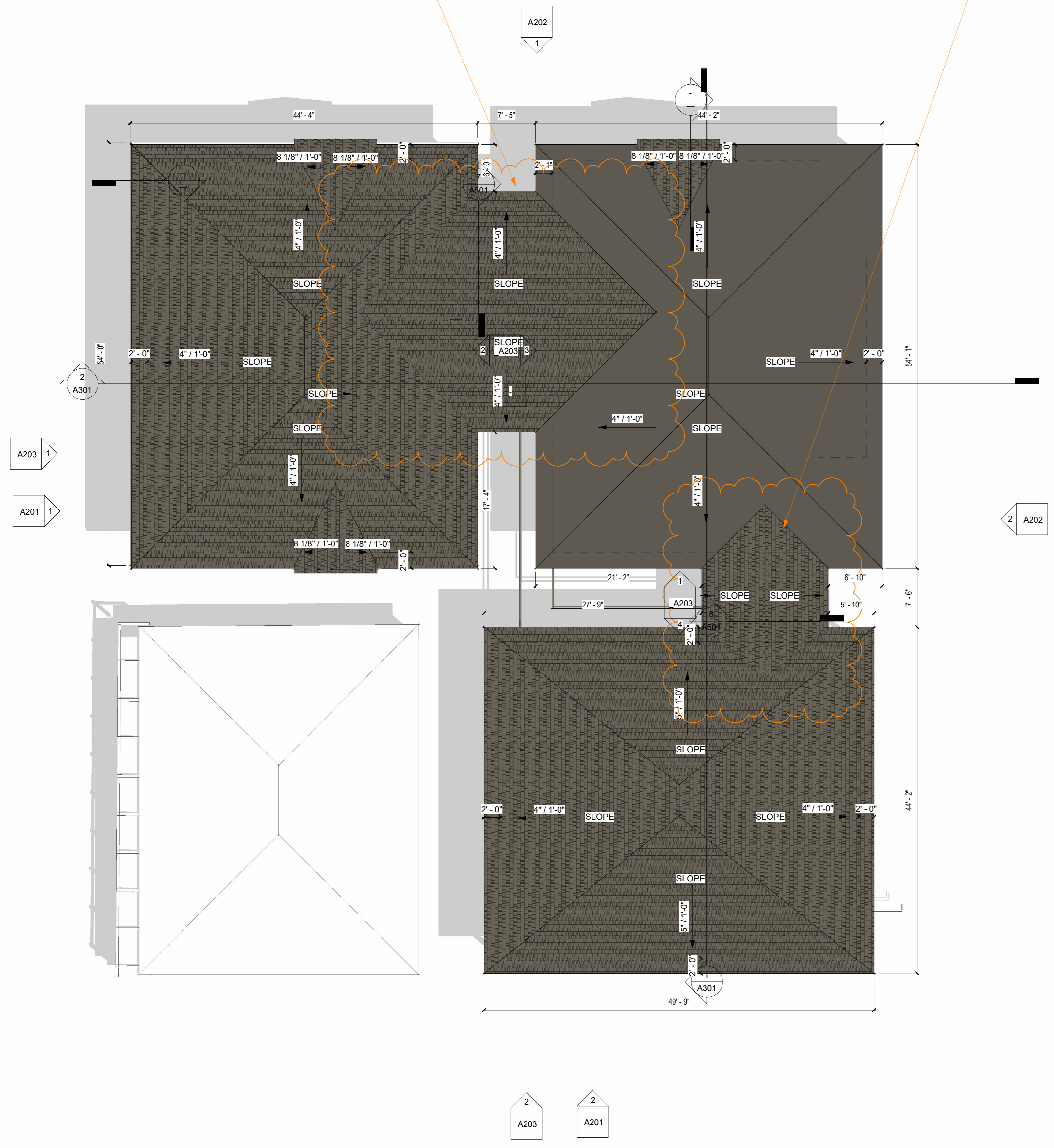
COMMENT #7 - CONNECTING STAIR ON EAST TO BE SET BACK FURTHER AND ROOF REDESIGNED WITH MINIMAL VISIBILITY



COMMENT #8 - REDESIGN THE DOOR ORIENTATION ON THE WALDBURG FACADE TO FACE WALDBURG STREET



COMMENT #7 - CONNECTING STAIR ON EAST TO BE SET BACK FURTHER AND ROOF REDESIGNED WITH MINIMAL VISIBILITY



REVISIONS

Date	#	Description
Date 2	2	Revision 2

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ROOF

Job No. 2109
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REVISIONS		
Date	#	Description
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ELEVATIONS

Job No. 2109
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MARTIN LUTHER KING BLVD.

1 Building A - West
A201 1/4" = 1'-0"



WEST WALDBURG STREET

COMMENT #8 - REDESIGN DOOR ORIENTATION ON THE WALDBURG FACADE TO FACE WALDBURG STREET

2 Building C - South
A201 1/4" = 1'-0"

MATERIAL LEGEND

1	HARDIE PLANK SIDING SMOOTH FINISH; COLOR: AGREEABLE GREY SW 7029	5	STOREFRONT DOUBLE DOOR - EFCO SERIES D502; COLOR: ULTRA-ESCENT II MICA	10	CUSTOM WOOD PLANK FENCING	15	BRICK - TAYLOR BRICK - #301W WHITE	21	NOT USED
1A	HARDIE PLANK SIDING SMOOTH FINISH; COLOR: AMAZING GRAY SW 7044	6	STOREFRONT SINGLE DOOR - EFCO SERIES T3501, COLOR: ULTRA-ESCENT II MICA	11	ASPHALT SHINGLE ROOFING - GAF TIMBERLINE WEATHERED WOOD	16	NOT USED	22	NOT USED
2	HARDIE TRIM; COLOR: INTELLECTUAL GRAY SW 7045	7	CUSTOM METAL CANOPY, COLOR: INTELLECTUAL GRAY SW 7045	12	DOUBLE HUNG WINDOW - PELLA WINDOW; INTELLECTUAL GRAY SW 7045	17	NOT USED	23	NOT USED
3	TILE - SIMENA HONED LIMESTONE - STONE SOURCE	8	STEEL EXTERIOR DOOR, COLOR: INTELLECTUAL GRAY SW 7045	13	FIXED WINDOW - PELLA WINDOW; INTELLECTUAL GRAY SW 7045	18	NOT USED	24	NOT USED
4	STOREFRONT SYSTEM - EFCO SERIES 403; COLOR: ULTRA-ESCENT II MICA	9	CUSTOM ORNAMENTAL METAL FENCING, COLOR: ROYCOFT BRONZE SW 2846	14	TRANSOM GLASS - PELLA WINDOW; INTELLECTUAL GRAY SW 7045	19	NOT USED	25	NOT USED

REVISIONS		
Date	#	Description
Date 2	2	Revision 2

NOT FOR CONSTRUCTION

ELEVATIONS

Job No.	2109
Date	JANUARY 25, 2024
Reviewed by	GMSHAY

COMMENT # 7 - CONNECTING STAIR TO EAST SET BACK FURTHER AND ROOF REDESIGNED TO MINIMIZE VISIBILITY

COMMENT # 7 - CONNECTING STAIR TO EAST SET BACK FURTHER AND ROOF REDESIGNED TO MINIMIZE VISIBILITY

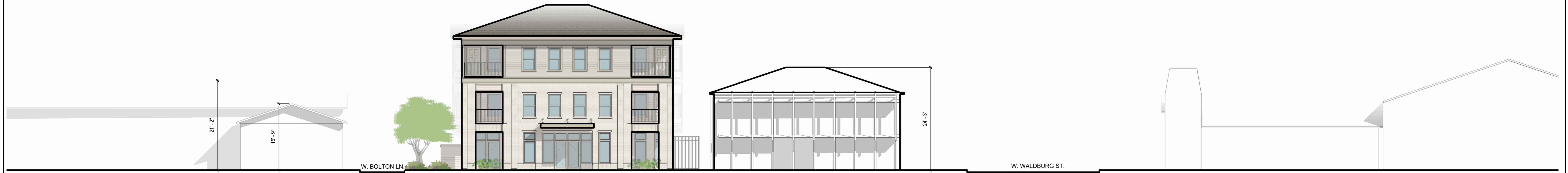


1 Building B & A - North
A202 1/4" = 1'-0"



2 Building C & B - East
A202 1/4" = 1'-0"

MATERIAL LEGEND					
1	HARDIE PLANK SIDING SMOOTH FINISH; COLOR: AGREEABLE GREY SW 7029	5	STOREFRONT DOUBLE DOOR - EFCO SERIES D502; COLOR: ULTRA-ESCENT II MICA	10	CUSTOM WOOD PLANK FENCING
1A	HARDIE PLANK SIDING SMOOTH FINISH; COLOR: AMAZING GRAY SW 7044	6	STOREFRONT SINGLE DOOR - EFCO SERIES T3501, COLOR: ULTRA-ESCENT II MICA	11	ASPHALT SHINGLE ROOFING - GAF TIMBERLINE WEATHERED WOOD
2	HARDIE TRIM; COLOR: INTELLECTUAL GRAY SW 7045	7	CUSTOM METAL CANOPY, COLOR: INTELLECTUAL GRAY SW 7045	12	DOUBLE HUNG WINDOW - PELLA WINDOW; INTELLECTUAL GRAY SW 7045
3	TILE - SIMENA HONED LIMESTONE - STONE SOURCE	8	STEEL EXTERIOR DOOR, COLOR: INTELLECTUAL GRAY SW 7045	13	FIXED WINDOW - PELLA WINDOW; INTELLECTUAL GRAY SW 7045
4	STOREFRONT SYSTEM - EFCO SERIES 403; COLOR: ULTRA-ESCENT II MICA	9	CUSTOM ORNAMENTAL METAL FENCING, COLOR: ROYCOFT BRONZE SW 2846	14	TRANSOM GLASS - PELLA WINDOW; INTELLECTUAL GRAY SW 7045
				15	SCREENED REFUSE STORAGE
				16	BRICK - TAYLOR BRICK - #301W WHITE
				17	NOT USED
				18	NOT USED
				19	NOT USED
				20	NOT USED
				21	NOT USED
				22	NOT USED
				23	NOT USED
				24	NOT USED
				25	NOT USED



