

Residential Addition for: Thad & Beth Meese

Situated in the State of Ohio, City of Hudson

ISSUED FOR BID & CONSTRUCTION

September 8th, 2020

GENERAL NOTES:

CONTRACTORS:
EACH CONTRACTOR IS TO FAMILIARIZE THEMSELVES WITH CONDITIONS AT THE JOB SITE PRIOR TO THE START OF THEIR WORK. DO NOT SCALE DRAWINGS. USE PLAN DIMENSIONS. IF DISCREPANCIES WITH DRAWINGS ARE DISCOVERED AT ANY TIME BEFORE OR DURING CONSTRUCTION NOTIFY PROJECT DESIGNER OR CONTRACTOR IMMEDIATELY BEFORE PROCEEDING. MAINTAIN ONE (1) COMPLETE SET OF APPROVED CONSTRUCTION DRAWINGS ON THE JOB SITE AT ALL TIMES. ALL WORK TO BE PERFORMED IN A GOOD WORKMANLIKE MANNER, IN ACCORDANCE WITH APPLICABLE CURRENT NATIONAL, STATE AND LOCAL CODES, ORDINANCES AND AUTHORITIES HAVING JURISDICTION OVER THIS PROJECT. CONTRACTORS ARE RESPONSIBLE FOR LOCAL CODE INTERPRETATIONS FOR THEIR TRADE. ALL PRODUCTS AND MATERIALS TO BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. COORDINATE ALL UTILITIES PRIOR TO CONSTRUCTION. DEVIATION FROM THE CONSTRUCTION DOCUMENTS MUST FIRST BE APPROVED BY CONTRACTOR, AND AUTHORIZED THROUGH WRITTEN CHANGE ORDER FORM SUBMITTED BY THE CONTRACTOR. EACH CONTRACTOR IS RESPONSIBLE FOR DAILY CLEAN-UP AND REMOVAL OF DEBRIS FROM THE JOB SITE. ALL CONTRACTORS WILL GUARANTEE ALL MATERIALS AND WORKMANSHIP FOR THE PERIOD OF ONE (1) YEAR.
IT IS UNDERSTOOD THAT THESE DRAWINGS ARE GENERIC WITH RESPECT TO CONSTRUCTION DETAILING, STRUCTURAL DETAILING AND FINISH DETAILING. THE OWNER AND CONTRACTOR ACCEPTS ALL RESULTING DETAILS AND AESTHETICS, SPECIFIED OR UNSPECIFIED, AND UNDER NO CIRCUMSTANCES SHALL THE DESIGNER BE HELD RESPONSIBLE.

TRUSSES:
ALL TRUSSES ARE TO BE DESIGNED BY THE TRUSS MANUFACTURER WITH DETAILED DRAWINGS DESCRIBING TRUSS LAYOUTS AND LOAD CALCULATIONS USED TO DESIGN THE TRUSSES. IT IS THE BUILDER AND/OR OWNER'S RESPONSIBILITY TO SUPPLY ANY/ALL OF THIS INFORMATION IF REQUESTED BY THE BUILDING DEPARTMENT TO ISSUE BUILDING PERMITS. IT IS ALSO THE RESPONSIBILITY OF THE TRUSS MANUFACTURER TO VERIFY, AND IF NECESSARY, ADJUST THE SIZE OF OR ADD ANY BEAM OR HEADER THAT IS DIRECTLY EFFECTED OR REQUIRED TO CARRY THE ROOF LOADS. IN THIS EVENT, THE TRUSS MANUFACTURER SHALL CONTACT FIDEI ARCHITECTURE IN ORDER TO UPDATE THE DRAWINGS.

SOIL BEARING:
FOUNDATIONS SHOWN ON THESE DRAWINGS ARE DESIGNED FOR AN ALLOWABLE SOIL BEARING PRESSURE OF 1,500 PSF. WALLS ARE DESIGNED FOR AN EQUIVALENT FLUID PRESSURE OF 55PCF. IT IS THE RESPONSIBILITY OF THE BUILDER AND/OR OWNER TO DETERMINE THAT THE SOIL IS ADEQUATE TO SUPPORT THIS BUILDING ON THE FOUNDATION AND THE WALLS SHOWN AND ALSO, DETERMINING THAT THE TOTAL AND DIFFERENTIAL SETTLEMENTS OF THE FOUNDATIONS ARE WITHIN THE TOLERABLE LIMITS OF THIS STRUCTURE AND THAT 55PCF IS THE CORRECT WALL LOADINGS. THE BUILDER AND/OR OWNER IS ENCOURAGED TO OBTAIN THE SERVICES OF A SOILS ENGINEERING FIRM TO DETERMINE THE SUITABILITY OF THE FOUNDATIONS AND THE WALLS SHOWN ON THESE DRAWINGS TO SAFELY SUPPORT THE STRUCTURE WITH NO DETRIMENTAL EFFECT TO THE BUILDING.

RADON:
IT IS THE RESPONSIBILITY OF THE BUILDER TO INFORM THE OWNER OR IF THE OWNER IS ACTING AS HIS OR HER OWN CONTRACTOR TO KNOW THAT ALL HOUSES HAVE A POTENTIAL TO HAVE RADON LEVELS WHICH MAY EXCEED THE RECOMMENDED LEVELS ESTABLISHED BY THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY. THE BUILDER AND/OR OWNER SHALL DECIDE WHAT ACTION, IF ANY, SHOULD BE TAKEN CONCERNING RADON. IT IS THE RESPONSIBILITY OF FIDEI ARCHITECTURE TO DETERMINE IF A RADON ABATEMENT SYSTEM IS REQUIRED.

ATTICS:
ALL ENCLOSED ATTICS AND RAFTER SPACES SHALL HAVE CROSS VENTILATION WITH THE NET FREE VENTILATION AREA NOT LESS THAN 1/300 OF THE AREA TO BE VENTILATED. ALL OPENINGS SHALL BE PROTECTED AGAINST THE ENTRANCE OF THE SNOW AND RAIN.

MECHANICALS:
ALL PLUMBING, ELECTRICAL, HEATING AND COOLING SYSTEMS SHALL COMPLY WITH ALL ORDINANCES SET FORTH BY THE LOCAL GOVERNING BUILDINGS AND ZONING DEPARTMENTS. PLUMBING SHALL ALSO COMPLY WITH THE OHIO PLUMBING CODE. ELECTRICAL SHALL ALSO COMPLY WITH THE NATIONAL ELECTRIC CODE AND THE OHIO BASIC BUILDING CODE.

FIRE STOPPING:
SHALL BE PROVIDED IN THE FOLLOWING LOCATIONS: CONCEALED SPACES OF STUD WALLS AND PARTITIONS A THE CEILING AND FLOOR, OR ROOF LEVELS. AT ALL INTERCONNECTIONS BETWEEN VERTICAL AND HORIZONTAL SPACES SUCH AS OCCURS AT SOFFITS OVER CABINETS, DROP CEILINGS, ETC. ALSO AROUND VENTS, PIPES, AND CHIMNEYS AT CEILING AND FLOOR LEVELS WITH NON COMBUSTIBLE MATERIALS.

INSULATION:
INSULATION SHALL BE INSTALLED AND ALSO COMPLY WITH ALL MINIMUM ORDINANCES SET FORTH BY THE LOCAL GOVERNING BUILDING AND ZONING DEPARTMENTS. REFER TO THE TYPICAL WALL SECTION FOR R-VALUES AND LOCATIONS.

ABBREVIATIONS

A.F.F.	ABOVE FINISH FLOOR	F.R.P.	FIBERGLASS REINFORCED PLASTIC	P-LAM	PLASTIC LAMINATE
ADJ	ADJUSTABLE	FRM G	FRAMING	POLY	POLY URETHANE
BD	BOARD	G.C.	GENERAL CONTRACTOR	PTD	PAINTED
BLK'G	BLOCKING	GYP	GYPSPUM	RAD	RADIUS
BR'G	BEARING	HDWD	HARDWOOD	R.A.	RETURN AIR
B.Z.A.	BOARD OF ZONING APPEALS	HDWR	HARDWARE	S.A.	SUPPLY AIR
CLG	CEILING	H.D.P.E.	HIGH DENSITY POLYETHYLENE	STL	STEEL
DEG	DEGREE(S)	INSUL	INSULATION	SUSP'D	SUSPENDED
DIA	DIAMETER	MAX	MAXIMUM	TYP	TYPICAL
DRWG	DRAWING	MECH	MECHANICAL	T.O.	TOP OF
EA	EACH	MIN	MINIMUM	T.O.S.	TOP OF SLAB
EQUIP	EQUIPMENT	MTL	METAL	T.O.W.	TOP OF WALL
EX'G	EXISTING	O.C.	ON CENTER	VERT	VERTICAL
FIN	FINISH	P.A.	PUBLIC ADDRESS	w/	WITH
FG	FIBERGLASS	PLYWD	PLYWOOD	WD.	WOOD

LEGEND & SYMBOLS KEY

	GRAVEL FILL		ELEVATION DATUM
	EARTH		GROUND LEVEL + 0'-0" A.F.F.
	GROUT OR STUCCO		ROOM NAME
	COUNTER TOP / DESK TOP		ROOM NUMBER
	DIMENSION LUMBER		DOOR WIDTH
	RIGID INSULATION		DOOR HEIGHT
	BATT INSULATION		WINDOW NUMBER
	MASONRY OR STONE		PARTITION TYPE
	CONCRETE MASONRY UNIT (C.M.U.)		EXTERIOR ELEVATION
	BRICK MASONRY UNIT		DETAIL SECTION
	PROPERTY LINE		BUILDING SECTION
	CENTER LINE		
	RIDGE LINE		

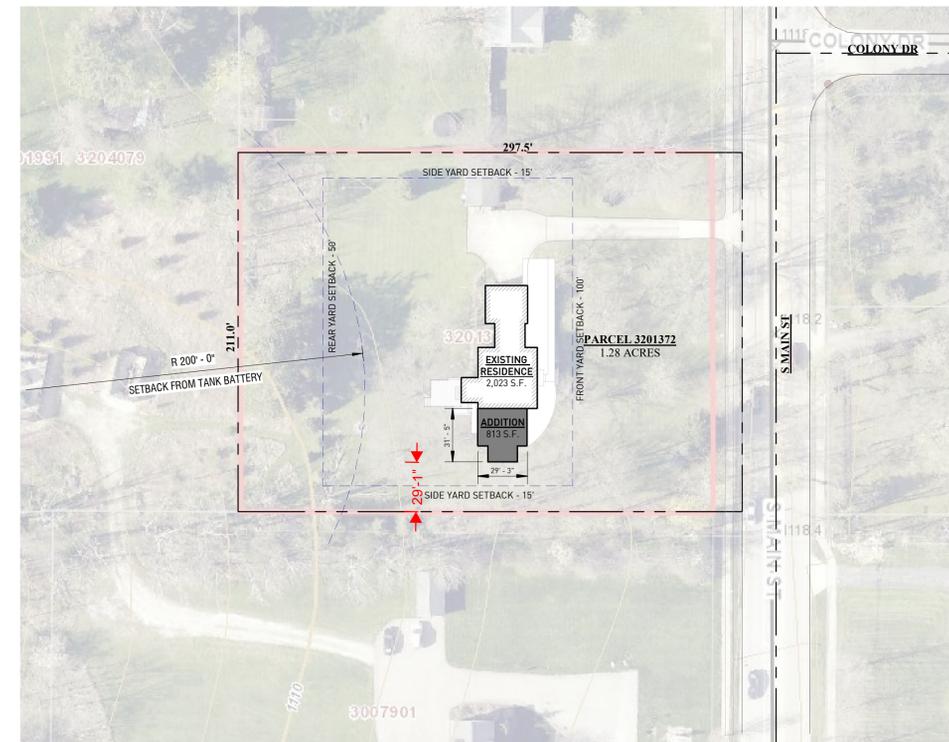


APPLICATION INFORMATION					
PROJECT LOCATION:	HUDSON, OHIO 44236				
TYPE OF IMPROVEMENT:	NEW BUILD	ADDITION	ALTERATION	CHANGE OF USE	OTHER
TYPE OF USE:	SINGLE FAMILY	DUPLEX	MULTI-FAMILY	# UNITS	COMMERCIAL
	INDUSTRIAL	DECK	POOL	GARAGE	SHED
USE GROUP:	A-1 A-2 A-3 A-4 A-5 B E F-1 F-2 H-1 H-2 H-3 H-4 H-5				
TYPE OF CONSTRUCTION:	I-A I-B II-A II-B III-A III-B IV V-A V-B				
PROJECT OWNER:	Thad & Beth Meese ADDRESS: 266 S MAIN ST - HUDSON, OH 44236 EMAIL: thadmeese@gmail.com				
PROJECT CONTRACTOR:	ALAIR HOMES ADDRESS: 10 WEST STREETSBORO ST., SUITE 201 HUDSON, OH 44236 EMAIL: terry.carter@alairhomes.com				
PROJECT DESIGNER:	fidei architecture ADDRESS: 2850B W MARKET ST FAIRLAWN, OH 44333 EMAIL: mbenedict@fideiarch.com				

DRAWING INDEX

SHEET No. DESCRIPTION

t1.0	TITLE SHEET
a1.1	ELEVATIONS
a1.2	ELEVATIONS
a2.1	FOUNDATION PLAN
a2.3	MAIN LEVEL PLAN
a2.5	SECOND LEVEL PLAN
a2.7	ROOF PLAN & FINISH PLAN
a3.1	SECTIONS
a3.2	SECTIONS



SCALE:
1" = 50'-0"

SITE PLAN

S.F. AREA TABULATION	
AREA	SQ. FT.
MAIN LEVEL LIVABLE (Addition):	813 s.f.
SECOND LEVEL LIVABLE (Addition):	38 s.f.
TOTAL LIVABLE (with addition):	2,874 s.f.
GARAGE:	0 s.f.
PATIO(S) & PORCHES:	140 s.f.
LIVABLE	
NON LIV.	

LIVABLE AREA:
CALCULATIONS ARE CALCULATED FROM THE OUTSIDE FACE OF EXTERIOR WALLS. STAIRWELLS AND FIREPLACE AREAS ARE INCLUDED.

NON-LIVABLE AREA:
GARAGES, VERANDA, DECKS, PATIOS, AND EXTERIOR PORCH AREAS

PHONE: 13301 267-3132
2850B WEST MARKET ST
FAIRLAWN, OHIO 44333
mbenedict@fideiarch.com

fidei
architecture

fidei

This drawing and design are the property of Fidei Architecture LLC. This drawing is issued to you subject to the condition that you shall not reproduce, copy, reuse, or otherwise dispose of any part of this drawing without the prior written consent of Fidei Architecture LLC. Any information for the making of drawings, prints or reproductions, or parts thereof, except where otherwise specifically provided for by contract agreement with Fidei Architecture LLC.

ALAIR
CUSTOM HOMES - REMODELING
COMMERCIAL
440-893-9600
10 WEST STREETSBORO ST., SUITE 201
HUDSON, OH 44236
ALAIR@ALAIRHOMES.COM

266 S Main St
Hudson, OH
44236

New Residence for:
ALAIR HOMES - MEESE ADDITION

No. Description Date
1 BID & CONST. 9/8/2020

TITLE SHEET

RELEASED FOR CONSTRUCTION
NOT RELEASED FOR CONSTRUCTION

SHEET No.
t1.0

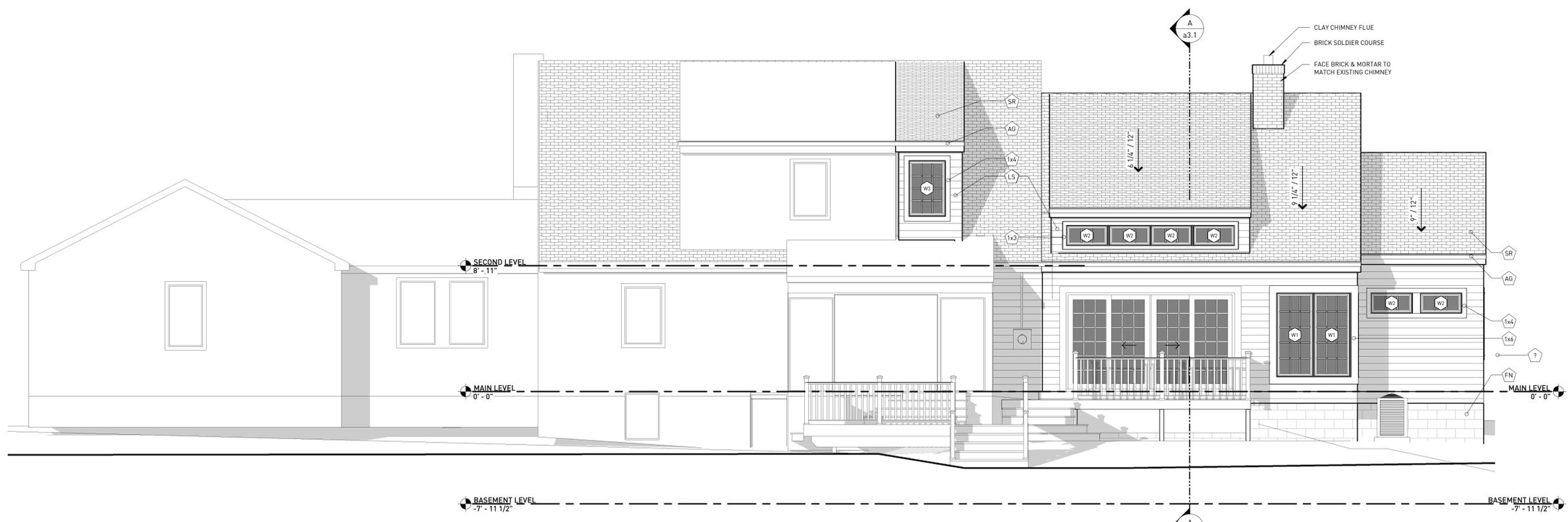


ELEVATION NOTES

- STUCCO SHALL BE INSTALLED WITH MINIMUM .019" (No. 26 GALVANIZED SHEET GAGE) CORROSION-RESISTANT WEEP SCREED OR PLASTIC WEEP CREED WITH MINIMUM BELOW THE FOUNDATION PLATE LINE ON THE EXTERIOR STUD WALLS IN ACCORDANCE WITH ASTM C 926. THE WEEP SCREED SHALL BE PLACED A MINIMUM OF 4" ABOVE VERTICAL ATTACHMENT FLANGE OF 3-1/2" PROVIDED AT OR THE EARTH OR 2" ABOVE PAVED AREAS AND SHALL BE OF THE TYPE THAT WILL BE ALLOW TRAPPED WATER TO DRAIN TO THE EXTERIOR OF THE BUILDING. THE WEATHER-RESISTANT BARRIER SHALL LAP THE ATTACHMENT FLANGE. THE EXTERIOR LATH SHALL COVER AND TERMINATE ON THE ATTACHMENT FLANGE OF THE WEEP SCREED.
- ELEVATIONS SHOWN GRAPHICALLY INDICATE BASEMENT FOUNDATION CONDITIONS.
- ALL ROOF SADDLES TO BE PLYWOOD SHEATHED W/ BUILDING PAPER AND SHINGLES.
- CONTINUOUS RIDGE VENTS TO BE BAFFLED TO PREVENT BACK FLOW
- ALL EXTERIOR WOOD TO BE PRIMED BEFORE INSTALLATION
- ALL WINDOW GRILLS TO MATCH ELEVATIONS
- CONTRACTOR TO PROVIDE PROPER FLASHING AT ALL EXTERIOR DOORS & WINDOWS
- PROVIDE ROOF SADDLE TO DRAIN AWAY FROM BACK SIDE OF CHIMNEY - PROVIDE ALL PROPER FLASHING
- ① DENOTES GLAZING TO BE TEMPERED

