

DESIGN LOADS		
TABLE R301.4	LIVE LOAD (PSF)	DEAD LOAD (PSF)
DWELLING UNITS	40	10
SLEEPING ROOMS	30	10
ATTICS WITH STORAGE	20	10
ATTICS WITHOUT STORAGE	10	10
ROOF SNOW	20	10
STAIRS	40	10
DECKS	40	10
EXTERIOR BALCONIES	60	10
PASSENGER VEHICLE GARAGES	50	~
FIRE ESCAPES	40	10
GUARDRAILS AND HANDRAILS	200	~

MATERIALS		
1. FRAMING LUMBER SHALL BE #2 SPRUCE PINE FIR (SPF) WITH THE FOLLOWING DESIGN PROPERTIES: Fb = 875 PSI Fv = 70 PSI E = 1.4E6 PSI		
2. FRAMING LUMBER EXPOSED TO WEATHER OR IN CONTACT WITH THE GROUND, CONCRETE OR MASONRY SHALL BE #2 SOUTHERN YELLOW PINE (SYP) TREATED IN ACCORDANCE WITH AWPAC C22 WITH THE FOLLOWING DESIGN PROPERTIES: Fb = 1050 PSI Fv = 95 PSI E = 1.6E6 PSI		
3. ENGINEERED WOOD BEAMS SHALL BE LAMINATED VENEER LUMBER (LVL) OR PARALLEL STRAND LUMBER (PSL) WITH THE FOLLOWING MINIMUM DESIGN PROPERTIES: Fb = 2900 PSI Fv = 285 PSI E = 1.9E6 PSI		
4. STRUCTURAL STEEL SHALL CONFORM TO ASTM A-36 MINIMUM GRADE.		
5. BOLTS SHALL CONFORM TO A307 MINIMUM GRADE.		
6. REBAR SHALL BE DEFORMED STEEL CONFORMING TO ASTM A615 GRADE 60.		
7. POURED CONCRETE SHALL HAVE A MINIMUM SPECIFIED COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS. MATERIALS USED TO PRODUCE CONCRETE SHALL COMPLY WITH THE APPLICABLE STANDARDS LISTED IN ACI 318 OR ASTM C 1157.		
8. CONCRETE LOCATED PER TABLE R402.2 SHALL BE AIR ENTRAINED WITH THE TOTAL AIR CONTENT NOT LESS THAN 5 PERCENT OR MORE THAN 7 PERCENT.		
9. MASONRY UNITS SHALL CONFORM TO ACI 530/ASCE 5/TMS 402 AND MORTAR SHALL COMPLY WITH ASTM C 270.		
10. ALLOWABLE SOIL BEARING PRESSURE 2000 PSF.		

GENERAL		
ENGINEER'S SEAL APPLIES TO STRUCTURAL COMPONENTS ONLY AND DOES NOT CERTIFY ARCHITECTURAL LAYOUT OR DIMENSIONAL ACCURACY. ENGINEER IS NOT RESPONSIBLE FOR CONSTRUCTION METHODS OR ANY DEVIATION FROM THE PLANS.		
ALL CONSTRUCTION, WORKMANSHIP, MATERIAL QUALITY AND SELECTION SHALL BE IN ACCORDANCE WITH THE NORTH CAROLINA STATE BUILDING CODE - RESIDENTIAL CODE 2018 EDITION FROM THE INTERNATIONAL RESIDENTIAL CODE 2018 (IRC), AND LOCAL CODES AND REGULATIONS. DIMENSIONS SHALL GOVERN OVER SCALE AND CODE SHALL GOVERN OVER DIMENSIONS.		

ADDITIONAL LOADS		
FIGURE R301.2(4) - ULTIMATE DESIGN WIND SPEEDS 115-120 MPH		
FIGURE R301.2(2) - SEISMIC DESIGN CATEGORY B		
TABLE R301.2(4) - DESIGN POSITIVE AND NEGATIVE PRESSURE FOR DOORS AND WINDOW FOR A MEAN ROOF HEIGHT OF 35 FEET OR LESS SHALL BE 25 PSF		
TABLE R301.2(2) - COMPONENT AND CLADDING LOADS FOR A MEAN ROOF HEIGHT OF 30 FEET OR LESS LOCATED IN EXPOSURE B		
ROOF VALUES BOTH POSITIVE AND NEGATIVE SHALL BE DESIGNED BASED ON ROOF PITCHES AS FOLLOWS: 45.4 PSF FOR 0:12 TO 2:25:12, 34.8 PSF FOR 2:25:12 TO 7:12 AND 21 PSF FOR 7:12 TO 12:12 WALL CLADDING IS DESIGNED FOR A 24.1 PSF POSITIVE AND NEGATIVE PRESSURE		

ENERGY COMPLIANCE:		
TABLE N1102.1 - REFER TO TABLE N1101.1 TO DETERMINE THE CLIMATE ZONE BY COUNTY AND REFER TO TABLE N1102.1 FOR R VALUE INSULATION REQUIREMENTS LISTED BY ZONE.		
TABLE N1102.1 - ZONE 7 - MAX. GLAZING U FACTOR: 0.40, MIN. INSULATION R VALUES: CEILING R-30, WALLS R-13, FLOORS R-19, BASEMENT WALLS R-7, SLAB PERIMETER R-0, CRAWL SPACE WALLS R-7.		
TABLE N1102.1 - ZONE 8 - MAX. GLAZING U FACTOR: 0.40, MIN. INSULATION R VALUES: CEILING R-30, WALLS R-13, FLOORS R-19, BASEMENT WALLS R-8, SLAB PERIMETER R-5 (2 FT DEEP), CRAWL SPACE WALLS R-10.		

CONSTRUCTION		
1. STEEL FLITCH BEAMS SHALL BE FASTENED TOGETHER WITH 1/2" DIAMETER BOLTS WITH WASHERS PLACED UNDER THE THREADED END OF THE BOLT. BOLTS SHALL BE SPACED AT MAXIMUM 24" o.c. STAGGERED TOP AND BOTTOM OF BEAM WITH A MINIMUM 2" EDGE DISTANCE. TWO BOLTS SHALL BE LOCATED AT 6" FROM EACH END OF FLITCH BEAM.		
2. STEEL BEAMS SHALL BE SUPPORTED AT EACH END WITH A MINIMUM BEARING LENGTH OF 3 1/2" AND FULL FLANGE WIDTH. BEAMS MUST BE ANCHORED AT EACH END WITH A MINIMUM OF FOUR 16d NAILS OR TWO 1/2" x 4" LAG SCREWS.		
3. ENGINEERED WOOD BEAMS SHALL BE INSTALLED WITH ALL CONNECTIONS PER MANUFACTURER'S INSTRUCTIONS.		
4. ALL BEAMS SHALL BE CONTINUOUSLY SUPPORTED Laterally AND SHALL BEAR FULL WIDTH ON THE SUPPORTING WALLS OR COLUMNS INDICATED WITH A MINIMUM OF THREE STUDS.		
5. SOLID BLOCKING SHALL BE PROVIDED AT ALL POINT LOADS TO TRANSFER LOADS THROUGH FLOOR LEVELS. COLUMNS SHALL BE CONTINUOUS TO THE FOUNDATION OR TO OTHER STRUCTURAL ELEMENTS.		
6. ENGINEERED WOOD FLOOR SYSTEMS AND ROOF TRUSS SYSTEMS SHALL BE PROVIDED FOR REVIEW AND COORDINATED WITH THE ENGINEER OF RECORD. INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.		
7. WALL BRACING REQUIREMENTS SHALL BE IN ACCORDANCE WITH SECTION R602.10 OF THE NORTH CAROLINA RESIDENTIAL CODE.		
8. BRICK LINTELS SHALL BE 3 1/2 x 3 1/2 x 1/4 STEEL ANGLE FOR UP TO 60" MAXIMUM SPAN AND 6 x 4 x 5/16 FOR SPANS GREATER THAN 60".		
9. BRICK LINTELS AT SLOPED AREAS SHALL BE 4 x 3 1/2 x 1/4 STEEL ANGLE WITH 16d NAILS IN 3/16" HOLES IN 4" ANGLE LEG AT 12" o.c. TO DOUBLE RAFTER. WHEN THE SLOPE EXCEEDS 4:12 A MINIMUM OF 3 x 3 x 1/4 PLATES SHALL BE WELDED AT 24" o.c. ALONG THE STEEL ANGLE.		