5515 Abercorn St. Savannah, GA 31405

1 West - Context - MLK Boulevard
A203 1" = 10'-0"

916 MLK BLVD.

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Savannah, Ga 31415

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SITE CONTEXT

Job No. 2109
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2 South - Context - W. Waldburg Street
A203 1" = 10'-0"

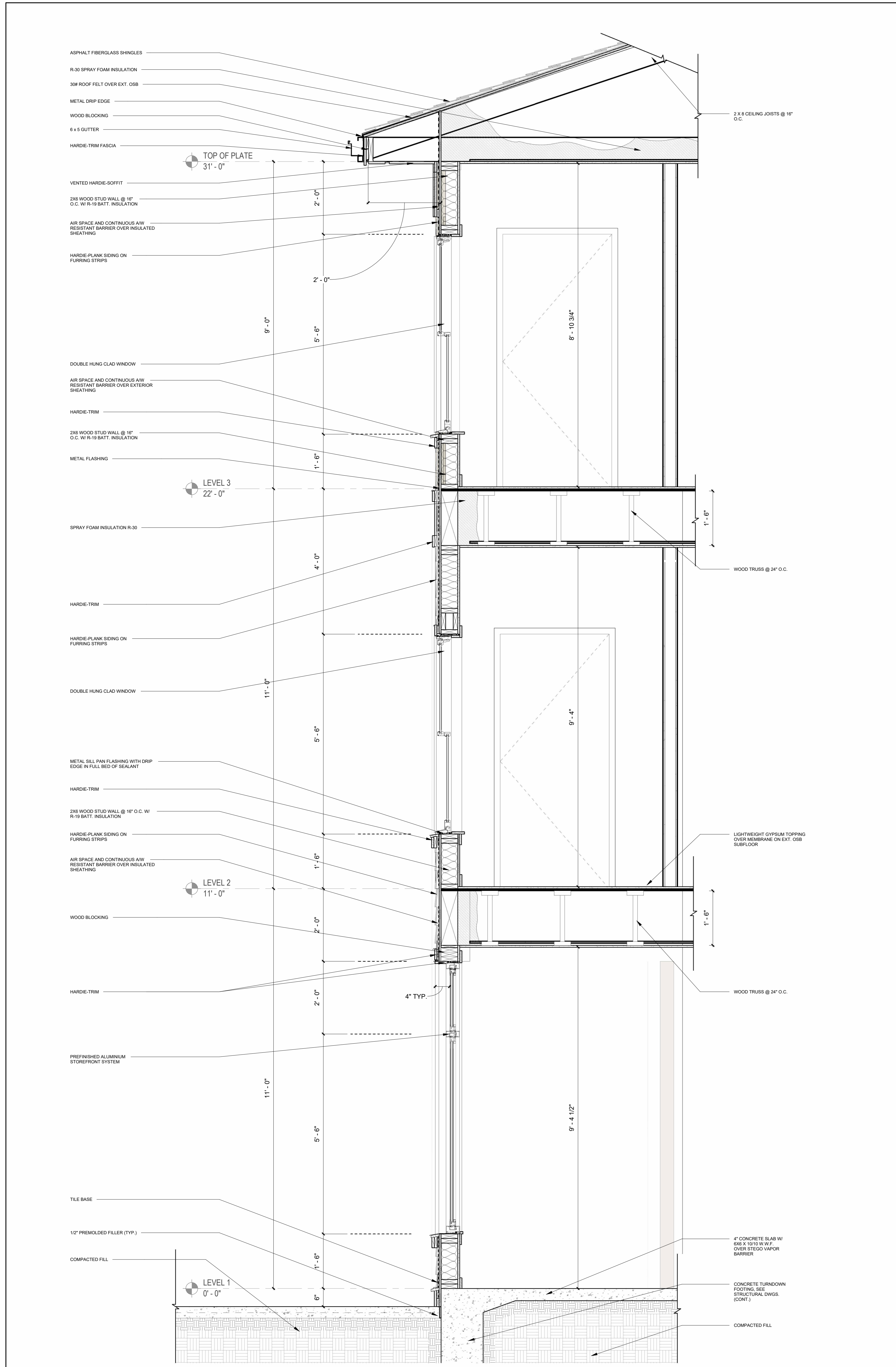
REVISIONS

Date	#	Description

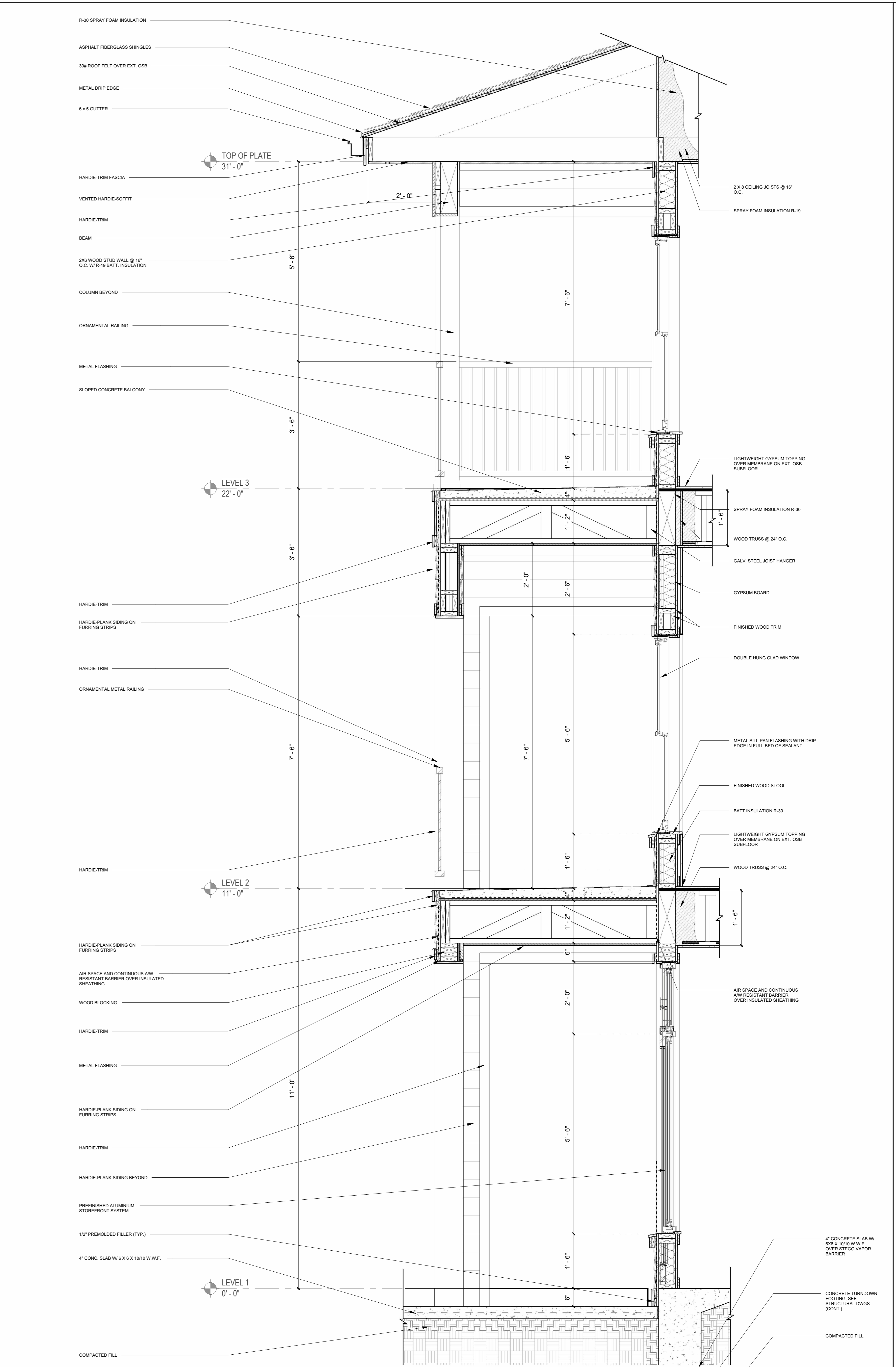
NOT FOR CONSTRUCTION

**WALL
SECTIONS**

Job No.	2109
Date	JANUARY 25, 2024
Reviewed by	GMSHAY



1
A310 Section Thru West Wall
3/4" = 1'-0"



2
A310 Section Thru North West Balcony
3/4" = 1'-0"

916 MLK Mixed Use

916 MLK Blvd.
Savannah, GA 31401



PRODUCT SPECIFICATIONS

Presented to:
The Historic Preservation Commission
Part 2 - Design Detail
New Construction
Previous Case File Number: 23-003509-COA

January 25, 2024





January 25, 2024

WRITTEN PROJECT DESCRIPTION FOR NEW CONSTRUCTION PART II: DESIGN DETAIL

916 Martin Luther King Blvd.

This is a submission for the Part Two Design Detail package for the approved Height and Mass Submission of the construction proposed for 916 Martin Luther King, Jr. Boulevard (MLK) and adjoining lots. It will provide 16 high quality 2-bedroom apartments affordable to small families and/or couples who have been displaced, or who are at risk of being displaced, due to the high cost of rental housing in the neighborhood and Savannah. Off-street parking for the apartments will be developed on a vacant lot located at 409 West Bolton Street.