EXTERIOR FINISH LEGEND

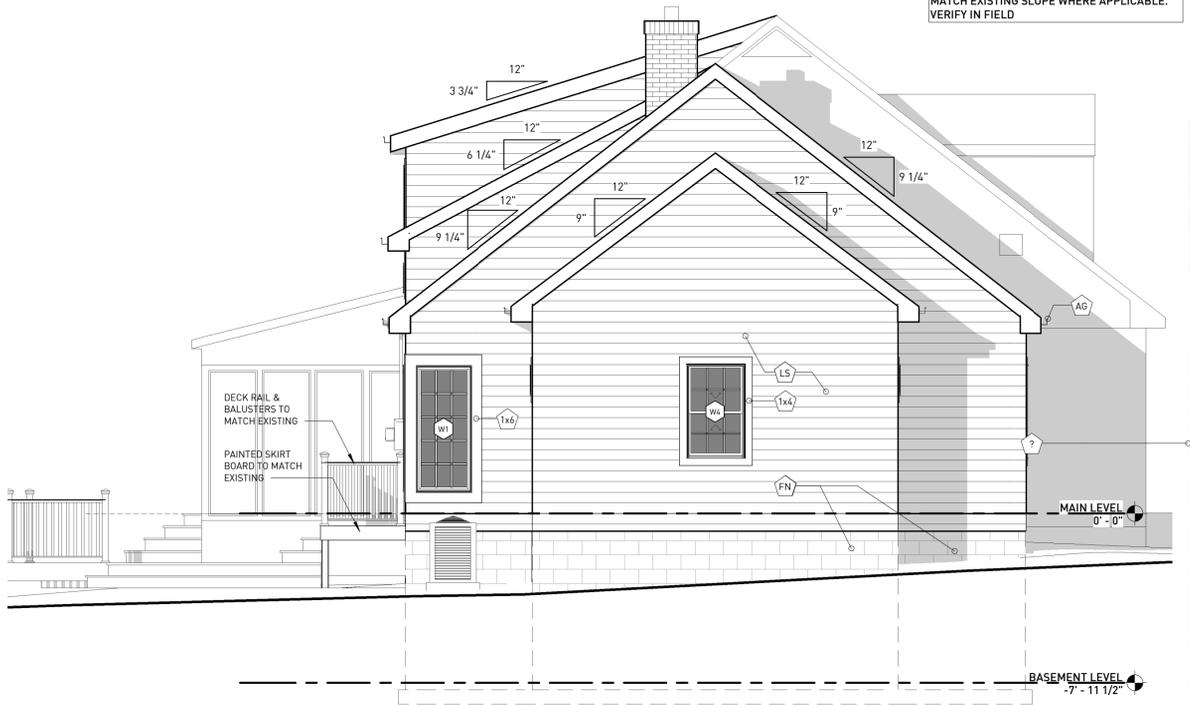
NO.	DESCRIPTION	HATCH PATTERN	NO.	DESCRIPTION
SR	SHINGLE ROOFING: BASIS OF DESIGN, GAF SLATELINE (ANTIQUE SLATE) 30 YEAR ARCHITECTURAL ASPHALT SHINGLES ON 15# FELT W/ ICE AND WATER SHIELD AS REQUIRED. ASSEMBLE TO BE INSTALLED PER MFC REQUIREMENTS		AG	ALUMINUM GUTTERS: AND DOWNSPOUTS TO MATCH FASCIA AND SOFFIT COLOR
FN	CMU FOUNDATION: SEE SECTIONS FOR DETAILS PAINT TO MATCH EXISTING FOUNDATIONS		RV	RIDGE VENT: CONTINUOUS RIDGE VENTS TO BE BAFFLED TO PREVENT BACKFLOW
LS	LAP SIDING: FIBER CEMENT LAP SIDING COLOR: MATCH EXISTING EXPOSURE & STYLE TO BE DETERMINED INSTALL WITH FIELD-CUT MITERED CORNERS OR MITRED CORNER CAPS		X	1 X COMPOSITE BD. OR EQUAL (REF ELEV. FOR SIZE) COLOR: WHITE
			TB	COMPOSITE TRIM BOARD SHEETS (5/8" X 48" X 96") COLOR: WHITE



NOTE: ROOF SLOPES ARE APPROXIMATE. MATCH EXISTING SLOPE WHERE APPLICABLE. VERIFY IN FIELD.

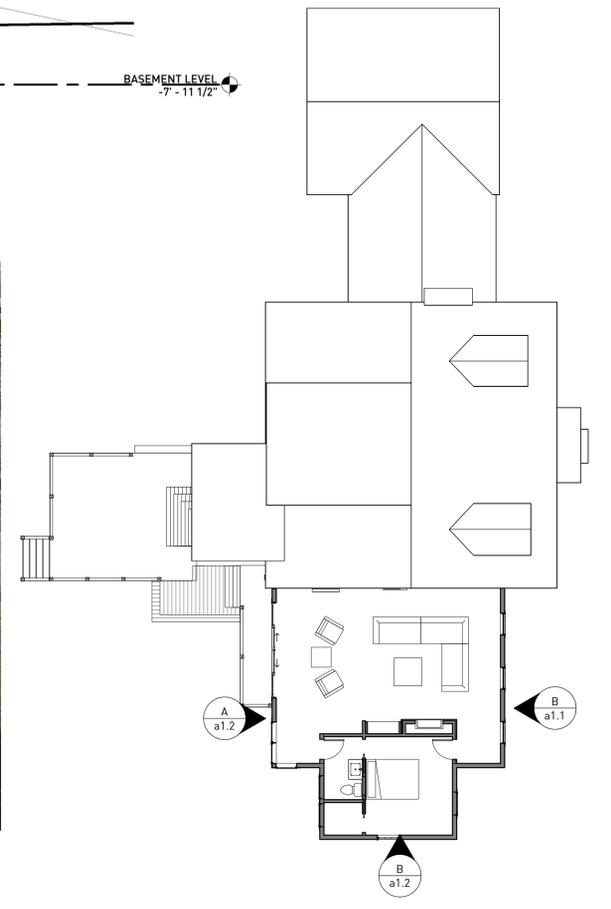
SCALE: 1/4" = 1'-0"

WEST ELEVATION



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

SOUTH ELEVATION



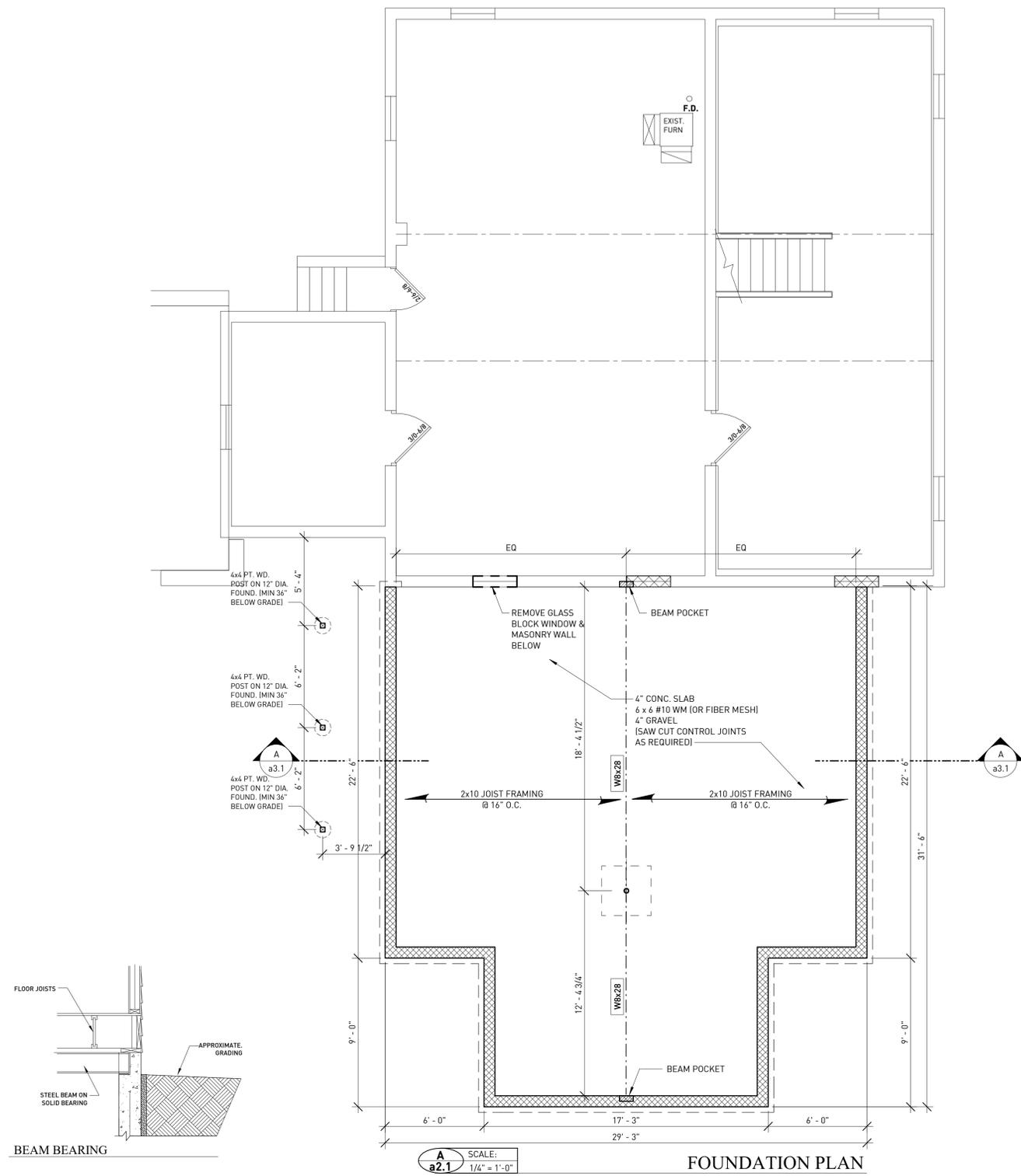
KEY PLAN

WINDOW SCHEDULE										
TYPE	FIXED	NOM. HEIGHT	NOM. WIDTH	BOOK CODE	LEVEL	SILL HT.	HEAD HT.	HEADER	TEMP. GLASS	COMMENTS
W1	FIXED	6'-0"	2'-8"		MAIN LEVEL	1'-0"	7'-0"			
W1	FIXED	6'-0"	2'-8"		MAIN LEVEL	1'-1"	7'-0"			
W1	FIXED	6'-0"	2'-8"		MAIN LEVEL	1'-1"	7'-0"			
W2	FIXED	1'-6"	3'-0"		MAIN LEVEL	10'-4"	11'-10"			
W2	FIXED	1'-6"	3'-0"		MAIN LEVEL	10'-4"	11'-10"			
W2	FIXED	1'-6"	3'-0"		MAIN LEVEL	10'-4"	11'-10"			
W2	FIXED	1'-6"	3'-0"		MAIN LEVEL	10'-4"	11'-10"			
W2	FIXED	1'-6"	3'-0"		MAIN LEVEL	10'-4"	11'-10"			
W2	FIXED	1'-6"	3'-0"		MAIN LEVEL	5'-7"	7'-0"			
W2	FIXED	1'-6"	3'-0"		MAIN LEVEL	5'-7"	7'-0"			
W2	FIXED	1'-6"	3'-0"		MAIN LEVEL	5'-7"	7'-0"			
W2	FIXED	1'-6"	3'-0"		MAIN LEVEL	5'-7"	7'-0"			
W3	CASEMENT	4'-0"	2'-8"		SECOND LEVEL	3'-6"	7'-6"			
W4	DOUBLE HUNG	4'-5"	2'-9"		MAIN LEVEL	2'-7"	7'-0"			
W4	DOUBLE HUNG	4'-5"	2'-9"		MAIN LEVEL	2'-7"	7'-0"			
W4	DOUBLE HUNG	4'-5"	2'-9"		MAIN LEVEL	2'-7"	7'-0"			
W4	DOUBLE HUNG	4'-5"	2'-9"		MAIN LEVEL	2'-7"	7'-0"			

- ### ELEVATION NOTES
- STUCCO SHALL BE INSTALLED WITH MINIMUM .019" (No.26 GALVANIZED SHEET GAGE) CORROSION-RESISTANT WEEP SCREED OR PLASTIC WEEP CREED WITH MINIMUM BELOW THE FOUNDATION PLATE LINE ON THE EXTERIOR STUD WALLS IN ACCORDANCE WITH ASTM C 926. THE WEEP SCREED SHALL BE PLACED A MINIMUM OF 4" ABOVE VERTICAL ATTACHMENT FLANGE OF 3-1/2" PROVIDED AT OR THE EARTH OR 2" ABOVE PAVED AREAS AND SHALL BE OF THE TYPE THAT WILL BE ALLOW TRAPPED WATER TO DRAIN TO THE EXTERIOR OF THE BUILDING. THE WEATHER-RESISTANT BARRIER SHALL LAP THE ATTACHMENT FLANGE. THE EXTERIOR LATH SHALL COVER AND TERMINATE ON THE ATTACHMENT FLANGE OF THE WEEP SCREED.
 - ELEVATIONS SHOWN GRAPHICALLY INDICATE BASEMENT FOUNDATION CONDITIONS.
 - ALL ROOF SADDLES TO BE PLYWOOD SHEATHED W/ BUILDING PAPER AND SHINGLES.
 - CONTINUOUS RIDGE VENTS TO BE BAFFLED TO PREVENT BACK FLOW
 - ALL EXTERIOR WOOD TO BE PRIMED BEFORE INSTALLATION
 - ALL WINDOW GRILLS TO MATCH ELEVATIONS
 - CONTRACTOR TO PROVIDE PROPER FLASHING AT ALL EXTERIOR DOORS & WINDOWS
 - PROVIDE ROOF SADDLE TO DRAIN AWAY FROM BACK SIDE OF CHIMNEY - PROVIDE ALL PROPER FLASHING
 - Ⓛ DENOTES GLAZING TO BE TEMPERED

EXTERIOR FINISH LEGEND

NO.	DESCRIPTION	HATCH PATTERN	NO.	DESCRIPTION
SR	SHINGLE ROOFING: BASIS OF DESIGN, GAF SLATELINE (ANTIQUE SLATE) 30 YEAR ARCHITECTURAL ASPHALT SHINGLES ON 15# FELT W/ ICE AND WATER SHIELD AS REQUIRED. ASSEMBLE TO BE INSTALLED PER MFC REQUIREMENTS	[Hatch Pattern]	AG	ALUMINUM GUTTERS: AND DOWNSPOUTS TO MATCH FASCIA AND SOFFIT COLOR
FN	CMU FOUNDATION: SEE SECTIONS FOR DETAILS PAINT TO MATCH EXISTING FOUNDATIONS	[Hatch Pattern]	RV	RIDGE VENT: CONTINUOUS RIDGE VENTS TO BE BAFFLED TO PREVENT BACKFLOW
LS	LAP SIDING: FIBER CEMENT LAP SIDING COLOR: MATCH EXISTING EXPOSURE & STYLE TO BE DETERMINED INSTALL WITH FIELD-CUT MITERED CORNERS OR MITRED CORNER CAPS	[Hatch Pattern]	1X	1 X COMPOSITE BD. OR EQUAL (REF ELEV. FOR SIZE) COLOR: WHITE
			TB	COMPOSITE TRIM BOARD SHEETS (5/8" X 48" X 96") COLOR: WHITE



FOUNDATION NOTES

- DO NOT SCALE DRAWINGS. IF ANY DISCREPANCIES ARISE PLEASE CONTACT THE PROJECT MANAGER AND DESIGNER.
- CONCRETE AND MASONRY FOUNDATION WALLS TO COMPLY W/ SECT 404 IN THE RCD.
- CONCRETE TO BE A MIN. 3000 PSI COMPRESSIVE STRENGTH.
- FOOTING DESIGN ASSUMES A SOIL-BEARING CAPACITY OF 2000 PSF.
- ALL FOOTINGS SHALL BEAR ON UNDISTURBED SOIL (36" BELOW FINISH GRADE (MIN.))
- REFERENCE FLOOR PLANS FOR PLUMBING LOCATIONS