ABBREVIATIONS	
CONC	CONCRETE
CONT	CONTINUOUS
DBL	DOUBLE
DJ	DOUBLE JOIST
DSP	DOUBLE STUD POCKET
EA	EACH
FL PT	FLAT PLATE
FTG	FOOTING
HGR	HANGER
LVL	LAMINATED VENEER LUMBER
NTS	NOT TO SCALE
OC	ON CENTER
PSL	PARALLEL STRAND LUMBER
PT	PRESSURE TREATED
SC	STUD COLUMN
SP	STUD POCKET
TJ	TRIPLE JOIST
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE

REVISION LOG						
Rev	Description	Drawn By	Date	Sheets Affected	Brochure Required	Engineering Required
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						

TABLE N1102.1 CLIMATE ZONES 3-5

CLIMATE ZONES	FENESTRATION U-FACTOR ^b	SKYLIGHT ^b U-FACTOR	GLAZED FENESTRATION SHGC ^{b,e}	CEILING ^k R-VALUE	WOOD FRAMED WALL R-VALUE	MASS WALL R-VALUE ¹	FLOOR R-VALUE	BASEMENT ^c WALL R-VALUE	SLAB ^d R-VALUE AND DEPTH	CRAWL SPACE ^c WALL R-VALUE
3	0.35	0.55	0.30	30	13	5/12	10	5/12	0	5/12
4	0.35	0.55	0.30	38 OR 30 CONT ¹	15 OR 13+2.5 ^h	5/13	19	10/15	10	10/15
5	0.35	0.55	NR	38 OR 30 CONT ¹	19 OR 13+5 OR 15+3 ^{h,i}	13/17 OR 13/12.5 ^h	38 OR 30	10/15	10	10/15

- a. R-VALUES ARE MINIMUMS. U-FACTORS AND SHGC ARE MAXIMUMS.
- b. THE FENESTRATION U-FACTOR COLUMN EXCLUDES SKYLIGHTS. THE SHGC COLUMN APPLIES TO ALL GLAZED FENESTRATION.
- c. "10/15" MEANS R-10 CONT. INSULATED SHEATHING ON THE INTERIOR OR EXTERIOR OF THE HOME OR R-13 CAVITY INSULATION AT THE INTERIOR OF THE BASEMENT WALL OR CRAWL SPACE WALL.
- d. FOR MONOLITHIC SLABS, INSULATION SHALL BE APPLIED FROM THE INSPECTION GAP DOWNWARD TO THE BOTTOM OF THE FOOTING OR A MAXIMUM OF 18 INCHES BELOW GRADE, WHICHEVER IS LESS. FOR FLOATING SLABS, INSULATION SHALL EXTEND TO THE BOTTOM OF THE FOUNDATION WALL OR 24 INCHES, WHICHEVER IS LESS. R-5 SHALL BE ADDED TO THE REQUIRED SLAB EDGE R-VALUE FOR HEATED SLABS.
- e. R-19 FIBERGLASS BATTS COMPRESSED AND INSTALLED IN A NOMINAL 2x6 CAVITY IS DEEMED TO COMPLY. FIBERGLASS BATTS RATED R-19 OR HIGHER COMPRESSED AND INSTALLED IN A 2x4 WALL IS NOT DEEMED TO COMPLY.
- f. BASEMENT WALL INSULATION IS NOT REQUIRED IN WARM-HUMID LOCATIONS AS DEFINED BY FIGURE N1101.2 (1 AND 2) AND TABLE N1101.2.
- g. OR INSULATION SUFFICIENT TO FILL THE FRAMING CAVITY, R-19 MINIMUM.
- h. "13+5" MEANS R-13 CAVITY INSULATION PLUS R-5 INSULATED SHEATHING. 15+3 MEANS R-15 CAVITY INSULATION PLUS R-3 INSULATED SHEATHING. IF STRUCTURAL SHEATHING COVERS 25 PERCENT OR LESS OF THE EXTERIOR, INSULATING SHEATHING IS NOT REQUIRED WHERE STRUCTURAL SHEATHING IS USED. IF THE STRUCTURAL SHEATHING COVERS MORE THAN 25 PERCENT OF THE EXTERIOR, STRUCTURAL SHEATHING SHALL BE SUPPLEMENTED WITH INSULATED SHEATHING OF AT LEAST R-2. 13+2.5 MEANS R-13 CAVITY INSULATION PLUS R-2.5 SHEATHING.
- i. FOR MASS WALLS, THE SECOND R-VALUE APPLIES WHEN MORE THAN HALF THE INSULATION IS ON THE INTERIOR OF THE MASS WALL.
- j. R-30 SHALL BE DEEMED TO SATISFY THE CEILING INSULATION REQUIREMENT WHEREVER THE FULL HEIGHT OF THE UNCOMPRESSED R-30 INSULATION EXTENDS OVER THE WALL TOP PLATE AT THE EAVES. OTHERWISE R-30 INSULATION IS REQUIRED WHERE ADEQUATE CLEARANCE EXISTS OR INSULATION MUST EXTEND TO EITHER THE INSULATION BAFFLE OR WITHIN 1" OF THE ATTIC ROOF DECK.
- k. TABLE VALUE REQUIRED EXCEPT FOR ROOF EDGE WHERE THE SPACE IS LIMITED BY THE PITCH OR THE ROOF, THERE THE INSULATION MUST FILL THE SPACE UP TO THE AIR BAFFLE.

MEAN ROOF HEIGHT
1 STORY = 11'-0"
CLADDING POSITIVE & NEGATIVE PRESSURE = 21 PSF

1 1/2 STORY = 19'-0"
CLADDING POSITIVE & NEGATIVE PRESSURE = 34.8 PSF

2 STORY = 19'-0"
CLADDING POSITIVE & NEGATIVE PRESSURE = 34.8 PSF

ANCHOR BOLTS
INSTALL ANCHOR BOLTS, NUTS, AND WASHERS PER CODE AT ALL EXTERIOR WALL TREATED PLATES AND AT INTERIOR BEARING WALL TREATED PLATES ON SLAB FOUNDATIONS. TO BE A MINIMUM OF 6" O.C. AND WITHIN 12" FROM THE ENDS OF EACH PLATE.