The Petitioner is proposing design details that compliment the existing building pattern in the neighborhood by employing architectural devices from the immediate surrounding context. This petition previously received relief from design standards adopted for the West Victorian neighborhood, to reduce the 13' first floor wall height to 11'. The reduced first floor wall height will be more in line with existing buildings on either side of the proposed new building.

The proposed design incorporates brick along the commercial street front. The overall primary material is smooth finish lap siding expressed on the remaining residential facing facades. Light and inviting color palette with subtle contrast in trim, windows, and storefront is used to compliment many of the neighborhood's commercial and residential buildings. A complimentary tile decorates the storefront bases. The western street facing facade has stone tile bases to make the storefront a natural and approachable pedestrian experience. Strong horizontal bands of built-up Hardie trim siding divide the second and third story to further express horizontality and keep within scale of the surrounding buildings and further break down the buildings' mass. The petitioner has selected natural range of material selections to include knotty alder wood as accent and a honed limestone tile base.

7.11.10 Streetcar Historic District Design Standards - New Construction, Additions and Alterations

"The intent of these standards is to ensure appropriate new construction, additions, and alterations within the Streetcar Historic District. They are not intended to promote copies of the architectural designs of the past, but to encourage contemporary designs that protect and complement existing contributing resources."

The Petitioner believes the proposed design meets the intent of the Thomas Square Streetcar Historic District Ordinance and is visually compatible. We request acceptance of Part Two Design Detail.

Exterior Materials

1. **HardiePlank Siding**
Manufacturer: James Hardie
Style: Smooth
Color: SW7029 – Agreeable Grey
- 1a. **HardiePlank Siding**
Manufacturer: James Hardie
Style: Smooth
Color: SW7044 – Amazing Gray
2. **HardieTrim**
Manufacturer: James Hardie
Color: SW7045 – Intellectual Gray
3. **Tile**
Manufacturer: Stone Source
Style: Honed Limestone
Color: Simena
16. Brick
Manufacturer: Taylor Brick
Style: Wirecut
Color: #301W - White

Openings

4. **Storefront**
Manufacturer: EFCO
Model: Series 403
Color: Ultra-Escent II Mica
5. **Storefront Double Door**
Manufacturer: EFCO
Model: Series D502
Color: Ultra-Escent II Mica
6. **Storefront Single Door**
Manufacturer: EFCO
Model: Series T3501
Color: Ultra-Escent II Mica
8. **Exterior Door**
Material: Steel
Color: Ultra-Escent II Mica
12. **Double Hung Window**
Manufacturer: Pella
Color: SW7045 – Intellectual Gray
13. **Fixed Window**
Manufacturer: Pella
Color: SW7045 – Intellectual Gray
14. **Transom Glass**
Manufacturer: Pella
Color: SW7045 – Intellectual Gray

Shingles

11. **Asphalt Shingles**
Manufacturer: Gaf Timberline
Color: Weathered Wood

Metals & Railing

7. **Canopy**
Manufacturer: Custom
Material: Metal, Knotty Alder Wood
Color: SW7045 – Intellectual Gray
9. **Ornamental Fencing**
Manufacturer: Custom
Material: Metal
Color: SW2846 – Roycroft Bronze Green
10. **Fencing**
Manufacturer: Custom
Material: Wood Plank



HardiePlank®

HardiePlank® Lap Siding Product Description

HardiePlank® lap siding is factory-primed fiber-cement lap siding available in a variety of styles and textures. Please see your local James Hardie® product dealer for product availability. HardiePlank lap siding comes in 12 ft. lengths. Nominal widths from 5 1/4 in to 12 in. create a range of exposures from 4 in to 103/4 in

HardiePlank lap siding is also available with ColorPlus® Technology as one of James Hardie's prefinished products. ColorPlus® Technology is a factory applied, oven-baked finish available on a variety of James Hardie siding and trim products. See your local dealer for details and availability of products, colors, and accessories.

The HZ5® product line is right at home in climates with freezing temperatures, seasonal temperature variations, snow and ice. HZ5® boards are the result of our generational evolution of our time-tested products. We've evolved our substrate composition to be specifically designed to perform in conditions found in these climates. To ensure that its beauty matches its durability, we've engineered the surface for higher performance, giving it superior paint adhesion and moisture resistance. In addition, we've added a drip edge to the HardiePlank® HZ5® lap siding product to provide improved water management in conditions specific to HZ5® climates.



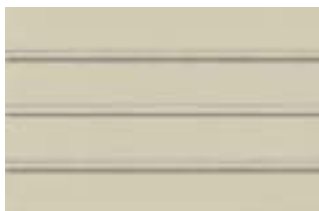
Select Cedarmill®



Smooth



Beaded Cedarmill®



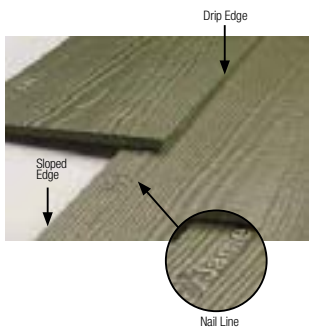
Beaded Smooth



Custom Colonial Roughsawn®



Custom Colonial Smooth®



General Product Information

Working Safety

Tools for Cutting and Fastening

General Installation Requirements

General Fastener Requirements

Finishing and Maintenance

HardieWrap® Weather Barrier

HardieTrim® Boards/Battens

HardieSoft® Panels

HardiePlank® Lap Siding

HardieSingle® Siding

HardiePanel® Vertical Siding

Appendix/Glossary

ESR-1844 & Z250 Report

General Product Information

Working Safely

Tools for Cutting and Fastening

General Installation Requirements

General Fastener Requirements

Finishing and Maintenance

HardieWrap® Weather Barrier

HardieTrim® Boards/Battens

HardieSoft® Panels

HardiePlank® Lap Siding

HardieShingle® Siding

HardiePanel® Vertical Siding

Appendix/Glossary

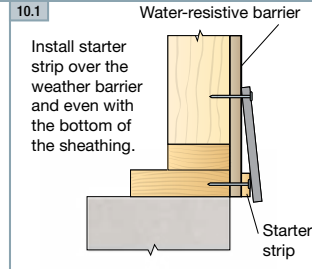
ESR-1844 & 2290 Report

Installation of HardiePlank® Lap Siding

INSTALL A STARTER STRIP

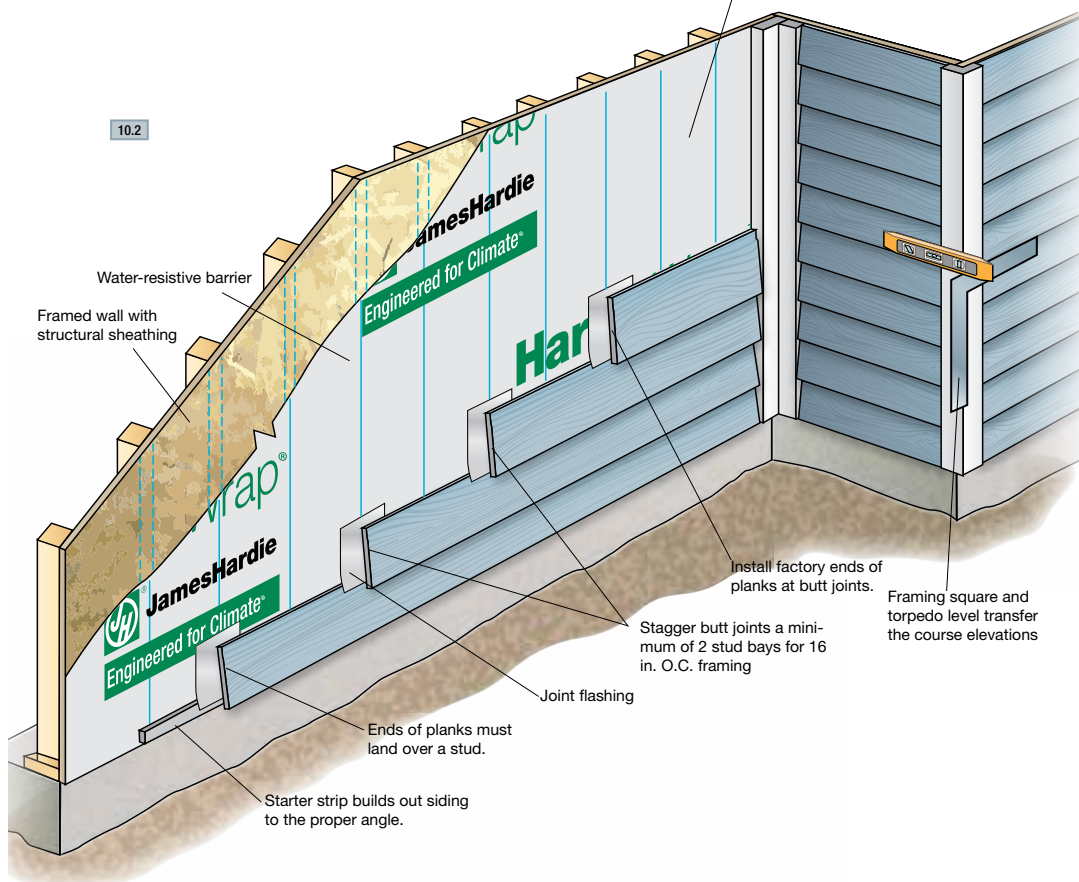
HardiePlank® lap siding requires a starter strip beneath the first course to set it on the proper angle and to create a proper drip edge at the bottom of the siding. Starter strips are easily made by ripping 1¼ in. pieces of HardiePlank siding from full or partial planks.