STRUCTURAL NOTES

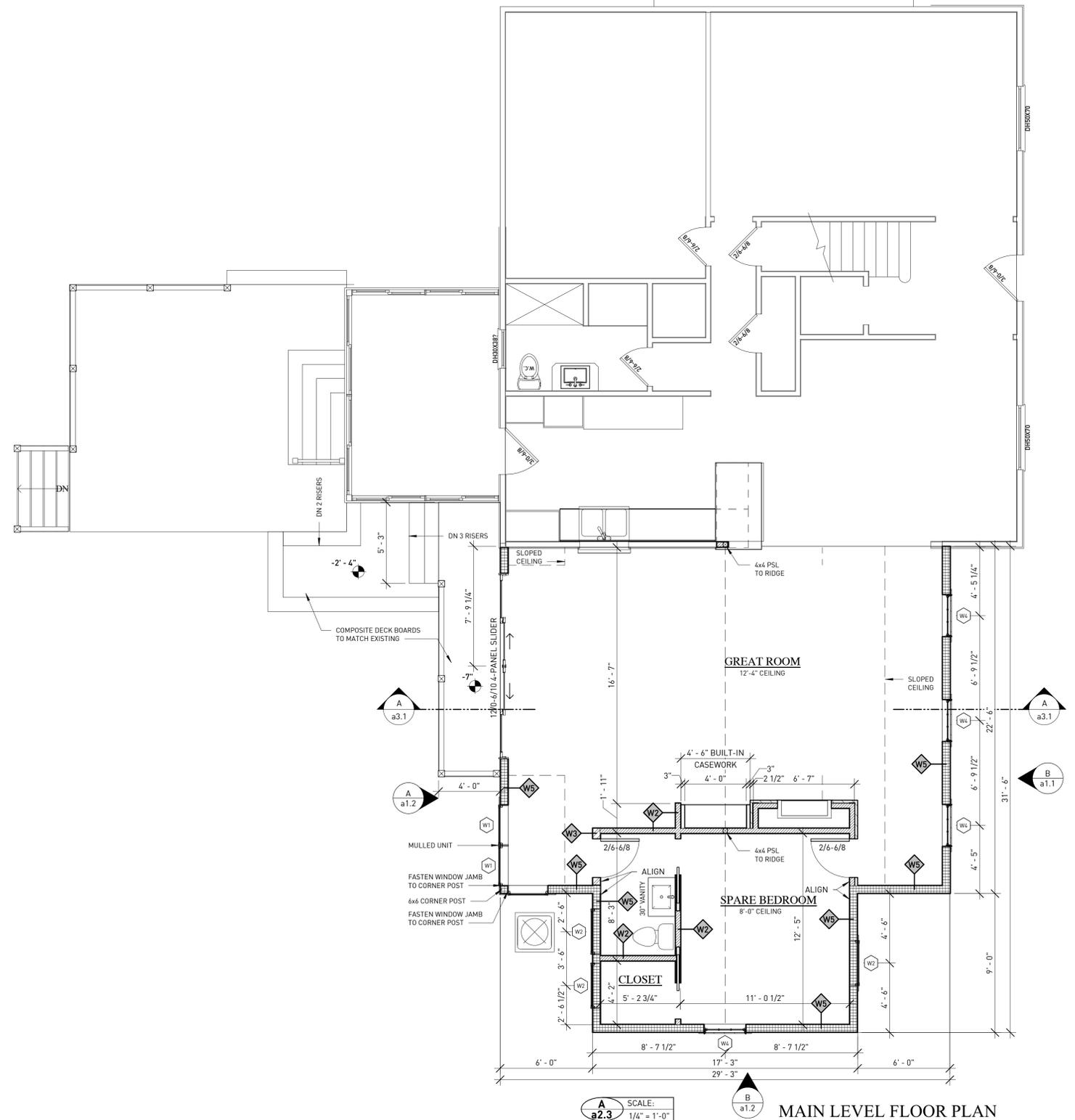
- THESE REQUIREMENTS MAY BE SUPERCEDED BY MORE STRINGENT INFORMATION CONTAINED WITHIN THE DRAWINGS. THE MORE STRINGENT SHALL BE FOLLOWED.
- SOIL CONDITIONS SHALL CONFORM TO THE FOLLOWING CONDITIONS:
 - BEARING CAPACITY - 1,500 PSF MAX
 - WATER TABLE - SHALL BE BELOW BOTTOM OF LOWEST FLOOR LINE OF STRUCTURE WHEN WATER TABLE FOUND ABOVE. NOTIFY ENGINEER OF RECORD IMMEDIATELY.
- UNLESS OTHERWISE NOTED, MINIMUM CONCRETE FOOTING WIDTHS SHALL BE:
 - 1-STORY, NO BRICK VENEER - 16 IN.
 - 2-STORY, NO BRICK VENEER - 18 IN.
 - 1-STORY, WITH BRICK VENEER - 17 IN.
 - 2-STORY, WITH BRICK VENEER - 21 IN.
- FREE DRAINING GRANULAR BACKFILL SHALL BE USED AGAINST FOUNDATION WALLS. ALL BACKFILL SHALL BE FREE OF VEGETATION AND FOREIGN MATERIAL SUCH AS ORGANIC MATERIALS, DEBRIS, PIECES OF DEMOLISHED CONCRETE, OR ANY OTHER HARD AND/OR POINTED OBJECTS SPECIFICALLY ROCKS LARGER THAN FOUR INCHES IN DIAMETER FOR WALLS WITH UNBALANCED BACKFILL GREATER THAN 4 FEET. BRACING IS REQUIRED TO PREVENT DAMAGE BY THE BACKFILL. THE MINIMUM HEIGHT OF BACKFILL ABOVE THE FOOTING SHALL BE 4-INCHES ABOVE THE FOOTING FOR A MINIMUM WIDTH OF 12-INCHES BEYOND THE FOOTING EDGE. ALL DRAIN TILES SHALL SIT ON TOP OF A MINIMUM OF 2-INCHES OF WASHED GRAVEL AND BE COVERED BY NOT LESS THAN 4-INCHES OF THE SAME MATERIAL.
- FASTENERS FOR PRESSURE TREATED OR FIRE-RETARDANT WOOD SHALL BE HOT-DIPPED GALVANIZED STEEL, STAINLESS STEEL, OR COPPER
- ALL WALL SILL PLATES BEARING DIRECTLY ON FOUNDATION WALLS SHALL BE ANCHORED WITH 1/2" DIAMETER ANCHOR BOLTS OR APPROVED GALVANIZED STEEL ANCHORS INTO THE WALL A MINIMUM OF 7-INCHES OF EMBEDMENT. MINIMUM TWO ANCHORS PER SECTION OF PLATE. MAXIMUM SPACING OF ANCHORS IS 4'-0". ANCHORS SHALL BE PLACED WITHIN 12-INCHES FROM EACH END OF EACH PLATE.
- PLYWOOD SUBFLOORS SHALL BE GLUED AND NAILED TO THE FLOOR JOISTS WITH APA APPROVED ELASTOMERIC STRUCTURAL ADHESIVE AND BE COMMON NAILS SPACED AT 4-INCHES ON-CENTER AT PANEL EDGES AND 12-INCHES ON-CENTER AT INTERMEDIATE SUPPORTS.
- ALL REINFORCING STEEL (REBAR OR BARI) SHALL CONFORM TO ASTM A-615, GRADE 60, (60,000 psi)
- MAXIMUM SLUMP OF 5-INCHES
- ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH ACI 318-05

STRUCTURAL LEGEND

SYM.	DESCRIPTION	REMARKS
F1	3/8" DIA. SCHED 40 ADJ. STEEL COLUMN ON 2'-0" X 2'-0" X 1'-0" CONC. PAD W/ (3) #4 EA. WAY	
F2	3/8" DIA. SCHED 40 ADJ. STEEL COLUMN ON 3'-0" X 3'-0" X 1'-0" CONC. PAD W/ (4) #4 EA. WAY	
F3	3/8" DIA. SCHED 40 ADJ. STEEL COLUMN ON 3'-6" X 3'-6" X 1'-0" CONC. PAD W/ (4) #4 EA. WAY	
F4	3/8" DIA. SCHED 40 ADJ. STEEL COLUMN ON 2'-6" X 2'-6" X 1'-0" CONC. PAD W/ (3) #4 EA. WAY	
B-1	REF. FLOOR PLANS	
B-2	REF. FLOOR PLANS	
B-3	W 8X24 STEEL BEAM	

STRUCTURAL NOTES

- STRUCTURAL STEEL WIDE FLANGE SHAPES TO BE ASTM A992
- STRUCTURAL STEEL CHANNELS, PLATES, AND ANGLES TO BE ASTM A36
- PIPE: STRUCTURAL GRACE
- TUBE: ASTM A500
- ALL H.L.S. TO BE 1/8" DIA. (U.N.O)
- ALL WELDS TO BE E70XX
- PAINT: 1 1/2 STD. GRAY PRIMER



MAIN LEVEL FLOOR PLAN

S.F. AREA TABULATION	
AREA	SQ. FT.
MAIN LEVEL LIVABLE [Addition]:	813 s.f.
SECOND LEVEL LIVABLE [Addition]:	38 s.f.
TOTAL LIVABLE [with addition]:	2,874 s.f.
GARAGE:	0 s.f.
PATIO(S) & PORCHES:	140 s.f.
LIVABLE	
NON LIV.	
LIVABLE AREA: CALCULATIONS ARE CALCULATED FROM THE OUTSIDE FACE OF EXTERIOR WALLS. STAIRWELLS AND FIREPLACE AREAS ARE INCLUDED.	
NON-LIVABLE AREA: GARAGES, VERANDA, DECKS, PATIOS, AND EXTERIOR PORCH AREAS	

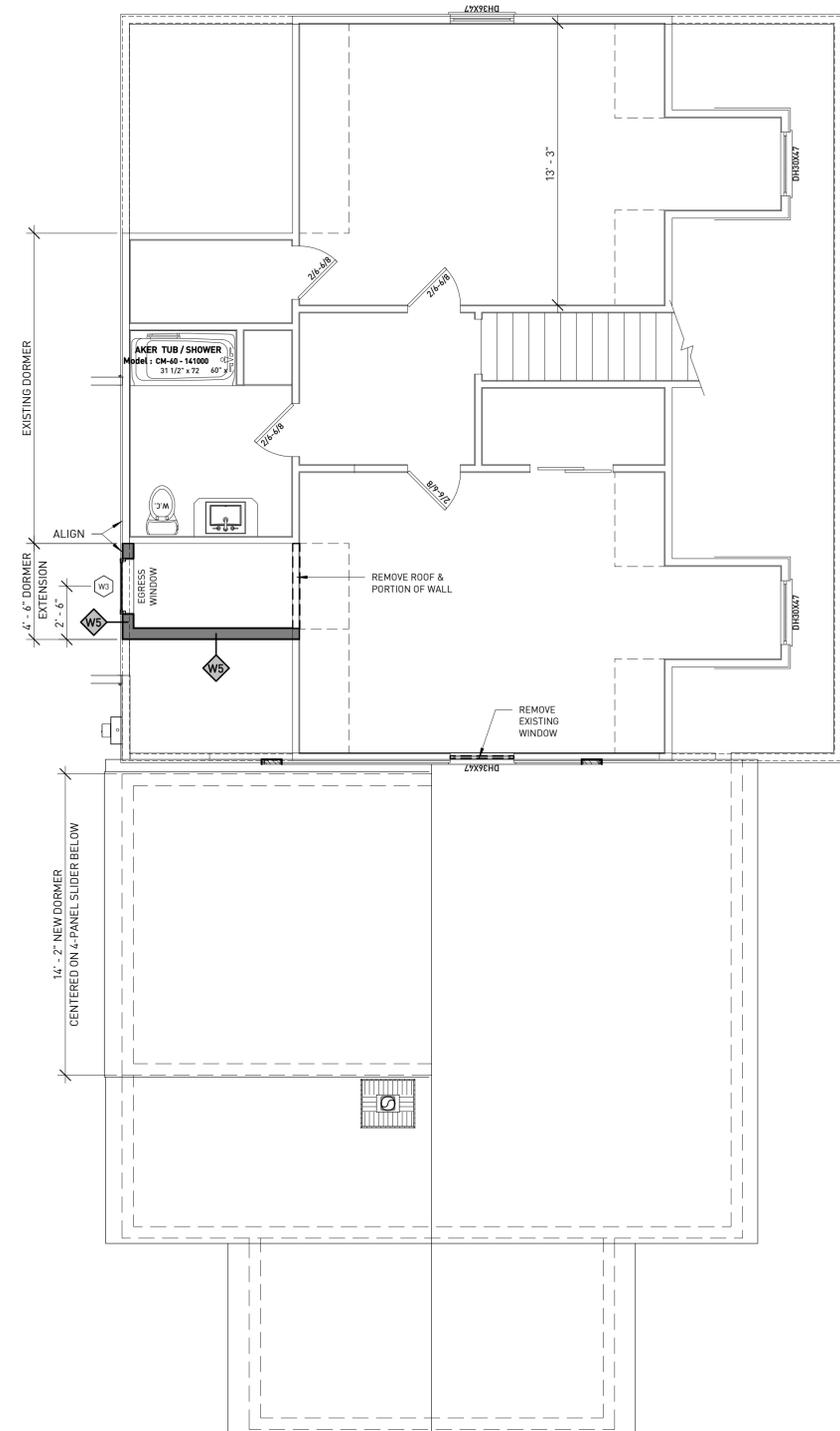
FLOOR PLAN NOTES

- GARAGE SPACE SHALL BE SEPARATED FROM LIVING AREA & ATTIC BY 1/2" GYPSUM APPLIED TO THE GARAGE SIDE. GARAGES BENEATH HABITABLE ROOMS SHALL BE SEPARATED FROM ROOMS ABOVE BY 5/8" TYPE X GYPSUM (COMPLY W/ RCO R309.2)
- PROVIDE BATHROOM EXHAUST FANS WITH A MINIMUM VENTILATION RATE OF 50 CFM. EXHAUST FANS TO BE VENTED DIRECTLY TO THE OUTSIDE (COMPLY W/ RCO R303.3).
- PROVIDE TEMPERED GLASS IN ALL SPECIFIC HAZARDOUS LOCATIONS SPECIFIED IN SECT. R308.4 IN THE RCO.
- INDEPENDENT METAL DRYER VENT SYSTEM W/ DAMPER TO BE INSTALLED. SYSTEM TO VENT MOISTURE DIRECTLY OUTDOORS (COMPLY W/ RCO M1301.1).
- ALL SLEEPING ROOMS MUST CONTAIN AN OPERABLE WINDOW OR DOOR WHICH WILL PROVIDE A MEANS OF EMERGENCY EGRESS. W/ A MIN. 5.7 S.F. CLEAR OPENING (5 S.F. AT GRADE FLOOR) (24" MIN. CLEAR HGT. / 20" MIN. CLEAR WIDTH) (COMPLY W/ RCO R310).
- FUEL-BURNING EQUIPMENT SHALL BE PROVIDED W/ A SUPPLY OF AIR FOR FUEL COMBUSTION. DRAFT HOOD DILUTION, AND VENTILATION OF THE SPACE IN WHICH THE EQUIPMENT IS INSTALLED (COMPLY W/ RCO).
- ENCLOSED ACCESSIBLE SPACE UNDER STAIRS SHALL HAVE WALLS AND SOFFITS PROTECTED ON THE ENCLOSED SIDE WITH 1/2" DRYWALL. (COMPLY W/ RCO R311.2.2)
- MINIMUM HEADROOM @ STAIRS SHALL BE 4'-8" MEASURED VERTICALLY FROM THE TREAD NOSING OR FROM THE FLOOR SURFACE OR LANDING PLATFORM. (COMPLY W/ RCO R311.5.2)
- HANDRAILS SHALL BE PROVIDED ON AT LEAST ONE SIDE OF STAIRS WITH 4 OR MORE RISERS. HANDRAILS WILL BE LOCATED 34" TO 38" MEASURED VERTICALLY FROM TREAD NOSING. HAND GRIP CROSS SECTION DIMENSION SHALL NOT EXCEED 2 1/4". (COMPLY W/ RCO R311)
- GUARDRAILS (MIN. 36" HIGH) SHALL BE PROVIDED ON PORCHES, BALCONIES AND RAISED FLOORS MORE THAN 30" ABOVE FLOOR OR GRADE. OPEN STAIRS SHALL HAVE GUARDRAILS (MIN. 36" HIGH) GUARDRAILS SHALL HAVE INTERMEDIATE RAILS OR ORNAMENTAL CLOSURES WHICH DO NOT ALLOW PASSAGE OF A SPHERE 4 INCHES OR MORE IN DIAMETER. (COMPLY W/ RCO R312).
- PROVIDE PROPER FIREPLACE CLEARANCES AS SPECIFIED IN SECT. R1001.15, R1003.12 AND R1003.13 IN THE RCO.
- LIGHT FIXTURES IN CLOSETS (INCANDESCENT AND FLUORESCENT) SHALL BE ENCLOSED (COMPLY W/ RCO).
- PROVIDE PROPER THICKNESS AND SPANS OF SHEATHING FOR ROOFS AND SUBFLOORS (COMPLY W/ RCO R503).
- ROOF VENTS TO MEET 1:150 VENT AREA RATIO (COMPLY W/ RCO R806).
- AN ATTIC ACCESS (22" x 30" MIN.) SHALL BE PROVIDED TO ANY ATTIC HAVING 30" OF CLEAR HEIGHT (COMPLY W/ RCO R807).
- PROVIDE MINIMUM (2) 2X10'S W/ 1/2" PLYWOOD FLITCH PLATE AT ALL EXTERIOR WALL OPENINGS AND INTERIOR BEARING WALL OPENINGS UNLESS OTHERWISE NOTED.
- PROVIDE MINIMUM OF (3) 2X4'S AT EACH END OF ALL BEAMS AND GIRDER TRUSSES UNLESS OTHERWISE NOTED. ALL SUCH CONCENTRATED LOADS SHALL BE TRANSFERRED TO FOUNDATION VIA BEAMS, POST AND / OR SOLID BLOCKING.