DESIGN PRESSURES
MINIMUM RATING: 25 PSF

MI WINDOWS 3500 SERIES
LOW E-GLASS WINDOWS

PAKT Construction Lot #1 Carol Wood

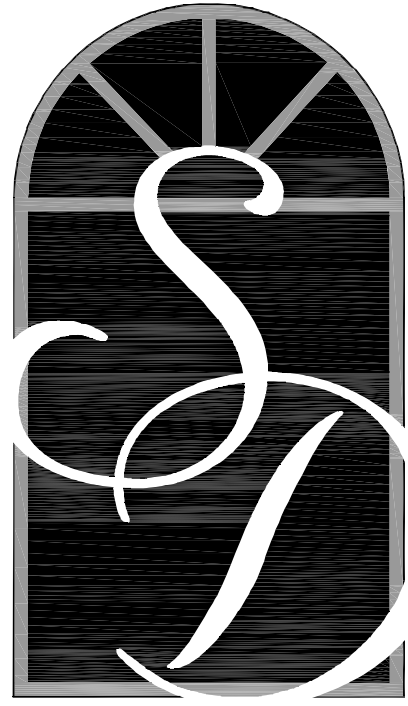
SQUARE FOOTAGE		
	HEATED SQUARE FT.	UN-HEATED SQUARE FT.
FIRST FLOOR	1606	
FRONT PORCH		36
PATIO		120
2 CAR GARAGE		469
TOTAL	1606	625

ATTIC VENT SCHEDULE								
PAKT RANCH								
ROOF PLAN 'A'		SQ FTG	2112	AT / NEAR RIDGE			AT / NEAR EAVE	
VENT TYPE	SQ. FT. REQUIRED RANGE	SQ. FT. SUPPLIED	PERCENT OF TOTAL SUPPLIED	POT. LARGE (SQ. FT. EACH)	POT. SMALL (SQ. FT. EACH)	RIDGE VENT (SQ. FT. PER LT)	EAVE VENT (SQ. IN. EACH)	CONT. VENT (SQ. IN. PER LT)
				0.4236	0.2778	0.125	0.1944	0.0625
RIDGE VENT	2.82 3.52	6.50	50.00	0	0	52.00		
SOFFIT VENTS	4.22 3.52	6.50	50.00				0	104.00
TOTAL (MIN)	7.04 7.04	13.00	100.00	POT VENTS MAY BE REQUIRED IF THERE IS INSUFFICIENT RIDGE AVAILABLE				

* SCHEDULE HAS BEEN CALCULATED ASSUMING EAVE VENTILATION AT 50-60% OF TOTAL AND RIDGE AT 40-50% OF TOTAL REQUIRED VENTILATION

ATTIC VENT SCHEDULE								
PAKT RANCH								
ROOF PLAN 'B'		SQ FTG	2112	AT / NEAR RIDGE			AT / NEAR EAVE	
VENT TYPE	SQ. FT. REQUIRED RANGE	SQ. FT. SUPPLIED	PERCENT OF TOTAL SUPPLIED	POT. LARGE (SQ. FT. EACH)	POT. SMALL (SQ. FT. EACH)	RIDGE VENT (SQ. FT. PER LT)	EAVE VENT (SQ. IN. EACH)	CONT. VENT (SQ. IN. PER LT)
				0.4236	0.2778	0.125	0.1944	0.0625
RIDGE VENT	2.82 3.52	7.50	50.00	0	0	60.00		
SOFFIT VENTS	4.22 3.52	7.50	50.00				0	120.00
TOTAL (MIN)	7.04 7.04	15.00	100.00	POT VENTS MAY BE REQUIRED IF THERE IS INSUFFICIENT RIDGE AVAILABLE				

* SCHEDULE HAS BEEN CALCULATED ASSUMING EAVE VENTILATION AT 50-60% OF TOTAL AND RIDGE AT 40-50% OF TOTAL REQUIRED VENTILATION



SOUTH
DESIGNS

P.O. Box 688
Wake Forest, NC 27587
(O) 919-556-2226
(F) 919-556-2228
www.southdesigns.com

Drawn By:	RWB
Checked By:	RWB
Date:	7-28-2025
Revision No.	Revision Date

This plan is the property of South Designs, Inc. and may not be used or reproduced without the expressed written consent of South Designs, Inc. These drawings are offered to the named client for a conditional one time use. The conditional use is limited to the lot or property as specified herein, and only for said location.

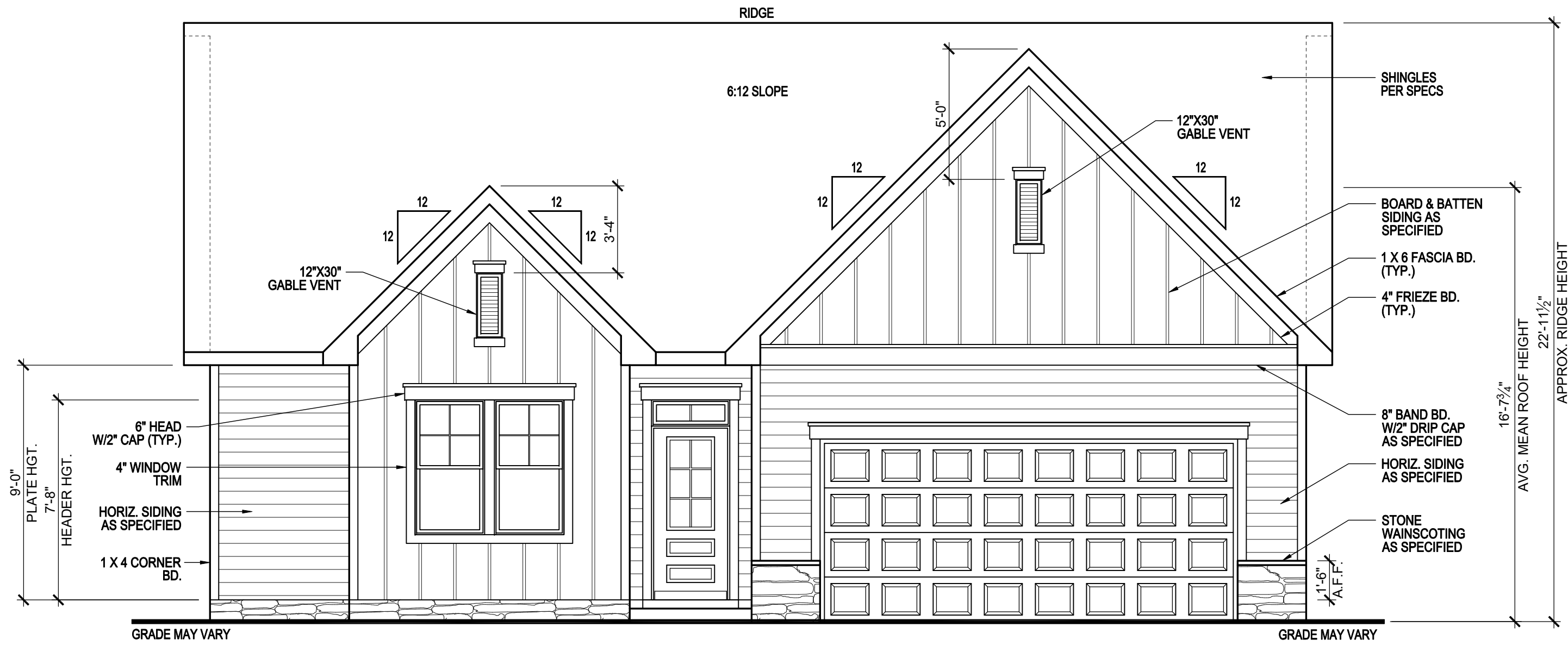
South Designs, Inc. assumes no liability for any home constructed from these plans. Contractor or builder shall verify all dimensions and conditions prior to construction. Caution must be exercised when making changes to these drawings. If changes are made to these drawings, contact South Designs.