The bottom of the starter strip should be installed even with the bottom of the mudsill or the bottom edge of the sheathing. The strip must be installed over the water-resistant barrier, but occasional gaps should be left in the starter strip to allow any accumulated moisture behind the siding to drain away safely.



TIP: For accurate fastening, snap vertical chalk lines on the water-resistant barrier at the center of every stud location.

OVERVIEW OF HARDIEPLANK LAP SIDING





AMAZING GRAY SW 7044





HardieTrim®

HardieTrim® Boards Products Description

HardieTrim® boards come finished with either the PrimePlus® factory primer and sealer or with ColorPlus® Technology. The ColorPlus® coating is a factory-applied, oven-baked finish available on a variety of James Hardie® siding and trim products. See your local dealer for details and availability of products, colors, and accessories.

HARDIETRIM® 5/4, 4/4 BOARDS

HardieTrim® 5/4, 4/4 board is a decorative non-load bearing trim product. HardieTrim 5/4 board is 1 in. thick, HardieTrim 4/4 board is 3/4 in thick, and both can be purchased in 10 ft. and 12 ft. lengths, based on local availability. In addition to frieze, rake, window, door, and corner details, HardieTrim 5/4, 4/4 boards may be used to construct light blocks, column wraps and decorative scroll work. Available in commonly-used nominal widths from 4 in to 12 in.

HARDIETRIM® BATTEN BOARDS

HardieTrim® Batten Boards are a decorative non-load bearing trim product. HardieTrim® Batten Boards are 3/4 in. thick, 2 1/2 in. wide, and come on 12 ft. lengths. See your local dealer for details and availability of product colors and accessories.



HardieTrim 5/4, 4/4 board - Smooth

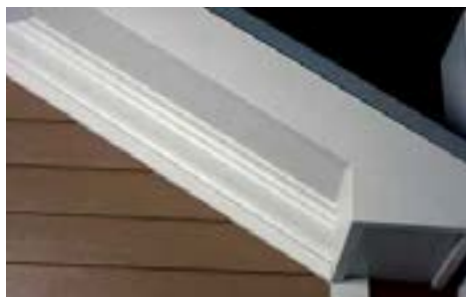


HardieTrim Batten board - Rustic and Smooth (not shown)



HardiePanel vertical siding with HardieTrim Batten board for the Board & Batten look.

A Complete James Hardie Exterior – Close-up on trim products.



ColorPlus TIP: HardieTrim 4/4, 5/4 boards with ColorPlus Technology is shipped with a protective laminate slip sheet. James Hardie recommends keeping the protective sheet in place during cutting and fastening to reduce damage to the boards. Remove the protective sheet only after installing the boards and filling the nail holes with a colored touch-up pen.



WARNING

DO NOT caulk nail heads when using ColorPlus products.
Refer to the ColorPlus touch-up section

General Product Information

Working Safety

Tools for Cutting and Fastening

General Installation Requirements

General Fastener Requirements

Finishing and Maintenance

HardieWrap® Weather Barrier

HardieTrim® Boards/Battens

HardieSoftie® Panels

HardiePlank® Lap Siding

HardieShingle® Siding

HardiePanel® Vertical Siding

Appendix/Glossary

ESF-1644 & Z290 Report

INTELLECTUAL GRAY SW 7045





Belair

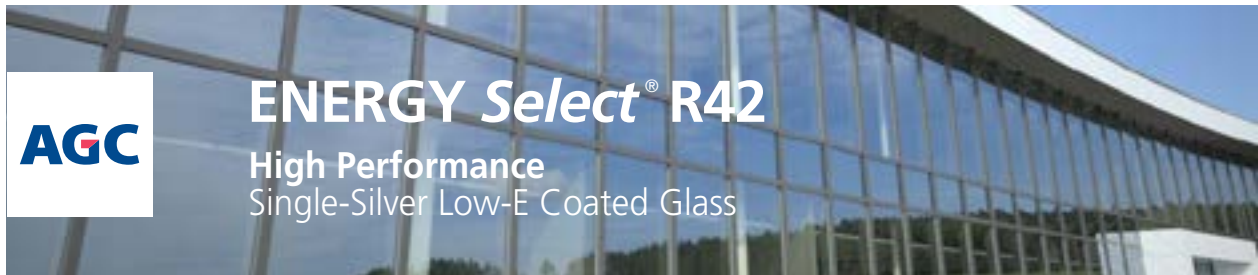
Origin : Portugal

Physical properties			Class
Apparent density (ASTM C97)	Kg/m3	2567	III
Absorption coefficient (ASTM C97)	%	1.73	III
Porosity	%	4.44	
Compressive strength (ASTM 170)	MPa	93	III
Modulus of rupture (ASTM C99)	MPa		
Flexural strength (ASTM C880)	%	10	
Abrasion (Hd) (ASTM C241)	mm	4.2	
Resistance to fixation elements (3cm)	MPa		
Bending strength	MPa		
Freeze thaw	Cycles		
Bent Bolt Anchor Pullout test (ASTM C1354)	mm		
Pin Clip anchor Pullout test (ASTM C1354)	mm		

Recommended Uses			
Applications		Traffic wear	
Cladding	x	Not a flooring material	
Exterior pavers	x	Heavy commercial (mall)	x
Interior floors	x	Low commercial (office)	x
Kitchen counters	x	Residential	x
Other counters	x		
Wet areas	x		

Finishes Available			
Honed	x	Dalle Rustique	
Flamed		Bush-Hammered	x
Polished	x	Tumbled	
Antique		Iron or sand Blasted	x
Patiné		Split-Face	x
Leather (flamed-brushed)		Sawn	
Medieval	x		
Linen	x		

Production data			
Maximum project size	sqft	100,000	
Slab size	inch	108"x58"	
Thickness Min	inch	3/8"	
Thickness Max	inch	4"	



With its low SHGC and high reflectivity, AGC ENERGY Select R42 is the perfect choice for high-rise residential and architectural facades. As an outstanding solar blocker, ENERGY Select R42 is the natural choice for regions where air conditioning is used most of the year. To meet the high aesthetic needs of today's architects, ENERGY Select R42 offers excellent light transmission and an aesthetically neutral reflectance.

ENERGY Select R42

What's so special about it? | What does this mean for you?

- | | |
|---|---|
| <p>Solar control low-e with stunning reflectance</p> <p>Legendary neutral reflective coating</p> <p>Low-e coating technology</p> | <ul style="list-style-type: none"> - Moderate solar control and good U-value for cooler regions - High visible light transmission of 62% (VLT) for plenty of natural daylighting - Ideal for commercial applications and residential high-rise - High-level outdoor reflectance of 26% - Neutral reflectance provides uniform appearance for building envelope - Sputter coating designed for unique aesthetic and energy efficiency - Versatile product for regions where air conditioning is used most of the year, while still providing energy savings in cooler temperatures with a 0.25 (Argon) winter U-value |
|---|---|

Performance

Product name	Coating Position	Color	Transmittance %			Reflectance %			Winter U-value (Imperial)		Shading Coefficient	Solar Heat Gain Coefficient (SHGC)	Light to Solar Gain (LSG)	DW Index
			Visible	Solar	UV	Out	In	Solar	Air	Argon				
Insulating glazing unit: Based on 1" (25mm) Unit: 1/4" (6mm) 1/2" (13mm) spacer 1/4" (6mm)														
Energy Select R42	Surface 2	Neutral	62	37	22	26	21	33	0.30	0.25	0.49	0.42	1.46	0.48

Performance values are based on representative production samples and product modeling data using LBNL Window 7 software. Actual values may differ based on variations in the manufacturing process. Environmental conditions based on NFRC 100-2010. Argon data based on 10% air and 90% argon. Thermal stress analysis or building codes may determine the requirement for heat-treated glass. Contact AGC Technical Services at 800-251-0441 to ensure the correct form of glass to be supplied. For additional data performance and comparisons use our online Glass Calculator www.agcglass.com/glasscalculator.

- Exterior use only
- Insulating
- Tempering & heat-strengthening
- Laminated
- Standard thickness
1/4" (6mm)
- Optional thickness
5/16" (8mm)
3/8" (10mm)

IGU configurations

There are virtually unlimited ENERGY Select R42 IGU configurations that are possible with this product. Please contact AGC for more information.

Build your own IGU

With the AGC online Glass Calculator you can quickly and easily build your own AGC IGU and calculate its performance data. Visit [www.agcglass.com/Tools & Resources](http://www.agcglass.com/Tools&Resources).

Envision Energy Select R42

With the AGC Architectural Glass Visualizer you can see how Energy Select looks on a variety of buildings and under various conditions. Visit [www.agcglass.com/Tools & Resources](http://www.agcglass.com/Tools&Resources).

Let AGC help build your spec

As the world's largest glass manufacturer, AGC offers the widest range of products. No matter what brand or type of glass you typically specify, there is an AGC product that will perform equally or better. If you have glass specifications that you would like re-written to reflect AGC products, contact a knowledgeable and helpful AGC architectural representative today.