WALL TYPE LEGEND

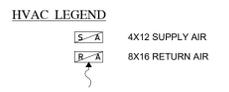
NO.	WALL HATCH	WALL TYPE DESCRIPTION
1	[Hatch]	INTERIOR 2X4 WALL : 1/2" GYP. BOARD ON BOTH SIDES OF 2X4 WD. STUDS @ 16" O.C. W/ R-13 SOUND INSULATION TYPE 1.1. GYP. BD ON ONE SIDE ONLY
2	[Hatch]	INTERIOR 2X4 WALL : 1/2" GYP. BOARD ON BOTH SIDES OF 2X4 WD. STUDS @ 16" O.C.
3	[Hatch]	INTERIOR 2X6 WALL : 1/2" GYP. BOARD ON BOTH SIDES OF 2X4 WD. STUDS @ 16" O.C. W/ R-13 SOUND INSULATION TYPE 2.1. GYP. BD ON ONE SIDE ONLY
4	[Hatch]	EXTERIOR 2X4 WALL : 3/8" OSB BOARD ON EXTERIOR SIDE OF 2X4 WD. STUDS @ 16" O.C. W/ 1/2" GYP. BOARD ON INTERIOR SIDE W/ R-15 INSULATION
5	[Hatch]	EXTERIOR 2X6 WALL : 7/16" ZIP SHEATHING ON EXTERIOR SIDE OF 2X6 WD. STUDS @ 16" O.C. W/ 1/2" GYP. BOARD ON INTERIOR SIDE W/ R-15 INSULATION



A SCALE: 1/4" = 1'-0"
a2.5 SECOND LEVEL FLOOR PLAN

FLOOR PLAN NOTES

- GARAGE SPACE SHALL BE SEPARATED FROM LIVING AREA & ATTIC BY 1/2" GYPSUM APPLIED TO THE GARAGE SIDE. GARAGES BENEATH HABITABLE ROOMS SHALL BE SEPARATED FROM ROOMS ABOVE BY 5/8" TYPE X GYPSUM (COMPLY W/ RCD R309.2)
- PROVIDE BATHROOM EXHAUST FANS WITH A MINIMUM VENTILATION RATE OF 50 CFM. EXHAUST FANS TO BE VENTED DIRECTLY TO THE OUTSIDE (COMPLY W/ RCD R303.3).
- PROVIDE TEMPERED GLASS IN ALL SPECIFIC HAZARDOUS LOCATIONS SPECIFIED IN SECT. R308.4 IN THE RCD.
- INDEPENDENT METAL DRYER VENT SYSTEM W/ DAMPER TO BE INSTALLED. SYSTEM TO VENT MOISTURE DIRECTLY OUTDOORS (COMPLY W/ RCD M1501.1).
- ALL SLEEPING ROOMS MUST CONTAIN AN OPERABLE WINDOW OR DOOR WHICH WILL PROVIDE A MEANS OF EMERGENCY EGRESS W/ A MIN. 5.7 S.F. CLEAR OPENING (5 S.F. AT GRADE FLOOR) (24" MIN. CLEAR HGT. / 20" MIN. CLEAR WIDTH) (COMPLY W/ RCD R310).
- FUEL-BURNING EQUIPMENT SHALL BE PROVIDED W/ A SUPPLY OF AIR FOR FUEL COMBUSTION, DRAFT HOOD DILUTION, AND VENTILATION OF THE SPACE IN WHICH THE EQUIPMENT IS INSTALLED (COMPLY W/ RCD).
- ENCLOSED ACCESSIBLE SPACE UNDER STAIRS SHALL HAVE WALLS AND SOFFITS PROTECTED ON THE ENCLOSED SIDE WITH 1/2" DRYWALL. (COMPLY W/ RCD R311.2.2)
- MINIMUM HEADROOM @ STAIRS SHALL BE 6'-8" MEASURED VERTICALLY FROM THE TREAD NOSING OR FROM THE FLOOR SURFACE OR LANDING PLATFORM. (COMPLY W/ RCD R311.5.2)
- HANDRAILS SHALL BE PROVIDED ON AT LEAST ONE SIDE OF STAIRS WITH 4 OR MORE RISERS. HANDRAILS WILL BE LOCATED 34" TO 38" MEASURED VERTICALLY FROM TREAD NOSING. HAND GRIP CROSS SECTION DIMENSION SHALL NOT EXCEED 2 1/4". (COMPLY W/ RCD R311)
- GUARDRAILS (MIN. 36" HIGH) SHALL BE PROVIDED ON PORCHES, BALCONIES AND RAISED FLOORS MORE THAN 30" ABOVE FLOOR OR GRADE. OPEN STAIRS SHALL HAVE GUARDRAILS (MIN. 34" HIGH) GUARDRAILS SHALL HAVE INTERMEDIATE RAILS OR ORNAMENTAL CLOSURES WHICH DO NOT ALLOW PASSAGE OF A SPHERE 4 INCHES OR MORE IN DIAMETER. (COMPLY W/ RCD R312).
- PROVIDE PROPER FIREPLACE CLEARANCES AS SPECIFIED IN SECT. R1001.15, R1003.12 AND R1003.13 IN THE RCD.
- LIGHT FIXTURES IN CLOSETS (INCANDESCENT AND FLUORESCENT) SHALL BE ENCLOSED (COMPLY W/ RCD).
- PROVIDE PROPER THICKNESS AND SPANS OF SHEATHING FOR ROOFS AND SUBFLOORS (COMPLY W/ RCD R503).
- ROOF VENTS TO MEET 1:150 VENT AREA RATIO (COMPLY W/ RCD R806).
- AN ATTIC ACCESS (22" x 30" MIN.) SHALL BE PROVIDED TO ANY ATTIC HAVING 30" OF CLEAR HEIGHT (COMPLY W/ RCD R807).
- PROVIDE MINIMUM (2) 2X10'S W/ 1/2" PLYWOOD FLITCH PLATE AT ALL EXTERIOR WALL OPENINGS AND INTERIOR BEARING WALL OPENINGS UNLESS OTHERWISE NOTED
- PROVIDE MINIMUM OF (3) 2X4'S AT EACH END OF ALL BEAMS AND GIRDER TRUSSES UNLESS OTHERWISE NOTED. ALL SUCH CONCENTRATED LOADS SHALL BE TRANSFERRED TO FOUNDATION VIA BEAMS, POST AND / OR SOLID BLOCKING



WALL TYPE LEGEND

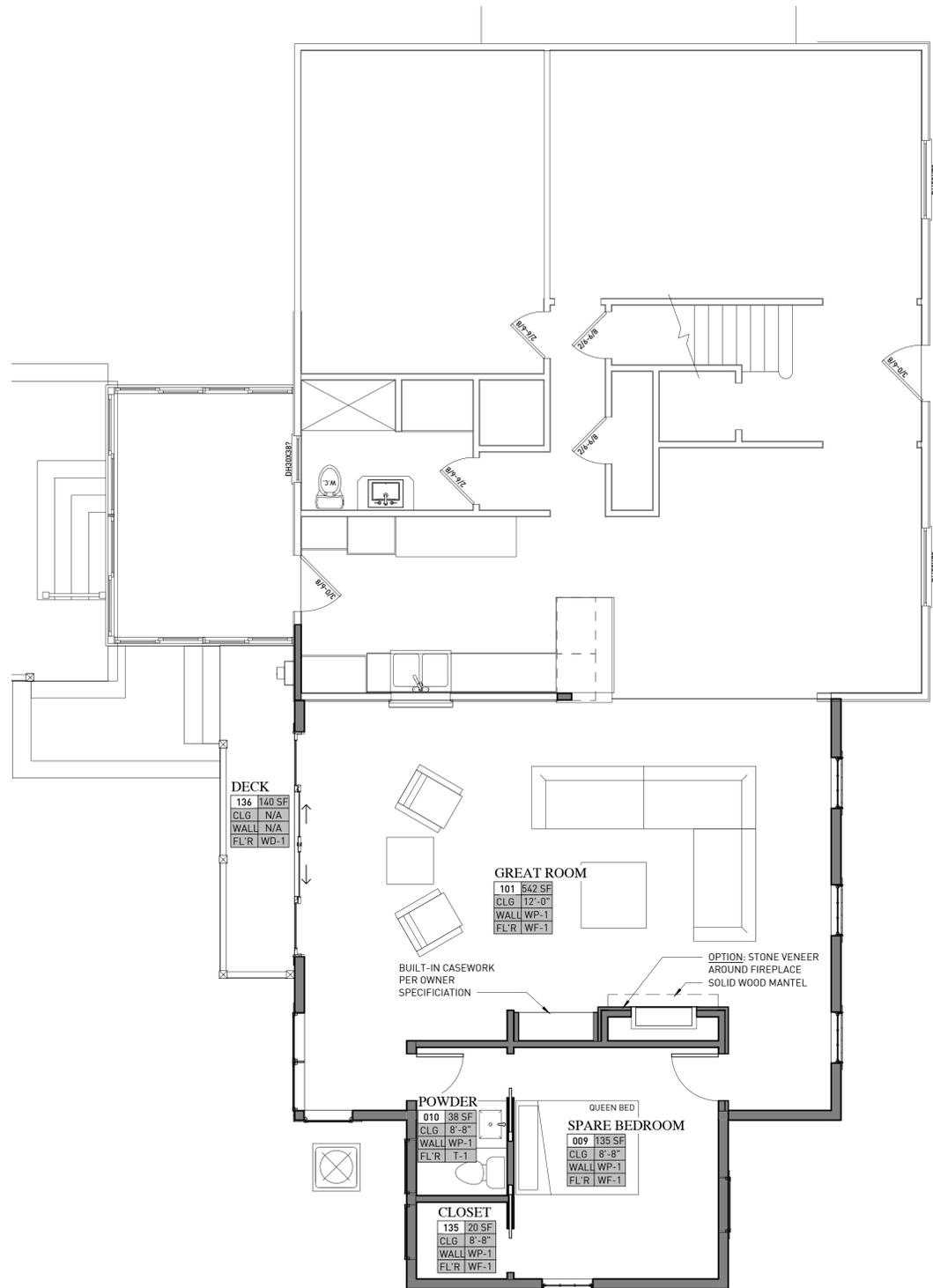
NO.	WALL HATCH	WALL TYPE DESCRIPTION
1		INTERIOR 2X4 WALL : 1/2" GYP. BOARD ON BOTH SIDES OF 2X4 WD. STUDS @ 16" O.C. W/ R-13 SOUND INSULATION TYPE 1.1 : GYP. BD ON ONE SIDE ONLY
2		INTERIOR 2X4 WALL : 1/2" GYP. BOARD ON BOTH SIDES OF 2X4 WD. STUDS @ 16" O.C. TYPE 2.1 : GYP. BD ON ONE SIDE ONLY
3		INTERIOR 2X6 WALL : 1/2" GYP. BOARD ON BOTH SIDES OF 2X4 WD. STUDS @ 16" O.C. W/ R-13 SOUND INSULATION TYPE 3.1 : GYP. BD ON ONE SIDE ONLY
4		EXTERIOR 2X4 WALL : 1/2" OSB BOARD ON EXTERIOR SIDE OF 2X4 WD. STUDS @ 16" O.C. W/ 1/2" GYP. BOARD ON INTERIOR SIDE W/ R-15 INSULATION
5		EXTERIOR 2X6 WALL : 7/16" ZIP SHEATHING ON EXTERIOR SIDE OF 2X6 WD. STUDS @ 16" O.C. W/ 1/2" GYP. BOARD ON INTERIOR SIDE W/ R-19 INSULATION

FINISH SCHEDULE

T-1 TILE FLOOR: CERAMIC TILE FLOOR COLOR: TBD BY OWNER	WD-1 COMPOSITE WOOD DECKING: MATCH EXISTING
WF-1 WOOD FLOOR: HARD WOOD FLOOR SPICES: TBD BY OWNER STAIN: TBD BY OWNER	WP-1 WALL PAINT (COLOR # AND NAME) (2) COATS PROGREEN 2000 LATEX EG-SHEL AS MANUFACTURED BY [MANUFACTURER]

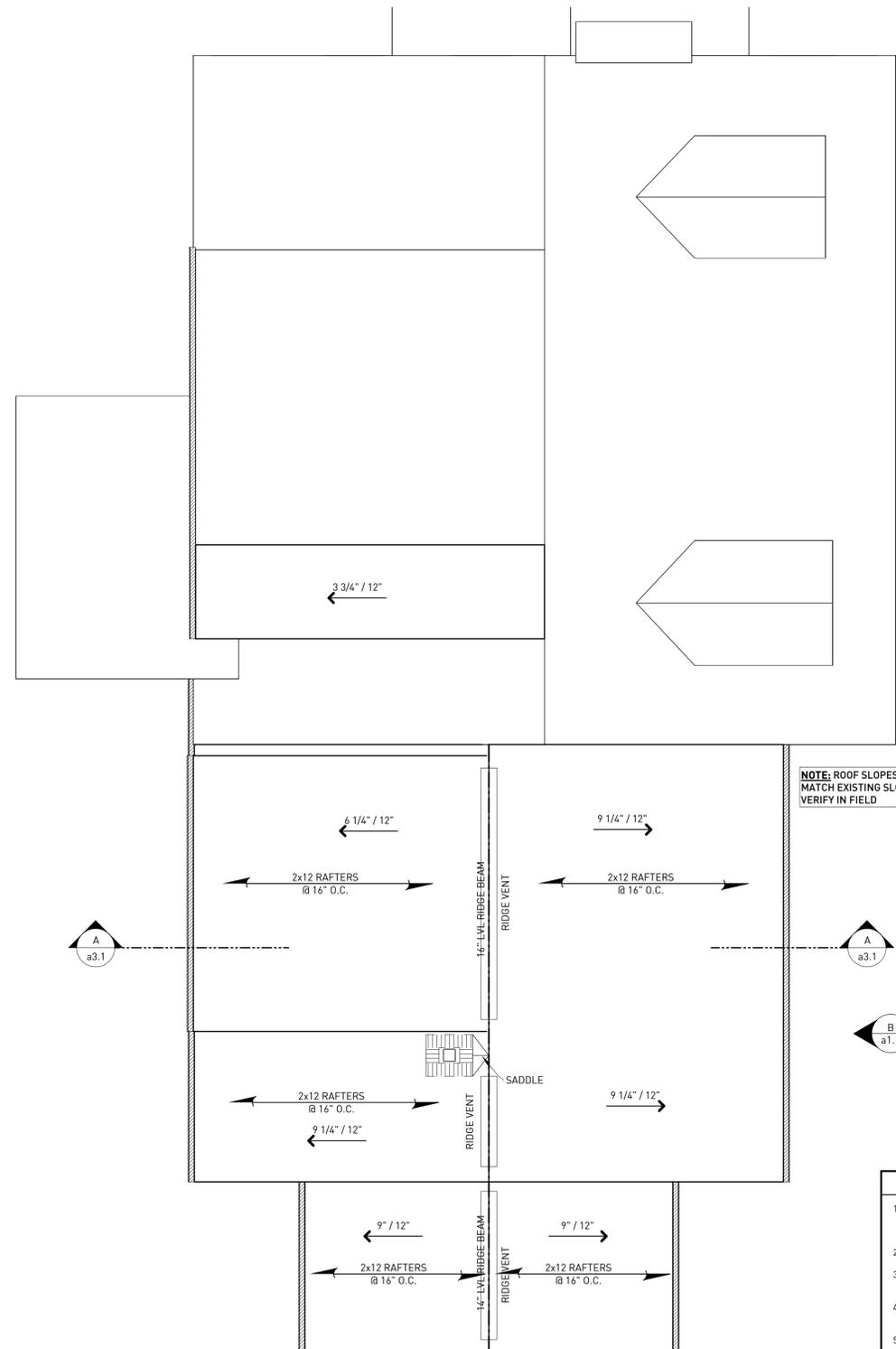
FINISH NOTES

1. ALL FLOORS TO BE LEVELED.
2. PROVIDE MOISTURE RESISTANT DRY WALL WITH IN AREAS OF WATER CLOSETS SHOWER, TUBS, & SINKS
3. DRYWALL SMOOTH FINISH ALL WALLS AND CEILING, UNLESS NOTED OTHERWISE.
4. NEW DOORS TO BE STAIN GRADE VENEER, VERIFY WITH HOME OWNER FOR STAIN COLOR.
5. CONTRACTOR TO PROVIDE WOOD STAIN SAMPLE TO HOME OWNER, BEFORE PROCEEDING WITH ORDERING OR APPLYING STAIN COLOR.
6. INSULATE AROUND WINDOW FRAMES AND SILLIS.
7. ALL FURNITURE N.I.C.



B a2.7 SCALE: 1/4" = 1'-0"

MAIN LEVEL FINISH PLAN

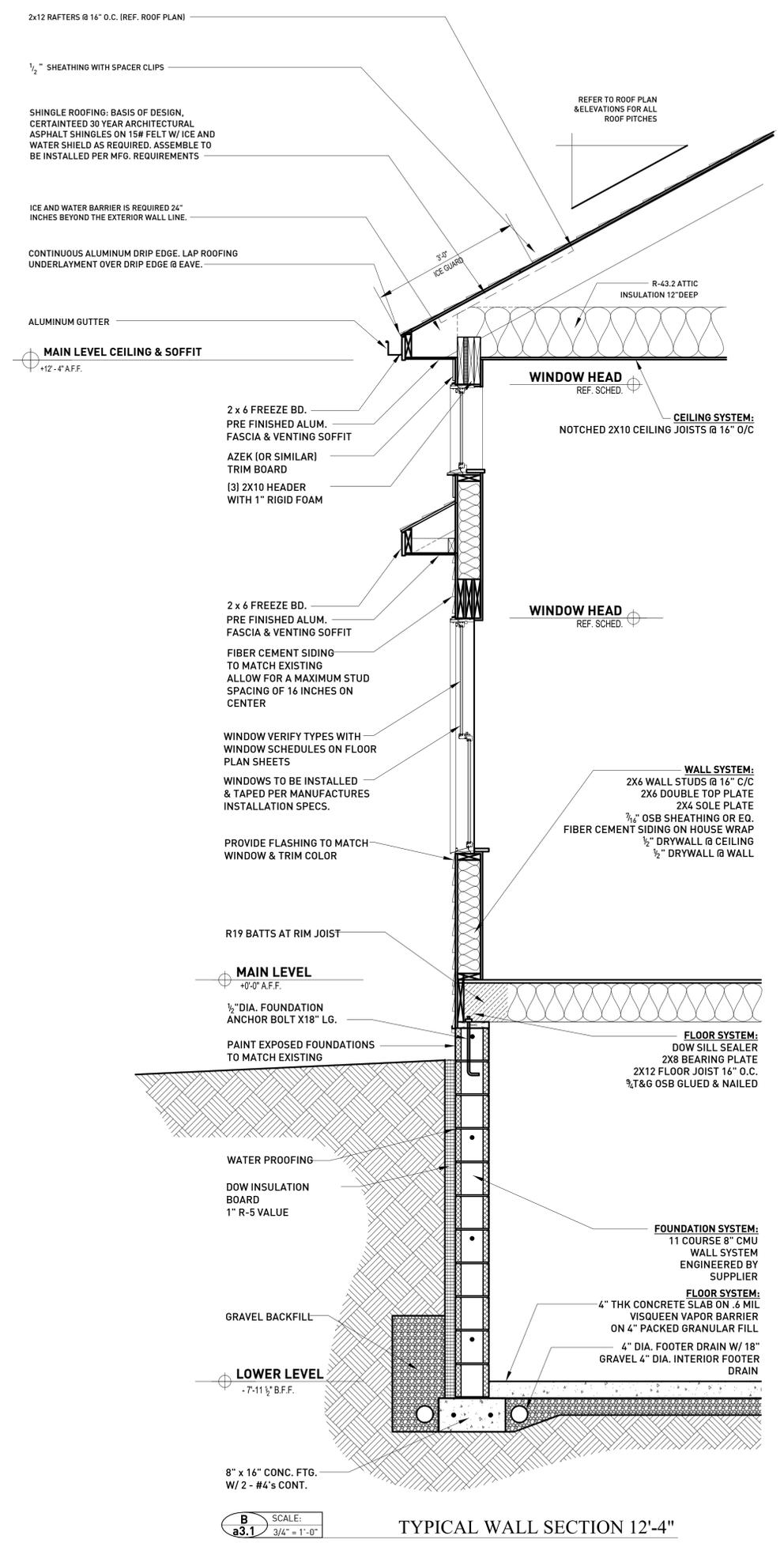


A a2.7 SCALE: 1/4" = 1'-0"

