

Burlington Design Advisory Board
645 Pine Street
Burlington, VT 05401
www.burlingtonvt.gov/DPI/DAB
Phone: (802) 865-7188

Ron Wanamaker
Emily Morse
Richard Martin
Gabriel Stadecker
Jay White
Joel Baird, Alt
Kathleen Ryan, Alt



Design Advisory Board

Tuesday, August 26, 2025, 3:00 PM

Remote and In Person (at 645 Pine Street) Meeting

Please click the link below to join the webinar:

Zoom: <https://us02web.zoom.us/j/87155655137?pwd=ZEdGaGhxeFpRNDJQcFJrNWkvb1Vudz09>

Webinar ID: 871 5565 5137
Passcode: 796731

Telephone: US: +1 312 626 6799 or +1 929 205 6099 or +1 301 715 8592 or +1 346 248 7799 or +1 669 900 6833 or +1 253 215 8782

1. Agenda

1.1.

Session I – 3:00 PM – 3:30 PM

ZP-25-313; 147 South Cove Road (RL, Ward 5) Katrina Thornburgh / Paul Rosenfeld
Proposed construction of a new home on existing vacant lot. (Project Manager, Scott Gustin)

1.2.

Session II – 3:30 PM – 4:00 PM

ZP-25-370; 23 Isham Street (RM, Ward 3) Isham Street 23, LLC / Brett Brosseau
Proposed construction of a secondary building with three residential dwelling units to accompany existing duplex. (Project Manager, Mary O'Neil)

2. Adjournment

3. Informational and Non-Discrimination Statements

3.1.

The programs and services of the City of Burlington are accessible to people with disabilities. Individuals who require special arrangements to participate are encouraged to contact the Department of Permitting & Inspections at least 72 hours in advance so that proper accommodations can be arranged. For information call 865-7188.

Non-Discrimination

The City of Burlington will not tolerate unlawful harassment or discrimination on the basis of political or religious affiliation, race, color, national origin, place of birth, ancestry, age, sex, sexual orientation, gender identity, marital status, veteran status, disability, HIV positive status, crime victim status or genetic information. The City is also committed to providing

proper access to services, facilities, and employment opportunities. For accessibility information or alternative formats, please contact Human Resources Department at (802) 540-2505.

Department of Permitting and Inspections

Zoning Division
645 Pine Street
Burlington, VT 05401
www.burlingtonvt.gov/pz
Phone: (802) 865-7188
Fax: (802) 865-7195

William Ward, Director
Scott Gustin, AICP, CFM, Principal Planner
Mary O'Neil, AICP, Principal Planner
Garret King, Associate Planner
Joseph Cava, Permitting Technician
Collin Miller, Code Compliance Officer
vacant, DPI Administrator



MEMORANDUM

To: Design Advisory Board
From: Scott Gustin
Re: 147 South Cove Road
Date: August 26, 2025

File: ZP-25-313
Location: 147 South Cove Road
Zone: RL **Ward:** 5S
Parking District: Neighborhood
Date application accepted: June 27, 2025, Complete July 21, 2025
Applicant/ Owner: Paul Rosenfeld
Request: Construct new single family home on existing vacant lot.

Overview:

The applicant is seeking approval to construct a new single family home, garage, and related site improvements on a vacant lakeshore parcel. The lot previously contained a single family home that was demolished in 2018 and more recently contained a temporary modular home that was removed about a year ago. Due to prior construction on the lot, relatively little site disturbance is entailed in this application for a new home.

The Conservation Board reviewed this application August 4, 2025. The Board recommended approval of the project with the recommendation that tree retention be clarified on the site plans. Only native plantings in the low mow zone, and no invasive plants installed onsite. Remove buckthorn and replace with native trees or shrubs.

Article 6: Development Review Standards

Part 1, Land Division Design Standards

Not applicable.

Part 2, Site Plan Design Standards

Sec. 6.2.2, Review Standards

(a) Protection of important natural features

The subject property is located along the Lake Champlain shoreline south of Oakledge Park. The shoreline is an identified significant natural area. Much of the property is affected by the Natural Resource Protection Overlay District, specifically the riparian and littoral conservation zone, which stretches inland 250' from the 95.5' lakeshore elevation. A new low-mow area will be established along the property's lakefront as required. No work will take place within the

flood zone. Given the existing graveled area where the prior home was located and new home will be placed, little vegetation will be cleared.

(b) Topographical alterations

Much of the lot slopes gently towards the lake. Some grading of the home site will be necessary; however, overall topographic alterations are minimal. No blasting is proposed.

(c) Protection of important public views

Distant terminal views of Lake Champlain and the Adirondack mountains will remain essentially unchanged. There are no public views associated with this property. The proposed home is modest in scale, and most mature vegetation will be retained. Its construction will not adversely affect public views from the lake towards shore.

(d) Protection of important cultural resources

The property contains no known archaeological resources. Much of the lakeshore is archaeologically sensitive. If, during construction, artifacts are unearthed, it is the applicant's responsibility to stop earthwork and to contact the Vermont Division for Historic Preservation for further guidance. Such discovery seems unlikely, given prior earthwork and construction on the property.

(e) Supporting the use of alternative energy

Project plans do not depict alternative energy devices; however, they do note conduit for PV. Solar energy utilization is encouraged and seemingly may be installed in the future.

(f) Brownfield sites

The subject property is not an identified brownfield.

(g) Provide for nature's events

An erosion prevention and sediment control plan has been provided and is subject to review and approval by the city's Water Resources Division. Post construction stormwater management plans will need to be addressed via the standards for duplex and single family properties totaling 2,500 sf or more impervious surface. Such plans will be subject to review and approval by the city's Water Resources Division.

The project plans depict a sheltered entry for the front entryway.

(h) Building location and orientation

The location of the proposed home will be essentially the same as the prior homes on the property and similar to neighboring homes along the street. It will be set in the front half of the lot. The new home will have an open front entryway facing inland towards the front yard and public street.

As required, the garage is set slightly behind the front of the residence.

(i) Vehicular access

The existing driveway will be reconstructed and reconfigured to serve the proposed home. Sight lines at the driveway's intersection with the road remain essentially unchanged.

(j) Pedestrian access

This criterion requires that a pedestrian walkway be provided from the front door to the public sidewalk or street. There is no sidewalk on this side of South Cove Road; however, the road is public. A front walkway is not present in the site plans and must be included. Convenient access between the driveway and front entry is proposed.

(k) Accessibility for the handicapped

No handicap accessibility is evident or required with this proposal.

(l) Parking and circulation

Parking will be provided within the garage and the driveway. Parking spaces appear to be dimensionally compliant. Circulation and access is provided via the private driveway.

Residential driveways are limited to 18' in width. As proposed, the driveway generally complies with this limitation; however, a turn-around in front of the breezeway connecting the house to the garage results in a driveway width exceeding 18.' In several similar previous cases, the turn-around has been constructed of a different material than the driveway and has served a dual use such as part of the entry into the home or a basketball half court. Alternatively, the turn-around could be deleted. In either case, site plan revision is needed.

(m) Landscaping, fences, and retaining walls

The site plans depict existing vegetation to be retained and the required low-mow zone along the waterfront. No landscaping plan is evident and is required. At least species, placement, and size at the time of planting should be included. No fencing or retaining walls are proposed.

(n) Public plazas and open space

No public plaza or open space is included or required in this proposal.

(o) Outdoor lighting

Outdoor lighting fixture specifications have been provided, and locations are depicted on the project plans. Sconce fixtures will be located by exterior entries, and recessed canister fixtures will be installed within the breezeway. Lumen information is acceptable for the canister fixtures; however, it is lacking for the sconces. Lumen information for the sconce fixtures is needed in order to determine compliance.

(p) Integrate infrastructure into the design

A bank of heat pumps will be located along the south side of the new home. While acceptably located on the side, screening is needed and can be accomplished with landscaping and/or a section of fencing. Utility lines will be buried.

Part 3, Architectural Design Standards

Sec. 6.3.2, Review Standards

(a) Relate development to its environment

1. Massing, Height, and Scale

The proposed construction consists of the residence and garage with a center breezeway connecting the two. Massing is broken into several distinct components tied together with various architectural features. The scale of the home is similar to nearby properties on the street, and the height is modest at ~ 25' to the midpoint of the roof rise.

2. Roofs and Rooflines

The residence will have a gable roof with eave end facing the street. The garage will have a simpler shed roof sloping up away from the street. This same roof line from the garage will extend across the breezeway and ground level of the residence, linking them all together.

3. Building Openings

Fenestration is basic and contributes to the clean and simple lines of the proposed residence. There are no blank walls, and ample natural light will penetrate the structure. Unsurprisingly, additional glazing on the west elevation will afford views across the lake.

(b) Protection of important architectural resources

There are no historic structures on the vacant property.

(c) Protection of important public views

See 6.2.2 (c) above.

(d) Provide an active and inviting street edge

The proposed home will be oriented towards South Cove Road, and its front entry is easily apparent from the street. The entry is under a breezeway between the home and the garage and provides an illuminated, sheltered entrance for residents and guests. As noted above, a front walkway connecting to the public street is needed.

(e) Quality of materials

The new building will be clad in wooden shingles with treated wooden trim and accent elements. Standing seam roofing is proposed, and triple pane wood clad windows will be installed throughout. Wooden decking is proposed within the breezeway, deck, and porch areas. An outdoor shower will set atop a small stone patio area in back. The materials proposed are of acceptable quality and durability for this new construction.

(f) Reduce energy utilization

The proposed building must comply with the current energy efficiency standards of Burlington and the State of Vermont.

(g) Make advertising features complimentary to the site

No advertising is included in this proposal.

(h) Integrate infrastructure into the building design

Mechanical units are limited to the heat pumps noted above.

(i) Make spaces safe and secure

The proposed building must comply with the city's current egress requirements. Building entries will be illuminated.

RECOMMENDED MOTION:

Approve the project as conditioned and forward to the Development Review Board.

1. Stormwater management plans are needed, subject to Water Resources review and approval.
2. Revised project plans addressing the following are needed:
 - a. A front walkway connecting to the public street;
 - b. Adjustment of the driveway and turn-around that differentiates the turn-around with a material different than that of the driveway;
 - c. A landscaping plan is needed and must include species, locations, and size at the time of planting;
 - d. Lumen information for the exterior sconce fixtures; and,
 - e. Street-side screening of the heat pumps.

GRIDLINES	A PRIMARY GRIDLINE		
	A.1 SECONDARY GRIDLINE		8'-0" AFF
LEVEL LINES	Name Elevation		MECHANICAL ROOM 1.1
EXTERIOR ELEVATION	1 DETAIL NUMBER A101 SHEET NUMBER		1.1.1
INTERIOR ELEVATION	1 DETAIL NUMBER A2.1 SHEET NUMBER		01
BUILDING SECTION	1 DETAIL NUMBER A3.1 SHEET NUMBER		W1
WALL SECTION	1 DETAIL NUMBER A5.1 SHEET NUMBER		MT.01
DETAIL SECTION	1 DETAIL NUMBER A5.1 SHEET NUMBER		
CALLOUT PLAN/SECTION	1 DETAIL NUMBER A4.1 SHEET NUMBER		
REVISION	REVISION CLOUD REVISION NUMBER		
WORK POINT / ELEVATION TARGET	1 DETAIL NUMBER A4.1 SHEET NUMBER		
CENTER LINE	1 DETAIL NUMBER A4.1 SHEET NUMBER		
10 SYMBOLS			MAGNETIC DECLINATION FOR BURLINGTON, VT = +15.24 DEGREES PROJECT NORTH / TRUE NORTH

& < @ ¢ ⌀ # (E) AB A/C A.C. ACT ACOUS ADJ A.F.F. ALT ALUM ANOD A.P. APPROX ARCH ASPH BD BITUM BLDG BLK BLKG BM BOT BR BSMT B.U.R. CAB CARP C.B. CEM CER C.I.R CLG	And Angle At Centerline Diameter or Round Perpendicular Number Existing Anchor Bolt Air Conditioning Asphaltic Concrete Acoustical Tile Acoustical Adjustable Above Finish Floor Alter or Alternate Aluminum Anodized Access Panel Approximate Architectural Asphalt Board Bituminous Building Block Blocking Beam Bottom Bedroom Basement Built Up Roofing Cabinet Carpet Catch Basin Cement Ceramic Center In Room Ceiling	CLO CLR CMU CNTR COL CONC CONN CONST CONT CONTR CORR C.T. CTR CTSK C.W. D DBL DET D.F. DIA DIM DISP DN D.O. DR DS D.S.P. DWG DWR E EA EJ EL ELEC ELEV EMER ENCL E.O.S. EQ EQUIP E.W.	Closet Clear Concrete Masonry Unit Counter Column Concrete Connection Construction Continuous Contractor Corridor Ceramic Tile Center Countersunk Cold Water Deep, Depth Double Detail Drinking Fountain Diameter Dimension Dispenser Down Door Opening Door Downspout Dry Standpipe Drawing Drawer East Each Expansion Joint Elevation Electrical Elevation Emergency Enclosure Edge of Slab Equal Equipment Each Way	E.W.C. EXIST EXP EXPO EXT F.A. F.B.O. F.D. FDN F.E. F.E.C. F.G. F.H.C. FIN FLASH FLR FLUOR F.O.C. F.O.F. F.O.M. F.O.S. FPF FR FS FT FURR FUT GA GALV G.B. G.I. GL GND GR GYP H H.B. H.C. HCP HDWR HDWD H.M.	Electric Water Cooler Existing Expansion Exposed Exterior Fire Alarm Furnished By Owner Floor Drain Foundation Fire Extinguisher Fire Extinguisher Cab Finish Grade Fire Hose Cabinet Finish Flashing Floor Fluorescent Face of Concrete Face of Finish Face of Masonry Face of Stud Fireproof Frame Full Size Foot, Feet Footing Furring, Furred Future Gauge Galvanized Grab Bar Galvanized Iron Glass, Glazing Ground Grade Gypsum High Hose Bib Hollow Core Handicapped Hardware Hardwood Hollow Metal	HORIZ HR HT HVAC H.W. I.D. INCL INSUL INT JAN JST JT KIT LAM LAV L.F. L.H. LKR L.R. LT LVR MATL MAX M.B. MECH MEMB MET MFR MH MIN MIR MISC M.O. M.R. MTD MUL N N.I.C.
9	ABBREVIATIONS					

NEW SINGLE FAMILY RESIDENCE ON OWNER PROPERTY	
SITE INFO	
ADDRESS	147 S. Cove Rd. Burlington, VT 05401
COUNTY	Chittenden
TAX MAP	Chittenden
LOT SIZE	0.58 AC = 25,264.8 SF
BLDG LOT COVERAGE	PROPOSED 12.34%, MAX 45%
UTILITIES	
ELECTRIC	Tie to Town's Elec.
SEWER/SEPTIC	Tie to Town's Sewer
WATER	Tie to Town's Water
BUILDING INFO	
BUILDING HEIGHT	30' - 3.38"
STORIES	2 + Mechanical Attic
BEDROOMS	4
BATHROOMS	3 1/2
AREA CALCULATIONS:	GROSS SF(Outside of Siding)
FIRST FLOOR	1501.42 SF
SECOND FLOOR	947.32 SF
TOTAL GROSS SF	
GARAGE	578 SF
BREEZEWAY	214.08 SF
SCREENED PORCH	348.27 SF
OUTDOOR DECK	353.01 SF

8 PROJECT INFORMATION

BUILDING AUTHORITY	CITY OF BURLINGTON, VT - Phone: 802-863-0442
BUILDING CODE	IBC/IRC 2015
ZONING	RESIDENTIAL LOW DENSITY (RL)
HEIGHT LIMIT	35'
SETBACKS	
FRONT	25' MAX
REAR	60' FROM 100' ELEVATION CONTOUR
SIDE	10.8' - 10% LOT WIDTH
OVERLAY DISTRICTS	• RIPARIAN AND LITTORAL CONSERVATION ZONE • STEEP SLOPE • DESIGN REVIEW

7 COMPLIANCE

STRUCTURAL ENGINEER:	GENERAL CONTRACTOR:
ALBERT PUTNAM ASSOCIATES, LLC STRUCTURAL ENGINEERS 183 PARK ROW BRUNSWICK, ME 04011 (207) 729-6230	

6 CONSULTANTS

CONSTRUCTION	TYPICAL PASSIVE HOUSE ASSEMBLY	R-VALUE
FOUNDATION & SLAB	◦ 4" POURED CONCRETE SLAB ◦ 8" CRUSHED STONE ◦ 6" EPS SUB-SLAB INSULATION (R-4.1/in) ◦ 8" POURED CONCRETE STEM WALLS ◦ 6" VERTICAL INSULATION (R-4.1/in)	R-24.5
WALLS	◦ 5/8" GYPSUM WALL BOARD ◦ 2X8 LOAD BEARING WALL @ 24 O.C. w/ 5-1/2" DENSEPACK INSULATION (R-3.6/in) ◦ 1/2" CDX OR ZIP SHEATHING (Air Barrier) ◦ 2X8 NON-LOAD BEARING WALL @ 16 O.C. w/ 7-1/4" HEMP BATT INSULATION (R-3.6/in) ◦ WATER RESISTIVE BARRIER ◦ 1X3 STRAPPING/RAINSCREEN PER SIDING ◦ SIDING AS SCHEDULED	R-48
2ND FLOOR (If Applicable)	◦ FINISHED FLOOR AS SCHEDULED ◦ 3/4" ADVANTECH SUB-FLOOR ◦ STRUCTURAL JOISTS PER ENGINEER w/ SOUND INSULATION ◦ 5/8" GYPSUM WALL BOARD	
ROOF	◦ METAL ROOF AS SPECIFIED ◦ 5/8" ROOF SHEATHING + UNDERLAYMENT ◦ 2X3 STRAPPING ◦ VAPOR PERMEABLE WRB ◦ 16" ROOF PANEL w/ 16" BLOWN-IN CELLULOSE INSULATION (R-3.6/in) ◦ CLASS 1 VAPOR RETARDER/AIR BARRIER ◦ STRAPPING AS SPECIFIED	R-61
WINDOWS	UNILUX II MODERLINE SERIES ALUMINUM CLAD WOOD TRIPLE GLAZED WINDOWS/DOORS	U-VALUE: 0.176 SHGC: .52
ENERGY PERFORMANCE TARGET		
PASSIVE HOUSE CERTIFIED MINIMUM AIR TIGHTNESS OF 0.06 ACH@50pa		
iCFA (I.F. of GWB)	L1: 1.278 SF	L2: 774 SF
TOTAL ENVELOPE SURF: AREA TO O.F. of THERMAL BOUNDARY	6.532 SF	
GROSS VOLUME TO OUTSIDE FACE OF THERMAL BOUNDARY	31,808 SF	

5 ASSEMBLIES / PERFORMANCE

ALL CONSTRUCTION TO ADHERE TO APPLICABLE LOCAL BUILDING CODE OR INTERNATIONAL BUILDING CODE 2021

ALL PLUMBING TO ADHERE TO INTERNATIONAL BUILDING CODE 2021 AND/OR EQUIVALENT JURISDICTIONAL GOVERNING CODE

ALL ELECTRICAL WORK TO ADHERE TO LOCAL JURISDICTIONAL GOVERNING CODE

ALL MECHANICAL WORK TO ADHERE TO LOCAL JURISDICTIONAL GOVERNING CODE

UPON NOTIFICATION FROM THE ARCHITECT OF LOCAL BUILDING DEPARTMENT APPROVAL, UNLESS OTHERWISE AGREED UPON, IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE AND MAINTAIN ALL BUILDING, PLUMBING, AND ELECTRICAL PERMITS

THE CONTRACTOR SHALL MAINTAIN ACCESSIBILITY FOR INSPECTION BY THE LOCAL BUILDING OFFICIALS AS REQUIRED AT ALL TIMES; THE CONTRACTOR SHALL COORDINATE ROUTINE SITE INSPECTIONS AS PER THE GOVERNING BUILDING CODE WITH THE LOCAL MUNICIPALITY

THE CONTRACTOR SHALL NOTIFY, IN WRITING, THE OWNER OF INSPECTIONS, SCHEDULED OR UNSCHEDULED

CONTRACTOR TO THOROUGHLY REVIEW THE CONTRACT DOCUMENTS AND SPECIFICATIONS FOR INCONSISTENCIES WITH SITE CONDITIONS. CONTRACTOR TO NOTIFY ARCHITECT IN WRITING AND REVIEW ANY INCONSISTENCIES WITH ARCHITECT PRIOR TO PROCEEDING WITH THE WORK

INCONSISTENCIES WITH SITE CONDITIONS DO NOT ABSOLVE THE CONTRACTOR OF THE OBLIGATION TO ADHERE TO THE CONTRACT DOCUMENTS, BOTH DRAWINGS AND SPECIFICATIONS

INCONSISTENCIES BETWEEN THE DRAWINGS AND SPECIFICATIONS DO NOT ABSOLVE THE CONTRACTOR OF THE OBLIGATION TO ADHERE TO THE STANDARDS OUTLINED; ALL INCONSISTENCIES SHALL BE PRESENTED TO THE ARCHITECT IN WRITING PRIOR TO PROCEEDING WITH THE WORK

MEANS AND METHODS SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR UNLESS OTHERWISE AGREED UPON WITH THE OWNER AND ARCHITECT

THE CONTRACTOR SHALL MAINTAIN ADEQUATE SITE SUPERVISION AND OVERSIGHT OF SITE OPERATION

CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN ALL TEMPORARY BARRIERS AND GUARDS, AND ALL TEMPORARY SHORING AND BRACING AS REQUIRED BY ALL CITY AND STATE REGULATIONS

CONTRACTOR SHALL PROVIDE ADEQUATE WEATHER PROTECTION FOR THE BUILDING AND ITS CONTENTS DURING THE COURSE OF WORK

CONTRACTOR TO PROVIDE TEMPORARY POWER POLE AND METER FOR THE DURATION OF THE WORK; CONTRACTOR TO MAINTAIN TEMPORARY LIGHT AS REQUIRED FOR THE DURATION OF THE WORK

CONTRACTOR SHALL PROVIDE TEMPORARY SANITARY FACILITIES

WHEN REQUIRED, THE CONTRACTOR SHALL TAKE CARE TO MAINTAIN SAFE AND CODE COMPLIANT CONDITIONS FOR TENANTS OCCUPY THE SITE OR BUILDING DURING ANY PERIOD OF CONSTRUCTION; UNLESS AGREED UPON BY THE OWNER IN WRITING, CONSTRUCTION OF THE WORK SHALL NOT INHIBIT ACCESS TO OCCUPIED PORTIONS OF THE SITE OR BUILDING

THE OWNER SHALL MAINTAIN THE RIGHT TO ACCESS THE SITE AND BUILDING AS REQUIRED

CONTROLLED INSPECTIONS:

UNLESS AGREED UPON WITH THE CONTRACTOR THE OWNER SHALL HOLD THE CONTRACT WITH ALL TESTING AGENTS

IF AGREED UPON IN WRITING, THE CONTRACTOR SHOULD SCHEDULE ALL TESTING WITH THE TESTING AGENT DIRECTLY

FILL GRADATION
SOIL COMPACTION
CONCRETE (SLUMP/TRANSMITTANCE)
CONCRETE (COMPACTION)
STRUCTURAL STABILITY (STRUCTURAL ENGINEER)
VENTILATION COMMISSIONING
FINAL INSPECTION (ARCHITECT)

4 GENERAL NOTES

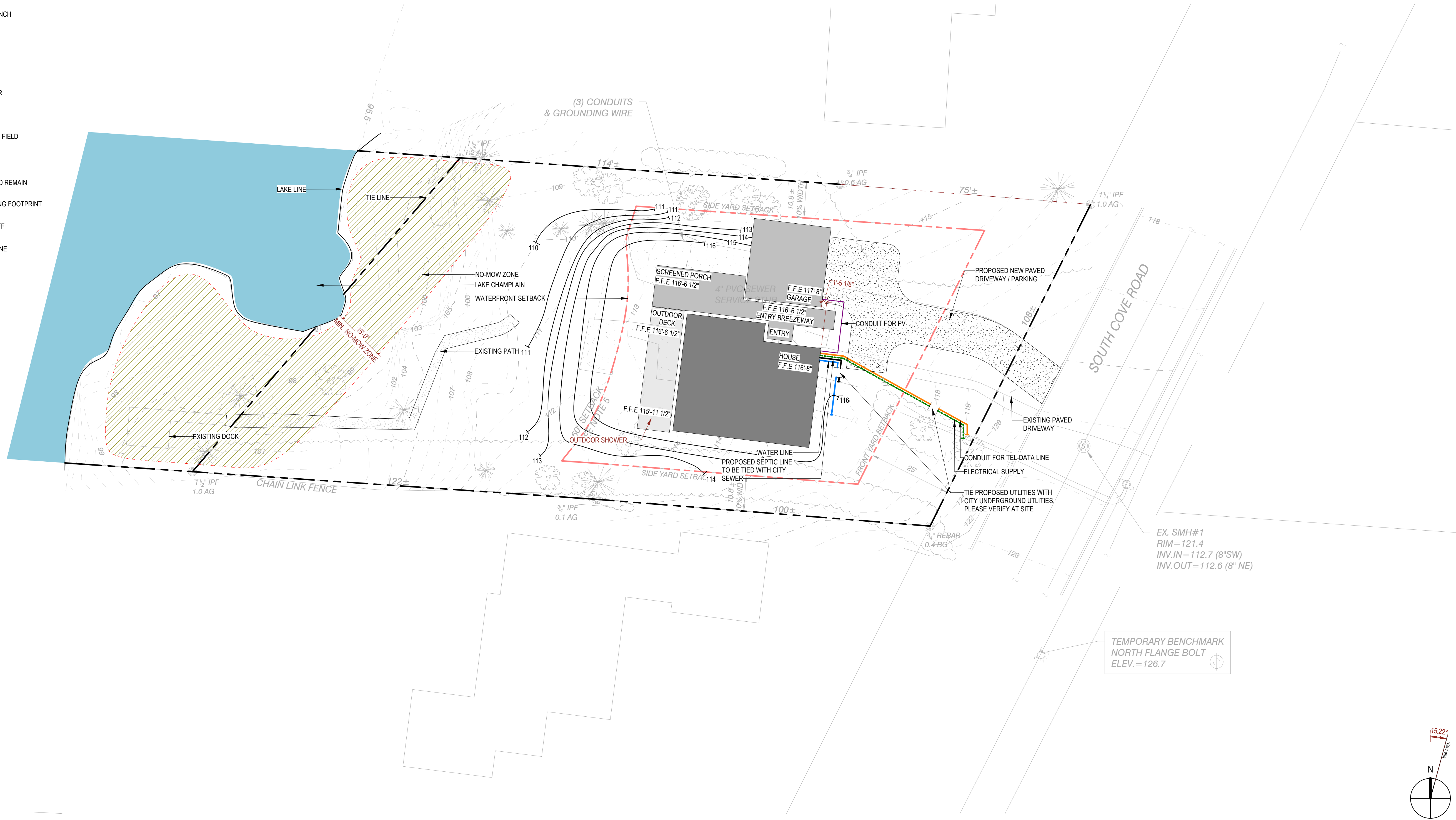


3 PERSPECTIVE VIEW

DRAWING LIST - PERMITTING SET	
NUMBER	NAME
Architectural	
A0.0	TITLE SHEET
A0.01	SITE PLAN - CONFORMING STRUCTURE OPTION 1
A0.001	SITE PLAN - CONFORMING STRUCTURE OPTION 2
A1.0	FOUNDATION PLAN
A1.1	FIRST FLOOR PLAN
A1.2	SECOND FLOOR PLAN
A1.3	REFLECTED CEILING PLAN - MAIN FLOOR
A1.4	REFLECTED CEILING PLAN - UPPER LEVELS
A1.5	ROOF PLAN
A2.1	ELEVATIONS
A2.2	ELEVATIONS
A3.1	SECTIONS
A3.2	SECTIONS
A4.1	ENLARGED PLANS AND INTERIOR ELEVATIONS
A4.2	ENLARGED PLANS AND INTERIOR ELEVATIONS
A4.3	ENLARGED PLANS AND INTERIOR ELEVATIONS
A5.1	INTERIOR DETAILS
A6.1	SCHEDULES
A6.2	OPENING SCHEDULES
A9.0	PERSPECTIVES
AE1.0	POWER AND COMMUNICATIONS PLANS
AE1.2	LIGHTING PLAN
AM1.0	MECHANICAL & VENTILATION PLAN

- SITE PLAN LEGEND:**
- CONCRETE WALL
 - PROPOSED NEW DRIVEWAY
 - EXISTING PATH
 - PROPOSED STONE PATH
 - PROPERTY LINE
 - SETBACK
 - EASEMENT
 - SUBSURFACE DRAINAGE
 - WATER SUPPLY
 - PHOTOVOLTAICS
 - ELECTRICAL SUPPLY - OVERHEAD
 - ELECTRICAL SUPPLY - UNDERGROUND
 - TEL-DATA
 - EXISTING UTILITIES TRENCH
 - SEPTIC WASTE LINE
 - FENCE
 - NEW SITE CONTOUR
 - EXISTING SITE CONTOUR
 - TREELINE
 - EXISTING SEPTIC LEECH FIELD
 - BOND OUT
 - EXISTING BUILDINGS - TO REMAIN
 - PROPOSED NEW BUILDING FOOTPRINT
 - PROPOSED FOREST DUFF
 - PROPOSED NO-MOW ZONE
 - WATER

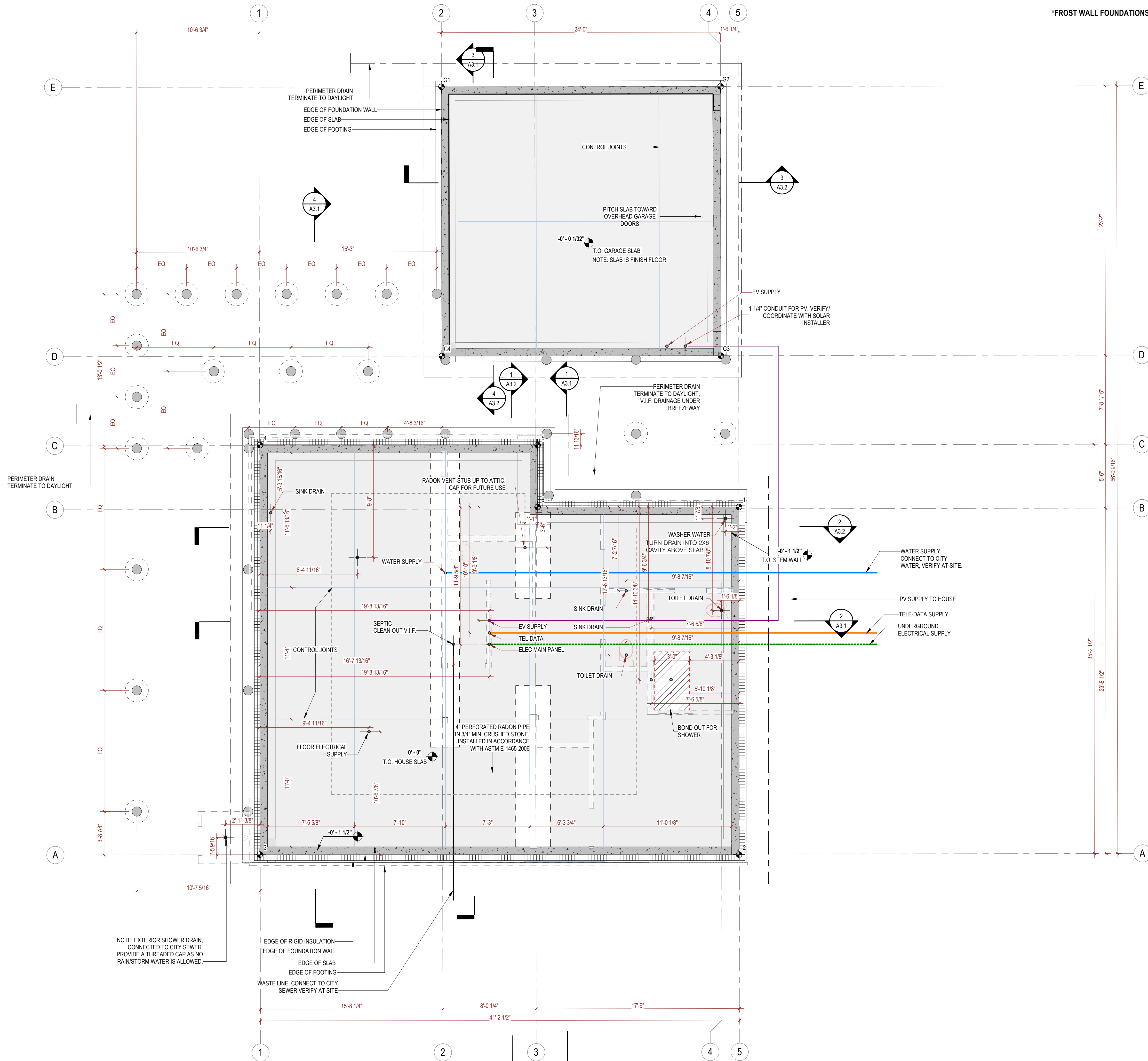
- SITE NOTES:**
- MAP: TAX PARCEL ID: 059-1-038-000
LOT: 038, 0.58 AC
SURVEYOR: CIVIL ENGINEERING ASSOCIATES, INC.
- ALL DIMENSIONS ARE TO FACE OF CONCRETE (F.O.C.), UNLESS OTHERWISE NOTED.
 - DO NOT SCALE FROM DRAWINGS.
 - ANY INCONSISTENCIES OR UNFORESEEN CONDITIONS TO BE REVIEWED BY THE ARCHITECT PRIOR TO PROCEEDING WITH CONSTRUCTION.
 - CONTRACTOR SHALL PROVIDE, ERECT, AND MAINTAIN ALL TEMPORARY BARRIERS AND GUARDS, AND ALL TEMPORARY SHORING AND BRACING IN COMPLIANCE WITH ALL STATE AND LOCAL REGULATIONS.
 - CONTRACTOR SHALL PROVIDE ADEQUATE WEATHER PROTECTION FOR THE BUILDING AND ITS CONTENTS DURING THE COURSE OF WORK.
 - CONTRACTOR TO PROVIDE TEMPORARY POWER POLE AND METER FOR THE DURATION OF THE WORK. CONTRACTOR SHALL PROVIDE TEMPORARY SANITARY FACILITIES AS TO LEAST IMPACT NEIGHBORS AND AS DIRECTED BY STATE AND LOCAL REGULATIONS.
 - CONTRACTOR TO VERIFY THE LOCATION OF ALL UTILITY CONNECTIONS PRIOR TO COMMENCING WORK. CONTRACTOR SHALL COORDINATE WITH APPROPRIATE UTILITY PROVIDERS AND OBTAIN ALL NECESSARY PERMITS TO CONNECT TO UTILITY SERVICES.
 - ALL UTILITY TRENCHING TO COMPLY WITH APPLICABLE CODE AND UTILITY PROVIDER STANDARDS.
 - CONTRACTOR TO PROVIDE AND MAINTAIN JOBSITE PROTECTION MEASURES DURING CONSTRUCTION INCLUDING BUT NOT LIMITED TO: DEWATERING, RUNOFF AND SEDIMENT CONTROL, AND EROSION CONTROL IN COMPLIANCE WITH STATE AND LOCAL REGULATIONS.
 - CONTRACTOR TO PREPARE TEST PITS AT ALL PROPOSED CORNER POINTS.
 - CONTRACTOR TO VERIFY FINAL SLAB



NOT FOR CONSTRUCTION

REVISIONS:		
No.	Description	Date

- SITE PLAN LEGEND:**
- CONCRETE WALL
 - PROPOSED NEW DRIVEWAY
 - EXISTING PATH
 - PROPOSED STONE PATH
 - PROPERTY LINE
 - SETBACK
 - EASEMENT
 - SUBSURFACE DRAINAGE
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 - SEPTIC WASTE LINE
 - FENCE
 - NEW SITE CONTOUR
 - EXISTING SITE CONTOUR
 - TREELINE
 - EXISTING SEPTIC LEECH FIELD
 - BOND OUT
 - EXISTING BUILDINGS - TO REMAIN
 - PROPOSED NEW BUILDING FOOTPRINT
 - PROPOSED FOREST DUFF
 - PROPOSED NO-MOW ZONE
 - WATER



*FROST WALL FOUNDATIONS FOR HOUSE AND GARAGE

NOT FOR CONSTRUCTION

GO Logic LLC
52 Little River Drive
Bellast, Maine 04915
207.338.1566
www.gologic.us

GO-LOGIC
DESIGN + CONSTRUCTION

Thornburgh Rosenfeld Residence
147 S. Cove Rd,
Burlington, VT 05401

FOUNDATION PLAN

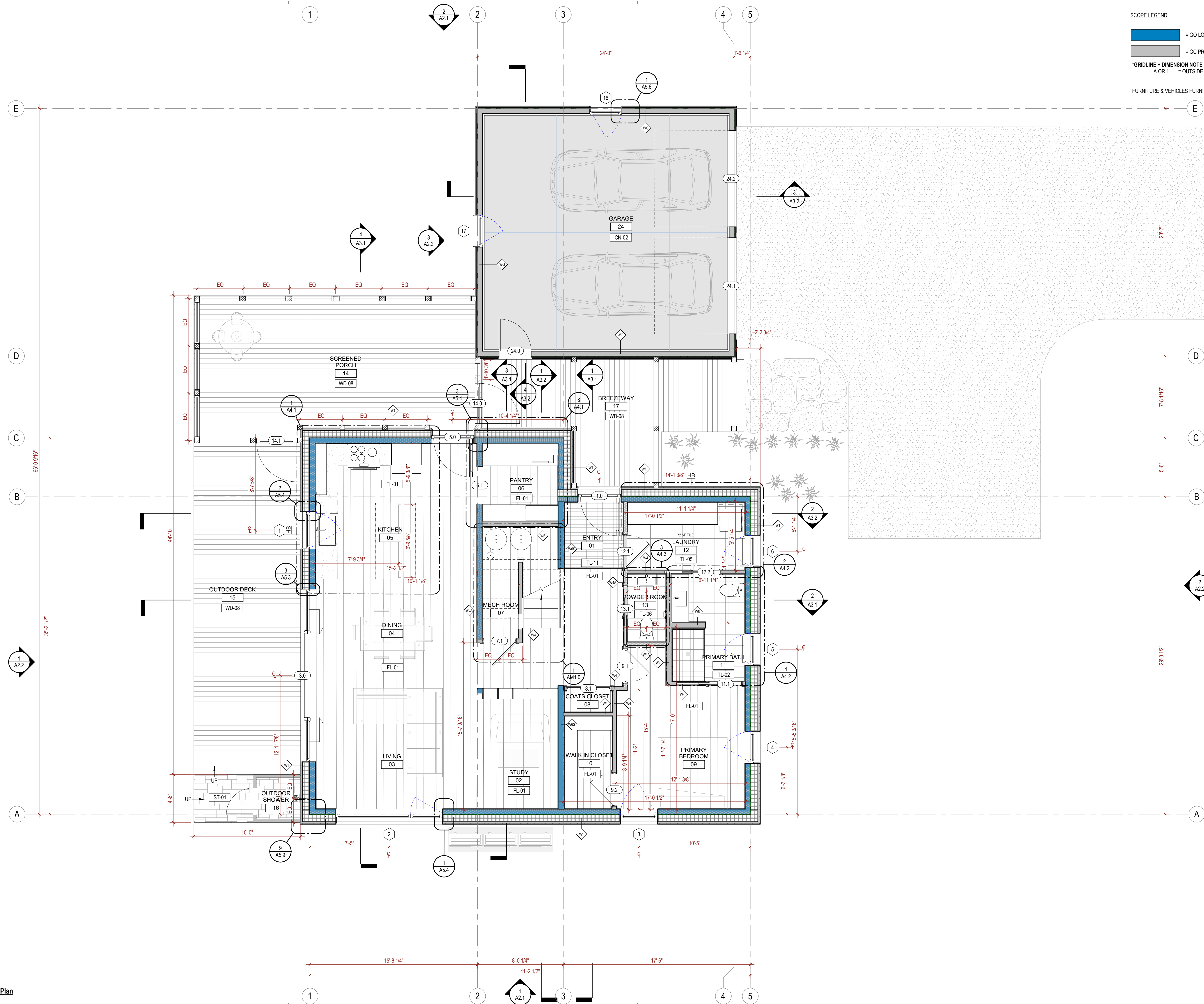
REVISIONS:		
No.	Description	Date

DATE: 07/17/2025
ISSUE: PERMITTING SET

SCALE: 1/4" = 1'-0"

A1.0

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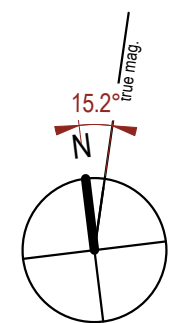
SCOPE LEGEND

- = GO LOGIC PROVIDED WALL, CEILING OR FLOOR
- = GC PROVIDED WALL, CEILING OR FLOOR

*GRIDLINE + DIMENSION NOTE (Unless Otherwise Noted):
A OR 1 = OUTSIDE FACE OF FOUNDATION

FURNITURE & VEHICLES FURNISHED BY OWNER

NOT FOR CONSTRUCTION



FIRST FLOOR PLAN

REVISIONS:

No. Description Date

DATE: 07/17/2025

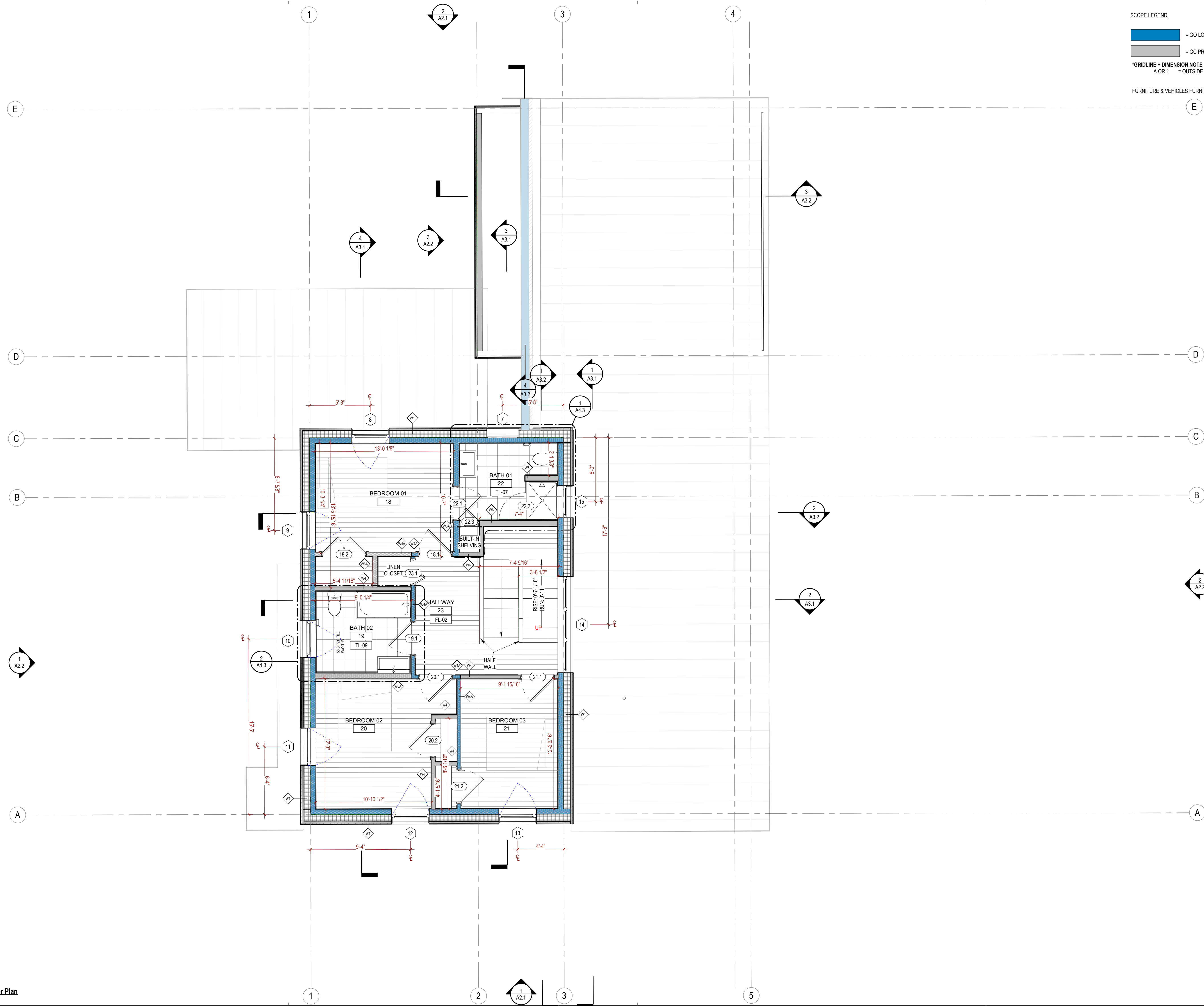
ISSUE: PERMITTING SET

SCALE: 1/4" = 1'-0"

A1.1

Thornburgh Rosenfeld Residence

147 S. Cove Rd,
Burlington, VT 05401



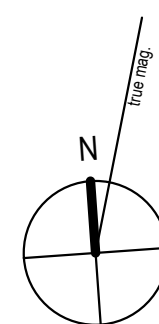
SCOPE LEGEND

- = GO LOGIC PROVIDED WALL, CEILING OR FLOOR
- = GC PROVIDED WALL, CEILING OR FLOOR

*GRIDLINE + DIMENSION NOTE (Unless Otherwise Noted):
A OR 1 = OUTSIDE FACE OF FOUNDATION

FURNITURE & VEHICLES FURNISHED BY OWNER

NOT FOR CONSTRUCTION



SECOND FLOOR PLAN

REVISIONS:

No.	Description	Date

DATE: 07/17/2025
ISSUE: PERMITTING SET

SCALE: 1/4" = 1'-0"

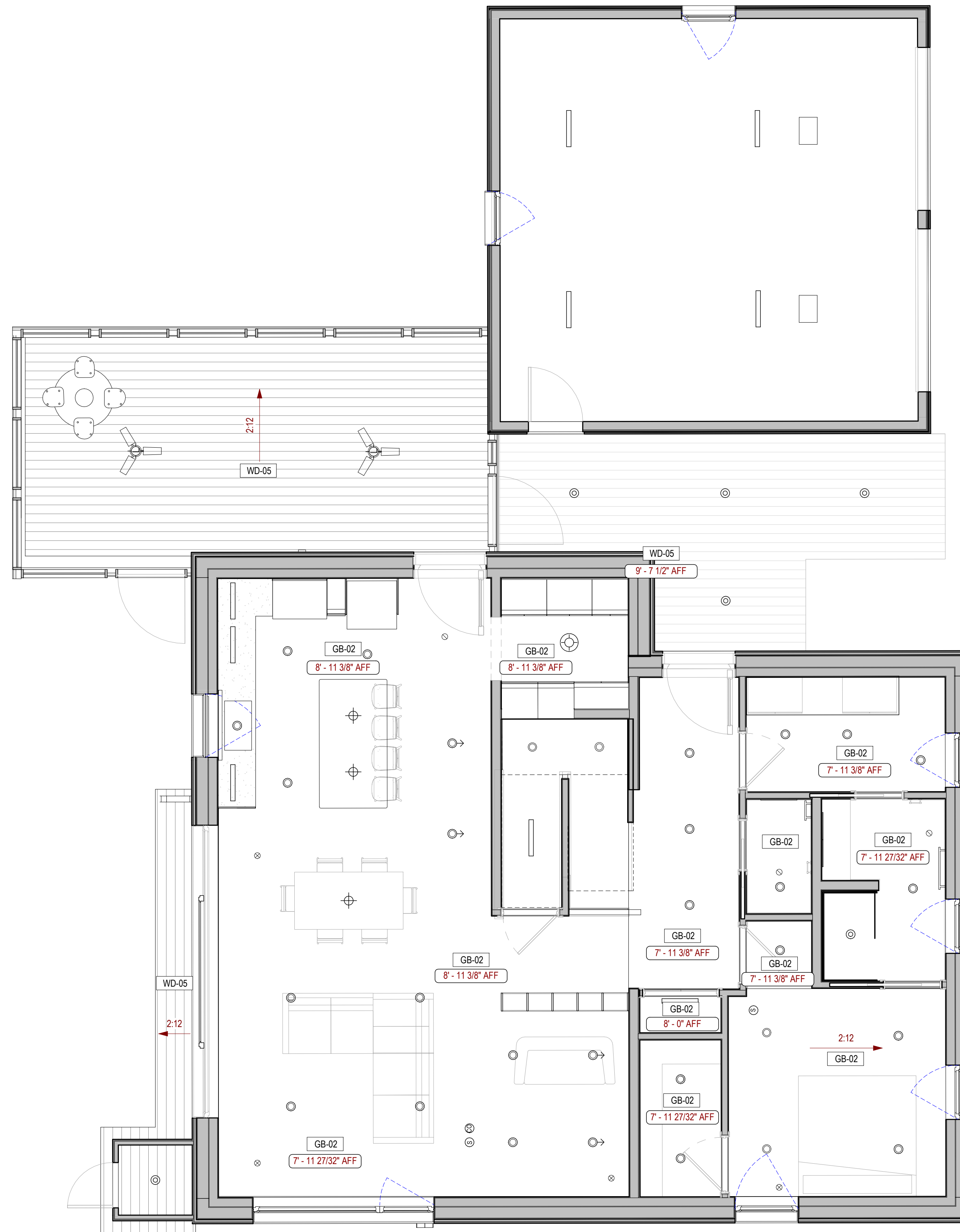
A1.2

Thornburgh Rosenfeld Residence

147 S. Cove Rd,
Burlington, VT 05401

REFLECTED CEILING PLAN LEGEND

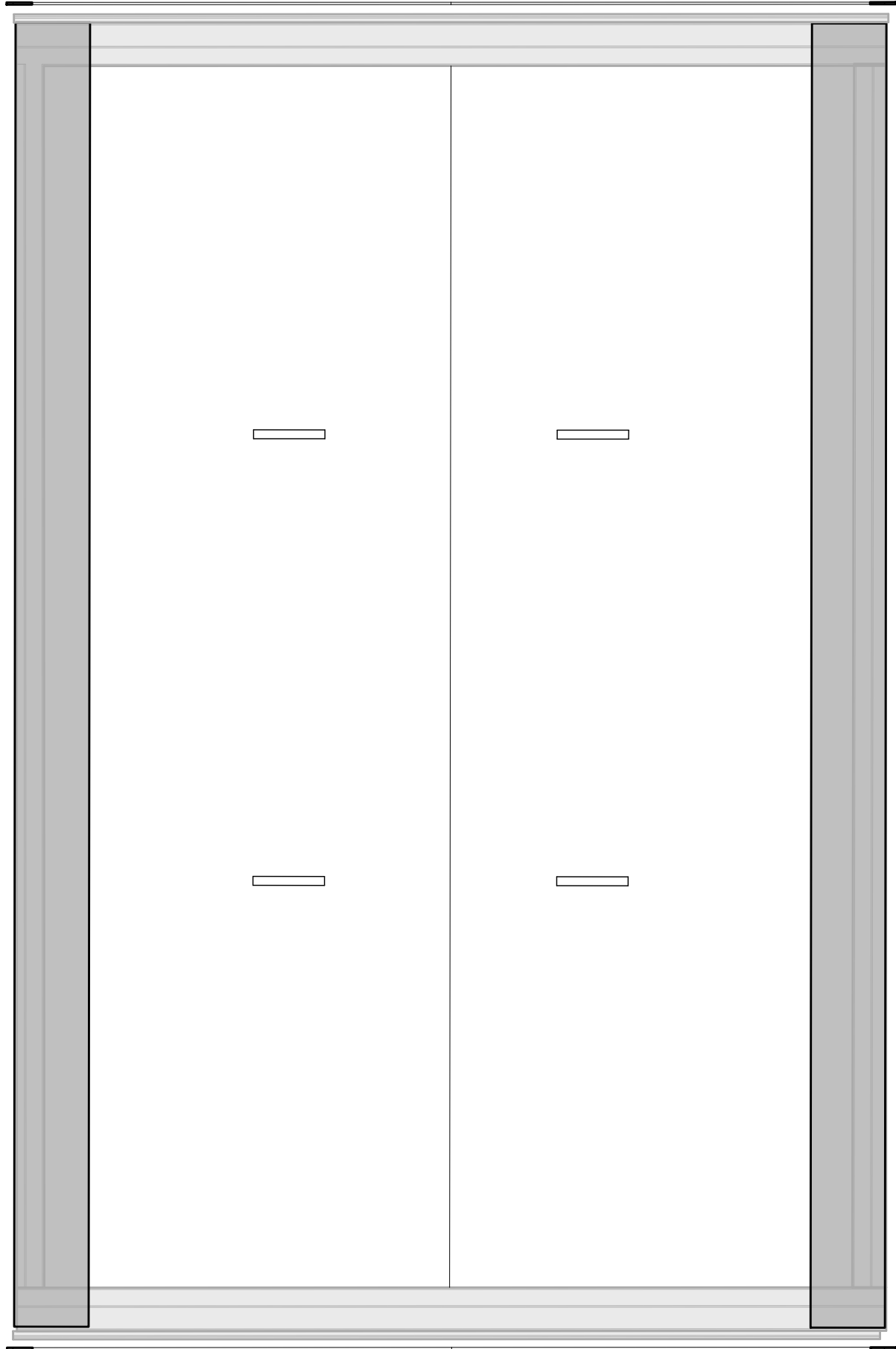
- | | |
|---|------------------------------------|
|  | RECESSED DOWN LIGHT |
|  | RECESSED DOWN LIGHT (Wet Location) |
|  | RECESSED DIRECTIONAL DOWNLIGHT |
|  | STRIP UTILITY LIGHT |
|  | UNDER CABINET STRIP LIGHT |
|  | PENDANT LIGHT |
|  | SURFACE MOUNTED OVERHEAD LIGHT |
|  | TRACK LIGHTING |
|  | WALL SCONCE - INTERIOR OR EXTERIOR |
|  | CEILING FAN WITH LIGHT |
|  | CEILING FAN WITHOUT LIGHT |
|  | SMOKE DETECTOR |
|  | CARBON MONOXIDE DETECTOR |
|  | CEILING VENTILATION SUPPLY |
|  | CEILING VENTILATION RETURN |



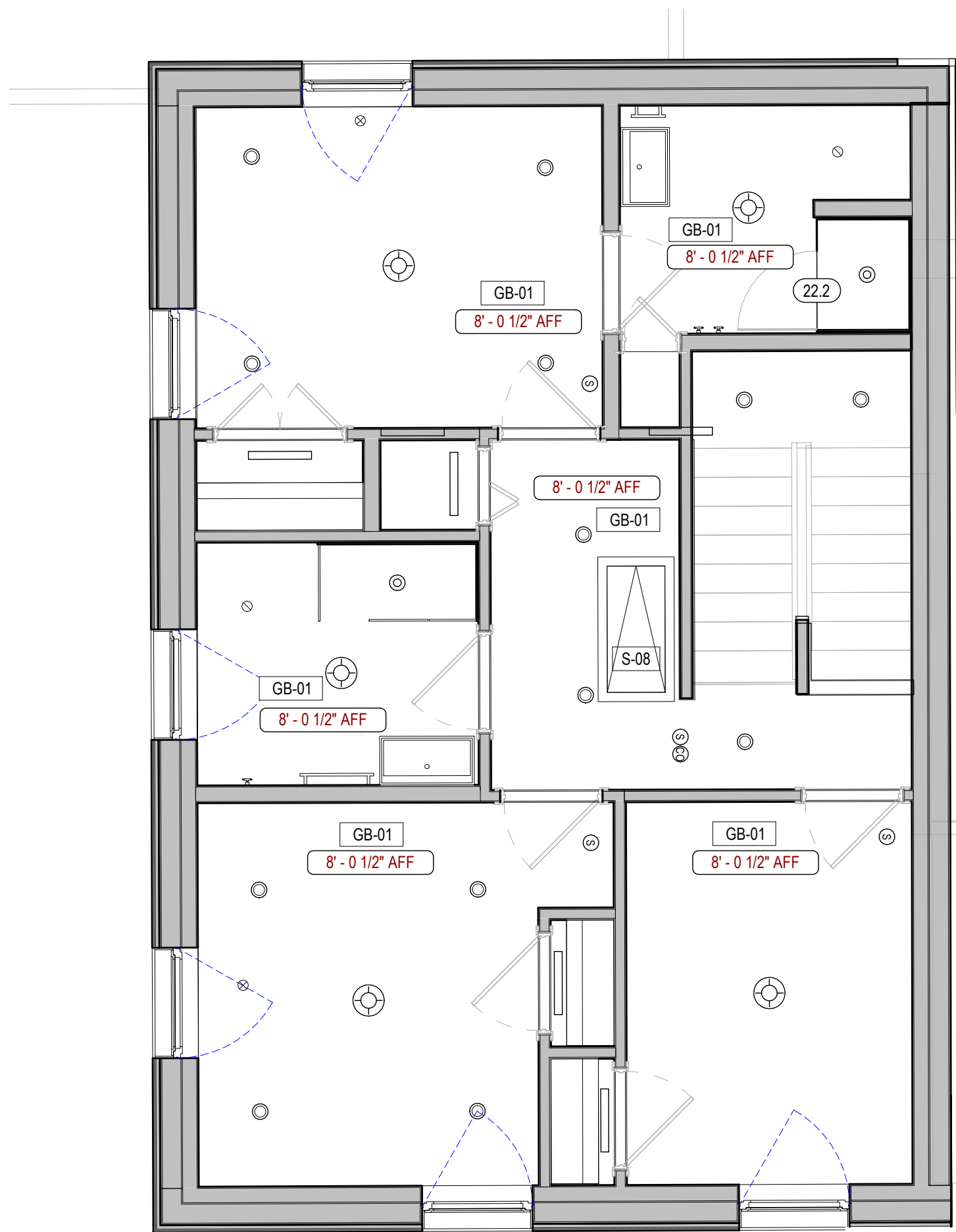
NOT FOR CONSTRUCTION

2 Attic RCP
1/4" = 1'-0"

- REFLECTED CEILING PLAN LEGEND
- RECESSED DOWN LIGHT
 - ⊙ RECESSED DOWN LIGHT (Wet Location)
 - ◐ RECESSED DIRECTIONAL DOWNLIGHT
 - ▬ STRIP UTILITY LIGHT
 - - UNDER CABINET STRIP LIGHT
 - ⊕ PENDANT LIGHT
 - ⊙ SURFACE MOUNTED OVERHEAD LIGHT
 - TRACK LIGHTING
 - ⌞ WALL SCONCE - INTERIOR OR EXTERIOR
 - ⊕ CEILING FAN WITH LIGHT
 - ⊖ CEILING FAN WITHOUT LIGHT
 - ⊙ SMOKE DETECTOR
 - ⊙ CARBON MONOXIDE DETECTOR
 - ⊗ CEILING VENTILATION SUPPLY
 - CEILING VENTILATION RETURN



1 Upper Floor RCP
1/4" = 1'-0"



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REVISIONS:		
No.	Description	Date

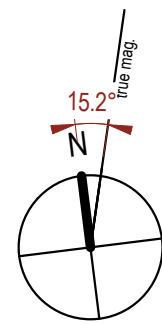
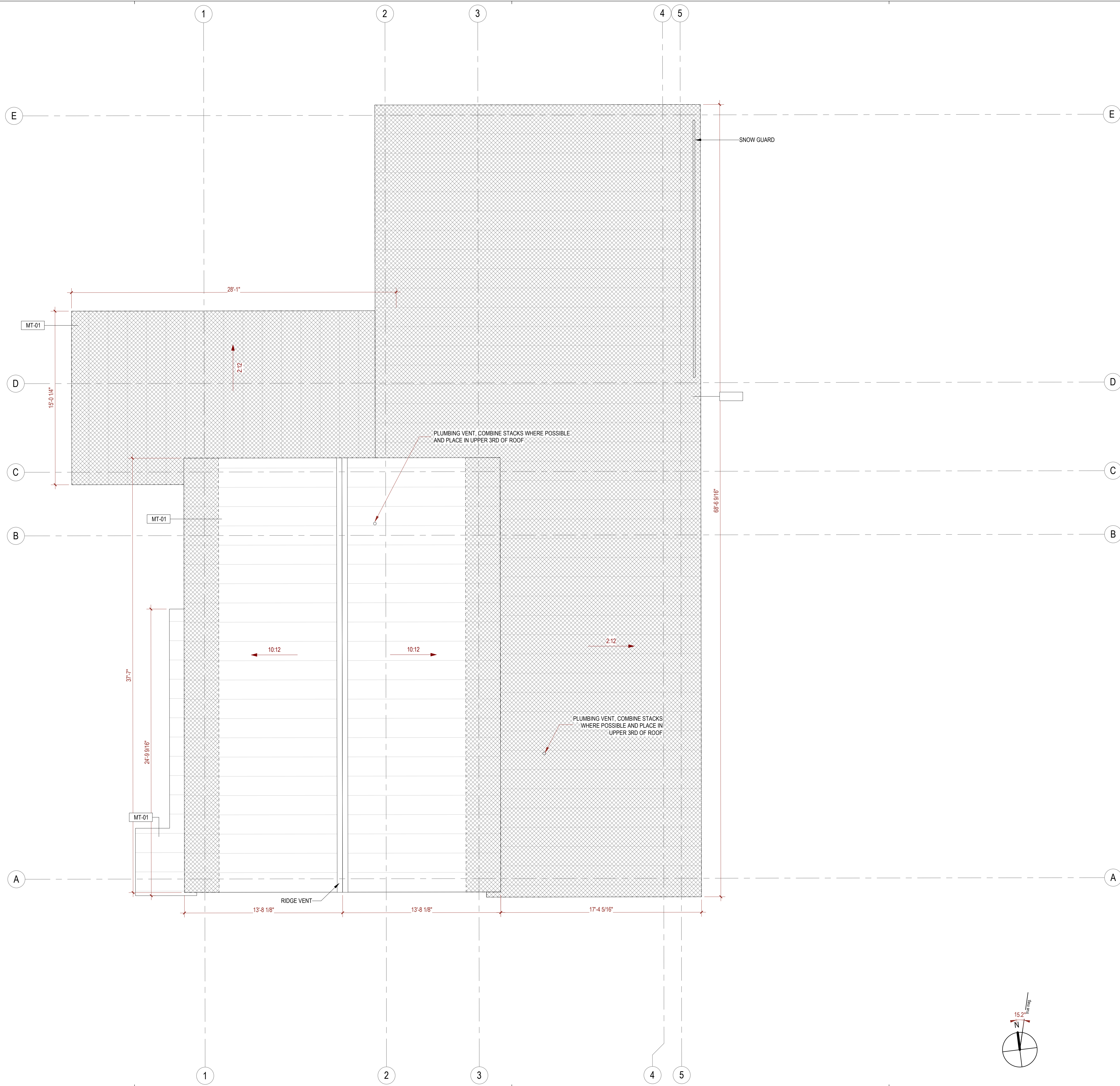
DATE: 07/17/2025
ISSUE: PERMITTING SET
SCALE: 1/4" = 1'-0"

ROOF LEGEND

- ADHESIVE - BACKED SHEET WATERPROOFING
- STANDING SEAM METAL ROOFING
- EPDM ROOFING

GENERAL NOTES

- ADHESIVE - BACKED SHEET WATERPROOFING IS TO BE INSTALLED AT ALL ROOF EAVES, FROM THE LOWEST EDGE OF THE ROOF, TO A POINT 24" INSIDE THE EXTERIOR WALL LINE. ALSO TO BE INSTALLED AT ALL VALLEY LOCATIONS.