Availability

As part of AGC's commitment to providing world-class customer service, AGC distribution centers, strategically located throughout North America, provide you with easy, convenient, and fast access to the most popular AGC products. Contact AGC for product samples or for a distribution center near you.



Series 403 2" x 4 1/2" Thermal Storefront Framing

CONFIGURATIONS

Shear Block • Screw Spline

This economical flush glaze system is available in both shear block and screw spline fabrication methods. Series 403 Storefront can accommodate all standard 1 3/4" Entrances as well as WV410 vents. This series is thermally broken, enhancing energy savings potential. Vertical mullions will accept steel reinforcement to enhance structural performance.

Features

Thermally broken frames
Screw spline construction
Shear block construction
The optional Roto-Vent™ ventilator
2-way corner mullions (90° & 135°)
3-way corner mullions (T-mullions)
0°-15° and 15°-30° variable mullions
Accommodates up to 1 1/16" glazing
Uniform glazing gasket is used for exterior and interior
Various height intermediate horizontals and sills
Accessory line of perimeter anchors, pocket fillers, door adaptors, etc.
Anodized or painted finishes available

Benefits

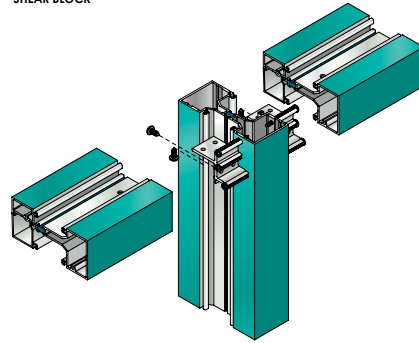
Enhanced thermal performance
Allows assembly of sections prior to installation
Decreases installation time
Ability to erect on the job site
Allows fresh air into the room, yet maintains security
Design flexibility
Multifaceted elevations
Custom applications
Expands design and energy savings options
Allows optimized use of gasket
Simplifies ordering and installation
Ability to maintain desired sight line
Increased product versatility
Multiple options to answer economic and aesthetic concerns



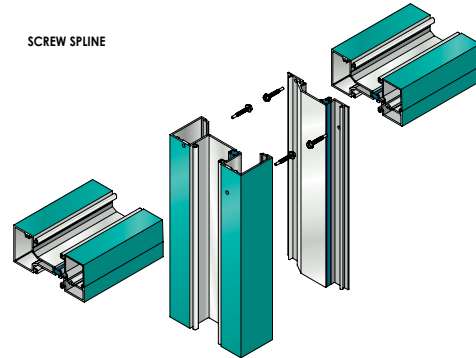
Series 403 2" x 4 1/2" Thermal Storefront Framing



SHEAR BLOCK



SCREW SPLINE



PERFORMANCE DATA

SYSTEM 403 STOREFRONT FRAMING

AIR INFILTRATION	<.06 CFM/SF @ 6.24 PSF
WATER	NO LEAKAGE @ 12.0 PSF
STRUCTURAL	visit MyEFCO at www.efcocorp.com
CRF FRAME	56
CRF-GLASS	63

Note: All performance value data is based on laboratory testing per AAMA 101/15.2/A440 for Air/Water/Structural, ASTM E90 and or E413 for Acoustical, AAMA 507 and or NFRC 100/200/500 for U-Factors and AAMA 1503 for Condensation Resistance Factor (CRF). Printed values are subject to change pending the frequency of recertification testing. Field results will vary depending on size, the field test method, the addition of sub-frames, panning, mullions, accessories and installation into the surrounding condition.

403 THERMAL U-FACTORS*		
CENTER OF GLASS U-FACTOR	CONFIGURATION AND SIZE	
	FIXED** 78 3/4" X 78 3/4"	FIXED 120" X 120"
0.46	0.55	0.52
0.34	0.46	0.41
0.30	0.42	0.38
0.24	0.38	0.33
0.20	0.34	0.29

* Based on NFRC 100
**NFRC Gateway size

*Note: Based on NFRC 100. Job specific performance ratings may vary due to differences in glass and glass spacer selection. If NFRC certified ratings are required, EFCO recommends requesting a CMA Bid Report at the bid stage from EFCO's Product Technical Support Group to ensure performance will meet project specifications

GLAZING

SYSTEM 403 CAN BE INSIDE OR OUTSIDE GLAZED WITH EXTRUDED ALUMINUM, SNAP-IN GLAZING BEAD. GLASS IS "DRY GLAZED" WITH TOP LOAD GASKET. GLAZINGS OF 3/16" TO 1-1/16" INFILL PANELS ARE ACCOMMODATED. SEE GLAZING CHART BELOW FOR EXACT SIZE.

SYSTEM 403 GLAZING CHART	POLYCARBONATE					GLASS OR PANEL										
	3/16"	1/4"	5/16"	3/16"	1/4"	1/4**	5/16"	7/16"	1/2"	9/16"	5/8"	3/4"	7/8"	15/16"	1"	1-1/16"
MONOLITHIC GLASS	C	C	C	C	C	C	C	C								
INSULATED GLASS												C		C	A	C

*Obscure glass thickness
**Laminated glass thickness

A-Available glazing option
C-Adaptor and/or gasket required
Blank - N/A



Series 403 2" x 4 1/2" Thermal Storefront Framing

Frame Construction

The frames have a depth of 4 1/2", and the nominal material wall thickness is .080". Members are extruded 6063-T6 aluminum alloy. Corner construction employs screw spline or shear block method. See Illustration 1 & 2.

Door Frames

System 403 offers integral System 402 entrance frames as a part of the entrance framing system. Members are nominally .080" in thickness.

Weather Stripping

All entrance frames are weather-stripped with bulb gasket.

Thermal Barrier

All frames and vents are thermally broken using the latest technology in two part, high density polyurethane.

Glazing

Series 403 can be inside or outside glazed with extruded aluminum, snap-in glazing bead. Glass is "dry glazed" with top load gasket. Glazings of 3/16" to 1 1/16" infill panels are accommodated. See Glazing Chart for exact size.

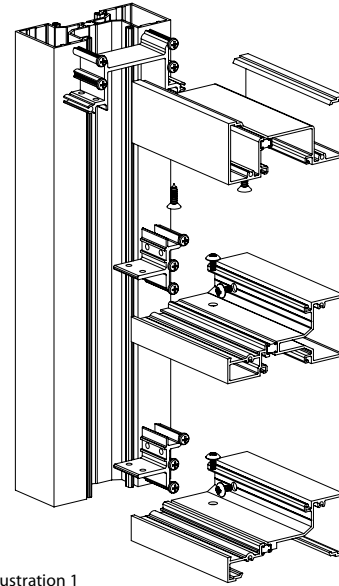


Illustration 1

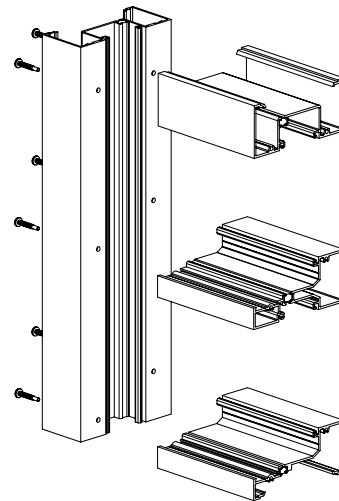


Illustration 2

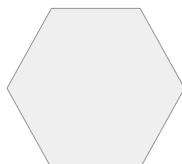


COATINGS
FINISHES
COLORS

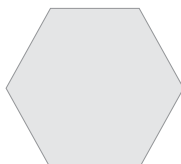
CUSTOM TO MATCH SW7045

ULTRAPON (70% PVDF)

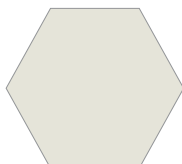
STANDARD



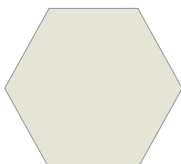
Bone White



White



Antique White



Herring Bone



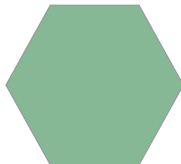
Mesa Brown



Mineral Brown



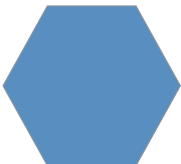
Gray



Aged Copper



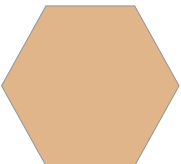
Legacy Blue



Denim Blue



Light Brown



Pueblo Tan

FEATURED



Ivy



Hartford Green



Blue Sky



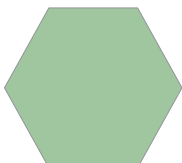
Brick Red



Black

ULTRA-ESCENT II (70% PVDF MICA*)

STANDARD



Weathered Copper



Slate



Raw Sienna

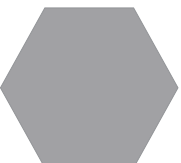


Gun Barrel



Saddle Bronze

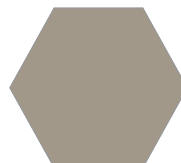
FEATURED



Warm Silver



Sea Spray



Asti



Champagne



Aztec Gold

¹ The color samples shown are not the actual paint. These paint colors represent the production colors as closely as possible within the limitations of color-chip reproduction.

² Additional charges may apply to exotic colors that require a clear topcoat, metallic colors, custom color matches

* Color variation is inherent in, and should be expected with Mica/Ultra-Escent II paint finishes. Laboratory-prepared samples will appear different from production-run material.