Client:	PAKT Construction Ranch Plan
---------	---------------------------------

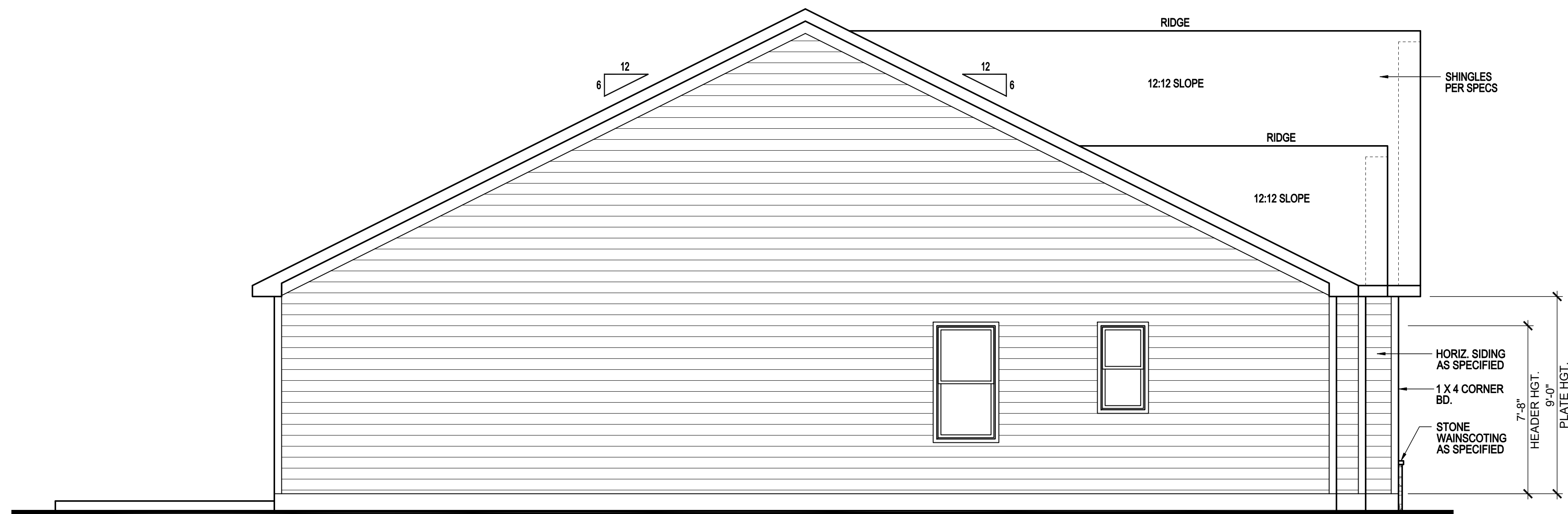
Title:	COVER SHEET
--------	-------------

Plan No.	1606
----------	------

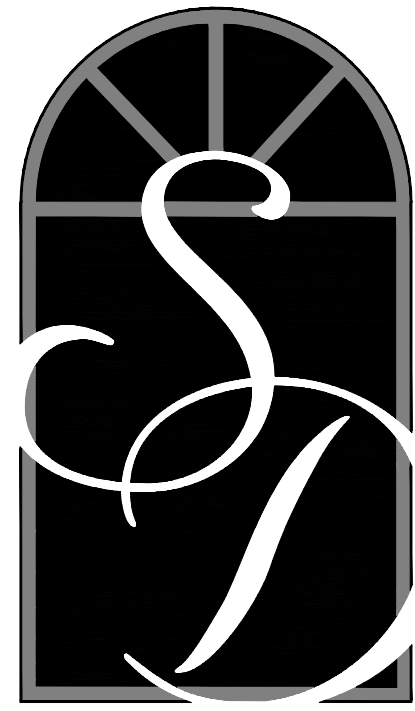
Sheet No.	1	8	Of
-----------	---	---	----



1 FRONT ELEVATION 'A'
SCALE: 1/4" = 1'-0"



2 LEFT SIDE ELEVATION 'A'
SCALE: 1/4" = 1'-0"



SOUTH
DESIGNS

P.O. Box 688
Wake Forest, NC 27587
(O) 919-556-2226
(F) 919-556-2228
www.southdesigns.com

Drawn By: RWB
Checked By: RWB
Date: 7-28-2025

Revision No.	Revision Date

This plan is the property of South Designs, Inc. and may not be used or reproduced without the expressed written consent of South Designs, Inc. These drawings are offered to the named client for a conditional one time use. The conditional use is limited to the lot or property as specified herein, and only for said location.

South Designs, Inc. assumes no liability for any home constructed from these plans. Contractor or builder shall verify all dimensions and conditions prior to construction. Caution must be exercised when making changes to these drawings. If changes are made to these drawings, contact South Designs.

Client: PAKT Construction
Ranch Plan

Title: FRONT & LEFT
ELEVATION 'A'

Plan No.
1606

Sheet No. 2 Of 8



SOUTH
DESIGNS

P.O. Box 688
Wake Forest, NC 27587
(O) 919-556-2226
(F) 919-556-2228
www.southdesigns.com

Drawn By: RWB
Checked By: RWB
Date: 7-28-2025

Revision No.	Revision Date

This plan is the property of South Designs, Inc. and may not be used or reproduced without the expressed written consent of South Designs, Inc. These drawings are offered to the named client for a conditional one time use. The conditional use is limited to the lot or property as specified herein, and only for said location.

South Designs, Inc. assumes no liability for any home constructed from these plans. Contractor or builder shall verify all dimensions and conditions prior to construction. Caution must be exercised when making changes to these drawings. If changes are made to these drawings, contact South Designs.

Client:

PAKT Construction
Ranch Plan

Title:

REAR & RIGHT
ELEVATION 'A'

Plan No.

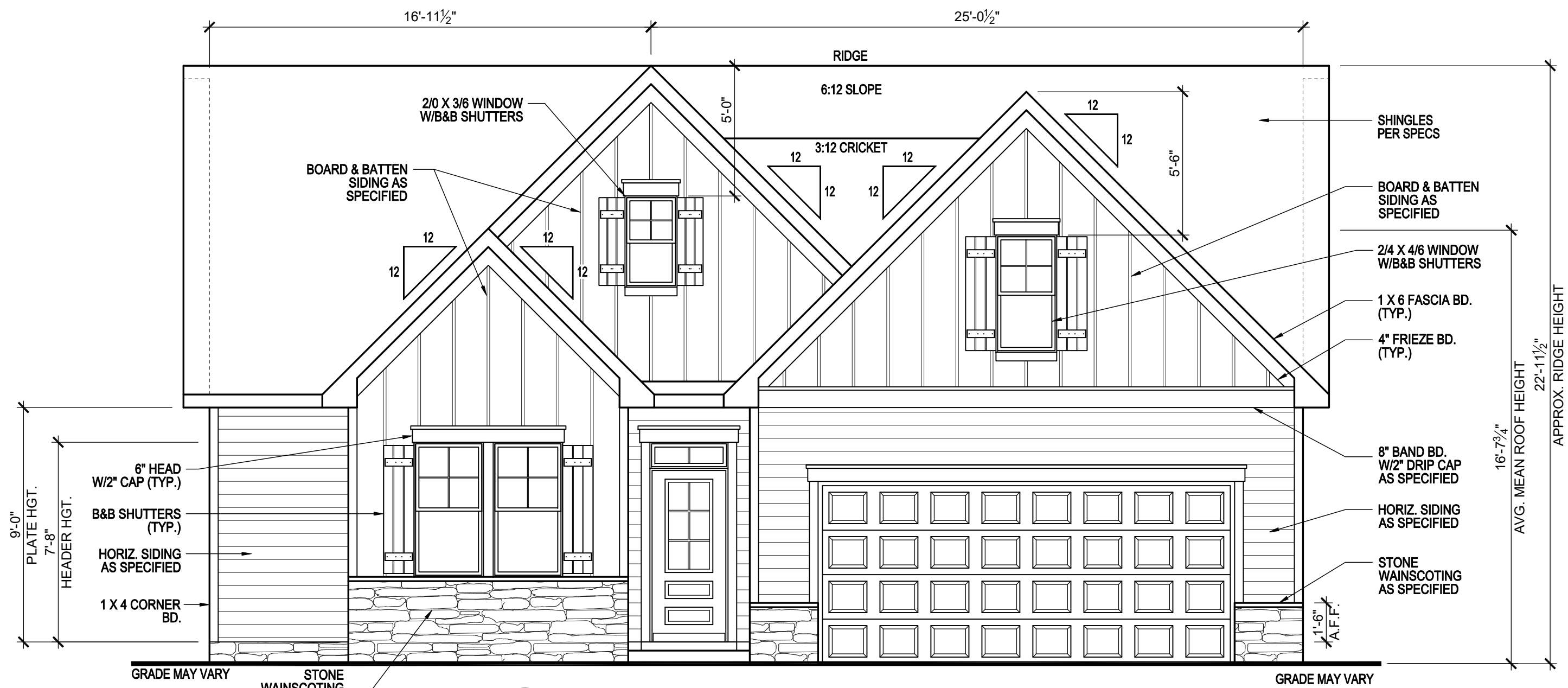
1606

Sheet No.