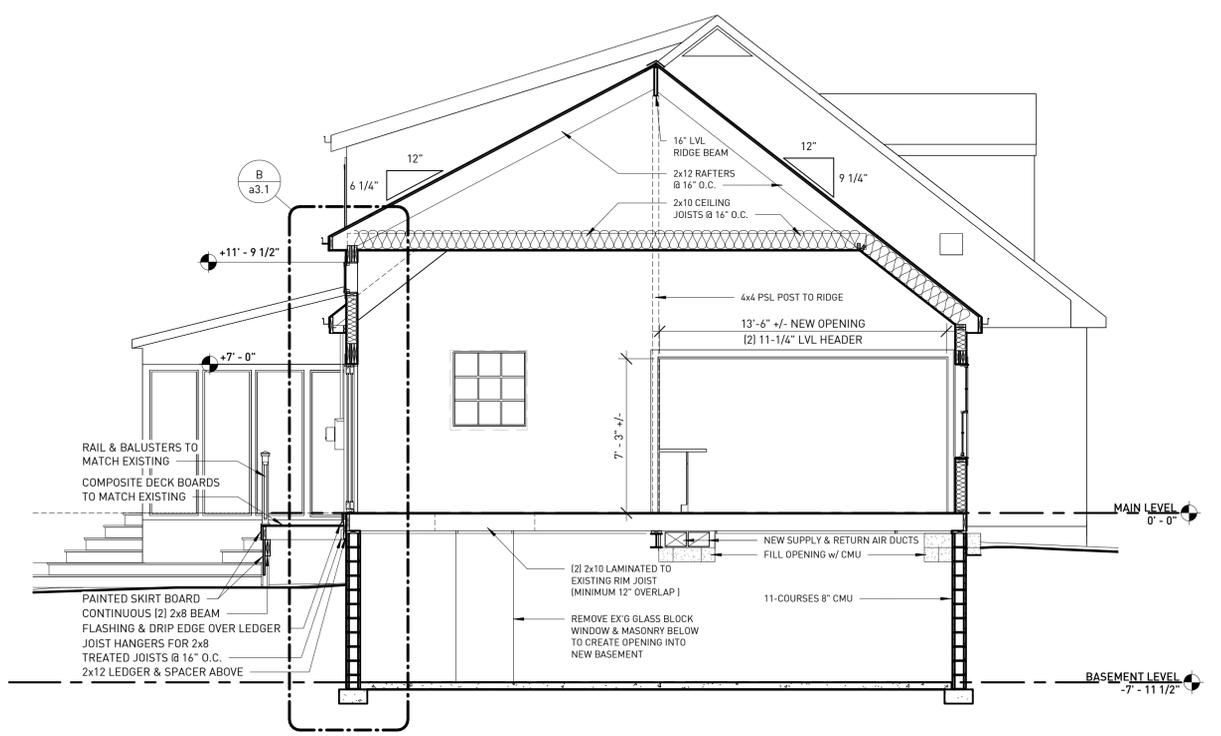
ROOF PLAN

ROOF NOTES:

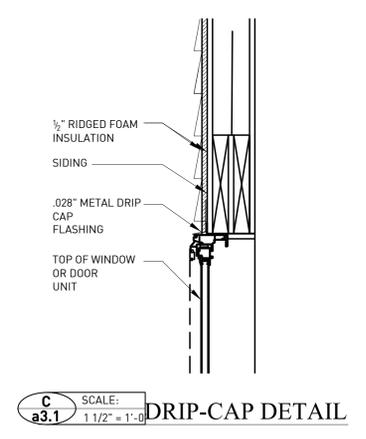
1. DO NOT SCALE DRAWINGS. IF ANY DISCREPANCIES ARISE PLEASE CONTACT THE PROJECT MANAGER AND DESIGNER.
2. STRUCTURAL FRAMING MEMBERS TO BE SPF #2
3. ALL TRUSSES TO BE PRE-ENGINEERED BY TRUSS MFG. (SEE TRUSS SECTIONS IF APPLICABLE).
4. CALCULATE ALL TRUSSES TO MAINTAIN NOTED SOFFIT HEIGHTS AND OVERHANG DIMENSIONS.
5. TYPICAL EXTERIOR OR BEARING HEADER IS 3 - 2 x 10's @ 2 x 6 WALLS AND 2 - 2 x 10's @ 2 x 4 WALLS, UNLESS NOTED OTHERWISE
6. ALL INTERIOR NON-BEARING HEADERS LESS THAN 4'-0" SPAN TO BE TWO 2 x 4's EXCEPT AS NOTED.
7. TYP. SOLID FRAMING POSTS TO BE MIN. OF 3 - 2 x 4's EXCEPT AS NOTED BY TRUSS MFG.
8. TRUSS CLIPS, HANGERS, AND STRUCTURAL CONNECTIONS FOR TRUSS SYSTEM TO BE SPECIFIED BY THE TRUSS MANUFACTURER ON SEALED TRUSS ENGINEERING PLANS.
9. ALL ENGINEERED BEAMS ARE DESIGNED WITH LOADS AS FOLLOWS:
ROOF LOAD 20 PSF LIVE LOAD
20 PSF DEAD LOAD
10. PROVIDE PROPER THICKNESS AND SPANS OF SHEATHING FOR ROOFS AND SUBFLOORS (COMPLY W/ RCO R503).
11. ROOF VENTS TO MEET 1:150 VENT AREA RATIO (COMPLY W/ RCO R806).
12. AN ATTIC ACCESS (22" x 30" MIN.) SHALL BE PROVIDED TO ANY ATTIC HAVING 30" OF CLEAR HEIGHT (COMPLY W/ RCO R807).
13. ALL BEAMS TO BE 1.9E UNLESS OTHERWISE NOTED.



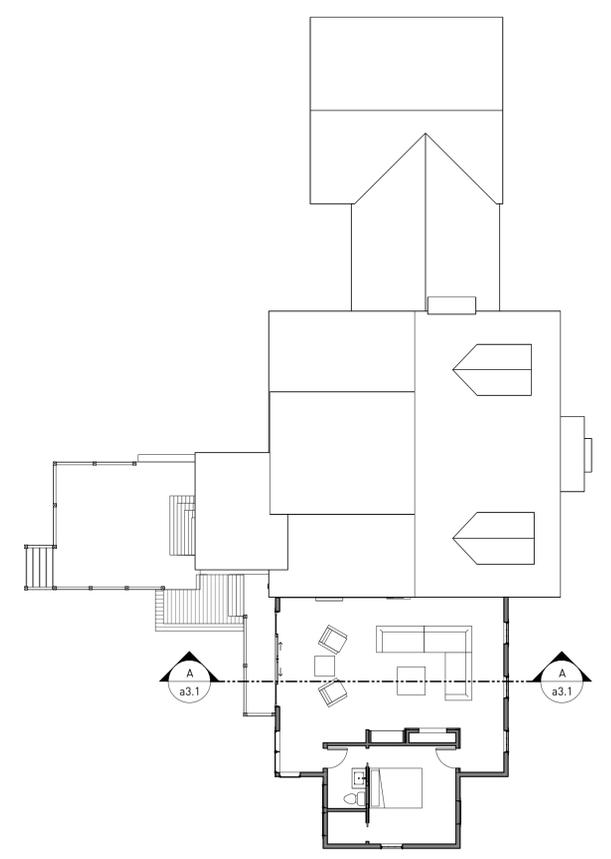
TYPICAL WALL SECTION 12'-4"



E/W BUILDING SECTION



DRIP-CAP DETAIL

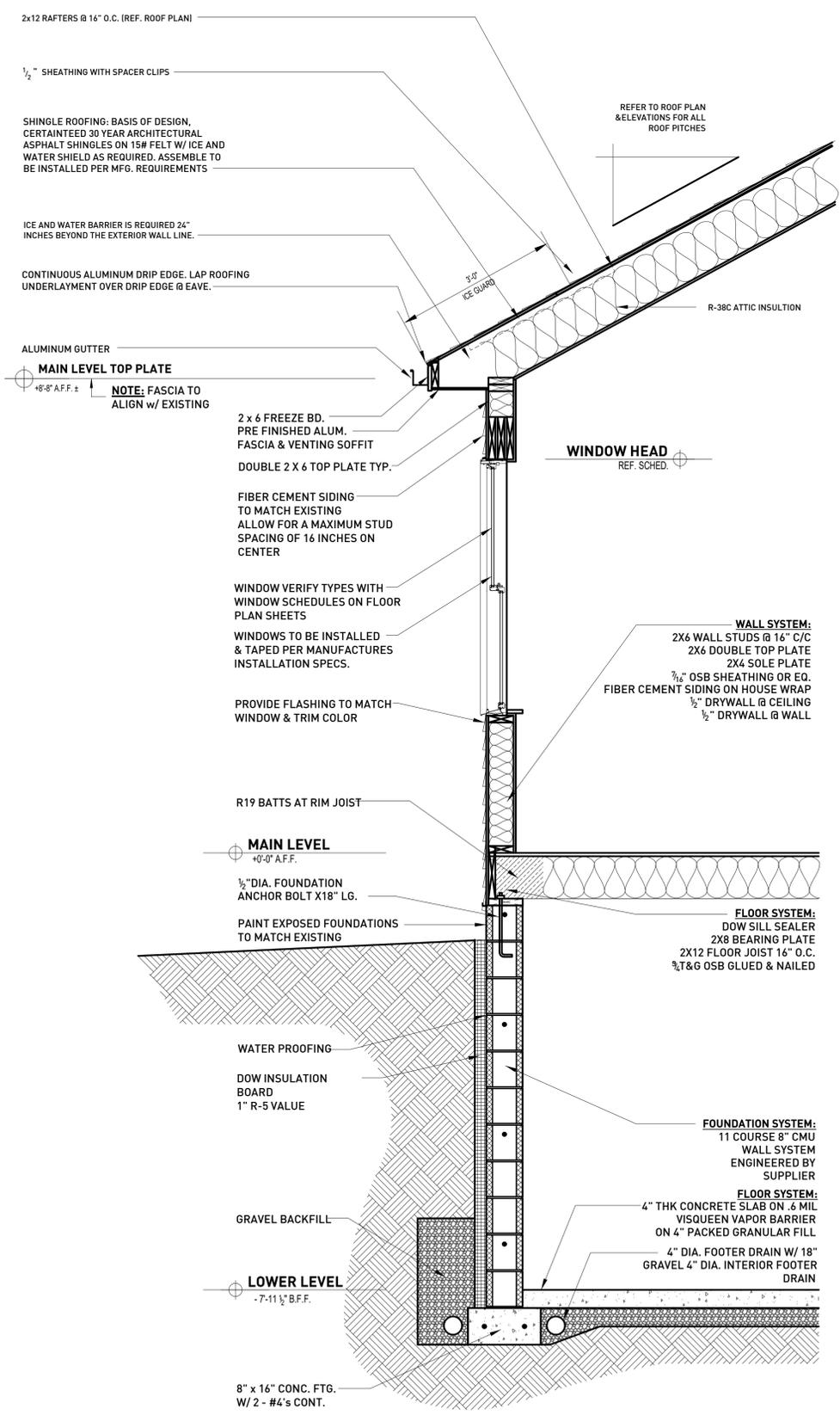


KEY PLAN

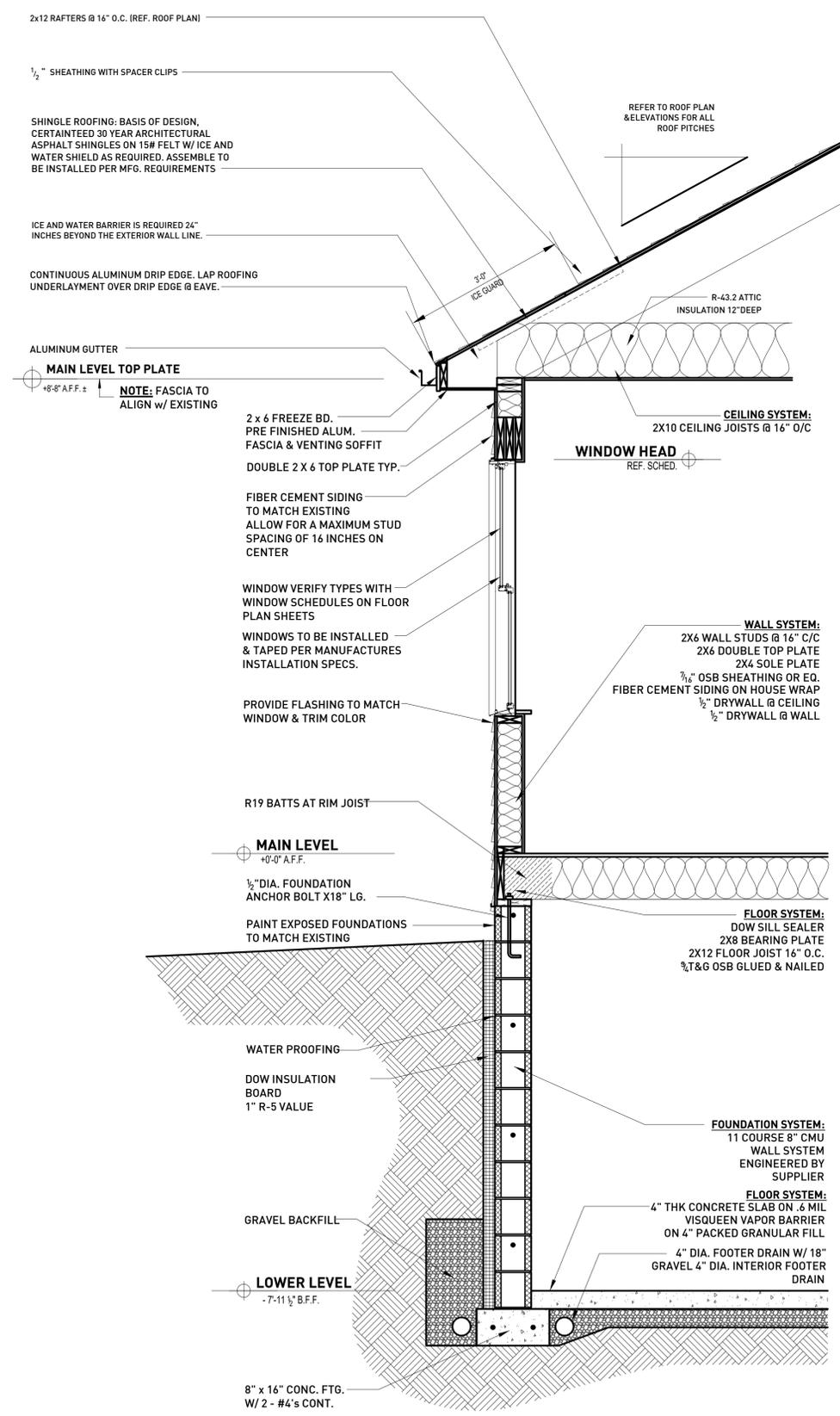
No.	Description	Date
1	BID & CONST.	1/8/2020

SECTIONS

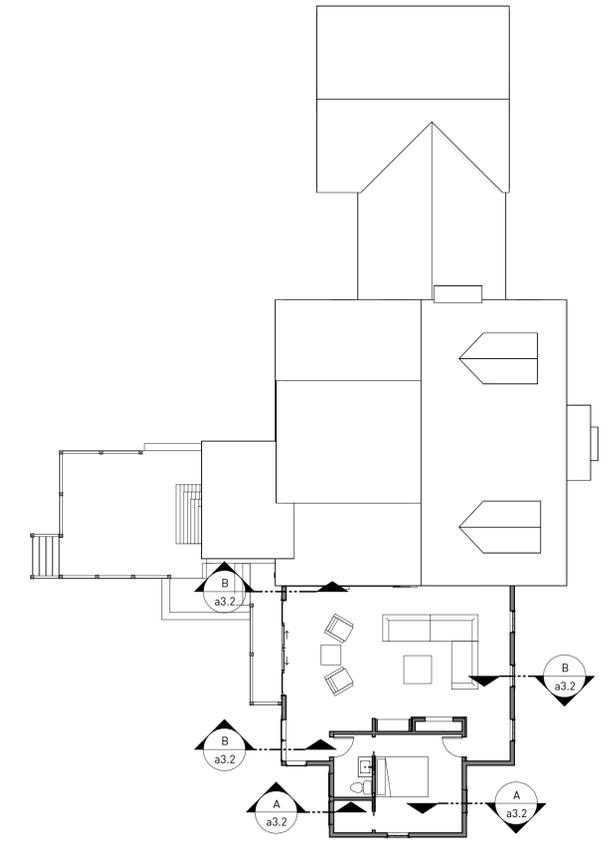
- RELEASED FOR CONSTRUCTION
- NOT RELEASED FOR CONSTRUCTION



B SCALE: 3/4" = 1'-0"
a3.2 TYP. WALL SECTION 8'-5 1/2" VAULT



A SCALE: 3/4" = 1'-0"
a3.2 TYP. WALL SECTION 8'-5 1/2" FLAT



KEY PLAN











250 Series Double-Hung

Performance Data

250 Series Double-Hung	
Sizes	
Standard Sizes	S
Special Sizes Available Built on 1/8" Increments	O
Frames	
Nail Fin Only	O
Nail Fin with J-Channel	O
3-1/4" Block	S
Integral 5/8" Flange	O
Double-Wall Flush Flange (West Region Only)	O
Performance ¹	
Standard Performance	
Meets or Exceeds AAMA/WDMA Ratings	R-PG20 – R-PG35 Hallmark Certified
Air Infiltration (cfm/ft ² of frame @ 1.57 psf wind pressure) ²	0.10
Design Pressure	20 – 35 psf
Water Penetration Resistance	3.14 – 5.43 psf
Performance Upgrade ³	
Meets or Exceeds AAMA/WDMA Ratings	R-PG50 Hallmark Certified
Air Infiltration (cfm/ft ² of frame @ 1.57 psf wind pressure) ²	0.10
Design Pressure	50 psf
Water Penetration Resistance	7.52 psf
Other Performance Criteria	
Forced Entry Resistance (Minimum Security Grade) ⁴	10
Operating Force (lb) Initiate Motion / Maintain Motion (of Hallmark tested size and glazing) ⁵	35

Sound Transmission Class and Outdoor-Indoor Transmission Class

Frame Size Tested ⁶	Glazing System				STC Rating	OITC Rating
	Overall Glazing Thickness	Exterior Glass Thickness	Interior Glass Thickness	Third Pane Thickness		
Double-Hung - Dual-Pane Insulating Glass						
48" x 60"	1 1/16"	2.2mm	2.2mm	–	26	22
Double-Hung - Triple-Pane Insulating Glass						
48" x 60"	1"	3mm	3mm	3mm	28	24

S = Standard; O = Optional;

(1) Published performance data is for single unit only. See Design Data pages in this section for specific product performance class and grade values.