WINDOWS • CURTAIN WALLS • ENTRANCES • STOREFRONTS

Series D202 Narrow Stile • Series D302 Medium Stile • D502 Wide Stile 2" ThermaStile® Aluminum Swing Entrance Doors



CONFIGURATIONS

Narrow Stile (2 1/4") • Medium Stile (3 1/2") • Wide Stile (5")

EFCO's ThermaStile® entrances are designed to meet specific applications where security, egress, thermal performance and dual finish capability is required. ThermaStile entrances are joint plug welded at every corner to provide superior strength in all applications. Offered in narrow, medium and wide stiles, EFCO standard entrances can accommodate a wide range of applications. Also, multiple glazing options provide flexibility to meet specific design requirements, and the product's ability to accommodate most hardware applications increases its versatility. ThermaStile entrances are thermally isolated, enhancing energy saving potential. EFCO's ThermaStile® entrances provide the complete solution for your fenestration needs.

Features

E-Strut™ thermal isolator

Exterior corners are true mortise and tenon

Interior corners are joined by concealed reinforcement brackets and deep penetration fillet weld

Accepts most major brands of locking hardware, panic devices, Rixson HD pivots and continuous hinges.

Accommodates all surface mounted, concealed overhead and floor closers

Tall bottom rails available

Variety of cross rails, door sweeps, and crash bars available

Anodized and painted finishes available

Benefits

Dual finish capability

Physical interlock between the rails and stiles increases strength of door

Improves ability to function correctly in high-usage applications

Able to comply with special hardware specifications

Unrestricted closer choices

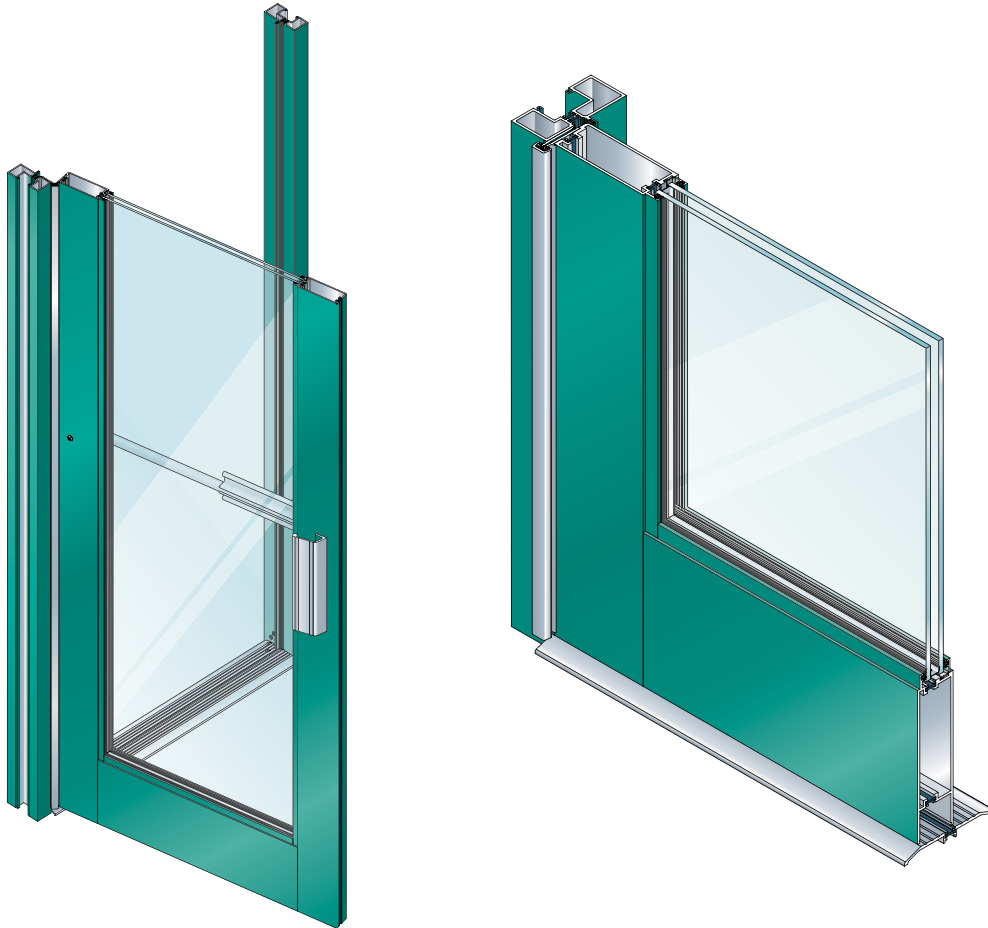
Meets ADA requirements

Increases configuration options

Multiple options to answer economic and aesthetic concerns



Series D202 Narrow Stile • Series D302 Medium Stile • D502 Wide Stile
2" ThermaStile® Aluminum Swing Entrance Doors



PERFORMANCE DATA

D202 NARROW STILE (SINGLE DOOR LEAF)

AIR INFILTRATION < .140 CFM/SF @ 1.56 PSF
CRF-FRAME 40
CRF-GLASS 52
U-FACTOR66

D302 MEDIUM STILE (SINGLE DOOR LEAF)

AIR INFILTRATION < .170 CFM/SF @ 1.56 PSF
CRF-FRAME 40
CRF-GLASS 52
U-FACTOR66

D502 WIDE STILE (SINGLE DOOR LEAF)

AIR INFILTRATION < .110 CFM/SF @ 1.56 PSF
CRF-FRAME 46
CRF-GLASS 65
U-FACTOR65

Note: All performance data is subject to change based on testing recertification and/or revised AAMA testing protocol. Please contact EFCO for latest performance values.

D202, D302, D502 GLAZING CHART	POLYCARBONATE			GLASS OR PANEL															
	3/16"	1/4"	5/16"	3/16"	1/4"	1/4"	5/16"	7/16"	1/2"	9/16"	5/8"	3/4"	7/8"	15/16"	1"	1-1/16"			
MONOLITHIC GLASS	C	A	C	C	A	A	C									C	A	C	
INSULATED GLASS																			

** - Laminated Glass Thickness
A - Available Glazing Option
C - Adaptor and/or gasket required
Blank - N/A



WINDOWS • CURTAIN WALLS • ENTRANCES • STOREFRONTS

Series D202 Narrow Stile • Series D302 Medium Stile • D502 Wide Stile 2" ThermaStile® Aluminum Swing Entrance Doors

Door Construction

The rails and stiles have a depth of 2", and are constructed of 6063-T6 aluminum alloy. Nominal material wall thickness is .125". The thermal barrier consists of two glass reinforced polyamide nylon struts, mechanically crimped in raceways extruded in the exterior and interior extrusions. Corner construction utilizes a combination of mortise and tenon and a heavy, concealed reinforcement bracket that is deep penetration and fillet welded. All aluminum members have a true thermal barrier. Dual finish capability is available. See Illustration 1.

Frame Construction

The door frame has a depth of 4 1/2", with a sightline of 2". The extrusions are 6063-T6 aluminum alloy. Nominal material wall thickness is .125". The thermal isolator consists of two glass reinforced polyamide nylon struts, mechanically crimped in raceways extruded in the exterior and interior extrusions. Corners incorporate the shear block method of construction. Dual finish capability is available.

Weather-Stripping

Single doors are weather-stripped at the frame with ASTM E2203 compliant bulb gasket and extruded door stops, which are available in integral, snap-in, and surface mounted varieties. See frame section. All pairs of doors are dual weather-stripped at the astragal with Poly-Pile®.

Hardware

EFCO standard doors accommodate most hardware types. Doors accept offset pivots, center pivots, or continuous gear hinges. Maximum security deadbolts, short throw deadbolts, hook bolts, latch locks, and flush bolts are a few of the compatible types of locks. Panic devices include concealed rod devices, rim devices and removable mullions. Concealed overhead, surface mounted and floor closers are accommodated. EFCO Ultraline™ push-pulls are standard. Butt Hinges are not compatible with ThermaStile entrances.

Glazing

Doors are glazed with extruded aluminum, pressure fitting glass stops. Glazing of 3/16" to 1 1/16" insulated units are available. See Glazing chart for exact size.

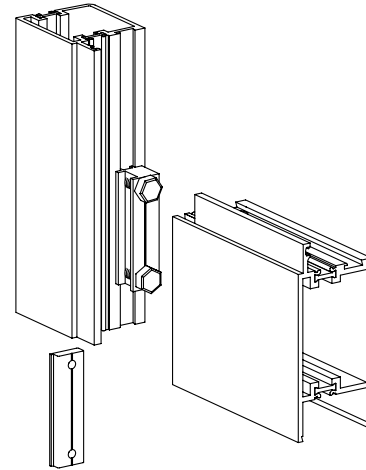


Illustration 1



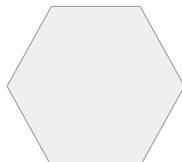


COATINGS FINISHES COLORS

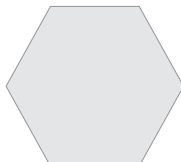
ULTRAPON (70% PVDF)

CUSTOM TO MATCH SW7045

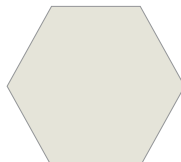
STANDARD



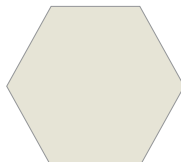
Bone White



White



Antique White



Herring Bone



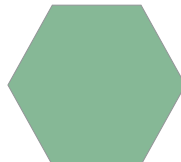
Mesa Brown



Mineral Brown



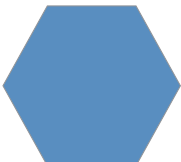
Gray



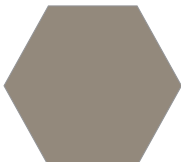
Aged Copper



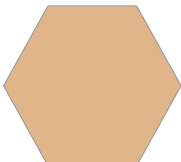
Legacy Blue



Denim Blue



Light Brown



Pueblo Tan

FEATURED



Ivy



Hartford Green



Blue Sky



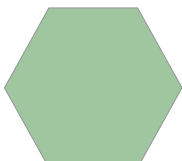
Brick Red



Black

ULTRA-ESCENT II (70% PVDF MICA*)

STANDARD



Weathered Copper



Slate



Raw Sienna

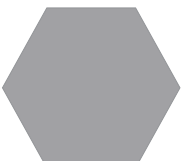


Gun Barrel



Saddle Bronze

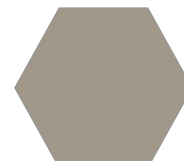
FEATURED



Warm Silver



Sea Spray



Asti



Champagne



Aztec Gold

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Pella® Reserve™ Traditional Wood & Clad/Wood



Exquisitely designed windows and doors with unparalleled historical detailing.