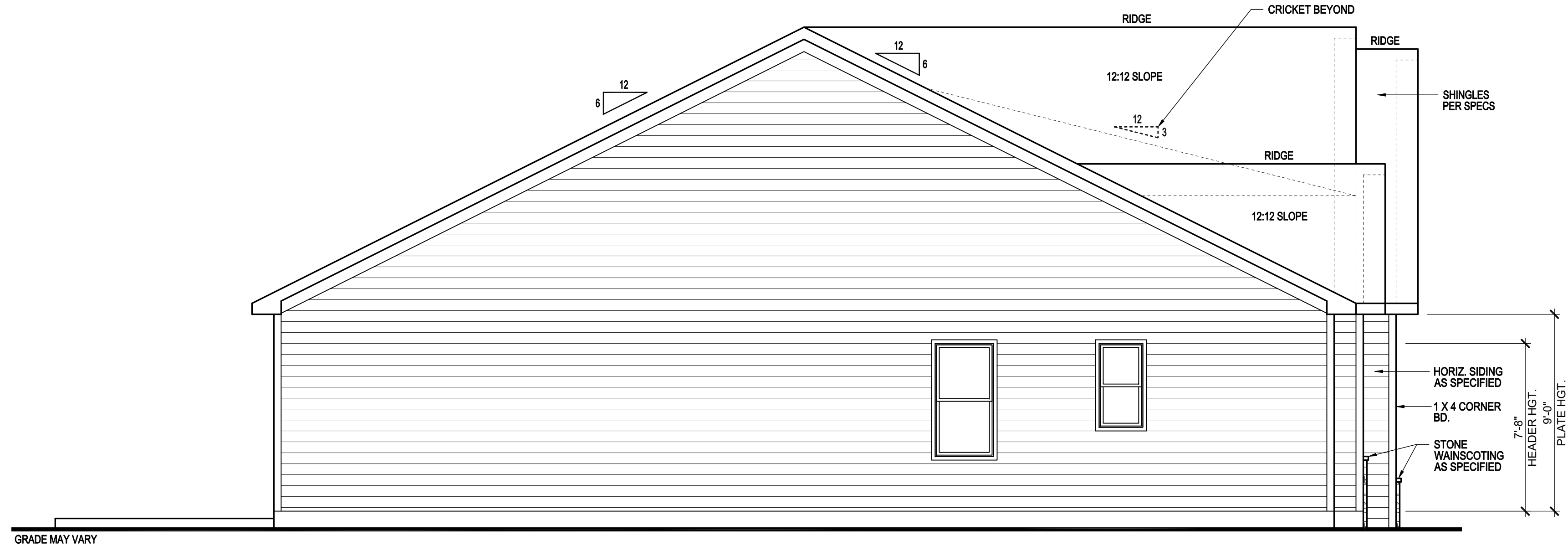
3

Of

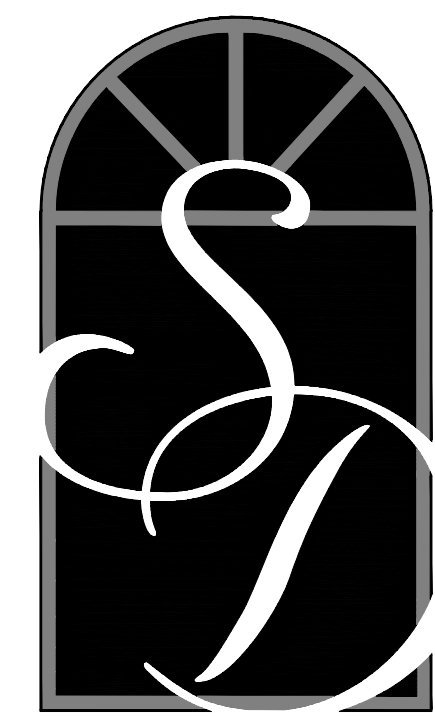
8



1 FRONT ELEVATION 'B'
SCALE: 1/4" = 1'-0"



2 LEFT SIDE ELEVATION 'B'
SCALE: 1/4" = 1'-0"



SOUTH
DESIGNS

P.O. Box 688
Wake Forest, NC 27587
(O) 919-556-2226
(F) 919-556-2228
www.southdesigns.com

Drawn By:	RWB
Checked By:	RWB
Date:	7-28-2025
Revision No.	Revision Date

This plan is the property of South Designs, Inc. and may not be used or reproduced without the expressed written consent of South Designs, Inc. These drawings are offered to the named client for a conditional one time use. The conditional use is limited to the lot or property as specified herein, and only for said location.

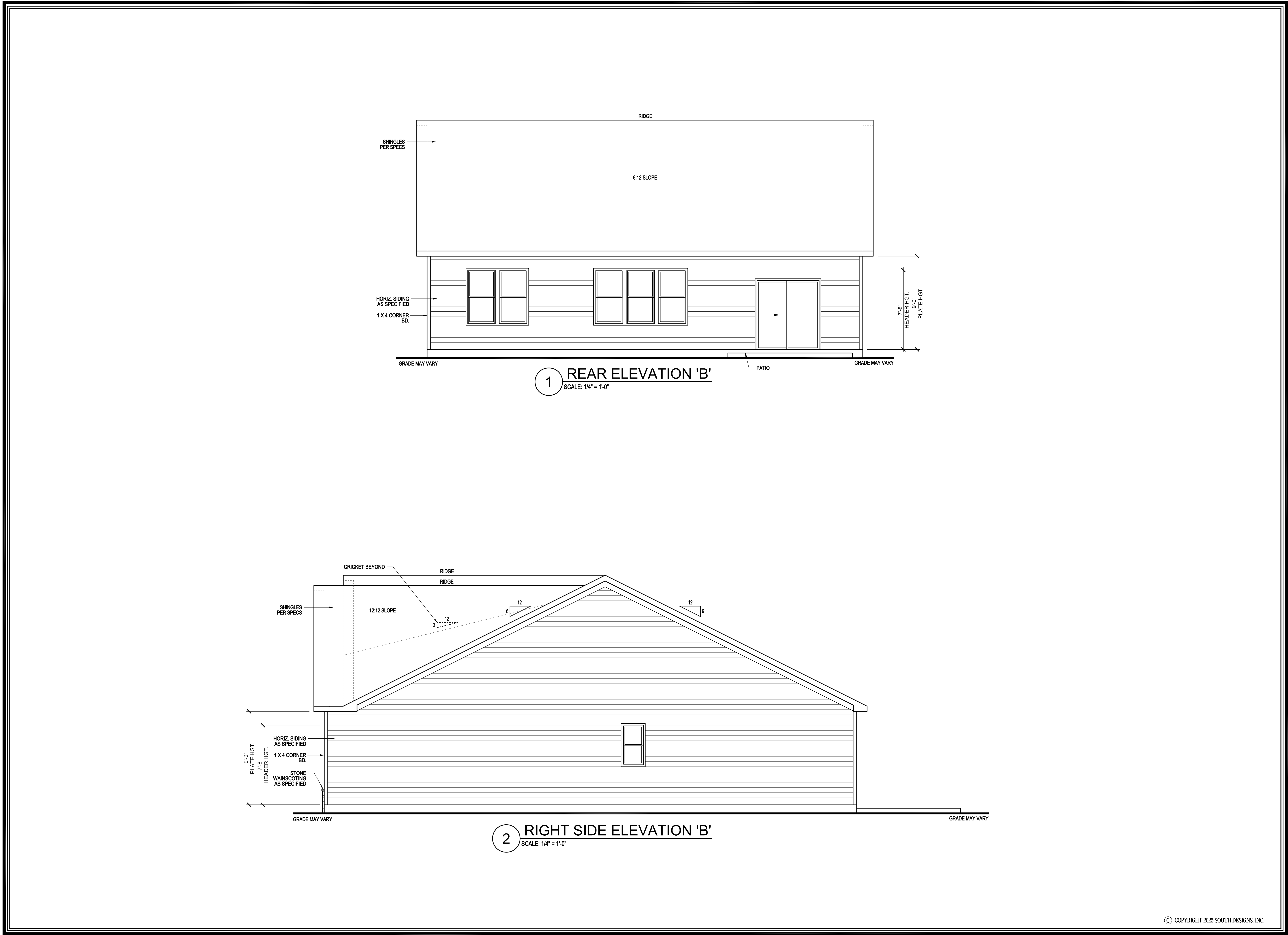
South Designs, Inc. assumes no liability for any home constructed from these plans. Contractor or builder shall verify all dimensions and conditions prior to construction. Caution must be exercised when making changes to these drawings. If changes are made to these drawings, contact South Designs.