NOT FOR CONSTRUCTION

ROOF PLAN

Thornburgh Rosenfeld Residence
147 S. Cove Rd,
Burlington, VT 05401

REVISIONS:

No. Description Date

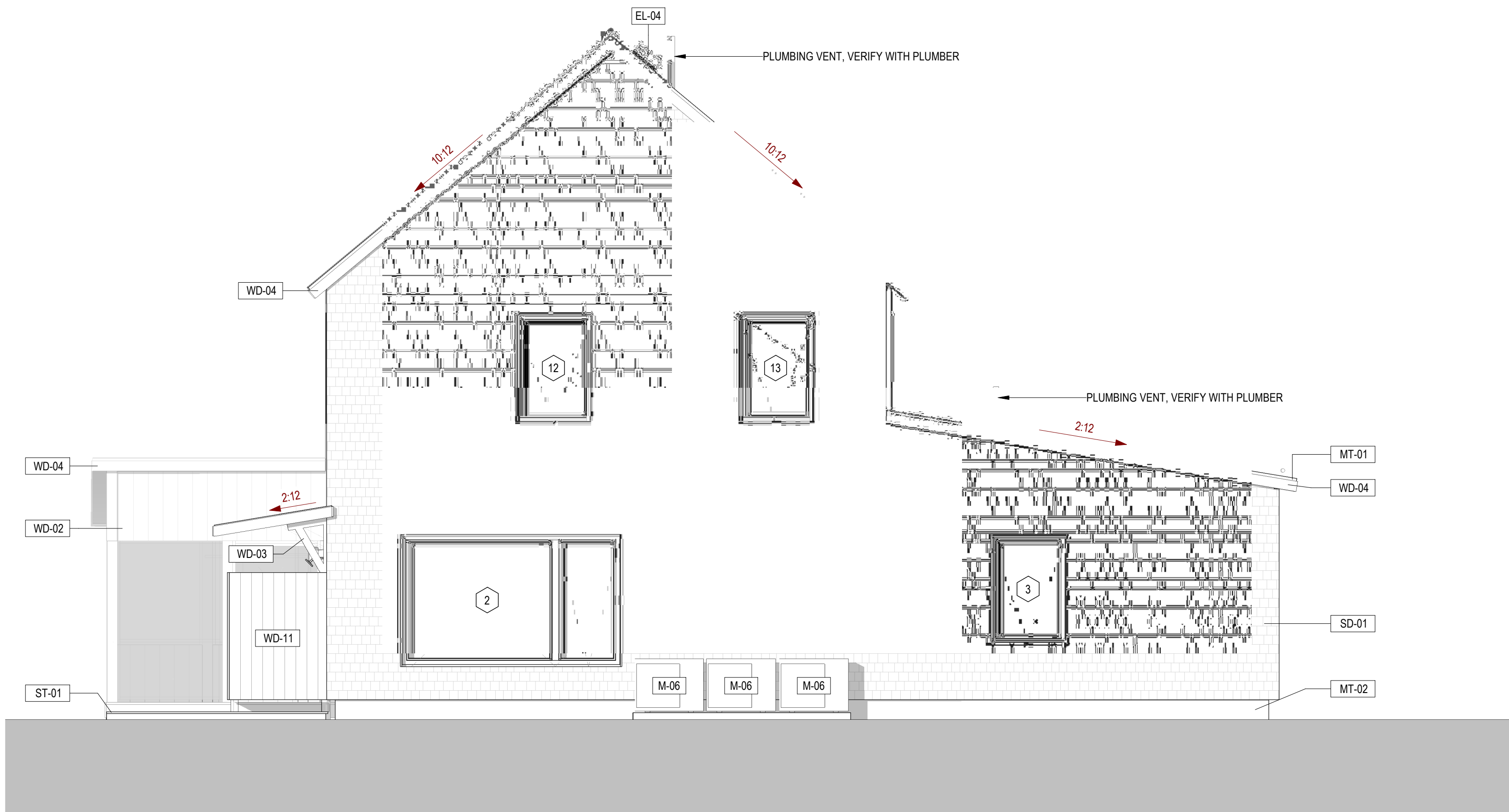
DATE: 07/17/2025

ISSUE: PERMITTING SET

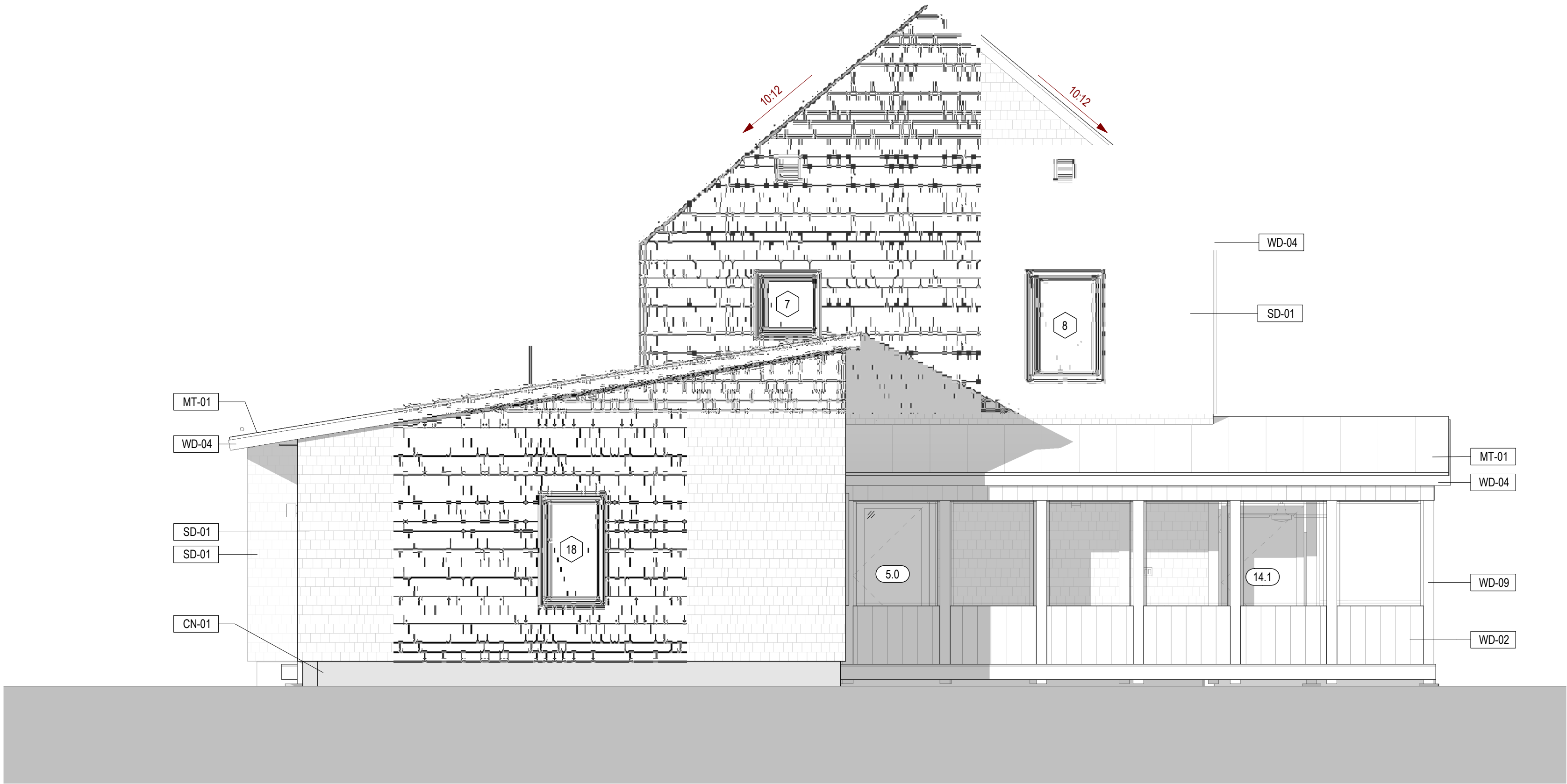
SCALE: 1/4" = 1'-0"

A1.5

1 House & Garage South Elevation
1/4" = 1'-0"



2 House & Garage North Elevation
1/4" = 1'-0"



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ELEVATIONS

REVISIONS:

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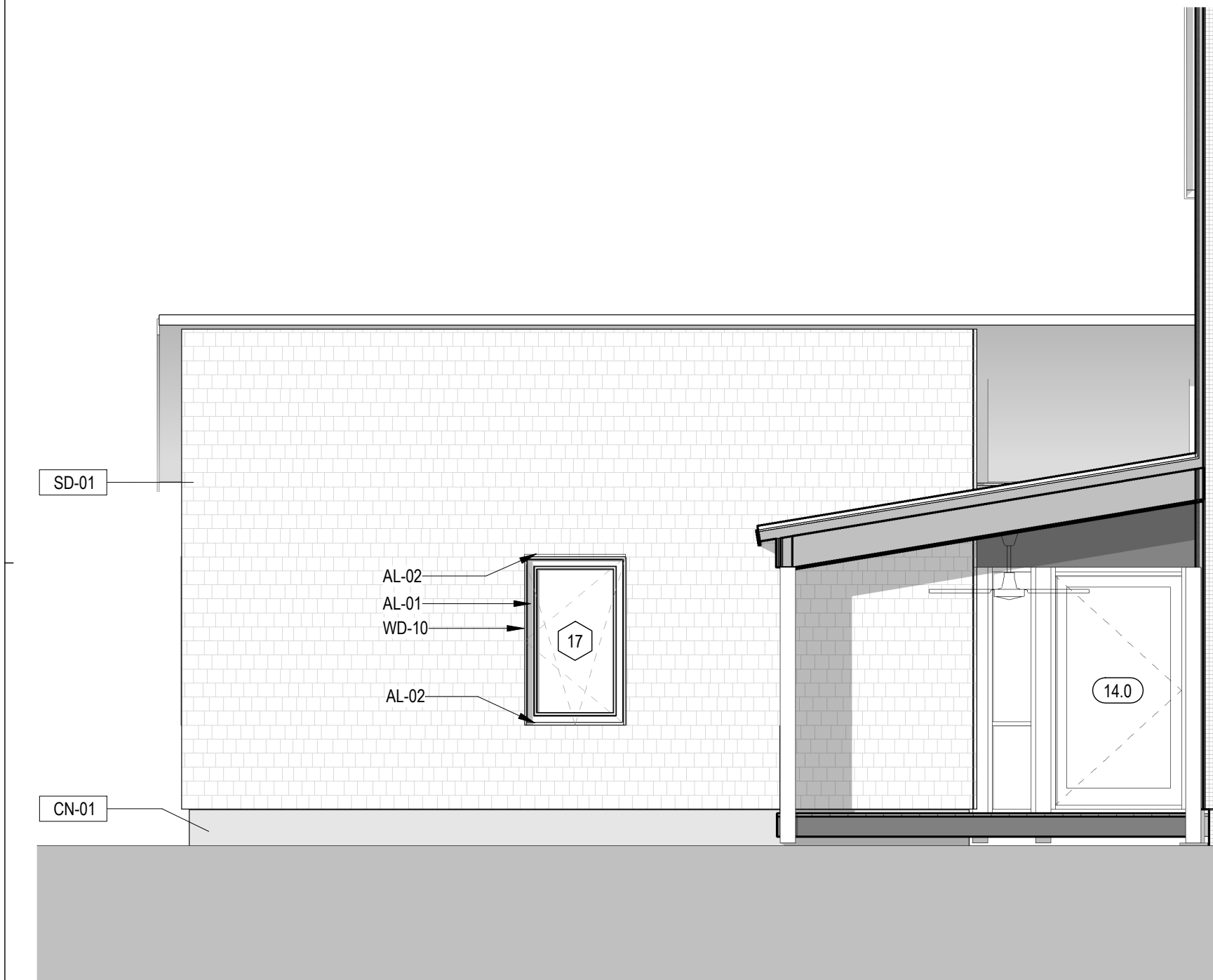
SCALE: 1/4" = 1'-0"

A2.1

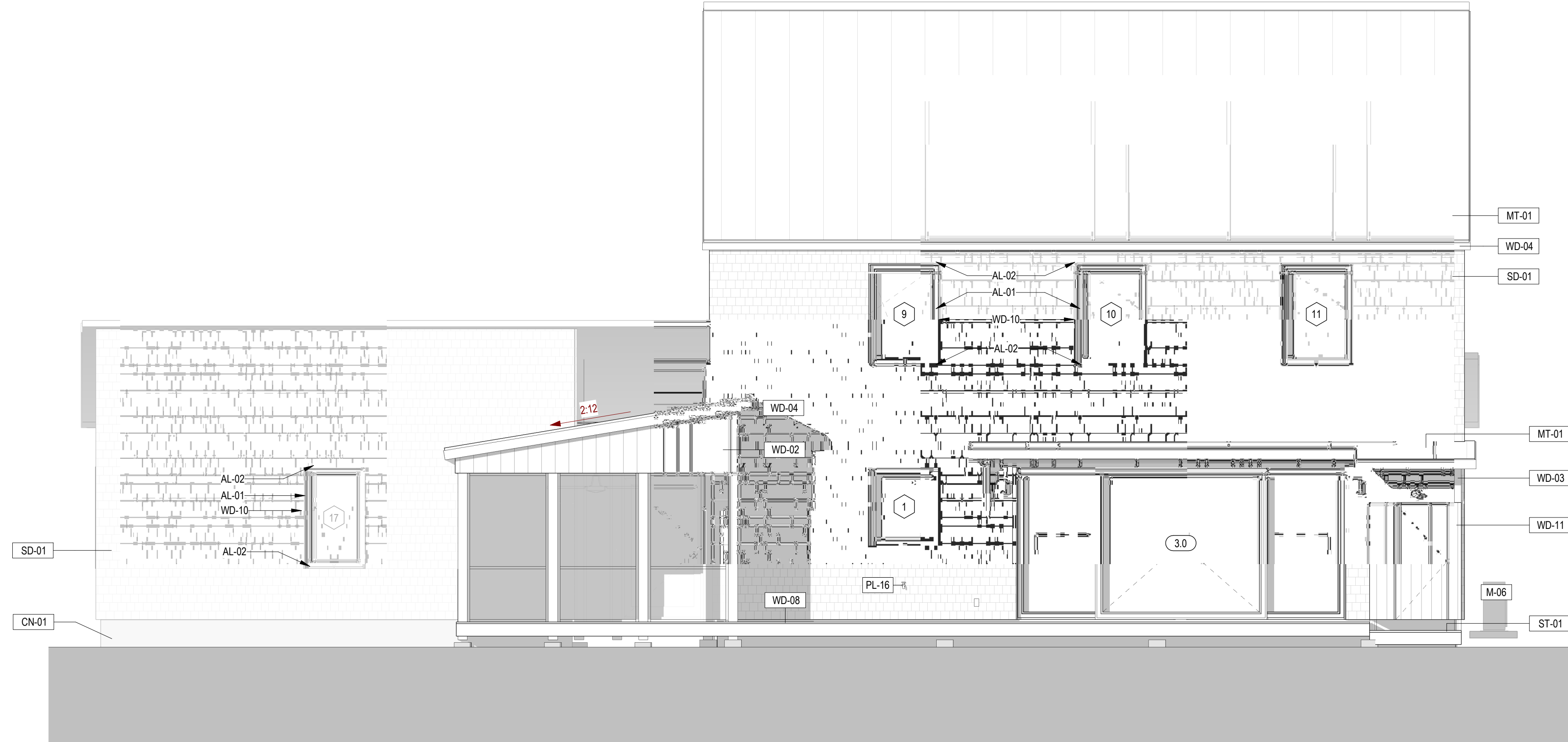
Thornburgh Rosenfeld Residence
147 S. Cove Rd,
Burlington, VT 05401



GO Logic LLC
52 Little River Drive
Belfast, Maine 04915
207.338.1566
www.gologic.us



3 Garage West Elevation
1/4" = 1'-0"



1 House & Garage West Elevation
1/4" = 1'-0"



2 House & Garage East Elevation
1/4" = 1'-0"

NOT FOR CONSTRUCTION

ELEVATIONS

REVISIONS:

No.	Description	Date

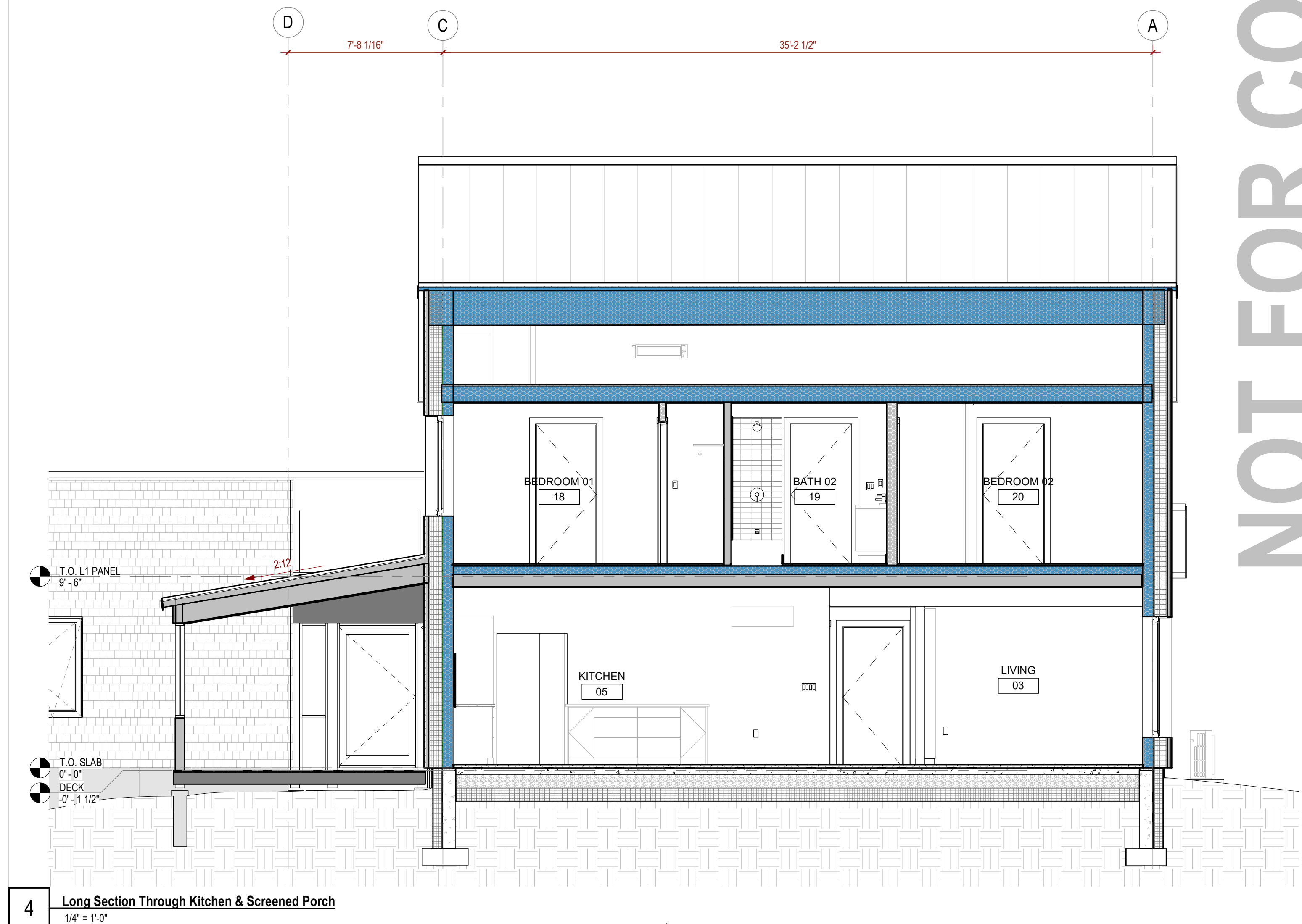
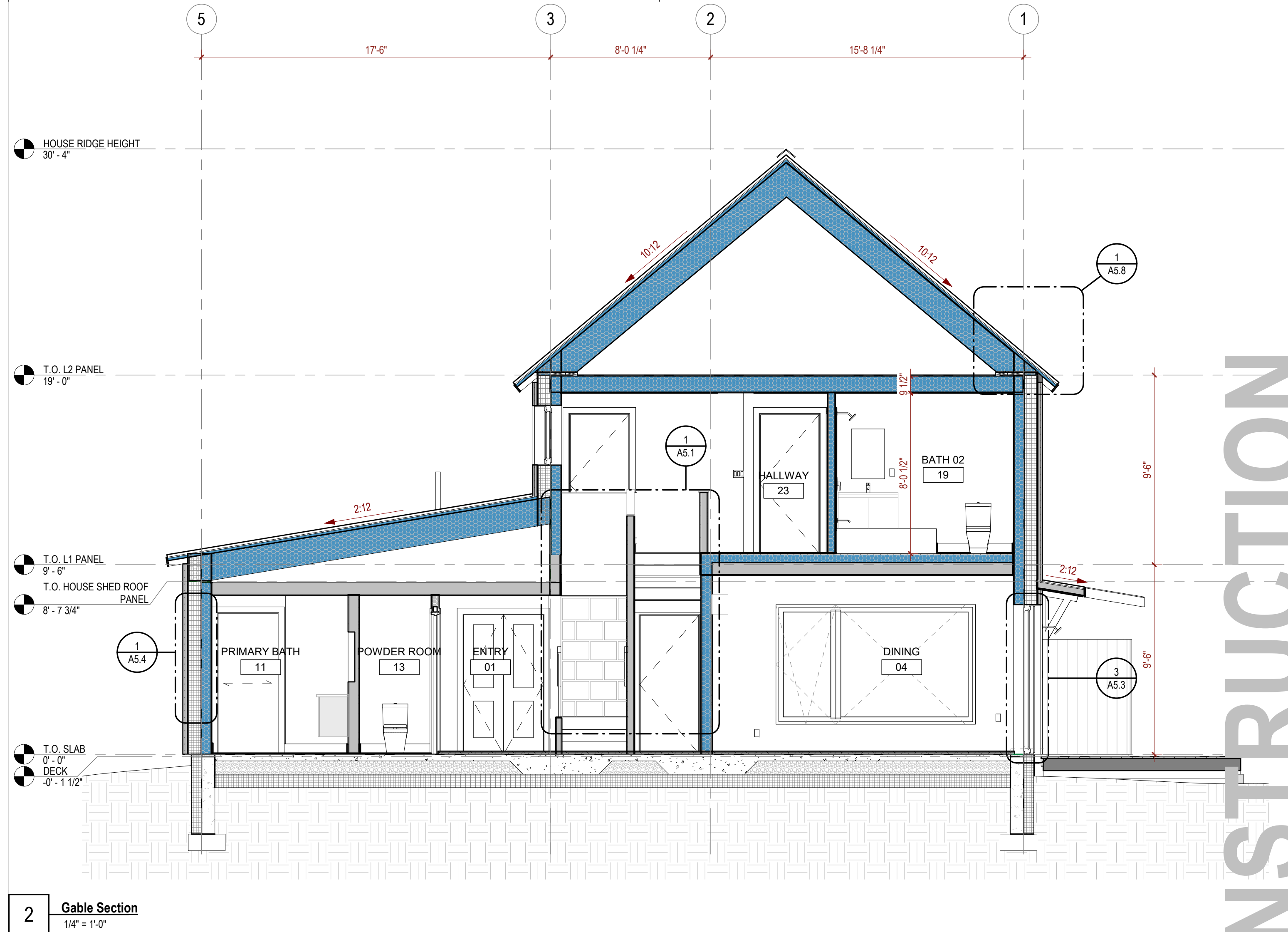
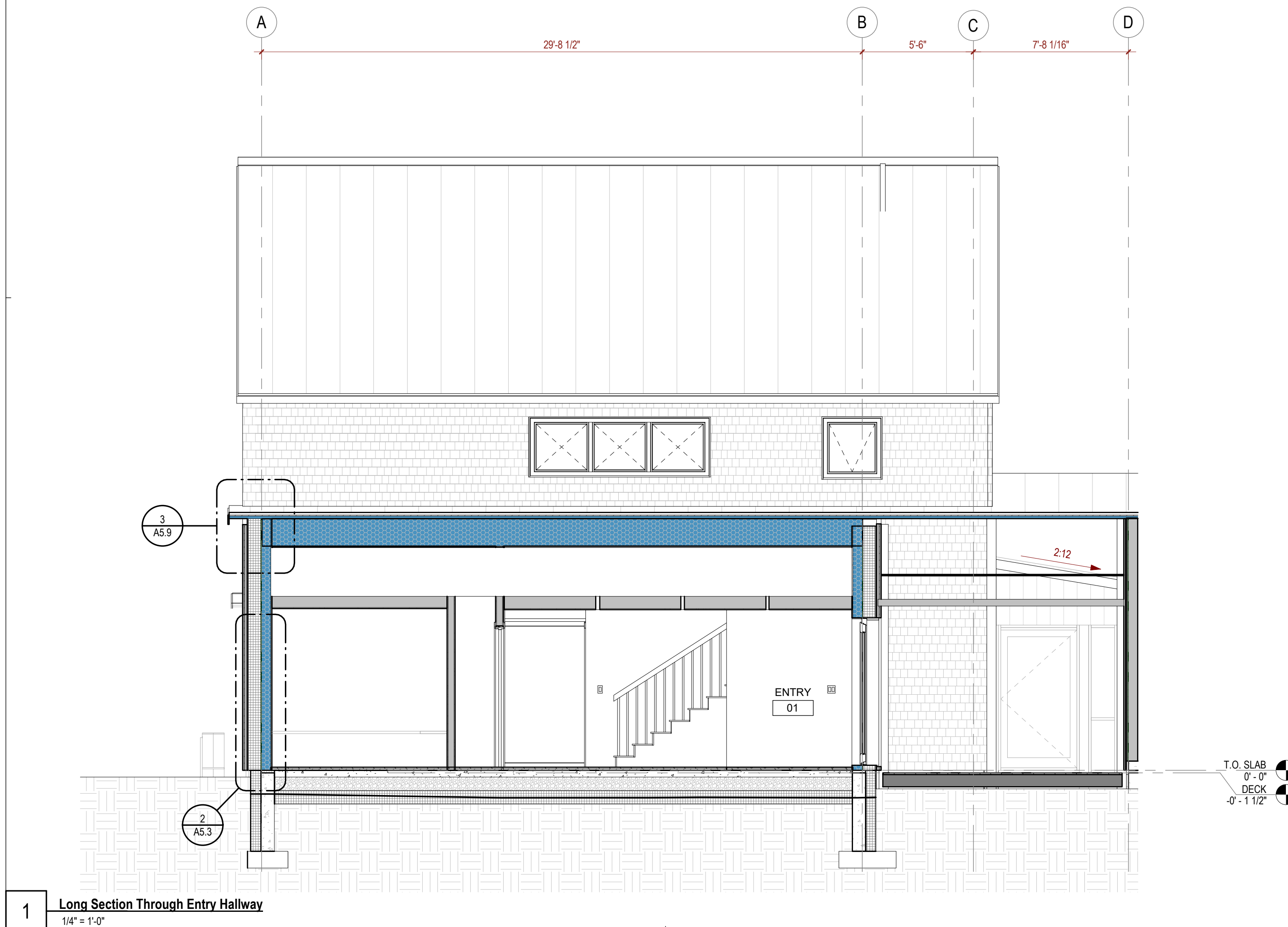
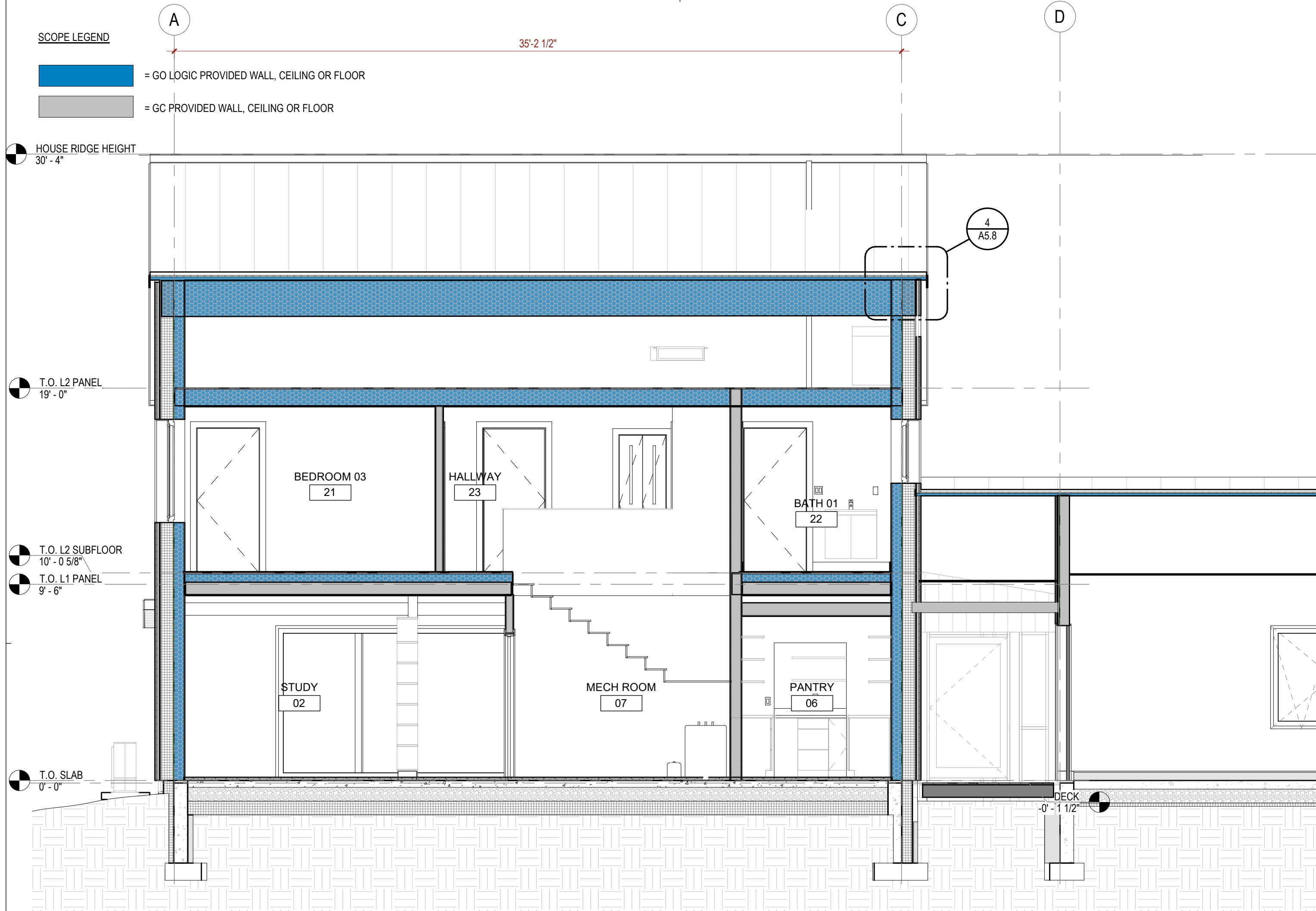
DATE: 07/17/2025
ISSUE: PERMITTING SET

SCALE: 1/4" = 1'-0"

A2.2

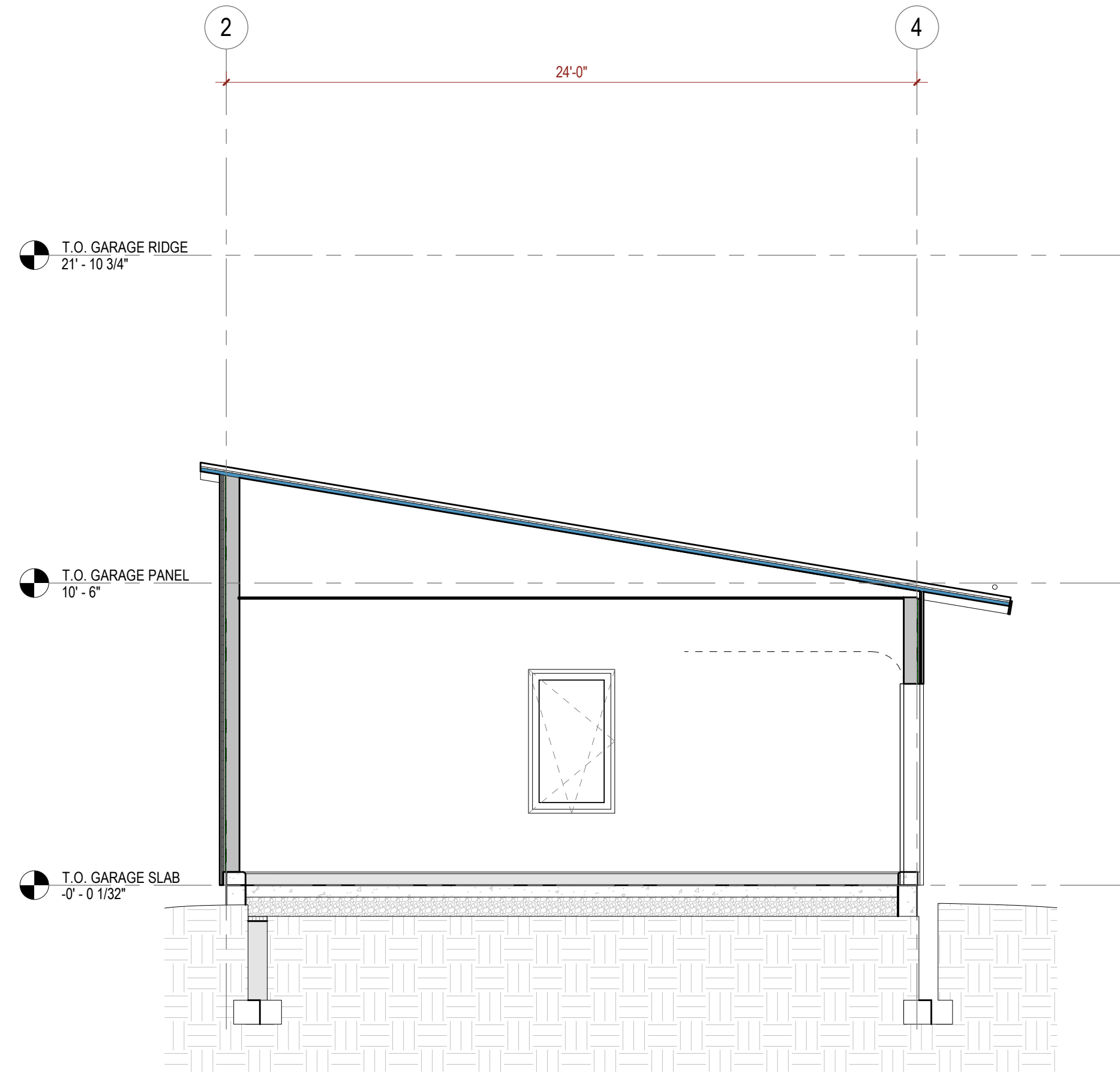
Thornburgh Rosenfeld Residence

147 S. Cove Rd,
Burlington, VT 05401

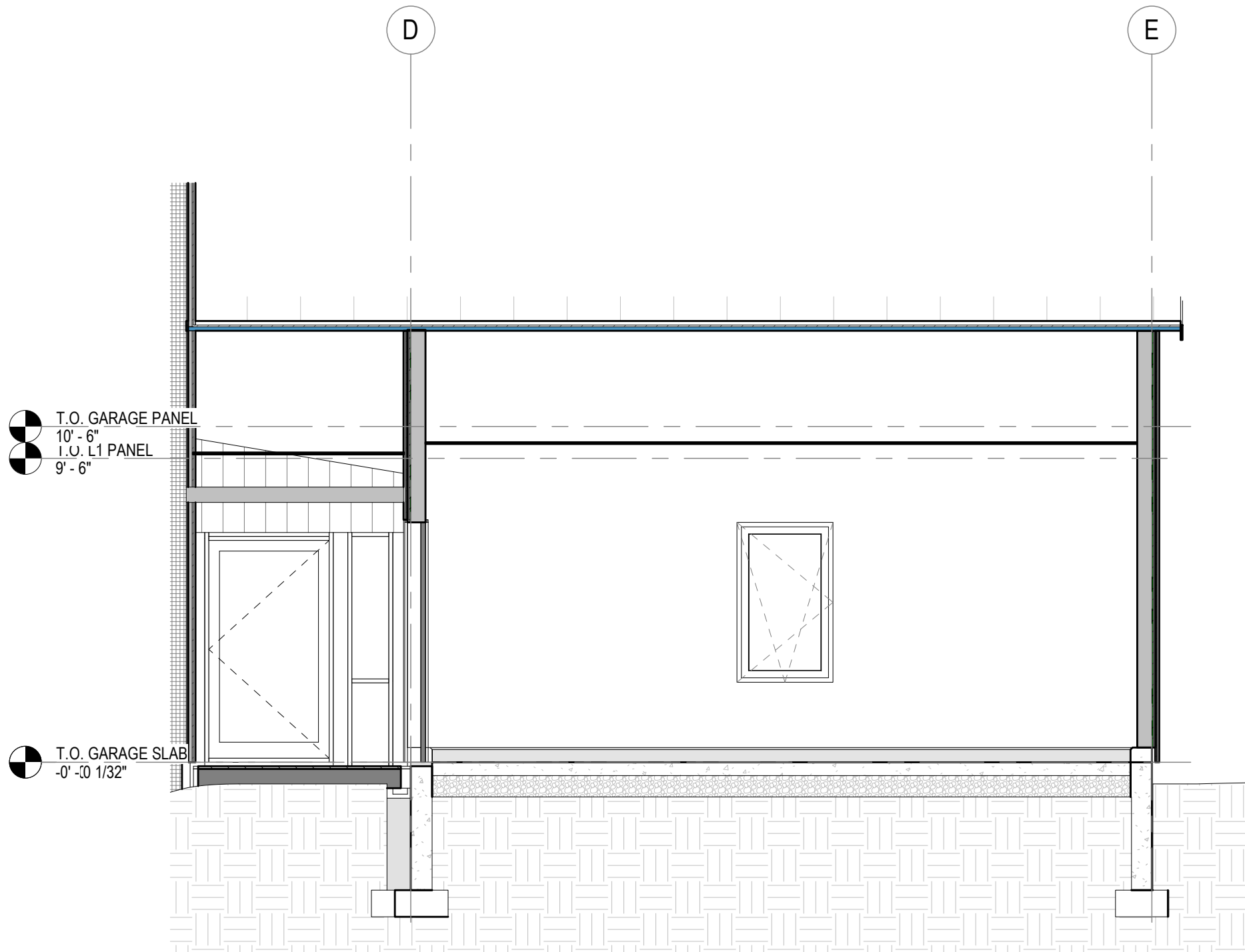


SCOPE LEGEND

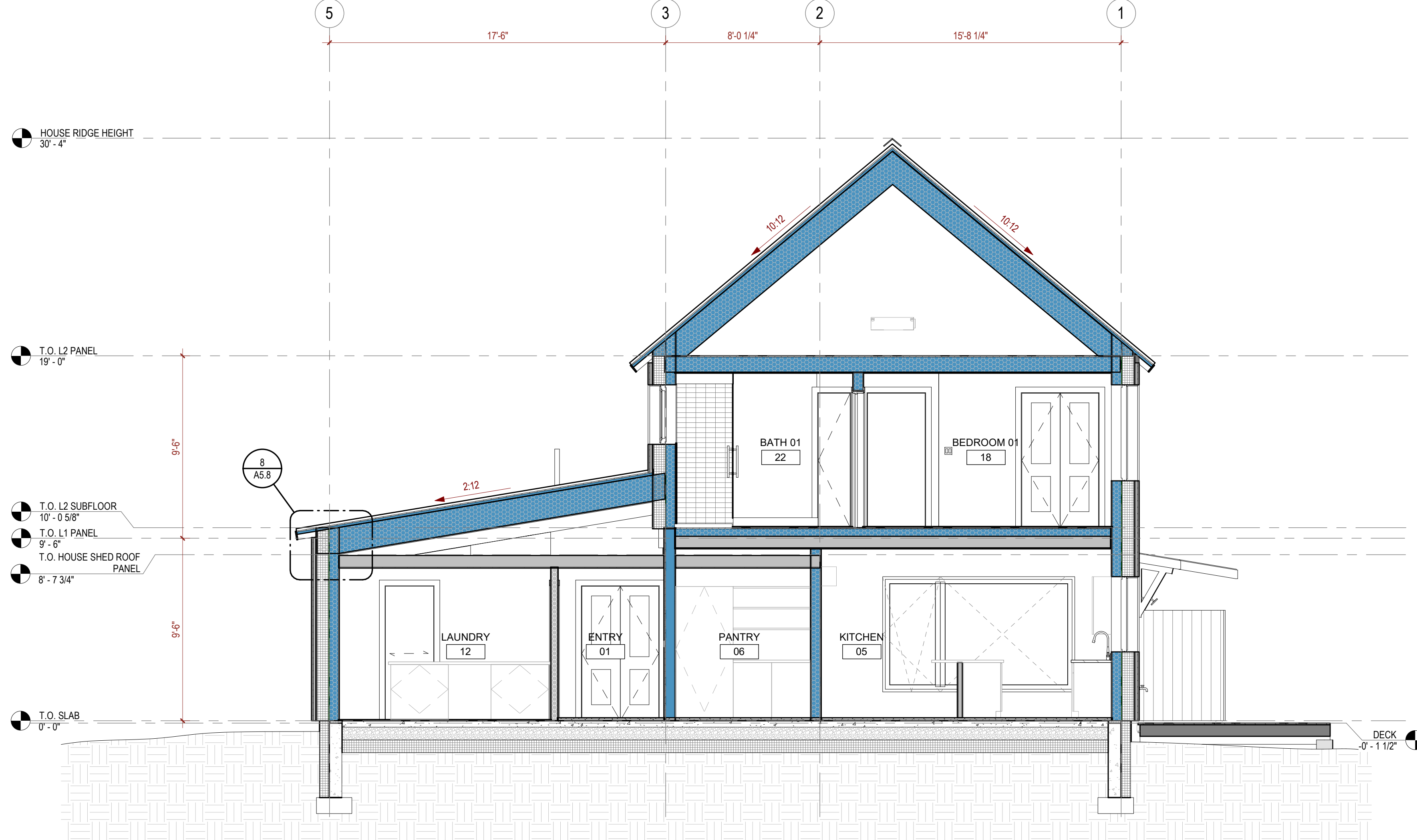
- = GO LOGIC PROVIDED WALL, CEILING OR FLOOR
- = GC PROVIDED WALL, CEILING OR FLOOR



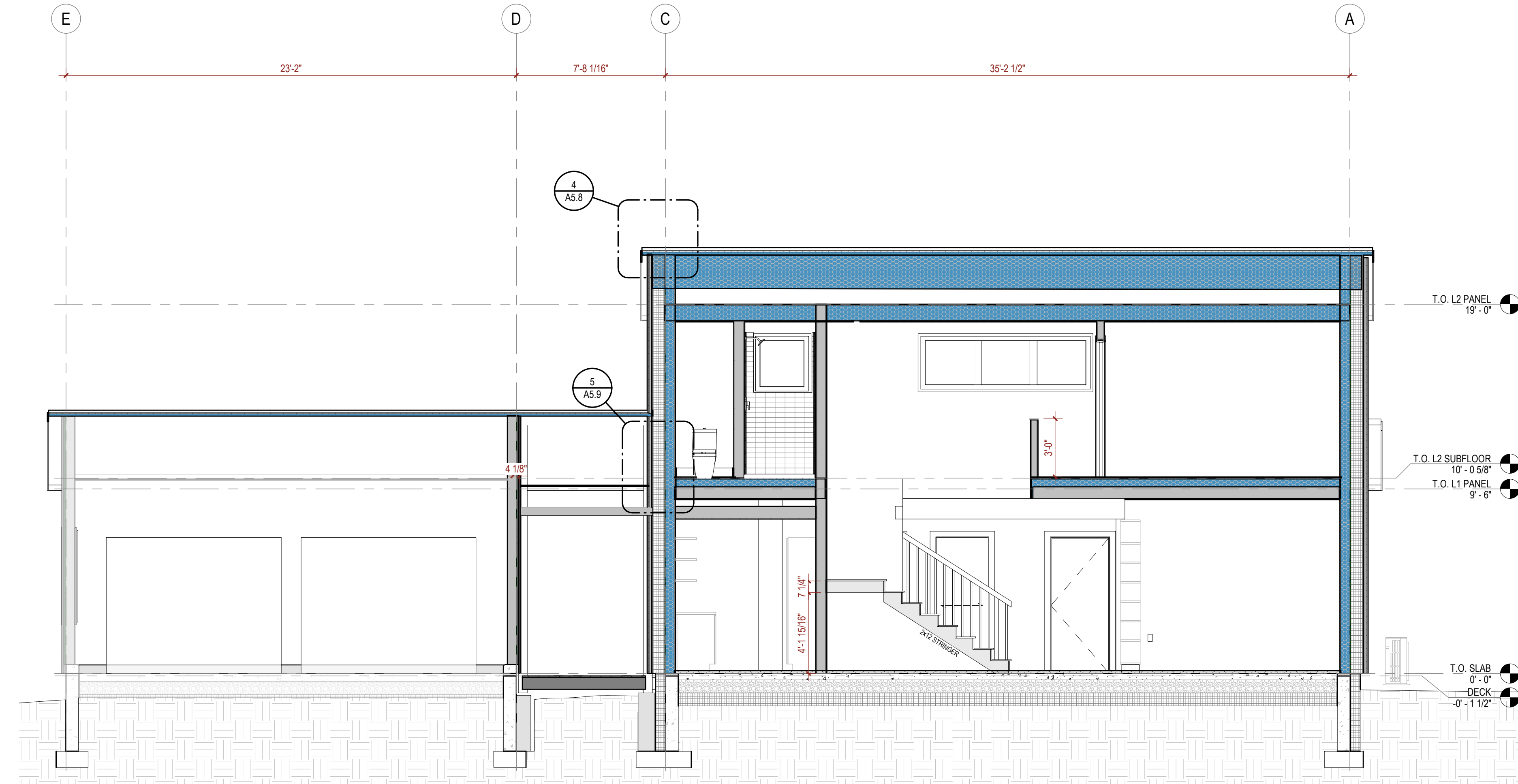
3 Section @ Garage Gable
1/4" = 1'-0"



4 Section @ Garage Rake
1/4" = 1'-0"



2 Gable Section 2
1/4" = 1'-0"



1 Section through Pantry & Lower Stair
1/4" = 1'-0"

NOT FOR CONSTRUCTION

SECTIONS

REVISIONS:

No. Description Date

DATE: 07/17/2025
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SCALE: 1/4" = 1'-0"

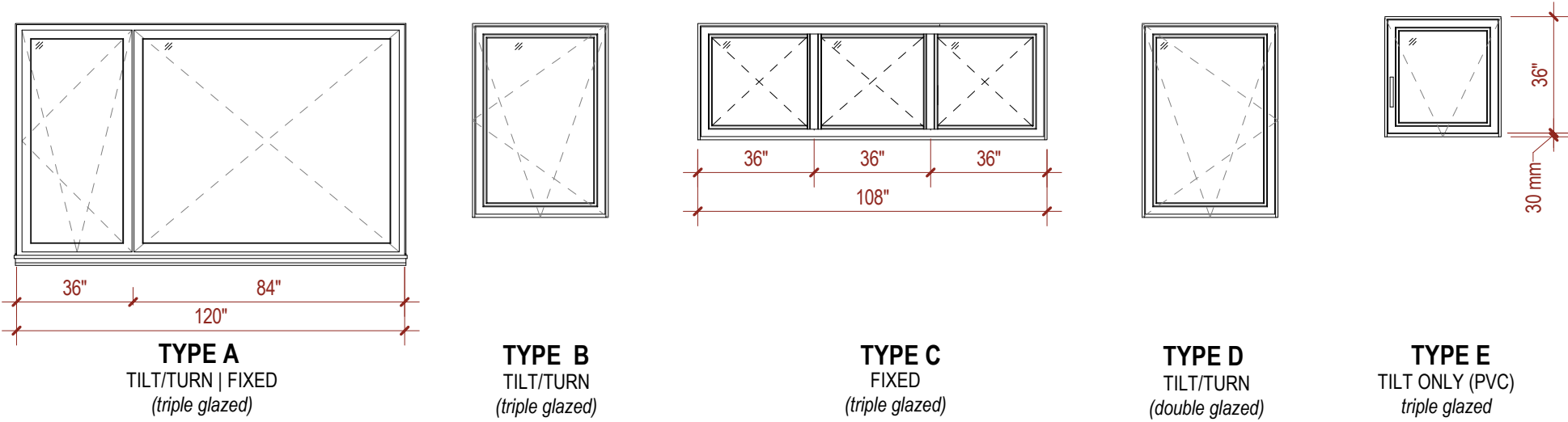
WINDOW SCHEDULE

MARK	TYPE	DESCRIPTION	MANUFACTURER	MODEL	WIDTH (includes Enl.)	HEIGHT (includes Enl.)	WIDTH (in. includes Enl.)	HEIGHT (in. includes Enl.)	ENL. L/R	SILL CONNECTOR BELOW	SILL HEIGHT	T.O. WINDOW	FINISH EXTERIOR	FINISH INTERIOR	HINGE SIDE (as seen from interior)	MUNTIN STYLE	SAFETY GLASS	INSECT SCREEN	HARDWARE	INT. WINDOW SILL	EXT. EXTENSION JAMBS	SHADING	HEAD FLASHING PROFILE	SILL FLASHING PROFILE	COMMENTS
1	B	SINGLE TILT TURN WINDOW - TRIPLE PANE	UNILUX	ALUICLAD WOOD - MODERNLINE WCIRCUMFERENTIAL-FRAME GROOVES 5mm.23mm	3'-6"	3'-11"	42.00"	47.00"	0/0	-	3'-7"	7'-6"	RAL9016M - TRAFFIC WHITE MATT	PINE 137 TRANSPARENT MATT	LEFT	NONE	No	YES	W1	Stained Grade Hardwood	WD-04	BY GC	76mm, 68mm, 27mm/ RAL9016M	165MM / RAL9016M	
2	A	2 PIECE MULLED TILT TURN/FIXED WINDOW - TRIPLE PANE	UNILUX	ALUICLAD WOOD - MODERNLINE WCIRCUMFERENTIAL-FRAME GROOVES 5mm.23mm	10'-0"	6'-0"	120.00"	72.00"	0/0	-	1'-6"	7'-6"	RAL9016M - TRAFFIC WHITE MATT	PINE 137 TRANSPARENT MATT	LEFT FIXED	NONE	No	YES	W1	Stained Grade Hardwood	WD-04	BY GC	76mm, 68mm, 27mm/ RAL9016M	165MM / RAL9016M	
3	B	SINGLE TILT TURN WINDOW - TRIPLE PANE	UNILUX	ALUICLAD WOOD - MODERNLINE WCIRCUMFERENTIAL-FRAME GROOVES 5mm.23mm	3'-6"	5'-0"	42.00"	60.00"	0/0	-	2'-6"	7'-6"	RAL9016M - TRAFFIC WHITE MATT	PINE 137 TRANSPARENT MATT	LEFT	NONE	No	YES	W1	Stained Grade Hardwood	WD-04	BY GC	76mm, 68mm, 27mm/ RAL9016M	165MM / RAL9016M	
4	B	SINGLE TILT TURN WINDOW - TRIPLE PANE	UNILUX	ALUICLAD WOOD - MODERNLINE WCIRCUMFERENTIAL-FRAME GROOVES 5mm.23mm	3'-0"	5'-0"	36.00"	60.00"	0/0	-	2'-6"	7'-6"	RAL9016M - TRAFFIC WHITE MATT	PINE 137 TRANSPARENT MATT	RIGHT	NONE	No	YES	W1	Stained Grade Hardwood	WD-04	BY GC	76mm, 68mm, 27mm/ RAL9016M	165MM / RAL9016M	
5	B	SINGLE TILT TURN WINDOW - TRIPLE PANE	UNILUX	ALUICLAD WOOD - MODERNLINE WCIRCUMFERENTIAL-FRAME GROOVES 5mm.23mm	3'-0"	5'-0"	36.00"	60.00"	0/0	-	2'-6"	7'-6"	RAL9016M - TRAFFIC WHITE MATT	PINE 137 TRANSPARENT MATT	RIGHT	NONE	Yes	YES	W1	Stained Grade Hardwood	WD-04	BY GC	76mm, 68mm, 27mm/ RAL9016M	165MM / RAL9016M	
6	B	SINGLE TILT TURN WINDOW - TRIPLE PANE	UNILUX	ALUICLAD WOOD - MODERNLINE WCIRCUMFERENTIAL-FRAME GROOVES 5mm.23mm	3'-0"	5'-0"	36.00"	60.00"	0/0	-	2'-6"	7'-6"	RAL9016M - TRAFFIC WHITE MATT	PINE 137 TRANSPARENT MATT	RIGHT	NONE	No	YES	W1	Stained Grade Hardwood	WD-04	BY GC	76mm, 68mm, 27mm/ RAL9016M	165MM / RAL9016M	
7	E	SINGLE TILT TURN WINDOW - TRIPLE PANE	UNILUX	ALUICLAD WOOD - MODERNLINE WCIRCUMFERENTIAL-FRAME GROOVES 5mm.23mm	3'-0"	3'-1 3/16"	36.00"	37.18"	0/0	-	4'-4 1/16"	7'-5 1/4"	RAL9016M - TRAFFIC WHITE MATT	PINE 137 TRANSPARENT MATT	RIGHT	NONE	Yes	YES	W1	Stained Grade Hardwood	WD-04	BY GC	76mm, 68mm, 27mm/ RAL9016M	165MM / RAL9016M	
8	B	SINGLE TILT TURN WINDOW - TRIPLE PANE	UNILUX	ALUICLAD WOOD - MODERNLINE WCIRCUMFERENTIAL-FRAME GROOVES 5mm.23mm	3'-6"	5'-0"	42.00"	60.00"	0/0	-	2'-5 1/4"	7'-5 1/4"	RAL9016M - TRAFFIC WHITE MATT	PINE 137 TRANSPARENT MATT	RIGHT	NONE	No	YES	W1	Stained Grade Hardwood	WD-04	BY GC	76mm, 68mm, 27mm/ RAL9016M	165MM / RAL9016M	
9	B	SINGLE TILT TURN WINDOW - TRIPLE PANE	UNILUX	ALUICLAD WOOD - MODERNLINE WCIRCUMFERENTIAL-FRAME GROOVES 5mm.23mm	3'-6"	5'-0"	42.00"	60.00"	0/0	-	2'-5 1/4"	7'-5 1/4"	RAL9016M - TRAFFIC WHITE MATT	PINE 137 TRANSPARENT MATT	LEFT	NONE	Yes	YES	W1	Stained Grade Hardwood	WD-04	BY GC	76mm, 68mm, 27mm/ RAL9016M	165MM / RAL9016M	
10	B	SINGLE TILT TURN WINDOW - TRIPLE PANE	UNILUX	ALUICLAD WOOD - MODERNLINE WCIRCUMFERENTIAL-FRAME GROOVES 5mm.23mm	3'-6"	5'-0"	42.00"	60.00"	0/0	-	2'-5 1/4"	7'-5 1/4"	RAL9016M - TRAFFIC WHITE MATT	PINE 137 TRANSPARENT MATT	RIGHT	NONE	Yes	YES	W1	Stained Grade Hardwood	WD-04	BY GC	76mm, 68mm, 27mm/ RAL9016M	165MM / RAL9016M	
11	B	SINGLE TILT TURN WINDOW - TRIPLE PANE	UNILUX	ALUICLAD WOOD - MODERNLINE WCIRCUMFERENTIAL-FRAME GROOVES 5mm.23mm	3'-6"	5'-0"	42.00"	60.00"	0/0	-	2'-5 1/4"	7'-5 1/4"	RAL9016M - TRAFFIC WHITE MATT	PINE 137 TRANSPARENT MATT	RIGHT	NONE	No	YES	W1	Stained Grade Hardwood	WD-04	BY GC	76mm, 68mm, 27mm/ RAL9016M	165MM / RAL9016M	
12	B	SINGLE TILT TURN WINDOW - TRIPLE PANE	UNILUX	ALUICLAD WOOD - MODERNLINE WCIRCUMFERENTIAL-FRAME GROOVES 5mm.23mm	3'-6"	5'-0"	42.00"	60.00"	0/0	-	2'-5 1/4"	7'-5 1/4"	RAL9016M - TRAFFIC WHITE MATT	PINE 137 TRANSPARENT MATT	RIGHT	NONE	No	YES	W1	Stained Grade Hardwood	WD-04	BY GC	76mm, 68mm, 27mm/ RAL9016M	165MM / RAL9016M	
13	B	SINGLE TILT TURN WINDOW - TRIPLE PANE	UNILUX	ALUICLAD WOOD - MODERNLINE WCIRCUMFERENTIAL-FRAME GROOVES 5mm.23mm	3'-6"	5'-0"	42.00"	60.00"	0/0	-	2'-5 1/4"	7'-5 1/4"	RAL9016M - TRAFFIC WHITE MATT	PINE 137 TRANSPARENT MATT	RIGHT	NONE	No	YES	W1	Stained Grade Hardwood	WD-04	BY GC	76mm, 68mm, 27mm/ RAL9016M	165MM / RAL9016M	
14	C	3 PIECE MULLED FIXED WINDOW - TRIPLE PANE	UNILUX	ALUICLAD WOOD - MODERNLINE WCIRCUMFERENTIAL-FRAME GROOVES 5mm.23mm	9'-0"	3'-0"	108.00"	36.00"	0/0	-	4'-5 1/4"	7'-5 1/4"	RAL9016M - TRAFFIC WHITE MATT	PINE 137 TRANSPARENT MATT	FIXED FIXED FIXED	NONE	Yes	N/A	NA	Stained Grade Hardwood	WD-04	BY GC	76mm, 68mm, 27mm/ RAL9016M	165MM / RAL9016M	
15	E	SINGLE TILT ONLY WINDOW - TRIPLE PANE	UNILUX	ALUICLAD PVC - ISOSTAR	3'-0"	3'-1 3/16"	36.00"	37.18"	0/0	30mm	4'-4 1/16"	7'-5 1/4"	RAL9016M - TRAFFIC WHITE MATT	WHITE	BOTTOM	NONE	Yes	YES	W2	Tile		BY GC	76mm, 68mm, 27mm/ RAL9016M	165MM / RAL9016M	Frosted Glass. Handle on Lower Left
17	D	SINGLE TILT TURN WINDOW - DOUBLE PANE	UNILUX	ALUICLAD WOOD - MODERNLINE WCIRCUMFERENTIAL-FRAME GROOVES 5mm.23mm	3'-0"	5'-0"	36.00"	60.00"	0/0	-	2'-6"	7'-6"	RAL9016M - TRAFFIC WHITE MATT	PINE 137 TRANSPARENT MATT	LEFT	NONE	No	YES	W1	TBD		BY GC	76mm, 47mm, 27mm/ RAL9016M	110MM / RA9016M	
18	D	SINGLE TILT TURN WINDOW - DOUBLE PANE	UNILUX	ALUICLAD WOOD - MODERNLINE WCIRCUMFERENTIAL-FRAME GROOVES 5mm.23mm	3'-0"	5'-0"	36.00"	60.00"	0/0	-	2'-6"	7'-6"	RAL9016M - TRAFFIC WHITE MATT	PINE 137 TRANSPARENT MATT	RIGHT	NONE		YES	W1	TBD		BY GC	76mm, 47mm, 27mm/ RAL9016M	110MM / RA9016M	

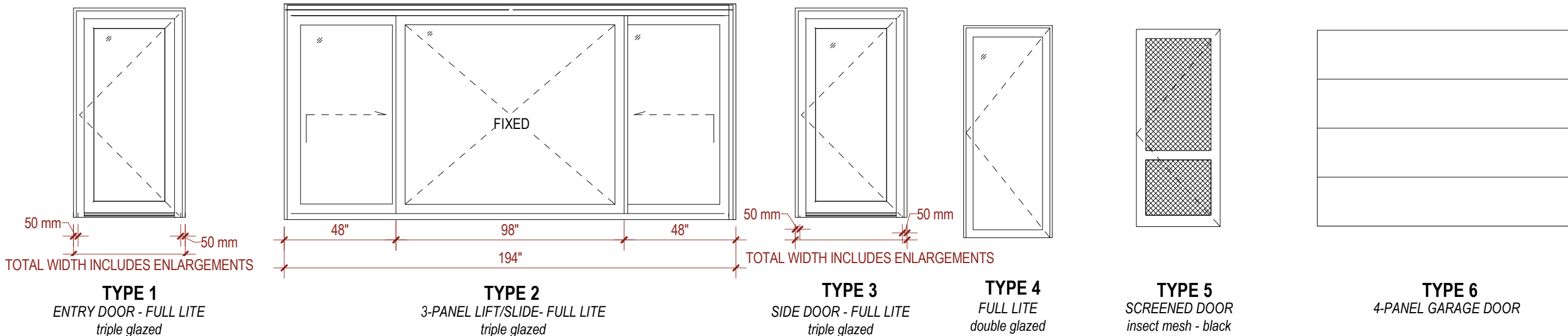
EXTERIOR DOOR SCHEDULE

MARK	TYPE	DESCRIPTION	MANUFACTURER	MODEL	WIDTH (Includes Enl.)	HEIGHT	WIDTH (In. Includes Enl.)	HEIGHT (In.)	SILL HEIGHT	T.O. DOOR	WOOD ONLY ENLARGEMENT L/R	FINISH EXTERIOR	FINISH INTERIOR	HINGE SIDE (as seen from interior)	OPENING DIRECTION	MUNTIN STYLE	SAFETY GLASS	INSECT SCREEN	HARDWARE SET	HEAD FLASHING PROFILE	COMMENTS
1.0	1	ENTRY DOOR - FULL LITE - TRIPLE PANE	UNILUX	ALUICLAD WOOD - MODERNLINE	3'-11"	7'-3"	47.00"	87.00"	0'-3"	7'-6"	50 MM / 50 MM	RAL5011MS - STEEL BLUE MATT TEXTURED	PINE 137 TRANSPARENT MATT	RIGHT	INWARD	NONE	Yes	N/A	W3	76mm, 47mm, 27mm/ RAL9016M	
3.0	2	LIFT + SLIDE - FULL LITE TRIPLE PANE 3 PANEL	UNILUX	ALUICLAD WOOD - MODERNLINE	16'-2"	7'-6"	194.00"	90.00"	0'-0"	7'-6"	0/0	RAL9016M - TRAFFIC WHITE MATT	PINE 137 TRANSPARENT MATT	N/A	PANELS SLIDE INWARDS	NONE	Yes	YES	W4	76mm, 47mm, 27mm/ RAL9016M	
5.0	3	SIDE ENTRY DOOR - FULL LITE - TRIPLE PANE	UNILUX	ALUICLAD WOOD - MODERNLINE	3'-11"	7'-3"	47.00"	87.00"	0'-3"	7'-6"	50 MM / 50 MM	RAL5011MS - STEEL BLUE MATT TEXTURED	PINE 137 TRANSPARENT MATT	RIGHT	INWARD	NONE	Yes	N/A	W3	76mm, 47mm, 27mm/ RAL9016M	
14.0	5	SCREEN DOOR - WOOD FRAMED HINGED DOOR	CUSTOM	CUSTOM-STILE AND RAIL/SIZE TO MATCH ADJACENT PORCH FRAMING	3'-9 5/32"	6'-9 3/4"	45.17"	81.75"				CEDAR TO MATCH SIDING	CEDAR TO MATCH SIDING	RIGHT	OUT	NONE		YES	TBD		By GC. Confirm with client
14.1	5	SCREEN DOOR - WOOD FRAMED HINGED DOOR	CUSTOM	CUSTOM-STILE AND RAIL/SIZE TO MATCH ADJACENT PORCH FRAMING	3'-8 13/32"	6'-9 3/4"	44.42"	81.75"				CEDAR TO MATCH SIDING	CEDAR TO MATCH SIDING	LEFT	OUT	NONE		YES	TBD		By GC. Confirm with client
24.0	4	GARAGE ENTRY DOOR - FULL LITE DOUBLE PAN	THERMATRU	SMOOTHSTAR	3'-0"	7'-6"	36.00"	90.00"	0'-0"	7'-6"		RAL5011MS - STEEL BLUE MATT TEXTURED	TBD by client	RIGHT	OUT	NONE		NO	W5	76mm, 47mm, 27mm/ RAL9016M	
24.1	6	OVERHEAD GARAGE DOOR	CHI	OVERLAY CARRIAGE HOUSE - TBD by Client	9'-0"	7'-0"	108.00"	84.00"	0'-0"	7'-0"	0/0	RAL9016M - TRAFFIC WHITE MATT	TBD by client	N/A	N/A	NONE	No	N/A	TBD	76mm, 47mm, 27mm/ RAL9016M	Order Primer paint as supplier recommendation,final finish to be applied on site by GC
24.2	6	OVERHEAD GARAGE DOOR	CHI	OVERLAY CARRIAGE HOUSE - TBD by Client	9'-0"	7'-0"	108.00"	84.00"	0'-0"	7'-0"	0/0	RAL9016M - TRAFFIC WHITE MATT	TBD by client	N/A	N/A	NONE	No	N/A	TBD	76mm, 47mm, 27mm/ RAL9016M	Order Primer paint as supplier recommendation,final finish to be applied on site by GC

WINDOW TYPES (AS SEEN FROM INTERIOR. SEE SCHEDULE FOR OPENING DIRECTIONS)



EXTERIOR DOOR TYPES (AS SEEN FROM INTERIOR. SEE SCHEDULE FOR OPENING DIRECTIONS)