Double-Hung Interior



Double-Hung Exterior



- Historical details**
 Our most historically authentic line of wood windows and patio doors. Featuring through-stile construction, deliberate proportions and intricate profiles. Pella Reserve products are the ideal choice for historical renovations and traditional building projects.
- Authentic hardware**
 Complement your project with historically authentic spoon-lock window hardware. Our Antiek casement window hardware is inspired by period furniture to deliver authentic traditional style.
- Architectural interest**
 Featuring the industry's only foam spacer solution, Pella's Integral Light Technology® grille helps capture the look of true-divided-light without sacrificing energy performance. Further your aesthetic with the putty profile, recreated with historically accurate angles – providing meaningful depth and a realistic shadow. Pella Reserve products offer the industry's deepest sash dimension.
- Virtually unlimited customization**
 If you can dream it, we can build it with our most customizable product line. From extra tall to extra wide, Pella can craft unique windows that complement your aesthetic. Custom sizes, grille patterns and designs, finishes, wood types and glass options are available.
- Tailor-made solutions**
 From preliminary drawings to installation, Pella's expert team of architects, engineers, drafters and consultants can work to deliver custom window and door solutions for your project. Partner with Pella to achieve your unique vision without concessions.
- Intentional innovation**
 Winner of the 2019 Most Innovative Window from Window and Door Magazine, the Integrated Rolscreen® retractable screen preserves aesthetic view. It is a double- and single-hung screen that appears when you open the window, and rolls away, out of sight, when you close it.
- Durable interiors and extruded aluminum exteriors**
 Create a custom exterior color to meet your design needs or choose from 27 standard color options. Interior finish options are available in four paints, eleven stains and primed and ready-to-paint.
- ENERGY STAR® certified¹**
 Pella wood products offer energy-efficient options that will meet or exceed ENERGY STAR guidelines in all 50 states. Pella Reserve products with triple-pane glass have been awarded the ENERGY STAR Most Efficient Mark in 2020.¹
- Testing beyond requirements**
 At Pella, our products are tested beyond requirements to help ensure they have long-lasting performance and reduce call-backs for you.
- Best limited lifetime warranty²**
 Pella Reserve products are covered by the best limited lifetime warranty in the business for wood windows and patio doors.²

Available in these window and patio door styles:



Special shape windows also available.

¹² See back cover for disclosures.

Product Specifications

Window & Patio Door Styles	Min. Width	Min. Height	Max. Width	Max. Height	Performance Class & Grade	Performance Values			Frame / Install
						U-Factor	SHGC	STC	
Awning	13-3/4"	13-3/4"	53"	29"	LC40-CW50	0.25-0.29	0.18-0.47	27-33	Fold-out Fin, Block Frame, EnduraClad Exterior Trim / Brickmould
Precision Fit Awning	17"	17"	53"	29"	R50-CW50	0.28-0.32	0.18-0.47	27-33	Pocket Replacement
Casement	13-3/4"	13-3/4"	41"	96"	R35-CW50	0.25-0.29	0.18-0.47	27-35	Fold-out Fin, Block Frame, EnduraClad Exterior Trim / Brickmould
Precision Fit Casement	17"	17"	35"	73"	R45-CW50	0.28-0.33	0.18-0.47	27-30	Pocket Replacement
Fixed Casement	10"	10"	144"	144"	R35-CW50	0.25-0.29	0.18-0.47	27-35	Fold-out Fin, Block Frame, EnduraClad Exterior Trim / Brickmould
Precision Fit Fixed Casement	17"	17"	59"	73"	R45-CW50	0.28-0.33	0.18-0.47	27-30	Pocket Replacement
Double-Hung	14"	24-3/8"	48"	96"	CW40-CW50	0.25-0.30	0.19-0.53	26-34	Fold-out Fin, Block Frame, EnduraClad Exterior Trim / Brickmould
Precision Fit Double-Hung	13-1/2"	23-3/4"	48"	84"	CW40-CW50	0.25-0.31	0.19-0.53	26-30	Pocket Replacement
Monumental Hung	13-3/4"	24"	72"	144"	LC25-CW50	0.25-0.30	0.17-0.47	29-34	Fold-out Fin, Block Frame, EnduraClad Exterior Trim / Brickmould
In-Swing Hinged Patio Door (Single)	18"	36"	48"	199-1/2"	LC40-LC55	0.25-0.29	0.14-0.40	31-32	
In-Swing Hinged Patio Door (Double)	36"	36"	96"	119-1/2"	LC40-LC55	0.25-0.29	0.14-0.40	31-32	
Out-Swing Hinged Patio Door (Single)	18"	36"	48"	119-1/2"	R50-LC70	0.25-0.30	0.14-0.39	30-32	
Out-Swing Hinged Patio Door (Double)	36"	36"	96"	119-1/2"	R50-LC70	0.25-0.30	0.14-0.39	30-32	
Sliding Patio Door (O)	30-3/4"	74"	60-3/4"	119-1/2"	LC25-LC70	0.29-0.32	0.15-0.42	-	
Sliding Patio Door (OX, XO)	59-1/4"	74"	119-1/2"	119-1/2"	LC25-LC70	0.29-0.32	0.15-0.42	29-35	
Sliding Patio Door (OXO)	90"	74"	180"	119-1/2"	LC25-LC70	0.29-0.32	0.15-0.42	-	
Sliding Patio Door (OXXO)	116-1/8"	74"	236-1/8"	119-1/2"	LC25-LC70	0.29-0.32	0.15-0.42	-	
Multi-Slide Patio Door	40-1/4"	50-1/2"	701-5/8"	119-1/2"	R15-LC25 ¹	0.30 - 0.36	0.15 - 0.46	-	
Bifold Patio Door	31-3/4"	55-1/2"	312"	119-1/2"	R15-R25 ³	0.26-0.44	0.13-0.45	-	For more info visit PellaADM.com

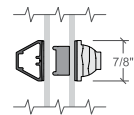
Window sizes available in 1/8" increments

Special sizes available. For more information regarding performance, visit installpella.com/performance. For more information regarding frame and installation types, visit PellaADM.com.

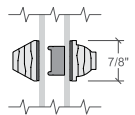
Grilles

Integral Light Technology*

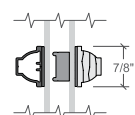
Choose the look of true divided light featuring the industry's only foam spacer.



Putty Glaze Exterior with Ogee Interior⁴
5/8", 7/8", 1-1/4" or 2"



Putty Glaze Exterior with Ogee Interior⁴
5/8", 7/8", 1-1/4" or 2"

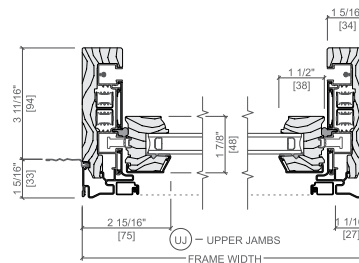


Ogee Exterior with Ogee Interior⁴
5/8", 7/8", 1-1/4" or 2"

Cross Sections

Cross Sections

The double-hung cross sections provide visual reference to the historic putty exterior profile and traditional, beveled Ogee interior that add architectural interest to your project.



Optional Fold-out Installation Fin

^{1,4} See back cover for disclosures.

Window Hardware

Classic Collection

Get a timeless look with authentic styles in classic finishes.



Fold-away Crank
Antiek



Spoon-Style Lock

Finishes:



Champagne White Brown Matte Black



Oil-Rubbed Bronze Satin Nickel Bright Brass Antique Brass

Rustic Collection

Create a distinct and charming look with distressed finishes.

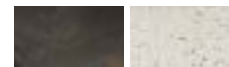


Fold-away Crank
Antiek



Spoon-Style Lock

Finishes:



Distressed Bronze Distressed Nickel

Essential Collection

Select from popular designs and finishes to suit every style.



Fold-away Crank



Cam-Action Crank

Finishes:



Champagne White Brown Matte Black



Oil-Rubbed Bronze Satin Nickel Bright Brass

Patio Door Hardware

Classic Collection

Choose timeless pieces, created in collaboration with Baldwin® Hardware, for a look that will never go out of style.

BALDWIN



Hinged & Bifold Patio Door Handle
Locus | Virago



Sliding & Multi-Slide Patio Door Handle
Ambrose



Multi-Slide Patio Door Handle^{5,6}

Finishes:



Matte Black Oil-Rubbed Bronze Satin Nickel Bright Brass



Antique Brass

Essential Collection

Elevate your style and transform a home with elegant selections.