Client: PAKT Construction
Ranch Plan

Title: FRONT & LEFT
ELEVATION 'B'

Plan No.
1606

Sheet No. 4 Of 8



SOUTH
DESIGNS

P.O. Box 688
Wake Forest, NC 27587
(O) 919-556-2226
(F) 919-556-2228
www.southdesigns.com

Drawn By: RWB
Checked By: RWB
Date: 7-28-2025

Revision No.	Revision Date

This plan is the property of South Designs, Inc. and may not be used or reproduced without the expressed written consent of South Designs, Inc. These drawings are offered to the named client for a conditional one time use. The conditional use is limited to the lot or property as specified herein, and only for said location.

South Designs, Inc. assumes no liability for any home constructed from these plans. Contractor or builder shall verify all dimensions and conditions prior to construction. Caution must be exercised when making changes to these drawings. If changes are made to these drawings, contact South Designs.

Client:

PAKT Construction
Ranch Plan

Title:

REAR & RIGHT
ELEVATION 'B'

Plan No.

1606

Sheet No.

5

Of

8



SOUTH
DESIGNS

P.O. Box 688
Wake Forest, NC 27587
(O) 919-556-2226
(F) 919-556-2228
www.southdesigns.com

Drawn By: RWB
Checked By: RWB
Date: 7-28-2025

Revision No.	Revision Date

This plan is the property of South Designs, Inc. and may not be used or reproduced without the expressed written consent of South Designs, Inc. These drawings are offered to the named client for a conditional one time use. The conditional use is limited to the lot or property as specified herein, and only for said location.

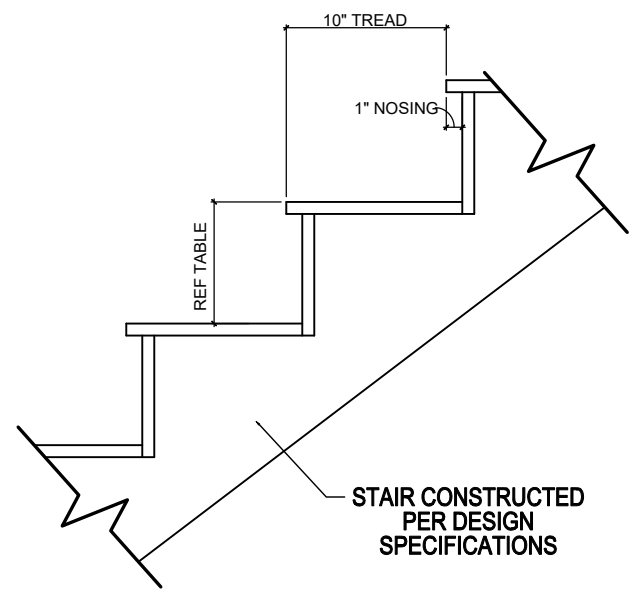
South Designs, Inc. assumes no liability for any home constructed from these plans. Contractor or builder shall verify all dimensions and conditions prior to construction. Caution must be exercised when making changes to these drawings. If changes are made to these drawings, contact South Designs.

PAKT Construction
Ranch Plan

Client:
Title:
FIRST FLOOR
PLAN

Plan No.
1606

Sheet No. 6 Of 8



RISER HEIGHTS PER STAIR CONFIGURATION			
PLATE HEIGHT	10" FLOOR SYSTEM	14" FLOOR SYSTEM	16" FLOOR SYSTEM
8'-1 1/2"	14 RISERS @ 7 11/16"	15 RISERS @ 7 1/2"	15 RISERS @ 7 5/8"
9'-1 1/2"	16 RISERS @ 7 1/2"	16 RISERS @ 7 3/4"	17 RISERS @ 7 7/16"
10'-1 1/2"	17 RISERS @ 7 3/4"	18 RISERS @ 7 9/16"	18 RISERS @ 7 11/16"

2 TYPICAL STAIR DETAIL

SCALE: 3/8\"/>

NOTE:
HANDRAILS SHALL BE PROVIDED ON AT LEAST ONE SIDE OF STAIR TREADS WITH 4\"/>

GUARDS ON ALL HANDRAILS SHALL BE PLACED SO THAT A SPHERE OF 4\"/>

GENERAL NOTES

WALLS:

ALL WALLS ARE DRAWN 4\"/>

SMOKE DETECTORS:
LOCATION AND NUMBER OF DETECTORS SHALL CONFORM TO NEC.

EGRESS:

ALL BEDROOMS MUST HAVE AT LEAST ONE WINDOW WHICH CONFORMS TO R-310 OF THE N.C. BLDG. CODE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY CHOSEN WINDOWS MEET EGRESS REQUIREMENTS AS MANUFACTURERS VARY.