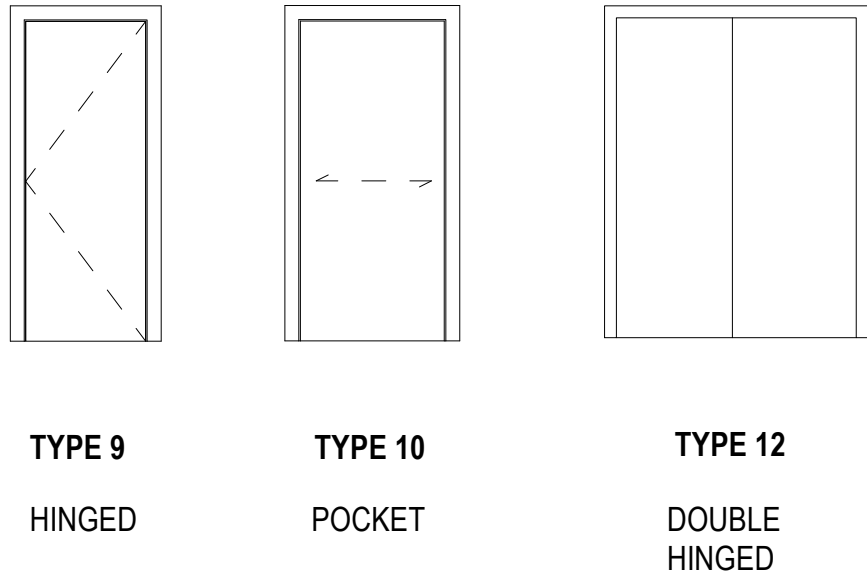
HARDWARE SET SCHEDULE

SET	DESCRIPTION	MANUFACTURER	MODEL	LOCKSET FUNCTION	TRACK	HINGES	FINISH	COMMENTS
W1	Window Handle	UNILUX	Angular Comfort Shape	n/a	n/a	Concealed	Stainless Steel	
W2	Window Handle - PVC	UNILUX	Basic PVC Handle	n/a	n/a	Concealed Hinge	White	
W3	Side/Entry Door Handle	UNILUX	Angular Comfort Shape -Set 4012	Keyed Alike - Multi Point Lockset w/ Hooks and Bolts (MFVA) cylinder by Mfg.	n/a	HINGE, Exposed Hinges - Caps To Match Handle Finish	Stainless Steel	Keyed Alike
W4	Lift & Slide Door Handle	UNILUX	Standard Lift + Slide Handle	Keyed Alike	n/a	Manufacturer Spec.	Stainless Steel	
W5	Garage Hinged Door Handle	Thermatru or Sim.	Forté Lever	Keyed Alike	n/a	Exposed	Brushed Nickel	
W6	Bed & Bath Knob	Schlage	Bowery	Privacy	n/a			
W7	Hall & Closet Knob	Schlage	Bowery	Passage	n/a			
W8	Pocket/Sliding Door Bed & Bath Pull	Schlage	Pocket Door Lock - Model: 991-619	Privacy	Brosco Catalog Johnson Series 1500			
W9	Pocket/Sliding Door Hall & Closet Pull	Schlage	Pocket Door Pull - Model 990-619	Passage	Brosco Catalog Johnson Series 1500			

INTERIOR DOOR SCHEDULE

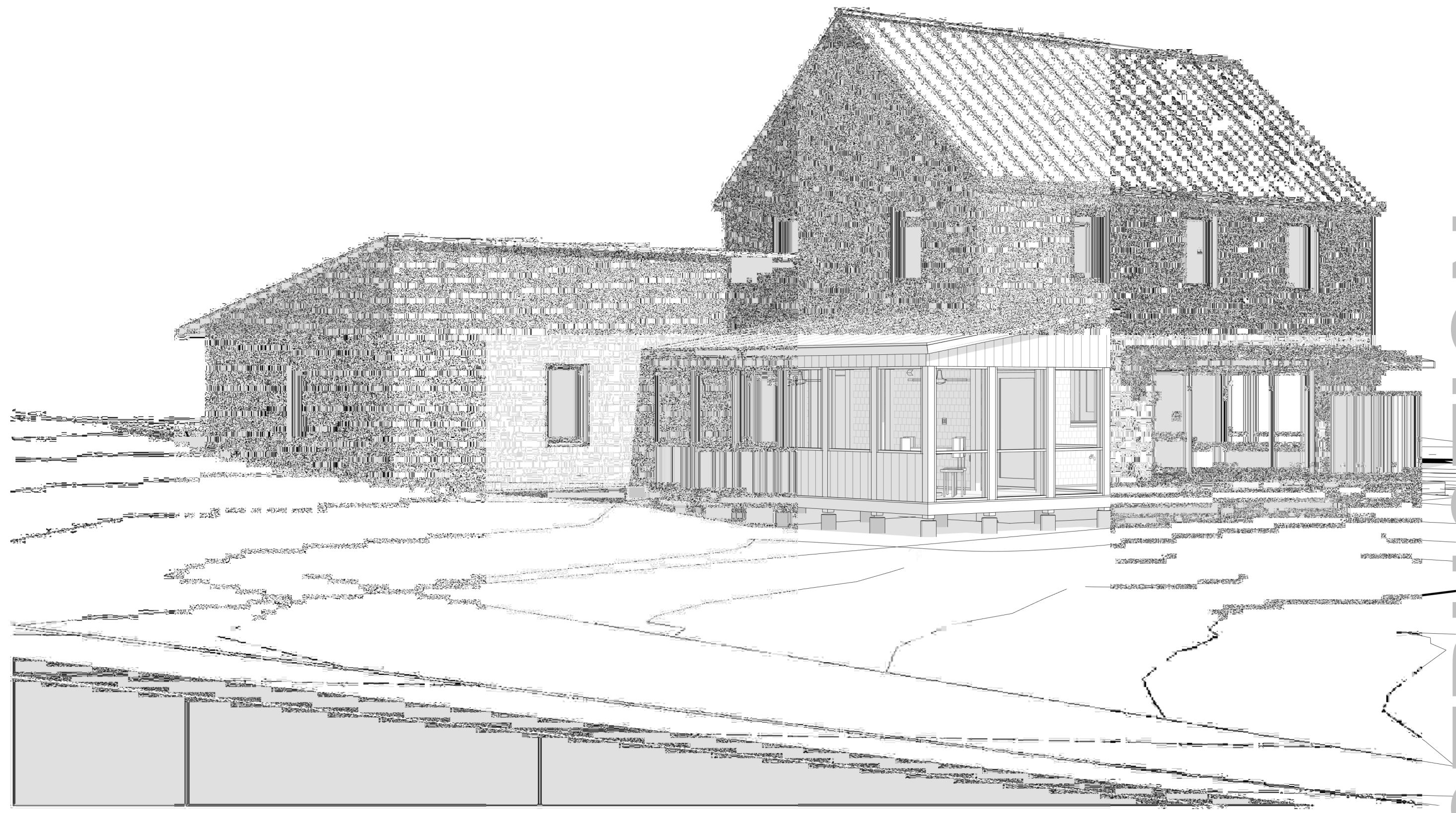
MARK	TYPE	DESCRIPTION	MANUFACTURER	MODEL	FINISH	WIDTH	HEIGHT	THICKNESS	HDWR SET	COMMENTS
6.1		Framed Opening	NA	NA	NA	3'-6"	7'-0"	0'-0"	(none)	
7.1	9	Single Door Hinged Solid Core	Brosco (or approved EQ.)	1-3/8" Flush Panel	Primed	3'-0"	7'-0"	0'-1 3/8"	W7	
8.1	12	Double Door Hinged Solid Core	Brosco (or approved EQ.)	1-3/8" Flush Panel	Primed	4'-0"	7'-0"	0'-1 3/8"	W7	
9.1	9	Single Door Hinged Solid Core	Brosco (or approved EQ.)	1-3/8" Flush Panel	Primed	3'-0"	7'-0"	0'-1 3/8"	W7	
9.2	9	Single Door Hinged Solid Core	Brosco (or approved EQ.)	1-3/8" Flush Panel	Primed	3'-0"	7'-0"	0'-1 3/8"	W7	
11.1	10	Single Door Pocket Solid Core	Brosco (or approved EQ.)	1-3/8" Flush Panel	Primed	3'-0"	7'-0"	0'-1 3/8"	W6	
12.1	9	Single Door Hinged Solid Core	Brosco (or approved EQ.)	1-3/8" Flush Panel	Primed	3'-0"	7'-0"	0'-1 3/8"	W7	
12.2	10	Single Door Pocket Solid Core	Brosco (or approved EQ.)	1-3/8" Flush Panel	Primed	2'-6"	7'-0"	0'-1 3/8"	W6	
13.1	10	Single Door Pocket Solid Core	Brosco (or approved EQ.)	1-3/8" Flush Panel	Primed	2'-8"	7'-0"	0'-1 3/8"	W6	
18.1	9	Single Door Hinged Solid Core	Brosco (or approved EQ.)	1-3/8" Flush Panel	Primed	3'-0"	7'-0"	0'-1 3/8"	W6	
18.2	12	Double Door Hinged Solid Core	Brosco (or approved EQ.)	1-3/8" Flush Panel	Primed	4'-0"	7'-0"	0'-1 3/8"	W7	
19.1	9	Single Door Hinged Solid Core	Brosco (or approved EQ.)	1-3/8" Flush Panel	Primed	3'-0"	7'-0"	0'-1 3/8"	W6	
20.1	9	Single Door Hinged Solid Core	Brosco (or approved EQ.)	1-3/8" Flush Panel	Primed	3'-0"	7'-0"	0'-1 3/8"	W6	
20.2	9	Single Door Hinged Solid Core	Brosco (or approved EQ.)	1-3/8" Flush Panel	Primed	3'-0"	7'-0"	0'-1 3/8"	W7	
21.1	9	Single Door Hinged Solid Core	Brosco (or approved EQ.)	1-3/8" Flush Panel	Primed	3'-0"	7'-0"	0'-1 3/8"	W6	
21.2	9	Single Door Hinged Solid Core	Brosco (or approved EQ.)	1-3/8" Flush Panel	Primed	3'-0"	7'-0"	0'-1 3/8"	W7	
22.1	9	Single Door Hinged Solid Core	Brosco (or approved EQ.)	1-3/8" Flush Panel	Primed	3'-0"	7'-0"	0'-1 3/8"	W6	
22.2	9	42" Hinged Glass Shower Door	Dreamline	D1300672-01		2'-6"	7'-0"	0'-0 15/32"	(none)	Confirm with Client
22.3	9	Single Door Hinged Solid Core	Brosco (or approved EQ.)	1-3/8" Flush Panel	Primed	1'-8"	7'-0"	0'-1 3/8"	(none)	
23.1	E	Bi-Fold Door - Flush Panel - 1-3/8" Solid Procore	Brosco (or approved EQ.)	B-2FD		2'-3"	6'-8"	0'-1 3/8"	W6	

INTERIOR DOOR TYPES (SEE SCHEDULE FOR OPENING DIRECTIONS)





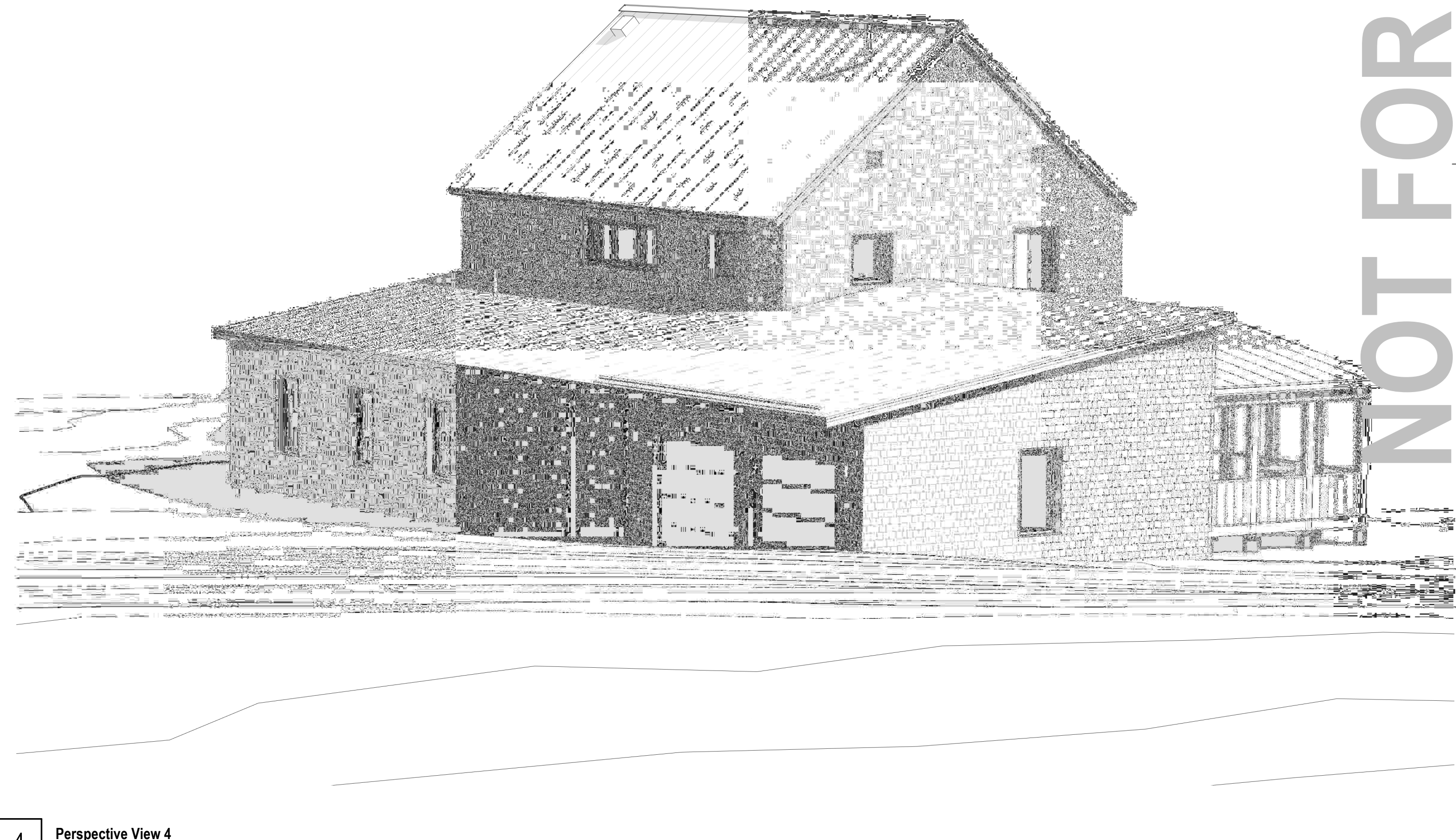
1 Perspective View 1



2 Perspective View 2



3 Perspective View 3



4 Perspective View 4

NOT FOR CONSTRUCTION

PERSPECTIVES

REVISIONS:

No.	Description	Date

DATE: 07/17/2025

ISSUE: PERMITTING SET

SCALE:

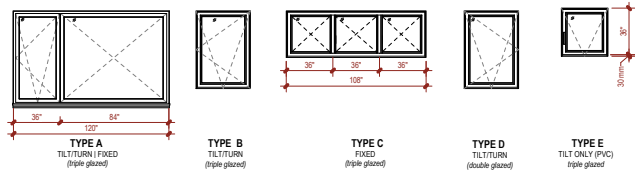
WINDOWS & DOORS

WINDOW SCHEDULE																										
MARK	TYPE	DESCRIPTION	MANUFACTURER	MODEL	WIDTH (includes Enl.)	HEIGHT (includes Enl.)	WIDTH (in. includes Enl.)	HEIGHT (in. includes Enl.)	ENL. L/R	BILL CONNECTOR BELOW	SILL HEIGHT	T.O. WINDOW	FINISH EXTERIOR	FINISH INTERIOR	HINGE SIDE (as seen from interior)	MUNTIN STYLE	SAFETY GLASS	INSECT SCREEN	HARDWARE	INT. WINDOW SILL	EXT. EXTENSION JAMBS	SHADING	HEAD FLASHING PROFILE	SILL FLASHING PROFILE	COMMENTS	
1	B	SINGLE TILT TURN WINDOW - TRIPLE PANE	UNILUX	ALUCAD WOOD - MODERNLINE WICRUMFERENTIAL-FRAME GROOVES 5mm/23mm	3'-6"	3'-11"	42.00"	47.00"	0/0	-	3'-7"	7'-6"	RAL5016M - TRAFFIC WHITE MATT	PINE 137 TRANSPARENT MATT	LEFT	NONE	Yes	W1	Stained Grade Hardwood	WD-04	BY GC		76mm, 68mm, 27mm RAL5016M	165MM / RAL5016M		
2	A	2 PCE MALLED TLT TURNWED WINDOW - TRIPLE PANE	UNILUX	ALUCAD WOOD - MODERNLINE WICRUMFERENTIAL-FRAME GROOVES 5mm/23mm	10'-0"	6'-0"	120.00"	72.00"	0/0	-	7'-6"	7'-6"	RAL5016M - TRAFFIC WHITE MATT	PINE 137 TRANSPARENT MATT	LEFT / FIXED	NONE	Yes	W1	Stained Grade Hardwood	WD-04	BY GC		76mm, 68mm, 27mm RAL5016M	165MM / RAL5016M		
3	B	SINGLE TILT TURN WINDOW - TRIPLE PANE	UNILUX	ALUCAD WOOD - MODERNLINE WICRUMFERENTIAL-FRAME GROOVES 5mm/23mm	3'-6"	5'-0"	42.00"	60.00"	0/0	-	2'-6"	7'-6"	RAL5016M - TRAFFIC WHITE MATT	PINE 137 TRANSPARENT MATT	LEFT	NONE	Yes	W1	Stained Grade Hardwood	WD-04	BY GC		76mm, 68mm, 27mm RAL5016M	165MM / RAL5016M		
4	B	SINGLE TILT TURN WINDOW - TRIPLE PANE	UNILUX	ALUCAD WOOD - MODERNLINE WICRUMFERENTIAL-FRAME GROOVES 5mm/23mm	3'-0"	5'-0"	36.00"	60.00"	0/0	-	2'-6"	7'-6"	RAL5016M - TRAFFIC WHITE MATT	PINE 137 TRANSPARENT MATT	RIGHT	NONE	Yes	W1	Stained Grade Hardwood	WD-04	BY GC		76mm, 68mm, 27mm RAL5016M	165MM / RAL5016M		
5	B	SINGLE TILT TURN WINDOW - TRIPLE PANE	UNILUX	ALUCAD WOOD - MODERNLINE WICRUMFERENTIAL-FRAME GROOVES 5mm/23mm	3'-0"	5'-0"	36.00"	60.00"	0/0	-	2'-6"	7'-6"	RAL5016M - TRAFFIC WHITE MATT	PINE 137 TRANSPARENT MATT	RIGHT	NONE	Yes	W1	Stained Grade Hardwood	WD-04	BY GC		76mm, 68mm, 27mm RAL5016M	165MM / RAL5016M		
6	B	SINGLE TILT TURN WINDOW - TRIPLE PANE	UNILUX	ALUCAD WOOD - MODERNLINE WICRUMFERENTIAL-FRAME GROOVES 5mm/23mm	3'-0"	5'-0"	36.00"	60.00"	0/0	-	2'-6"	7'-6"	RAL5016M - TRAFFIC WHITE MATT	PINE 137 TRANSPARENT MATT	RIGHT	NONE	Yes	W1	Stained Grade Hardwood	WD-04	BY GC		76mm, 68mm, 27mm RAL5016M	165MM / RAL5016M		
7	B	SINGLE TILT TURN WINDOW - TRIPLE PANE	UNILUX	ALUCAD WOOD - MODERNLINE WICRUMFERENTIAL-FRAME GROOVES 5mm/23mm	3'-6"	5'-0"	42.00"	60.00"	0/0	-	2'-5 1/4"	7'-5 1/4"	RAL5016M - TRAFFIC WHITE MATT	PINE 137 TRANSPARENT MATT	RIGHT	NONE	Yes	W1	Stained Grade Hardwood	WD-04	BY GC		76mm, 68mm, 27mm RAL5016M	165MM / RAL5016M		
8	B	SINGLE TILT TURN WINDOW - TRIPLE PANE	UNILUX	ALUCAD WOOD - MODERNLINE WICRUMFERENTIAL-FRAME GROOVES 5mm/23mm	3'-6"	5'-0"	42.00"	60.00"	0/0	-	2'-5 1/4"	7'-5 1/4"	RAL5016M - TRAFFIC WHITE MATT	PINE 137 TRANSPARENT MATT	RIGHT	NONE	Yes	W1	Stained Grade Hardwood	WD-04	BY GC		76mm, 68mm, 27mm RAL5016M	165MM / RAL5016M		
9	B	SINGLE TILT TURN WINDOW - TRIPLE PANE	UNILUX	ALUCAD WOOD - MODERNLINE WICRUMFERENTIAL-FRAME GROOVES 5mm/23mm	3'-6"	5'-0"	42.00"	60.00"	0/0	-	2'-5 1/4"	7'-5 1/4"	RAL5016M - TRAFFIC WHITE MATT	PINE 137 TRANSPARENT MATT	RIGHT	NONE	Yes	W1	Stained Grade Hardwood	WD-04	BY GC		76mm, 68mm, 27mm RAL5016M	165MM / RAL5016M		
10	B	SINGLE TILT TURN WINDOW - TRIPLE PANE	UNILUX	ALUCAD WOOD - MODERNLINE WICRUMFERENTIAL-FRAME GROOVES 5mm/23mm	3'-6"	5'-0"	42.00"	60.00"	0/0	-	2'-5 1/4"	7'-5 1/4"	RAL5016M - TRAFFIC WHITE MATT	PINE 137 TRANSPARENT MATT	RIGHT	NONE	Yes	W1	Stained Grade Hardwood	WD-04	BY GC		76mm, 68mm, 27mm RAL5016M	165MM / RAL5016M		
11	B	SINGLE TILT TURN WINDOW - TRIPLE PANE	UNILUX	ALUCAD WOOD - MODERNLINE WICRUMFERENTIAL-FRAME GROOVES 5mm/23mm	3'-6"	5'-0"	42.00"	60.00"	0/0	-	2'-5 1/4"	7'-5 1/4"	RAL5016M - TRAFFIC WHITE MATT	PINE 137 TRANSPARENT MATT	RIGHT	NONE	Yes	W1	Stained Grade Hardwood	WD-04	BY GC		76mm, 68mm, 27mm RAL5016M	165MM / RAL5016M		
12	B	SINGLE TILT TURN WINDOW - TRIPLE PANE	UNILUX	ALUCAD WOOD - MODERNLINE WICRUMFERENTIAL-FRAME GROOVES 5mm/23mm	3'-6"	5'-0"	42.00"	60.00"	0/0	-	2'-5 1/4"	7'-5 1/4"	RAL5016M - TRAFFIC WHITE MATT	PINE 137 TRANSPARENT MATT	RIGHT	NONE	Yes	W1	Stained Grade Hardwood	WD-04	BY GC		76mm, 68mm, 27mm RAL5016M	165MM / RAL5016M		
13	B	SINGLE TILT TURN WINDOW - TRIPLE PANE	UNILUX	ALUCAD WOOD - MODERNLINE WICRUMFERENTIAL-FRAME GROOVES 5mm/23mm	3'-6"	5'-0"	42.00"	60.00"	0/0	-	2'-5 1/4"	7'-5 1/4"	RAL5016M - TRAFFIC WHITE MATT	PINE 137 TRANSPARENT MATT	RIGHT	NONE	Yes	W1	Stained Grade Hardwood	WD-04	BY GC		76mm, 68mm, 27mm RAL5016M	165MM / RAL5016M		
14	C	3 PCE MALLED FIXED WINDOW - TRIPLE PANE	UNILUX	ALUCAD WOOD - MODERNLINE WICRUMFERENTIAL-FRAME GROOVES 5mm/23mm	6'-0"	3'-0"	108.00"	36.00"	0/0	-	6'-5 1/4"	7'-5 1/4"	RAL5016M - TRAFFIC WHITE MATT	PINE 137 TRANSPARENT MATT	FIXED / FIXED / FIXED	NONE	Yes	NA	Stained Grade Hardwood	WD-04	BY GC		76mm, 68mm, 27mm RAL5016M	165MM / RAL5016M		
15	E	SINGLE TILT ONLY WINDOW - TRIPLE PANE	UNILUX	ALUCAD PVC - ISOSTAR	3'-0"	3'-1 3/8"	36.00"	37.18"	0/0	30mm	6'-4 1/8"	7'-5 1/4"	RAL5016M - TRAFFIC WHITE MATT	WHITE	TOP	NONE	Yes	W2	Tie		Tie	BY GC		76mm, 68mm, 27mm RAL5016M	165MM / RAL5016M	Frosted Glass. Handle on Lower Left
17	D	SINGLE TILT TURN WINDOW - DOUBLE PANE	UNILUX	ALUCAD WOOD - MODERNLINE WICRUMFERENTIAL-FRAME GROOVES 5mm/23mm	3'-0"	5'-0"	36.00"	60.00"	0/0	-	2'-6"	7'-6"	RAL5016M - TRAFFIC WHITE MATT	PINE 137 TRANSPARENT MATT	LEFT	NONE	Yes	W1	TBD	TBD	BY GC		76mm, 47mm, 27mm RAL5016M	110MM / RAL5016M		
18	D	SINGLE TILT TURN WINDOW - DOUBLE PANE	UNILUX	ALUCAD WOOD - MODERNLINE WICRUMFERENTIAL-FRAME GROOVES 5mm/23mm	3'-0"	5'-0"	36.00"	60.00"	0/0	-	2'-6"	7'-6"	RAL5016M - TRAFFIC WHITE MATT	PINE 137 TRANSPARENT MATT	RIGHT	NONE	Yes	W1	TBD	TBD	BY GC		76mm, 47mm, 27mm RAL5016M	110MM / RAL5016M		

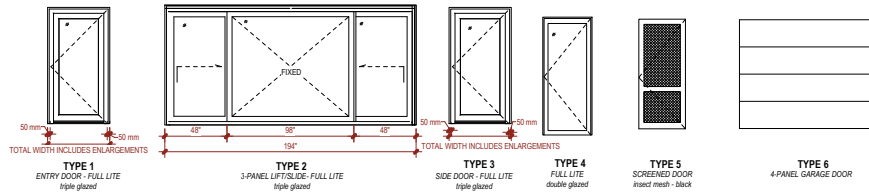
EXTERIOR DOOR SCHEDULE

MARK	TYPE	DESCRIPTION	MANUFACTURER	MODEL	WIDTH (includes Enl.)	HEIGHT	WIDTH (in. includes Enl.)	HEIGHT (in.)	SILL HEIGHT	T.O. DOOR	WOOD ONLY ENLARGEMENT L/R	FINISH EXTERIOR	FINISH INTERIOR	HINGE SIDE (as seen from interior)	OPENING DIRECTION	MUNTIN STYLE	SAFETY GLASS	INSECT SCREEN	HARDWARE SET	HEAD FLASHING PROFILE	COMMENTS
10	1	ENTRY DOOR - FULL LITE - TRIPLE PANE	UNILUX	ALUCAD WOOD - MODERNLNE	3'-11"	7'-3"	47.00"	87.00"	0'-2"	7'-6"	50 MM / 50 MM	RAL5016M - STEEL BLUE MATT TEXTURED	PINE 137 TRANSPARENT MATT	RIGHT	INWARD	NONE	Yes	N/A	W3	76mm, 47mm, 27mm RAL5016M	
3	2	LIFT + SLIDE - FULL LITE TRIPLE PANE 3 PANEL	UNILUX	ALUCAD WOOD - MODERNLNE	16'-2"	7'-6"	194.00"	90.00"	0'-0"	7'-6"	0/0	RAL5016M - TRAFFIC WHITE MATT	PINE 137 TRANSPARENT MATT	N/A	PANELS SLIDE INWARDS	NONE	Yes	YES	W4	76mm, 47mm, 27mm RAL5016M	
5.0	3	SIDE ENTRY DOOR - FULL LITE - TRIPLE PANE	UNILUX	ALUCAD WOOD - MODERNLNE	3'-11"	7'-3"	47.00"	87.00"	0'-2"	7'-6"	50 MM / 50 MM	RAL5016M - STEEL BLUE MATT TEXTURED	PINE 137 TRANSPARENT MATT	RIGHT	INWARD	NONE	Yes	N/A	W3	76mm, 47mm, 27mm RAL5016M	
14.0	5	SCREEN DOOR - WOOD FRAMED HINGED DOOR	CUSTOM	CUSTOM STYLE AND RAILSIZE TO MATCH ADJACENT PORCH FRAMING	3'-8 5/32"	6'-9 3/4"	45.17"	81.75"				CEDAR TO MATCH SIDING	CEDAR TO MATCH SIDING	RIGHT	OUT	NONE	Yes	YES	TBD		By GC, Confirm with client
14.1	5	SCREEN DOOR - WOOD FRAMED HINGED DOOR	CUSTOM	CUSTOM STYLE AND RAILSIZE TO MATCH ADJACENT PORCH FRAMING	3'-8 1/32"	6'-9 3/4"	44.42"	81.75"				CEDAR TO MATCH SIDING	CEDAR TO MATCH SIDING	LEFT	OUT	NONE	Yes	YES	TBD		By GC, Confirm with client
24.0	4	CARRIAGE DOOR - FULL LITE DOUBLE PAN	THORNBURG		7'-0"	7'-0"	84.00"	84.00"	0'-0"	7'-6"	0/0	RAL5016M - STEEL BLUE MATT TEXTURED	TBD by client	RIGHT	OUT	NONE	Yes	W1	TBD	76mm, 47mm, 27mm RAL5016M	
24.1	6	OVERHEAD GARAGE DOOR	CHI	OVERLAY CARRIAGE HOUSE - TBD by Client	9'-0"	7'-0"	108.00"	84.00"	0'-0"	7'-0"	0/0	RAL5016M - TRAFFIC WHITE MATT	TBD by client	N/A	N/A	NONE	No	N/A	TBD	76mm, 47mm, 27mm RAL5016M	Order Primer paint as supplier recommendation, final finish to be applied on site by GC.
24.2	6	OVERHEAD GARAGE DOOR	CHI	OVERLAY CARRIAGE HOUSE - TBD by Client	9'-0"	7'-0"	108.00"	84.00"	0'-0"	7'-0"	0/0	RAL5016M - TRAFFIC WHITE MATT	TBD by client	N/A	N/A	NONE	No	N/A	TBD	76mm, 47mm, 27mm RAL5016M	Order Primer paint as supplier recommendation, final finish to be applied on site by GC.

WINDOW TYPES (AS SEEN FROM INTERIOR. SEE SCHEDULE FOR OPENING DIRECTIONS)



EXTERIOR DOOR TYPES (AS SEEN FROM INTERIOR. SEE SCHEDULE FOR OPENING DIRECTIONS)



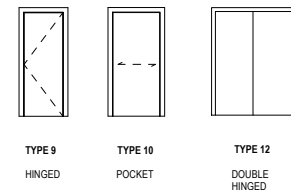
HARDWARE SET SCHEDULE

SET	DESCRIPTION	MANUFACTURER	MODEL	LOCKSET FUNCTION	TRACK	HINGES	FINISH	COMMENTS
W1	Window Handle	UNILUX	Angular Comfort Shape	via	Concealed		Stainless Steel	
W2	Window Handle - PVC	UNILUX	Basic PVC Handle	via	Concealed Hinge		White	
W3	Side Entry Door Handle	UNILUX	Angular Comfort Shape - Set 4012	Keyed Alike - Multi-Point Lockset w/ Hooks and Bolts (MPV) cylinder by Mfg.	via	HINGE, Exposed Hinges - Caps To Match Handle Finish	Stainless Steel	Keyed Alike
W4	Lift & Slide Door Handle	UNILUX	Standard Lift + Slide Handle	Keyed Alike	via	Manufacturer Spec.	Stainless Steel	
W5	Garage Hinged Door Handle	Thornburg or Sm.	Front Lever	Keyed Alike	via	Exposed	Brushed Nickel	
W6	Bed & Bath Knob	Schlage	Bowery	Privacy	via			
W7	Hall & Closet Knob	Schlage	Bowery	Passage	via			
W8	Pocket/Slide Door Bed & Bath Pull	Schlage	Pocket Door Lock - Model 991-619	Privacy	via			
W9	Pocket/Slide Door Hall & Closet Pull	Schlage	Pocket Door Pull - Model 990-619	Passage	via			

INTERIOR DOOR SCHEDULE

MARK	TYPE	DESCRIPTION	MANUFACTURER	MODEL	FINISH	WIDTH	HEIGHT	THICKNESS	HOWR SET	COMMENTS
6.1		Framed Opening	NA	NA	NA	3'-0"	7'-0"	0'-0"	(none)	
7.1	9	Single Door / Hinged / Solid Core	Broco (or approved EQ.)	1-3/8" Flush Panel	Primed	3'-0"	7'-0"	0'-1 3/8"	W7	
8.1	12	Double Door / Hinged / Solid Core	Broco (or approved EQ.)	1-3/8" Flush Panel	Primed	6'-0"	7'-0"	0'-1 3/8"	W7	
9.1	9	Single Door / Hinged / Solid Core	Broco (or approved EQ.)	1-3/8" Flush Panel	Primed	3'-0"	7'-0"	0'-1 3/8"	W7	
9.2	9	Single Door / Hinged / Solid Core	Broco (or approved EQ.)	1-3/8" Flush Panel	Primed	3'-0"	7'-0"	0'-1 3/8"	W7	
11.1	10	Single Door / Pocket / Solid Core	Broco (or approved EQ.)	1-3/8" Flush Panel	Primed	3'-0"	7'-0"	0'-1 3/8"	W6	
12.1	9	Single Door / Hinged / Solid Core	Broco (or approved EQ.)	1-3/8" Flush Panel	Primed	3'-0"	7'-0"	0'-1 3/8"	W7	
12.2	10	Single Door / Pocket / Solid Core	Broco (or approved EQ.)	1-3/8" Flush Panel	Primed	2'-6"	7'-0"	0'-1 3/8"	W6	
13.1	10	Single Door / Pocket / Solid Core	Broco (or approved EQ.)	1-3/8" Flush Panel	Primed	2'-8"	7'-0"	0'-1 3/8"	W6	
18.1	9	Single Door / Hinged / Solid Core	Broco (or approved EQ.)	1-3/8" Flush Panel	Primed	3'-0"	7'-0"	0'-1 3/8"	W6	
18.2	12	Double Door / Hinged / Solid Core	Broco (or approved EQ.)	1-3/8" Flush Panel	Primed	4'-0"	7'-0"	0'-1 3/8"	W7	
18.1	9	Single Door / Hinged / Solid Core	Broco (or approved EQ.)	1-3/8" Flush Panel	Primed	3'-0"	7'-0"	0'-1 3/8"	W6	
20.1	9	Single Door / Hinged / Solid Core	Broco (or approved EQ.)	1-3/8" Flush Panel	Primed	3'-0"	7'-0"	0'-1 3/8"	W6	
20.2	9	Single Door / Hinged / Solid Core	Broco (or approved EQ.)	1-3/8" Flush Panel	Primed	3'-0"	7'-0"	0'-1 3/8"	W7	
21.1	9	Single Door / Hinged / Solid Core	Broco (or approved EQ.)	1-3/8" Flush Panel	Primed	3'-0"	7'-0"	0'-1 3/8"	W6	
21.2	9	Single Door / Hinged / Solid Core	Broco (or approved EQ.)	1-3/8" Flush Panel	Primed	3'-0"	7'-0"	0'-1 3/8"	W7	
22.1	9	Single Door / Hinged / Solid Core	Broco (or approved EQ.)	1-3/8" Flush Panel	Primed	3'-0"	7'-0"	0'-1 3/8"	W6	
22.2	9	42" Hinged Glass Shower Door	Dynarene	D1300672-01	Primed	2'-6"	7'-0"	0'-0 1/32"	(none)	Confirm with Client
22.3	9	Single Door / Hinged / Solid Core	Broco (or approved EQ.)	1-3/8" Flush Panel	Primed	1'-8"	7'-0"	0'-1 3/8"	(none)	
23.1	E	In-Fold Door - Flush Panel - 1-3/8" Solid Picores	Broco (or approved EQ.)	B-2FD	Primed	2'-3"	6'-8"	0'-1 3/8"	W6	

INTERIOR DOOR TYPES (SEE SCHEDULE FOR OPENING DIRECTIONS)





Aluminum clad wood window overview

Live the way you are – naturally individual





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UNILUX

One brand. One promise.

The only thing modern-day windows have in common with their “ancestors” is their name. Good carpentry work and appearance alone is no longer enough, because energy efficiency, safety, and functionality standards have increased dramatically to meet today’s customer needs.

That’s why all UNILUX aluminum clad wood products are inhouse developments, demonstrating an extraordinary degree of product intelligence and complex engineering.

To ensure these masterpieces are not just available to a selected group of people, UNILUX produces them as series, enabling these unique aluminum clad wood products to be sold at prices which make top quality affordable.

UNILUX opening up perspectives.



All good things come in sixes:

The UNILUX brand advantages.

Brand advantage 1: Durability

Ever since its early days, UNILUX has always used the highest-quality materials. Down to the finest detail: instead of the inferior silicon, we use smooth glazing seals made from synthetic rubber. The high-quality workmanship and strict quality controls ensure you gain long-term enjoyment from your UNILUX window.

Brand advantage 2: Freedom of design

Some things are a matter of taste. Thus, you can choose from our three designs - LivingLine, ModernLine and DesignLine. And that's just the beginning. Every one of those models can be customized. From the choice of wood to the coloring - all RAL colors for aluminum and special wood colors up to the handles. And let's not forget: a wide variety of window shapes (they don't have to be rectangular, after all) and muntins upon request in four different lines. Variety right from the factory.

Brand advantage 3: Energy efficiency

UNILUX's solid construction style not only guarantees durability, but also helps save energy. In the standard version, each of our wood-aluminum windows has a „warm edge“ which forms the thermal separation between the glass panes. That provides better insulation values, more comfort in the vicinity of the window, and significantly less condensation in cold months. Heating costs can be further reduced in conjunction with a highly efficient triple-glazing.





Brand advantage 4: Safety

Sometimes a window's job is not just to keep out wind and rain, but also uninvited guests. That's why all UNILUX locking parts are made from high-quality materials. Mushroom pins are also a standard feature of all our aluminum clad wood window fittings. For those who want even more security, we offer maximum protection with our SAFE packages.

Read more on page 21.

Brand advantage 5: Service

UNILUX only works with expertly qualified window specialist retailers, located across the country with their own showrooms. Your regional UNILUX retailer will offer you detailed advice and assist you with your plans. It will also ensure prompt, correct installation, and will be available at any time if you have any service-related needs.

Brand advantage 6: Brand quality

Since 1955, UNILUX's philosophy has been: Only products of uncompromising quality must leave the factory. This saw our company become a recognized quality leader over the decades. Anyone who pays heed to the UNILUX logo can be certain of always receiving a "Made in Germany"-branded product.





Advantages of aluminum clad wood

Aluminum on the outside, pure wood on the inside – combined for generations.

Wood creates comfort – it is a feel-good material. Aluminum on the other hand, is a robust protective shield against the elements. Together, they form an aluminum clad wood product which lasts generations without the need for continuous maintenance.

The wood interior does not require UV protection in the form of coloring pigments in the finish. It can be used in its natural form (transparent stain) thanks to the aluminum shell. The aluminum shield firmly encases the wood, protecting it from the elements while still giving room to expand and contract and cope perfectly with temperature fluctuations.

UNILUX aluminum clad wood products:
the originals.

Aluminum Clad wood windows

Discover diversity.

No house is like any other. To help you design your window to your own taste, we offer you three different designs.

U_w-VALUE
0.83
W/m²K

U_w-VALUE
0.146
btu/h×ft²×°F

In the standard
version UNILUX
wood-aluminum
windows can achieve
a U_w-value of
up to 0.83.

Unilux DesignLine

The attractive way to save on energy costs (heating or cooling). The DesignLine aluminum clad wood window range combines architectural elegance and state-of-the-art energy efficiency. Uncompromising in terms of aesthetics, it is designed for high-quality residential buildings and condominium buildings.



Unilux ModernLine

Three glass panes with a thickness of nearly 50mm (2"), a custom-designed insulating core, thermally isolated spacers, special filling gas, and invisible coating on both sides improve insulation values by 46% compared to conventional windows.



Unilux LivingLine

Some things never need to change. The aluminum clad windows in the LivingLine series are so discreet that they fit harmoniously into any traditional architecture, and are very attractive when renovating older buildings as well.



Passive house Stars

The Passive House stands for healthy and comfortable living with high energy efficiency.

As a premium manufacturer of wood-aluminum windows, UNILUX has adapted the development of its product range to meet these requirements, because our wood-aluminum windows allow you to achieve passive house standards.

The core for more insulation

An additional insulating core in the window frame helps to achieve a better thermal insulation. In addition, the pine wood naturally provides a good insulation value. In this combination, the wood-aluminum windows can reach a U_w -value of 0.73. Thus, they can meet the strict criteria for passive house windows. This means that you automatically have to heat less.



Aluminum clad wood windows

DesignLine Privacy.

"My home is my castle." Just block the world out. Be undisturbed, footloose and fancy free. This is easy with the aluminum clad wood DesignLine Privacy window. Thanks to integrated blinds, you can create privacy at any time – even by remote control if you wish. Also save on energy compared to a roller-shutter or venetian blind box.

DesignLine Privacy

Advantages on 4 levels

1. Privacy

Discretion could not be more easily achieved. Nothing has to be built, mounted or improvised. The blinds move easily, via remote control if required.

2. Peace and quiet

Three or even four glass panes mounted some distance from one another enable unrivalled sound-proofing. Test it for yourself and pull the blind up: You'll see the cars but won't hear them.

3. Warmth

Roller-shutter or venetian-blind boxes are often energy guzzlers. Heat escapes and cold creeps in. DesignLine Privacy gets rid of this airlock. Since the blind is now part of the window, the boxes are no longer required.

4. Freedom of design

The integrated blind – with your choice of color – offers you a wide range of possibilities. As you don't require shutters, curtains or separately mounted blinds, your freedom of design is greater than ever before.

Try out more comfort. As an option to the standard chain cord, the blinds integrated into many windows* can now be operated by remote control from the comfort of your sofa, armchair or bed.

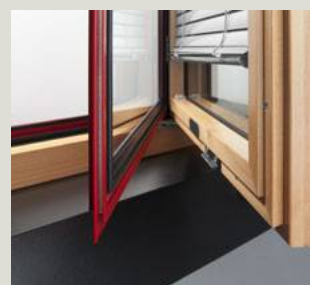
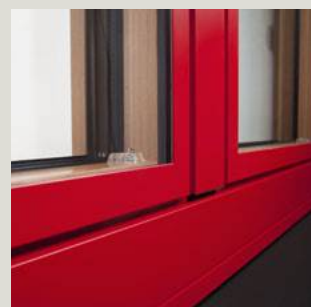


* Depending on the size of the window.



Sleek appearance

No frills, no gadgets. The DesignLine models stand for clear, puristic lines. Timeless window design.



Internal blind

The energy-efficient alternative to the box above the window. It can be easily adjusted to the sun's position via motor or chain. As it is located inside, it hardly gets dirty, either.

Easy to clean

The blind sits in front of the insulated glass unit, making the rare cleaning sessions a piece of cake. Simply open the sash, clean it, and you're done!

Aluminum clad wood windows frames for renovation

The smart way to renovate windows.

Window renovation can be so easy! Thanks to the renovation window frame from UNILUX, replacing obsolete windows is child's play. You don't even need to worry about plaster or wallpaper. Everything gets done cleanly and quickly.

Experienced installers manage that by simply removing the sashes of your old windows and cutting off the frame. Then they already have the groundwork laid for your new wood-aluminum window.

You can choose from all the many variants of a DesignLine window. And just like windows for new construction, you have all the different options for design available. For custom windows at lightning speed.

The decisive factor: The skill of installers matches the high quality of our windows. So you can be absolutely certain that your energy-saving DesignLine window with renovation window frames will have the same thermal insulation values as a DesignLine window in a new house. And plastering and wallpapering? They're just as much a thing of the past as masonry repair.

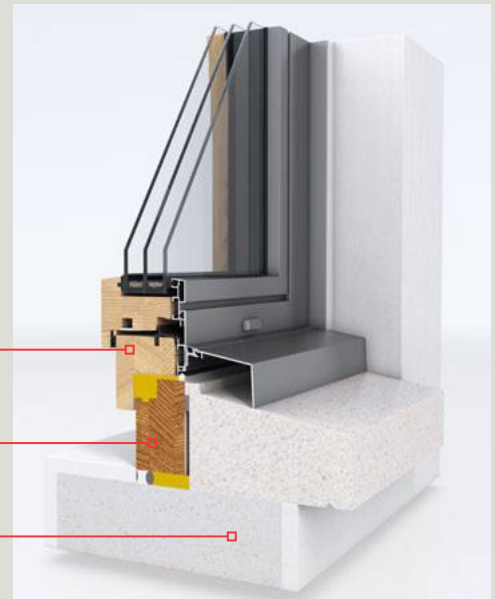
The renovation window frame from UNILUX – new windows, without the stress.



New windows, no muss, no fuss.

Clean insertion into the old window frame leaves the masonry and stucco intact, and interior plaster and wallpaper aren't affected either. Even an existing window sill can be cleanly integrated.

The new window fits harmoniously into the existing window opening, from both the visual and technical points of view.



**New renovation
window frame**

Old window frame

Masonry and stucco



Clean

The entire area is cleanly covered and taped before work begins. The old window sashes are removed, and the old frames cut off without leaving dust. They will be used as the foundation of the new window structure.

Safe

By stable anchoring into the frame and the masonry and by adding foam and insulation, our new windows aren't just visually attractive – they're also attractive when it comes to security and thermal insulation.

Fast

Once the new frame is inserted and anchored, the only thing left to do is simply to mount the new sashes. And then your room shines in a new light – without the mess, and without the stress.

Quality as a standard: the basic UNILUX advantages.

As you know from buying cars, some models look cheap at first glance. But upon closer examination, you are incredulous at all the extras charged by the manufacturer.

That's not the case at UNILUX. Our basic features in themselves are so extensive, that there is often no need for accessories. Each of our standard aluminum clad wood windows has the following special features:



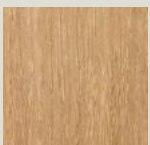
[Glazing seal

Silicon may be cheap, but it fades easily, is hard to clean, and susceptible to cracks and abrasion. UNILUX uses the better alternative: synthetic rubber, which is easy to clean, fade-resistant, long-lasting and hardly noticeable.



[Aluminum cladding slider couplings

Aluminum contracts or expands more than wood in cold or hot weather, creating tension on the frame. We prevent this from happening by mounting the aluminum cladding on slider couplings – similar to a rail system. This also ensures the wood is properly ventilated at all times.



[Superior-quality wood

Not all woods are the same. To guarantee a consistently high quality of materials, we use our own experienced wood purchasers, even in the most distant of supply countries. The same strict standards are applied during treatment – to ensure the wood has a long and healthy life.



[Embedded lock keepers

Impressive not only aesthetically, but also from a security perspective – due to being recessed compared to screwed-on locking parts. And the window frames are also easy to clean due to the fact that all the metal parts are recessed/embedded.



[Aluminum powder coating

"The exterior paint has chipped" is a phrase unfamiliar to UNILUX customers. Because our aluminum clad wood windows are made using aluminum powder coating, which has been tried and tested in the automotive industry. The result is highly robust paintwork able to withstand even the harshest of elements.



[Extra warmth: Triple glazing

Three panes are part of the standard fitting for UNILUX. This ensures improved thermal insulation and thus lower energy costs. Since the pane can have a thickness of 32 to 52 mm (1 1/4" to 2 1/16"), it can also be efficiently equipped with noise protection.

Extra perfect:

the UNILUX optional advantages.

Special circumstances require special solutions. That's why UNILUX offers exclusive added value when it comes to security, material protection and energy usage.

These additional benefits also give you the peace of mind of knowing you have the ultimate aluminum clad wood windows. Perfection, made by UNILUX.



[Added security: SAFE

In standard version, our windows and glazed doors already have secure mushroom-pin locks. For those who want even more security, we offer maximum protection with our SAFE packages. Choose between SAFE +, SAFE ++ and SAFE +++.



[Plus: Aneloxal coating

It's not just acid rain which can corrode metal. Salty sea air can also have aggressive, negative impacts up to 60 miles/100 kilometers inland – including on stainless steel. Pre-anodising, - the "aneloxal" process – effectively prevents corrosion. We are one of the very few manufacturers to use this form of coating at customers' requests, thereby ensuring UNILUX aluminum clad wood windows remain a symbol of durability, even in coastal areas.



[Glass competence

You can not only design UNILUX windows visually, our glass can also be completely customized to your needs. It's your choice: Noise protection, security, sun protection or a higher degree of thermal insulation - with UNILUX nothing is left to be desired.



[Wood-aluminum 0.7 advanced

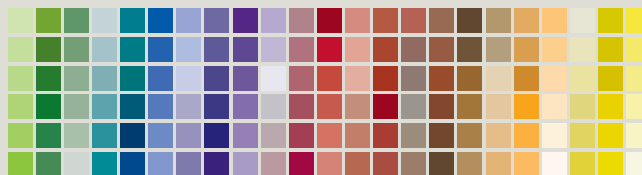
Wood-aluminum windows from UNILUX already have a good thermal insulation value in their standard version. For all those who want a special insulation, we build an additional insulating core in the window frame. This makes your window passive house compatible.

Freedom of design in terms of material and color.

How many different tastes are there? Around 2 million when it comes to wood and color. Because that's how many combination options you have for your individual UNILUX aluminum clad wood windows. Find out which wood species goes best with which color, and which pattern goes with the aluminum cladding.



RAL colors
Wood patterns
DB & metallic
colors
NCS colors



For interior design (= the wood variety and wood coating) there are 4 wood varieties and 200 colors available (covering RAL colors and wood glaze tones). You have even more options for the exterior design (= the aluminum covering). Here, you can choose from over 2,100 colors or decors (RAL, NCS, DB/Eloxal and white pigment colors as well as wood decors).



You love wood

Wood is a living material, so it's nice if you can incorporate it into your living space. UNILUX aluminum clad wood windows bring this vitality to your living room.



It's your choice

Even when it comes to wood colors, UNILUX always gives you the choice. Select from a wide variety of wood species, and make the most of the options for designing the wood's color scheme.





Eucalyptus Grandis



Larch



Pine



Oak



Choose from the following wood species: Pine, Oak, Larch and Eucalyptus Grandis, as well as 20 transparent or semi-transparent finishes.

Colors may vary due to printing.

Glass-competence.

UNILUX sets high standards in terms of glass, that is why every UNILUX window is fitted with 3-pane insulating glass as standard. But that alone is not enough for our engineers and developers. For all those who want more than just to design their windows, UNILUX offers various possibilities to upgrade their glass. However you decide, every UNILUX window is an example of groundbreaking glass competence.



[Thermal insulation

These standard UNILUX glasses achieve insulation values that are by no means commonplace for windows. If that's not

enough, you have the option to upgrade. You have the choice between SupraTherm, which achieves sensational insulation values. Or PrimaTherm 0.6 White - thanks to a new, invisible Low-e coating, you can use the energy from the sun's rays more effectively. More solar heat finds its way into the house. At the same time, this coating ensures that the cold stays outside.



[Safety glass VSG, P2A + P4A

At UNILUX you get the glass that is adapted to your security needs. Starting with ball-proof safety, which is nowadays in demand not only

in sports halls but also increasingly in private homes, up to the P4A glass, which withstands rough attacks, such as stone throwing or hammer blows. The tested safety glass is joined with an invisible high-tear-resistant film between two panes and ensures adhesion and tension in case the glass shatters. The security class can be further enhanced by increasing the number of plastic films and glass panes.



[Noise protection

One of the important tasks of a home is to ensure sleep and recuperation. Regrettably, the

noise pollution of our environment has greatly increased in the past. UNILUX offers the suitable glass for different noise sources - whether for buildings on busy roads or near discos and airports. UNILUX offers you high-quality glazing with improved sound insulation up to class 5, i.e. up to 45 dB (test value).



[Sun protection

Large window fronts bring brightness and atmosphere to our buildings. On the other

hand, rooms can heat up quickly as the sun shines on the generous window panes. To counteract this, UNILUX offers you sun protection glasses. The sun protection glass has two functions: In summer, it reduces solar radiation and thus reduces the heating of the building. In cool weather, the glass acts as a thermal protection and saves energy. The rays of the sun are reflected or absorbed by the solar protection glass without darkening the room.

Added security.

Protect your most valuable items. Burglars are risk-conscious people. They are quickly dissuaded once they realize the hurdles are too high. Thanks to sturdy profiles, anti-burglary fittings, lockable handles and special safety glass, UNILUX ensures that thieves think twice before attempting a burglary. Our windows and patio doors help to ward off suspicious characters.

The wood-aluminum windows from UNILUX already feature a mushroom pin in the standard version. With the SAFE packages you additionally reinforce the resistance of your windows against burglaries in three stages (+, ++ and +++). Thus you are always on the safe side with your windows.

STANDARD

Standard lock
Locking window handle

SAFE+

4-corner security lock
(Mushroom pin +
safety striker plate)

Window handle with locking
button

SAFE++

4-corner security lock
(Mushroom pin +
safety striker plate)

Window handle lockable

Drilling protection on gears

SAFE+++

Security lock all around
(hardware suitable for elements
of class RC2)

Window handle lockable

Drilling protection on gears

Of course for the highest security requirements we also offer the DIN EN-tested safety classes RC2 and RC2N. In this configuration, the UNILUX windows were tested intensively for you by neutral testing institutes.

RC2

Security lock all around
(hardware suitable for elements of class RC2)

Window handle lockable

Drilling protection on gears

P4A glazing

Tested according to DIN EN 1627-1630:2011

Tested glass connection (gluing the pane)

RC2 N

Security lock all around
(hardware suitable for elements of class RC2)

Window handle lockable

Drilling protection on gears

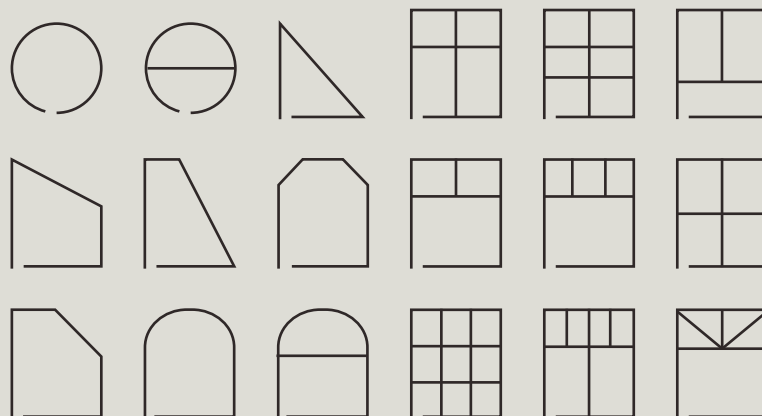
Any desired glass

Tested according to DIN EN 1627-1630:2011

Tested glass connection (gluing the pane)

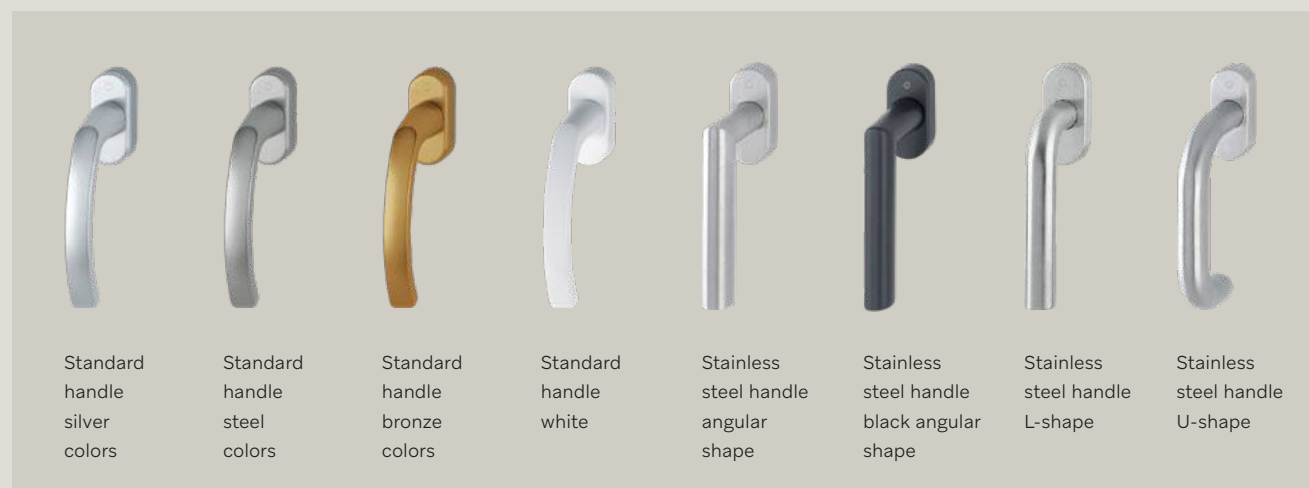
Endless variety of shapes.

There are practically no limits when selecting the shape of your aluminum clad wood windows. Triangular or circular window? Sectional or semicircular arch? With or without SDL or TDL bars? Your specialized UNILUX trade partner will show you what's possible.



A handle on design.

Design you can grab: Every UNILUX handle is not only a solid piece of "Made in Germany" workmanship, but also a visual gem. A tool enabling you to express your taste and style.



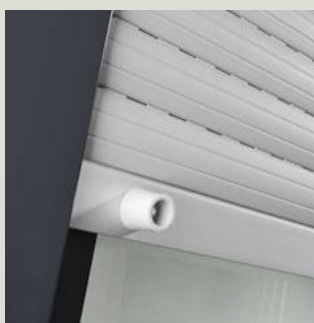
Shades and screens.

There are different options for protection from intensive sunlight and curious eyes. Whether classical roller shutter, elegant Venetian blinds, or traditional aluminum shutters, UNILUX offers you your individual shade and screen solution. By the way, we have a few good recipes against insects, too.



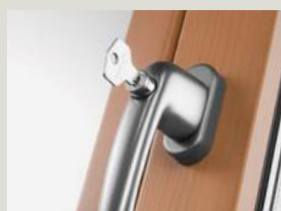
Variety of bars & dividers

Divided lights are the icing on the cake when it comes to a window's appearance. Our range covers four different lines, from true divided and simulated divided lites to the astragal and georgian bar designs.



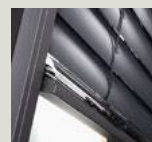
Sunshades and more

At UNILUX, we have first-class roller shutters, and insect screens that are either built into the roller shutter box or act as a separate component.



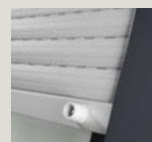
Lockability

Not every window needs to be opened, especially when there are small children around. That's why most of our handles come with a lock button, and are also available as lockable variants. Just in case.



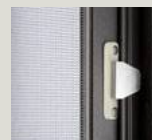
Venetian blinds

Blindingly bright or pitch dark? Venetian blinds give you many more nuances than that. They can control incoming light on a continuous basis. The strips, with their adjustable tilt, allow you to determine exactly how much sunlight you let into your rooms. And the Venetian blind also has an excellent visual appearance.



Roller shutter

When it comes to blocking out light, roller shutters have been the benchmark forever. No wonder they're preferred for use in bedrooms. And since the box appearance is the same as for our venetian blinds, you can combine UNILUX roller shutters and Venetian blinds together harmoniously.



Insect protection

It's not just in bedrooms that insects are a bother. Biting flies and wasps can rob your enjoyment of the fresh air. So you can still air out without the worries, there are special clamping frames and rotating doors. You can easily mount these insect screens yourself. Comfort is so easy.



Venetian blinds
Top-mounted venetian shutter, made from polyurethane, with exterior inspection opening



Roller shutter
Top-mounted roller shutter, made from polyurethane, with exterior inspection opening



Roller shutter
Top-mounted roller shutter, made from polyurethane, with interior inspection opening

UNILUX widens
your perspectives

**Impressive
glass surfaces.
Slim profiles.**





For unlimited vision
and new spheres of
experience.





Full-glass corner window OpenView.

The dream which comes true. OpenView allows you to gaze far into the distance – without any interfering window frames in the corner. Uninterrupted views for as far as the eye can see.



Technical masterpiece

While completely transparent, it conceals a sophisticated UNILUX construction. During the assembly of the assembly glass an insulation is integrated which is not visible to the naked eye. The black stripe that characterizes the glass corner consists of high-quality enamel, which is optically refracted in the glass so that only a shadow gap is visible. Typically UNILUX - masterfully crafted down to the last detail.

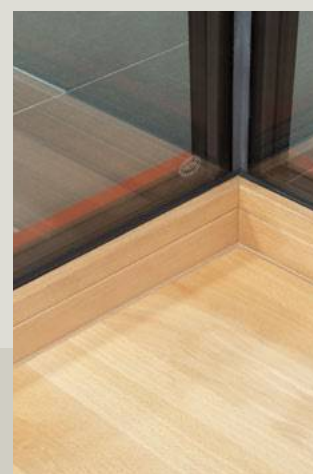
Freedom of design

Whether as a strip of tall windows or a large glass field, OpenView adds value to modern, high-quality architecture. Of course, this impressive structural feature comes in wood species, contours, wood colors and external colors which blend in perfectly with the UNILUX aluminum clad wood windows. It is also available with energy saving triple-pane glass, upon request.



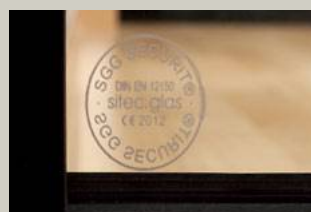
Slender profile

The filigree design enables maximum transparency. Aesthetics and robustness become one thanks to the safety glass.



Maximum performance

Namely, in terms of energy and architecture: The corner is joined via an assembly glass. This allows for an almost invisible insulation of the glass behind it.



Safety glass

The standard tempered safety glass (with seal) ensures firmness and optimized load distribution.

Lift/Slide system HS.

The classic model in its most convenient form. With the lift/slide system, you'll see how sliding becomes gliding. A simple panel movement creates an opening approximately 10'/3 meter wide and 9'/2.8 meter high.

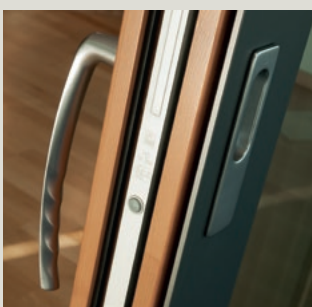


Exemplary craftsmanship

The lift/slide system perfectly demonstrates nature of UNILUX's products. High-quality hardware and solid constructions enable long-lasting elements which ensure maximum views and grand openings.

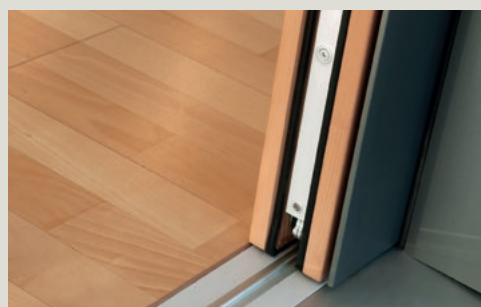
Freedom of design

Easy on the eye: The lift -slide system comes in wood species, con-tours, wood colors and external colors which blend seamlessly into the UNILUX aluminum clad wood windows.



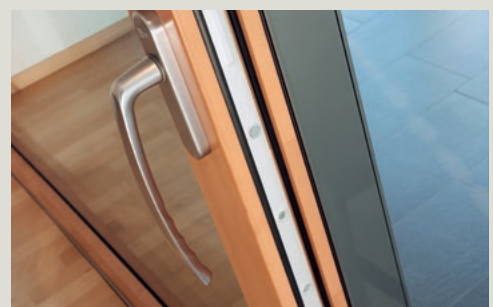
A handle on everything

Thanks to a practical recess and solid handle, the panels can be easily moved both inside and outside. The system also comes in a lockable version.



Low threshold

No stumbling, no stopping. Inside and outdoors join seamlessly. Freedom from barriers that's also visually attractive.



Shared sash profiles

Design from the same mould: The sash profiles of the lift/slide system are tailored to the entire UNILUX line.

Bi-Fold (sliding-folding) system Exterior.

There are no obstacles here. You don't need to move any plants or standard lamps, because the door panels fold outwards, creating an opening up to 25/7.7 meter wide and 9'/2.8 meter high. And a nice benefit: If you open the door after a rain shower, the water automatically drains to the outside – leaving everything dry inside.

Exemplary durability

The bi-fold door perfectly demonstrates the stable and durable nature of UNILUX's products. Aluminum is used as the base material and wood as the cladding, creating a high degree of rigidity in one element, in which everything fits perfectly together.



Freedom of design

Easy on the eye: The bi-fold door comes in wood species, contours, wood colors and external colors which blend seamlessly into the UNILUX aluminum clad wood window line (including energy saving triple-pane glass). Even the external handle can be matched to the unit's exterior color. And upon request, the bi-fold door is also available with embedded threshold.



Handles

Practical when you want to get out quickly. Depending on how the elements are divided, a standard door handle can be installed (in the same color as the element's exterior).



Freedom of interior design

As the panels open outwards, you don't need to create any space for them inside. And when they are opened, raindrops land on the terrace instead of the floor.

Seamless connection

Depending on the architecture, the panels' castors can be integrated into the floor – forming the basis for a flat sill track and fluid transition.



Pict. 4



Exemplary strength

UNILUX only uses solid, laminated wood protected by a weather-proof aluminum cladding, which also holds the glass panes in place. These robust materials, as well as the sophisticated, invisible connection technology for posts and beams, ensure maximum stability even for large façades extending beyond one floor.

Freedom of design

Easy on the eye: The large glass areas enable personalized interior design. The slender, elegant FineLine façade comes in a variety of wood species and colors, contours and aluminum exterior colors, which blend seamlessly into the UNILUX aluminum clad wood window lines. Available with energy saving triple-pane glass, upon request.



Facade system (Curtain Wall) FineLine.

The name's the game. FineLine is distinguished by its slender yet solid post & beam construction. The sophisticated connection technology allows even tricky architectural tasks to be mastered with maximum quality.



Energy efficiency

Optimum U-value according to passive house standards is achieved, thanks to the thermally insulated construction. The heat stays in and the cold stays out.