(2) Published performance data for air infiltration is determined by testing a minimum of four (4) products of NFRC model size. Testing is conducted in accordance with ASTM E283. Air infiltration ratings for products will differ by size. The performance data does not apply to combination assemblies unless noted. Actual product performance may vary for a number of reasons including installation and product care.

(3) The sash members may have metal reinforcement in the cavities of the extrusion to achieve the stated Performance Grade. The exterior appearance of the unit is unchanged.

(4) The higher the level, the greater the product's ability to resist forced entry.

(5) Glazing configurations may result in higher operational forces.

(6) ASTM E 1425 defines standard sizes for acoustical testing. Ratings achieved at that size are representative of all sizes of the same configuration. The presence of low-e or argon have negligible effect on sound attenuation characteristics.



250 Series Double-Hung

Features and Options

	250 Series Double-Hung
Glazing (Insulating Glass)	
Glazing Type	
Dual-pane insulating glass	S
Triple-pane insulating glass	O
Insulated Glass Options / Low-E Types	
Advanced Low-E	S
NaturalSun Low-E	O
SunDefense Low-E ₁	O
Bronze-tinted Advanced Low-E ₁	O
Additional Glazing Options	
Annealed glass	S
Tempered glass	O
Obscure glass ₂	O
Gas Fill / High Altitude	
Argon	O
High altitude	O
High altitude with argon ₁	O
Sash	
Foam insulation	O
Performance upgrade	O
Interior / Exterior Color	
White Interior/White Exterior	S
Almond Interior/Almond Exterior	O
Fossil Interior/Fossil Exterior	O
White Interior/Brown Exterior	O
White Interior/Fossil Exterior	O
White Interior/Black Exterior	O
White Interior/Brick Red Exterior	O
White Interior/Hartford Green Exterior	O
White Interior/Morning Sky Gray Exterior	O
White Interior/Poplar White Exterior	O
White Interior/Portobello Exterior	O
White Interior/Tan Exterior	O

	250 Series Double-Hung
Hardware	
Color matched hardware	S
Sash Locks	
Standard Cam Lock	S
Autolock	O
Tilt-Wash Cleaning	
Tilt to interior on both sashes	S
Screens	
Conventional black fiberglass - flat	S
Grilles	
Grilles-Between-the-Glass₃	
3/4" Contour	O
5/8" flat	O
1" Contour	O
Grille Patterns: Traditional, Prairie, Top Row, Custom - Equally Divided	O
Simulated-Divided-Light Grilles₁ (without spacer)	
7/8" contour profile	O
Grille Patterns: Traditional, Prairie, Top Row, Custom - Equally Divided	O

S = Standard; O = Optional

(1) Not available with triple-pane glazing.

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



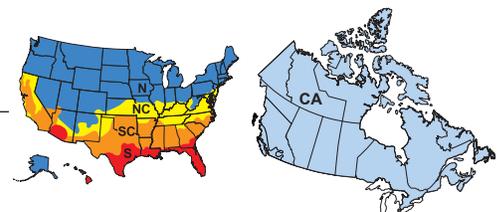
250 Series Double-Hung

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	Zone			
										N	NC	SC	S	CA		
Vent – Dual-Pane																
3/4"	Advanced Low-E IG	PEL-N-211-00054-00004	3	3	air	0.33	0.28	0.53	53							
	with SDL or grilles-between-the-glass	PEL-N-211-00054-00005				0.33	0.25	0.47	53					S		
3/4"	Advanced Low-E IG	PEL-N-211-00057-00004	3	3	argon	0.29	0.28	0.53	57		NC					
	with SDL or grilles-between-the-glass	PEL-N-211-00057-00005				0.29	0.25	0.47	57		NC	SC	S			
3/4"	NaturalSun Low-E IG	PEL-N-211-00053-00004	3	3	air	0.33	0.49	0.59	53							
	with SDL or grilles-between-the-glass	PEL-N-211-00053-00005				0.33	0.44	0.53	53							
3/4"	NaturalSun Low-E IG	PEL-N-211-00056-00004	3	3	argon	0.30	0.49	0.59	56		N					
	with SDL or grilles-between-the-glass	PEL-N-211-00056-00005				0.30	0.44	0.53	56		N					
3/4"	SunDefense™ Low-E IG	PEL-N-211-00055-00004	3	3	air	0.32	0.21	0.49	54						S	
	with SDL or grilles-between-the-glass	PEL-N-211-00055-00005				0.32	0.19	0.43	54						S	
3/4"	SunDefense Low-E IG	PEL-N-211-00058-00004	3	3	argon	0.29	0.21	0.49	57		NC	SC	S			
	with SDL or grilles-between-the-glass	PEL-N-211-00058-00005				0.29	0.19	0.43	57		NC	SC	S			
Vent – with Foam Insulation																
3/4"	Advanced Low-E IG	PEL-N-211-00069-00004	3	3	air	0.31	0.28	0.53	54						S	
	with SDL or grilles-between-the-glass	PEL-N-211-00069-00005				0.31	0.25	0.47	54					S		
3/4"	Advanced Low-E IG	PEL-N-211-00072-00004	3	3	argon	0.27	0.28	0.53	57		N	NC				
	with SDL or grilles-between-the-glass	PEL-N-211-00072-00005				0.27	0.25	0.47	57		N	NC	SC	S		
3/4"	NaturalSun Low-E IG	PEL-N-211-00068-00004	3	3	air	0.31	0.49	0.59	53							
	with SDL or grilles-between-the-glass	PEL-N-211-00068-00005				0.31	0.44	0.53	53							
3/4"	NaturalSun Low-E IG	PEL-N-211-00071-00004	3	3	argon	0.28	0.49	0.59	56		N					
	with SDL or grilles-between-the-glass	PEL-N-211-00071-00005				0.28	0.44	0.53	56		N					
3/4"	SunDefense™ Low-E IG	PEL-N-211-00070-00004	3	3	air	0.30	0.21	0.49	54			NC	SC	S		
	with SDL or grilles-between-the-glass	PEL-N-211-00070-00005				0.30	0.19	0.43	54			NC	SC	S		
3/4"	SunDefense Low-E IG	PEL-N-211-00073-00004	3	3	argon	0.27	0.21	0.49	57		N	NC	SC	S		
	with SDL or grilles-between-the-glass	PEL-N-211-00073-00005				0.27	0.19	0.43	57		N	NC	SC	S		
Tinted Glazing																
3/4"	Bronze Advanced Low-E IG	PEL-N-211-00057-00007	3	3	argon	0.29	0.27	0.39	57			NC				
	with SDL or grilles-between-the-glass	PEL-N-211-00057-00008				0.29	0.25	0.35	57			NC	SC	S		
Tinted Glazing – with Foam Insulation																
3/4"	Bronze Advanced Low-E IG	PEL-N-211-00072-00007	3	3	argon	0.27	0.27	0.39	57		N	NC				
	with SDL or grilles-between-the-glass	PEL-N-211-00072-00008				0.27	0.25	0.35	57		N	NC	SC	S		

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 2016 (Version 6) criteria.
 (2) The values shown are based on Canada's updated ENERGY STAR® 2020 initiative. Based on unit size, some products will use 2.5mm glass that may have improved glazing performance from what is shown. See the Product Performance section for more detailed information or visit www.energystar.gov for Energy Star guidelines.





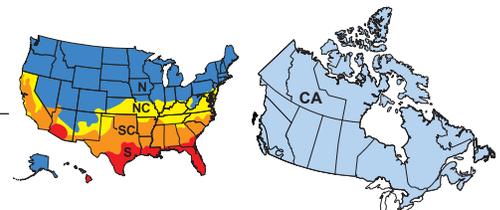
250 Series Double-Hung

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.	Middle	Int.		U-Factor	SHGC	VLT	CR	U. S.				Canada ²		
											Zone				ER	Zone	
Vent – Triple-Pane											N	NC	SC	S			
1"	Advanced Low-E Triple-pane IG	PEL-N-211-00059-00001	3	3	3	air	0.26	0.24	0.41	63	N	NC	SC	S			
	with Grilles-between-the-glass	PEL-N-211-00063-00001					0.27	0.21	0.36	63	N	NC	SC	S			
1"	Advanced Low-E Triple-pane IG	PEL-N-211-00061-00001	3	3	3	argon	0.23	0.24	0.41	65	N	NC	SC	S			
	with Grilles-between-the-glass	PEL-N-211-00065-00001					0.23	0.21	0.36	65	N	NC	SC	S			
1"	NaturalSun Low-E Triple-pane IG	PEL-N-211-00060-00001	3	3	3	air	0.27	0.42	0.52	62	N						
	with Grilles-between-the-glass	PEL-N-211-00064-00001					0.27	0.38	0.47	62	N	NC					
1"	NaturalSun Low-E Triple-pane IG	PEL-N-211-00062-00001	3	3	3	argon	0.24	0.42	0.52	65	N						
	with Grilles-between-the-glass	PEL-N-211-00066-00001					0.24	0.38	0.47	65	N	NC					
Vent – with Foam Insulation																	
1"	Advanced Low-E Triple-pane IG	PEL-N-211-00074-00001	3	3	3	air	0.24	0.24	0.41	63	N	NC	SC	S			
	with Grilles-between-the-glass	PEL-N-211-00078-00001					0.25	0.21	0.36	63	N	NC	SC	S			
1"	Advanced Low-E Triple-pane IG	PEL-N-211-00076-00001	3	3	3	argon	0.21	0.24	0.41	67	N	NC	SC	S	25		
	with Grilles-between-the-glass	PEL-N-211-00080-00001					0.21	0.21	0.36	67	N	NC	SC	S			
1"	NaturalSun Low-E Triple-pane IG	PEL-N-211-00075-00001	3	3	3	air	0.25	0.42	0.52	63	N						
	with Grilles-between-the-glass	PEL-N-211-00079-00001					0.25	0.38	0.47	63	N	NC					
1"	NaturalSun Low-E Triple-pane IG	PEL-N-211-00077-00001	3	3	3	argon	0.22	0.42	0.52	66	N				34		
	with Grilles-between-the-glass	PEL-N-211-00081-00001					0.22	0.38	0.47	66	N	NC					
Vent – with Structural Reinforcement																	
1"	Advanced Low-E Triple-pane IG	PEL-N-211-00059-00001	3	3	3	air	0.26	0.24	0.41	63	N	NC	SC	S			
	with Grilles-between-the-glass	PEL-N-211-00063-00001					0.27	0.21	0.36	63	N	NC	SC	S			
1"	Advanced Low-E Triple-pane IG	PEL-N-211-00061-00001	3	3	3	argon	0.23	0.24	0.41	65	N	NC	SC	S			
	with Grilles-between-the-glass	PEL-N-211-00065-00001					0.23	0.21	0.36	65	N	NC	SC	S			
1"	NaturalSun Low-E Triple-pane IG	PEL-N-211-00060-00001	3	3	3	air	0.27	0.42	0.52	62	N						
	with Grilles-between-the-glass	PEL-N-211-00064-00001					0.27	0.38	0.47	62	N	NC					
1"	NaturalSun Low-E Triple-pane IG	PEL-N-211-00062-00001	3	3	3	argon	0.24	0.42	0.52	65	N						
	with Grilles-between-the-glass	PEL-N-211-00066-00001					0.24	0.38	0.47	65	N	NC					
Vent – with Foam Insulation with Structural Reinforcement																	
1"	Advanced Low-E Triple-pane IG	PEL-N-211-00089-00001	3	3	3	air	0.26	0.24	0.41	63	N	NC	SC				
	with Grilles-between-the-glass	PEL-N-211-00093-00001					0.26	0.22	0.36	63	N	NC	SC				
1"	Advanced Low-E Triple-pane IG	PEL-N-211-00091-00001	3	3	3	argon	0.22	0.24	0.41	66	N	NC	SC				
	with Grilles-between-the-glass	PEL-N-211-00095-00001					0.22	0.21	0.36	66	N	NC	SC				
1"	NaturalSun Low-E Triple-pane IG	PEL-N-211-00090-00001	3	3	3	air	0.26	0.42	0.52	62	N						
	with Grilles-between-the-glass	PEL-N-211-00094-00001					0.26	0.38	0.47	62	N	NC					
1"	NaturalSun Low-E Triple-pane IG	PEL-N-211-00092-00001	3	3	3	argon	0.23	0.42	0.52	66	N						
	with Grilles-between-the-glass	PEL-N-211-00096-00001					0.23	0.38	0.47	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 2016 (Version 6) criteria.
 (2) The values shown are based on Canada's updated ENERGY STAR® 2020 initiative. Based on unit size, some products will use 2.5mm glass that may have improved glazing performance from what is shown. See the Product Performance section for more detailed information or visit www.energystar.gov for Energy Star guidelines.





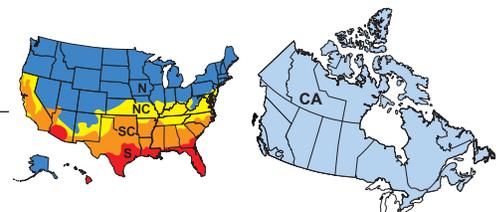
250 Series Double-Hung

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	Zone	ER	Zone
Vent – Dual-Pane with Structural Reinforcement										N	NC	SC	S	CA
3/4"	Advanced Low-E IG	PEL-N-211-00054-00004	3	3	air	0.33	0.28	0.53	53					
	with SDL or grilles-between-the-glass	PEL-N-211-00054-00005				0.33	0.25	0.47	53				S	
3/4"	Advanced Low-E IG	PEL-N-211-00057-00004	3	3	argon	0.29	0.28	0.53	57	NC				
	with SDL or grilles-between-the-glass	PEL-N-211-00057-00005				0.29	0.25	0.47	57	NC	SC	S		
3/4"	NaturalSun Low-E IG	PEL-N-211-00053-00004	3	3	air	0.33	0.49	0.59	53					
	with SDL or grilles-between-the-glass	PEL-N-211-00053-00005				0.33	0.44	0.53	53					
3/4"	NaturalSun Low-E IG	PEL-N-211-00056-00004	3	3	argon	0.30	0.49	0.59	56	N				
	with SDL or grilles-between-the-glass	PEL-N-211-00056-00005				0.30	0.44	0.53	56	N				
3/4"	SunDefense™ Low-E IG	PEL-N-211-00055-00004	3	3	air	0.32	0.21	0.49	54				S	
	with SDL or grilles-between-the-glass	PEL-N-211-00055-00005				0.32	0.19	0.43	54				S	
3/4"	SunDefense Low-E IG	PEL-N-211-00058-00004	3	3	argon	0.29	0.21	0.49	57	NC	SC	S		
	with SDL or grilles-between-the-glass	PEL-N-211-00058-00005				0.29	0.19	0.43	57	NC	SC	S		
Vent – with Foam insulation with Structural Reinforcement														
3/4"	Advanced Low-E IG	PEL-N-211-00084-00004	3	3	air	0.32	0.28	0.53	53					
	with SDL or grilles-between-the-glass	PEL-N-211-00084-00005				0.32	0.25	0.47	53				S	
3/4"	Advanced Low-E IG	PEL-N-211-00087-00004	3	3	argon	0.29	0.28	0.53	57	NC				
	with SDL or grilles-between-the-glass	PEL-N-211-00087-00005				0.29	0.25	0.47	57	NC	SC	S		
3/4"	NaturalSun Low-E IG	PEL-N-211-00083-00004	3	3	air	0.33	0.49	0.59	53					
	with SDL or grilles-between-the-glass	PEL-N-211-00083-00005				0.33	0.44	0.53	53					
3/4"	NaturalSun Low-E IG	PEL-N-211-00086-00004	3	3	argon	0.29	0.49	0.59	56	N				
	with SDL or grilles-between-the-glass	PEL-N-211-00086-00005				0.29	0.44	0.53	56	N				
3/4"	SunDefense™ Low-E IG	PEL-N-211-00085-00004	3	3	air	0.32	0.21	0.49	54				S	
	with SDL or grilles-between-the-glass	PEL-N-211-00085-00005				0.32	0.19	0.43	54				S	
3/4"	SunDefense Low-E IG	PEL-N-211-00088-00004	3	3	argon	0.28	0.21	0.49	57	NC	SC	S		
	with SDL or grilles-between-the-glass	PEL-N-211-00088-00005				0.28	0.19	0.43	57	NC	SC	S		
Tinted Glazing – with Structural Reinforcement														
3/4"	Bronze Advanced Low-E IG	PEL-N-211-00057-00007	3	3	argon	0.29	0.27	0.39	57	NC				
	with SDL or grilles-between-the-glass	PEL-N-211-00057-00008				0.29	0.25	0.35	57	NC	SC	S		
Tinted Glazing – with Foam insulation with Structural Reinforcement														
3/4"	Bronze Advanced Low-E IG	PEL-N-211-00087-00007	3	3	argon	0.29	0.27	0.39	57	NC				
	with SDL or grilles-between-the-glass	PEL-N-211-00087-00008				0.29	0.25	0.35	57	NC	SC	S		

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

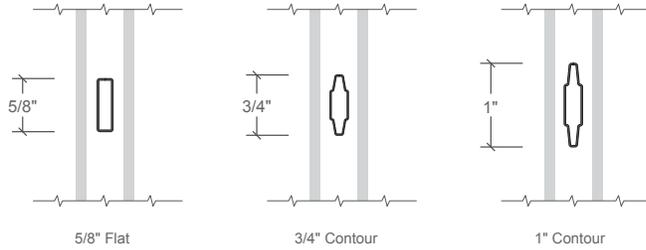
(1) Glazing performance values are calculated based on NFRC 100, NFRC 200 and NFRC 500. ENERGY STAR® values are updated to 2016 (Version 6) criteria.
 (2) The values shown are based on Canada's updated ENERGY STAR® 2020 initiative. Based on unit size, some products will use 2.5mm glass that may have improved glazing performance from what is shown. See the Product Performance section for more detailed information or visit www.energystar.gov for Energy Star guidelines.