ATTIC ACCESS:

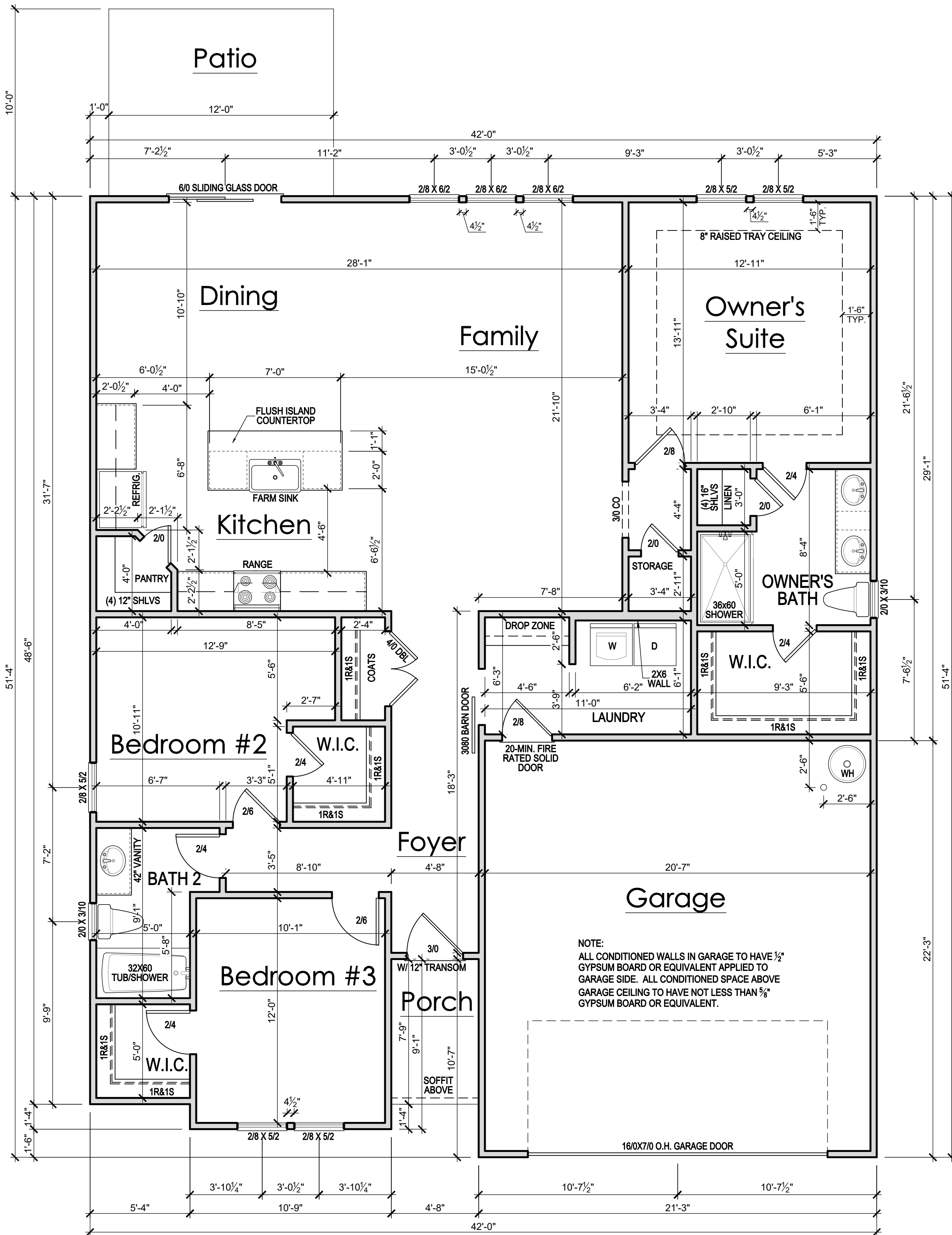
MIN. ATTIC ACCESS SHALL BE PROVIDED BY BUILDER AND LOCATED ON SITE.

WALL/CEILING HGT.

WALL AND CEILING HEIGHT NOTES ARE BASED ON NOMINAL WALL SIZE.
KNEE WALL HEIGHT LABELS FOR WALLS UNDER RAFTERS ASSUME AN EXTRA 2\"/>

SQUARE FOOTAGE

	HEATED SQUARE FT.	UNHEATED SQUARE FT.
FIRST FLOOR	1606	
FRONT PORCH		36
PATIO		120
2 CAR GARAGE		469
TOTAL	1606	625

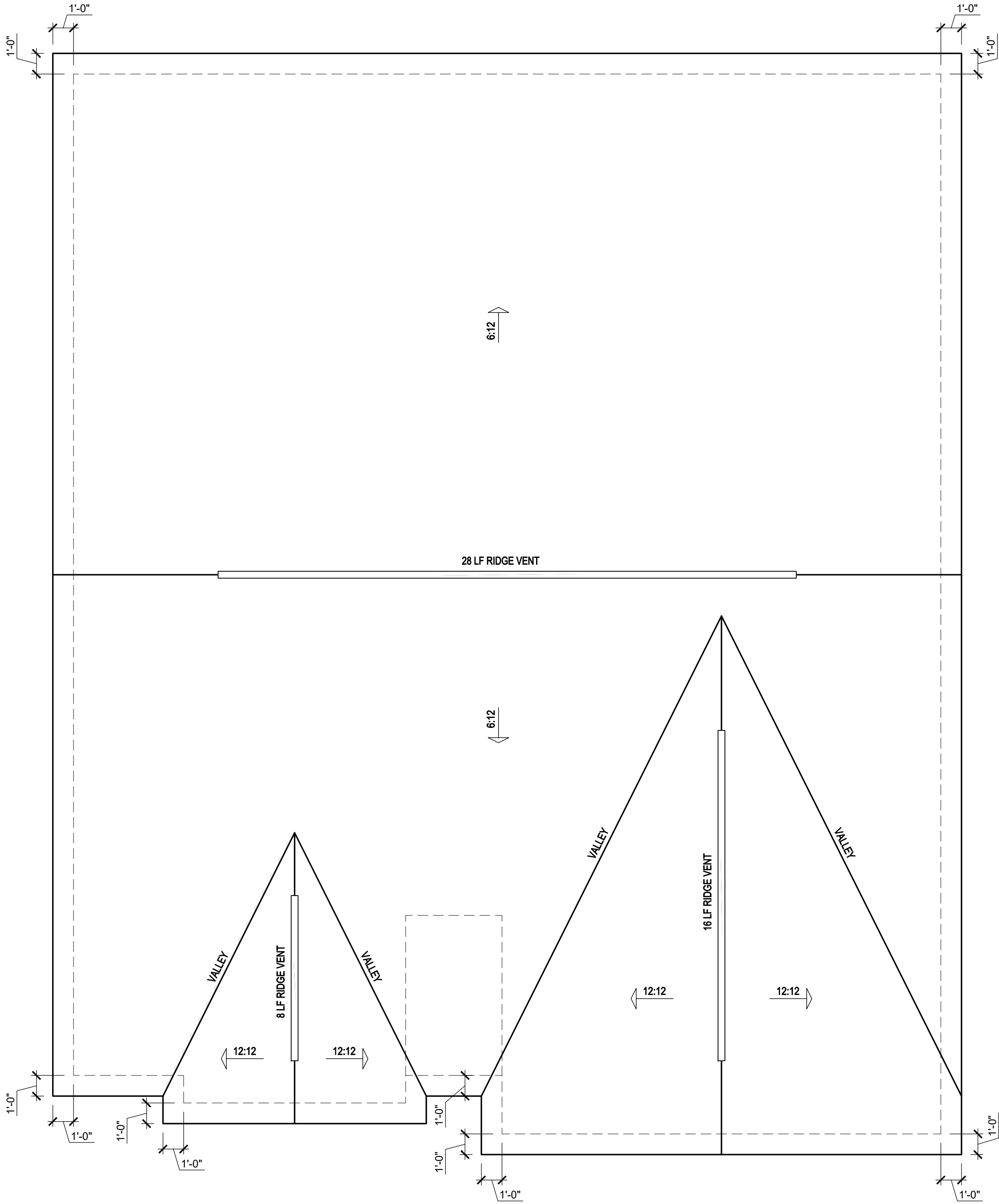


1 FIRST FLOOR PLAN

SCALE: 1/4\"/>

ATTIC VENT SCHEDULE								
PAKT RANCH								
ROOF PLAN 'A'		SQ FTG	2112	AT / NEAR RIDGE			AT / NEAR EAVE	
VENT TYPE	SQ. FT. REQUIRED RANGE	SQ. FT. SUPPLIED	PERCENT OF TOTAL SUPPLIED	POT LARGE (SQ. FT. EACH)	POT SMALL (SQ. FT. EACH)	RIDGE VENT (SQ. FT. PER LF)	EAVE VENT (SQ. IN. EACH)	CONT. VENT (SQ. IN. PER LF)
				0.4236	0.2778	0.125	0.1944	0.0625
RIDGE VENT	2.82 3.52	6.50	50.00	0	0	52.00		
SOFFIT VENTS	4.22 3.52	6.50	50.00				0	104.00
TOTAL (MIN)	7.04 7.04	13.00	100.00	POT VENTS MAY BE REQUIRED IF THERE IS INSUFFICIENT RIDGE AVAILABLE				