Aesthetics

Solid wood, perfectly presented. The base connection with post-and-beam profile is just one example of the importance UNILUX places on high-quality architectural solutions.

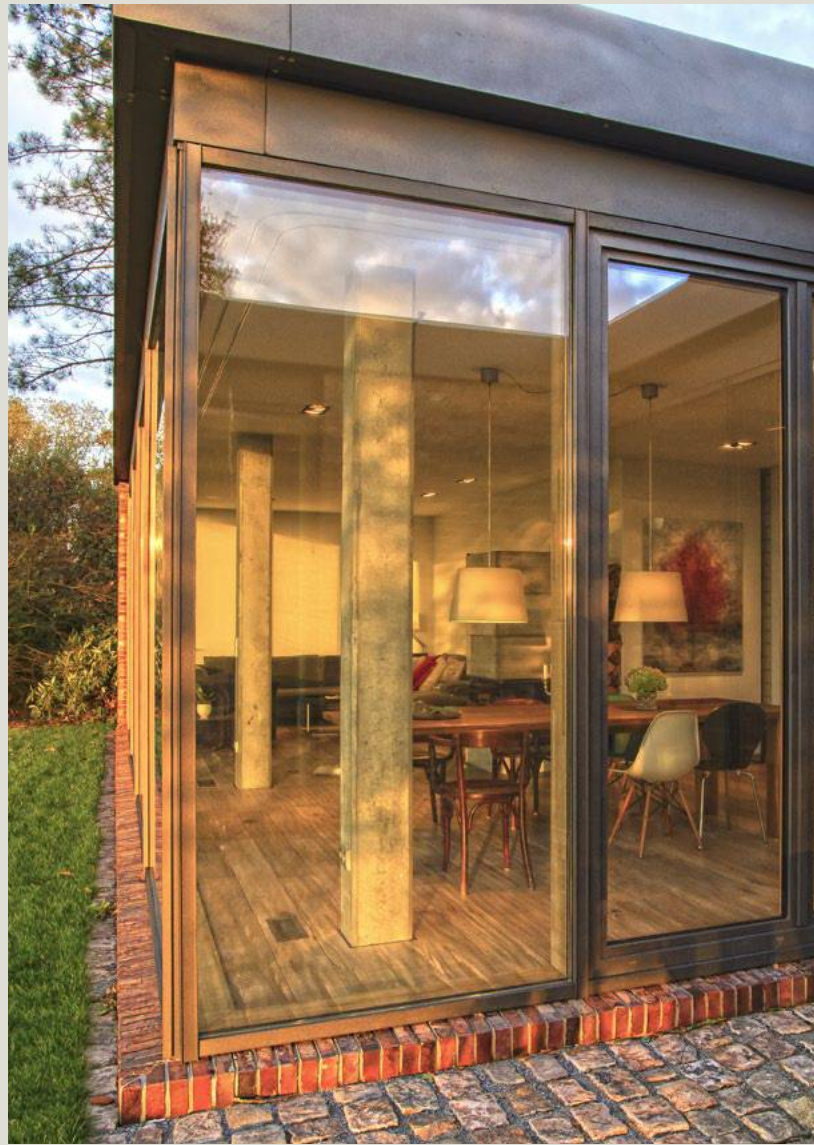


Workmanship

Closer inspection please. Examining details reveals just how much precision work goes into each UNILUX product.

Large-scale door JumboLine.

High window elements are increasingly popular. It's good when balcony doors can keep up. While the standard balcony door gives out after 2.60 meters (8'-6"), our JumboLine balcony doors can manage heights of up to 3 meters (10'). The key are the massive PowerHinge hinges, which can manage loads of up to 300 kilograms.



Harmony in completion

Engineering and aesthetics make a harmonious couple. For example, the sash limiter which prevents the panel from excessive opening is only visible when the door opens. The structural glass and securely anchored hardware ensure maximum stability – the panel is easy to operate even after many years.

Seamless integration

The JumboLine is available in all the aluminum clad designs, aluminum colors, wood species and finishes of the standard aluminum clad wood windows.



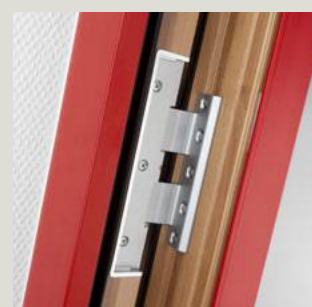
Filigree profiles

The door may be tall and heavy, but its panels are just as slim as any of our elegant tilt-and-turn windows.



Invisible sash limiter

To protect the hinges, standard JumboLines have a build-in, invisible turn restrictor which automatically stops the door from opening beyond a 90° angle.



Strong hardware

Thanks to solid door hinges, even heavy panels (as a standard up to 385 lbs/175 kg, with PowerHinge up to 660 lbs/300 kg) are a piece of cake for this large door. And a durable construction ensures long-lasting use.

References





Pic: 6



Pic: 6



Pic: 1



Pic: 7



Pic: 1



Pic: 6



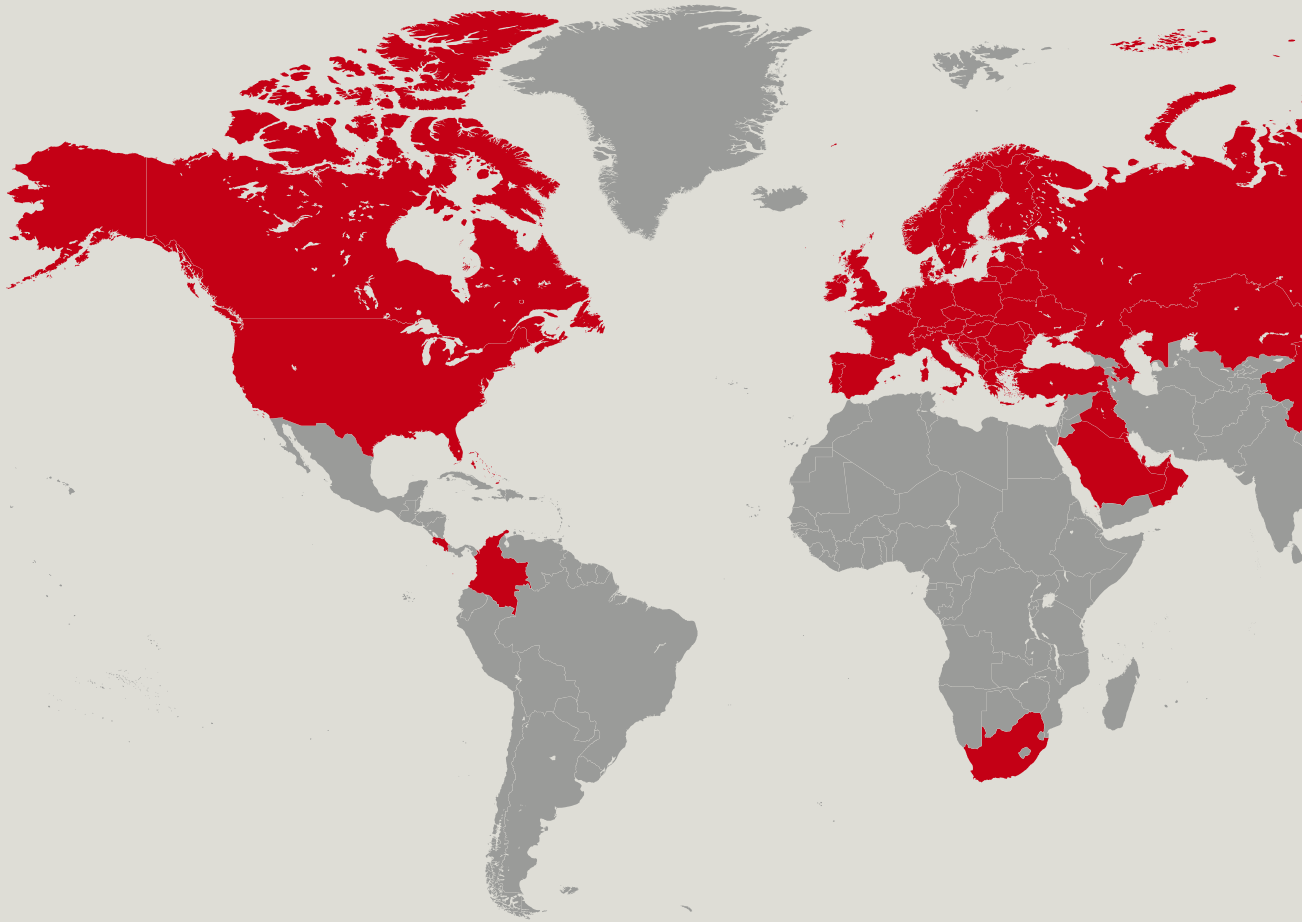
Pic: 3



Pic: 6



The reliability of a big name



UNILUX ensures award-winning long-term progress - by selecting the right partners and raw-material suppliers, and by being a member of leading institutions and associations:



UNILUX products meet international test and safety standards:





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UNILUX headquarters, Salmtal

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TRIM

Peace of mind,
for a lifetime



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



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www.lifespansolidselect.com



► TECHNICAL MANUAL



The advantages are clear

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

- Limited lifetime warranty
- Clear grade lumber – no finger-joints or knots
- Superior durability against rot, fungal attack and insects
- Long-term termite protection
- Resists corrosion to nails and fastenings
- FSC[®] Certified – environmentally responsible
- Superior water resistance
- Real wood – a pleasure to work with
- Product of New Zealand



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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 low-maintenance peace of mind.

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-00198).

- 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!!

This Manual has been developed to provide information for the use of LIFESPAN SOLID SELECT in interior and exterior above ground building applications (American Wood Preservers Association (AWPA) UC3A (painted) and UC3B (unpainted) use classes).

Fletcher Wood Solutions

Fletcher Wood Solutions (dba Taupo Wood Solutions) is the USA domiciled sales and marketing division of Tenon Manufacturing, a part of the Tenon Limited group of companies. Tenon Manufacturing operates pine-manufacturing facilities in Taupo, New Zealand and is the largest manufacturer of defect-free, appearance grade radiata pine products in New Zealand.

Fletcher Wood Solutions distributes its clear boards, mouldings, LIFESPAN products, and lumber to the North American market through its proven and completely integrated supply chain. In addition, Fletcher Wood Solutions maintains direct access to one of the largest FSC® certified pine plantation forests in the world, and its manufacturing plants have been certified by the Forest Stewardship Council® (FSC® SCS-COC-00198).

Liability

Fletcher Wood Solutions and Tenon accept neither liability nor responsibility if the information contained in this Manual is incorrectly or inappropriately applied or interpreted, nor if LIFESPAN SOLID SELECT is used in a manner other than as explicitly set out in this Manual.

Fletcher Wood Solutions has taken care to ensure that the information contained in this Manual was correct at the time of writing. However, Fletcher Wood Solutions and Tenon reserve the right to make changes or improvements to this Manual and to LIFESPAN SOLID SELECT without prior notice.



Specifications

Product range

LIFESPAN SOLID SELECT products are suitable for a range of interior and exterior above ground building applications. Examples of such products include:

Exterior Woodwork

- Fascia
- Trim boards: surfaced all sides, eased edges or with one rough-sawn face
- Exterior mouldings (brick mould, lattice, quarter round, etc.)

Siding

- Available in a range of patterns

Windows

- Window components (sash, casement sash, jambs)
 - machined cut stock
- Mouldings: brick mould

Exterior doors

- Door frames
- Stiles, rails (especially door bottoms)
- Sill substrate
- Mouldings: brick mould

Interior Woodwork

- Baseboard
- Crown Backer
- Trim around doors and windows

Quality standards

Material

Manufactured from C & Better Select grade kiln dried, tree farmed, radiata pine – however minor blemishes that will not be visible through a paint coat or affect performance are permitted.

Treatment

Solvent treated with active ingredients tebuconazole, propiconazole and permethrin to 0.08% m/m total azole average (0.06% m/m minimum).

Treatment is in accordance with NZS3640 and AS 1604.1:H3 standards (0.06% minimum), which exceed AWP requirements (0.0185% minimum).

Priming

Two coats high-quality alkyd primer applied at 3-4 wet mils. Total dry film build 3-4 mils.

Quality

No material visible defects: birdseye, tear out, etc. allowed prior to last primer coat.

Machining

Pitch marks 1/16" maximum.

Length Tolerance

0+1/2"

Width Tolerance

+0-1/32" (+0-0.5mm) – at time of manufacture.

Thickness Tolerance

+0-1/32" (+0-0.5mm) – at time of manufacture.

Moisture Content

10-15%MC (90% of pieces).

Straightness (as permitted by WWPA Lumber Grading Rules)

Cup: 1/32" in up to and including 6", 1/16" in 8", 3/32" in 10", and 1/8" in 12" Bow: 1-1/2" in 16ft.

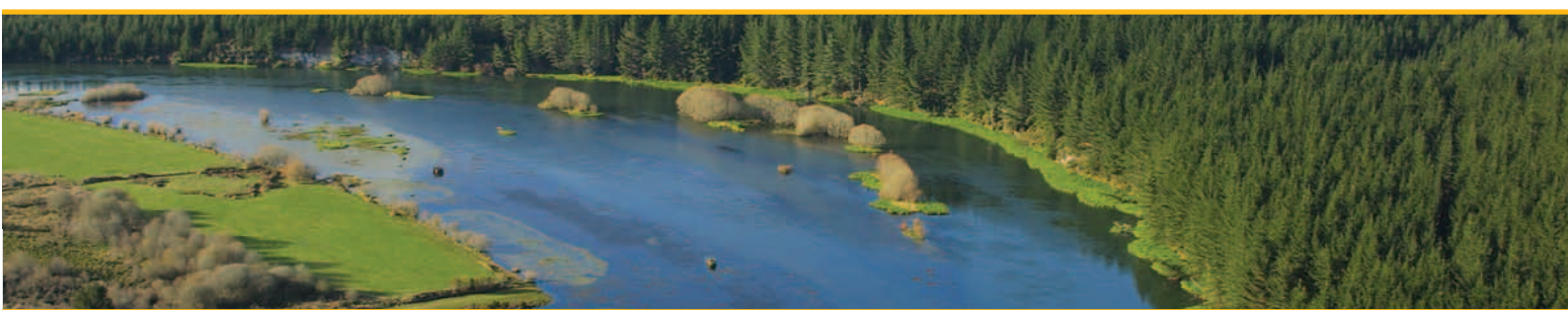
Crook: 1" in 4", 7/8" in 6", 3/4" in 8", 5/8" in 10", and 1/2" in 12" (All on 16ft basis).

Twist: 1/4" in 4", 3/8" in 6", 1/2" in 8", 5/8" in 10", and 3/4" in 12" (All on 16ft basis).

1. Distortion permitted in occasional pieces
2. Distortion assessed at time of manufacture, there may be some movement in response to atmospheric humidity changes and subsequent moisture content changes after manufacture.



- ▼ 1. Exterior woodwork including fascia, trim boards, exterior mouldings
- ▼ 2. Interior woodwork including trim, crown backer, and baseboard
- ▼ 3. Sidings and claddings
- ▼ 4. Exterior doors including frames, stiles, rails, sill substrate, mouldings
- ▼ 5. Window components and mouldings, casement sash, sash jambs



Product Overview – From Forest to Home



Environmental certification

LIFESPAN SOLID SELECT is manufactured with radiata pine from environmentally certified pine tree farms. Our processing mills are certified by the FSC® (www.fsc.org), demonstrating that they meet strict environmental, social, and economic standard.

We utilize leading technology and innovative techniques to maximize the recovery of logs into finished products and minimize waste in our mills. We use geothermal energy in our kiln drying operations, with the geothermal fluid being reinjected after use, thereby saving the use of fossil fuels and minimising greenhouse gases. Our equipment includes optimizing scanners in the sawmill, optimized ripping, and modern Weinig high-speed planers for a moulding quality finish.

Preservative

LIFESPAN SOLID SELECT has been treated with a solvent-based (non-aqueous), colorless, organic (metal free) wood preservative (LOSP-Light Organic Solvent Preservative). Three active ingredients (propiconazole, tebuconazole and permethrin) synergistically provide protection against a wide range of fungi, insects and rot:

- Propiconazole and tebuconazole are EPA approved systemic fungicides, used widely to control mould and mildew in agricultural and horticultural applications. Together, they protect lumber from a wide range of wood destroying fungi.
- Permethrin is an EPA registered insecticide used to protect wood against termites and borers. Permethrin has low mammalian toxicity and is approved for use in many agricultural, household and pharmaceutical applications.

This combination has been specifically formulated as an EPA approved wood preservative. It can be used in American Wood Preservers Association UC3A and UC3B applications. The chemicals are insoluble in water, remaining permanently in the wood and not leaching into the soil. The LOSP used in LIFESPAN SOLID SELECT is non-corrosive to fasteners, so LIFESPAN can be used with regular galvanized fasteners in exterior applications and any fastener type in interior applications.

Pressure treatment

Unlike traditional dip treatments and newer spray-on treatments that only reach outside surfaces, LIFESPAN SOLID SELECT is pressure treated, ensuring that the organic biocide penetrates and protects the entire sapwood substrate with precise quantities of preservative. This process avoids the surface roughness and grain-raising often associated with water-borne preservatives.

During pressure treatment, the wood is also impregnated with waxes and resins, which bond with the wood. These resist moisture uptake, enhancing the dimensional stability of LIFESPAN SOLID SELECT even when exposed to harsh environments of high humidity and precipitation. After treatment, the solvent is allowed to evaporate sufficiently to permit subsequent priming, packaging and shipping.

Primer system

LIFESPAN SOLID SELECT factory-applied two-coat alkyd primer system further protects against water infiltration and weathering. The first full primer coat provides deep penetration and high film build to provide water repellence and to limit cracking. The second primer coat acts as an undercoat, providing a smooth, even, defect-free surface for topcoating. The primers used in LIFESPAN SOLID SELECT are supplied by PPG Industries.



Performance

Durability

LIFESPAN SOLID SELECT carries a limited lifetime durability warranty against fungal decay (rot) and insect attack (including termites). Details of the warranty can be found on page 12 of this Manual.

Decay

The preservative system used in LIFESPAN SOLID SELECT has been extensively tested against fungal decay in laboratory tests and field tests around the world in extreme situations. The performance in these trials has provided the confidence to back LIFESPAN with a limited lifetime warranty against fungal decay. LIFESPAN SOLID SELECT is treated to an average retention of 0.08%*m/m* total azoles (0.06%*m/m* minimum) as a fungicide together with 0.02%*m/m* permethrin as an insecticide (termidicide).

Toxic values were determined by laboratory decay tests carried out in accordance with European protocols (EN113) using *Pinus sylvestris*. The minimum retentions (0.27kg/*m*³) used in LIFESPAN SOLID SELECT are much higher than these toxic values. The Mississippi Forest Products Laboratory of Mississippi State University established L-Joint trials (in accordance with AWP Standard E9-97) using Ponderosa pine at both Hilo, Hawaii and Saucier, Mississippi in 1996. L-Joint tests are designed to simulate performance in millwork applications.

These have been inspected yearly and results after six years exposure showed good resistance to decay, at retention levels less than used for LIFESPAN SOLID SELECT (0.27kg/*m*³ minimum) especially at Hilo, Hawaii, which is a recognized high hazard site for fungal decay.

Insects (including termites)

The LIFESPAN SOLID SELECT protection system also contains an insecticide, permethrin, which is effective against insects, including termites. The permethrin retention (0.02%*m/m*) used is approved in both Australia (AS1604) and New Zealand (NZS3640) and has been extensively used for out of ground contact applications. A recent trial by CSIRO, Australia (Susceptibility of Envelope-Treated Softwood to Subterranean Termite Damage, by James W. Creffield.

Forest Products Journal, December 2004) examined the performance of permethrin, as both an envelope and fully impregnated, against termites. Samples were exposed for 12 months at Gunn Point, Darwin, and Northern Territory, Australia where a species of termite, *Coptotermes acinaciformis*, is prevalent. All specimens showed evidence of contact with termites, indicating activity. The full penetration treatments with 0.02%*m/m* permethrin had a mean rating of 1.2 (radiata pine) with a range of 1-2, and 1.0 (slash pine). Untreated samples had a mean rating of 6.3 with a range of 5-7 (1 being sound; 7 being destroyed [75 to 100% mass loss]).

Further samples were exposed at Beerburum, Queensland where both *C. acinaciformis* and *Schedorhinotermes* spp. occur. Samples were examined after seven months. Samples that were fully treated with 0.02%*m/m* permethrin had no weight loss due to termite attack, whereas untreated controls had a weight loss of 16.2 to 262.5g. The successful control of termite attack by permethrin in Australia, involving a number of different termite species, provides an assurance that LIFESPAN SOLID SELECT products will also be protected from attack by the Formosan termite, *C. formosanus*.

Stability

Dimensional stability is a critical wood property for cladding, joinery and exterior millwork uses. One key element that contributes to the stability of wood products is the kiln drying process. Fletcher Wood Solutions' manufacturing process uses the latest in kilns and kiln technology to produce stable products. The use of final steaming to eliminate drying stresses is one example of this. Radiata pine has naturally low shrinkage, which contributes to its stability.

Compared to other North American softwoods, radiata pine has shrinkage comparable to ponderosa pine and lower than hemlock, loblolly pine and Douglas-fir. The use of high grade clear lumber from the outside of the log further enhances the dimensional stability of LIFESPAN SOLID SELECT products. In addition, the preservative treatment used in LIFESPAN SOLID SELECT contains waxes and resins, which significantly reduce the uptake of liquid water and subsequent swelling of wood. LIFESPAN SOLID SELECT products will show improved stability over untreated products.



Toxic Values (kg/m³) for Propiconazole/Tebuconazole (1:1)

Test fungus	Unaged	Evaporative aged (EN73)	Leached (EN84)
<i>Coniophora puteana</i>	0.010–0.020	0.020–0.030	0.040–0.070
<i>Gloeophyllum trabeum</i>	0.030–0.045	0.030–0.045	0.020–0.030
<i>Poria placenta</i>	0.050–0.070	0.030–0.045	0.040–0.070
<i>Coriolis versicolor</i> *	0.100–0.165	0.210–0.250	>0.180

Wocosen Product Information Sheet, Janssen Pharmaceutica, Plant and Material Protection Division. *Test used on beech wood.

Average Decay Ratings for Coated Ponderosa Pine L-Joints after Six Years Field Exposure

Treatment	L-Joint treatment solution concentration (% active)	L-Joint overall retention at average uptake of 301/m ³ (kg/m ³)	Decay Rating Hilo, Hawaii	Decay Rating Saucier, MS
Untreated			1.9	1.7
Propiconazole/tebuconazole (1:1) Vac-Vac treatment	0.2	0.06	8.7	9.7
	0.4	0.12	8.8	9.8
	0.6	0.18	7.9	10.0
	0.8	0.24	9.7	9.9
Penta, Dip treatment (control)	5.0		8.3	10.0
IBPC, Dip treatment (control)	0.5		6.9	8.9

Decay rating: 10 - sound, 0 - failure

Other field trials have been established in Australia and New Zealand:

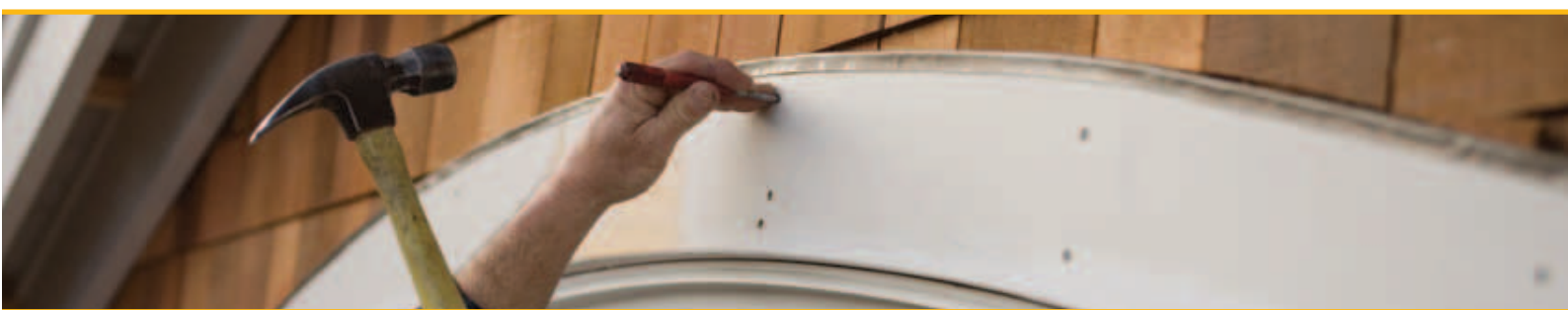
Average Decay Ratings for Treated and Untreated Pine

	Trial Type	Substrate	Condition	Azole Retention %m/m	Score	Sound	Failure	Start	Length of study	Location
A	Decking	Radiata	treated	0.057	9.2	10	0	1995	7 yrs	Rotorua, NZ
			untreated		0.8					
B	Decking	Radiata	treated	0.069	8.4	10	0	1998	5 yrs	Rotorua, NZ
			untreated		5.5					
C	Decking	Radiata	treated	0.069	8.8	10	0	1998	4 yrs	Queensland, Aus Beerburum State Forest
			untreated		3.4					
D	Decking	Radiata	treated	0.069	9	10	0	1998	4 yrs	Queensland, Aus Johnstone Research Sta.
			untreated		1.6					

*Retention level in LIFESPAN is over 4.6 times higher (minimum retention level .06%/m) Trials B, E and F were run concurrently.

Standards and Approvals

As a result of these and other tests, the azole preservative system is approved by Standards New Zealand (NZS3640:2003, incorporating Amendments 1, 2, and 3) for exterior above ground painted applications (equivalent to AWPAC UC3A) at a minimum retention of 0.06%/m total azole content. The LIFESPAN SOLID SELECT preservative system as used meets approvals by the Australian Pesticides & Veterinary Medicines Authority and Standards Australia (AS1604.1:2005, incorporating Amendment 1 2006) for use in exterior above ground applications where a minimum retention of 0.06%/m total azole content also applies, with incorporation of permethrin to meet a minimum Standards requirement of 0.02%/m. Such applications are as described in AWPAC Use Category classifications UC3A and UC3B. The system has similar approvals for use in the United Kingdom.



Handling and Installation

Where you can use lifespan solid select

LIFESPAN SOLID SELECT products are suitable for interior and all exterior above ground use classes (American Wood Preservatives Association UC3A and UC3B). The limited lifetime warranty against fungal decay and insects is null and void if the LIFESPAN SOLID SELECT product is used in contact with the ground, is used within 6" of the ground, or is used in conditions of prolonged water entrapment. LIFESPAN SOLID SELECT products are not designed for and should not be used in structural (load bearing) situations.

LIFESPAN SOLID SELECT may emit a solvent odor for a short period of time. This is similar to that of oil-based paint and results from the interwoven slip sheeting and containerization process. The slip sheeting protects the wood from blocking but does not allow for minute amounts of solvent to dissipate. Any noticeable odor will be well below the accepted threshold limit values (TLV) for long term exposure of 100ppm, and will disappear within a few days of airing.

Nailing

LIFESPAN SOLID SELECT products should be installed in accordance with the normal industry standards. Proper application and nailing practices are essential for maximizing the performance and appearance of LIFESPAN SOLID SELECT.

Building construction features that maximize performance of exterior wood products include: wide roof overhang, wide flashing at roof edges, correctly installed flashings around doors, windows and other openings, effective vapor barriers, adequate eave troughs and downspouts, exhaust fans to remove excessive moisture, and adequate attic insulation and ventilation.

In order to allow for normal seasonal wood movement, nailing should be such that it does not restrict movement - do not nail through overlapping pieces. Unlike treatments that contain high levels of copper or other metals, the active ingredients in LIFESPAN SOLID SELECT do not promote the corrosion of nails and fastenings. To fasten LIFESPAN SOLID SELECT in exterior applications, hot dipped galvanized nails are all that is needed. High tensile aluminum or stainless steel fasteners are also suitable. To fasten in interior applications, LIFESPAN SOLID SELECT requires no specialty nails; simply fasten as you would with any other interior wood product.

Hand nailing is recommended so that the factory primer seal will not be broken. If a nail gun is used, the precise adjustment of

air pressure is necessary to achieve a flush finish. Alternatively, nails can be countersunk 1/16" and filled with putty to obtain a smooth surface. Pre-drilling near the ends is recommended to avoid any possibility of end splitting.

All nailing should be over studs and total effective penetration into a solid wood base should be at least 1-1/2". Nailing patterns should comply with industry practices (see Exterior Wood in the South - Selection, Applications and Finishes. 1991. US Department of Agriculture, Forest Products Laboratory, General Technical Report, FPL-GTR-69).

Trimming, cutting and sealing requirements

While LIFESPAN SOLID SELECT is pressure treated throughout the substrate, cross-cutting and any other cutting, notching, etc. may expose wood with a lower concentration of treatment. LIFESPAN SOLID SELECT of 1" or under nominal thickness does not need to have cut surfaces, notches, and bored holes primed or treated, but for LIFESPAN of greater than 1" nominal thickness it is important (and a requirement of the warranty) that any such exposed wood be liberally swabbed with a brush-on or spray wood preservative.

Suitable products contain zinc naphthenate, such as Wolman Wood Preservative Clear, Cuprinol Clear, Dussek 8% ZnN, Protecto-Zinc and Greens Clear Wood Preservative. The active preservative components of LIFESPAN SOLID SELECT are insoluble in water and will not be leached out in service. However to maximise long term appearance, as good building practice, it is recommended to coat exposed end cuts and mitre joints, with a good quality exterior primer before final painting.

Any alteration of the shape or size of the product by machining (other than as a result of sawing to length or notching as required for fitting or joining) will void the limited lifetime warranty.

Gluing

Timber building products and exterior joinery are not normally glued onsite, but if the occasion should arise any standard wood glue - with the exception of casein containing glues - may be used with LIFESPAN SOLID SELECT products.

LIFESPAN SOLID SELECT is not intended for structural uses. Where impact adhesives are to be used or highly stressed glue joints are to be made (e.g. glue laminated beams), specific advice should be sought from Fletcher Wood Solutions.



Putties, mastics, sealants

Putties, mastics and sealers should be compatible with alkyd (oil-based) paints to be suitable for use with LIFESPAN SOLID SELECT. The relevant manufacturer's advice should be sought, e.g. Sika, Dow, and Master Builders.

Painting

For best results, and in line with general industry best practices, LIFESPAN SOLID SELECT products should be painted as soon as possible after installation. To ensure your limited lifetime warranty, LIFESPAN SOLID SELECT should be over coated within two months of first installation.

The smooth, defect free surface results from two coats of manufacturer applied, special purpose primer. Simply fill and prepare the wood for the finish coat using paint manufacturer's specified instructions (e.g. use exterior filler if used on the outside of a building, spot prime and sand if necessary, clean and remove surface debris). Always follow the paint manufacturer's recommendation for the application and maintenance of paint. For best results, choose a high-quality exterior acrylic/latex or oil-based paint system.

PPG industries offers an extended topcoat paint warranty for LIFESPAN SOLID SELECT when topcoated using their family of paint products (Monarch, Olympic, Porter, Pittsburgh Paints). The paint warranty is separate from the substrate warranty. For details of this, contact Olympic Paints and Pittsburgh Paints at 877-622-4277.

Resin bleed

LIFESPAN SOLID SELECT is manufactured from radiata pine. As a natural material, it may contain resin as a natural constituent. In hot, sheltered conditions where the product has been painted a dark color, resin bleed may occur. If the above specification is followed, any resin bleed will be minimized. It is recommended that LIFESPAN SOLID SELECT be painted in light colors (Light Reflectance Value (LRV) greater than 40%). Any subsequent resin bleed may be repaired by sanding back and spot priming with a stain and bleed sealer.

Storage

Prior to installation, and pending top coating with paint, LIFESPAN SOLID SELECT should be protected from direct sunlight, dirt and other elements. LIFESPAN SOLID SELECT needs to be stored in a dry location, not directly on the ground, preferably on bearers protected with a waterproof cover. However, allow air circulation from beneath to allow the product to acclimatize (LIFESPAN SOLID SELECT packets are wrapped on four sides and top, leaving the bottom unwrapped). Do not completely seal the bundle.

Disposal

Properly clean up and dispose of all sawdust and off-cuts after construction by ordinary trash collection.

Health and safety

LIFESPAN SOLID SELECT is safe to use and is suitable for both interior and exterior applications. The active ingredients in the organic treatment are in total less than 0.1%, significantly lower than most other treatment alternatives. However, even though adverse effects on the user of LIFESPAN SOLID SELECT products are extremely unlikely, it is not always possible to anticipate an individual's sensitivity to the chemicals used. It is important, therefore, to take sensible precautions to minimize exposure to these chemicals when working with LIFESPAN SOLID SELECT. In particular, we recommend that you:

- Do not use LIFESPAN SOLID SELECT under circumstances where the preservative may contact or become a component of food or animal feed. Examples of such uses would be cutting boards, counter tops, animal bedding, and structures or containers for storing animal feed or human food.
- Do not use LIFESPAN SOLID SELECT for construction of those portions of beehives that may come into contact with honey.
- Always maintain good woodworking practices, and particularly avoid inhalation of sawdust.
- When sawing, sanding and machining LIFESPAN SOLID SELECT, as for any wood product, always wear a class P1 or P2 replaceable filter or disposable half face piece respirator. These operations should be performed outdoors to avoid indoor accumulations of airborne sawdust.
- Launder clothing that has had sawdust accumulate on it prior to reuse. Wash work clothes separately from other household clothing.
- When power-sawing and machining, and in areas with high dust levels, wear goggles to protect eyes from flying particles.
- Wear gloves and protective clothing when working with LIFESPAN SOLID SELECT. After working with LIFESPAN SOLID SELECT, wash exposed skin areas thoroughly before eating, drinking or using tobacco products. Avoid hand-to-mouth contact with soiled hands.

Do not burn LIFESPAN SOLID SELECT, because when burned, the chemicals used may become toxic as part of smoke and ash. In particular, LIFESPAN SOLID SELECT should not be burned in open fires or in stoves, fireplaces or residential boilers. Treated wood may be burned only in commercial or industrial incinerators or boilers in accordance with state and Federal regulations.



Limited lifetime warranty against fungal decay and insect attack

The LIFESPAN SOLID SELECT range of treated wood products is supported by a limited lifetime warranty for protection against fungal decay and insect attack. Where any LIFESPAN SOLID SELECT product used in the appropriate application becomes structurally or functionally unserviceable during the lifetime of the original consumer purchaser due to fungal decay or insect attack, then replacement of the material will be provided by the manufacturer.

This Warranty is limited to the original consumer purchaser or "first owners". The manufacturer's liability under this Warranty is limited to the replacement cost of the defective LIFESPAN SOLID SELECT product only. It does not include any other costs including freight, labor costs, finishing costs, consequential damages, incidental damages, or special damages arising directly or indirectly from the LIFESPAN SOLID SELECT product, however caused.

To be covered under the limited lifetime Warranty, the "first owner" must be the recorded or documented owner of the property at the time or within 12 months of the time the LIFESPAN wood product is installed by the builder or contractor. In all other circumstances the limited lifetime LIFESPAN SOLID SELECT Warranty is not transferable to subsequent owners of the property. In order to claim on this Warranty, the "first owners" must provide, at the time of claim, proof of purchase. This is necessary so that Fletcher Wood Solutions can properly identify the product as a LIFESPAN SOLID SELECT product.

This could include original invoices or sales receipts, or any LIFESPAN SOLID SELECT end tags. Fletcher Wood Solutions may require, as a condition of meeting any warranty claim, to inspect the relevant installation. In addition to satisfying all other conditions, limitations, and requirements referenced in this Warranty, any claims under this Warranty are specifically excluded unless the following specific terms and conditions are also satisfied:

- Compliance with all applicable Building Codes and Standards
- Compliance with the appropriate Hazard Class or Use Category (UC3A and UC3B). See "Where You Can Use LIFESPAN SOLID SELECT" under the "Handling and Installation" section on page 10.

- Handling and installation requirements. See the "Handling and Installation" requirements section on page 10.
- The LIFESPAN SOLID SELECT must have been well maintained in service in accordance with standard building recommendations and practices.

Except for the foregoing, and to the maximum extent permitted by law, Tenon makes no other warranties, representations, or conditions, expressed or implied, as to or concerning LIFESPAN SOLID SELECT including claims and complaints relating to priming, painting, resin bleed, environmental, or health and safety issues and any and all other representations, warranties, terms and conditions implied by any laws are excluded.

Fletcher Wood Solutions makes no claim that LIFESPAN SOLID SELECT will protect non-LIFESPAN products from insects, rot or fungi. For further information regarding the terms and conditions, please contact your LIFESPAN SOLID SELECT supplier.



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Version 01/12

ROOFING

The Englert Advantage in Metal Roofing:

ALUMINUM & STEEL

SHEETS AND COIL

NOW, THE LEADER IN METAL ROOFING BRINGS YOU A FULL RANGE OF ALUMINUM AND STEEL PRODUCTS.

Whether it's a reroofing project or new construction, Englert makes buying aluminum and steel easier than ever. Our team of reliable professionals is known and trusted from coast to coast for the highest standard of quality and service. As one of the leading single-source roofing suppliers, Englert offers powerful advantages like unmatched customer service, a wide selection of products and cost efficiency. Our extensive nationwide distribution network assures you virtually 100% product availability in a complete range of color choices.

THE BENEFITS OF WORKING WITH ENGLERT

Technological leadership for quality without question.

Englert systems permit complex roof configurations from ridge to eave, to ensure a crisp roof line and greater weather-tightness. Our metal roofing systems have earned the Energy Star® label, and reflect radiant heat back to the sun, reducing cooling requirements and saving energy consumption.

Sales and technical support whenever you need it.

You can count on responsible, experienced support at every stage of your project. We provide knowledgeable assistance with everything from product selection to installation issues. Skilled technical advice and a list of nationwide certified installers are just a call away.

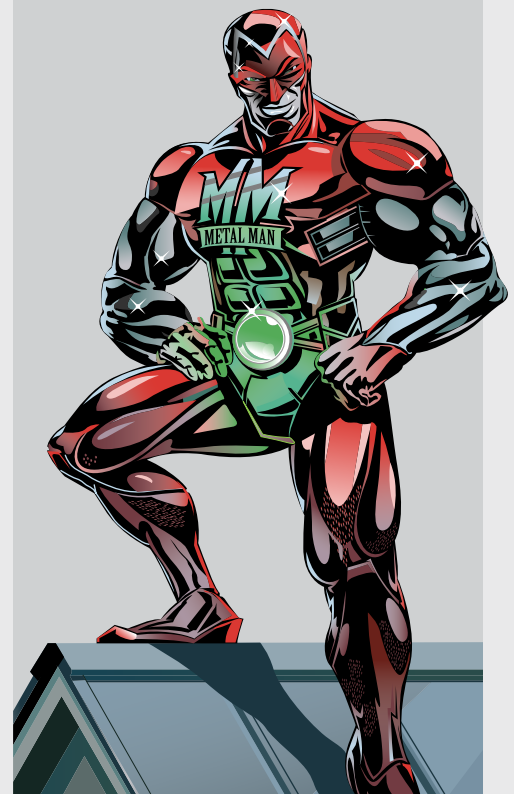
Comprehensive warranty on metal and finish.

Virtually maintenance-free, Englert aluminum roofing carries up to a 35-year limited warranty on paint finish against peeling, blistering, chalking or color change.



THE METAL EXPERTS

Englert is one of the nation's leading forces in metal roofing, rainware, coil coating and portable roll-forming equipment. Since 1966, we've been a pioneer in building products – from the development of LeafGuard®, the revolutionary debris-shedding gutter system, to fully integrated metal roofing with an in-house, continuous coil coating line.



FINISHES THAT MEET ANY DESIGN OBJECTIVE

Englert is one of the few single-source metal roof manufacturers with an in-house coil coating line and an exceptionally broad range of finishes, whether the design calls for a natural weathered appearance or bright, high-performance, full-strength fluorocarbon colors.

Custom Colors

We can match the color of virtually any material, including brick, wood and fabric. Englert offers short lead times, and our minimum custom-color order requirements are among the industry's lowest.



ROOFING KYNAR-COATED STANDARDS IN STOCK - SHEET AND COIL

COLORS	STEEL			ALUMINUM			
	22g	24g	26g	.032	.040	.050	.063
Galvalume Plus		3	3	NA	NA	NA	NA
Burgundy		3	3	3			
Bone White		3		3	3	3	
Charcoal Gray		3	3	3	3	3	
Colonial Red		3	3	3		3	
Dark Bronze		3	3	3	3	3	
Dove Gray		3		3	3	3	
Deep Red		3		3			
Everglade Moss		3		3			
Forest Green		3	3	3	3	3	
Hartford Green		3	3	3	3	3	
Hemlock Green		3		3		3	
Mansard Brown		3	3	3	3	3	
Medium Bronze		3	3	3	3	3	
Mill Finish (Aluminum)	NA	NA	NA	3	3	3	3

COLORS	STEEL			ALUMINUM			
	22g	24g	26g	.032	.040	.050	.063
Matte Black		3	3	3	3	3	
Pacific Blue		3		3			
Patina Green		3		3			
Royal Blue		3		3		3	
Slate Blue		3		3		3	
Slate Gray		3	3	3	3	3	
Sunnet Blue		3		3			
Sandstone		3		3	3	3	
Sierra Tan		3		3	3	3	
Stone White		3		3	3	3	
Terracotta		3		3		3	
Champagne (Metallic)*							
Copper (Metallic)*		3		3	3	3	
Prewathered (Metallic)*		3		3	3	3	

*Premium Priced Paint System

3 - Standard - Minimum Quantities Required NA = Not Available

Due to the limitations of printing processes, this color chart is not an accurate representation of our actual colors. Sample chips are available on request at no charge.

POLYESTER COATED SHEETS - ALUMINUM

COLORS (TWO-SIDED)		4' x 10'		4' x 8'	
		.032	.040	.032	.040
Bronze	Low-Gloss White	3	3	3	
Hi-Gloss White	Hi-Gloss White	3	3	3	



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90097E

SIDING

Individual Shingles Installation Guide

U.S. VERSION

Read this entire guide before installing Maibec individual shingles. For proper installation, you must understand and follow all requirements and steps correctly. **DOWNLOAD THE LATEST VERSION ONLINE AT MAIBEC.COM.** For any questions, please contact Maibec's technical service toll-free at 1 800 363-1930, Monday to Friday from 8:30 a.m. to 4:30 p.m. (Eastern Time).

IMPORTANT: COMPLIANCE WITH MAIBEC'S INSTALLATION, STORAGE AND MAINTENANCE REQUIREMENTS, AND WITH ALL APPLICABLE BUILDING CODES IS MANDATORY. PROBLEMS CAUSED BY FAILURE TO COMPLY WITH THESE REQUIREMENTS AND CODES MAY NOT BE COVERED BY THE APPLICABLE WARRANTIES.

Factory-stained white cedar individual shingles can only be installed to exterior wall surfaces.

Shingles have one side that is smoother and more uniform than the other. Be sure to install them with this side facing outward.

1. STORAGE

- Store the shingle siding in an unheated, dry and ventilated area.
- Leave shingle boxes on pallet. Do not store the material in direct contact with the ground or a cement floor.
- Always cover the uninstalled material after a day's work.

2. BEFORE YOU BEGIN INSTALLATION

CHECK YOUR ORDER

- Make sure the product(s) delivered matches your order (color, quantity etc.).
- Have touch-up stain on hand.
- Never install a product that appears to be or that you think may be defective. Installed defective products are not covered by the warranty. Contact Maibec at 1 800 363-1930.

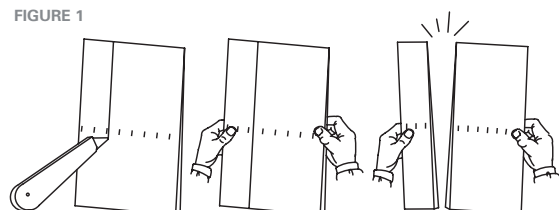
CONSULT THE BUILDING CODES

Consult the building codes applicable in your region for requirements regarding the installation of shingle siding, breather membrane (housewrap), caulking, etc. Follow the manufacturer's instructions for installing the breather membrane and applying caulking.

3. CUTTING SHINGLES

Since cedar is a soft wood, shingles can be easily cut with a utility knife. Cutting a shingle lengthwise is simple: make a straight cut into its surface, then snap the shingle cleanly along the scored line or use a power saw.

FIGURE 1



4. TOUCH-UP STAIN

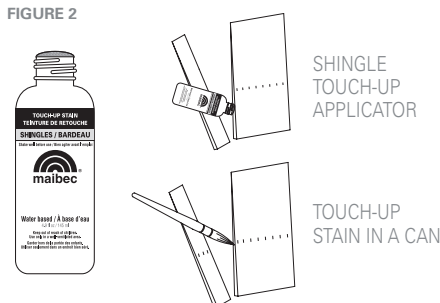
Apply touch-up stain on all cuts, planed edges, and small damaged areas. All bare wood must be touched-up, regardless of whether it is visible or not once installed. Touch-up on cuts must be performed prior to shingle installation.

For shingle touch-ups, use the Maibec touch-up applicator.
For shingle touch-ups when using touch-up stain in a can, use a polyester, nylon, or any synthetic applicator with firm bristles approved for water-based coatings. Do not use wide brushes that could cause drips and give poor results. Carefully dab, do not spillover or overbrush.

Touch-up stain is only meant to be used in the area in need of it. It must not, under any circumstance, be applied over non-damaged factory coated material.

For more information, see the touch-up guide that comes with the touch-up stain cans or kits, or go to maibec.com/us/support.

FIGURE 2



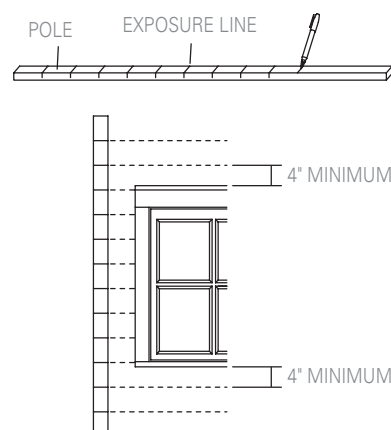
5. DETERMINING EXPOSURE

The exposure is the part of the shingle that you see. **The exposure for shingles is 5"** but can vary between 1/8" to 1/4" depending on the height of the wall and the window positions.

To determine the number of courses needed and the exposure, measure the height of the wall from its lowest point (above the foundations). The butt edge of the first course of shingles must extend at least 1" beyond the foundation, so add 1" to the height of the wall. To determine the number of courses, divide the height of the wall by the exposure (5"). Then calculate back by dividing the height of the wall by the number of courses previously obtained (rounded off) to determine the exact exposure.

Use a wooden pole that is long enough to measure the exposure over several courses. A straight furring strip should do the job. Once marked, place the pole against the wall to check the alignment of the courses with the windows. If possible, the shingle courses should be aligned with window tops and bottoms, or the exposure should be at least 4" in these areas. The last course at the top of the wall should also have at least 4" of exposure. If not, recalculate to get enough exposure, then mark the pole once again. Using the pole, mark the exposure lines on the wall. Keep the pole as a reference while installing the shingles.

FIGURE 3



6. FASTENERS

THE FASTENING REFERENCE LINE

Shingle fastening is simpler with this easily identifiable guide. The reference line is found 6 1/4" from the base of the shingle. For the 5" required shingle exposure, fasten just below the reference line to respect the installation requirement. Each individual shingle is marked on one side.

NAILS:

- stainless steel or hot dipped galvanized
- ring shank blunt tip nail with minimum 7/32" head or

STAPLES:

- stainless steel or aluminum staple with minimum 7/16" crown, minimum 16 gauge.

Two fasteners per shingle, regardless of its width. Located 3/4" from each edge and 1" above the butt line of the overlapping shingle. Must penetrate solid nailable substrate minimum 1/2" (example: plywood).

FIGURE 4

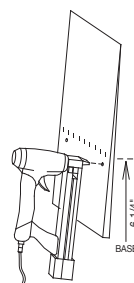
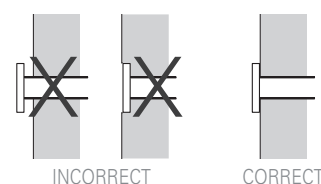


FIGURE 5



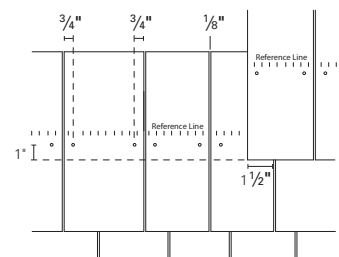
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7. EXPOSURE AND KEYWAY SPACING

The exposure for shingles is 5".

Leave a keyway space of at least 1/8" between shingles. The edges should not touch. The keyway spacings on consecutive rows must be offset a minimum 1 1/2".

FIGURE 6



8. THE STARTER COURSE

The starter course has two layers of shingles. The easiest method consists of installing 2 courses of full-length shingles one on top of the other, making sure that joints aren't aligned over subsequent courses. [FIGURE 7]

Another method consists of installing the first course using shingles trimmed 5" from the base, then continuing the second course with full-length shingles, making sure that joints aren't aligned over subsequent courses. With this method, all the courses will have the same thickness on the wall. [FIGURE 8]

The starter course must extend at least 1" beyond the foundation to keep water off the wall. The second course extends slightly below (1/2") the starter course to allow water to drip at the base of the shingles by gravity. [FIGURE 9]

The butt line of the starter course must have a minimum clearance of 6" with the ground surrounding the building.

ALLOW A MINIMUM CLEARANCE OF:

- 1" from adjacent horizontal structures (example: deck),
- 1/2" from roof shingles or according to building code.

FIGURE 7

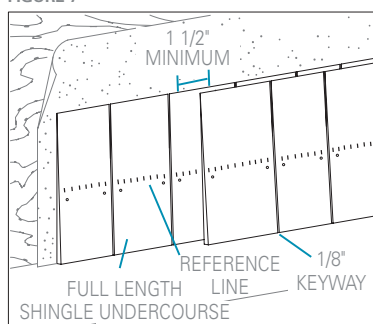


FIGURE 8

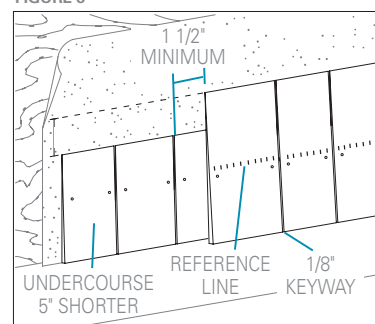
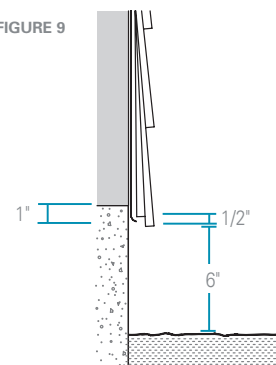


FIGURE 9



9. SUBSEQUENT COURSES

Shingles come in random widths, so you must make sure that the joints are not aligned over subsequent courses. Leave a keyway spacing of at least 1 1/2" from the shingles in the previous course. Ideally, no joints should be aligned over three subsequent courses. No joint should occur over a knot. [FIGURE 10]

Install subsequent courses in a single layer on the rest of the wall according to the determined exposure. Keep your courses straight and level. To make shingle alignment easier, tack a furring strip beneath the exposure line or make a chalk line. [FIGURE 11]

FIGURE 10

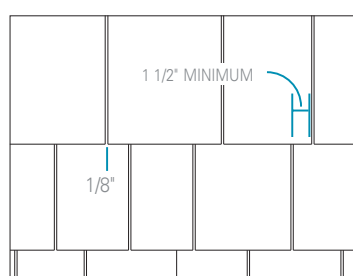
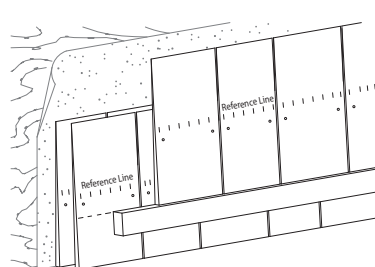


FIGURE 11



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10. CORNERS FINISH DETAILS

The most common and traditional outside corner trim is made by overlapping shingles so that the joints alternate successively on each side of the corner. Nail the lower corner of the shingle with a ring shank blunt tip nail. [FIGURE 12]

- Choose a corner shingle that is wide enough to extend beyond the wall. Trim excess cleanly with a utility knife. You can trim it in place using the corner of the wall as a guideline, but for greater precision, you can mark a pencil line on the back of the shingle and cut it flat. [FIGURE 13]
- Tack the shingle in place while you install a second shingle that also extends beyond the wall on the other side. Trim the shingle, using the first shingle as a guideline. For a smooth finish, use a plane. [FIGURE 14]
- Apply touch-up stain to the cut edges, then nail the shingles in place according to the nailing recommendations. [FIGURE 15]

FIGURE 12

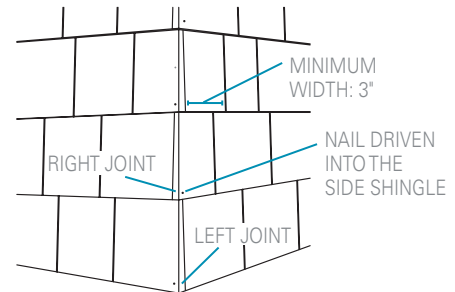


FIGURE 13

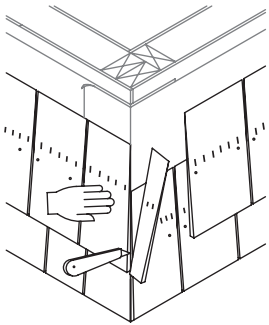


FIGURE 14

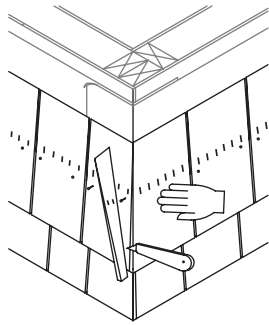
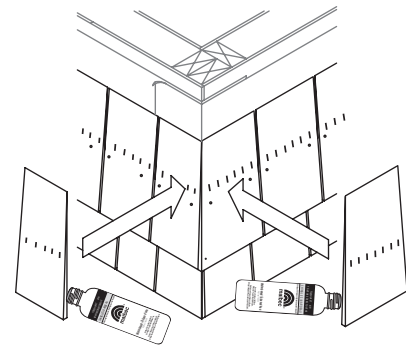


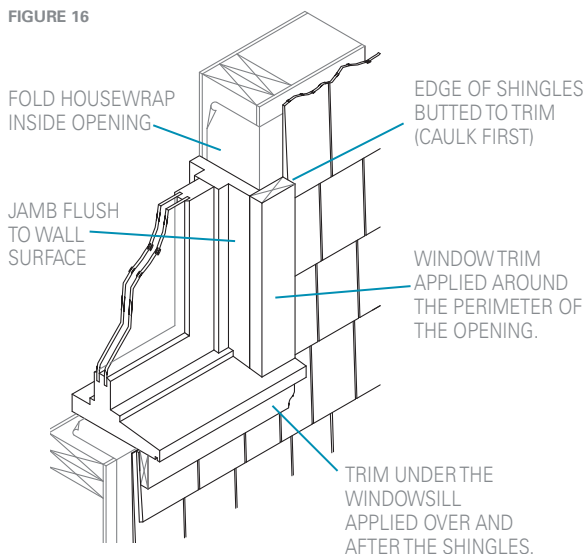
FIGURE 15



11. WINDOW FINISH DETAILS

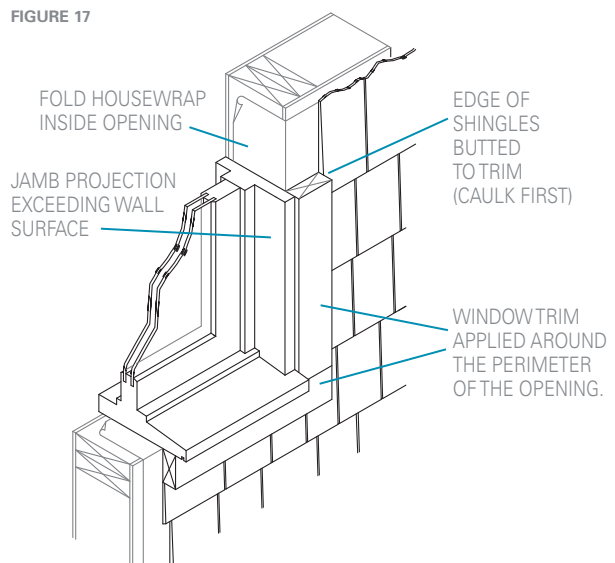
WOOD CASED TRIM

FIGURE 16



PERIMETER WOOD TRIM

FIGURE 17



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11. Window Finish Details (cont'd)

When a shingle is installed against the lower corner of the window opening, the joint must be aligned with the edge of the opening. For greater stability of shingles below openings, apply glue to the back and nail the bottom corners. Pre-drilling of the shingles may be required. [FIGURE 18]

THE WINDOW HEADER

The window header is a crucial element where water could accumulate and seep behind shingles, which could affect the structural integrity of the window frame. [FIGURE 19]

Metal flashing is essential to keep moisture away from the window header. The flashing should extend beyond the trim that will be installed. [FIGURE 20]

Shingles installed above window and door headers must be spaced $\frac{1}{4}$ " to $\frac{1}{2}$ " to ensure proper drainage and airflow. [FIGURE 21]

FIGURE 19

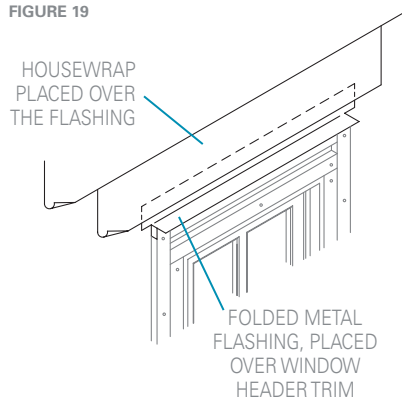


FIGURE 20

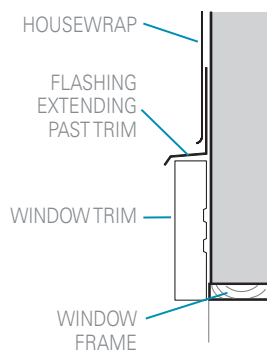


FIGURE 18

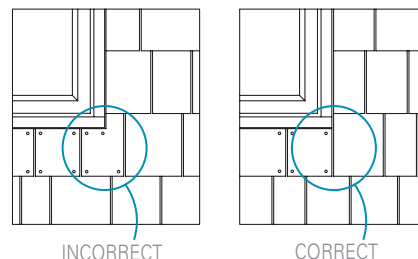
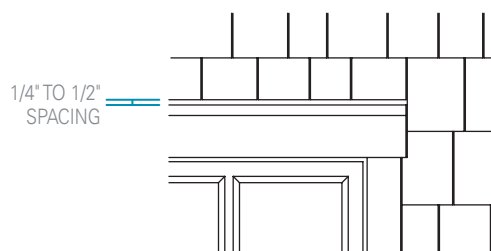


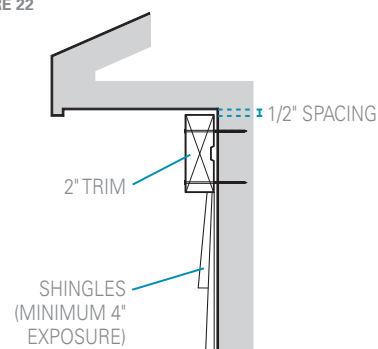
FIGURE 21



12. TOP OF THE WALL FINISH DETAILS

The typical way to finish the top of a wall is to install a trim and have the shingles butt directly to it. This is traditionally done when the shingle course is wide enough, a minimum 4" long shingle is the norm for this type of application. To facilitate airflow at the top of the wall, it is important to leave a $\frac{1}{2}$ " gap between the trim and the soffit.

FIGURE 22



13. GABLES

Finishing under sloping soffits such as gables calls for special attention because the remaining triangular shingles have visible nails. These shingles are often narrower and more fragile. You must glue the back, cover with a trim and sometimes nail the lower corner for greater stability and to keep them from curling. There are several ways this can be done.

Cut the shingles at the end of the course on the same angle as the gable. This way the end shingles need fewer nails. [FIGURES 23 and 24]

OR Leave the section open at the end of the course. [FIGURE 25]

FIGURE 23

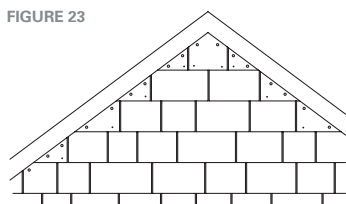


FIGURE 24

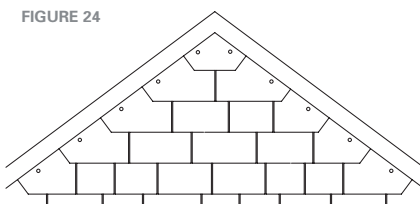
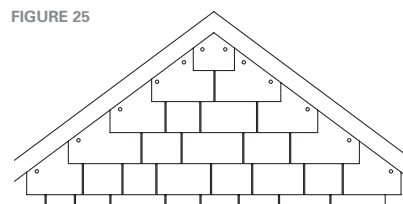


FIGURE 25

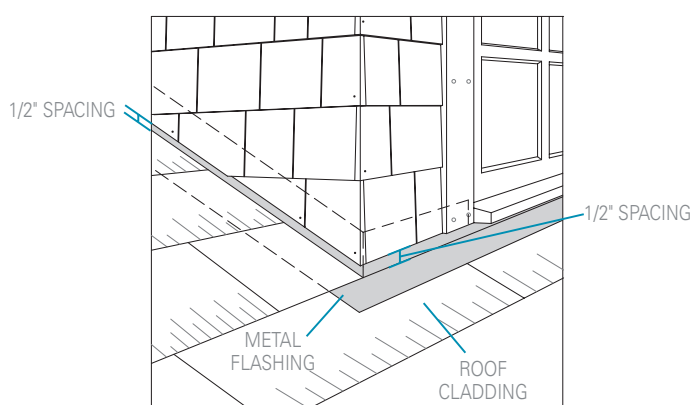


See the Maibec Wides Installation Guide at maibec.com/us/support.

14. DORMER/ROOF JUNCTION FINISH DETAILS

The shingle must be spaced at least 1/2" when it ends adjacent to the roof surface (or according to the building code). The spacing is necessary to properly drain water and prevent the build-up of ice against the shingles siding.

FIGURE 26



15. MAINTENANCE

As with all sidings, dirt build-up can occur; this can be due to a number of factors such as surrounding vegetation, dust or air pollution. Periodic cleaning may be required. Clean the dirt off of the siding using a gentle water spray from a household low-pressure garden hose (under 100 psi). In rare instances where the dirt is not removed with a simple spray of water, you can gently scrub the surface using a soft brush and a non-abrasive laundry detergent, or a dishwasher detergent diluted

as follows: 1/3 cup detergent for 0.8 gallon of water. Because they produce suds, dish detergent are not recommended.

Rinse gently with a low-pressure garden hose (less than 100 psi). **Do not use a pressure washer.**

See the Maibec Sidings Maintenance Guide for more details at maibec.com/us/support/maintenance-program.

 Drawings not to scale.

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LIGHTING

LIGHTING SCHEDULE

LIGHTING SCHEDULE					
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619	620	621	622	623	624
625	626	627	628	629	630
631	632	633	634	635	636
637	638	639	640	641	642
643	644	645	646	647	648
649	650	651	652	653	654
655	656	657	658	659	660
661	662	663	664	665	666
667	668	669	670	671	672
673	674	675	676	677	678
679	680	681	682	683	684
685	686	687	688	689	690
691	692	693	694	695	696
697	698	699	700	701	702
703	704	705	706	707	708
709	710	711	712	713	714
715	716	717	718	719	720
721	722	723	724	725	726
727	728	729	730	731	732
733	734	735	736	737	738
739	740	741	742	743	744
745	746	747	748	749	750
751	752	753	754	755	756
757	758	759	760	761	762
763	764	765	766	767	768
769	770	771	772	773	774
775	776	777	778	779	780
781	782	783	784	785	786
787	788	789	790	791	792
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799	800	801	802	803	804
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829	830	831	832	833	834
835	836	837	838	839	840
841	842	843	844	845	846
847	848	849	850	851	852
853	854	855	856	857	858
859	860	861	862	863	864
865	866	867	868	869	870
871	872	873	874	875	876
877	878	879	880	881	882
883	884	885	886	887	888
889	890	891	892	893	894
895	896	897	898	899	900
901	902	903	904	905	906
907	908	909	910	911	912
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979	980	981	982	983	984
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997	998	999	1000	1001	1002
1003	1004	1005	1006	1007	1008
1009	1010	1011	1012	1013	1014
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1021	1022	1023	1024	1025	1026
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1093	1094	1095	1096	1097	1098
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1105	1106	1107	1108	1109	1110
1111	1112	1113	1114	1115	1116
1117	1118	1119	1120	1121	1122
1123	1124	1125	1126	1127	1128
1129	1130	1131	1132	1133	1134
1135	1136	1137	1138	1139	1140
1141	1142	1143	1144	1145	1146
1147	1148	1149	1150	1151	1152
1153	1154	1155	1156	1157	1158
1159	1160	1161	1162	1163	1164
1165	1166	1167	1168	1169	1170
1171	1172	1173	1174	1175	1176
1177	1178	1179	1180	1181	1182
1183	1184	1185	1186	1187	1188
1189	1190	1191	1192	1193	1194
1195	1196	1197	1198	1199	1200
1201	1202	1203	1204	1205	1206
1207	1208	1209	1210	1211	1212
1213	1214	1215	1216	1217	1218
1219	1220	1221	1222	1223	1224
1225	1226	1227	1228	1229	1230
1231	1232	1233	1234	1235	1236
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1243	1244	1245	1246	1247	1248
1249	1250	1251	1252	1253	1254
1255	1256	1257	1258	1259	1260
1261	1262	1263	1264	1265	1266
1267	1268	1269	1270	1271	1272
1273	1274	1275	1276	1277	1278
1279	1280	1281	1282	1283	1284
1285	1286	1287	1288	1289	1290
1291	1292	1293	1294	1295	1296
1297	1298	1299	1300	1301	1302
1303	1304	1305	1306	1307	1308
1309	1310	1311	1312	1313	1314
1315	1316	1317	1318	1319	1320
1321	1322	1323	1324	1325	1326
1327	1328	1329	1330	1331	1332
1333	1334	1335	1336	1337	1338
1339	1340	1341	1342	1343	1344
1345	1346	1347	1348	1349	1350
1351	1352	1353	1354	1355	1356
1357	1358	1359	1360	1361	1362
1363	1364	1365	1366	1367	1368
1369	1370	1371	1372	1373	1374
1375	1376	1377	1378	1379	1380
1381	1382	1			

EXTERIOR SCONCE

LUSA™

Meet the light of your life.