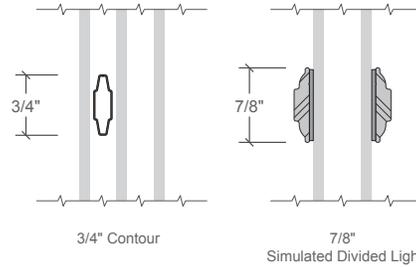


Grille Profiles

Grilles-Between-the-Glass

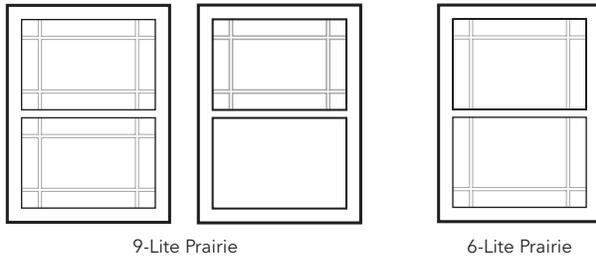


Simulated-Divided-Light Grilles without spacer



Grille Patterns

Prairie Lite Patterns



Prairie

- Specify upper or both sash
- Approximately 4" from edge of sash to center of bar
- Minimum actual glass is 13"

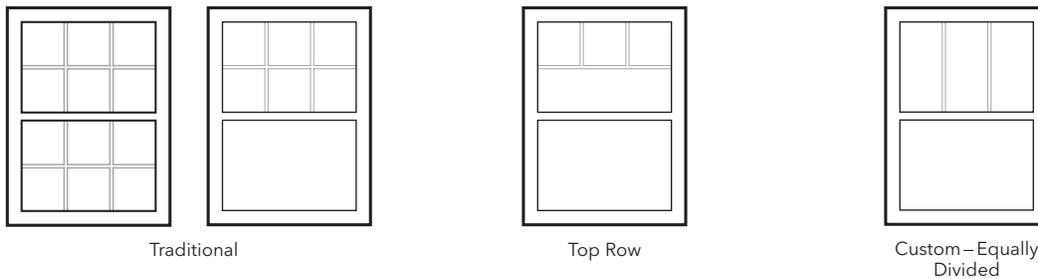
Traditional - and Custom - Equally Divided

- Specify upper or both sash
- Specify number of lites
- Grilles must be equally divided on visible glass
- Minimum 6" x 6" center-to-center

Top Row

- Standard visible glass to separator bar must be $\leq 1/2$ upper actual glass

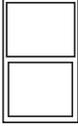
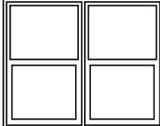
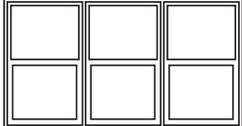
Other Available Patterns





250 Series Double-Hung

Special Sizes and Dimensions

1-Wide Vent Unit	2-Wide Vent Unit Composite	3-Wide Vent Unit Composite
		
MINIMUM	MINIMUM	MINIMUM
14-1/2" W x 23-1/2" H (368 x 597)	29-1/2" W x 23-1/2" H (749 x 597)	44-1/2" W x 23-1/2" H (1 130 x 597)
28-1/2" H (724) Cottage and Contemporary	28-1/2" H (724) Cottage and Contemporary	28-1/2" H (724) Cottage and Contemporary
EQUAL SASH MAXIMUM	EQUAL SASH MAXIMUM	EQUAL SASH MAXIMUM
48 Ft ² (4.46 m ²)	48 Ft ² (4.46 m ²)	48 Ft ² (4.46 m ²)
53-1/2" W x 78" H (1 359 x 1 981)	95-1/2" W x 78" H (2 426 x 1 981)	107-1/2" W x 78" H (2 731 x 1 981)
COTTAGE SASH MAXIMUM	COTTAGE SASH MAXIMUM	COTTAGE SASH MAXIMUM
53-1/2" W x 65-1/2" H (1 359 x 1 664)	95-1/2" W x 65-1/2" H (2 426 x 1 664)	107-1/2" W x 65-1/2" H (2 731 x 1 664)
CONTEMPORARY SASH MAXIMUM	CONTEMPORARY SASH MAXIMUM	CONTEMPORARY SASH MAXIMUM
53-1/2" W x 65-1/2" H (1 359 x 1 664)	95-1/2" W x 65-1/2" H (2 426 x 1 664)	107-1/2" W x 65-1/2" H (2 731 x 1 664)

General Notes:

- Rough Opening—Frame Dimension + 1/2"
- Keep frame dimensions to the nearest 1/8" increment
- 2-Wide and 3-Wide units are composites with multiple windows in one frame with integral mullions

Miscellaneous Formulas

		Standard Performance	Actual Glass Height		Standard Performance	Performance Upgrade	Visible Glass Height
		Actual Glass Width	Lower Glass	Upper Glass	Visible Glass Width	Visible Glass Width	
1-Wide	Vent-equal		$(FH - 6) \div 2$	$(FH - 6) \div 2$			
	Cottage	FW - 5-1/4"	$(FH - 6) \times .6$	$(FH - 6) \times .4$	AGW - 1-1/8"	FW - 3-15/16"	AGH - 1-1/8"
	Contemporary		$(FH - 6) \times .4$	$(FH - 6) \times .6$			
2-wide	Vent-equal		$(FH - 6) \div 2$	$(FH - 6) \div 2$			
	Cottage	$(FW \div 2) - 5-1/2"$	$(FH - 6) \times .6$	$(FH - 6) \times .4$	AGW - 1-1/8"		AGW - 1-1/8"
	Contemporary		$(FH - 6) \times .4$	$(FH - 6) \times .6$			
3-wide	Vent-equal		$(FH - 6) \div 2$	$(FH - 6) \div 2$			
	Cottage	$(FW \div 3) - 5-19/32"$	$(FH - 6) \times .6$	$(FH - 6) \times .4$	AGW - 1-1/8"		AGW - 1-1/8"
	Contemporary		$(FH - 6) \times .4$	$(FH - 6) \times .6$			

Clear Opening Formulas

	COW	COH Equal Vent	COH Cottage Vent	COH Contemporary Vent
Clear opening with Cam Lock		$(FH \div 2) - 5.411$	FH - ALGH - 8.411	FH - AUGH - 8.518
Clear opening with Auto Lock	Frame Width - 5.046	$(FH \div 2) - 5.411$	FH - ALGH - 8.411	FH - AUGH - 8.518

KEY:

AGW = Actual Glass Width
 AGH = Actual Glass Height
 ALGH = Actual Lower Glass Height
 AUGH = Actual Upper Glass Height
 FW = Frame Width

FH = Frame Height
 VGW = Visible Glass Width
 VGH = Visible Glass Height
 COW = Clear opening width
 COH = Clear opening height

Clear Opening Area (ft²) = (COW x COH) + 144
 Frame Area (ft²) = (Frame Width x Frame Height) + 144



250 Series Double-Hung

Detailed Product Descriptions

Frame

- Overall frame depth: 3-1/4" on all frame types.
- Frame members are mitered and heat fused to provide a fully welded corner assembly. Sill is fitted with weeps.
- Frame: [1-1/8" setback nail fin for 2-1/8" wall depth] [Block frame for 3-1/4" wall depth] [Integral 5/8" flange for 3" wall depth] [Double-Wall Flush Flange for 3" wall depth (West region only)].
- Interior and exterior frame surfaces are extruded rigid PVC.

Sash

- Sash members are extruded, rigid PVC [with optional foam insulation].
- Sash members are mitered and heat-fused to provide a fully welded corner assembly.
- Includes an integral extruded sash lift as standard.
- Contains sealed insulating glass.

Weatherstripping

- Sash is weatherstripped around the sash perimeter with a fin-type, pile weatherstripping and vinyl wrapped foam weatherstrip.

Glazing System

- Quality float glass complying with ASTM C 1036.
- Exterior face-glazed sealed insulating glass.
- Dual-Pane [[annealed] [tempered]] [[Advanced] [NaturalSun] [SunDefense™] [Bronze, Advanced] Low-E coated [with Argon]] [Obscure₃] [High Altitude₂].
-or-
- 1" Triple-Pane [[annealed] [tempered]] [[Advanced] [NaturalSun] Low-E coated [with Argon]] [Obscure₃] [High Altitude₂].

Interior / exterior

- Window frame and sash members are [[White] [Almond] [Fossil] with integral color extruded throughout the profiles] [[Brown] [Black] [Brick Red] [Hartford Green] [Morning Sky Gray] [Poplar White] [Portobello] [Tan] [Fossil] exterior, consisting of a solar reflective coating exceeding AAMA 613 test requirements, with White integral color extruded throughout the profiles on the interior].
- All exposed PVC surfaces are smooth, glossy and uniform in appearance.

Hardware

- Constant force balances are concealed within the frame and connected to the sash with a bracket which houses a stainless steel coil spring.
- Upper and lower sashes are fully operable for ventilation.
- All fasteners are corrosion-resistant material compatible with PVC.
- Locks are factory-installed, zinc die cast, self-aligning, [cam action locks] [AutoLock] located on the checkrail. Two sash locks are installed on units with 29-1/2" or greater frame width.
- Tilt latches are factory installed, [zinc die cast] [PVC] and are located on the checkrail of the lower sash and the top rail of the upper sash.
- Hardware finish is [White] [Almond] [Fossil].

Screens

- [Full-size] [Half-screen] Set in aluminum frame and fitted to exterior of window.
- Screen frame finish is baked enamel, color to match exterior
- Screens for windows with frame width >39" or frame height > 53-1/2" have a screen spreader bar.
- Conventional Black Fiberglass
 - Black vinyl coated 18/16 mesh fiberglass screen cloth complying with ASTM D 3656 and SMA 1201.

Optional Products

Grilles

- Grilles-Between-the-Glass
 - [Dual-Pane Insulating glass contains [[3/4" [1" contoured] [5/8" flat] aluminum grilles permanently installed between two panes of glass] [Triple-Pane Insulating glass contains 3/4" contoured aluminum grilles permanently installed between three panes of glass].
 - Patterns are [Traditional] [6-Lite Prairie] [9-Lite Prairie] [Top Row].
 - Interior grille color matches interior frame.
 - Exterior grille color [3/4" Grille is [White] [Almond₄] [Fossil₄] [Brown] [Black] [Brick Red] [Hartford Green] [Morning Sky Gray] [Poplar White] [Portobello] [Tan]] [1" Grille is [White] [Almond₄] [Fossil₄]] [5/8" Grille is [White] [Almond₄] [Fossil₄]].
- Simulated-Divided-Light grilles without spacer
 - 7/8" grilles permanently bonded to the interior and exterior of glass.
 - Patterns are [Traditional] [6-Lite Prairie] [9-Lite Prairie] [Top Row].
 - Grilles match color of interior and exterior frame
 - Available only on units glazed with dual-pane insulated glass.

Hardware

- Optional limited opening hardware available for vent units in [White] [Almond] [Fossil] extruded vinyl to match the unit; nominal 3-3/4" opening.
- Optional window opening control device available for factory or field installation. Device allows window to open less than 4" with normal operation, with a release mechanism that allows the sash to open completely. Complies with ASTM F2090-10.

(1) Not available with performance upgrade.

(2) Dual-Pane IG High Altitude glazings are available with or without Argon. Triple-Pane IG High Altitude glazings are only available without Argon.

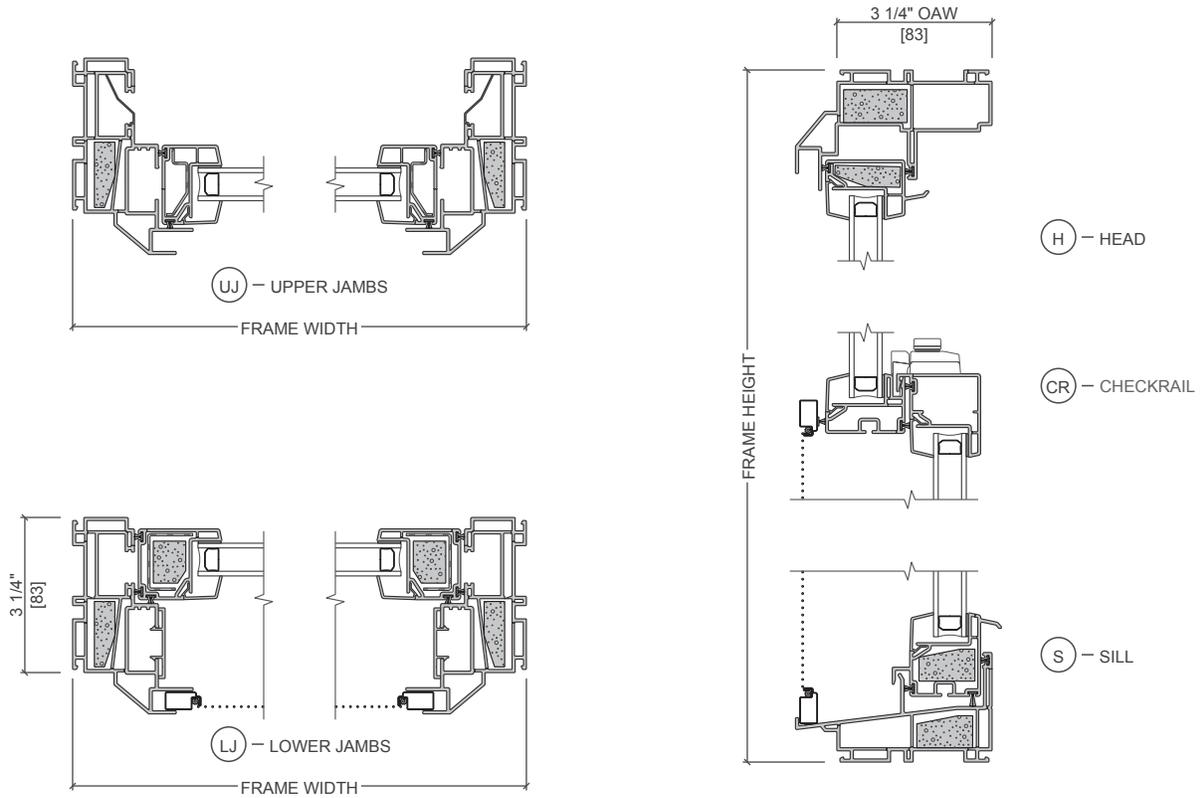
(3) Obscure glass not available with Bronze Advanced Low-E.

(4) Almond grilles only available on almond units. Almond units with grilles will have an almond grille color, Fossil extruded color units with grilles have a Fossil grille color.



250 Series Double-Hung

Unit sections - Optional Foam Insulation



Scale 3" = 1' 0"
All dimensions are approximate.

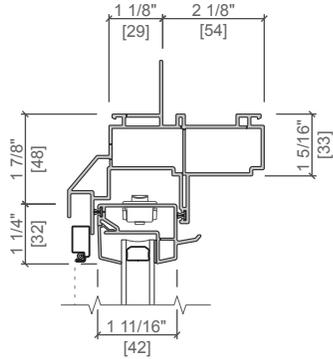


250 Series Double-Hung

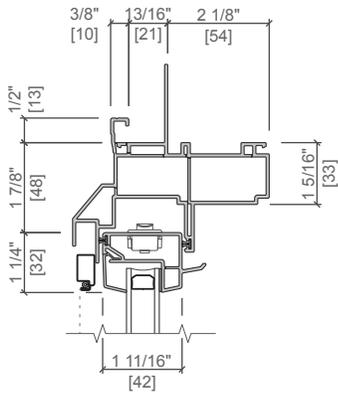
Unit sections - Frame Types

NEW CONSTRUCTION FRAME

Standard Nail Fin

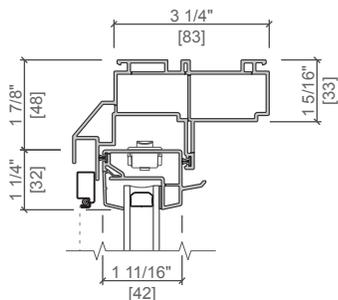


Standard Nail Fin with J-Channel



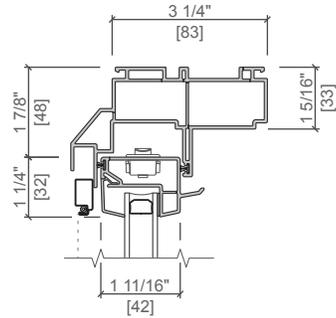
GLAZING OPTIONS

3/4" IG

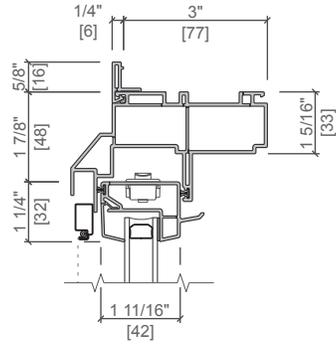


REPLACEMENT FRAME

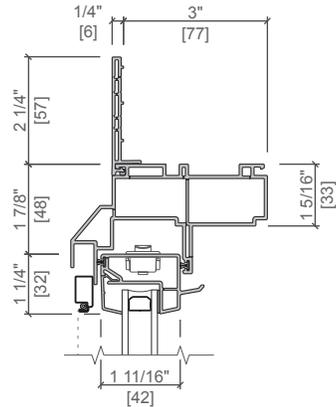
Standard Block Frame



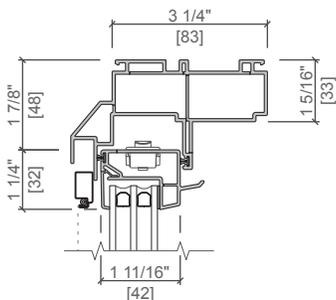
5/8" Flush Flange - Florida Region Only



Double-Wall Flush Flange



1" TRIPLE-PANE IG



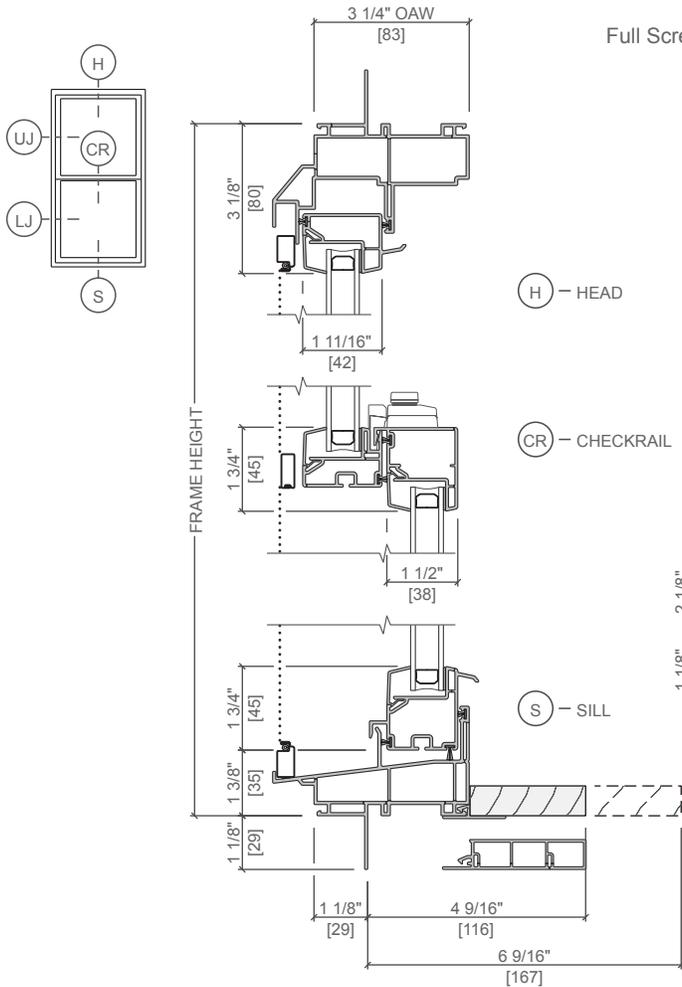
Scale 3" = 1' 0"

All dimensions are approximate.