Hinged & Bifold Patio Door Handle



Sliding Patio Door Handle

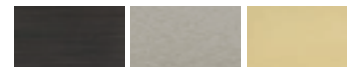


Multi-Slide Patio Door Handle^{5,6}

Finishes:



Champagne White Brown Matte Black



Oil-Rubbed Bronze Satin Nickel Bright Brass

^{5,6} See back cover for disclosures.

Colors

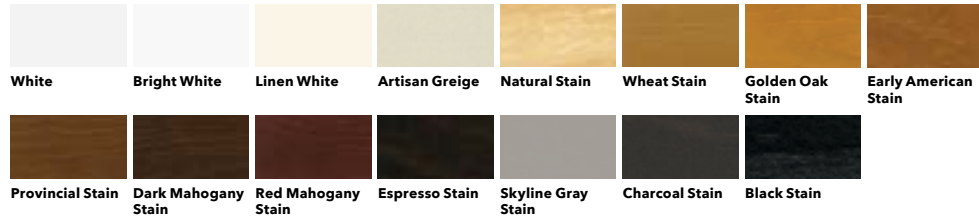
Wood Types

Choose the wood species that best complements your project's interior.



Prefinished Pine Interior Colors

Custom interior finishes, unfinished or primed and ready-to-paint are also available.



Extruded Aluminum-Clad Exterior Colors

Our low-maintenance EnduraClad® exterior finish resists fading. Take durability one step further with EnduraClad Plus which also resists chalking and corrosion.⁷




CUSTOM TO MATCH SW7045

Custom colors are also available.

Added Peace of Mind

Integrated Security Sensors

Integrated wireless security sensors maintain aesthetics, streamline security installation and ensure no warranty loss is caused by post-installation drilling. Sensors can be monitored via the free Pella® Insynctive® App and are compatible with major security panel systems.⁸ For more information, go to connectpella.com.



The confidence of Pella's warranty.
Pella® Reserve™ products are covered by the best limited lifetime warranty for wood windows and patio doors.²

¹ Some Pella products may not meet ENERGY STAR® guidelines in Canada. For more information, contact your local Pella sales representative or go to energystar.gc.ca.
² Based on comparing written limited warranties of leading national wood window and wood patio door brands. See written limited warranty for details, including exceptions and limitations, at installpella.com/warranties or contact Pella Customer Service.
³ Ratings are contingent on product configurations.
⁴ Color-matched to your product's interior and exterior color.
⁵ Flush multi-slide handle is a Pella exclusive design.
⁶ Flush multi-slide handle is not available in Antique Brass, Champagne or Polished Nickel.
⁷ EnduraClad Plus protective finish is not available with all colors. See your local Pella sales representative for availability.
⁸ Requires the Insynctive App on a smart device, an Insynctive Bridge and a wireless home router with internet connection.



America's #1-selling shingle just got better — again

Now with GAF Time-Release Algae-Fighting Technology and LayerLock™ Technology, Timberline HDZ® offers everything you can expect from an architectural shingle roof, and more.

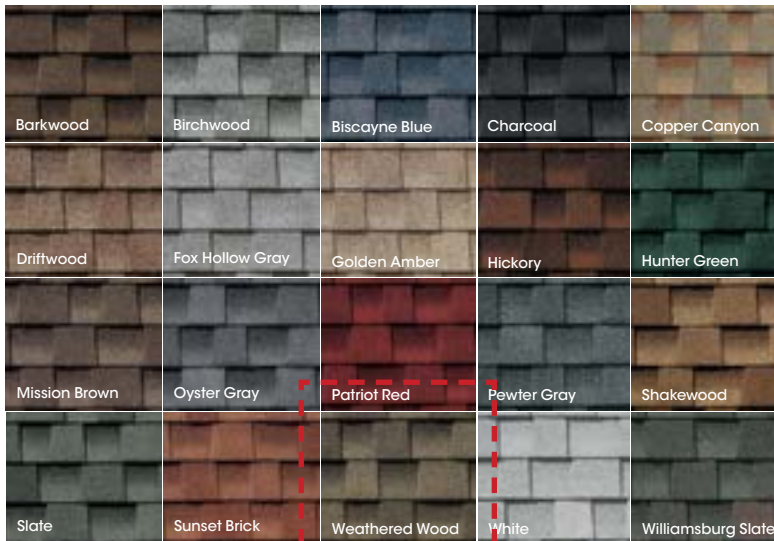


Timberline HDZ® Shingles

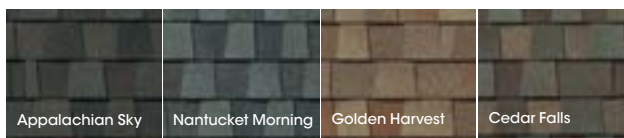
Benefits:

- **LayerLock™ Technology** — mechanically fuses the common bond between overlapping shingle layers
- **Up to 99.9% nailing accuracy** — the StrikeZone™ nailing area is so easy to hit that a roofer placed 999 out of 1,000 nails correctly in our test¹
- **WindProven™ Limited Wind Warranty** — when installed with the required combination of GAF Accessories, Timberline HDZ® Shingles are eligible for a wind warranty with no maximum wind speed limitation³
- **Dura Grip™** sealant pairs with the microgranule surface of the StrikeZone™ nailing area. Then, an asphalt to-asphalt monolithic bond cures for durability, strength, and exceptional wind uplift performance.
- **25-year StainGuard Plus™ Algae Protection Limited Warranty** against blue-green algae discoloration.² Proprietary GAF Time-Release Algae-Fighting Technology helps protect your shingles from unsightly stains.
- **For the best look** — use TimberTex® Premium Ridge Cap Shingles or TimberCrest® Premium SBS-Modified Ridge Cap Shingles

Colors:



Harvest Blend Colors⁵



Product details:

- Product/System Specifics**
- Fiberglass asphalt construction
 - **Dimensions (approx.):** 13 1/4" x 39 3/8" (337 x 1,000 mm)
 - **Exposure:** 5 5/8" (143 mm)
 - **Bundles/Square:** 3
 - **Pieces/Square:** 64
 - **StainGuard Plus™ Algae Protection² Limited Warranty**
 - **Hip/Ridge:** TimberTex®; TimberCrest®; Seal-A-Ridge®; Z®Ridge; Ridglass®⁵
 - **Starter:** Pro-Start®; QuickStart®; WeatherBlocker™
- Applicable Standards & Protocols:**
- UL Listed to ANSI/UL 790 Class A
 - State of Florida approved
 - Classified by UL in accordance with ICC-ES AC438
 - Meets ASTM D7158, Class H
 - Meets ASTM D3161, Class F
 - Meets ASTM D3018, Type 1
 - Meets ASTM D3462⁴
 - Miami-Dade County Product Control approved
 - ICC-ES Evaluation Reports ESR-1475 and ESR-3267
 - Meets Texas Department of Insurance Requirements
 - Rated by the CRRC; Can be used to comply with Title 24 Cool Roof requirements (some colors)

¹ Lifetime refers to the length of warranty coverage provided and means as long as the original individual owner(s) of a single-family detached residence [or eligible second owner(s)] owns the property where the qualifying GAF products are installed. For other owners/structures, Lifetime coverage is not applicable. Lifetime coverage on shingles requires the use of GAF Lifetime Shingles only. See the *GAF Shingle & Accessory Limited Warranty* for complete coverage and restrictions. Visit gaf.com/LRS for qualifying GAF products. Lifetime coverage on shingles and accessories requires the use of any GAF Lifetime Shingle and at least 3 qualifying GAF Accessories. See the *GAF Roofing System Limited Warranty* for complete coverage and restrictions. For installations not eligible for the *GAF Roofing System Limited Warranty*, see the *GAF Shingle & Accessory Limited Warranty*. Visit gaf.com/LRS for qualifying GAF products.

² Results based on study conducted by Home Innovation Research Labs, an independent research lab, comparing installation of Timberline HDZ® Shingles to Timberline HDZ™ Shingles on a 16-square roof deck using standard 4-nail nailing pattern under controlled laboratory conditions. Actual results may vary.

³ 25-year StainGuard Plus™ Algae Protection Limited Warranty against blue-green algae discoloration is available only on products sold in packages bearing the StainGuard Plus™ logo. See *GAF Shingle & Accessory Limited Warranty* for complete coverage and restrictions and qualifying products.

⁴ 15-year WindProven™ limited wind warranty on GAF Shingles with LayerLock™ Technology requires the use of GAF Starter Strips, Roof Deck Protection, Ridge Cap Shingles, and Leak Barrier or Attic Ventilation. See *GAF Roofing System Limited Warranty* for complete coverage and restrictions. Visit gaf.com/LRS for qualifying GAF products. For installations not eligible for the *GAF Roofing System Limited Warranty*, see the *GAF Shingle & Accessory Limited Warranty*.

⁵ Periodically tested by independent and internal labs to ensure compliance with ASTM D3462 at time of manufacture.

⁶ Harvest Blend colors are only available on TimberTex® Ridge Cap Shingles, Seal-A-Ridge® Ridge Cap Shingles, and TimberCrest® Premium SBS-Modified Ridge Cap Shingles.

Note: It is difficult to reproduce the color clarity and actual color blends of these products. Before selecting your color, please ask to see several full-size shingles.



We protect what matters most™



ROYCROFT BRONZE GREEN - SW2846