Wall Mount Cylinder Installation

SHT-10114

lusalighting.com

For your safety, read and understand these instructions completely before starting installation.

The electrical product contained herein is designed to meet the requirements of UL 1598 and the current NFP regulations as published in the National Electrical Code (NEC). Specific modifications and revisions in your area may differ from this standard. Compliance with local building and electrical codes must be confirmed before installation.

WARNING - To prevent wiring damage or abrasion, do not pinch or damage exposed wiring during installation. Keep away from edges of sheet metal or other sharp objects.

WARNING - Risk of fire or electric shock. Installation of this product requires a person familiar with the construction and operation of the luminaire's electrical system and the hazard involved. If not qualified, do not attempt installation. Contact a qualified electrician.

WARNING - Risk of fire or electric shock. Install this kit only in the luminaires that have the construction features shown in the photographs and / or drawings. Do not make or alter any open holes in an enclosure of wiring or electrical components during kit installation.

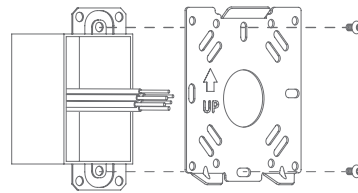
WARNING - Risk of fire or electric shock. Do not alter, relocate or remove wiring, lamp holders, power supply, or any other electrical component.

BEFORE YOU INSTALL - Power must be turned off prior to installation. Failure to do so may cause electric shock, which may result in injury or death. Ensure that electrical connection is in accordance with local and NEC standards and that wiring is 120VAC.

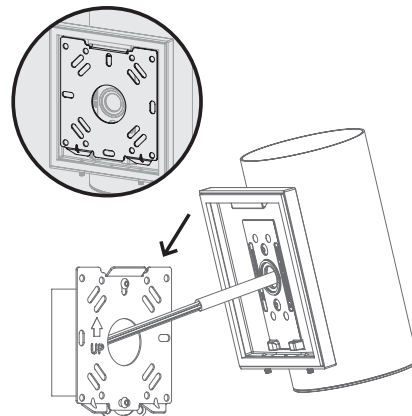
Wall Mount Cylinder Installation CW6BWH, CW6BBK

The following instructions are for use with two-gang, 3" octagonal, 3" round metallic, 3" round non-metallic old-work, 4" octagonal, 4" round, and 4" square junction boxes.

1. Route the building's electrical supply wires through the junction box adapter, then secure the adapter to the junction box using two (2) screws (not included).

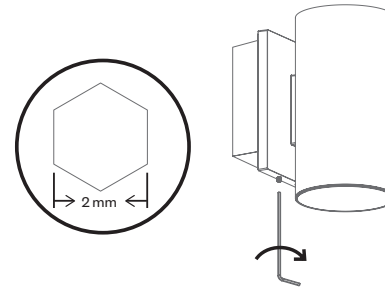


2. Connect the cylinder to the electrical circuit, ensuring compliance with local and NEC standards. Push these connections into the junction box through the adapter's opening.



3. Align the bracket on the back of the cylinder with the protruding cleat on the junction box adapter, fitting them together.

4. Press firmly to seat the cylinder and bracket onto the junction box adapter. Use a hex key to secure the bracket to the adapter using two (2) socket headset screws (included).

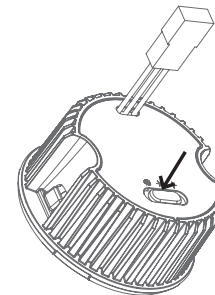


5. Set the Brightness Switch to your desired setting:

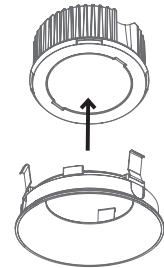
☐- Soft Light: 350 lm (5W)

☐- 7-9 ft Ceiling: 750 lm (9W)

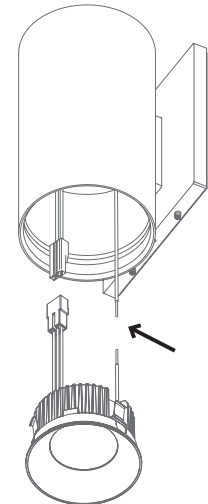
☐- 9-12 ft Ceiling: 950 lm (12W)



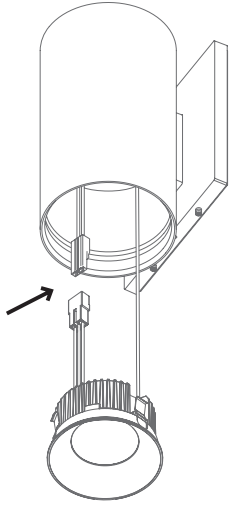
6. Attach the trim to the module, applying pressure until the tension clips snap into place.



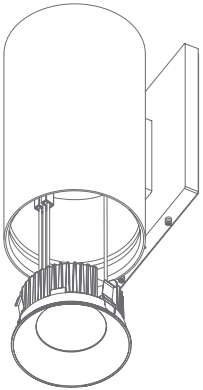
7. Connect the module's ground wire to the building ground, adhering to local and NEC standards.



8. Connect the module power connector.



9. Insert the trim and attached module into the cylinder. Press until fully seated into cylinder.



Good light. Good life.

SEE SCHEDULE FOR NTERIOR LIGHTS



SPECIFICATION SHEETS

OB400-CCT27

High performance recessed downlight with 27K-3K-4K selectable color temperature



NAME:	
TYPE:	
DATE:	
NOTES:	

SPECIFICATIONS

LIGHT UNIT:	Aluminum Die cast with powder paint coat preventing discoloring and rusting.
WIRING:	Plenum rated cable used to connect light unit and junction box.
JUNCTION BOX:	Aluminum extrusion, with full ½" knockouts on each side and the end of the junction box. Wiring compartment allows for (6) 12 gauge (AWG) or (8) 14 gauge (AWG) insulated conductors. Connection to one (1) downstream unit is permitted within the junction box compartment. The compartment satisfies junction box volume requirements of CSA C22.2 No. 250.0/UL 1598.
INSTALLATION:	Ideal for ceiling installations with no housing required. Steel spring clip for easy installation. Suitable for installation in t-grid and drop ceiling applications.
OPTICS:	COB (Chip on Board) LED technology uses light guided reflector to distribute light and optimize high level of delivered lumens. The regressed Gimbal design offers an anti-glare feature.
ELECTRICAL & PHASE CONTROL:	Easily connected to a 120V power supply via provided UL recognized driver. Optional 120-277V, 0-10V dimming driver available. Dimming down to 10% with most standard LED dimmers (see list of approved dimmers). Ambient operating temperature: -40°C (-40°F) to +40°C (+104°F). IC, WET Location and AIR-TIGHT rated. Phase Control: Forward Phase. Certifications: This product is ETL listed in USA & Canada, certified to UL standard 1598 and CSA standard C22.2 No. 250.0-08

CUTTING HOLE:	3.25" (83mm)
MOUNTING PLATE:	MP300 / AMP300 / MPHB250-450
BEAM ANGLE:	36°
GIMBAL ANGLE / HEAD ROTATION:	27° / 360°
COLOR TEMPERATURE:	27K-3K-4K
CRI*:	90
LUMEN OUTPUT:	800 lumens
DIMMABLE:	Yes
WATTS:	11 watts
LED LIFE:	50,000 hours
WARRANTY:	5 years
WIRE CABLE:	FT4
DRIVER (SPECIAL ORDER):	120-277V, 0-10V Dimming (Model: OB300-400-277V-CCT)

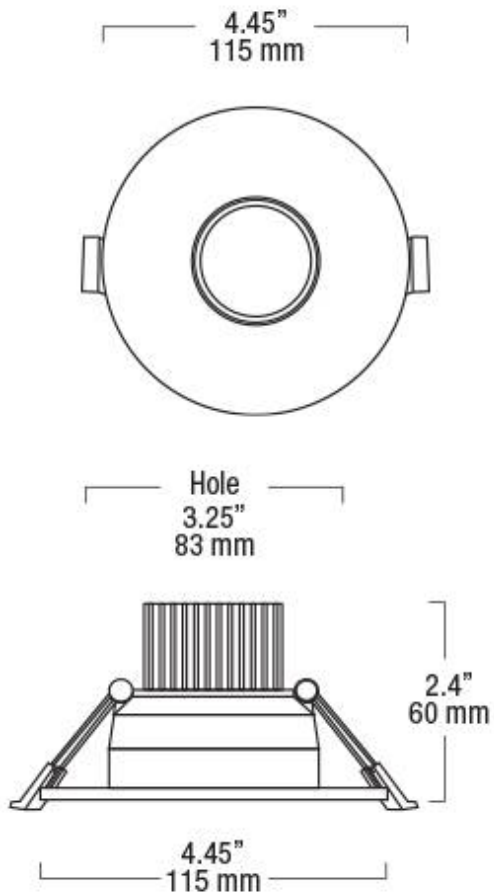
APPLICATIONS

The ORBIT series offers a high-performance LED (COB) recessed downlight with a pressure-fit spring clip application for an easy install. Whether it is a Remodel or New Construction installation, this unit is well suited for indoor / outdoor residential, hospitality, commercial and multifamily applications. It does not require a recessed housing for installation.

OB400-CCT27

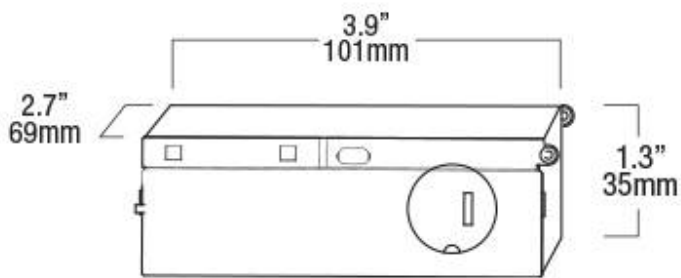
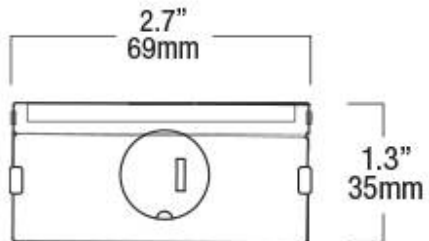
High performance recessed downlight with 27K-3K-4K selectable color temperature

DIMENSIONS



OB400-CCT27

High performance recessed downlight with 27K-3K-4K selectable color temperature



OB400-CCT27

High performance recessed downlight with 27K-3K-4K selectable color temperature

ACCESSORIES



MOUNTING PLATE

Versatile square mounting plate allows for installation of all models of ndr lighting recessed lighting products. refer to our mounting plate compatibility chart to ensure the proper mounting plate is selected.



REMODEL VAPOUR BARRIER

The remodel vapour barrier unit may be used with all ndr lighting remodel housings. it is designed to prevent air leakage from your living space into the attic, or any insulated spaces.



ADJUSTABLE MOUNTING PLATE

Versatile adjustable mounting plate allows for installation of all models of ndr lighting recessed lighting products. refer to our mounting plate compatibility chart to ensure the proper mounting plate is selected.



GOOF RINGS

This goof ring is used when the ceiling hole is wider than the retrofit light unit being installed. refer to our goof ring compatibility chart to ensure the proper goof ring is selected.



UNIVERSAL MOUNTING PLATE WITH ADJUSTABLE HANGER BARS

This multi-size adjustable mounting plate allows for installation of all models of ndr lighting recessed lighting products. refer to our mounting plate compatibility chart to ensure the proper mounting plate is selected.



ORBIT MULTIPLATE

Our orbit line of led downlights is so amazing that you just cannot get enough of them! this orbit series accessory allows you to combine our 2" and 3" orbits into doubles or triples for an elegant, even brighter directional light source. just drop a couple of orbits in and they're installed faster than you think. a multiple look in seconds. "strength in numbers" has never been more relevant.

RATINGS

AIRTIGHT
RATED



IC
RATED



ORDERING GUIDE

ORBIT 400 CCT27 Series

Series	Color Temperature	Finish
OB400-CCT27	CCT27 27K-3K-4K/90CRI/11W	WH White
	CCT27 27K-3K-4K/90CRI/11W	BK Black
	CCT27 27K-3K-4K/90CRI/11W	BRZ Bronze
	CCT27 27K-3K-4K/90CRI/11W	SC Satin Chrome

Notes: Configure product using **BOLD** options: Ex: **OB400-CCT27-WH**

HVAC

MSZ-FS06NA & MUZ-FS06NA
6,000 BTU/H DELUXE WALL-MOUNTED INDOOR UNIT
6,000 BTU/H HYPER-HEATING OUTDOOR UNIT



Job Name:

System Reference:

Date:



Indoor Unit.....MSZ-FS06NA

Outdoor Unit.....MUZ-FS06NA

INDOOR UNIT FEATURES

- Slim wall-mounted indoor units provide zone comfort control
- Dual Barrier Coating applied to the heat exchanger, vanes and fan to prevent hydrophilic and hydrophobic dirt build-up
- Multiple fan speed options: Quiet, Low, Medium, High, Super-high, Auto
- 3D i-see Sensor® enables advance features:
 - Indirect or Direct Airflow for personalized comfort
 - Absence Detection for energy-saving mode
- Double Vane features:
 - Separates airflow to deliver air across a large area
 - Simultaneously deliver to air separate sections of a room
 - Generates more comfortable natural airflow pattern
- Multiple control options available:
 - Back-lit screen handheld remote controller (provided with unit)
 - kumo cloud® smart device app for remote access
 - Third-party interface options
 - Wired or wireless controllers
- Triple-action Filtration: Nano Platinum Filter, Deodorizing Filter, & Electrostatic Anti-Allergy Enzyme Filter
- Hot-Start Technology: no cold air rush at equipment startup or when restarting after Defrost Cycle
- Quiet operation

OUTDOOR UNIT FEATURES

- INVERTER-driven compressor and LEV provide high efficiency and comfort while using only the energy needed to maintain maximum performance
- H2i plus™ performance offers 100% heating capacity at -5° and 70% to 81% heating capacity at -13° F
- Blue Fin anti-corrosion treatment applied to the outdoor unit heat exchanger for increased coil protection and longer life

SPECIFICATIONS: MSZ-FS06NA & MUZ-FS06NA

Cooling at 95°F ¹	Maximum Capacity	BTU/H	9,000
	Rated Capacity	BTU/H	6,000
	Minimum Capacity	BTU/H	1,700
	Maximum Power Input	W	560
	Rated Power Input	W	315
	Moisture Removal	Pints/h	0.2
	Sensible Heat Factor		0.96
	Power Factor [208V / 230V]	%	79.0 / 80.0
Heating at 47°F ²	Maximum Capacity	BTU/H	14,000
	Rated Capacity	BTU/H	8,700
	Minimum Capacity	BTU/H	1,600
	Maximum Power Input	W	1,270
	Rated Power Input	W	545
	Power Factor [208V / 230V]	%	90.0 / 91.0
Heating at 17°F ³	Maximum Capacity	BTU/H	12,840
	Rated Capacity	BTU/H	5,900
	Maximum Power Input	W	1,400
	Rated Power Input	W	390
Heating at 5°F ⁴	Maximum Capacity	BTU/H	10,500
	Maximum Power Input	W	1,250
Heating at -5°F ⁶	Maximum Capacity	BTU/H	8,700
Heating at -13°F ⁷	Maximum Capacity	BTU/H	7,250
Efficiency	SEER		33.1
	EER ¹		19.05
	HSPF [I/V]		13.5
	COP at 47°F ²		4.68
	COP at 17°F at Maximum Capacity ³		2.69
	COP at 5°F at Maximum Capacity ⁴		2.26
	COP at -5°F at Maximum Capacity ⁶		2.26
	COP at -13°F at Maximum Capacity ⁷		1.93
Electrical	ENERGY STAR® Certified		Yes
	Voltage, Phase, Frequency		208/230, 1, 60
	Guaranteed Voltage Range	V AC	187 - 253
	Voltage: Indoor - Outdoor, S1-S2	V AC	208/230
	Voltage: Indoor - Outdoor, S2-S3	V DC	24
	Short-circuit Current Rating [SCCR]	kA	5
	Recommended Fuse/Breaker Size (Outdoor)	A	15
	Recommended Wire Size [Indoor - Outdoor]	AWG	14
Indoor Unit	Power Supply		Indoor unit is powered by the outdoor unit
	MCA	A	1.0
	Fan Motor Full Load Amperage	A	0.65
	Fan Motor Type		DC Motor
	Airflow Rate at Cooling, Dry	CFM	137~167~221~304~381
	Airflow Rate at Cooling, Wet	CFM	117~143~190~261~328
	Airflow Rate at Heating, Dry	CFM	140~167~225~325~437
	Sound Pressure Level [Cooling]	dB[A]	20~23~29~36~40
	Sound Pressure Level [Heating]	dB[A]	20~24~29~39~42
	Drain Pipe Size	In. [mm]	5/8 [15.88]
	Coating on Heat Exchanger		Dual Barrier Coating
	External Finish Color		Munsell 1.0Y 9.2/0.2
	Unit Dimensions	W x D x H: In. [mm]	36-7/16 x 9-3/16 x 12 (+11/16) [925 x 234 x 305 (+17)]
	Package Dimensions	W x D x H: In. [mm]	39 x 12-1/4 x 15-1/2 [990 x 310 x 400]
	Unit Weight	Lbs. [kg]	29 [13.5]
	Package Weight	Lbs. [kg]	34 [15.4]
Indoor Unit Operating Temperature Range	Cooling Intake Air Temp [Maximum / Minimum]*	°F	90 DB, 73 WB / 67 DB, 57 WB
	Heating Intake Air Temp [Maximum / Minimum]	°F	80 DB / 70 DB

NOTES:

AHRI Rated Conditions
(Rated data is determined at a fixed compressor speed)

¹ Cooling (Indoor // Outdoor)	°F	80 DB, 67 WB // 95 DB, 75 WB
² Heating at 47°F (Indoor // Outdoor)	°F	70 DB, 60 WB // 47 DB, 43 WB
³ Heating at 17°F (Indoor // Outdoor)	°F	70 DB, 60 WB // 17 DB, 15 WB

Conditions

⁴ Heating at 5°F (Indoor // Outdoor)	°F	70 DB, 60 WB // 5 DB, 4 WB
⁶ Heating at -5°F (Indoor // Outdoor)	°F	70 DB, 60 WB // -5 DB, -6 WB
⁷ Heating at -13°F (Indoor // Outdoor)	°F	70 DB, 60 WB // -13 DB, -14 WB

*Indoor/Outdoor Unit Operating Temperature Range (Cooling Air Temp [Maximum / Minimum]):

- Applications should be restricted to comfort cooling only; equipment cooling applications are not recommended for low ambient temperature conditions.

**Outdoor Unit Operating Temperature Range (Cooling Thermal Lock-out / Re-start Temperatures; Heating Thermal Lock-out / Re-start Temperatures):

- System cuts out in heating mode to avoid thermistor error and automatically restarts at these temperatures.

SPECIFICATIONS: MSZ-FS06NA & MUZ-FS06NA

Outdoor Unit	MCA	A	10.0
	MOCP	A	15
	Fan Motor Full Load Amperage	A	0.5
	Fan Motor Output	W	55
	Airflow Rate [Cooling / Heating]	CFM	1141 / 1183
	Refrigerant Control		LEV
	Defrost Method		Reverse Cycle
	Coating on Heat Exchanger		Blue Fin Coating
	Sound Pressure Level, Cooling ¹	dB(A)	47
	Sound Pressure Level, Heating ²	dB(A)	49
	Compressor Type		Twin Rotary
	Compressor Model		SNB092FQAMT
	Compressor Rated Load Amps	A	9.2
	Compressor Locked Rotor Amps	A	7.4
	Compressor Oil [Type // Charge]	oz.	FV50S // 0.35
	External Finish Color		Munsell 3Y 7.8/1.1
	Base Pan Heater		Optional
	Unit Dimensions	W x D x H: In. [mm]	31-1/2 x 11-1/4 x 21-5/8 [800 x 285 x 550]
	Package Dimensions	W x D x H: In. [mm]	37 x 15 x 24-1/2 [940 x 380 x 630]
	Unit Weight	Lbs. [kg]	82 [37]
	Package Weight	Lbs. [kg]	89 [40]
Outdoor Unit Operating Temperature Range	Cooling Air Temp [Maximum / Minimum]*	°F	115 DB / 14 DB
	Cooling Thermal Lock-out / Re-start Temperatures**	°F	-4 / 0
	Heating Air Temp [Maximum / Minimum]	°F	75 DB, 65 WB / -13 DB, -14 WB
	Heating Thermal Lock-out / Re-start Temperatures**	°F	-18 / -14
Refrigerant	Maximum Charge Quantity	Lbs, oz	2.0, 9.0
	Initial Charge Quantity	Ft. [m]	25.0 [7.5]
	Additional Refrigerant Charge Per Additional Piping Length	oz./Ft. [g/m]	0.216 [20]
Piping	Gas Pipe Size O.D. [Flared]	In.[mm]	3/8 [9.52]
	Liquid Pipe Size O.D. [Flared]	In.[mm]	1/4 [6.35]
	Maximum Piping Length	Ft. [m]	65 [20]
	Maximum Height Difference	Ft. [m]	40 [12]
	Maximum Number of Bends		10

NOTES:

AHRI Rated Conditions

(Rated data is determined at a fixed compressor speed)

¹ Cooling (Indoor // Outdoor)	°F	80 DB, 67 WB // 95 DB, 75 WB
² Heating at 47°F (Indoor // Outdoor)	°F	70 DB, 60 WB // 47 DB, 43 WB
³ Heating at 17°F (Indoor // Outdoor)	°F	70 DB, 60 WB // 17 DB, 15 WB

Conditions

⁴ Heating at 5°F (Indoor // Outdoor)	°F	70 DB, 60 WB // 5 DB, 4 WB
⁵ Heating at -5°F (Indoor // Outdoor)	°F	70 DB, 60 WB // -5 DB, -6 WB
⁷ Heating at -13°F (Indoor // Outdoor)	°F	70 DB, 60 WB // -13 DB, -14 WB

*Indoor/Outdoor Unit Operating Temperature Range (Cooling Air Temp [Maximum / Minimum]):

- Applications should be restricted to comfort cooling only; equipment cooling applications are not recommended for low ambient temperature conditions.

**Outdoor Unit Operating Temperature Range (Cooling Thermal Lock-out / Re-start Temperatures; Heating Thermal Lock-out / Re-start Temperatures):

- System cuts out in heating mode to avoid thermistor error and automatically restarts at these temperatures.

INDOOR UNIT ACCESSORIES: MSZ-FS06NA

Control Interface	BACnet® and Modbus® Interface	PAC-UKPRC001-CN-1
	CN24 Relay Kit	CN24RELAY-KIT-CM3
	IT Extender	PAC-WHS01IE-E
	kumo station® for kumo cloud®	PAC-WHS01HC-E
	Lockdown bracket for remote controller	RCMKP1CB
	System Control Interface	MAC-334IF-E
	Thermostat Interface	PAC-US444CN-1
	Thermostat Interface	PAC-US445CN-1
	USNAP Adapter	PAC-WHS01UP-E
	Wireless Interface for kumo cloud®	PAC-USWHS002-WF-2
Remote Sensor	Wireless temperature and humidity sensor for kumo cloud®	PAC-USWHS003-TH-1
Wired Remote Controller	Deluxe Wired MA Remote Controller†	PAR-40MAAU
	Simple MA Remote Controller†	PAC-YT53CRAU-J
	Touch MA Controller†	PAR-CT01MAU-SB
Wireless Remote Controller	kumo touch™ RedLINK™ Wireless Controller	MHK2
Condensate	Blue Diamond (Advanced) Mini Condensate Pump w/ Reservoir & Sensor (208/230V) [recommended]	X87-721
	Blue Diamond (MicroBlue) Mini Condensate Pump (110/208/230V) up to 18,000 BTU/H	X86-003
	Blue Diamond Alarm Extension Cable — 6.5 Ft.	C13-192
	Blue Diamond MultiTank — collection tank for use with multiple pumps	C21-014
	Blue Diamond Sensor Extension Cable — 15 Ft.	C13-103
	Drain Pan Level Sensor/Control	SS610E
	Fascia Kit for MicroBlue Pump, mounts the MicroBlue and sensor directly beneath indoor unit	T18-016
	Refco Condensate Pump (100-240 VAC)	GOBI-II
	Refco Condensate Pump (100-240 VAC) up to 120,000 BTU/H	COMBI
	Sauermann Condensate Pump	SI30-230
Disconnect Switch	(30A/600V/UL) [fits 2" X 4" utility box] - Black	TAZ-MS303
	(30A/600V/UL) [fits 2" X 4" utility box] - White	TAZ-MS303W
Drain Hose	Flexible Mini-Split Drain Hose	DRX-16
Filter	Electro Static Anti-allergy Enzyme Filter	MAC-2330FT-E
	Platinum Deodorizing Filter	MAC-3000FT-E
Lineset	15' x 1/4" x 15' / 3/8" Lineset (Twin-Tube Insulation)	MLS143812T-15
	30' x 1/4" x 30' / 3/8" Lineset (Twin-Tube Insulation)	MLS143812T-30
	50' x 1/4" x 50' / 3/8" Lineset (Twin-Tube Insulation)	MLS143812T-50
	65' x 1/4" x 65' / 3/8" Lineset (Twin-Tube Insulation)	MLS143812T-65

NOTES:

†Requires MAC-334IF-E

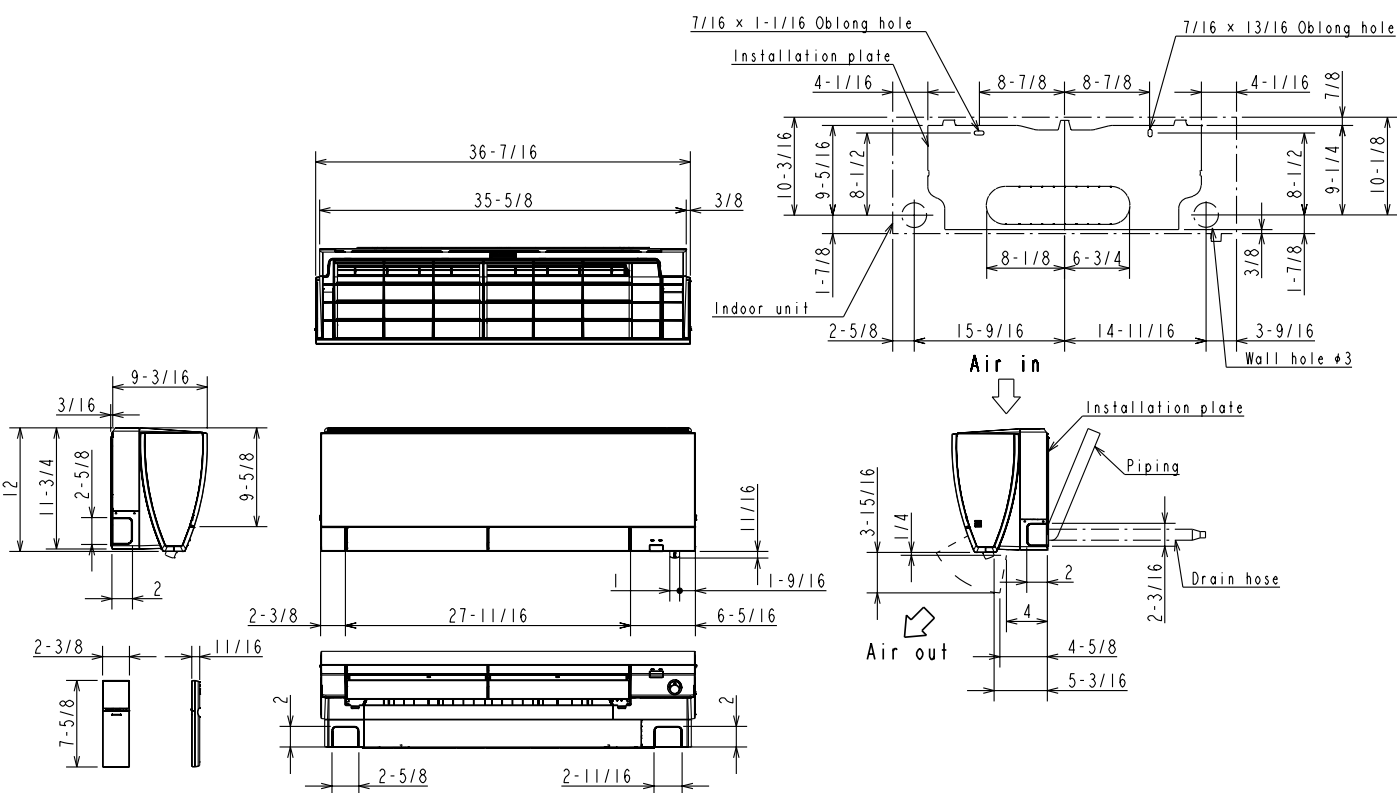
- M-Series EZ FIT® Recessed Ceiling Cassette, Floor-mount and Wall-mount
Allows indoor units to connect to an MA Controller:
Deluxe MA Remote Controller
Simple MA Controller
Touch MA Controller

OUTDOOR UNIT ACCESSORIES: MUZ-FS06NA

Air Outlet Guide	Air Outlet Guide	MAC-881SG
Control/Service Tool	M- & P-Series Maintenance Tool Cable Set	M21EC0397
	USB/UART Conversion Cable (Required for all laptop connection)	M21EC1397
Drain Socket	Drain Socket	MAC-871DS
Hail Guards	Hail Guard	HG-B4
Mini-Split Wire	14 Gauge, 4 wire MiniSplit Cable—250 ft. roll	S144-250
	14 Gauge, 4 wire MiniSplit Cable—50 ft. roll	S144-50
	16 Gauge, 4 wire MiniSplit Cable—250 ft. roll	S164-250
	16 Gauge, 4 wire MiniSplit Cable—50 ft. roll	S164-50
Mounting Pad	Condensing Unit Mounting Pad: 16" x 36" x 3"	ULTRILITE1
	Outdoor Unit 3-1/4 inch Mounting Base (Pair) - Plastic	DSD-400P
Optional Defrost Heater	Optional Defrost Heater	MAC-640BH-U
Stand	18" Single Fan Stand	QSMS1801M
	24" Single Fan Stand	QSMS2401M
	Condenser Wall Bracket	QSWB2000M-1
	Condenser Wall Bracket - Stainless Steel Finish	QSWBSS
	Outdoor Unit Stand — 12" High	QSMS1201M

INDOOR UNIT DIMENSIONS: MSZ-FS06NA

Unit: inch



(06/09/12 KBTU/H)

Piping	Insulation	#1-7/16 O.D
	Liquid line	#1/4 19-11/16 (Flared connection #1/4)
	Gas line	#3/8 16-15/16 (Flared connection #3/8)
Drain hose	Insulation	#1-1/8 Connected part #5/8 O.D

(15/18 KBTU/H)

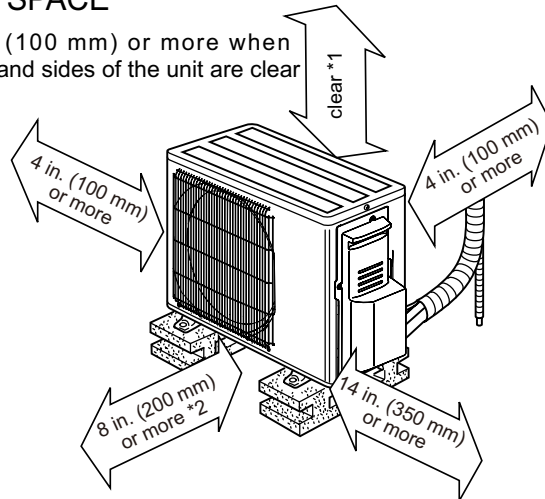
Piping	Insulation	#1-7/16 O.D.
	Liquid line	#1/4 19-11/16 (Flared connection #1/4)
	Gas line	#3/8 16-15/16 (Flared connection #1/2)
Drain hose	Insulation	#1-1/8 Connected part #5/8 O.D.

OUTDOOR UNIT DIMENSIONS: MUZ-FS06NA

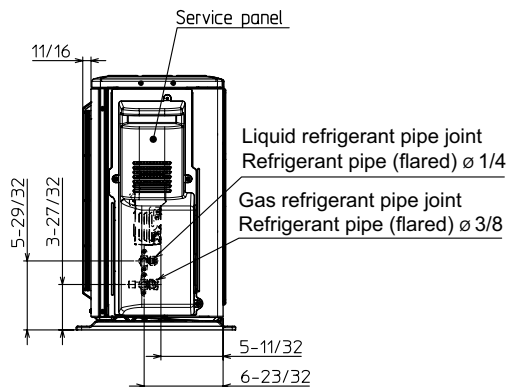
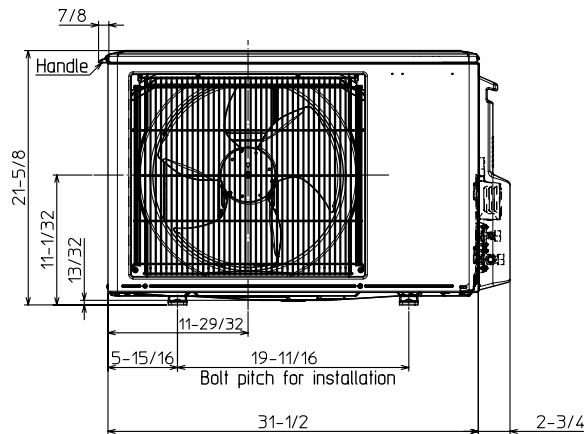
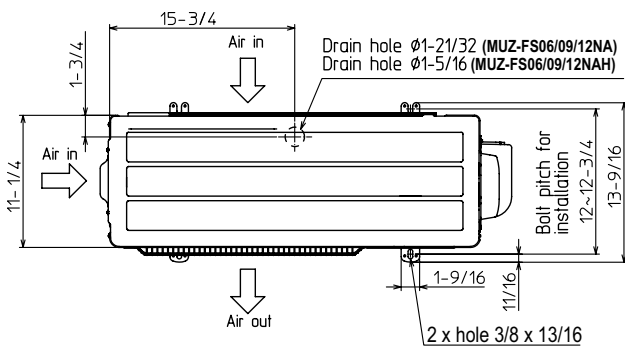
Unit: inch

REQUIRED SPACE

*1 4 in. (100 mm) or more when front and sides of the unit are clear



*2 When any 2 sides of left, right and rear of the unit are clear



1340 Satellite Boulevard Suwanee, GA 30024
Toll Free: 800-433-4822 www.mehvac.com

FORM# MSZ-FS06NA & MUZ-FS06NA - 202211



MSZ-FS09NA

9,000 BTU/H DELUXE WALL MOUNT



Job Name:

System Reference:

Date:



GENERAL FEATURES

- Slim wall-mounted indoor units provide zone comfort control
- Dual Barrier Coating applied to the heat exchanger, vanes and fan to prevent hydrophilic and hydrophobic dirt build-up
- Multiple fan speed options: Quiet, Low, Medium, High, Super-high, Auto
- 3D i-see Sensor® enables advance features:
 - Indirect or Direct Airflow for personalized comfort
 - Absence Detection for energy-saving mode
 - Double Vane features:
 - Separates airflow to deliver air across a large area
 - Simultaneously deliver to air separate sections of a room
 - Generates more comfortable natural airflow pattern
- Multiple control options available:
 - Back-lit screen handheld remote controller (provided with unit)
 - kumo cloud® smart device app for remote access
 - Third-party interface options
 - Wired or wireless controllers
- Triple-action Filtration: Nano Platinum Filter, Deodorizing Filter, & Electrostatic Anti-Allergy Enzyme Filter
- Hot-Start Technology: no cold air rush at equipment startup or when restarting after Defrost Cycle
- Quiet operation

Specifications			System
Unit Type			MSZ-FS09NA
Cooling Capacity ^{1, 3}		BTU/H	9,000
Heating Capacity ^{2, 3}		BTU/H	9,600
Electrical	Voltage, Phase, Frequency		208/230, 1, 60
	Guaranteed Voltage Range	V AC	187- 253V
	Voltage: Indoor - Outdoor, S1-S2	V AC	208/230
	Voltage: Indoor - Outdoor, S2-S3	V DC	24
	Short-circuit Current Rating [SCCR]	kA	5
Indoor Unit	MCA	A	1.0
	Fan Motor Full Load Amperage	A	0.65
	Fan Motor Output	W	40
	Airflow Rate at Cooling, Dry	CFM	137-167-221-304-381
	Airflow Rate at Cooling, Wet	CFM	117-143-190-261-328
	Airflow Rate at Heating, Dry	CFM	140-167-225-325-437
	Sound Pressure Level [Cooling]	dB[A]	20-23-29-36-40
	Sound Pressure Level [Heating]	dB[A]	20-24-29-39-42
	Drain Pipe Size	In. [mm]	5/8 [15.88]
	Coating on Heat Exchanger		Dual Barrier Coating
	External Finish Color		Munsell 1.0Y 9.2/0.2
	Unit Dimensions	W x D x H: In. [mm]	36-7/16 x 9-3/16 x 12 (+11/16) [925 x 234 x 305 (+17)]
	Package Dimensions	W x D x H: In. [mm]	39 x 12-1/4 x 15-1/2 [990 x 310 x 400]
	Unit Weight	Lbs. [kg]	29 [13.5]
	Package Weight	Lbs. [kg]	39 x 12-1/4 x 15-1/2 [990 x 310 x 400]
Refrigerant	Type		R410A
Piping	Gas Pipe Size O.D. [Flared]	In.[mm]	3/8 [6.35]
	Liquid Pipe Size O.D. [Flared]	In.[mm]	1/4 [6.35]

NOTES:

Conditions

¹Cooling (Indoor // Outdoor) °F 80 DB, 67 WB // 95 DB, 75 WB

²Heating at 47°F (Indoor // Outdoor) °F 70 DB, 60 WB // 47 DB, 43 WB

³Capacity varies based on the number of indoor units operating and the model of the Multi-zone Outdoor Unit. For reference to connected capacity charts, please refer Multi-zone Outdoor Unit Operational Performance.:

INDOOR UNIT ACCESSORIES: MSZ-FS09NA

Control Interface	BACnet® and Modbus Interface	PAC-UKPRC001-CN-1
	CN24 Relay Kit	CN24RELAY-KIT-CM3
	IT Extender	PAC-WHS01IE-E
	kumo station® for kumo cloud®	PAC-WHS01HC-E
	Lockdown bracket for remote controller	RCMKP1CB
	System Control Interface	MAC-334IF-E
	Thermostat Interface	PAC-US444CN-1
	USNAP Adapter	PAC-WHS01UP-E
	Wireless Interface for kumo cloud®	PAC-USWHS002-WF-2
Remote Sensor	Wired Remote Sensor	M21EAA307
	Wireless temperature and humidity sensor for kumo cloud®	PAC-USWHS003-TH-1
Wired Remote Controller	Deluxe Wired MA Remote Controller†	PAR-40MAAU
	Simple MA Remote Controller†	PAC-YT53CRAU-J
	Touch MA Controller†	PAR-CT01MAU-SB
Wireless Remote Controller	kumo touch™ RedLINK™ Wireless Controller	MHK2
Condensate	Blue Diamond (Advanced) Mini Condensate Pump w/ Reservoir & Sensor (208/230V) [recommended]	X87-721
	Blue Diamond (MicroBlue) Mini Condensate Pump (110/208/230V) up to 18,000 BTU/H	X85-003
	Blue Diamond Alarm Extension Cable — 6.5 Ft.	C13-192
	Blue Diamond MultiTank — collection tank for use with multiple pumps	C21-014
	Blue Diamond Sensor Extension Cable — 15 Ft.	C13-103
	Drain Pan Level Sensor/Control	SS610E
	Fascia Kit for MicroBlue Pump, mounts the MicroBlue and sensor directly beneath indoor unit	T18-016
	Sauermann Condensate Pump	SI30-230
Disconnect Switch	(30A/600V/UL) [fits 2" X 4" utility box] - Black	TAZ-MS303
	(30A/600V/UL) [fits 2" X 4" utility box] - White	TAZ-MS303W
Filter	Electro Static Anti-allergy Enzyme Filter	MAC-2330FT-E
	Platinum Deodorizing Filter	MAC-3000FT-E
Lineset	15' x 1/4" x 15' / 3/8" Lineset (Twin-Tube Insulation)	MLS143812T-15
	30' x 1/4" x 30' / 3/8" Lineset (Twin-Tube Insulation)	MLS143812T-30
	50' x 1/4" x 50' / 3/8" Lineset (Twin-Tube Insulation)	MLS143812T-50
	65' x 1/4" x 65' / 3/8" Lineset (Twin-Tube Insulation)	MLS143812T-65

NOTES:

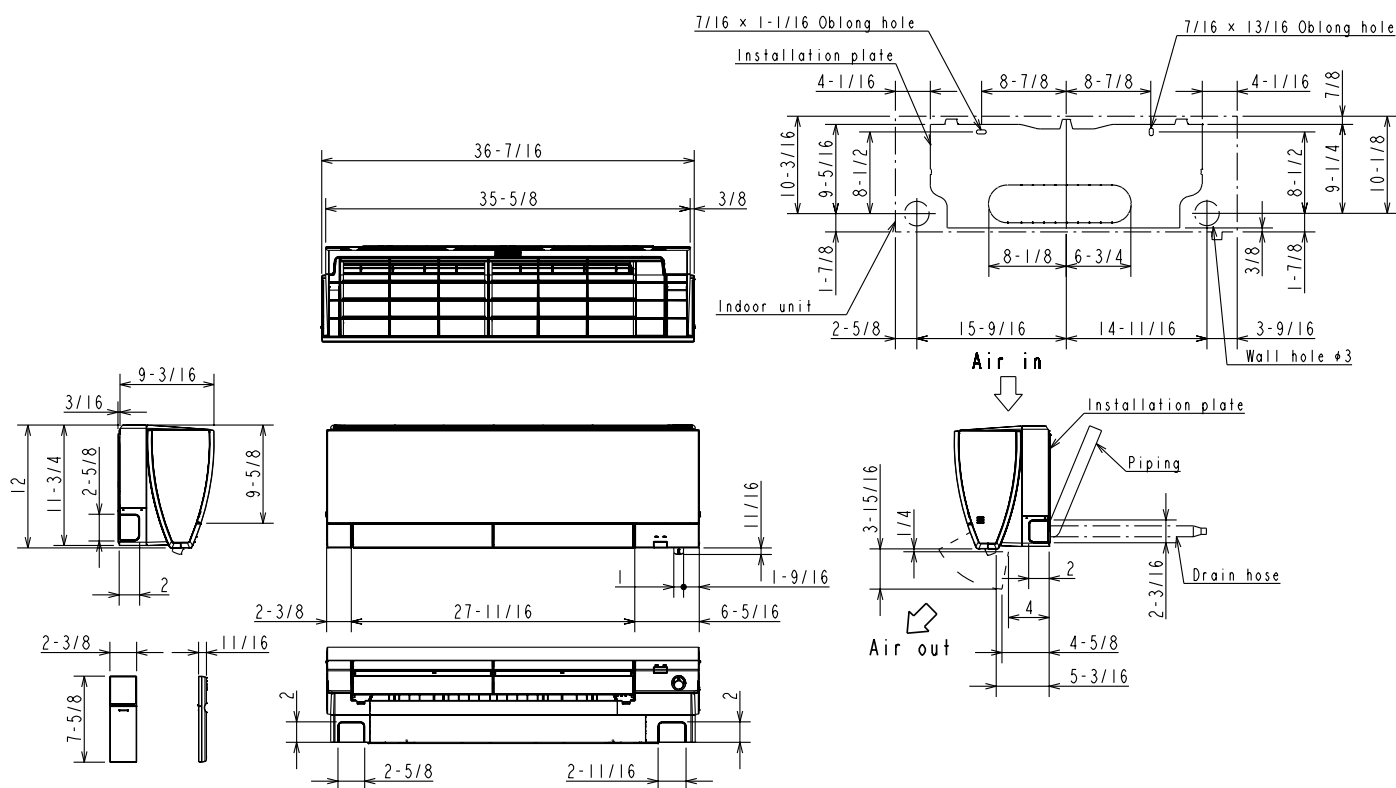
†Requires MAC-334IF-E

•Allows indoor units to connect to an MA Controller:

- Deluxe MA Remote Controller
- Simple MA Controller
- Touch MA Controller

INDOOR UNIT DIMENSIONS: MSZ-FS09NA

Unit: inch



(06/09/12 KBTU/H)

Piping	Insulation	1-7/16 O.D.
	Liquid line	1/4 19-11/16 (Flared connection 1/4)
	Gas line	3/8 16-15/16 (Flared connection 3/8)
Drain hose	Insulation	1-1/8 Connected part 5/8 O.D.

(15/18 KBTU/H)

Piping	Insulation	1-7/16 O.D.
	Liquid line	1/4 19-11/16 (Flared connection 1/4)
	Gas line	3/8 16-15/16 (Flared connection 1/2)
Drain hose	Insulation	1-1/8 Connected part 5/8 O.D.

1340 Satellite Boulevard Suwanee, GA 30024
Toll Free: 800-433-4822 www.mehvac.com

FORM# MSZ-FS09NA-U1 - 202102



M-SERIES

SUBMITTAL DATA: SEZ-KD09NA4 & SUZ-KA09NAHZ 9,000 BTU/H HORIZONTAL-DUCTED HEAT PUMP SYSTEMS

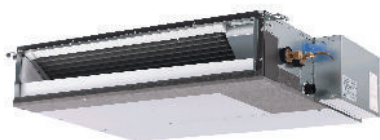


Job Name:	
System Reference:	Date:

APPLIES TO INDOOR UNIT:

- ☐ SEZ-KD09NA4.TH
- ☐ SEZ-KD09NAR1.TH
- ☐ SEZ-KD09NA4R1.TH

Outdoor Unit:
SUZ-KA09NAHZ



INDOOR UNIT FEATURES

- Concealed horizontal-ducted unit for applications with short duct runs
- Quiet operation
- Ultra-thin body: 7-7/8" high
- Built-in condensate lift mechanism (lifts to 21-21/32")
- Multiple control options available:
 - kumo cloud® smart device app for remote access
 - Third-party interface options
 - Wired or wireless controllers
- Static capability up to 0.20 in. WG

OUTDOOR UNIT FEATURES

- The outdoor unit powers the indoor unit, and should a power outage occur, the system is automatically restarted when power returns
- INVERTER-driven compressor and LEV provide high efficiency and comfort while using only the energy needed to maintain maximum performance
- H2i® hyper heat performance offers 100% heating capacity at 5°F
- Hot-Start Technology: no cold air rush at equipment startup or when restarting after Defrost Cycle
- Quiet operation
- Blue Fin anti-corrosion treatment applied to the outdoor unit heat exchanger for increased coil protection and longer life
- Built-in base pan heater
- Innovative Joint Lap DC Motor leads to high efficiency and reliability
- Pulse Amplitude Modulation technology

SPECIFICATIONS: SEZ-KD09NA4 & SUZ-KA09NAHZ

Cooling at 95°F ¹	Maximum Capacity	BTU/H	9,000
	Rated Capacity	BTU/H	9,000
	Minimum Capacity	BTU/H	4,500
	Maximum Power Input	W	690
	Rated Power Input	W	690
	Moisture Removal	Pints/h	1.70
	Sensible Heat Factor		0.79
	Power Factor (208/230V)	%	89
Heating at 47°F ²	Maximum Capacity	BTU/H	13,300
	Rated Capacity	BTU/H	12,500
	Minimum Capacity	BTU/H	8,100
	Maximum Power Input	W	1,300
	Rated Power Input	W	1,300
	Power Factor	%	95
Heating at 17°F ³	Maximum Capacity	BTU/H	12,500
	Rated Capacity	BTU/H	8,700
	Maximum Power Input	W	1,670
	Rated Power Input	W	1,120
Heating at 5°F ⁴	Maximum Capacity	BTU/H	12,500
	Maximum Power Input	W	2,000
Efficiency	SEER		17.30
	EER ¹		13.00
	HSPF (IV)		9.80
	COP at 47° F ²		2.80
	COP at 17°F in Maximum Capacity ³		2.20
	COP at 5°F in Maximum Capacity ⁴		1.59
	ENERGY STAR® certified units (ENERGY STAR products are third-party certified by an EPA-recognized Certification Body.)		Yes
Electrical	Voltage, Phase, Frequency		208/230V, 1 phase, 60Hz
	Guaranteed Voltage Range	V AC	187-253
	Voltage: Indoor - Outdoor, S1-S2	V AC	208/230
	Voltage: Indoor - Outdoor, S2-S3	V DC	24
	Short-circuit Current Rating (SCCR)	kA	5
	Recommended Fuse/Breaker Size (Outdoor)	A	15
	Recommended Wire Size (Indoor - Outdoor)	AWG	14
Indoor Unit	MCA	A	0.74
	Fan Motor Full Load Amperage	A	0.59
	Fan Motor Output	W	96
	Airflow Rate, Dry	CFM	317-247-194
	Airflow Rate, Wet	CFM	285-222-174
	Sound Pressure Level (Cooling)	dB(A)	30-26-23
	Sound Pressure Level (Heating)	dB(A)	30-26-23
	External Static Pressure	in.WG	0.02-0.06-0.14-0.2
	Drain Pipe Size	In. (mm)	1-1/4 (32)
	Condensate Lift Mechanism, Maximum Distance	In. (mm)	21-21/32 (550)
	Heat Exchanger Type		Plate fin coil
	External Finish Color		Galvanized
	Unit Dimensions	W: In. (mm)	31 1/8 (790)
		D: In. (mm)	27-9/16 (700)
		H: In. (mm)	7-7/8 (200)
	Package Dimensions	W: In. (mm)	39-3/8 (1,000)

SPECIFICATIONS: SEZ-KD09NA4 & SUZ-KA09NAHZ

		D: In. (mm)	35-7/16 (900)
		H: In. (mm)	14-3/16 (360)
	Unit Weight	Lbs. (kg)	42 (19)
	Package Weight	Lbs. (kg)	64 (29)
Indoor Unit Operating Temperature Range	Cooling Intake Air Temp (Maximum / Minimum)*	°F	90 DB / 72 WB // 68 DB / 61 WB
	Heating Intake Air Temp (Maximum / Minimum)	°F	77 DB // 59 DB
Outdoor Unit	MCA	A	14.0
	MOCP	A	24.0
	Fan Motor Full Load Amperage	A	0.7
	Fan Motor Output	W	77.0
	Airflow Rate	CFM	1,691 / 1,691
	Refrigerant Control		LEV
	Defrost Method		Reverse Cycle
	Heat Exchanger Type		Plate Fin Coil
	Blue Fin Coating on Heat Exchanger		Yes
	Sound Pressure Level (Cooling) ¹	dB(A)	54
	Sound Pressure Level, Heating ²	dB(A)	55
	Compressor Type		DC INVERTER-driven Twin Rotary
	Compressor Model		SNB130FHB2T
	Compressor Rated Load Amps	A	13
	Compressor Locked Rotor Amps	A	10
	Compressor Oil Type // Charge	oz.	FV50S // 22
	External Finish Color		Ivory Munsell 3Y 7.8/1.1
	Base Pan Heater		Yes
	Unit Dimensions	W: In. (mm)	38-9/16 (840)
		D: In. (mm)	13 (330)
		H: In. (mm)	34-5/8 (880)
	Package Dimensions	W: In. (mm)	38-9/16 (980)
		D: In. (mm)	16-9/16 (420)
		H: In. (mm)	39 (990)
	Unit Weight	Lbs. (kg)	129 (58.5)
	Package Weight	Lbs. (kg)	148 (67)
Outdoor Unit Operating Temperature Range	Cooling Air Temp (Maximum / Minimum)*	°F	115 / 14
	Cooling Thermal Lock-out / Re-start Temperatures**	°F	-1 / 3
	Heating Air Temp (Maximum / Minimum)	°F	75 / -13
	Heating Thermal Lock-out / Re-start Temperatures**	°F	-18 / -14
Refrigerant	Type		R410A
	Charge	Lbs, oz	3, 9
Piping	Gas Pipe Size O.D. (Flared)	In.(mm)	3/8 (9.52)
	Liquid Pipe Size O.D. (Flared)	In.(mm)	1/4 (6.35)
	Maximum Piping Length	Ft. (m)	65
	Maximum Height Difference	Ft. (m)	40
	Maximum Number of Bends		10

Notes

AHRI Rated Conditions (Rated data is determined at a fixed compressor speed)	¹ Cooling (Indoor // Outdoor)	°F	80 DB, 67 WB // 95 DB, 75 WB
	² Heating at 47°F (Indoor // Outdoor)	°F	70 DB, 60 WB // 47 DB, 43 WB
	³ Heating at 17°F (Indoor // Outdoor)	°F	70 DB, 60 WB // 17 DB, 15 WB
Conditions	⁴ Heating at 5°F (Indoor // Outdoor)	°F	70 DB, 60 WB // 5 DB, 4 WB

*Applications should be restricted to comfort cooling only; equipment cooling applications are not recommended for low ambient temperature conditions.

**System cuts out in heating mode to avoid thermistor error and automatically restarts at these temperatures.

ACCESSORIES: SEZ-KD09NA4

Filter Box with MERV 8 Filters	□ FBL1-1
Wireless Signal Receiver	□ PAR-SA9CA-E
Wireless Signal Receiver	□ PAR-FA32MA-W
Wireless Remote Controller	□ PAR-FL32MA-E
kumo touch™ RedLINK™ Wireless Controller	□ MHK2
Deluxe MA Remote Controller	□ PAR-40MAAU
Simple MA Controller	□ PAC-YT53CRAU-J
Touch MA Controller	□ PAR-CT01MAU-SB
Wired Remote Sensor	□ PAC-SE41TS-E
Wireless Temperature and Humidity Sensor	□ PAC-USWHS003-TH-1
Flush Mount Remote Temperature Sensor	□ PAC-USSEN002-FM-1
Wireless Interface 2	□ PAC-USWHS002-WF-2
Thermostat Interface	□ PAC-US444CN-1
Thermostat Interface	□ PAC-US445CN-1
kumo station® for kumo cloud®	□ PAC-WHS01HC-E
USNAP Interface	□ PAC-WHS01UP-E
IT Extender	□ PAC-WHS01IE-E
BACnet® and MODBUS® Interface	□ PAC-UKPRC001-CN-1
External Fan / Heater Control Relay Adapter	□ CN24RELAY-KIT-CM3
Wire for Remote on/off with CN32 connector	□ PAC-715AD
Connector and wire for Operation status/error using CN51	□ PAC-725AD
Connector cable for remote display	□ PAC-SA88HA-EP
Remote Operation Adapter ¹	□ PAC-SF40RM-E
Bottom Return Plate (Converts low-profile ducted indoor unit from rear return to bottom return)	□ BRP-1
Blue Diamond Sensor Extension Cable — 15 Ft.	□ C13-103
Blue Diamond Alarm Extension Cable — 6.5 Ft.	□ C13-192
Blue Diamond MultiTank — collection tank for use with multiple pumps	□ C21-014
Blue Diamond Rubber Foot Pads	□ F10-010
Mini Condensate Pump — 230 volt application	□ SI30-230
Advanced Blue Diamond Mini Condensate Pump w/ Reservoir & Sensor (208/230V) [recommended]	□ X87-721 - 208/230V
Refco Condensate Pump (100-240 VAC) up to 120,000 BTU/H	□ COMBI
(30A/600V/UL) [fits 2" X 4" utility box] - Black	□ TAZ-MS303
(30A/600V/UL) [fits 2" X 4" utility box] - White	□ TAZ-MS303W

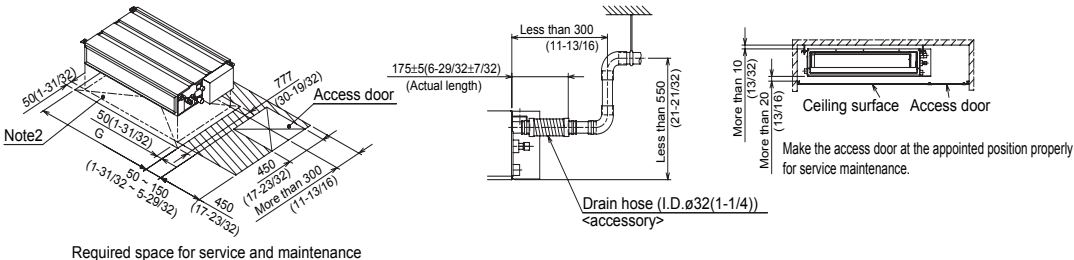
¹ Unable to use with wireless remote controller

ACCESSORIES: SUZ-KA09NAHZ

Air Outlet Guide	□ MAC-881SG
Optional Defrost Heater	□ MAC-640BH-U
Hail Guard	□ HG-A7
Outdoor Unit 3-1/4 inch Mounting Base (Pair) - Plastic	□ DSD-400P
Condensing Unit Mounting Pad 16" x 36" x 3"	□ ULTRILITE1
Outdoor Unit Stand — 12" High	□ QSMS1201M
Outdoor Unit Stand — 18" High	□ QSMS1801M
Outdoor Unit Stand — 24" High	□ QSMS2401M
Heavy Duty Wall Mounting Bracket— Coated Steel	□ QSWB2000M-1
Heavy Duty Wall Mounting Bracket — 316 Series Stainless Steel	□ QSWBSS
15' x 1/4" x 15' / 3/8" Lineset (Twin-Tube Insulation)	□ MLS143812T-15
30' x 1/4" x 30' / 3/8" Lineset (Twin-Tube Insulation)	□ MLS143812T-30
50' x 1/4" x 50' / 3/8" Lineset (Twin-Tube Insulation)	□ MLS143812T-50
65' x 1/4" x 65' / 3/8" Lineset (Twin-Tube Insulation)	□ MLS143812T-65

DIMENSIONS: SEZ-KD09NA4

Unit: mm (inch)



Required space for service and maintenance

mm (in.)

Sizes	A	B	C	D	E	F	G	H	J	K	L	M	N	① Gas pipe	② Liquid pipe
09 KBTU/H	700 (27-916)	752 (29-58)	798 (31-716)	660 (26)	7	600 (23-58)	800 (31-112)	660 (26)	5	500 (19-1116)	16	839 (33-116)	790 (31-118)	ø9.52(3/8)	ø6.35(1/4)
12 KBTU/H	900 (35-716)	952 (37-12)	998 (39-516)	860 (33-78)	9	800 (31-12)	1000 (39-38)	860 (33-78)	7	700 (27-916)	20	1039 (40-2832)	990 (39)		
15 KBTU/H														ø12.7(1/2)	
18 KBTU/H	1100 (43-516)	1152 (45-38)	1198 (47-116)	1060 (41-34)	11	1000 (39-38)	1200 (47-14)	1060 (41-34)	9	900 (37-716)	24	1239 (48-2832)	1190 (46-78)		

Note1. Use M10 screw for the suspension bolt (field supply).

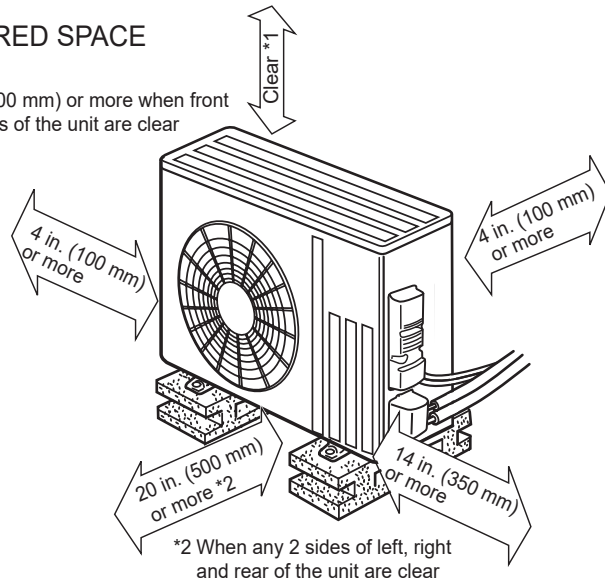
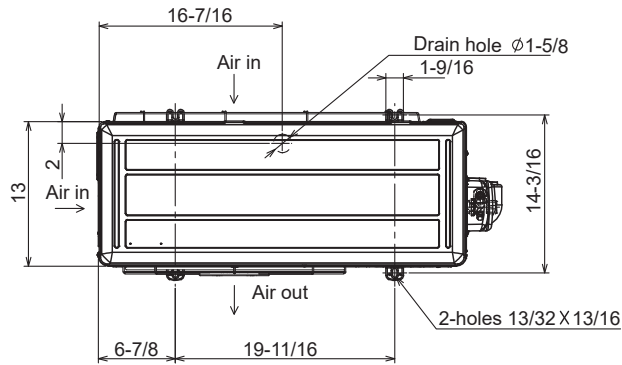
2. Keep the service space for the maintenance at the bottom.
3. This chart indicates for size 15 kBTu/h model, which has 3 fans.
Sizes 09,12 kBTu/h models have 2 fans.
Sizes 08 kBTu/h model has 4 fans.
4. When an inlet duct is used, remove the air filter (supply with the unit), then install the filter (field supply) at suction side.

DIMENSIONS: SUZ-KA09NAHZ

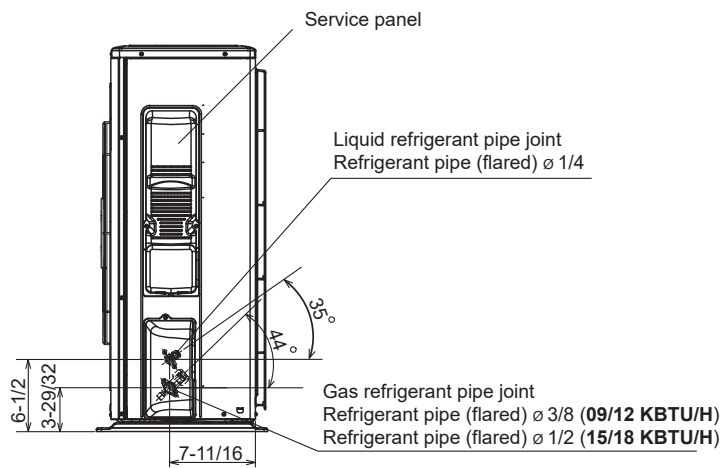
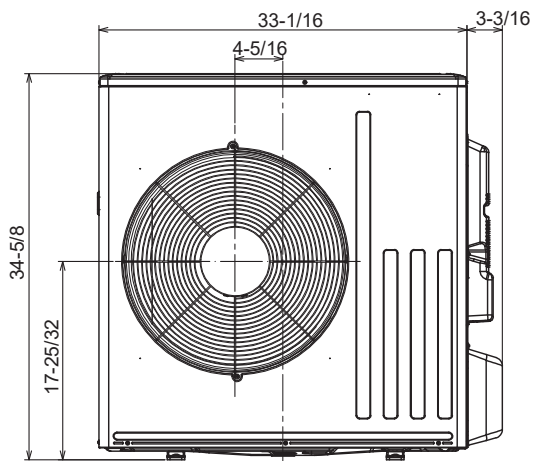
Unit: inch

REQUIRED SPACE

*1 20 in. (500 mm) or more when front and sides of the unit are clear



*2 When any 2 sides of left, right and rear of the unit are clear



1340 Satellite Boulevard, Suwanee, GA 30024
Toll Free: 800-433-4822 www.mehvac.com

FORM# SEZ-KD09NA4 / SUZ-KA09NAHZ - 202209



Specifications are subject to change without notice.