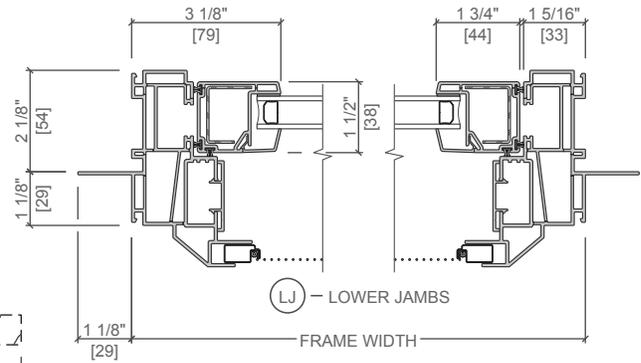
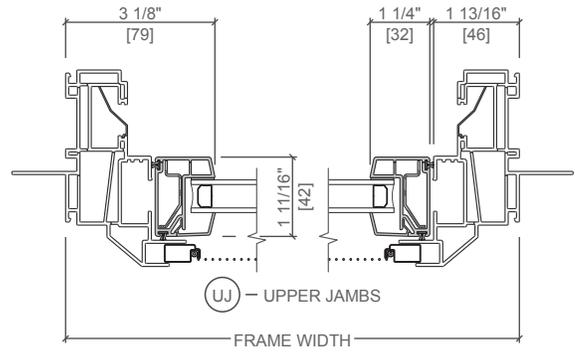


250 Series Double-Hung

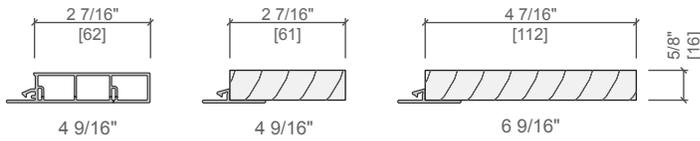
Unit Sections - Nail Fin



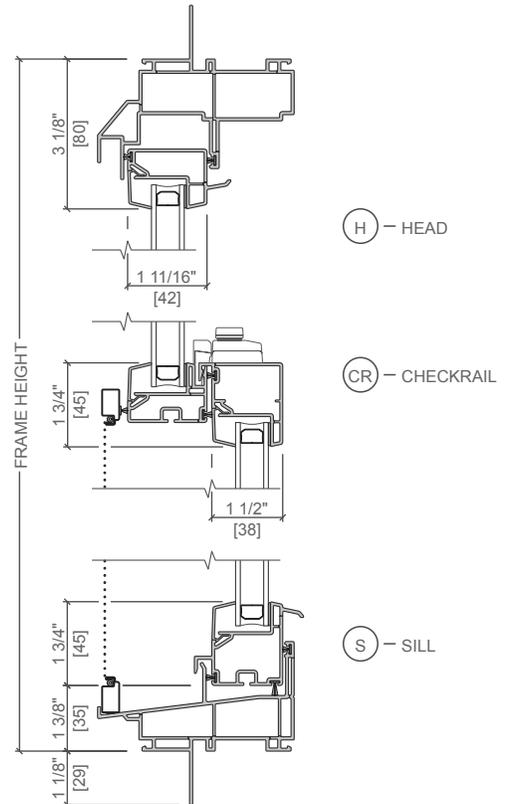
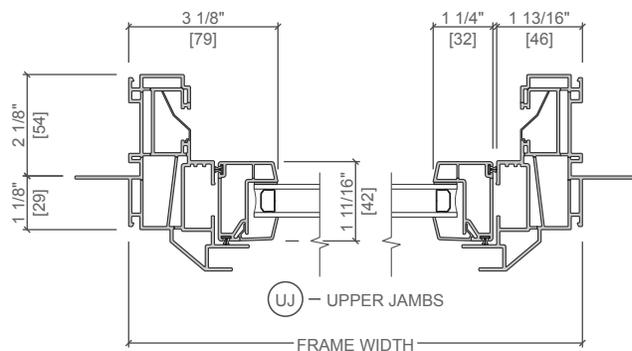
Full Screen



Optional Factory Applied Jamb Extensions



Half Screen

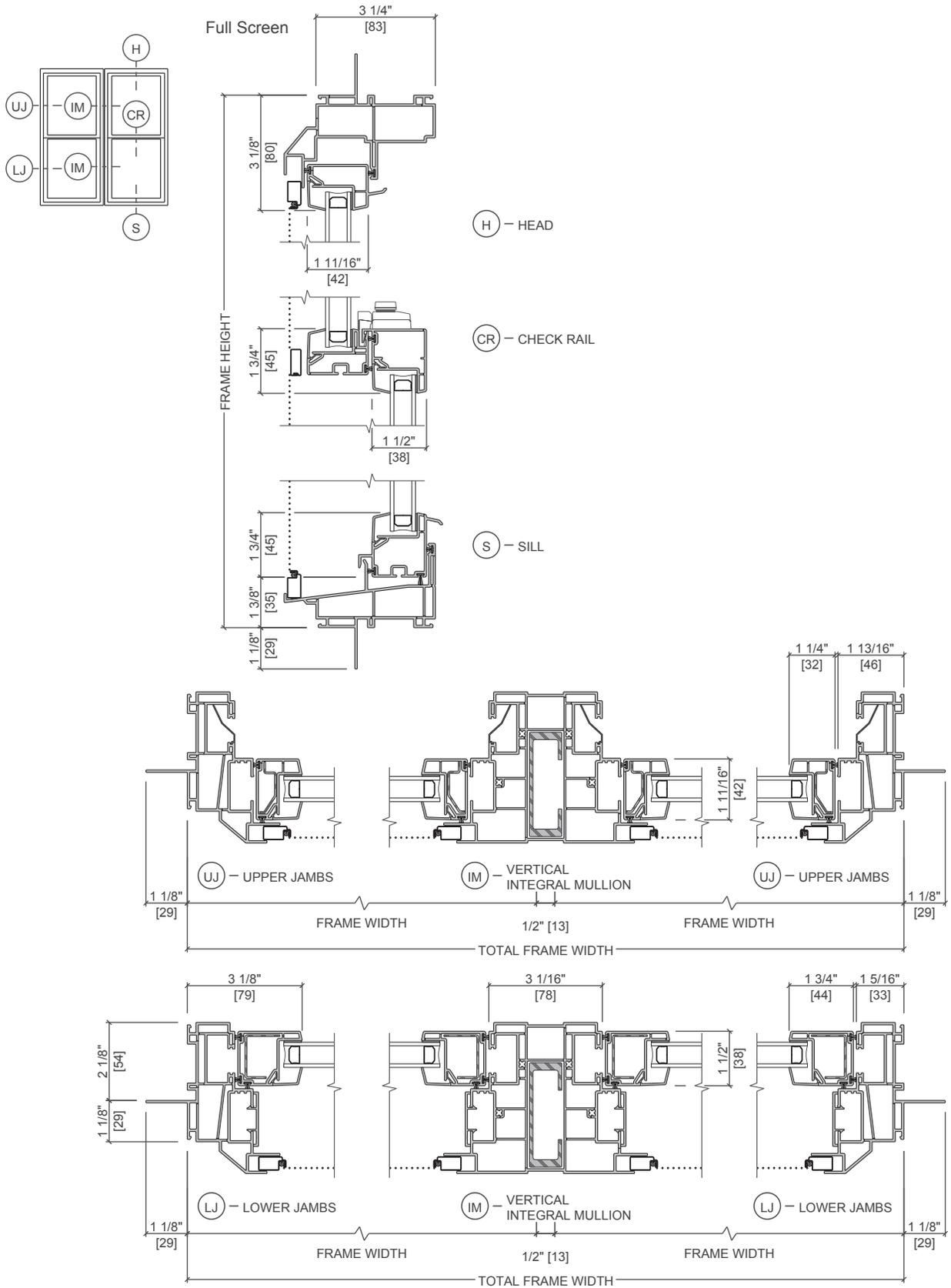


Scale 3" = 1' 0"
All dimensions are approximate.



250 Series Double-Hung

Unit Sections - Nail Fin

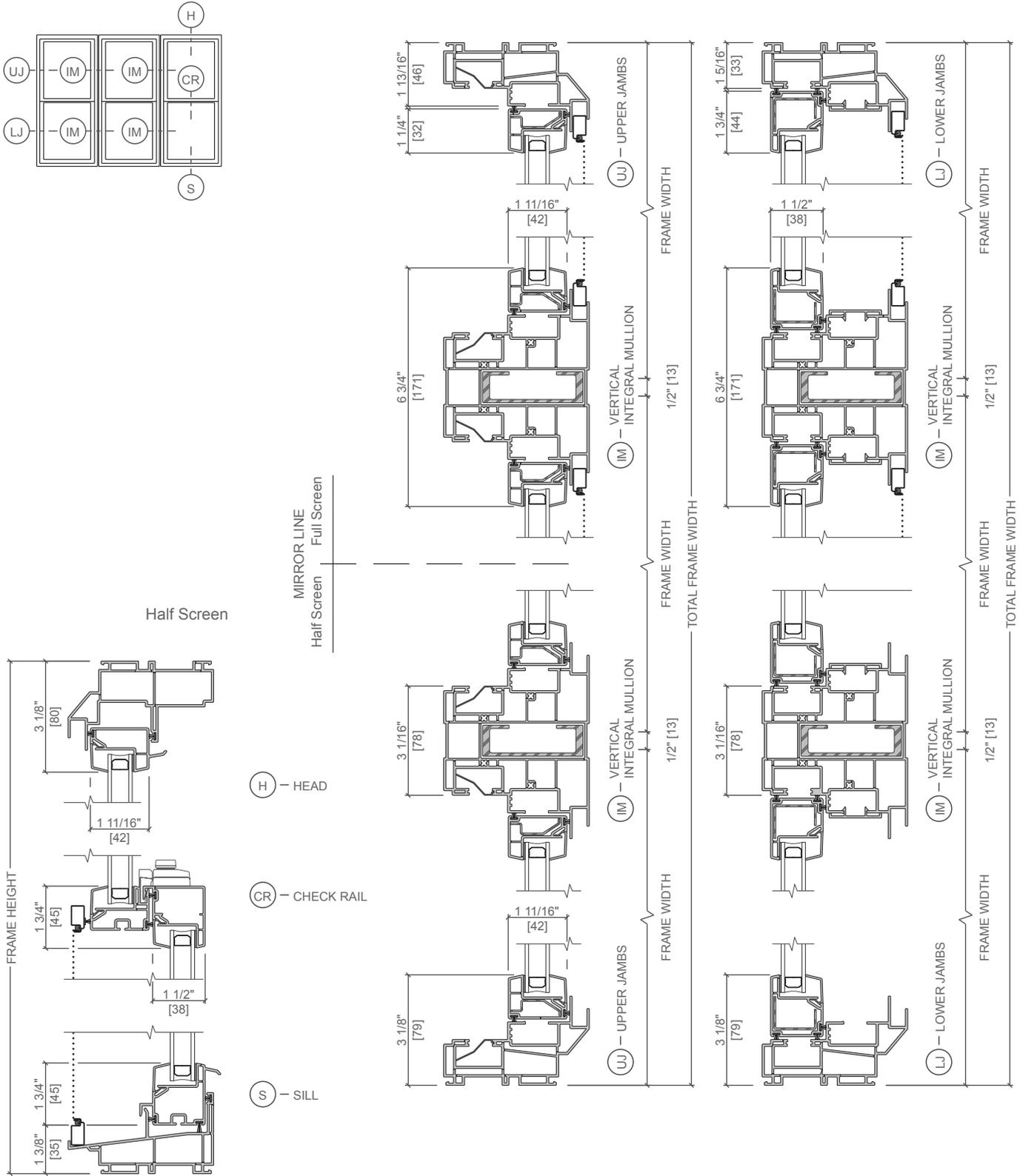


Scale 3" = 1' 0"
All dimensions are approximate.



250 Series Double-Hung

Unit Sections - Block Frame



Scale 3" = 1' 0"
All dimensions are approximate.

Pella® Vinyl Windows and Doors

Pella 250 Series Double-Hung

Detailed Product Descriptions

Frame

- Overall frame depth: 3-1/4" on all frame types.
- Frame members are mitered and heat fused to provide a fully welded corner assembly. Sill is fitted with weeps.
- Frame: [1-1/8" setback nail fin for 2-1/8" wall depth] [Block frame for 3-1/4" wall depth] [Integral 5/8" flange for 3" wall depth].
- Interior and exterior frame surfaces are extruded rigid uPVC.

Sash

- Sash members are extruded, rigid uPVC [with optional foam insulation₁].
- Sash members are mitered and heat-fused to provide a fully welded corner assembly.
- Includes an integral extruded sash lift as standard.
- Contains sealed insulating glass.

Weatherstripping

- Sash is weather-stripped around the sash perimeter with a fin-type, pile weather stripping and vinyl wrapped foam weatherstrip.

Glazing System

- Quality float glass complying with ASTM C 1036.
- Exterior face-glazed sealed insulating glass.
- Dual-Pane insulating glass [[annealed] [tempered]] [[Advanced] [NaturalSun] [SunDefense™] [Bronze, Advanced] Low-E coated [, with Argon]] [Obscure₃] [High Altitude₂].
- or-
- 1" Triple-Pane [[annealed] [tempered]] [[Advanced] [NaturalSun] Low-E coated [, with Argon]] [Obscure₃] [High Altitude₂].

Interior / Exterior

- Window frame and sash members are [[White] [Almond] [Fossil] with integral color extruded throughout the profiles] [[Brown] [Black] [Brick Red] [Hartford Green] [Morning Sky Gray] [Poplar White] [Portobello] [Tan] [Fossil] exterior, consisting of a solar reflective coating exceeding AAMA 613 test requirements, with White integral color extruded throughout the profiles on the interior].
- All exposed PVC surfaces are smooth, glossy and uniform in appearance.

Hardware

- Constant force balances connected to sash with stainless steel spring and concealed within the frame.
- Upper and lower sashes are fully operable for ventilation.
- All fasteners are corrosion-resistant material compatible with PVC.
- Locks are factory-installed, zinc die cast, self-aligning, [cam action locks] [AutoLock] located on the check rail. Two sash locks are installed on units with 29-1/2" or greater frame width.
- Tilt latches are factory installed, [zinc die cast] [PVC] and are located on the check rail of the lower sash and the top rail of the upper sash.
- Hardware finish is [White] [Almond] [Fossil].

Screens

- [Full-size] [Half-screen] Set in aluminum frame and fitted to exterior of window.
- Screen frame finish is baked enamel, color to match exterior
- Screens for windows with frame width >39" or frame height > 53-1/2" have a screen spreader bar.
- Conventional Black Fiberglass
 - Black vinyl coated 18/16 mesh fiberglass screen cloth complying with ASTM D 3656 and SMA 1201.

Optional Products

Grilles

- Grilles-Between-the-Glass
 - [Dual-Pane Insulating glass contains [[3/4"] [1"] contoured] [5/8" flat] aluminum grilles permanently installed between two panes of glass] [Triple-Pane Insulating glass contains 3/4" contoured aluminum grilles permanently installed between three panes of glass].
 - Patterns are [Traditional] [6-Lite Prairie] [9-Lite Prairie] [Top Row].
 - Interior grille color matches interior frame.
 - Exterior grille color [3/4" Grille is [White] [Almond₄] [Fossil₄] [Brown] [Black] [Brick Red] [Hartford Green] [Morning Sky Gray] [Poplar White] [Portobello] [Tan]] [1" Grille is [White] [Almond₄] [Fossil₄]] [5/8" Grille is [White] [Almond₄] [Fossil₄]].

-or-

- Simulated-Divided-Light grilles without spacer
 - 7/8" grilles permanently bonded to the interior and exterior of glass.
 - Patterns are [Traditional] [6-Lite Prairie] [9-Lite Prairie] [Top Row].
 - Grilles match color of interior and exterior frame
 - Available only on units glazed with dual-pane insulated glass.

Hardware

- Optional limited opening hardware available for vent units in [White] [Almond] [Fossil] extruded vinyl to match the unit; nominal 3-3/4" opening.
- Optional window opening control device available for factory or field installation. Device allows window to open less than 4" with normal operation, with a release mechanism that allows the sash to open completely. Complies with ASTM F2090-10.

(1) Not available with performance upgrade.

(2) Dual-Pane IG High Altitude glazings are available with or without Argon. Triple-Pane IG High Altitude glazings are only available without Argon.

(3) Obscure glass not available with Bronze Advanced Low-E.

(4) Almond grilles only available on almond units. Almond units with grilles will have an almond grille color, Fossil extruded color units with grilles have a Fossil grille color.