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Heating

Cooling

Fresh Air

Clean Air



ComfoAir Q 350 / ComfoAir Q 450



ComfoAir Q 600

5 Maintenance

Part of system	Limit	Responsible	Procedure
Filters	6 months	User	Replace the filters
Valves	6 months	User	Clean the valves
Grilles	6 months	User	Clean the grilles
Operating device	6 months	User	Clean the operating device
Condensation drain	6 months	User	Fill the condensation drain
System inspection and cleaning	4 years	Installer or service engineer	-

Zehnder recommends a maintenance contract with a specialist ventilation maintenance company. Some installers provide a maintenance contract in which the user maintenance can be integrated. Contact the supplier of the unit for a list of registered installers nearby.

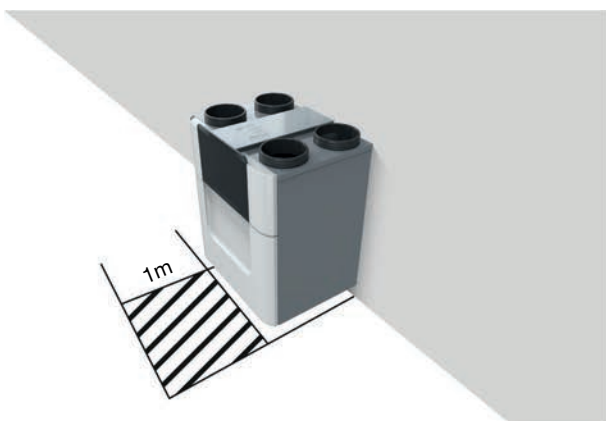
The warranty becomes invalid if:

- Parts are used that have not been supplied by the manufacturer;
- The unit is used without filters.

⚠ Do not disconnect the power to the unit, unless instructed otherwise in the manual. This can lead to a build-up of moisture and result in problems with mould.

⚠ Perform the maintenance tasks within the suggested time periods. Failure to do this can result in the ventilation systems performance to be compromised.

👉 Keep a clearance in front of the unit of at least 1m. This room is needed to carry out the maintenance activities.



5.1 Fill the condensation drain

The condensation drain is connected to the domestic waste-water system. To prevent sewer smells from entering your home, the water seal of the domestic waste-water system must always contain water. You can achieve this by pouring a cup of water into the water seal.

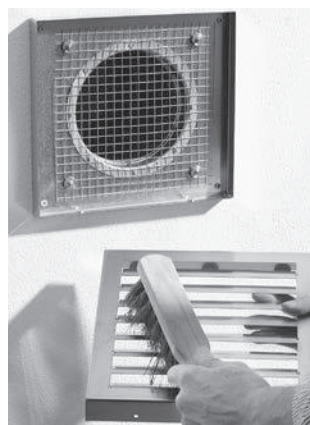
5.2 Clean the operating device

Activate the child lock on the display, to prevent any changes to the settings caused by accidentally pressing the buttons. Clean any operating device present in your home at least every six months. Use a dry duster or vacuum cleaner to remove the dust. Do not use water or any other liquid.

5.3 Clean the grilles

⚠ Clean any grille present in and outside your home at least every six months.

1. Keep hold of the grille on its outer edge and pull it completely out of the wall or ceiling (if not screwed down).
2. Clean the grille with a soft brush or vacuum cleaner.



3. Clean the filter behind the grille (if present) with a soft brush or vacuum cleaner.
 - Do not remove the foam behind the grille (if present) as it would negatively influence the system performance.
4. Place the grille back in the wall or ceiling.

DECKING

Key Details:

- Black Locust, scientific name Robinia Pseudoacacia
- Sizes stocked:
 - 2 x 6
 - 2 x 4
 - 5/4 x 6
 - 5/4 x 4
 - 1 x 6
 - 1 x 5
 - 1 x 4
- ASTM E84-16 class A fire rated
- Custom sizes available



Specifications:

Wood Common name	Black Locust
Wood Scientific name	Robinia Pseudoacacia
Color	Initial color is blonde to light red/light brown
Grain	Tight grain
Density @ 12% moisture	4.0 to 4.5 pounds per board foot
Durability	Highest rating from USDA (Exceptionally high decay resistance)
Fire rating	Class A (ASTM E84-16 tested)
Hardness (Janka)	1,700
Resistance to decay and insect attack	Resistant to attack by decay fungi and termites.
Modulus of rupture	19,400 lbf/in ²
Modulus of elasticity	2,050,000 lbf/in ²
Maximum crushing strength	10,200 lbf/in ²
Wood movement properties	Radial: 4.6%, Tangential: 7.2%, Volumetric: 10.2%, T/R Ratio: 1.6

sales@robidecking.com / 336.365.2850

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STAIRN TREADS



Vermont Plank Flooring

Finish Warranty

Vermont Plank Flooring warrants that our product is free from defects in finishing and we will replace any plank that shows a finishing defect so long as it is returned to us prior to installation. Planks with manufacturing defects or character that is deemed undesirable by the end user should not be installed. All of the products we pre-finish are from products manufactured from natural materials and contain variations in color, grain patterns, and textures. This warranty does not include variances in color, knots, or kiln drying defects in the installed product or variances between showroom samples and the installed floor.

There are no warranties which extend beyond the description on the face hereof. These warranties are given in lieu of all other warranties. There is no warranty of merchantability or fitness for any particular purpose except the express warranties on the face of this document. Vermont Plank Flooring excludes all warranties implied by law or implied by fact, which are not expressly set forth on the face of this document. The pre-finisher excludes and will not compensate for any consequential or incidental damages. This warranty is valid only to the original purchasers of the flooring and is not transferable. This warranty will void any restitution or actions on the pre-finisher's behalf if the client commits to a claim without the pre-finisher or their customer inspecting and validating the job-site, installation and/or quality product prior to the decision.

Finish Warranty

Residential: Vermont Plank Flooring offers a 25-Year Finish Warranty on all pre-finished solid and engineered products as long as the flooring installation and care guidelines are adhered to. This warranty is given solely to the original purchaser. This Finish Warranty applies only to residential applications and installations with regular wear and when proper care and maintenance is followed.

Commercial: Vermont Plank Flooring offers a 5-Year Finish Warranty on all formulated and stated commercial-grade pre-finished solid and engineered product finishes as long as the flooring installation and care guidelines are adhered to. This warranty is given solely to the original purchaser. This Finish Warranty applies only to commercial applications and installations with regular wear and when proper care and maintenance is followed.

Exclusions

All wood flooring will undergo natural color changes due to the effects of sunlight and/or ultraviolet light and these changes are not covered by our warranty. Area rugs and other furnishings should be moved occasionally as they block sunlight and may give the appearance of discoloration under the rug. This is not a product defect.

Additional exclusions: indentations, scratches, or damages caused by misuse, negligence, accidents, fire, erosion, insects, pets, shoes, pebbles, sand, other abrasives, lack of proper maintenance, insufficient protection of furniture, and misuse or improper alterations of the original manufactured product. Damage due to water and/or moisture, including but not limited to damage resulting from broken or leaking pipes, wet mopping, weather conditions or natural disasters, is excluded from warranties made by Vermont Plank Flooring.

INSTALLATION OF ANY FLOORING CONSTITUTES ACCEPTANCE OF ITS GRADE, MILLING, AND FINISH.

As Vermont Plank Flooring has no control over installation methods or site conditions, we cannot warranty any installation or site-related issue.

Vermont Plank Flooring assumes no liability for incidental or consequential damages. This writing is the complete and exclusive statement of the warranty, and is in lieu of all other expressed and/or statutory warranties. This warranty gives you specific legal rights and you may have other rights as they vary from state to state. Any damage caused to the flooring as a result of the following will void this warranty.

IMPROPER INSTALLATION - Proper N.W.F.A. guidelines must be followed including subfloor preparation.

STORAGE/JOB-SITE CONDITIONS - Product must be stored in a dry and heated environment, no exposure to any moisture shall be permitted. Do not store in garages, over concrete, or below grade.

WATER DAMAGE - Warranty does not include damage caused by flooding, faulty plumbing, moisture penetration, overflowing sinks, leaking appliances or any like occurrences.

Proper handling, storage, and installation are the Installer/Dealer's responsibility. Installer responsibility includes final inspection of flooring prior to installation. Our warranty does not cover flooring with visible defects once it is installed. Installer is also responsible for making certain the flooring is installed over an acceptable, suitable subfloor.

Signed Control Sample

In order to begin the finishing process for your pre-finished Vermont Plank Floor, we first must receive your signed Control Sample indicating your approval of color and finish. This Control Sample will serve as our reference point for verification before, during, and after the finishing process. Variations in color, grain structure, and character may be expected from board to board. By signing the Control Sample, you agree that your floor will be finished with the same formula to match the color and sheen of your Approved Control Sample.

Care & Maintenance

Hardwood flooring, unlike other types of floor coverings, can be kept looking new, regardless of wear, with a minimum amount of effort. To protect against damage, just follow some basic, sensible guidelines. If your floor happens to get damaged, don't panic. One of the benefits of wood flooring is that because it is a natural flooring material, it can be repaired and/or refinished to look just like new. Here are some tips for its longevity:

- To prevent excess dirt and grit from coming in contact with your floors, use entry mats or rugs at all exterior doors. Throw rugs are also recommended on the inside of those doors. High traffic or potential spill areas in kitchens should also employ this tactic.
- Many wood species are photosensitive to direct or indirect U.V. light. Over time your floor may show signs of a slight change in appearance; move area rugs occasionally and shade or curtain large exposed windows to minimize this effect.
- Please use felt floor protectors wherever possible; this will allow your furniture to be moved while minimizing the opportunity for surface scratching.

- Clean or replace your protectors often as dirt or grit can be embedded in them. Ball-type casters are not recommended as they may dent your floor. Avoid any floor protectors that are plastic.
- Be aware of marking soled shoes and keep high-heeled shoes in good repair. Marks from marking soled shoes can be removed by using mineral spirits and a soft cloth or towel.
- We recommend purchasing cleaning products designed specifically for wood floors that are not acetone or solvent-based. These can be purchased through your flooring installer or directly from your flooring distributor. Using a vinegar and water dilution is not recommended.
- Never use any kind of over-the-counter oil, oil-soap, or solvent-based products to clean or maintain your floor. They will, with repeated use, erode the protective finish and dull the luster on your floor.
- Floors that have been damaged from years of wear and tear or neglect can be restored to their original beauty by sanding, staining, and refinishing. For best results, we recommend this be done by a professional wood flooring refinisher.

Vermont Plank Flooring

112 Hardwood Way
Brattleboro, VT 05301

866-326-2373
info@vtpf.com

PORCH POSTS

Key Details:

- Black Locust, scientific name Robinia Pseudoacacia
- Sizes stocked:
 - 4 x 4 Nominal (actual 3.5" x 3.5")
 - 6 x 6 Nominal (actual 5.5" x 5.5")
 - 8 x 8 Nominal (actual 7.25" x 7.25")
- 4 x 4 Rough
- 6 x 6 Rough
- 8 x 8 Rough
- 10 x 10 Rough
- 12 x 12 Rough (limited quantity)
- ASTM E84-16 class A fire rated
- Custom sizes available



Specifications:

Wood Common name	Black Locust
Wood Scientific name	Robinia Pseudoacacia
Color	Initial color is blonde to light red/light brown
Grain	Tight grain
Density @ 20% moisture	5.0 to 5.5 pounds per board foot
Durability	Highest rating from USDA (Exceptionally high decay resistance)
Fire rating	Class A (ASTM E84-16 tested)
Hardness (Janka)	1,700
Resistance to decay and insect attack	Resistant to attack by decay fungi and termites.
Modulus of rupture	19,400 lbf/in ²
Modulus of elasticity	2,050,000 lbf/in ²
Maximum crushing strength	10,200 lbf/in ²
Wood movement properties	Radial: 4.6%, Tangential: 7.2%, Volumetric: 10.2%, T/R Ratio: 1.6

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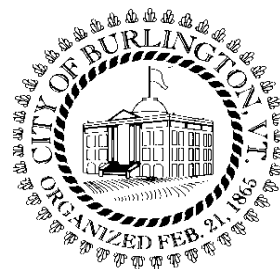




Department of Permitting and Inspections

Zoning Division
645 Pine Street
Burlington, VT 05401
www.burlingtonvt.gov/pz
Phone: (802) 865-7188
Fax: (802) 865-7195

William Ward, Director
Scott Gustin, AICP, CFM, Principal Planner
Mary O'Neil, AICP, Principal Planner
Garret King, Associate Planner
Joseph Cava, Planning Technician
Collin Miller, Zoning Compliance Officer



MEMORANDUM

To: The Design Advisory Board
From: Mary O'Neil, AICP, Principal Planner
RE: ZP 25-370
Location: 23 Isham Street
Date: August 26, 2025

File: ZP25-370
Location: 23 Isham Street
Zone: RM **Ward:** 3
Date application accepted: July 21, 2025
Plans revised: August 19, 2025.
Applicant/ Owner: Brett Brosseau / Missa Aloisi
Request: Construct a Secondary Structure with 3 units. Existing duplex to remain.

Background:

- **Zoning Permit 21-0353CA;**
door, steps, and shed roof.
October 2020.
- **Zoning Permit 20-0982CA;**
install new windows. June
2020.
- **Zoning Permit 20-0626CA;**
change of use from single
family dwelling to a duplex;
replace rear porch with new
2 story addition, and expand
driveway to accommodate
additional parking. January
2020.

Overview: Adoption of the Neighborhood Code allowed for a Secondary Structure on a residential lot, provided it meets dimensional standards. This application proposes a new, detached triplex to accompany the existing duplex, for a total of 5 units on-site.



The programs and services of the City of Burlington are accessible to people with disabilities. For accessibility information call 865-7188 (for TTY users 865-7142).

Part 1: Land Division Design Standards

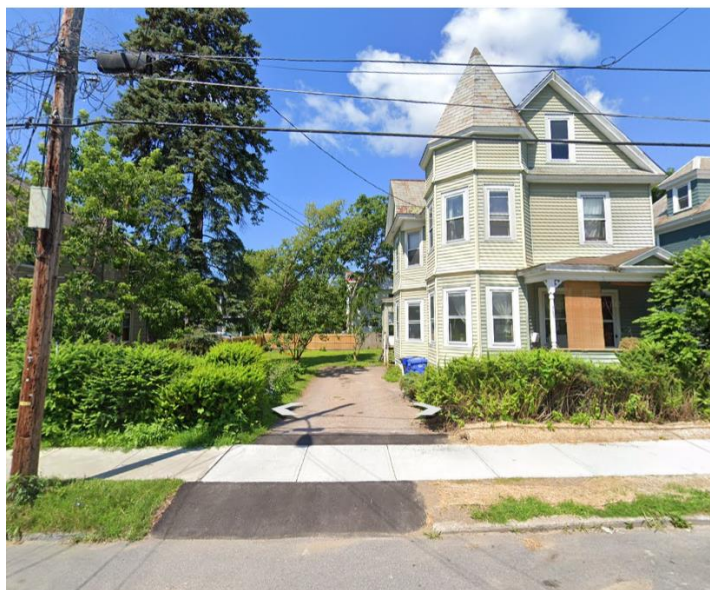
No subdivision is proposed. Not applicable.

Part 2: Site Plan Design Standards

Sec. 6.2.2 Review Standards

(a) Protection of Important Natural Features:

The landscape, existing terrain and any significant trees and vegetation shall be preserved in their natural state insofar as practicable in keeping with the objectives of the underlying zoning district. Development and site disturbance shall preserve watercourses, wetlands, steep slopes, flood-prone areas, rock outcroppings, wildlife habitat and travel corridors, specimen trees and contiguous stands of forest, and other sensitive ecological and geological areas insofar as practicable in keeping with the objectives of the underlying zoning district. Site plans shall provide suitable buffers from any proposed site improvements, and maintain continuity and contiguousness of greenspace while allowing reasonable development in support of the overall intent of the zoning district. Where any natural features are proposed to be removed or the topography altered, special attention shall be given to replace or mitigate the loss of such features. Any development occurring on parcels containing significant natural areas identified in the city's Open Space Protection Plan shall avoid disturbance to these natural areas and establish appropriate buffers that protect their natural functions.



Existing site, Google Earth view.

Secondary structure proposed on the south (left) of photo.

Other than the removal of a conifer tree, no landscaping plan has been provided and no tree removal plan submitted. Plan A1.1 lacks site details.

(b) Topographical Alterations:

Alteration to the natural contour of the site shall minimize grading, cut, and fill, and shall take necessary measures to protect against erosion and future instability. Any grade changes shall be in keeping with the general appearance of neighboring developed areas. In areas where more intense levels of development are encouraged, development should seek to take advantage of topographical changes to hide and/or blend new construction into the landscape. Proposed design and construction details for any cut and fill, or retaining walls over 3-feet in height, or any height along the lakeshore, shall be subject to review and approval by the city engineer before receiving approval of the site plan.

No topographic information has been provided. Any changes shall be provided as part of a landscaping plan.

(c) Protection of Important Public Views:

Distant terminal views of Lake Champlain and the mountains to the east and west, and important public and cultural landmarks, framed by public rights-of-way or viewed from public spaces shall be maintained through sensitive siting and design to the extent practicable. This shall not be construed to include views from exclusively private property.

There are no important public views from or through this property. Not applicable.

(d) Protection of Important Cultural Resources:

Burlington's architectural and cultural heritage shall be protected through sensitive and respectful redevelopment, rehabilitation, and infill. Archeological sites likely to yield information important to the city's or the region's pre-history or history shall be evaluated, documented, and avoided whenever feasible. Where the proposed development involves sites listed or eligible for listing on a state or national register of historic places, the applicant shall meet the applicable development and design standards pursuant to Sec. 5.4.8(b).

23 Isham Street is listed on the Vermont State Register of Historic Resources. While this application is intended to provide a detached structure of three units, considering the context of the new development is addressed in Section 5.4.8, below.

(e) Supporting the Use of Renewable Energy Resources:

Where feasible, the site plan should be so designed as to take advantage of the site's inherent potential to utilize sources of renewable energy including direct sunlight, wind, or running water. The site plan should also incorporate site planning and landscaping decisions intended to minimize energy demand such as siting buildings to maximize solar access or the use of deciduous and coniferous trees to create shade and windbreak.

Buildings should, where appropriate within the context of the neighborhood development pattern, maximize their solar exposure by being oriented to maximize natural light and heat gain during winter months, and to minimize casting shadows into ground floor living space of a building on an adjacent property.

Condensing units are proposed; they have been relocated in revised plans (8.19) to within an enclosure on the front of the Secondary Structure.

The new secondary structure will be placed south of the existing duplex; with the potential to throw shadow on the rear portion of the existing structure. This lot is wider than adjacent lots, with the existing structure at the far north of the site and providing an area for a new building.

(f) Brownfield Sites:

Where a proposed development involves a known or suspected brownfield, the site plan shall indicate areas of known or suspected contamination, and the applicant shall identify completed or planned remediation necessary to support the intended use(s).

23 Isham Street is not listed on the State's Brownfield list. Not applicable.

(g) Provide for nature's events:

Special attention shall be accorded to stormwater runoff so that neighboring properties and/or the public stormwater drainage system are not adversely affected. All development and site disturbance shall follow applicable city and state erosion and stormwater management guidelines in accordance with the requirements of Art 5, Sec 5.5.3.

An Erosion Prevention and Sediment Control Plan, as well as a Stormwater Plan will be required. Neither have been provided.

Design features which address the effects of rain, snow, and ice at building entrances, and to provisions for snow and ice removal or storage from circulation areas shall also be incorporated.

A small canopy is provided at the first floor entry. Snow storage is identified south of the front parking area.

(h) Building Location and Orientation:

The introduction of new buildings and additions shall be consistent with the intent of the district. New buildings and additions should be aligned with the front façade of neighboring buildings to reinforce the existing "street-edge," or where necessary, located in such a way that complements existing natural features and landscapes. Buildings placed in mixed-use areas where high volumes of pedestrian traffic are desired should seek to provide sufficient space (optimally 12-15 feet) between the curblineline and the building face to facilitate the flow of pedestrian traffic. In such areas, architectural recesses and articulations at the street-level are particularly important, and can be used as an alternative to a complete building setback in order to maintain the existing street wall.

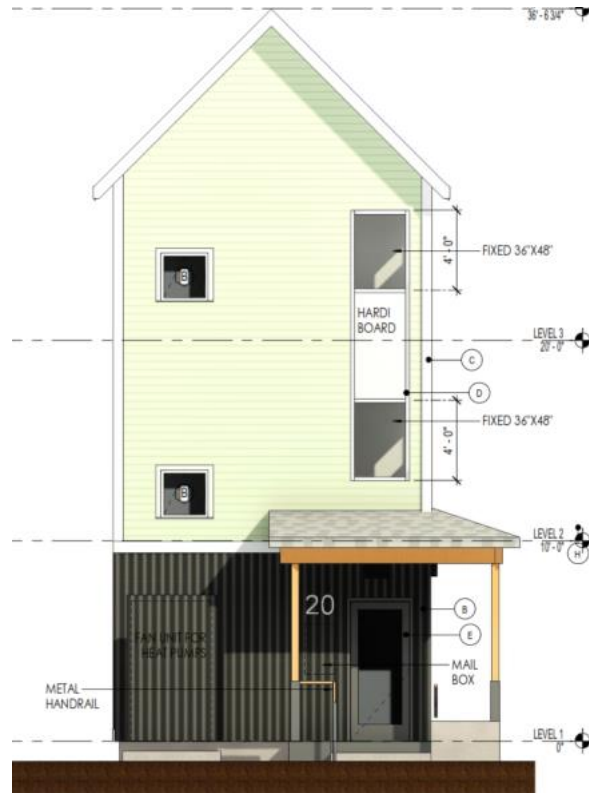
Principal buildings shall have their main entrance facing and clearly identifiable from the public street.

The proposed Secondary Structure is recessed from the structural street wall of Isham St; placed almost 40' from the front property line (while the existing primary structure is less than 10'). It deviates from the alignment of the remainder of the buildings along Isham (*"should be aligned with the front façade of neighboring buildings to reinforce the street edge..."*) This arrangement is due to footnote 5, Table 4.4.5-2:

Except as otherwise may be permitted in Article 11, PUD, a Secondary Structure shall be placed behind the Principal Structure.

While the primary entrance faces the public street, it is positioned right next to an enclosure for condensing units; the wall sheathed in dark metal siding. Standards state *Utility and service enclosures and screening shall be coordinated with the design of the principal building, and should be grouped in a service court away from public view.*

While the enclosure is intended to blend in with the first floor siding, the utility equipment is not grouped in a service court away from public view. It is not entirely clear whether the condensing units can capably function within the enclosure as proposed as well. It would be much preferred to move mechanical equipment away from the primary façade of the building, and coordinated with the design of the building.



(i) Vehicular Access:

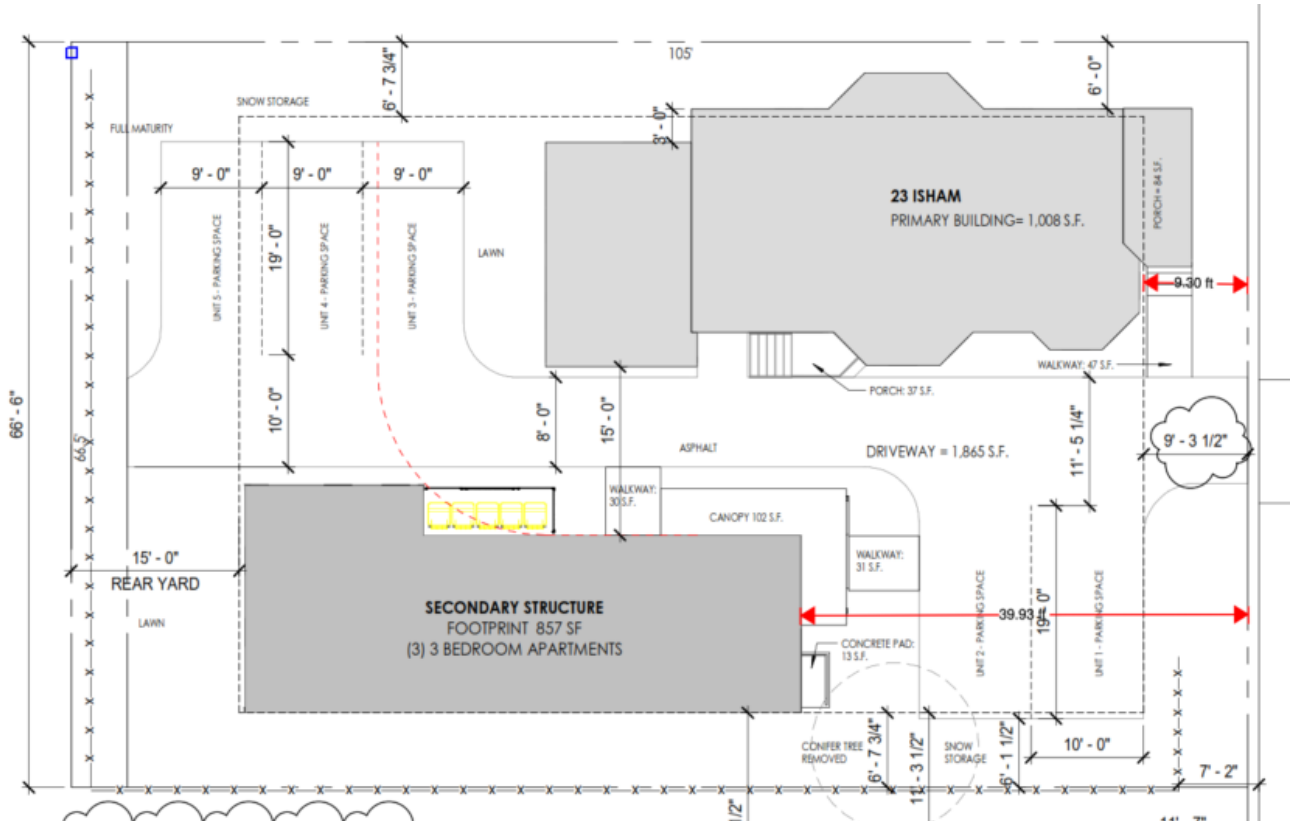
Curb cuts shall be arranged and limited in number to reduce congestion and improve traffic safety. A secondary access point from side roads is encouraged where possible to improve traffic flow and safety along major streets. The width and radius of curb cuts should be kept to the minimum width necessary, and sight triangles and sufficient turnarounds for vehicles shall be provided to reduce the potential for accidents at points of egress.

Whether commercial or residential, shared driveways are encouraged, where possible and appropriate.

A zoning permit in 2020 enlarged the parking area, where is the approximate location of the new Secondary structure. The curb cut is existing.

(j) Pedestrian Access:

Pedestrians shall be provided one or more direct and unobstructed paths between a public sidewalk and the primary building entrance. Well defined pedestrian routes shall be provided through parking areas to primary building access points and be designed to provide a physical separation between vehicles and pedestrians in a manner that minimizes conflicts and improves safety. Where sidewalks and driveways meet, the sidewalk shall be clearly marked by differentiated ground materials and/or pavement markings.



There are public sidewalks on Isham Street. A walkway is proposed to the front entrance of the new building; however it does not connect directly with the public sidewalk and requires pedestrians to cross a parking and vehicular access area. This plan does not effectively separate vehicles and pedestrians.

(k) Accessibility for the Handicapped:

ADA requirements are the jurisdiction of the building official. Construction to meet Vermont's Visitability Standards are recommended.

(l) Parking and Circulation:

To the extent possible, parking should be placed at the side or rear of the lot and screened from view from surrounding properties and adjacent public rights of ways.

Attempts to link adjacent parking lots or provide shared parking areas which can serve neighboring properties simultaneously shall be strongly encouraged.

Parking shall be laid out to provide ease in maneuvering of vehicles and so that vehicles do not have to back out onto city streets. Dimensions of spaces shall at a minimum meet the requirements as provided in Article 8. The perimeter of all parking areas shall be designed with anchored curb stops, landscaping, or other such physical barriers to prevent vehicles from encroaching into adjacent green spaces.

Surface parking and maneuvering areas should be shaded in an effort to reduce their effect on the local microclimate, air quality, and stormwater runoff with an objective of shading at least 30% of the parking lot. Shading should be distributed throughout the parking area to the greatest extent practical, including within the interior depending on the configuration. New or substantially improved parking areas with 15 or more parking spaces shall include a minimum of 1 shade tree per 5 parking spaces with a minimum caliper size of 2.5"-3" at planting. Up to a 30% waiver of the tree planting requirement may be granted by the development review board if it is found that the standard requirement would prove impractical given physical site constraints and required compliance with minimum parking requirements. All new shade trees shall be: of a species appropriate for such planting environments, expected to provide a mature canopy of no less than 25-feet in diameter, and selected from an approved list maintained by the city arborist. Existing trees retained within 25-feet of the perimeter of the parking area (including public street trees), and with a minimum caliper size greater than 3-inches, may be counted towards the new tree planting requirement.

While the parking area does not accommodate 15 or more spaces, the extent of new parking recommends additional tree planting; especially as a large conifer is proposed to be removed at the south of the parcel.

Parking has been illustrated in front of the new building; Standards require parking to be within, behind, or next to buildings.

All parking areas shall provide a physical separation between moving and parked vehicles and pedestrians in a manner that minimizes conflicts and gives pedestrians a safe and unobstructed route to building entrance(s) or a public sidewalk.

As previously noted, the pedestrian access to the Secondary structure requires pedestrians to walk across a parking area; failing to separate pedestrians and vehicles.

Where bicycle parking is provided, access shall be provided along vehicular driveways or separate paths, with clearly marked signs indicating the location of parking areas. Where bicycle parking is located proximate to a building entrance, all shared walkways shall be of sufficient width to separate bicycles and pedestrians, and be clearly marked to avoid conflicts. All bicycle parking areas shall link directly to a pedestrian route to a building entrance. All bicycle parking shall be in conformance with applicable design & construction details as provided by the dept. of public works.

Bicycle parking will be required for the three new units. Identification of the location will be a requirement prior to DRB review.

(m) Landscaping, Fences and Retaining Walls:

Landscaping shall be used to beautify the development site and to provide specific functions and benefits to the uses and buildings on the site. These include but are not limited to stormwater retention and erosion control, winter windbreaks and summer shade, recreational and habitat corridors, buffers and screening of parking areas, and creating privacy for and from adjacent property.

Existing trees shall be retained and incorporated into a landscape plan to the extent possible, and existing trees to be retained shall be protected during construction in accordance with specifications provided by the city arborist. Contiguous green space, both within the site and with adjacent properties, should be provided on a site whenever possible and be designed to provide wildlife travel corridors and habitat preservation, as well as enabling recreational access. If open space is intended to be publicly accessible, it shall be designed to maximize accessibility for all individuals including the disabled, encourage social interaction, and facilitate ease of maintenance. Along the street edge, landscaping shall be used to provide a visual buffer into parking areas from the public street and reinforce the streetscape.

*The selection of plant materials and planting sites should create a sustainable landscape, and consideration shall be given to factors such as hardiness, salt tolerance, disease resistance, invasiveness, root and canopy spread, underground and overhead utilities, soil conditions, and microclimates. The use of native plant materials is encouraged, and the use of plants considered invasive by VT Agency of Agriculture shall be prohibited. For more information on sustainable landscapes, applicants are encouraged to consult *Planting Sustainable Landscapes: A Guide for Plan Reviewers* prepared for the Vermont Department of Forests Parks and Recreation by the Vermont Chapter of the American Society of Landscape Architects.*

New or replacement street trees shall be provided consistent with the city's Street Tree Master Plan. All proposed street trees shall be selected and planted in accordance with specifications provided by the city arborist.

Fences may be placed within the required setback along a property line, but shall be setback sufficiently to provide for the maintenance of both sides of the fence without entering onto the adjacent property and shall present a finished side to the adjoining property and public street. Fences placed within a clear sight triangle shall adhere to the standards of Sec. 5.2.6 (c). Styles, materials, and dimensions of the proposed fence shall be compatible with the context of the neighborhood and the use of the property.

Retaining walls greater than 5 feet tall shall incorporate textured surfaces, terracing, and/or vegetation to avoid long monotonous unarticulated expanses and to minimize adverse visual impacts to neighboring properties. As with fences, retaining wall styles, materials, and dimensions shall be compatible with the context of the neighborhood and use of the property.

No landscaping plan has been provided, and is required. There are no retaining walls or fences identified on the submitted plans. A conifer tree is proposed to be removed, but without a landscaping plan, the application is incomplete.

(n) Public Plazas and Open Space:

Where public open space is provided as an amenity to the site plan, it should be sited on the parcel to maximize solar exposure, with landscaping and hardscape (including fountains, sitting walls, public art, and street furniture) to encourage its use by the public in all seasons. Public plazas should be visually and physically accessible from public rights-of-ways and building entrances where appropriate and shall be designed to maximize accessibility for all individuals, including the disabled and encourage social interaction.

Public space should be coordinated with the surrounding buildings without compromising safety and visibility. Public spaces should be surrounded by active uses that generate pedestrian traffic, and connect the space to major activity centers, streets, or corridors.

New structures and additions to existing structures shall be shaped to reduce shadows on public plazas and other publicly accessible spaces. In determining the impact of shadows, the following factors shall be taken into account: the mass of area shaded, the duration of shading, and the importance of sunlight to the utility of the type of open space being shadowed. Proposed development shall be considered for solar impact based the sun angle during the Vernal and Autumnal equinox.

While no public plaza is included within this plan, the multi-unit character of this development begs for some open space dedicated to the enjoyment of the residents. There is little that isn't parking in this plan. Some area dedicated to gardening, outside furniture, clotheslines, and outdoor recreation area or similar would be beneficial for the tenants.

(o) Outdoor Lighting:

Where exterior lighting is proposed the applicant shall meet the lighting performance standards as per Sec 5.5.2.

Other than a continuous downlight under the canopy, no other lighting is identified. For resident safety and comfort, some full cut-off down-lights are recommended for the rear parking area.

(p) Integrate infrastructure into the design:

Exterior storage areas, machinery and equipment installations, service and loading areas, utility meters and structures, mailboxes, and similar accessory structures shall utilize setbacks, plantings, enclosures and other mitigation or screening methods to minimize their auditory and visual impact on the public street and neighboring properties to the extent practicable.

Utility and service enclosures and screening shall be coordinated with the design of the principal building, and should be grouped in a service court away from public view.
On-site utilities shall be place underground whenever practicable. Trash and recycling bins and dumpsters shall be located, within preferably, or behind buildings, enclosed on all four (4) sides to prevent blowing trash, and screened from public view.

Any development involving the installation of machinery or equipment which emits heat, vapor, fumes, vibration, or noise shall minimize, insofar as practicable, any adverse impact on neighboring properties and the environment pursuant to the requirements of Article 5, Part 5 Performance Standards.

Trash and recycling have been relocated to the north side of the Secondary Structure, behind an enclosure. Including condensing units on the primary façade of the Secondary Structure, even behind an enclosure, is inconsistent with standards that direct to locate utilities and mechanical equipment away from public view and in a service court.



Part 3: Architectural Design Standards

Sec. 6.3.1 Applicability.

These standards are enacted and shall be satisfied for the approval of all development subject to the provisions of this ordinance found in Article 3, Section 3.4.2(b) – Design Review.

Sec. 6.3.2 Review Standards

(a) Relate development to its environment:

Proposed buildings and additions shall be appropriately scaled and proportioned for their function and with respect to the purpose of the zoning district. They should integrate harmoniously into the topography, and to the use, scale, and architectural details of existing buildings in the vicinity; however, such consideration shall not require building height to be more limited than otherwise allowed within an applicable zoning district or overlay zone per Article 4.

The following shall be considered:

1. Massing, Height and Scale:

While architectural styles or materials may vary within a streetscape, proposed development should maintain an overall scale similar to that of surrounding



buildings, or provide a sensitive transition, where appropriate, to development of a dissimilar scale.

In low and medium residential districts, the height and massing of existing residential buildings should be carefully considered when evaluating the compatibility of additions and infill development; however, no modifications by the DRB shall be made to projects which otherwise limit the allowable Principal Structure footprint, height, and number of units per building otherwise permitted by Tables 4.4.5-1 and 4.4.5-2.

Isham Street is characteristically populated with 2 ½ story residential buildings; visually ornamented with porches, turrets, pavilions, bays, and similar architectural treatments that provide interest and transition in building massing and arrangement. This proposal introduces a full-rise three story building with a steeply pitched gable roof; with only minor modulation in massing with the addition of a cross gable. While the proposal is compliant relative to building height (35' max allowed), its massing and arrangement are dissimilar with its surroundings.

Buildings should maintain consistent massing and perceived building height at the street level, regardless of the overall bulk or height of the building. Buildings should maintain a relationship to the human scale through the use of architectural elements,

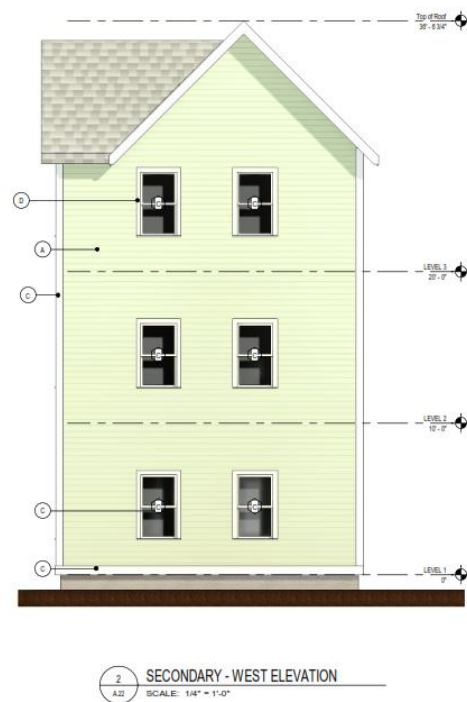
variations of proportions and materials, and surface articulations. Large expanses of undifferentiated building wall along the public street or sidewalk shall be avoided. The apparent mass and scale of buildings shall be broken into smaller parts by articulating separate volumes reflecting existing patterns in the streetscape, and should be proportioned to appear more vertical than horizontal in order to avoid monotonous repetition. (See also (d) Provide an active and inviting street edge below.)

The building design is successful in appearing more vertical than horizontal. The only gesture towards interest and complexity is the minor cross-gable. The plan's interpretation of variation in materials is wrapping the entrance in corrugated metal while sheathing the rest of the arrangement in vinyl.

2. Roofs and Rooflines.

New buildings should incorporate predominant roof forms and pitches within the existing neighborhood and appropriate to the context. Large expanses of undifferentiated roof forms shall be avoided. This can be achieved by incorporating dormers or some variation in the roof form to lessen the impact of the massing against the sky. While flat roofs can be a reasonable architectural solution, pitched roof forms and architectural elements that enhance the city's skyline are strongly encouraged. Roof eaves, parapets, and cornices should be articulated as an architectural detail. Roof-top mechanicals shall be screened from view from the public street, and should be incorporated into and hidden within the roof structure whenever possible.

The roof is an unarticulated steeply pitched gable; unlike any existing examples on the street.



3. Building Openings

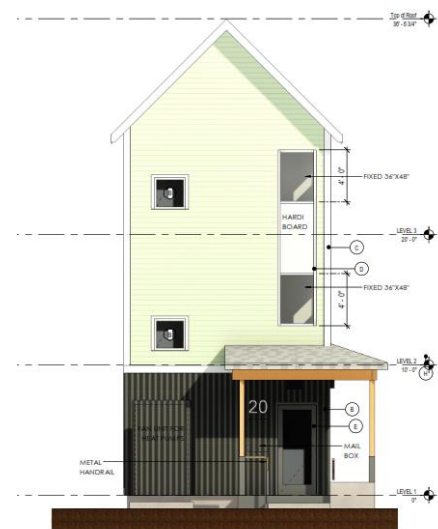
Principal entrances shall be clearly defined and readily identifiable from a public street whether by a door, a canopy, porch, or other prominent architectural or landscape features. People with physical challenges should be able to use the same entrance as everyone-else and shall be provided an “accessible route” to the building. Attention shall also be accorded to design features which provide protection from the affects of rain, snow, and ice at building entrances, and to provisions for snow and ice removal or storage.

Window openings shall maintain consistent patterns and proportions appropriate to the use. The window pattern should add variety and interest to the architecture, and be proportioned to appear more vertical than horizontal. Where awnings over windows or doors are used, the lowest edge of the awning shall be at least eight (8) feet above any pedestrian way, and shall not encroach into the public right-of-way without an encroachment permit issued by the dept. of public works.

Buildings placed on a side or rear property line where no setback is required shall contain neither doors nor windows along such façade so as not to restrict future development or re-development options of the adjacent property due to fire safety code restrictions. Otherwise they should be setback a minimum of 5-feet.

As noted, the principal entrance is under a canopy next to the condensing unit enclosure. The entrance is more assumed than readily identifiable from the public street. Protection from the elements is provided by the canopy.

Window openings are random and (except for the west elevation) without any pattern. Smaller openings flag kitchens and bathrooms; sliders are placed above living room couches. A revised floor plan, placing the internal staircase at the rear of the structure would allow greater glazing opportunities for key rooms (kitchen, living room) while moving secondary functions like trash, recycling, and parking access to the rear.



(b)Protection of Important Architectural

Resources: Burlington’s architectural and cultural heritage shall be protected through sensitive and respectful redevelopment, rehabilitation, and infill. Where the proposed development involves buildings listed or eligible for listing on a state or national register of historic places, the applicant shall meet the applicable development and design standards pursuant to Sec. 5.4.8. The introduction of new buildings to a historic district listed on a state or national register of historic places shall make every effort to be compatible with nearby historic buildings.

See Section 5.4.8, below.

(c) Protection of Important Public Views:

There are no protected important public views from or through this parcel.
Not applicable.

(d) Provide an active and inviting street edge:

Building facades shall be varied along the street edge by the integration of architectural features, building materials, or physical step-backs of the façade along its length. Large expanses of undifferentiated building wall shall be avoided. This may be accomplished by incorporating fenestration patterns, bays, horizontal and vertical façade articulations, the rhythm of openings and prominent architectural features such as porches, patios, bays, articulated bases, stepping back an elevation relative to surrounding structures, and other street level details. The use of traditional facade components such as parapet caps, cornices, storefronts, awnings, canopies, transoms, kick plates, and recessed entries are highly encouraged. In areas where high volumes of pedestrian traffic are desired, the use of architectural recesses and articulations at the street-level are particularly important in order to facilitate the flow of pedestrian traffic.

The plan lacks basic modulation of form, vertical articulation and planar changes that would provide interest. Please see earlier comments about building location and orientation, the conflict between pedestrian access and vehicular circulation, and the entry placed within a darkly sheathed alcove next to a condensing unit enclosure.

(e) Quality of materials:

All development shall maximize the use of highly durable building materials that extend the life cycle of the building, and reduce maintenance, waste, and environmental impacts. Such materials are particularly important in certain highly trafficked locations such as along major streets, sidewalks, loading areas, and driveways. Efforts to incorporate the use of recycled content materials and building materials and products that are extracted and/or manufactured within the region are highly encouraged.

Owners of historic structures are encouraged to consult with an architectural historian in order to determine the most appropriate repair, restoration or replacement of historic building materials as outlined by the requirements of Art 5, Sec. 5.4.8.

Materials proposed include vinyl siding, corrugated metal around the first floor entrance, vinyl windows, vinyl window trim and asphalt shingle roof. While vinyl siding is generally acceptable for new construction, the building materials proposed do not support the standard of highly durable building materials that extend the life cycle of the building...and environmental impacts.

(f) Reduce energy utilization:

New structures should incorporate the best available technologies and materials in order to maximize energy efficient design. All new construction shall meet the Guidelines for Energy Efficient Construction pursuant to the requirements of Article VI. Energy Conservation, Section 8 of the City of Burlington Code of Ordinances.

New structures should take advantage of solar access where available, and shall undertake efforts to reduce the impacts of shadows cast on adjacent buildings where practicable, in order to provide opportunities for the use of active and passive solar utilization.

Development is required to meet the Guidelines for Energy Efficient Construction pursuant to the requirements of Article VI. Energy Conservation, Section 8 of the City of Burlington Code of Ordinances. In addition, the newly adopted Thermal Energy Ordinance applies.¹

(g) Make advertising features complementary to the site:

Not applicable.

(h) Integrate infrastructure into the building design:

Exterior machinery and equipment installations, service and loading areas, utility meters and structures, mailboxes, and similar accessory features shall utilize setbacks, plantings, enclosures and other mitigation or screening methods to minimize their auditory and visual impact on the public street and neighboring properties.

See earlier comments about recommendations to move the condensing unit enclosure.

Mailbox location is not identified and needs to be. A landscaping plan is required.

Rooftop mechanicals, including heating and cooling devices and elevator equipment, should be incorporated into the structure's design, and shall be arranged to minimize their visibility from the street level. Such features, in excess of one foot in height, shall be either enclosed within the roof structure, outer building walls, or parapets, or designed so that they are integrated into the overall design and materials of the building. Where such rooftop features do not exceed ten percent (10%) of the total roof area, they may be considered "ornamental and symbolic features" pursuant to Sec. 5.2.7 for the purposes of measuring building height.

No rooftop units are proposed.

Any development involving the installation of machinery or equipment which emits heat, vapor, fumes, vibration, or noise shall minimize any adverse impact on neighboring properties and the environment pursuant to the requirements of Article 5, Part 5 Performance Standards.

¹ ¹ (a) New buildings. Applicants seeking permits pursuant to this chapter for new buildings shall demonstrate that the new building will utilize renewable energy thermal energy systems. If an applicant utilizes a primary thermal energy system that relies on renewable energy other than electrification, geothermal, or solar measures, the applicant must certify prior to receiving a permit that the use of electrification, geothermal, or solar measures is not technically feasible, is economically unduly burdensome, is not permitted by applicable regulation, or is not feasible for other similar reasons demonstrated to the satisfaction of the department of permitting and inspections. If an applicant utilizes a nonprimary thermal energy system that relies on renewable energy other than electrification, geothermal, or solar measures, the applicant must provide the department of permitting and inspection a written explanation of the reason for not using a thermal energy system that relies on electrification, geothermal, or solar measures.

As noted, mechanical equipment/heat pumps shall be located and screened to minimize visual and auditory impacts.

(i) Make spaces secure and safe:

Spaces shall be designed to facilitate building evacuation, accessibility by fire, police or other emergency personnel and equipment, and, to the extent feasible, provide for adequate and secure visibility for persons using and observing such spaces. Building entrances/entry points shall be visible and adequately lit, and intercom systems for multi-family housing should be incorporated where possible, to maximize personal safety.

The building's entrance will be illuminated with a continuous downlight under the canopy. Development shall adhere to all applicable building and life safety code as defined by the building official and/or fire marshal.

Sec. 5.4.8 Historic Buildings and Sites

(a) Applicability:

These regulations shall apply to all buildings and sites in the city that are listed, or eligible for listing, on the State or National Register of Historic Places.

The principal structure, 23 Isham Street is listed on the Vermont State Register. Comments below will only relate to the relationship between the existing, historic building and the proposed Secondary Structure.

(b) Standards and Guidelines:

The following development standards, following the Secretary of the Interior's Standards for the Treatment of Historic Properties, shall be used in the review of all applications involving historic buildings and sites subject to the provisions of this section and the requirements for Design Review in Art 3, Part 4. The Secretary of the Interior's Standards are basic principles created to help preserve the distinctive character of a historic building and its site. They are a series of concepts about maintaining, repairing and replacing historic features, as well as designing new additions or making alterations. These Standards are intended to be applied in a reasonable manner, taking into consideration economic and technical feasibility.

1. *A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces, and spatial relationships.*

Not applicable.

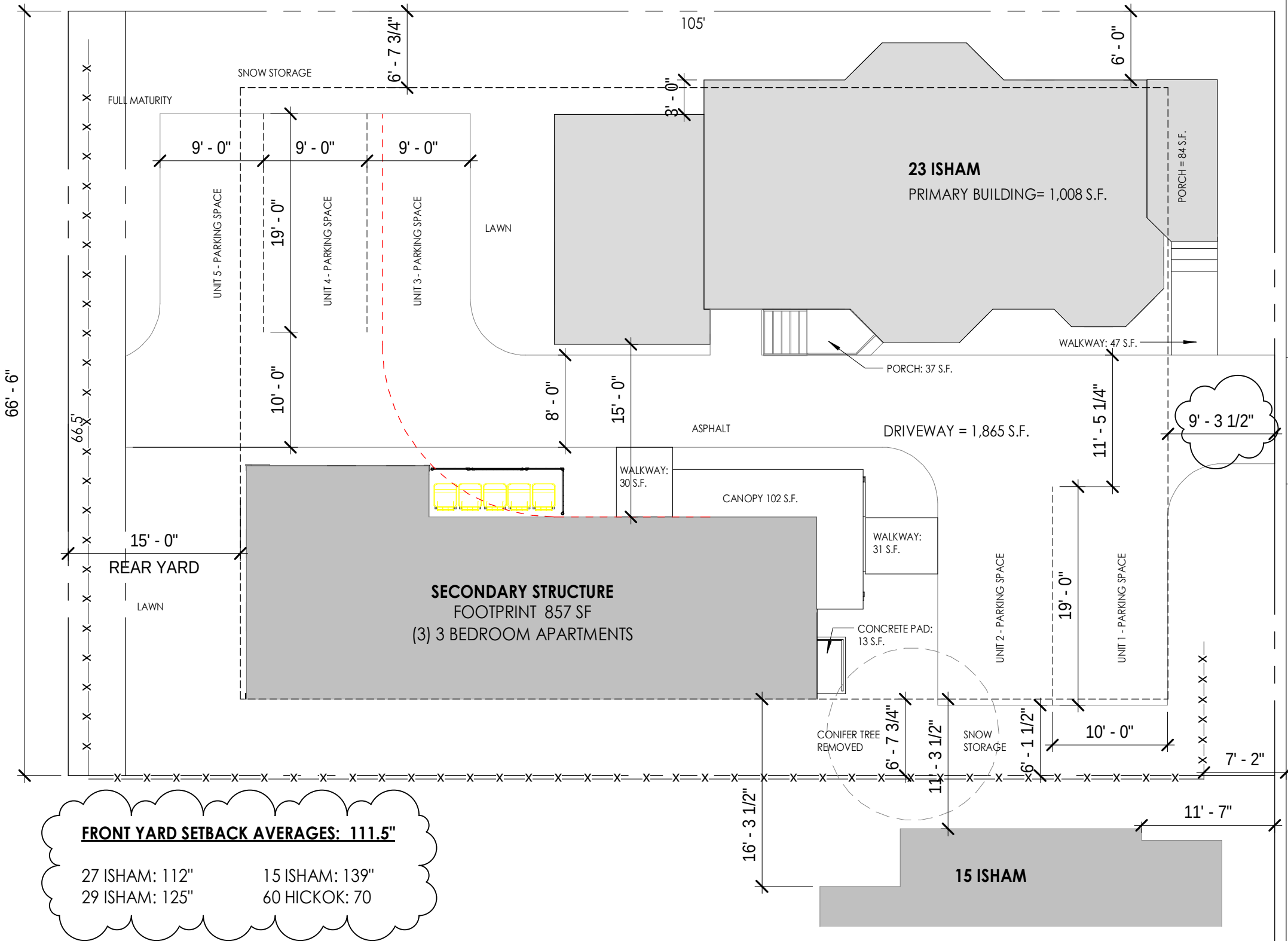
2. *The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.*

The introduction of a new residential structure will alter the spatial relationship of 23 Isham Street to its context. The recently adopted Neighborhood Code, however, sanctions this arrangement.

3. *Each property will be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic properties, will not be undertaken.*
No conjectural features are proposed. Not applicable.
4. *Changes to a property that have acquired historic significance in their own right will be retained and preserved.*
Not applicable.
5. *Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.*
Not applicable.
6. *Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials recognizing that new technologies may provide an appropriate alternative in order to adapt to ever changing conditions and provide for an efficient contemporary use. Replacement of missing features will be substantiated by documentary and physical evidence.*
Not applicable.
7. *Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.*
Not applicable.
8. *Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.*
There are no known archaeological resources on this parcel. Not applicable.
9. *New additions, exterior alterations, or **related new construction** will not destroy historic materials, features, and spatial relationships that characterize the property. The new work shall be differentiated from the old and will be compatible with the historic materials, features, size, scale, and proportion, and massing to protect the integrity of the property and its environment.*
The introduction of a new residential structure on the site will alter the spatial relationships 23 Isham Street enjoys with the site. The new development is markedly differentiated from the existing historic structure; introducing some level of dissonance with site location, features, size, scale, proportion and massing in relation to the existing structure and the neighborhood context.
10. *New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.*
The addition of a new detached structure is reversible.

Items for the Board's consideration:

1. A landscaping plan and tree removal program shall be provided for review by the Development Review Board.
2. Condensing units/fans shall be relocated away from the façade of the building; in a service court designed to coordinate with the structure.
3. Parking within the front yard setback is prohibited. Parking is intended to be located within, behind or next to buildings in residential districts.
4. The location of mailboxes shall be identified.
5. An Erosion Prevention and Sediment Control Plan, as well as a Stormwater Plan will be required.



ZONING DISTRICT: RM

MAX. LOT COVERAGE = 55%
+10 COVERAGE FOR PATIOS, DECKS PORCHES, TERRACES.

FRONT: AVE. OF 2 ADJACENT LOTS ON BOTH SIDE +/- 5'-0"
SIDE: 10% OF LOT WIDTH, BUT IN NO EVENT LESS THAN 5'-0"
REAR: 25% OF LOT DEPTH, BUT IN NO EVENT LESS THAN 15'-0"

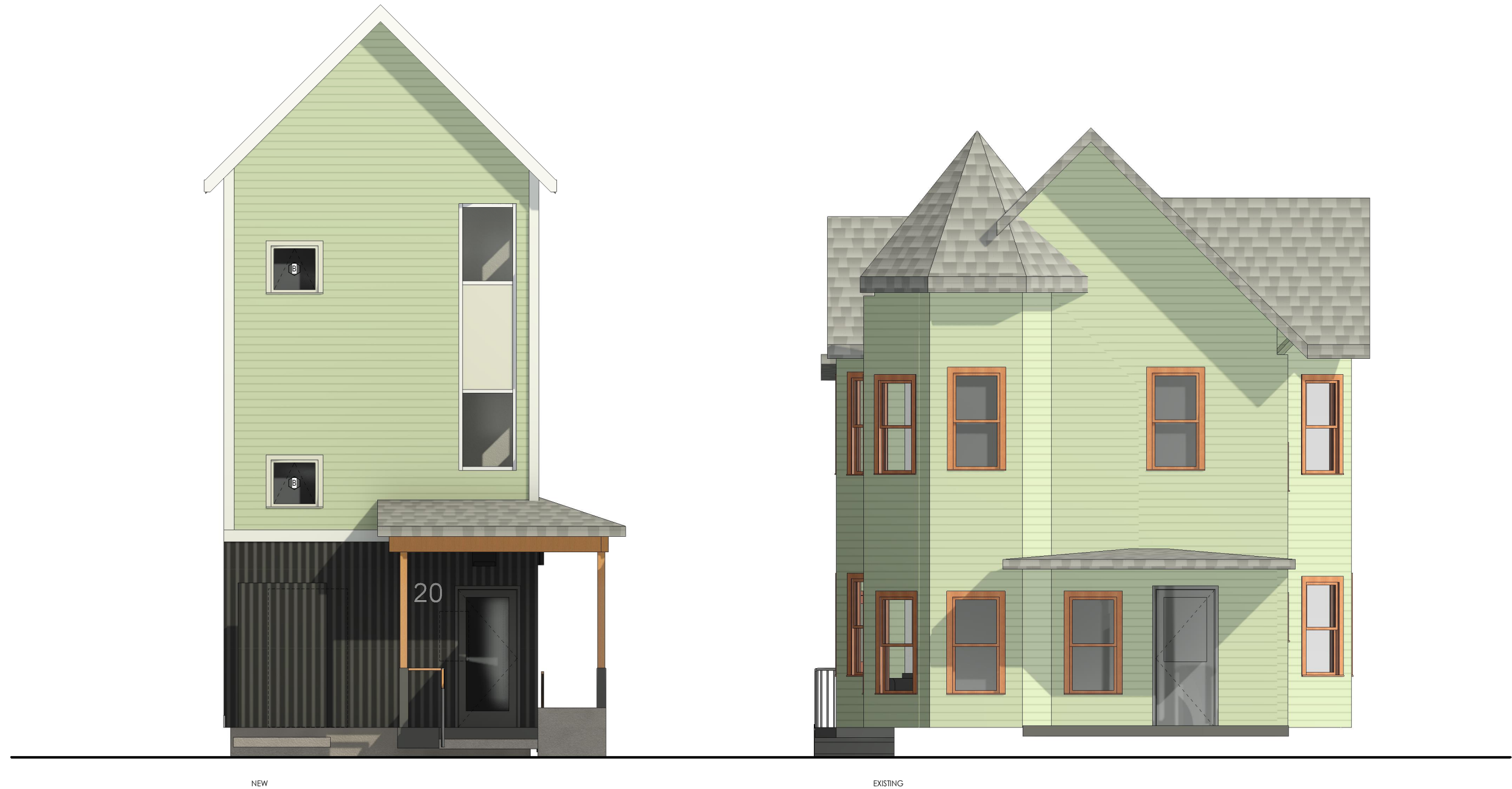
3 STORIES MAX HEIGHT

EXISTING LOT COVERAGE	
EXISTING LOT SIZE:	6,982.5 S.F.
EXISTING HOUSE:	1,008 S.F.
EXISTING PORCHES:	130 S.F.
EXISTING WALKWAYS:	84 S.F.
EXISTING DRIVEWAY:	1,259 S.F.
EXISTING LOT COVERAGE = 2,510 S.F. = 36%	

PROPOSED LOT COVERAGE	
LOT SIZE:	6,982.5 S.F.
PRIMARY BUILDING:	1,008 S.F.
PORCHES:	130 S.F.
SECONDARY BUILDING:	857 S.F.
CANOPY:	102 S.F.
WALKWAYS:	158 S.F.
DRIVEWAY:	1,865 S.F.
PROPOSED LOT COVERAGE = 4,120 S.F. = 59%	
WITHOUT PORCHES & WALKWAYS: 3,730 = 53%	

DRAWING KEY	
	EXISTING STRUCTURE
	ADDITION
	PROPERTY LINE
	SETBACK LINE
	FENCE LINE

revision for P&Z: 08/14/25

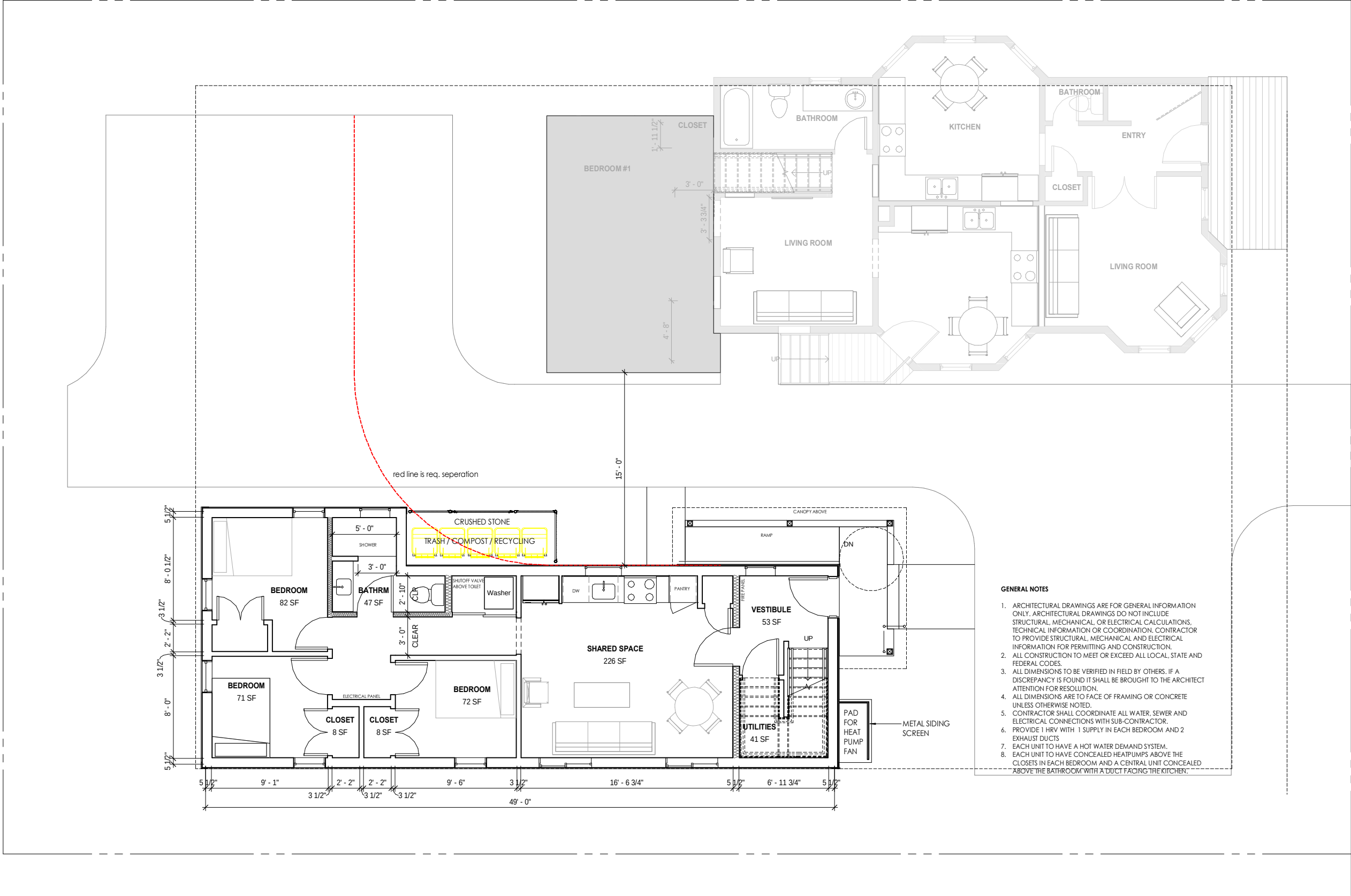


ARCHITECT
HINGE, INC.
Burlington, VT 05401
802.793.9840

23 ISHAM MULTI-UNIT RESIDENTIAL

23 ISHAM STREET, BURLINGTON, VT

08/14/25



- GENERAL NOTES**
1. ARCHITECTURAL DRAWINGS ARE FOR GENERAL INFORMATION ONLY. ARCHITECTURAL DRAWINGS DO NOT INCLUDE STRUCTURAL, MECHANICAL, OR ELECTRICAL CALCULATIONS. TECHNICAL INFORMATION OR COORDINATION. CONTRACTOR TO PROVIDE STRUCTURAL, MECHANICAL AND ELECTRICAL INFORMATION FOR PERMITTING AND CONSTRUCTION.
 2. ALL CONSTRUCTION TO MEET OR EXCEED ALL LOCAL, STATE AND FEDERAL CODES.
 3. ALL DIMENSIONS TO BE VERIFIED IN FIELD BY OTHERS. IF A DISCREPANCY IS FOUND IT SHALL BE BROUGHT TO THE ARCHITECT ATTENTION FOR RESOLUTION.
 4. ALL DIMENSIONS ARE TO FACE OF FRAMING OR CONCRETE UNLESS OTHERWISE NOTED.
 5. CONTRACTOR SHALL COORDINATE ALL WATER, SEWER AND ELECTRICAL CONNECTIONS WITH SUB-CONTRACTOR.
 6. PROVIDE 1 HRV WITH 1 SUPPLY IN EACH BEDROOM AND 2 EXHAUST DUCTS
 7. EACH UNIT TO HAVE A HOT WATER DEMAND SYSTEM.
 8. EACH UNIT TO HAVE CONCEALED HEATPUMPS ABOVE THE CLOSETS IN EACH BEDROOM AND A CENTRAL UNIT CONCEALED ABOVE THE BATHROOM WITH A DUCT FACING THE KITCHEN.

1 SECONDARY - FLOOR PLAN - LEVEL 1
A.11 SCALE: 1/4" = 1'-0"

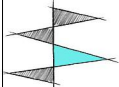
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23 ISHAM MULTI-UNIT RESIDENTIAL

23 ISHAM STREET, BURLINGTON, VT



HINGE
architecture
431 Pine Street, Suite 314, Burlington, VT 05401
802.793.9840

DATE: 03/12/24
SCALE: As indicated
DRAWN BY: MA
CHECKED BY: MA
PHASE: SCHEMATIC PERMIT

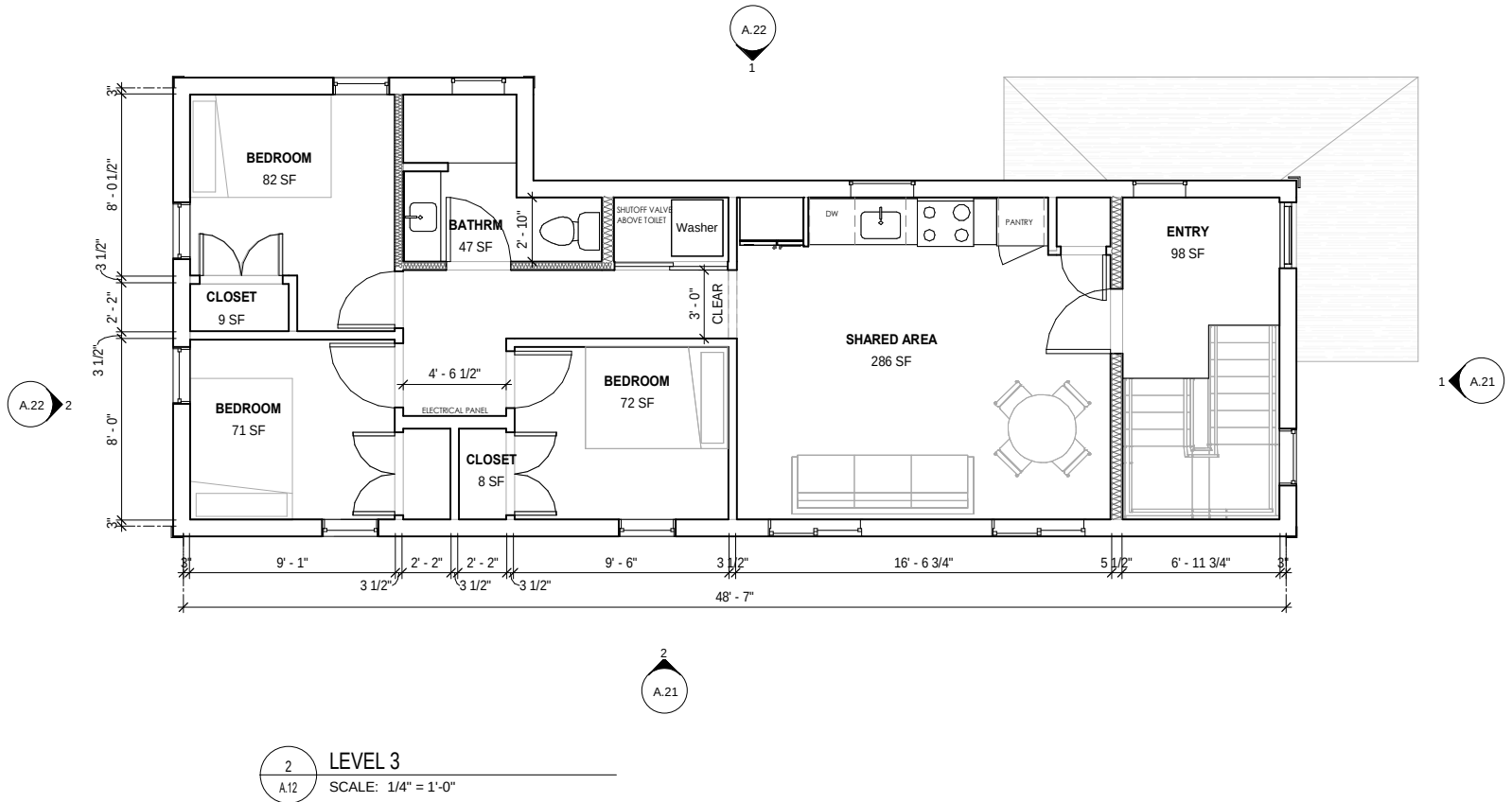
SECONDARY
LEVEL 1

SHEET NO:

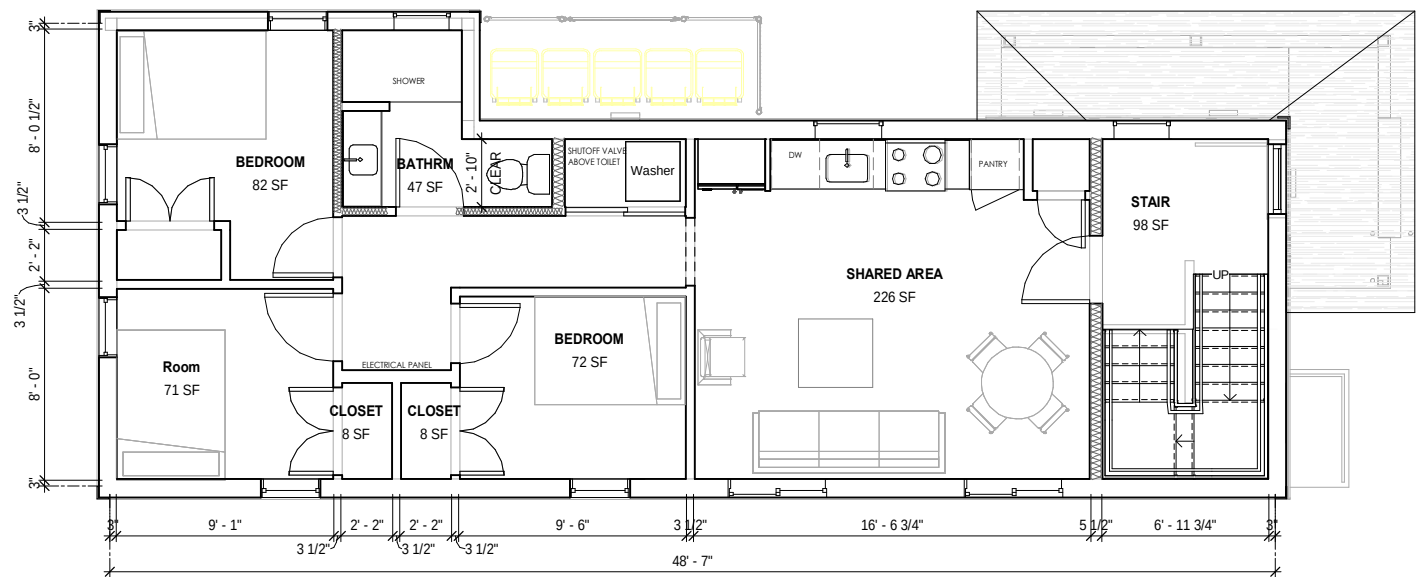
A.11



3 3D OF SECONDARY FROM DRIVEWAY
A.12 SCALE:



2 LEVEL 3
A.12 SCALE: 1/4" = 1'-0"



1 LEVEL 2
A.12 SCALE: 1/4" = 1'-0"

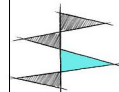
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23 ISHAM MULTI-UNIT RESIDENTIAL

23 ISHAM STREET, BURLINGTON, VT



HINGE
architecture
431 Pine Street, Suite 314, Burlington, VT 05401
802.793.9840

DATE: 07/09/25
SCALE: 1/4" = 1'-0"
DRAWN BY: MA
CHECKED BY: MA
PHASE: FOR PERMIT

LEVEL 2 & 3

SHEET NO:

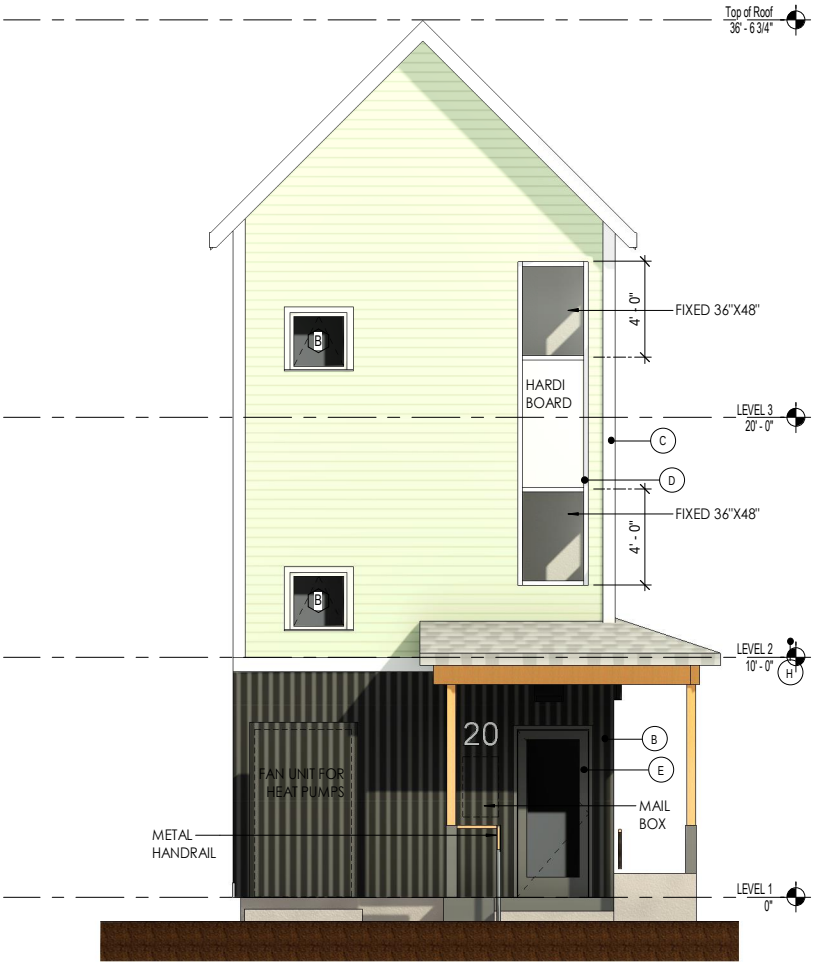
A.12

Window Schedule								
Type Mark	Description	Count	Type	Width	Sill Height	Height	Head Height	Comments
A	FIXED	1	30" x 30"	2' - 6"	4' - 2"	2' - 6"	6' - 8"	
B	AWNING	7	30" x 30"	2' - 6"	<varies>	2' - 6"	<varies>	<varies>
C	DOUBLE HUNG	15	30" x 52"	2' - 6"	2' - 4"	4' - 4"	6' - 8"	EACH BEDROOM TO HAVE CASEMENT FOR EGRESS THAT LOOKS LIKE DOUBLE HUNG
D	AWNING	3	36" x 30"	3' - 0"	4' - 2"	2' - 6"	6' - 8"	
E	SLIDER	6	50" x 30"	4' - 2"	4' - 2"	2' - 6"	6' - 8"	

MATERIAL KEY	
Key Value	Keynote Text
A	VINYL CLAPBOARD SIDING
B	METAL SIDING - VERTICAL CORRUGATED
C	SOLID VINYL TRIM
D	VINYL WINDOW
E	ENTRY DOOR - ALUMINUM CLAD
H	ASPHALT ROOF
I	STEEL HANDRAIL



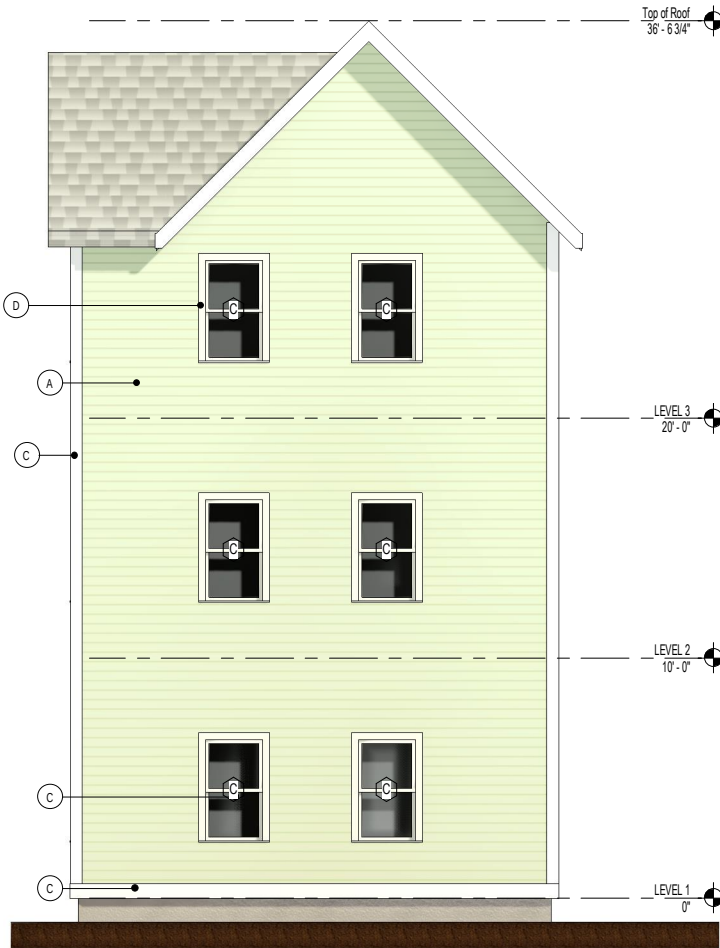
2
A21 SECONDARY - SOUTH ELEVATION
SCALE: 1/4" = 1'-0"



1
A21 SECONDARY - EAST ELEVATION
SCALE: 1/4" = 1'-0"

Window Schedule								
Type Mark	Description	Count	Type	Width	Sill Height	Height	Head Height	Comments
A	FIXED	1	30" x 30"	2' - 6"	4' - 2"	2' - 6"	6' - 8"	
B	AWNING	7	30" x 30"	2' - 6"	<varies>	2' - 6"	<varies>	<varies>
C	DOUBLE HUNG	15	30" x 52"	2' - 6"	2' - 4"	4' - 4"	6' - 8"	EACH BEDROOM TO HAVE CASEMENT FOR EGRESS THAT LOOKS LIKE DOUBLE HUNG
D	AWNING	3	36" x 30"	3' - 0"	4' - 2"	2' - 6"	6' - 8"	
E	SLIDER	6	50" x 30"	4' - 2"	4' - 2"	2' - 6"	6' - 8"	

MATERIAL KEY	
Key Value	Keynote Text
A	VINYL CLAPBOARD SIDING
B	METAL SIDING - VERTICAL CORRUGATED
C	SOLID VINYL TRIM
D	VINYL WINDOW
E	ENTRY DOOR - ALUMINUM CLAD
H	ASPHALT ROOF
I	STEEL HANDRAIL



2 SECONDARY - WEST ELEVATION
A.22 SCALE: 1/4" = 1'-0"



1 SECONDARY - NORTH ELEVATION
A.22 SCALE: 1/4" = 1'-0"

CASEMENT & AWNING WINDOW



Easy-to-operate Harvey casement and awning windows with improved handle provide clean, contemporary lines and maximum ventilation. There's no need to stretch to reach a top lock because the casement unlocks with one conveniently placed latch. The bottom of the awning tilts outward by turning the compact folding handle.

HANDLE

Easy-to-use, compact, full-flip folding handles tuck neatly into the cover for a modern, nested appearance.

Single latch, multi-point locking system is standard.



MORE OPTIONS & FEATURES

- Grids come in 5/8" and 1" sizes
- Custom grid configurations available
- Full size screens
- Simulated double-hung meeting rail available on casement
- Casement available in sizes up to 36" x 80", as big as an entry door!

OPTIONS

ENERGY STAR GLASS



ThermaLock RS
ThermaLock 3X HPTG

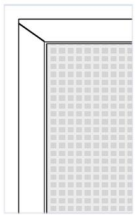


SunGain
HSHG



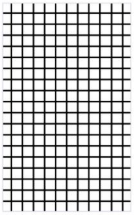
SunShield

SCREEN | FRAME

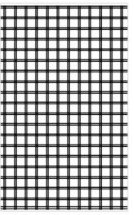


Aluminum

SCREEN | MESH



VIEWS



Fiberglass

GRID | TYPE



GBG

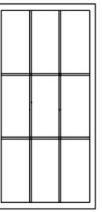


Exterior
Applied

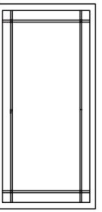


SDL

GRID | STYLE



Colonial



Prairie

COLORS | EXTERIOR



White Vinyl
(Standard)



Almond Vinyl



White Interior/
Black Laminate
Exterior

Interior/exterior finish also available in Matte Black Paint.



EXTERIOR PAINT
AVAILABLE

COLORS | HARDWARE



White
(Standard)



Almond



Black

Premium Hardware



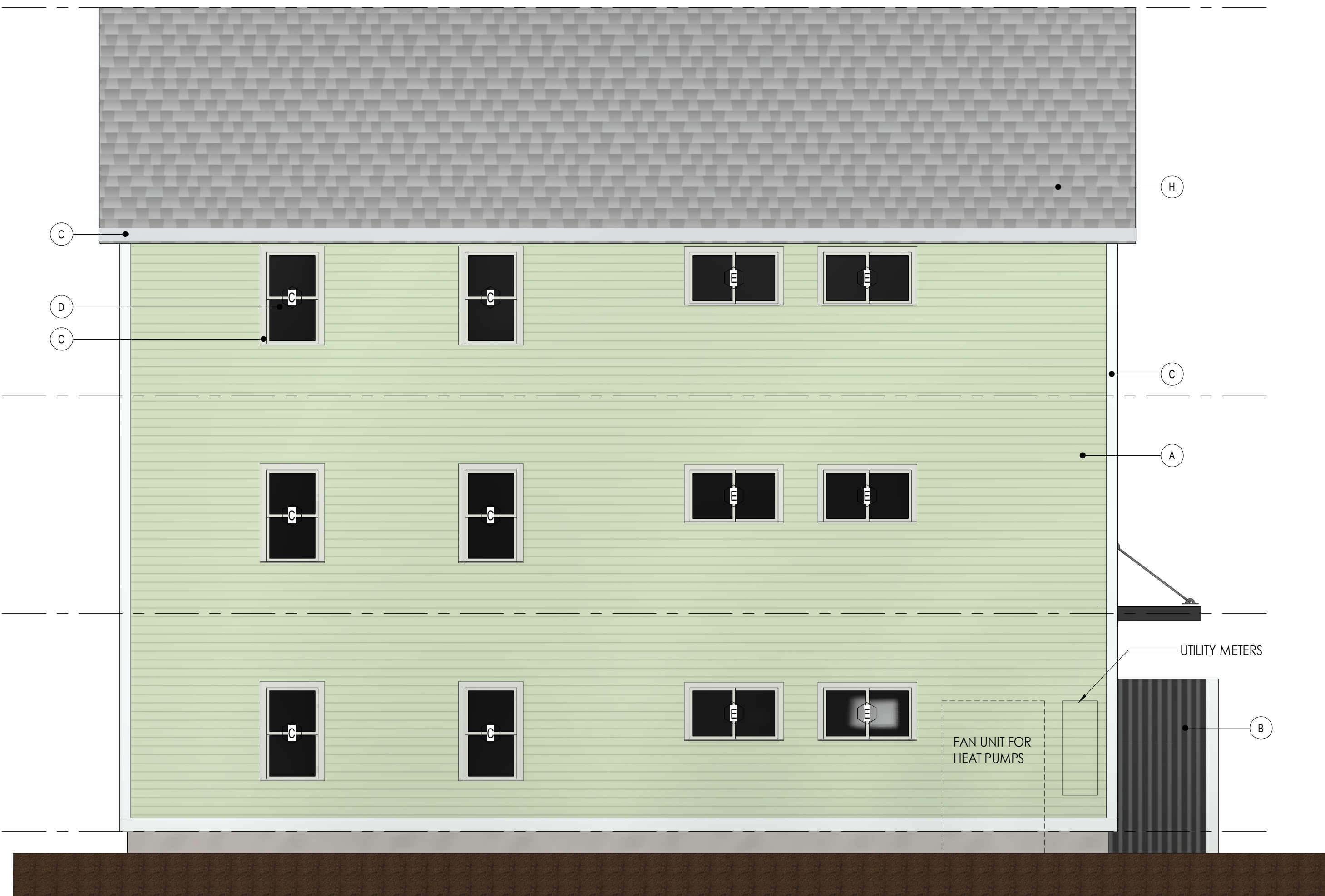
Oil Rubbed
Bronze



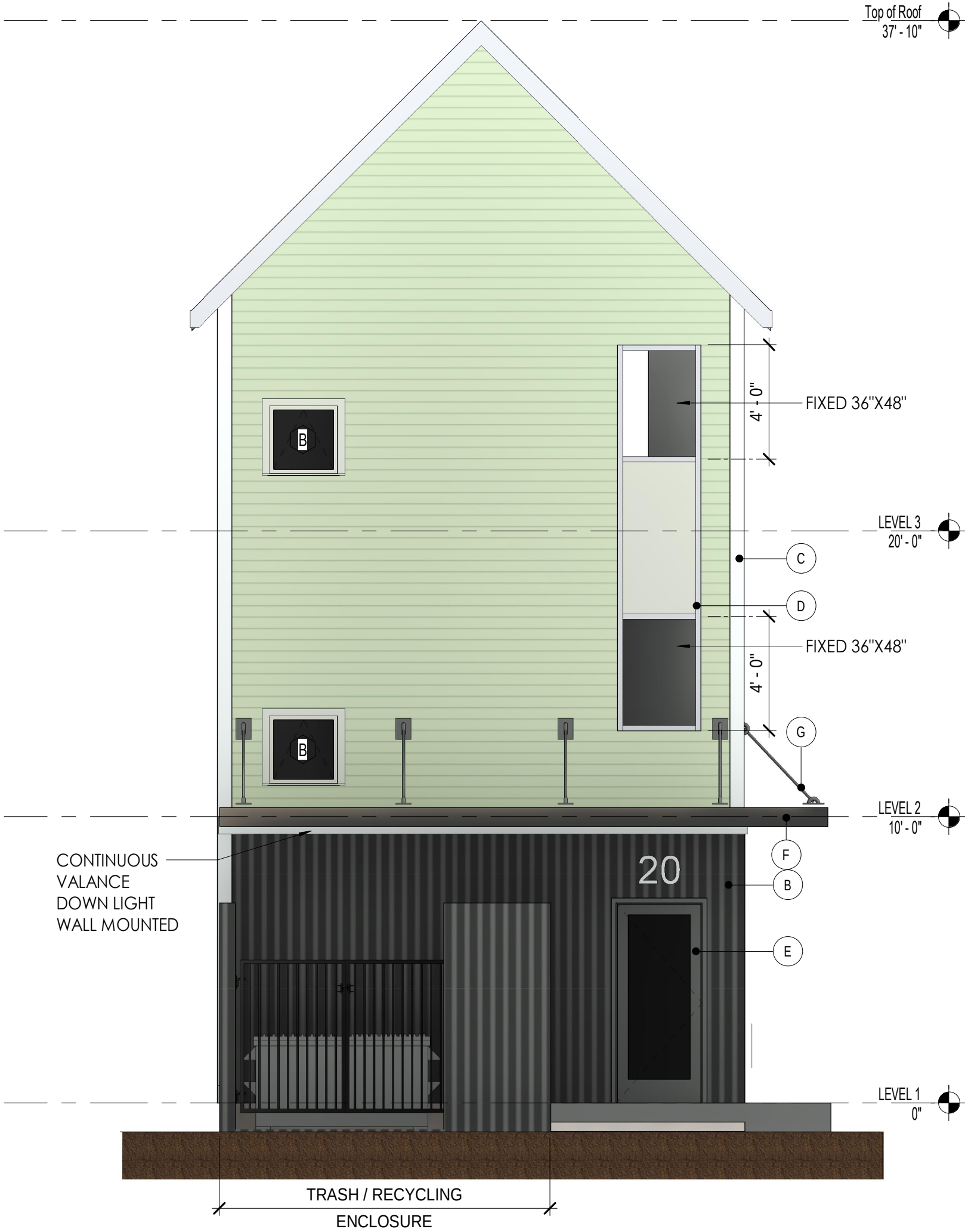
Brushed
Nickel

Window Schedule								
Type Mark	Description	Count	Type	Width	Sill Height	Height	Head Height	Comments
A	FIXED	1	30" x 30"	2' - 6"	4' - 2"	2' - 6"	6' - 8"	
B	AWNING	4	30" x 30"	2' - 6"	<varies>	2' - 6"	<varies>	THESE ARE IN THE SHARED STAIR
C	DOUBLE HUNG	15	30" x 52"	2' - 6"	2' - 4"	4' - 4"	6' - 8"	EACH BEDROOM TO HAVE CASEMENT FOR EGRESS THAT LOOKS LIKE DOUBLE HUNG
D	AWNING	6	36" x 30"	3' - 0"	4' - 2"	2' - 6"	6' - 8"	
E	SLIDER	6	50" x 30"	4' - 2"	4' - 2"	2' - 6"	6' - 8"	

MATERIAL KEY	
Key Value	Keynote Text
A	VINYL CLAPBOARD SIDING
B	METAL SIDING - VERTICAL CORRUGATED
C	SOLID VINYL TRIM
D	VINYL WINDOW
E	ENTRY DOOR - ALUMINUM CLAD
F	ALUMINUM CANOPY
G	STEEL CANOPY BRACKET
H	ASPHALT ROOF
I	STEEL HANDRAIL



2 SECONDARY - SOUTH ELEVATION
A21 SCALE: 1/4" = 1'-0"



1 SECONDARY - EAST ELEVATION
A21 SCALE: 1/4" = 1'-0"

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23 ISHAM MULTI-UNIT RESIDENTIAL

23 ISHAM STREET, BURLINGTON, VT

HINGE
architecture
431 Pine Street, Suite 314, Burlington, VT 05401
802.793.9840

DATE: 07/09/25
SCALE: 1/4" = 1'-0"
DRAWN BY: MA
CHECKED BY: MA
PHASE: FOR PERMIT

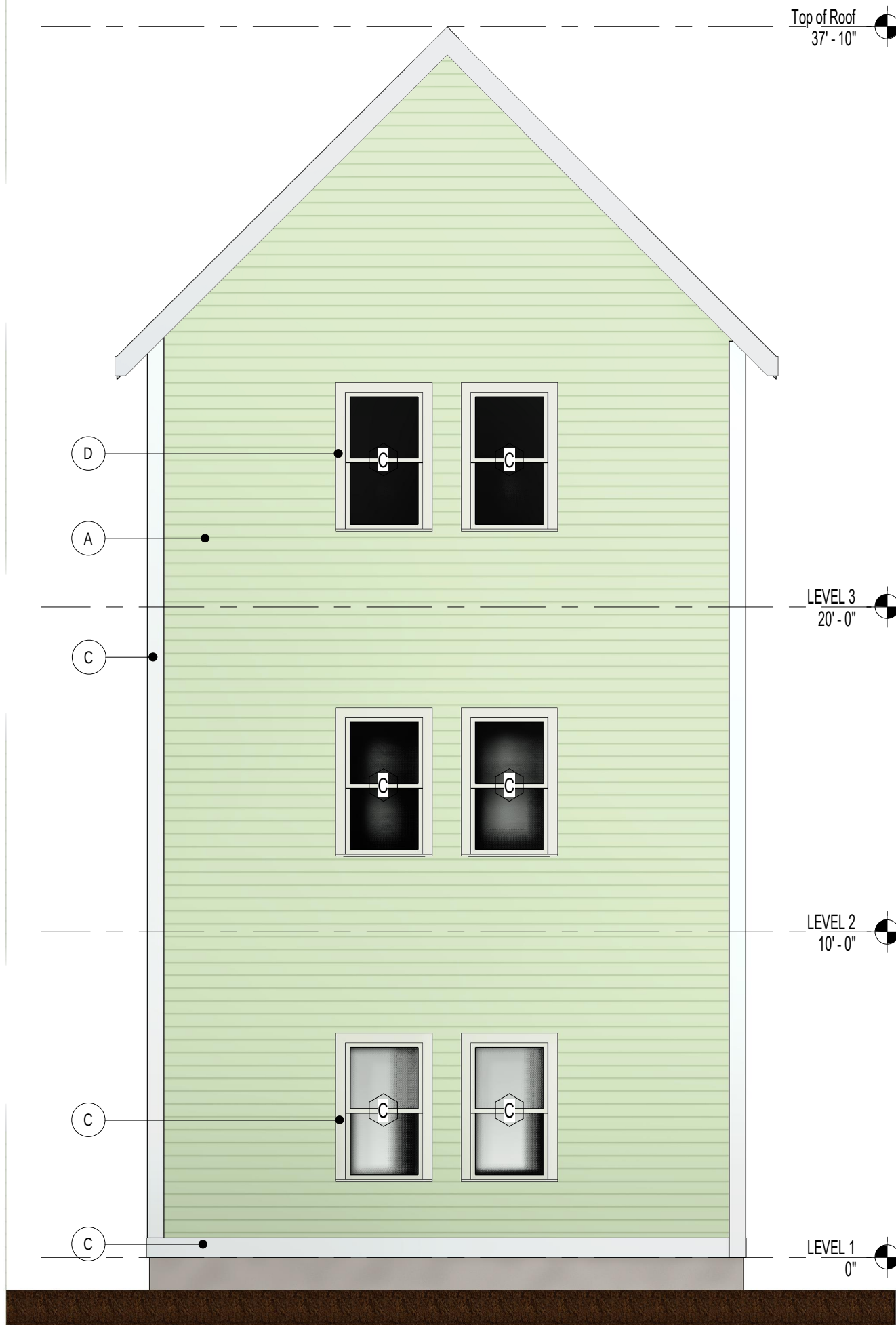
ELEVATIONS

SHEET NO:

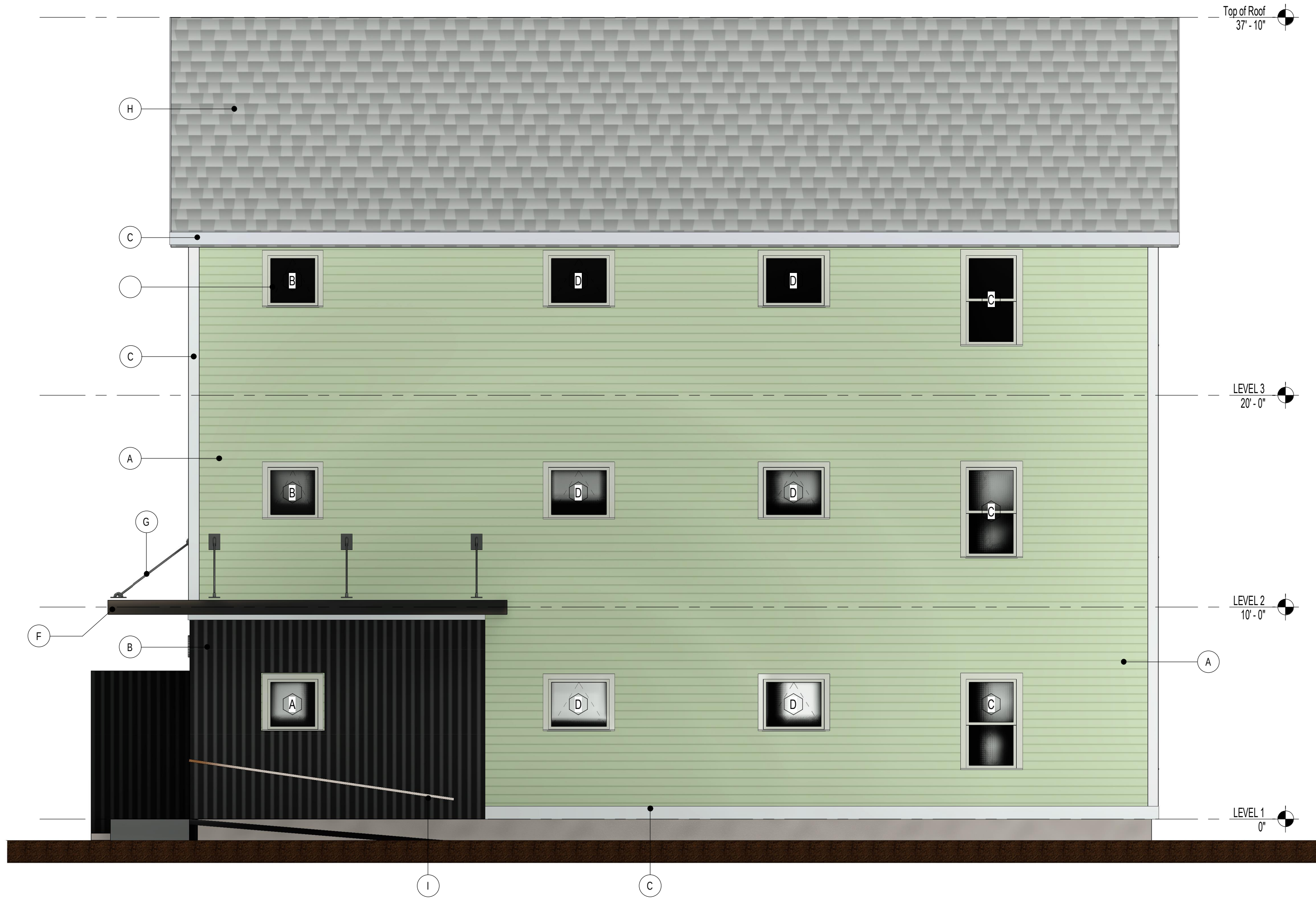
A.21

Window Schedule								
Type Mark	Description	Count	Type	Width	Sill Height	Height	Head Height	Comments
A	FIXED	1	30" x 30"	2' - 6"	4' - 2"	2' - 6"	6' - 8"	
B	AWNING	4	30" x 30"	2' - 6"	<varies>	2' - 6"	<varies>	THESE ARE IN THE SHARED STAIR
C	DOUBLE HUNG	15	30" x 52"	2' - 6"	2' - 4"	4' - 4"	6' - 8"	EACH BEDROOM TO HAVE CASEMENT FOR EGRESS THAT LOOKS LIKE DOUBLE HUNG
D	AWNING	6	36" x 30"	3' - 0"	4' - 2"	2' - 6"	6' - 8"	
E	SLIDER	6	50" x 30"	4' - 2"	4' - 2"	2' - 6"	6' - 8"	

MATERIAL KEY	
Key Value	Keynote Text
A	VINYL CLAPBOARD SIDING
B	METAL SIDING - VERTICAL CORRUGATED
C	SOLID VINYL TRIM
D	VINYL WINDOW
E	ENTRY DOOR - ALUMINUM CLAD
F	ALUMINUM CANOPY
G	STEEL CANOPY BRACKET
H	ASPHALT ROOF
I	STEEL HANDRAIL



2 SECONDARY - WEST ELEVATION
A22 SCALE: 1/4" = 1'-0"



1 SECONDARY - NORTH ELEVATION
A22 SCALE: 1/4" = 1'-0"

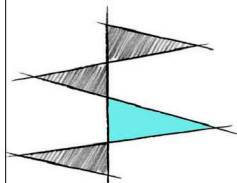
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23 ISHAM STREET, BURLINGTON, VT



HINGE
architecture
431 Pine Street, Suite 314, Burlington, VT 05401
802.793.9840

DATE: 07/09/25
SCALE: 1/4" = 1'-0"
DRAWN BY: MA
CHECKED BY: MA
PHASE: FOR PERMIT

ELEVATION

SHEET NO:

A.22

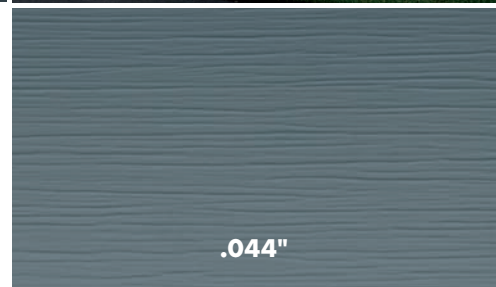


Cedar Knolls™

DELUXE VINYL SIDING

THE BEAUTY OF CEDAR,
THE PERFORMANCE OF VINYL

 **NORANDEX™**
VINYL SIDING, SOFFIT & ACCESSORIES



THE LOOK OF WOOD, THE VALUE OF VINYL

FEATURES AND BENEFITS



.044" Panel thickness with a natural cedar embossed woodgrain pattern

A 5/8" panel projection provides rigidity and casts deep, appealing shadow lines



A heavy duty extended return leg snaps tightly into the TitanBar® Reinforced Nail Hem which is double the thickness of the siding panel under the nail head, for an installation that's solid, secure and protects against panel blow off in adverse weather conditions



XLOK TECHNOLOGY **TitanBar** REINFORCED NAIL HEM **NailRIGHT** SIDING INSTALLATION SYSTEM

XLoK® Technology combines the TitanBar, Reinforced Nail Hem and the NailRIGHT® Siding Installation System, two innovations that help ensure the siding is securely interlocked and properly affixed to the wall



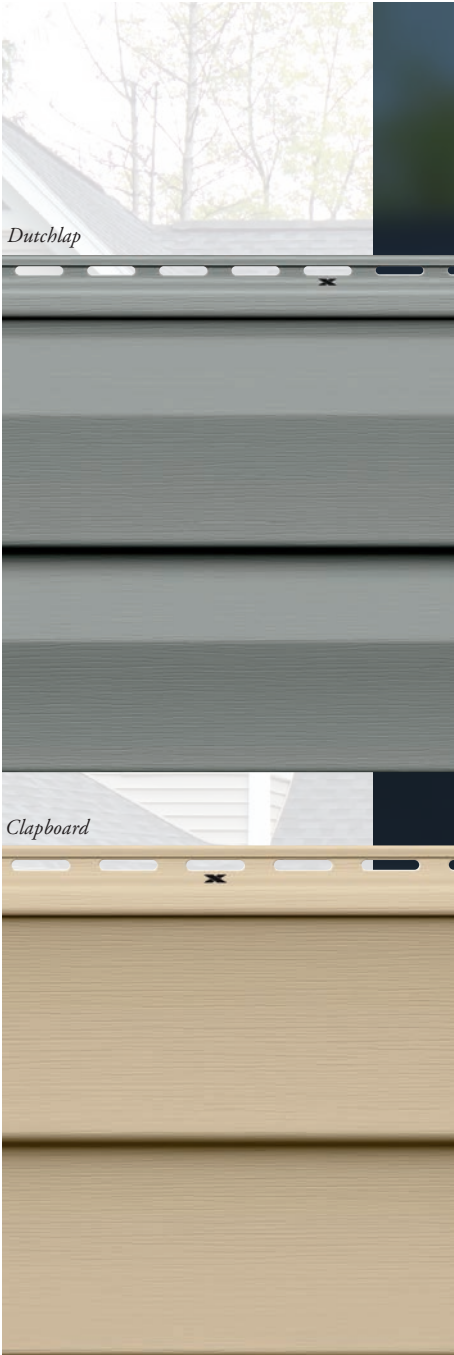
COLORHOLD®
Lifetime Fade Protection

ColorHold is a highly-durable capstock that resists fading and discoloring and is backed by a Limited Lifetime Transferable Warranty* including Lifetime Fade Protection

*Visit www.norandex.com to view warranty details



Matching and contrasting soffit, accessories, shakes and shingles available to give your home a one-of-a-kind look



Make Cedar Knolls Deluxe Vinyl Siding the choice for the life of your home.

- Virtually maintenance free. Save time and money on upkeep costs.
- Because it's solid vinyl, it won't blister, crack, flake, peel or rot like wood exteriors.
- A sound investment that can help increase the resale value of your home.

- THREE DISTINCTIVE PROFILES:**
- Double 4" & 5" Clapboard
 - Double 5" Dutchlap

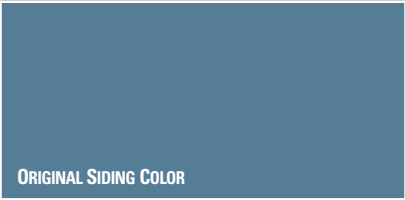
Profile & Color Shown: Double 4" Sierra



Profile & Color Shown: Double 4," Wheat



15 Year
COMPARISON OF FADE



This is a visual representation of the actual fade that can be expected on standard vinyl siding vs. Cedar Knolls Deluxe Vinyl Siding. Colors are mechanically reproduced.

DESIGNER
COLLECTION

A beautiful collection of darker, richer colors with tremendous curb appeal, providing a real value for homeowners seeking a unique darker finish that stands out and stands apart from others in the neighborhood.

COLOR AVAILABILITY

29 BEAUTIFUL COLORS

WHITE	FERN PREMIUM
BEIGE	OLIVE PREMIUM
CREAM	ACADIA GREEN DESIGNER COLLECTION
YELLOW	MYRTLE DESIGNER COLLECTION
CHAMPAGNE	SMOKE PREMIUM
WHEAT	SILVER
SANDSTONE	GRANITE PREMIUM
SIERRA PREMIUM	SEAPORT DESIGNER COLLECTION
MOCHA PREMIUM	JAMESTOWN BLUE DESIGNER COLLECTION
RUSSET DESIGNER COLLECTION	STEEL BLUE DESIGNER COLLECTION
MAVERICK BROWN DESIGNER COLLECTION	GENEVA BLUE PREMIUM
RUSTIC CEDAR DESIGNER COLLECTION	DEEP WATER DESIGNER COLLECTION
FIREBRICK DESIGNER COLLECTION	GRAPHITE DESIGNER COLLECTION
KHAKI PREMIUM	CARBON BROWN DESIGNER COLLECTION
CACTUS	

Colors are mechanically reproduced.
For color accuracy, please see actual product sample.

SAFE SECURE INSTALLATION

Your professional installation crew takes every possible precaution to make sure your new siding looks and performs its best.

They use the Norandex proprietary NailRIGHT® Siding Installation System to help them locate and precisely nail into the framing studs. This is a very important detail because misapplied nails can cause siding to buckle, blow off in windy

conditions, or be hazardous if they strike wiring or plumbing located between the studs.

NailRIGHT helps ensure an accurate and safe installation. It securely connects the siding to the wall for optimum performance. This means the beautiful siding you select will not only stand out, but will stay up, even in extreme weather conditions.

Beauty and Performance. It's the perfect siding combination to make the exterior of any home...perfect.

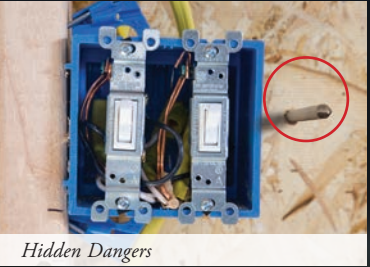
NailRIGHT
SIDING INSTALLATION SYSTEM



THE "X" APPEARS EVERY 8" ON THE NAILING HEM AS A GUIDE TO HELP DETERMINE LOCATION OF HIDDEN WALL STUDS.



AVOID:



Hidden Dangers

Nails that miss their mark can be potentially hazardous to items, like wiring and plumbing, located in the cavities between studs.



Blow Off

NailRIGHT helps guide the installer to the studs for an installation that's strong, secure and resistant to blow offs.



Unnecessary Nail Usage

NailRIGHT assures the proper amount of nails are used, saving your home from unnecessary hammer hits.



Profile & Color Shown: Double 4" White

COMPLEMENT YOUR NEW SIDING WITH OTHER QUALITY EXTERIOR PRODUCTS



Your home deserves the best. That's why, in addition to siding, we offer other top quality products to beautify and protect your home. Whether it's entry doors, energy-efficient windows, soffit, trim, or metals, you can rest comfortably knowing you've finished your home with performance products that are among the best the industry has to offer.



VINYL SIDING, SOFFIT & ACCESSORIES

1-800-528-0942

www.norandex.com



Product Selection Guide

Size and Performance Data	OSD-2
Sound Transmission Class/Outdoor-Indoor Transmission Class	OSD-2
Features and Options	OSD-3
Combination Assemblies	OSD-4
Glazing Performance	OSD-5
Grille Types	
Grille Profiles	OSD-7
Size Tables—Clad and Wood	OSD-8
Design Data	OSD-11
Miscellaneous Formulas	OSD-11
Detailed Product Descriptions	OSD-15
Unit Sections	OSD-16

Document Navigation Tips:

Items listed in the table of contents above are active links that will take you to the corresponding page.

The Pella logo on each page is a link back to this table of contents.

Bookmarks are also included in this PDF document and are available as an additional navigation option.

Supporting documents for this product:

Test Reports:

https://media.pella.com/professional/adm/CertificationReports/Test_Reports_AS-Clad.pdf?utm_source=pdfdoc

CSI Specs (readable using Microsoft Word or other text editing application):

https://media.pella.com/professional/adm/Wood-CSI_Specs/08213-PRC.rtf?utm_source=pdfdoc

AIA Masterspec (readable using Microsoft Word or other text editing application):

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Detailed Product Description (readable using Microsoft Word or other text editing application):

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CAD cross sections (requires appropriate CAD software to read and use):

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3D & BIM (requires appropriate software to read and use):

<https://media.pella.com/professional/adm/RevitFiles/PR-Revit/Door-Out-Swing-Pella-Reserve-Contemporary.zip>

Sketchup (requires appropriate software to read and use):

https://media.pella.com/professional/adm/Clad-Wood-ASC/Pella_ArchitectSeries_Contemporary_Hinged_Door_Out-Swing.zip?utm_source=pdfdoc

Combination Recommendations:

https://media.pella.com/professional/adm/Clad-Wood/D_Combinations.pdf?utm_source=pdfdoc

Installation Details:

https://media.pella.com/professional/adm/Clad-Wood/F_InstallationDetails.pdf?utm_source=pdfdoc

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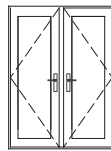
Pella® Reserve™ Contemporary Out-Swing Door

Performance Data

	Clad
Air / Water / Structural Performance₁	
Doors 8' Tall and Under	
Meets or Exceeds AAMA/WDMA Ratings ₁	LC55 - LC70 Hallmark Certified
Air Infiltration (cfm/ft ² of frame @ 1.57 psf wind pressure)	0.15
Water Resistance	10.66 psf
Design Pressure	55 - 70 psf
Doors over 8' Tall up to 10'	
Meets or Exceeds AAMA/WDMA Ratings ₁	LC40 - LC50 Hallmark Certified
Air Infiltration (cfm/ft ² of frame @ 1.57 psf wind pressure)	0.15
Water Resistance	8.36 psf
Design Pressure	40 - 50 psf
Other Performance Criteria	
Forced Entry Resistance Level (Minimum Security Grade) ₂	40

Double-Swing

Single-Swing



active/passive



right panel shown

Sound Transmission Class / Outdoor-Indoor Transmission Class

Product	Frame Size Tested ₃	Glazing System				STC Rating	OITC Rating
		Overall Glazing Thickness	Exterior Glass Thickness	Interior Glass Thickness	Third Pane Thickness		
Contemporary Clad Door	No Grilles						
	71-1/4" x 81-1/2"	13/16"	3mm	3mm	—	30	25
	71-1/4" x 81-1/2"	13/16"	3mm	7.6mm PVB	—	35	29

(—) = Not Applicable

(1) Maximum performance for single unit with standard sill when glazed with the appropriate glass thickness. Doors supplied without latching hardware are not AAMA/WDMA performance certified.

See Design Data pages in this section for specific product performance class and grade values.

(2) The higher the level, the greater the product's ability to resist forced entry. Valid only if Pella supplied locking system is used.

(3) ASTM E 1425 defines standard sizes for acoustical testing. Ratings achieved at that size are representative of all sizes of the same configuration.



Features and Options

Standard	Options / Upgrades
Glazing	
Glazing Type	
Dual-Pane Insulating Glass	Triple-Pane Insulating Glass
Insulated Glass Options/Low-E Types	
Advanced Low-E	SunDefense™ Low-E
	SunDefense+ Low-E
	AdvancedComfort Low-E
	NaturalSun Low-E
	NaturalSun+ Low-E
	Clear (no Low-E coating)
Additional Glass Options	
Tempered Glass	STC Glazing Options
	Obscure Glass ₁
	Tinted Glass (Bronze, Gray and Green)
Gas Fill/High Altitude	
Argon	High altitude
Exterior	
EnduraClad® protective finish	EnduraClad Plus protective finish
Cladding Colors	
Standard colors	Feature Colors, Custom Colors ₁
Sill Finish₂	
Black	Mill finish
	Satin nickel anodized
	Bronze anodized
Interior	
Unfinished wood	Factory primed
	Factory prefinished paint ₁
	Factory prefinished stain ₁
Wood Types	
Pine	Mahogany, Douglas Fir
Hardware	
White, Champagne, Brown, Matte Black	Satin Brass, Chrome, Oil-Rubbed Bronze, Polished Chrome, Distressed Bronze, Distressed Nickel
Grilles	
Integral Light Technology® Grilles	
—	Traditional, Prairie, Top Row, Cross
Grilles-Between-the-Glass	
—	Traditional, Prairie, Top Row, Cross

(1) Contact your local Pella sales representative for current designs and color options.

(2) ADA sill finishes available in mill or bronze anodized only.

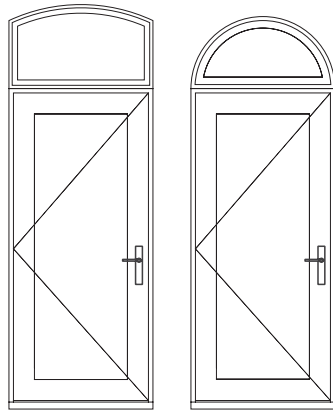


Combination Assemblies

Combinations are a great way to create visual interest in any project. A combination is an assembly formed by two or more separate windows or doors whose frames are mullioned together by a direct or reinforcing mullion.

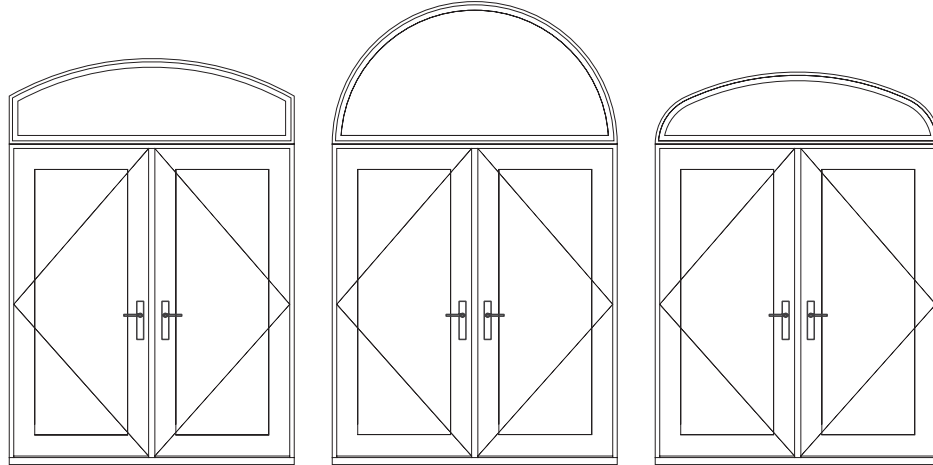
Pella window combinations are available in a variety of arrangements. See the Combinations Recommendations document for typical mullions, requirements and limitations.

Contact your local Pella sales representative for more information.



Arch Head over
Single

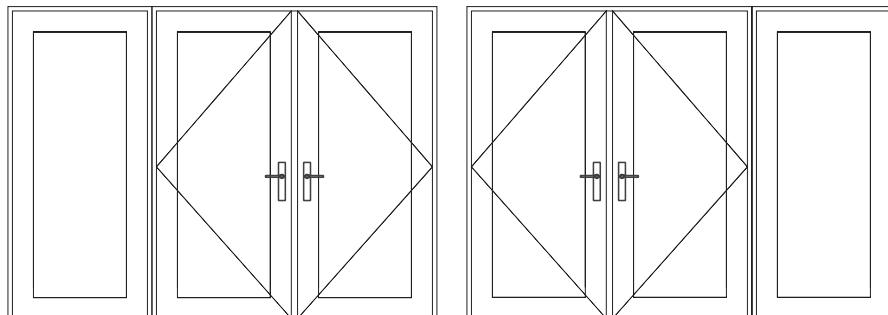
Half Circle over
Single



Arch Head over
Double

Half Circle over
Double

Elliptical over
Double





Pella® Reserve™ Contemporary Out-Swing Door

Glazing Performance - Total Unit

Glazing Thickness	Type of Glazing	NFRC Certified Product #	Glass (mm)		Gap Fill	Performance Values ₁				Shaded Areas Meet ENERGY STAR® Performance Criteria in Zones Shown					
			Ext.	Int.		U-Factor	SHGC	VLT %	CR	U. S.				Canada ₂	
										Zone				ER	
Vent										N	NC	SC	S	CA	
13/16"	Clear IG	PEL-N-212-06617-00001	3	3	Air	0.40	0.44	0.46	45						
	with grilles-between-the-glass	PEL-N-212-06618-00001				0.40	0.38	0.39	45						
	with integral grilles	PEL-N-212-06619-00001				0.40	0.38	0.39	45						
13/16"	Advanced Low-E IG	PEL-N-212-06649-00001	3	3	Argon	0.28	0.21	0.39	61				SC	S	
	with grilles-between-the-glass	PEL-N-212-06650-00001				0.28	0.19	0.33	61				SC	S	
	with integral grilles	PEL-N-212-06651-00001				0.28	0.19	0.33	61				SC	S	
13/16"	SunDefense™ Low-E IG	PEL-N-212-06625-00001	3	3	Argon	0.27	0.16	0.36	61				SC	S	
	with grilles-between-the-glass	PEL-N-212-06626-00001				0.27	0.14	0.31	61				SC	S	
	with integral grilles	PEL-N-212-06627-00001				0.28	0.14	0.31	61				SC	S	
13/16"	SunDefense+ Low-E IG	PEL-N-212-10237-00001	3	3	Argon	0.24	0.16	0.35	48	N	NC		SC	S	
	with grilles-between-the-glass	PEL-N-212-10238-00001				0.24	0.14	0.30	48	N	NC		SC	S	
	with integral grilles	PEL-N-212-10239-00001				0.25	0.14	0.30	48	N	NC		SC	S	
13/16"	AdvancedComfort Low-E IG	PEL-N-212-06633-00001	3	3	Argon	0.24	0.21	0.38	48	N	NC		SC	S	
	with grilles-between-the-glass	PEL-N-212-06634-00001				0.24	0.18	0.33	48	N	NC		SC	S	
	with integral grilles	PEL-N-212-06635-00001				0.25	0.18	0.33	48	N	NC		SC	S	
13/16"	NaturalSun Low-E IG	PEL-N-212-06641-00001	3	3	Argon	0.28	0.39	0.44	60						
	with grilles-between-the-glass	PEL-N-212-06642-00001				0.28	0.34	0.38	60						
	with integral grilles	PEL-N-212-06643-00001				0.29	0.34	0.38	60						
13/16"	NaturalSun+ Low-E IG	PEL-N-212-10205-00001	3	3	Argon	0.25	0.36	0.43	47	N	NC				
	with grilles-between-the-glass	PEL-N-212-10206-00001				0.25	0.31	0.37	47	N	NC				
	with integral grilles	PEL-N-212-10207-00001				0.26	0.31	0.37	47	N	NC				
Tinted Glazing															
13/16"	Bronze Advanced Low-E IG	PEL-N-212-06693-00001	5	3	Argon	0.27	0.19	0.25	62				SC	S	
	with integral grilles with grilles	PEL-N-212-06694-00001				0.27	0.17	0.22	62				SC	S	
	with integral grilles	PEL-N-212-06695-00001				0.28	0.17	0.22	62				SC	S	
13/16"	Gray Advanced Low-E IG	PEL-N-212-06701-00001	5	3	Argon	0.27	0.17	0.22	62				SC	S	
	with grilles-between-the-glass	PEL-N-212-06702-00001				0.27	0.15	0.19	62				SC	S	
	with integral grilles	PEL-N-212-06703-00001				0.28	0.15	0.19	62				SC	S	
13/16"	Green Advanced Low-E IG	PEL-N-212-06709-00001	5	3	Argon	0.27	0.21	0.34	62				SC	S	
	with grilles-between-the-glass	PEL-N-212-06710-00001				0.27	0.19	0.29	62				SC	S	
	with integral grilles	PEL-N-212-06711-00001				0.28	0.19	0.29	62				SC	S	
High Altitude Glazing															
13/16"	Advanced Low-E IG	PEL-N-212-06645-00001	3	3	Air	0.30	0.22	0.39	57						
	with grilles-between-the-glass	PEL-N-212-06646-00001				0.30	0.19	0.33	57						
	with integral grilles	PEL-N-212-06647-00001				0.31	0.19	0.33	58						
13/16"	SunDefense Low-E IG	PEL-N-212-06621-00001	3	3	Air	0.30	0.16	0.36	58						
	with grilles-between-the-glass	PEL-N-212-06622-00001				0.30	0.14	0.31	58						
	with integral grilles	PEL-N-212-06623-00001				0.30	0.14	0.31	58						
13/16"	SunDefense+ Low-E IG	PEL-N-212-10233-00001	3	3	Air	0.26	0.16	0.35	45	N	NC		SC	S	
	with grilles-between-the-glass	PEL-N-212-10234-00001				0.26	0.14	0.30	45	N	NC		SC	S	
	with integral grilles	PEL-N-212-10235-00001				0.27	0.14	0.30	45				SC	S	
13/16"	AdvancedComfort Low-E IG	PEL-N-212-06629-00001	3	3	Air	0.26	0.21	0.38	45	N	NC		SC	S	
	with grilles-between-the-glass	PEL-N-212-06630-00001				0.26	0.18	0.33	45	N	NC		SC	S	
	with integral grilles	PEL-N-212-06631-00001				0.27	0.18	0.33	45				SC	S	
13/16"	NaturalSun Low-E IG	PEL-N-212-06637-00001	3	3	Air	0.31	0.39	0.44	57						
	with grilles-between-the-glass	PEL-N-212-06638-00001				0.31	0.34	0.38	57						
	with integral grilles	PEL-N-212-06639-00001				0.31	0.34	0.38	57						
13/16"	NaturalSun+ Low-E IG	PEL-N-212-10201-00001	3	3	Air	0.27	0.36	0.43	44						
	with grilles-between-the-glass	PEL-N-212-10202-00001				0.27	0.31	0.37	44						
	with integral grilles	PEL-N-212-10203-00001				0.28	0.31	0.37	44						

R-Value = 1/U-Factor
SHGC = Solar Heat Gain Coefficient
VLT % = Visible Light Transmission
CR = Condensation Resistance
ER = Canadian Energy Rating

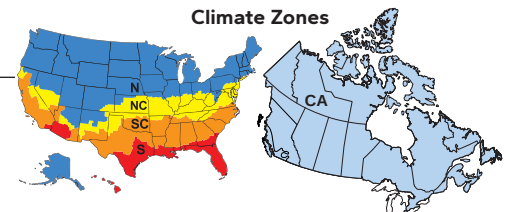
(1) Glazing performance values are calculated based on NFRC 100, NFRC 200 and NFRC 500. ENERGY STAR® values are updated to 2023 (Version 7) criteria.

(2) The values shown are based on Canada's updated ENERGY STAR® 2020 initiative.

U-Factor values shown are based on a standard sill and pine interior.

For center-glass values, see the Product Performance section.

Visit www.energystar.gov for Energy Star guidelines.





Pella® Reserve™ Contemporary Out-Swing Door

Glazing Performance - Total Unit

Glazing Thickness	Type of Glazing	NFRC Certified Product #	Glass (mm)			Gap Fill	Performance Values ₁				Shaded Areas Meet ENERGY STAR® Performance Criteria in Zones Shown					
			Ext.	Mid.	Int.		U-Factor	SHGC	VLT %	CR	U. S.				Canada ₂	
											Zone				ER	
Vent											N	NC	SC	S		CA
1"	Advanced Low-E IG	PEL-N-212-07005-00001	3	3	3	Argon	0.23	0.20	0.35	70	N	NC	SC	S		
	with grilles-between-the-glass	PEL-N-212-07006-00001					0.23	0.17	0.29	70	N	NC	SC	S		
	with integral grilles	PEL-N-212-07007-00001					0.23	0.17	0.29	70	N	NC	SC	S		
1"	SunDefense™ Low-E IG	PEL-N-212-07017-00001	3	3	3	Argon	0.22	0.15	0.32	70	N	NC	SC	S		
	with grilles-between-the-glass	PEL-N-212-07018-00001					0.23	0.13	0.27	70	N	NC	SC	S		
	with integral grilles	PEL-N-212-07019-00001					0.23	0.13	0.27	70	N	NC	SC	S		
1"	NaturalSun Low-E IG	PEL-N-212-06993-00001	3	3	3	Argon	0.23	0.32	0.39	70	N	NC				
	with grilles-between-the-glass	PEL-N-212-06994-00001					0.23	0.28	0.33	70	N	NC				
	with integral grilles	PEL-N-212-06995-00001					0.23	0.28	0.33	70	N	NC				
High Altitude Glazing																
1"	Advanced Low-E IG	PEL-N-212-07009-00001	3	3	3	Air	0.25	0.20	0.35	66	N	NC	SC	S		
	with grilles-between-the-glass	PEL-N-212-07010-00001					0.26	0.17	0.29	66	N	NC	SC	S		
	with integral grilles	PEL-N-212-07011-00001					0.26	0.17	0.29	66	N	NC	SC	S		
1"	SunDefense Low-E IG	PEL-N-212-07021-00001	3	3	3	Air	0.25	0.15	0.32	66	N	NC	SC	S		
	with grilles-between-the-glass	PEL-N-212-07022-00001					0.26	0.13	0.27	66	N	NC	SC	S		
	with integral grilles	PEL-N-212-07023-00001					0.26	0.13	0.27	66	N	NC	SC	S		
1"	NaturalSun Low-E IG	PEL-N-212-06997-00001	3	3	3	Air	0.25	0.32	0.39	66	N	NC				
	with grilles-between-the-glass	PEL-N-212-06998-00001					0.26	0.28	0.33	66	N	NC				
	with integral grilles	PEL-N-212-06999-00001					0.26	0.28	0.33	66	N	NC				

R-Value = 1/U-Factor
SHGC = Solar Heat Gain Coefficient
VLT % = Visible Light Transmission
CR = Condensation Resistance
ER = Canadian Energy Rating

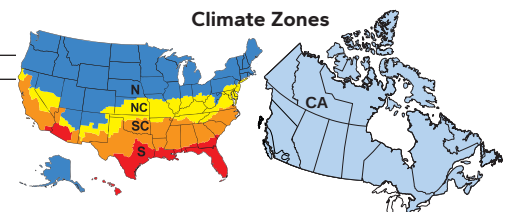
(1) Glazing performance values are calculated based on NFRC 100, NFRC 200 and NFRC 500. ENERGY STAR® values are updated to 2023 (Version 7) criteria.

(2) The values shown are based on Canada's updated ENERGY STAR® 2020 initiative.

U-Factor values shown are based on a standard sill and pine interior.

For center-glass values, see the Product Performance section.

Visit www.energystar.gov for Energy Star guidelines.



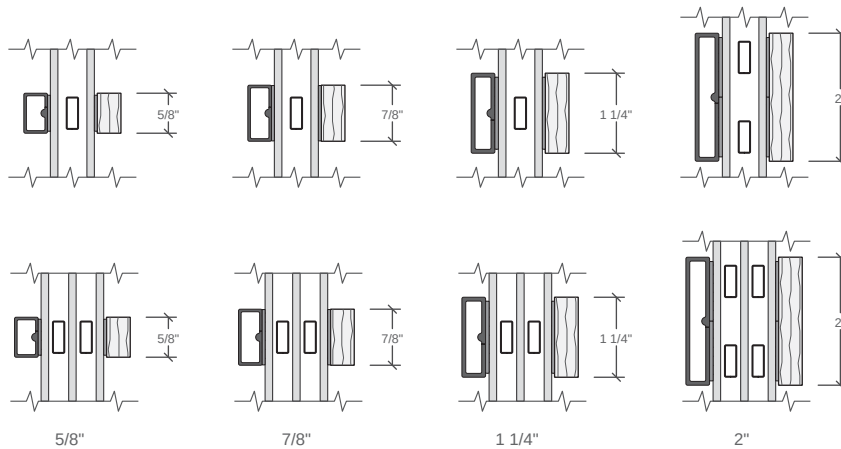


Grilles

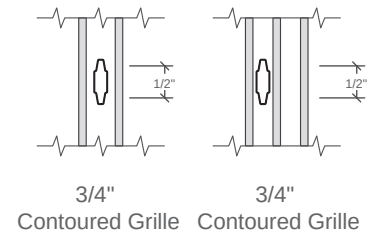
Grille Profiles

Contemporary Style Collection - Integral Light Technology®

Square Grilles
Clad Exterior - Wood Interior

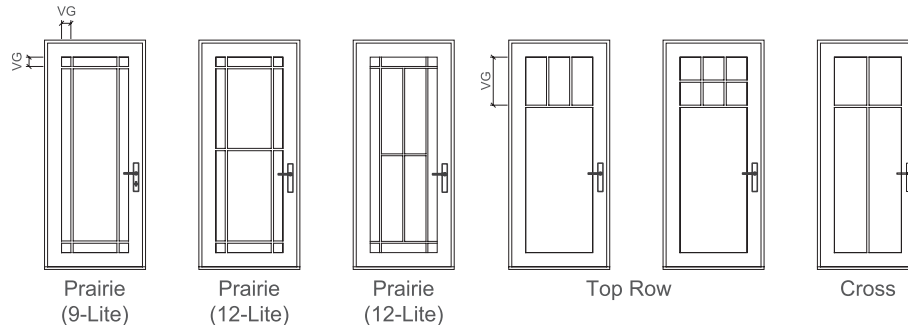


Grilles-Between-the-Glass



Grille Patterns

Integral Light Technology® Grilles



Prairie

- Standard corner lite dimension for Prairie patterns = 3-1/2" VG
- 9-Lite available in all standard and special sizes
- 12-Lite available at 8' height; other heights available per custom drawing

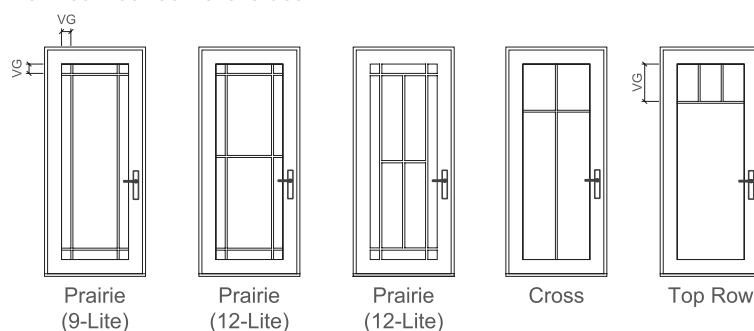
Top Row

- Standard visible glass to separator bar = 14" or half of total visible glass height, whichever is smaller

Cross

- Standard visible glass to separator bar is one-quarter of total visible glass height

Grilles-Between-the-Glass



Prairie

- Standard corner lite dimension = 3-1/2" VG
- 9-Lite available in units < 7' 0-3/4" height
- Prairie in heights > 7' 0-1/2" will have 12 lites
- 12-Lite available in units ≤ 7' 2" height

Cross

- Horizontal bar is 1/4 of visible glass from the top in door panels

Top Row

- Horizontal bar may be ordered 12", 14" or 16" from the top VG

For traditional patterns, see size tables.

Interior wood ILT Grilles available in Pine, Mahogany or Douglas Fir to match complete unit.

VG = Visible Glass

Lite dimensions noted can vary.

Custom configurations are also available, for details contact your local Pella sales representative.



Standard Size Tables

6' 7" Single Doors

	Opening				
	2' 2 1/8" (664)	2' 6 3/4" (781)	2' 10 1/4" (870)	3' 0 3/4" (933)	3' 2 5/8" (981)
	Frame				
	2' 1 3/8" (645)	2' 6" (762)	2' 9 1/2" (851)	3' 0" (914)	3' 1 7/8" (962)
6' 8" (2 032)					
6' 7 1/2" (2 019)					
	LEFT 2680	LEFT 3080	LEFT 3480	LEFT 3680	LEFT 3880

6' 7" Double Doors Active-Passive

	Opening				
	4' 2 3/4" (1 289)	5' 0" (1 524)	5' 7" (1 702)	6' 0" (1 829)	6' 3 3/4" (1 924)
	Frame				
	4' 2" (1 270)	4' 11 1/4" (1 505)	5' 6 1/4" (1 682)	5' 11 1/4" (1 810)	6' 3" (1 905)
6' 8" (2 032)					
6' 7 1/2" (2 019)					
	ACTIVE-PASSIVE 5080	ACTIVE-PASSIVE 6080	ACTIVE-PASSIVE 6780	ACTIVE-PASSIVE 7280	ACTIVE-PASSIVE 7580

6' 8" Single Doors

	Opening				
	2' 2 1/8" (664)	2' 6 3/4" (781)	2' 10 1/4" (870)	3' 0 3/4" (933)	3' 2 5/8" (981)
	Frame				
	2' 1 3/8" (645)	2' 6" (762)	2' 9 1/2" (851)	3' 0" (914)	3' 1 7/8" (962)
6' 8 5/8" (2 048)					
6' 8 1/8" (2 035)					
	LEFT 2681	LEFT 3081	LEFT 3481	LEFT 3681	LEFT 3881

6' 8" Double Doors Active-Passive

	Opening				
	4' 2 3/4" (1 289)	5' 0" (1 524)	5' 7" (1 702)	6' 0" (1 829)	6' 3 3/4" (1 924)
	Frame				
	4' 2" (1 270)	4' 11 1/4" (1 505)	5' 6 1/4" (1 682)	5' 11 1/4" (1 810)	6' 3" (1 905)
6' 8 5/8" (2 048)					
6' 8 1/8" (2 035)					
	ACTIVE-PASSIVE 5081	ACTIVE-PASSIVE 6081	ACTIVE-PASSIVE 6781	ACTIVE-PASSIVE 7281	ACTIVE-PASSIVE 7581

Not to scale.
Traditional grille patterns shown.
All doors and sidelights are glazed with tempered glass.
Single doors - Left-hand shown. Right-hand and fixed are available.
Double-swing doors - Active-Passive shown. Passive-Active also available.



Standard Size Tables

6' 10" Single Doors

6' 10"	Opening	2' 2 1/8"	(664)	2' 6 3/4"	(781)	2' 10 1/4"	(870)	3' 0 3/4"	(933)	3' 2 5/8"	(981)
	Frame	2' 1 3/8"	(645)	2' 6"	(762)	2' 9 1/2"	(851)	3' 0"	(914)	3' 1 7/8"	(962)
			LEFT 2682		LEFT 3082		LEFT 3482		LEFT 3682		LEFT 3882

6' 10" Double Doors Active-Passive

6' 10"	Opening	4' 2 3/4"	(1 289)	5' 0"	(1 524)	5' 7"	(1 702)	6' 0"	(1 829)	6' 3 3/4"	(1 924)
	Frame	4' 2"	(1 270)	4' 11 1/4"	(1 505)	5' 6 1/4"	(1 682)	5' 11 1/4"	(1 810)	6' 3"	(1 905)
			ACTIVE-PASSIVE 5082		ACTIVE-PASSIVE 6082		ACTIVE-PASSIVE 6782		ACTIVE-PASSIVE 7282		ACTIVE-PASSIVE 7582

7' 2" Single Doors

7' 2"	Opening	2' 2 1/8"	(664)	2' 6 3/4"	(781)	2' 10 1/4"	(870)	3' 0 3/4"	(933)	3' 2 5/8"	(981)
	Frame	2' 1 3/8"	(645)	2' 6"	(762)	2' 9 1/2"	(851)	3' 0"	(914)	3' 1 7/8"	(962)
			LEFT 2686		LEFT 3086		LEFT 3486		LEFT 3686		LEFT 3886

7' 2" Double Doors Active-Passive

7' 2"	Opening	4' 2 3/4"	(1 289)	5' 0"	(1 524)	5' 7"	(1 702)	6' 0"	(1 829)	6' 3 3/4"	(1 924)
	Frame	4' 2"	(1 270)	4' 11 1/4"	(1 505)	5' 6 1/4"	(1 682)	5' 11 1/4"	(1 810)	6' 3"	(1 905)
			ACTIVE-PASSIVE 5086		ACTIVE-PASSIVE 6086		ACTIVE-PASSIVE 6786		ACTIVE-PASSIVE 7286		ACTIVE-PASSIVE 7586

Not to scale.
Traditional grille patterns shown.
All doors and sidelights are glazed with tempered glass.
Single doors - Left-hand shown. Right-hand and fixed are available.
Double-swing doors - Active-Passive shown. Passive-Active also available.



Pella® Reserve™ Contemporary Out-Swing Door

Standard Size Tables

8' 0" Single Doors

	Opening		2' 2 1/8" (664)		2' 6 3/4" (781)		2' 10 1/4" (870)		3' 0 3/4" (933)		3' 2 5/8" (981)	
	Frame		2' 1 3/8" (645)		2' 6" (762)		2' 9 1/2" (851)		3' 0" (914)		3' 1 7/8" (962)	
8' 0" (2 438)												
7' 11 1/2" (2 426)			LEFT 2696		LEFT 3096		LEFT 3496		LEFT 3696		LEFT 3896	

8' 0" Double Doors Active-Passive

	Opening		4' 2 3/4" (1 289)		5' 0" (1 524)		5' 7" (1 702)		6' 0" (1 829)		6' 3 3/4" (1 924)	
	Frame		4' 2" (1 270)		4' 11 1/4" (1 505)		5' 6 1/4" (1 682)		5' 11 1/4" (1 810)		6' 3" (1 905)	
8' 0" (2 438)												
7' 11 1/2" (2 426)			ACTIVE-PASSIVE 5096		ACTIVE-PASSIVE 6096		ACTIVE-PASSIVE 6796		ACTIVE-PASSIVE 7296		ACTIVE-PASSIVE 7596	

10' 0" Single Doors

	Opening		2' 2 1/8" (664)		2' 6 3/4" (781)		2' 10 1/4" (870)		3' 0 3/4" (933)		3' 2 5/8" (981)	
	Frame		2' 1 3/8" (645)		2' 6" (762)		2' 9 1/2" (851)		3' 0" (914)		3' 1 7/8" (962)	
10' 0" (3 048)												
9' 11 1/2" (3 035)			LEFT 26120		LEFT 30120		LEFT 34120		LEFT 36120		LEFT 38120	

10' 0" Double Doors Active-Passive

	Opening		4' 2 3/4" (1 289)		5' 0" (1 524)		5' 7" (1 702)		6' 0" (1 829)		6' 3 3/4" (1 924)	
	Frame		4' 2" (1 270)		4' 11 1/4" (1 505)		5' 6 1/4" (1 682)		5' 11 1/4" (1 810)		6' 3" (1 905)	
10' 0" (3 048)												
9' 11 1/2" (3 035)			ACTIVE-PASSIVE 50120		ACTIVE-PASSIVE 60120		ACTIVE-PASSIVE 67120		ACTIVE-PASSIVE 72120		ACTIVE-PASSIVE 75120	

Not to scale.

Traditional grille patterns shown.

All doors and sidelights are glazed with tempered glass.

Single doors - Left-hand shown. Right-hand and fixed are available.

Double-swing doors - Active-Passive shown. Passive-Active also available.



Special Sizes and Dimensions

Special Size Frame Dimensions ,

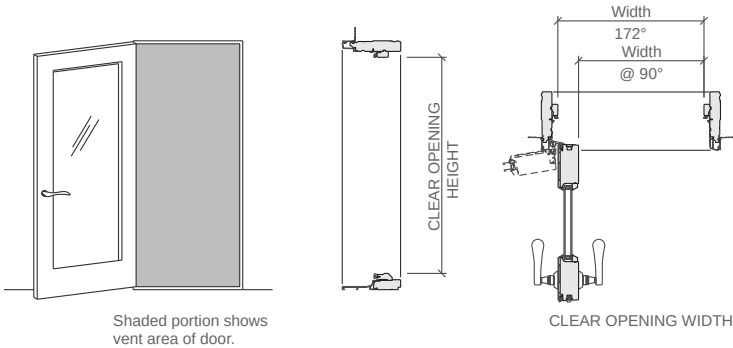
Door Type	Minimum	Maximum
Single Door	1' 6" W x 3' 0" H (18" x 36") (457 x 914)	4' 0" W x 9' 11-1/2" H (48" x 119-1/2") (1 219 x 3 035)
Double Door	3' 0" W x 3' 0" H (36" x 36") (914 x 914)	8' 0" W x 9' 11-1/2" H (96" x 119-1/2") (2 438 x 3 035)
Transom (Fixed Frame Direct Set)	2' 1" W x 1' 5" H (25-1/4" x 17") (641 x 432)	6' 3-3/4" W x 2' 1" H (75-3/4" x 25") (1 924 x 635)

Miscellaneous Formulas

	Single Door	Double-Door	Transom - Fixed Frame Direct Set
Actual Glass Width	Frame Width - 11.625"	(Frame Width - 22.5") ÷ 2	Frame Width - 3.25"
Actual Glass Height	Frame Height - 11.875"		Frame Height - 3.25"
Visible Glass Width	Frame Width - 10.625"	(Frame Width - 20.5") ÷ 2	Frame Width - 2"
Visible Glass Height	Frame Height - 12.1875"		Frame Height - 2"

	Single Door	Single Door ADA Sill	Double-Door (Single Panel)	Double-Door ADA Sill (Single Panel)	Double-Door (both panels PA/AP)	Double-Door ADA Sill (both panels PA/AP)
Clear Opening Width @90°	Frame Width - 5.375"		(Frame Width ÷ 2) - 5"		Frame Width - 7.4375"	
Clear Opening Width @172	Frame Width - 3.3125"		(Frame Width ÷ 2) - 2.9375"		Frame Width - 3.3125"	
Clear Opening Height	Frame Height - 3.25"	Frame Height - 2.0625"	Frame Height - 3.25"	Frame Height - 2.0625"	Frame Height - 3.25"	Frame Height - 2.0625"

Clear Opening Schematic



(1) Available within size range shown.
Keep frame dimensions to the nearest 1/8" increment.



Design Data

Out-Swing Design Data											
	Unit		Clear Opening (Inches)				Vent Area Ft²	Vent Area (ADA) Ft²	Visible Glass Ft²	Standard Glass Thickness (mm) Tempered	Performance Class & Grade ₃
			Width ₁		Standard Sill Unit Height	ADA Sill Unit Height ₂					
			172°	90°							
6' 7-1/2" DOORS	2680	F	—	—	—	—	—	—	6.5	3	LC55/LC70
	3080	F	—	—	—	—	—	—	8.7	3	LC55/LC70
	3480	F	—	—	—	—	—	—	10.4	3	LC55/LC70
	3680	F	—	—	—	—	—	—	11.6	3	LC55/LC70
	3880	F	—	—	—	—	—	—	12.5	3	LC55/LC70
	2680	L/R	22-1/16	20	76	77-7/16	11.6	11.9	6.5	3	LC55/LC70
	3080	L/R	26-11/16	24-5/8	76	77-7/16	14.1	14.4	8.7	3	LC55/LC70
	3480	L/R	30-3/16	28-1/8	76	77-7/16	15.9	16.2	10.4	3	LC55/LC70
	3680	L/R	32-11/16	30-5/8	76	77-7/16	17.3	17.6	11.6	3	LC55/LC70
	3880	L/R	34-9/16	32-1/2	76	77-7/16	18.2	18.6	12.5	3	LC55/LC70
	5080	PA/AP	46-11/16 / 22-1/16	42-9/16 / 20	76	77-7/16	11.6	11.9	13.0	3	LC55/LC70
	6080	PA/AP	55-15/16 / 26-11/16	51-13/16 / 24-5/8	76	77-7/16	14.1	14.4	17.4	3	LC55/LC70
	6780	PA/AP	62-15/16/ 30-5/16	58-13/16 / 28-1/8	76	77-7/16	15.9	16.2	20.8	3	LC55/LC70
	7280	PA/AP	67-15/16 / 32-11/16	63-13/16 / 30-5/8	76	77-7/16	17.3	17.6	23.1	3	LC55/LC70
	7580	PA/AP	71-9/16 / 34-5/8	67-9/16 / 32-1/2	76	77-7/16	18.2	18.6	24.9	3	LC55/LC70
6' 10" DOORS	3082	F	—	—	—	—	—	—	9.0	3	LC55/LC70
	3682	F	—	—	—	—	—	—	11.9	3	LC55/LC70
	2682	L/R	22-1/16	20	78	79-7/16	12.0	12.2	6.7	3	LC55/LC70
	3082	L/R	26-11/16	24-5/8	78	79-7/16	14.5	14.7	9.0	3	LC55/LC70
	3482	L/R	30-3/16	28-1/8	78	79-7/16	16.4	16.7	10.7	3	LC55/LC70
	3682	L/R	32-11/16	30-5/8	78	79-7/16	17.7	18.0	11.9	3	LC55/LC70
	3882	L/R	34-9/16	32-1/2	78	79-7/16	18.7	19.1	12.8	3	LC55/LC70
	5082	PA/AP	46-11/16 / 22-1/16	42-9/16 / 20	78	79-7/16	12.0	12.2	13.4	3	LC55/LC70
	6082	PA/AP	55-15/16 / 26-11/16	51-13/16 / 24-5/8	78	79-7/16	14.5	14.7	17.9	3	LC55/LC70
	6782	PA/AP	62-15/16/ 30-5/16	58-13/16 / 28-1/8	78	79-7/16	16.4	16.7	21.4	3	LC55/LC70
	7282	PA/AP	67-15/16 / 32-11/16	63-13/16 / 30-5/8	78	79-7/16	17.7	18.0	23.8	3	LC55/LC70
	7582	PA/AP	71-9/16 / 34-5/8	67-9/16 / 32-1/2	78	79-7/16	18.7	19.1	25.6	3	LC55/LC70
7' 2" DOORS	3086	F	—	—	—	—	—	—	9.5	3	LC55/LC70
	3686	F	—	—	—	—	—	—	12.7	3	LC55/LC70
	2686	L/R	22-1/16	20	82-1/2	83-15/16	12.6	12.9	7.1	3	LC55/LC70
	3086	L/R	26-11/16	24-5/8	82-1/2	83-15/16	15.3	15.6	9.5	3	LC55/LC70
	3486	L/R	30-3/16	28-1/8	82-1/2	83-15/16	17.3	17.6	11.4	3	LC55/LC70
	3686	L/R	32-11/16	30-5/8	82-1/2	83-15/16	18.7	19.1	12.7	3	LC55/LC70
	3886	L/R	34-9/16	32-1/2	82-1/2	83-15/16	19.8	20.2	13.6	3	LC55/LC70
	5086	PA/AP	46-11/16 / 22-1/16	42-9/16 / 20	82-1/2	83-15/16	12.6	12.9	14.3	3	LC55/LC70
	6086	PA/AP	55-15/16 / 26-11/16	51-13/16 / 24-5/8	82-1/2	83-15/16	15.3	15.6	19.1	3	LC55/LC70
	6786	PA/AP	62-15/16/ 30-5/16	58-13/16 / 28-1/8	82-1/2	83-15/16	17.3	17.6	22.7	3	LC55/LC70
	7286	PA/AP	67-15/16 / 32-11/16	63-13/16 / 30-5/8	82-1/2	83-15/16	18.7	19.1	25.3	3	LC55/LC70
	7586	PA/AP	71-9/16 / 34-5/8	67-9/16 / 32-1/2	82-1/2	83-15/16	19.8	20.2	27.3	3	LC55/LC70

(—) = Not applicable

(1) All dimensions are approximate to the nearest 1/16". The second value, where shown, provides the clear opening for the active panel only.

(2) Water resistance is 0 psf for units with a low profile sill.

(3) Maximum performance when glazed with the appropriate glass thickness. Second number indicates Performance Upgrade Class and Grade, Performance upgrade requires specific installation methods to meet the stated performance.

All doors and sidelights are glazed with tempered glass.



Design Data

Out-Swing Design Data										
	Unit	Clear Opening (Inches)				Vent Area Ft²	Vent Area (ADA) Ft²	Visible Glass Ft²	Standard Glass Thickness (mm) Tempered	Performance Class & Grade₃
		Width₁		Standard Sill Unit Height	ADA Sill Unit Height₂					
		172°	90°							
8' 0" DOORS	3096 F	—	—	—	—	—	—	10.8	3	LC55/LC70
	3696 F	—	—	—	—	—	—	14.3	3	LC55/LC70
	2696 L/R	22-1/16	20	92	93-7/16	14.1	14.3	8.1	3	LC55/LC70
	3096 L/R	26-11/16	24-5/8	92	93-7/16	17.1	17.3	10.8	3	LC55/LC70
	3496 L/R	30-3/16	28-1/8	92	93-7/16	19.3	19.6	12.8	3	LC55/LC70
	3696 L/R	32-11/16	30-5/8	92	93-7/16	20.9	21.2	14.3	3	LC55/LC70
	3896 L/R	34-9/16	32-1/2	92	93-7/16	22.1	22.4	15.4	3	LC55/LC70
	5096 PA/AP	46-11/16 / 22-1/16	42-9/16 / 20	92	93-7/16	14.1	14.3	16.1	3	LC55/LC70
	6096 PA/AP	55-15/16 / 26-11/16	51-13/16 / 24-5/8	92	93-7/16	17.1	17.3	21.5	3	LC55/LC70
	6796 PA/AP	62-15/16/ 30-5/16	58-13/16 / 28-1/8	92	93-7/16	19.3	19.6	25.6	3	LC55/LC70
	7296 PA/AP	67-15/16 / 32-11/16	63-13/16 / 30-5/8	92	93-7/16	20.9	21.2	28.5	3	LC55/LC70
	7596 PA/AP	71-9/16 / 34-5/8	67-9/16 / 32-1/2	92	93-7/16	22.1	22.4	30.7	3	LC55/LC70
9' 0" DOORS	30108 F	—	—	—	—	—	—	12.4	5	LC50/LC50
	36108 F	—	—	—	—	—	—	16.4	5	LC50/LC50
	26108 L/R	22-1/16	20	104.5	105-15/16	16.0	16.2	9.2	5	LC40/LC50
	30108 L/R	26-11/16	24-5/8	104.5	105-15/16	19.4	19.6	12.4	5	LC40/LC50
	34108 L/R	30-3/16	28-1/8	104.5	105-15/16	21.9	22.2	14.7	5	LC40/LC50
	36108 L/R	32-11/16	30-5/8	104.5	105-15/16	23.7	24.1	16.4	5	LC40/LC50
	38108 L/R	34-9/16	32-1/2	104.5	105-15/16	25.1	25.4	17.6	5	LC40/LC50
	50108 PA/AP	46-11/16 / 22-1/16	42-9/16 / 20	104.5	105-15/16	16.0	16.2	18.5	5	LC40/LC50
	60108 PA/AP	55-15/16 / 26-11/16	51-13/16 / 24-5/8	104.5	105-15/16	19.4	19.6	24.7	5	LC40/LC50
	67108 PA/AP	62-15/16/ 30-5/16	58-13/16 / 28-1/8	104.5	105-15/16	21.9	22.2	29.4	5	LC40/LC50
	72108 PA/AP	67-15/16 / 32-11/16	63-13/16 / 30-5/8	104.5	105-15/16	23.7	24.1	32.8	5	LC40/LC50
	75108 PA/AP	71-9/16 / 34-5/8	67-9/16 / 32-1/2	104.5	105-15/16	25.1	25.4	35.3	5	LC40/LC50
10' 0" DOORS	30120 F	—	—	—	—	—	—	13.8	5	LC50/LC50
	36120 F	—	—	—	—	—	—	18.3	5	LC50/LC50
	26120 L/R	22-1/16	20	116	117-7/16	17.8	18.0	10.3	5	LC40/LC50
	30120 L/R	26-11/16	24-5/8	116	117-7/16	21.5	21.8	13.8	5	LC40/LC50
	34120 L/R	30-3/16	28-1/8	116	117-7/16	24.3	24.6	16.5	5	LC40/LC50
	36120 L/R	32-11/16	30-5/8	116	117-7/16	26.3	26.7	18.3	5	LC40/LC50
	38120 L/R	34-9/16	32-1/2	116	117-7/16	27.8	28.2	19.7	5	LC40/LC50
	50120 PA/AP	46-11/16 / 22-1/16	42-9/16 / 20	116	117-7/16	17.8	18.0	20.7	5	LC40/LC50
	60120 PA/AP	55-15/16 / 26-11/16	51-13/16 / 24-5/8	116	117-7/16	21.5	21.8	27.6	5	LC40/LC50
	67120 PA/AP	62-15/16/ 30-5/16	58-13/16 / 28-1/8	116	117-7/16	24.3	24.6	32.9	5	LC40/LC50
	72120 PA/AP	67-15/16 / 32-11/16	63-13/16 / 30-5/8	116	117-7/16	26.3	26.7	36.7	5	LC40/LC50
	75120 PA/AP	71-9/16 / 34-5/8	67-9/16 / 32-1/2	116	117-7/16	27.8	28.2	39.5	5	LC40/LC50

(—) = Not applicable

(1) All dimensions are approximate to the nearest 1/16". The second value, where shown, provides the clear opening for the active panel only.

(2) Water resistance is 0 psf for units with a low profile sill.

(3) Maximum performance when glazed with the appropriate glass thickness. Second number indicates Performance Upgrade Class and Grade. Performance upgrade requires specific installation methods to meet the stated performance.

All doors and sidelights are glazed with tempered glass.

To convert areas to square meters (m²), multiply square feet by 0.0929.



Design Data

TRANSOMS — FIXED FRAME DIRECT SET

Unit	Visible Glass Ft ²	Standard Glass Thickness (mm)		Performance Class & Grade ⁽¹⁾
		Annealed	Tempered	
2617	2.1	3	3	CW90
2625	3.3	3	3	CW90
3017	2.6	3	3	CW90
3025	4.0	3	3	CW90
3417	2.9	3	3	CW90
3425	4.6	3	3	CW90
3617	3.1	3	3	CW90
3625	4.9	3	3	CW90
3817	3.3	3	3	CW90
3825	5.2	3	3	CW90
5017	4.5	3	3	CW90
5025	7.1	3	3	CW75/CW90
6017	5.3	3	3	CW90
6025	8.5	3	3	CW55/CW90
6717	6.0	3	3	CW60
6725	9.5	3	3	CW50/CW60
7217	6.5	3	3	CW60
7225	10.3	3	3	CW45/CW60
7517	6.8	3	3	CW60
7525	10.8	3	3	CW45/CW60

(1) Maximum performance when glazed with the appropriate glass thickness.

Second number indicates Performance Upgrade Class and Grade, Performance upgrade requires specific installation methods to meet the stated performance.

To convert areas to square meters (m²), multiply square feet by 0.0929.



Detailed Product Description

Frame

- Select softwood, immersion treated with Pella's EnduraGuard® wood protection formula in accordance with WDMA I.S.-4. The EnduraGuard formula includes three active ingredients for protection against the effects of moisture, decay, stains from mold and mildew. Plus, an additional ingredient adds protection against termite damage.
- Interior exposed surfaces are [clear pine] [mahogany] [douglas fir], edge-banded and veneered on straight members.
- Exterior surfaces are clad with aluminum at the head and jambs.
- Components are assembled with screws, staples and concealed corner locks.
- Frame depth is 5-7/8" (149mm) for a wall depth of 4-9/16" (116mm).
- Jamb extensions available to adapt door to wall thickness between 4-9/16" (116mm) to 7" (178mm).
- Optional factory-applied EnduraClad® exterior trim.
- Solid extruded aluminum sill with [Mill] [Nickel] [Bronze] [Black] [anodized to match anodized cladding] finish. [Mahogany threshold for mahogany door] [[oak] [composite black] threshold for [pine] [douglas fir] door].
– or –
- Sill is 1/2" low profile. Material and finish is extruded aluminum with [Mill] [Bronze] finish.

Door Panels

- Select softwood, immersion treated with Pella's EnduraGuard® wood protection formula in accordance with WDMA I.S.-4. The EnduraGuard formula includes three active ingredients for protection against the effects of moisture, decay, and stains from mold and mildew. Plus, an additional ingredient adds protection against termite damage.
- Interior exposed surfaces are veneered with [clear pine] [mahogany] [douglas fir] on straight members.
- Exterior surfaces are clad with aluminum.
- Panel stiles and rails are three-ply construction, randomly finger-jointed blocks laminated with water-resistant glue and veneered on both sides.
- Units over 8' height have panel stiles constructed with LVL core with finger-jointed edge bands on both sides and veneered on both faces.
- Corners are urethane-silicone hybrid sealed and secured with metal fasteners.
- Panel thickness is 2-1/16" (52mm).

Weatherstripping

- Dual-durometer extruded polymer along jambs, head and sill.
- Dual-durometer extruded polymer rainscreen along top and sides of panel.
- Bristle rainscreen along bottom of panel.

Glazing System

- Quality fully-tempered float glass complying with ASTM C 1048.
- Custom and high altitude glazing available.
- Silicone-glazed, 13/16" double-pane, dual-seal, insulating glass
 - [Clear] [Obscure] [Reflective Bronze] with air.
 - [Obscure Low-E with [argon][air]] [Advanced] [AdvancedComfort] [SunDefense™] [SunDefense+] [NaturalSun] [NaturalSun+] Low-E with [argon] [air].
 - [Bronze] [Gray] [Green] Advanced Low-E with [argon] [air].
– or –
- Silicone-glazed, 13/16" double-pane, dual-seal, laminated, insulating glass
 - Clear with air.
 - [Advanced Low-E] [SunDefense™ Low-E] with argon.
 - [Bronze] [Gray] [Green] Advanced Low-E with argon.
– or –
- Silicone-glazed, 1" triple-pane, dual-seal, insulating glass
 - [Obscure Low-E with [argon][air]] [Advanced Low-E] [SunDefense™ Low-E] [NaturalSun Low-E] with [argon] [air].

Exterior

- Aluminum clad exteriors shall be finished with EnduraClad® protective finish, in a multi-step, baked-on finish.
 - Color is [Standard] [Feature] [custom]₂.
– or –
- Aluminum clad exteriors shall be finished with EnduraClad Plus protective finish with 70% fluoropolymer resin in a multi-step, baked-on finish.
 - Color is [Standard] [Feature] [custom]₂.

Interior

- [Unfinished, ready for site finishing] [factory primed with one coat acrylic latex] [factory prefinished [paint] [stain]₂].

Hardware

Hinges

- [Adjustable hinges standard to assist in installation] [optional ball bearing hinges].
- Doors 6' 10" to 7' 0" frame height will have three (3) hinges.
- Doors over 7' 0" frame height up to and including 8' 0" frame height will have four (4) hinges.
- Doors over 8' 3" frame height up to and including 9' 0" frame height will have five (5) hinges.
- Doors over 9' 0" frame height will have six (6) hinges.
- Hinge color [Adjustable hinges to match exterior cladding] [Ball bearing hinges are [Satin Nickel] [Colonial Bronze] to compliment sill finish].

Locks

- Mortised and keyed multi-point locking system, center deadbolt and shoot-bolts at head and sill will engage simultaneously.
- Doors 8' 0" frame height and below will have one (1) strike at the head, one (1) strike at the sill and one (1) center deadbolt.
- Doors over 8' 0" frame height up to and including 10' 0" frame height will have one (1) strike at the head, one (1) strike at the sill and three (3) locking points at the stile.
- Solid brass handles and keylock with K-keyway cylinder.
- Key cylinder finish is [Brass] [Chrome] [Matte Black].

Finish

- Hardware finish (Handle and Strike) is [Satin Brass] [Satin Nickel] [Polished Nickel] [Polished Chrome] [Distressed Bronze] [Distressed Nickel] [Oil-Rubbed Bronze] [baked enamel [White] [Champagne] [Brown] [Matte Black]].

Optional Products

Grilles

- Integral Light Technology® grilles
 - Interior grilles are [5/8"] [7/8"] [1-1/4"] [2"] square profile that are solid [pine] [mahogany] [douglas fir]. Interior surfaces are [unfinished, ready for site finishing] [factory primed] [pine: factory prefinished [paint] [stain] ₂].
 - Exterior grilles are [5/8"] [7/8"] [1-1/4"] [2"] square profile that are extruded aluminum.
 - Patterns are [Traditional] [Prairie] [Top Row] [Cross].
 - Insulating glass contains non-glare spacer between the panes of glass.
 - Grilles are adhered to both sides of the insulating glass with VHB acrylic adhesive tape and aligned with spacer.
– or –
- Grilles-Between-the-Glass₃
 - Insulating glass contains 3/4" contoured aluminum grilles permanently installed between two panes of glass (exterior air-space on triple-pane insulating glass).
 - Patterns are [Traditional] [Prairie] [Cross] [Top Row]
 - Interior color is [White] [Tan₄] [Brown] [Putty₄] [Fossil] [Black] [Ivory] [Harvest] [Cordovan] [Brickstone].
 - Exterior color is [Standard] [Feature]₂.

Sensors

- Optional factory installed integrated security sensors available in vent units.

(1) Insulating glass with argon is Low-E coated. All other insulating glass is air-filled.

(2) Contact your local Pella sales representative for current color options.

(3) Available in clear or Low-E insulating glass with argon, and obscure insulated glass.

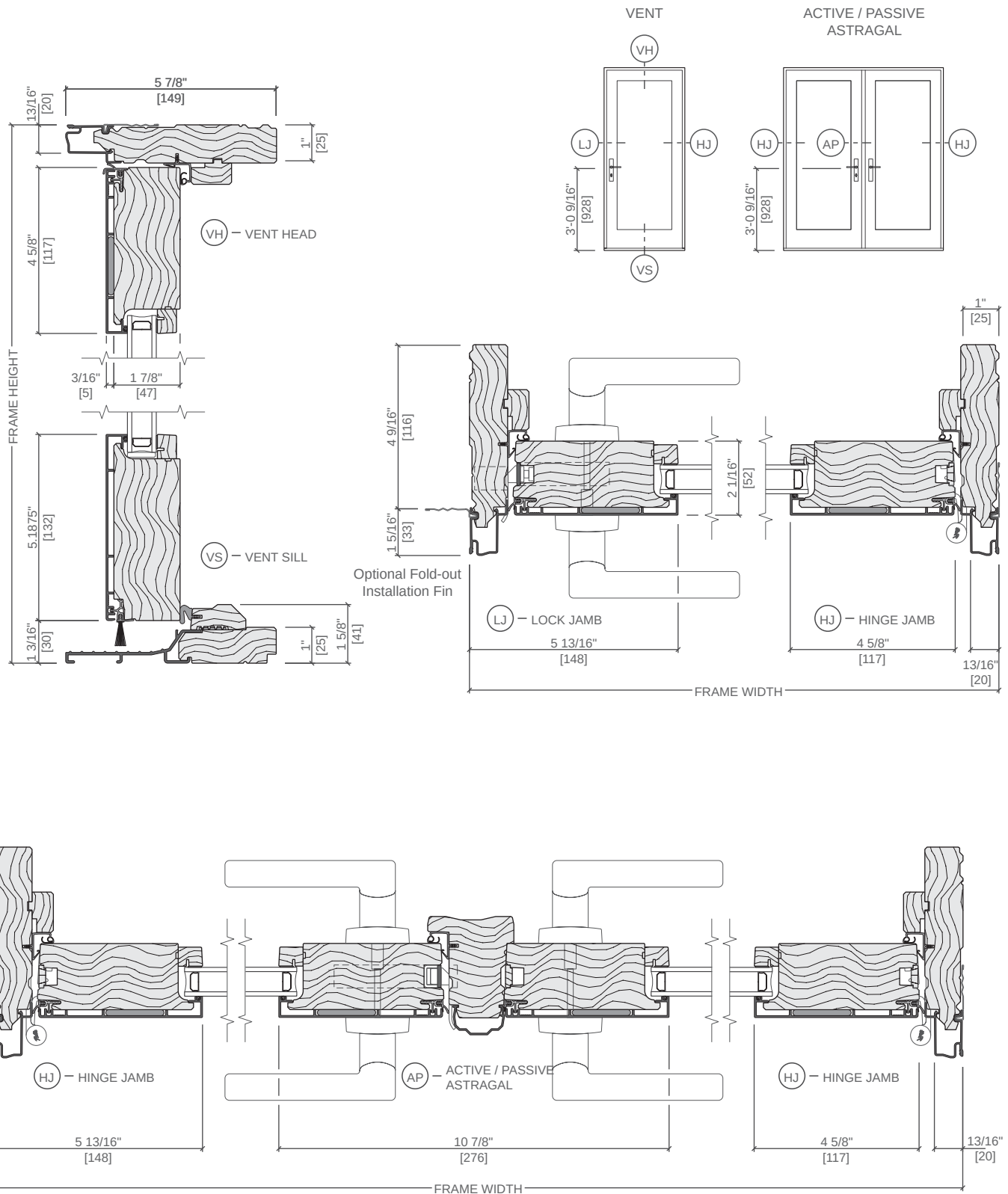
(4) Tan or Putty Interior GBG colors are available in single-tone (Tan/Tan or Putty/Putty).

(5) Appearance of exterior grille color will vary depending on Low-E coating on glass.



Pella® Reserve™ Contemporary Out-Swing Door

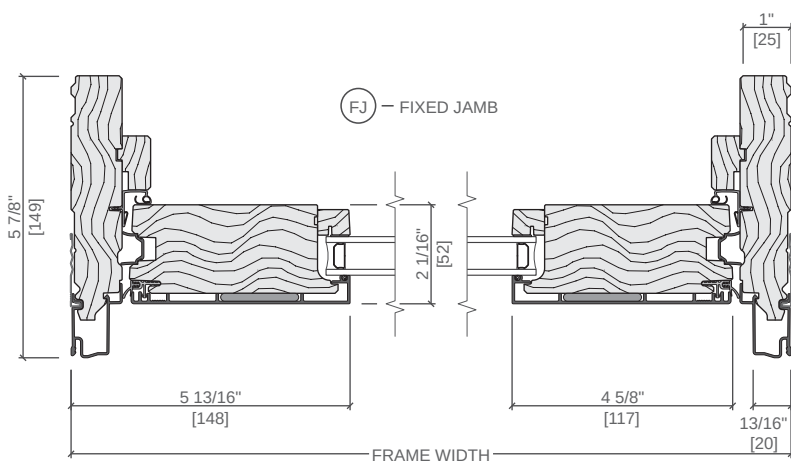
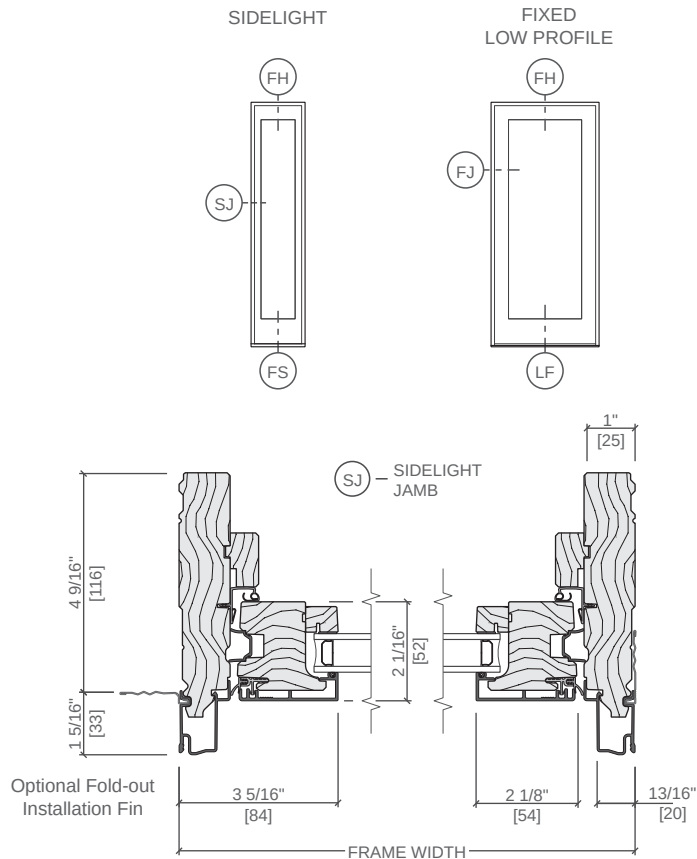
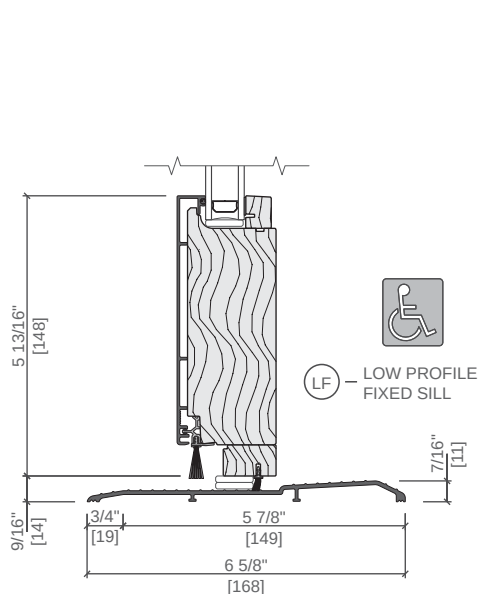
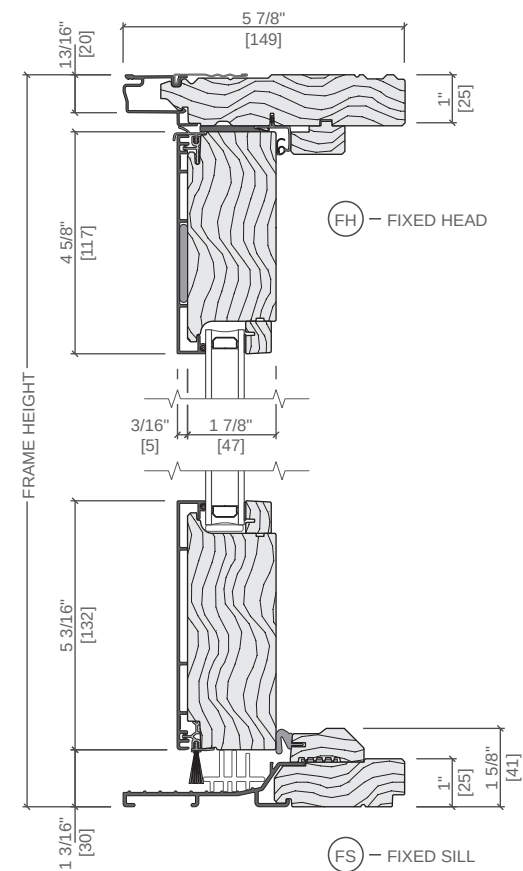
Unit Sections



Scale 3" = 1' 0"

All dimensions are approximate.

Unit Sections



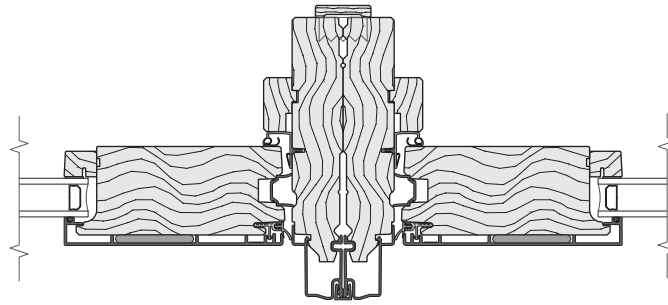
Scale 3" = 1' 0"

All dimensions are approximate.

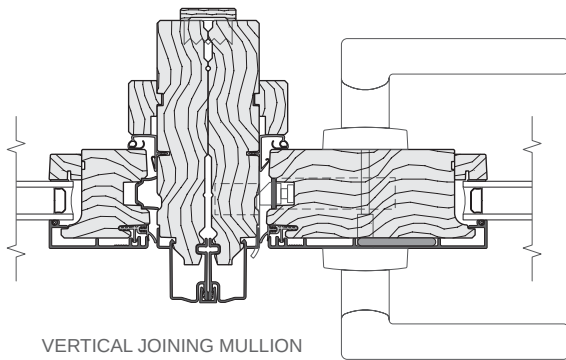
Sidelight is available only as a custom option, contact your local Pella sales representative for details.



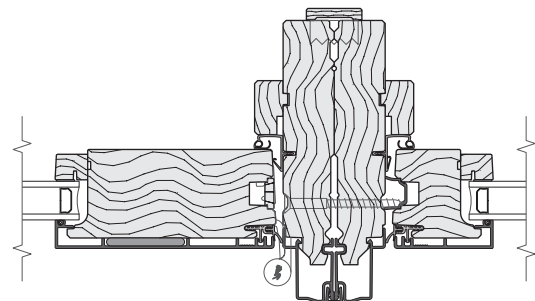
Unit Sections



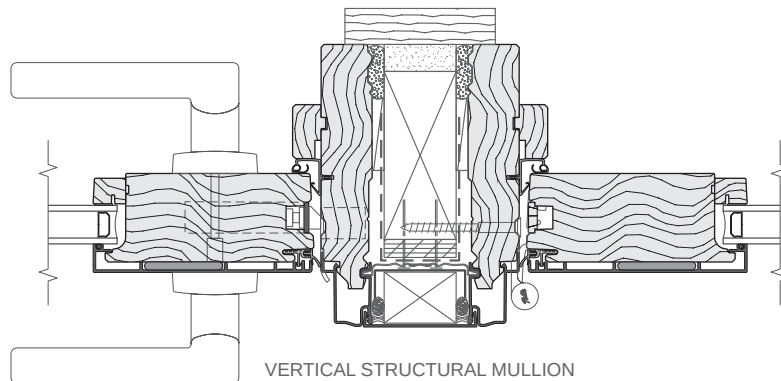
VERTICAL JOINING MULLION
FIXED PANELS



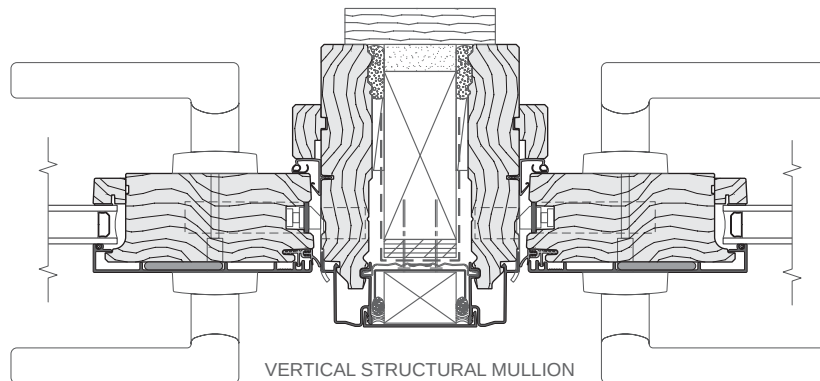
VERTICAL JOINING MULLION
SIDELIGHT / LOCK JAMB



VERTICAL JOINING MULLION
HINGE JAMB / SIDELIGHT



VERTICAL STRUCTURAL MULLION
LOCK JAMB / HINGE JAMB



VERTICAL STRUCTURAL MULLION
LOCK JAMB / LOCK JAMB

Scale 3" = 1' 0"

All dimensions are approximate.

Sidelight is available only as a custom option, contact your local Pella sales representative for details.



TruDefinition®
DURATION®

Shingles with Patented SureNail® Technology

Tejas con tecnología patentada SureNail®



Driftwood



DEEP DIMENSION OUTSTANDING PERFORMANCE

Duration® Shingles offer:

- The high-performance of SureNail® Technology
- A TruDefinition® Color Platform
- A Limited Lifetime Warranty*[†] for as long as you own your home
- The protection of a 130-MPH* wind warranty
- StreakGuard® Protection with a 25-year Algae Resistance Limited Warranty^{3/8}
- Rated Class 3 for Impact Resistance⁶ and may qualify for a homeowner insurance discount⁷

UNA NUEVA DIMENSIÓN DESEMPEÑO SOBRESALIENTE

Las tejas Duration® ofrecen:

- El gran desempeño de la tecnología SureNail®
- La gama de colores TruDefinition®
- Una garantía limitada de por vida*[†] mientras sea propietario de la vivienda
- La protección de una garantía contra vientos de hasta 210 km/h (130 mph)*
- Protección StreakGuard® con una garantía limitada de 25 años de resistencia a las algas ^{3/8}
- Clasificación nominal 3 para resistencia a los impactos⁶ y puede ser aplicable a descuento por seguro del propietario⁷



Don't let black streaks lower the value or curb appeal of your home.

Owens Corning blends specialized copper-lined granules, developed by 3M, a leading producer of roofing granules, into our colorful shingles. This helps resist blue-green algae growth.

No deje que las manchas de algas afecten al valor o aspecto de su vivienda.

En sus coloridas tejas, Owens Corning añade gránulos especiales con recubrimiento de cobre, desarrollados por 3M, un productor líder de gránulos para techos. Esto ayuda a prevenir la proliferación de algas azul-verdosas.



THE FINISHING TOUCH

OWENS CORNING® HIP & RIDGE SHINGLES

Owens Corning® Hip & Ridge Shingles are uniquely color matched to TruDefinition® Duration® Shingles. The multiple color blends are only available from Owens Corning Roofing and offer a finished look for the roof.

EL TOQUE FINAL

TEJAS DE LIMATESA Y CUMBRERA DE OWENS CORNING®

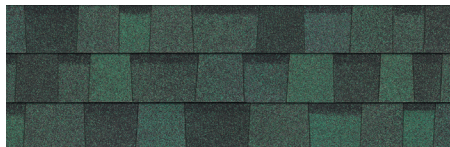
Las tejas de limatesa y cumbrera de Owens Corning® se ofrecen en una exclusiva gama de colores para combinar con las tejas Duration® TruDefinition®. Esta gran variedad de combinaciones de colores es una exclusividad de Owens Corning Roofing para lograr techos con un acabado único.

TruDefinition®
DURATION®

Shingles with Patented SureNail® Technology | Tejas con tecnología patentada SureNail®



Brownwood¹



Chateau Green¹



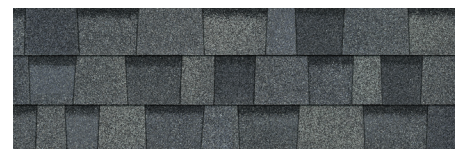
Colonial Slate¹



Desert Rose¹



Driftwood¹



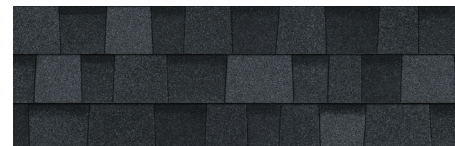
Estate Gray¹



Harbor Blue¹



Midnight Plum^{1/5}



Onyx Black¹



Peppercorn¹



Sand Castle¹



Sierra Gray¹



Slatestone Gray¹



Teak¹



Terra Cotta¹



Williamsburg Gray¹

COLOR DISCLAIMER

As color experts, we know getting the shingle color right is a big part of any roofing purchase. Due to printing color variations, in addition to viewing shingle literature, we suggest you request an actual shingle sample to see how it will appear on your home and with your home's exterior elements in various natural lighting conditions. Lastly, we recommend you verify your color choice by seeing it installed on an actual home; your roofing contractor or supplier can provide a sample and may be able to direct you to a local installation.

DESCARGO DE RESPONSABILIDAD SOBRE LOS COLORES

En tanto que especialistas en color, sabemos que obtener el color de teja perfecto es una parte importante en toda compra de techos. Debido a las variaciones en los colores impresos, además de mirar folletos de tejas, le sugerimos que solicite una muestra de la teja para ver como se verá en su hogar y con los elementos externos de la vivienda bajo distintas condiciones de luz natural. Finalmente, le recomendamos que para verificar su elección de colores, vea cómo lucen las tejas ya instaladas en una vivienda; su contratista de techos o su proveedor le pueden dar una muestra e incluso indicarle dónde ver un techo ya instalado.

THERE'S A LINE BETWEEN A GOOD SHINGLE AND A GREAT SHINGLE.®

It's the nailing line on your shingles. The difference between a good shingle and a great shingle is having Patented SureNail® Technology, only from Owens Corning.

HAY UNA GRAN DIFERENCIA ENTRE UNA BUENA TEJA Y UNA TEJA EXCELENTE™

Es la línea de clavado en su tejas. La diferencia entre una buena teja y una teja excelente es la tecnología patentada SureNail®, una exclusividad de Owens Corning.



Excellent Adhesive Power

Helps keep the shingle layers laminated.

Excelente poder adhesivo

Ayuda a conservar el laminado de las capas de las tejas.

Outstanding Grip

The SureNail® strip enhances the already amazing grip of our proprietary Tru-Bond®** sealant for exceptional wind resistance of a 130-MPH wind warranty.

Agarre excepcional

La banda SureNail® mejora el excelente agarre de nuestro sellador patentado Tru-Bond®** con una garantía de resistencia al viento excepcional de 210 km/h (130 mph).

Breakthrough Design

Patented SureNail® Technology is the first and only reinforced nailing zone on the face of the shingle.

Diseño innovador

La tecnología patentada SureNail® es la primera y la única que provee un área de clavado reforzada en la cara de la teja.

"No Guess" Wide Nailing Zone

This tough, engineered woven-fabric strip is embedded in the shingle to create an easy-to-see, strong, durable fastener zone.

Área de clavado ancha, sin cálculos "a ojo"

Esta banda resistente de tela mecánica tejida está incrustada en la teja para proveer un área de sujeción resistente, duradera y fácil de detectar.

Triple Layer Protection®

A unique "triple layer" of reinforcement occurs when the fabric overlays the two shingle layers, providing increased protection against "nail pull" from the wind.

Triple Layer Protection®

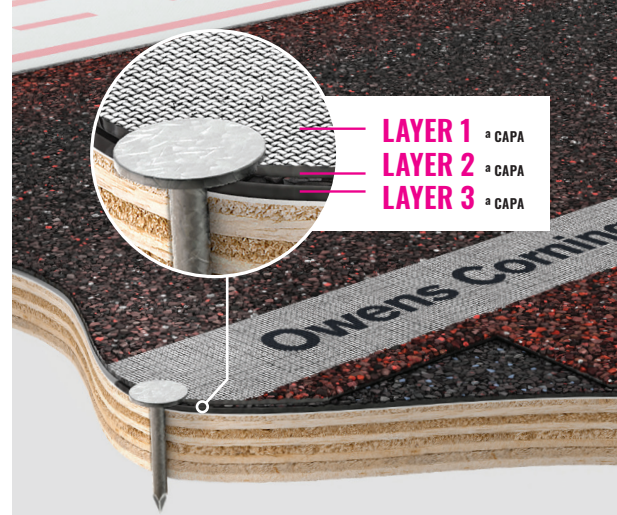
Cuando la tela cubre las dos capas de la teja, se forma una "triple capa" de refuerzo excepcional que ofrece una mayor protección ante el "arranque de clavos" debido al viento.

Double the Common Bond

SureNail® features up to a 200% wider bond between the shingle layers in the nailing zone over standard shingles.

Duplica la adherencia común

En comparación con las tejas comunes, SureNail® ofrece un área de unión hasta un 200 % más ancha entre las capas de la teja en el área de clavado.



THE PROOF IS IN THE PERFORMANCE LA PRUEBA ESTÁ EN EL DESEMPEÑO



Up to

2.5X
BETTER
NAIL PULL-THROUGH RESISTANCE

Hasta

2.5X
MEJOR
RESISTENCIA A LA TRACCIÓN DE LOS CLAVOS

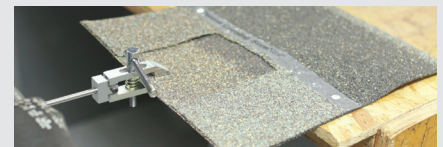


Up to

9X
BETTER
NAIL BLOW-THROUGH RESISTANCE

Hasta

9X
MEJOR
RESISTENCIA AL DESPRENDIMIENTO DE LOS CLAVOS



Up to

2X
BETTER
DELAMINATION RESISTANCE

Hasta

2X
MEJOR
RESISTENCIA A LA DELAMINACIÓN



TOTAL PROTECTION SIMPLIFIED®

It takes more than just shingles to protect a home. It takes an integrated system of components and layers designed to perform in three critical areas. The Owens Corning® Total Protection Roofing System® gives you the assurance that all of your Owens Corning roofing components are working together to help increase the performance of your roof.

PROTECCIÓN TOTAL SIMPLIFICADA®

Se necesita más que simplemente tejas para proteger su vivienda. Se necesita un sistema integral de componentes y capas diseñadas para desempeñarse en tres áreas críticas. El Total Protection Roofing System® de Owens Corning® le garantiza que todos sus componentes para cubiertas de Owens Corning funcionan en conjunto para mejorar el desempeño de su techo.

SEAL. SELLAR.

Helps create a waterproof barrier

Ayuda a crear una barrera impermeable

DEFEND. DEFENDER.

Helps protect against nature's elements

Protege contra los elementos climáticos

BREATHE. RESPIRAR.

For balanced attic ventilation

Para una ventilación equilibrada del ático

Hip & Ridge shingles
Tejas de limatesa y cumbre

Laminate shingles
Tejas laminadas

Starter shingles
Tejas de arranque

Exhaust vents
Salidas de aire

Intake vents
Entradas de aire

Self-adhered ice & water barrier
Barrera autoadhesiva contra el hielo y el agua

Synthetic underlayment
Membrana impermeabilizante sintética

+ COMFORT. CONFORT.

Add comfort and energy performance
Más confort y desempeño energético

PINK® Fiberglas™ blown-in attic insulation
Aislamiento para áticos PINK® Fiberglas™ aplicado por impulsión

For intake ventilation, use approved Owens Corning® Vent Sure® InFlow ventilation or soffit ventilation. Do not use both intake ventilation options in one roofing application. See install instructions for more details.
Para la ventilación de entrada, utilice la ventilación aprobada por Owens Corning® Vent Sure® InFlow o ventilación de alero. No utilice ambas opciones de ventilación de entrada en una misma aplicación para techos. Consulte las instrucciones de instalación para obtener más detalles.

REGISTER YOUR WARRANTY

Registering your Owens Corning® warranty ensures it's easily referenced should you ever need to access it. The process is easy—just have your installation date, shingle type, shingle color and number of squares ready. Then go online to www.owenscorning.com/roofingstandardwarranty or call 1-800-ROOFING (1-800-766-3464) to finish the process.



SCAN TO REGISTER YOUR WARRANTY

Escanee para registrar su garantía

REGISTRE SU GARANTÍA

Al registrar su garantía de Owens Corning® la podrá consultar rápidamente si fuera necesario acceder a ella. El proceso es simple: tenga a mano la fecha de instalación, el tipo y color de tejas y la cantidad de cuadrados. Luego, visite www.owenscorning.com/roofingstandardwarranty o llame al 1-800-ROOFING (1-800-766-3464) para completar el proceso.



Product Attributes

Warranty Length*

Limited Lifetime†
(for as long as you own your home)

Wind Resistance Limited Warranty*

130-MPH

Algae Resistance Limited Warranty*/§

25 Years

TRU PROtection® Non-Prorated Limited Warranty* Period

10 Years



TruDefinition® Duration® Shingles Product Specifications

Size	13¼" x 39⅝"
Application Exposure	5⅝"
Shingles per Bundle	Not less than 20
Average Shingle Count per 3 Bundles	64
Average Coverage per 3 Bundles	98.4 sq. ft.

Applicable Standards and Codes

ASTM D3462

ASTM D228

ASTM D3018 (Type 1)

ICC-ES AC438#

ASTM D3161 (Class F Wind Resistance)

ASTM D7158 (Class H Wind Resistance)

ASTM E108/UL 790 (Class A Fire Resistance)

UL 2218 (Class 3 Impact Resistance)⁵

FM 4473 (Class 3 Impact Resistance)⁶

PRI ER 1378E01

* See actual warranty for complete details, limitations and requirements.

† 40-Year Limited Warranty on commercial projects.

‡ Owens Corning testing against competing products with wide, single-layer nailing zones when following manufacturers' installation instructions and nailing in the middle of the allowable nailing zone.

** Tru-Bond® is a proprietary premium weathering-grade asphalt sealant that is blended by Owens Corning Roofing® and Asphalt, LLC.

+ The amount of Triple Layer Protection® may vary on shingle-to-shingle basis.

International Code Council Evaluation Services Acceptance Criteria for Alternative Asphalt Shingles.

^ Excludes non-Owens Corning® roofing products such as flashing, fasteners, pipe boots and wood decking.

1 See Color Disclaimer information on page 3 for additional details.

2 Applies to all areas that recognize Miami-Dade Notice of Acceptance (NOA).

3 Shingles are algae resistant to control the growth of algae and discoloration.

§ Installation must include use of an Owens Corning® Hip & Ridge product. See actual warranty for details.

5 Owens Corning® Bourbon and Midnight Plum shingles include a patent pending design.

6 Qualifying Owens Corning Hip & Ridge Shingles may be required to complete a UL 2218 and/or FM 4473 Class 3 Impact-Resistant Roof System. Given the variability in real storm conditions, a Class Rating on any product class rating does not guarantee resistance to all weather conditions. Owens Corning shingles are not covered under a warranty for hail damage.

7 Homeowners should check with their insurance company to see if they qualify.

SureNail® Technology is not a guarantee of performance in all weather conditions.

For patent information, please visit owenscorning.com/patents.



OWENS CORNING ROOFING AND ASPHALT, LLC

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(Kearny)

Características del producto

Período de garantía*

Garantía limitada de por vida†
(mientras sea propietario de la vivienda)

Garantía limitada de resistencia al viento*

210 km/h (130 mph)

Garantía limitada de resistencia a las algas*/§

25 años

Período no prorrateado de garantía limitada TRU PROtection®

10 años



Especificaciones de las tejas Duration® TruDefinition®

Tamaño	33.65 × 100 cm (13¼ × 39⅝ pulg)
Exposición de aplicación	14.3 cm (5⅝ pulg)
Tejas por paquete	20 como mínimo
Cantidad promedio de tejas por 3 paquetes	64
Cobertura promedio por 3 paquetes	9.14 m² (98.4 pies²)

Normas y códigos pertinentes

ASTM D3462

ASTM D228

ASTM D3018 (Tipo 1)

ICC-ES AC438*

ASTM D3161 (Resistencia al viento, Clase F)

ASTM D7158 (Resistencia al viento Clase H)

ASTM E108/UL 790 (Resistencia al fuego Clase A)

UL 2218 (Resistencia a impactos de clase 3)⁵

FM 4473 (Resistencia a impactos de clase 3)⁶

PRI ER 1378E01

* Consulte la garantía para obtener una lista completa de detalles, limitaciones y requisitos.

† Garantía limitada de 40 años para proyectos comerciales.

‡ Ensayos comparativos de Owens Corning con productos de la competencia con zonas de clavado ancho de una sola capa cuando se siguen las instrucciones de instalación del fabricante y se clava en el medio de la zona de clavado permitida.

** Tru-Bond® es un sellador asfáltico patentado de calidad premium formulado por Owens Corning Roofing® and Asphalt, LLC.

+ La cantidad de Triple Layer Protection® puede variar entre una teja y otra.

Criterios de aceptación de los servicios de evaluación del Consejo Internacional de Códigos para tejas asfálticas alternativas.

^ Se excluyen productos para techos no fabricados por Owens Corning®, como tapajuntas, sujetadores, bases de tubos y estructuras de soporte de madera.

1 Para obtener más información, consulte el Descargo de responsabilidad sobre los colores, en la página 3.

2 Aplicable a todas las zonas que reconocen el Aviso de aceptación (NOA, Notice of Acceptance) del condado de Miami Dade.

3 Las tejas son resistentes a las algas para controlar su desarrollo y la decoloración.

§ La instalación debe incluir el uso de un producto para limatesa y cumbreira de Owens Corning®.

5 Las tejas de Owens Corning® Bourbon y Midnight Plum incluye un diseño con patente pendiente.

6 Es posible que se requiera el uso de tejas aptas para limatesa y cumbreira de Owens Corning para completar un sistema de techo resistente a impactos UL 2218 y/o FM 4473 Clase 3. Dada la variabilidad en las condiciones de tormenta reales, una clasificación de clase en cualquier clasificación de clase de producto no garantiza la resistencia a todas las condiciones climáticas. Las tejas de Owens Corning no cuentan con una garantía por daños de granizo.

7 Los propietarios deben verificar con su aseguradora para saber si califican.

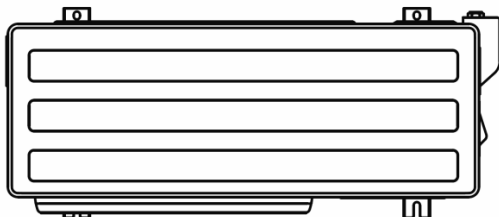
La tecnología SureNail® no es una garantía de desempeño en todos los tipos de condiciones climáticas.

Para información sobre la patente, visite www.owenscorning.com/patents.

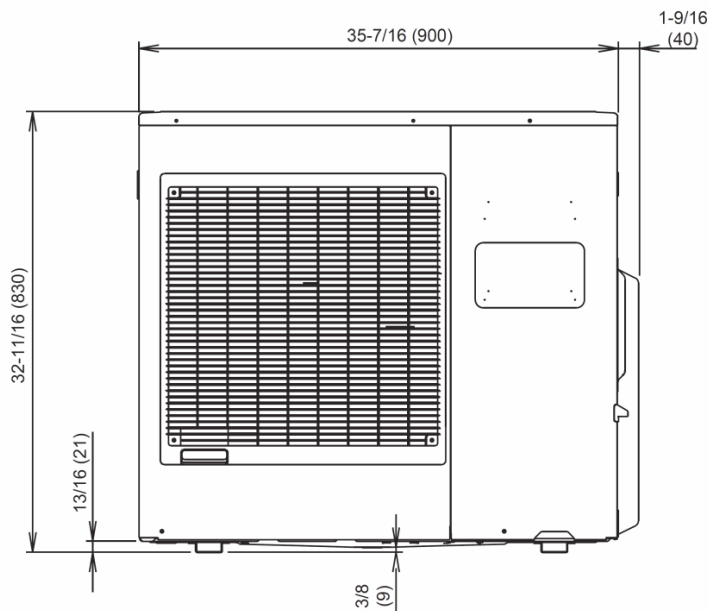
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Dimensions: 36RLXFZ1

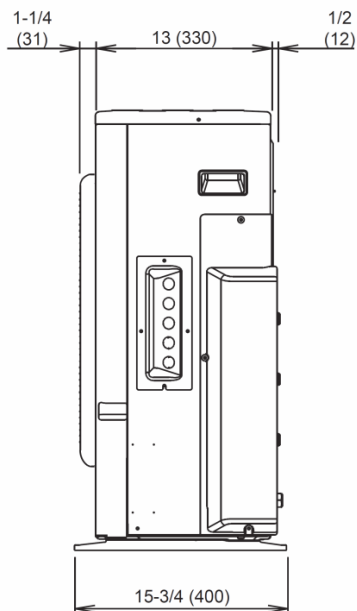
[Unit: in. (mm)]



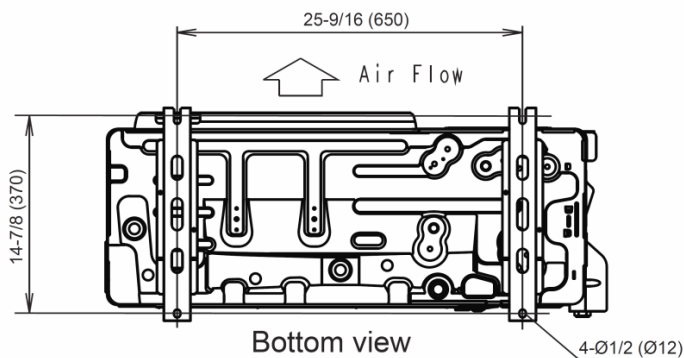
Top view



Front view



Side view



Bottom view