* SCHEDULE HAS BEEN CALCULATED ASSUMING EAVE VENTILATION AT 50-60% OF TOTAL AND RIDGE AT 40-50% OF TOTAL REQUIRED VENTILATION



1 ROOF PLAN 'A'
SCALE: 1/4" = 1'-0"



SOUTH
DESIGNS

P.O. Box 688
Wake Forest, NC 27587
(O) 919-556-2226
(F) 919-556-2228
www.southdesigns.com

Drawn By: RWB
Checked By: RWB
Date: 7-28-2025

Revision No.	Revision Date

This plan is the property of South Designs, Inc. and may not be used or reproduced without the expressed written consent of South Designs, Inc. These drawings are offered to the named client for a conditional one time use. The conditional use is limited to the lot or property as specified herein, and only for said location.

South Designs, Inc. assumes no liability for any home constructed from these plans. Contractor or builder shall verify all dimensions and conditions prior to construction. Caution must be exercised when making changes to these drawings. If changes are made to these drawings, contact South Designs.

Client:

PAKT Construction
Ranch Plan

Title:

ROOF PLAN 'A'

Plan No.

1606

Sheet No.

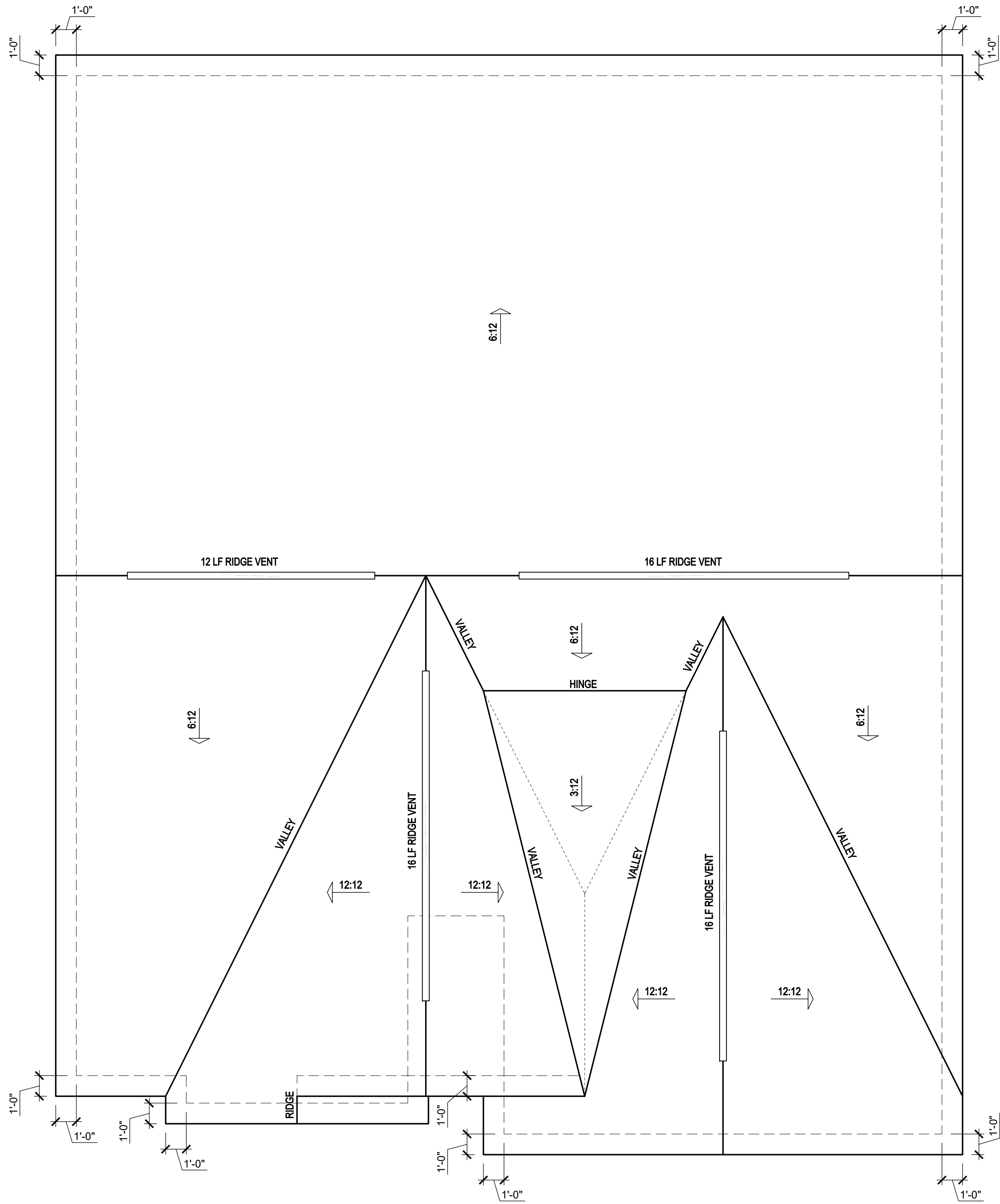
7

Of

8

ATTIC VENT SCHEDULE								
PAKT RANCH								
ROOF PLAN 'B'		SQ FTG		2112		AT / NEAR RIDGE		AT / NEAR EAVE
VENT TYPE	SQ. FT. REQUIRED RANGE	SQ. FT. SUPPLIED	PERCENT OF TOTAL SUPPLIED	POT LARGE (SQ. FT. EACH)	POT SMALL (SQ. FT. EACH)	RIDGE VENT (SQ. FT. PER LF)	EAVE VENT (SQ. IN. EACH)	CONT. VENT (SQ. IN. PER LF)
				0.4236	0.2778	0.125	0.1944	0.0625
RIDGE VENT	2.82 3.52	7.50	50.00	0	0	60.00		
SOFFIT VENTS	4.22 3.52	7.50	50.00				0	120.00
TOTAL (MIN)	7.04 7.04	15.00	100.00	POT VENTS MAY BE REQUIRED IF THERE IS INSUFFICIENT RIDGE AVAILABLE				

* SCHEDULE HAS BEEN CALCULATED ASSUMING EAVE VENTILATION AT 50-60% OF TOTAL AND RIDGE AT 40-50% OF TOTAL REQUIRED VENTILATION



1 ROOF PLAN 'B'
SCALE: 1/4" = 1'-0"



**SOUTH
DESIGNS**
P.O. Box 688
Wake Forest, NC 27587
(O) 919-556-2226
(F) 919-556-2228
www.southdesigns.com

Drawn By:	RWB
Checked By:	RWB
Date:	7-28-2025
Revision No.	Revision Date

This plan is the property of South Designs, Inc. and may not be used or reproduced without the expressed written consent of South Designs, Inc. These drawings are offered to the named client for a conditional one time use. The conditional use is limited to the lot or property as specified herein, and only for said location.

South Designs, Inc. assumes no liability for any home constructed from these plans. Contractor or builder shall verify all dimensions and conditions prior to construction. Caution must be exercised when making changes to these drawings. If changes are made to these drawings, contact South Designs.

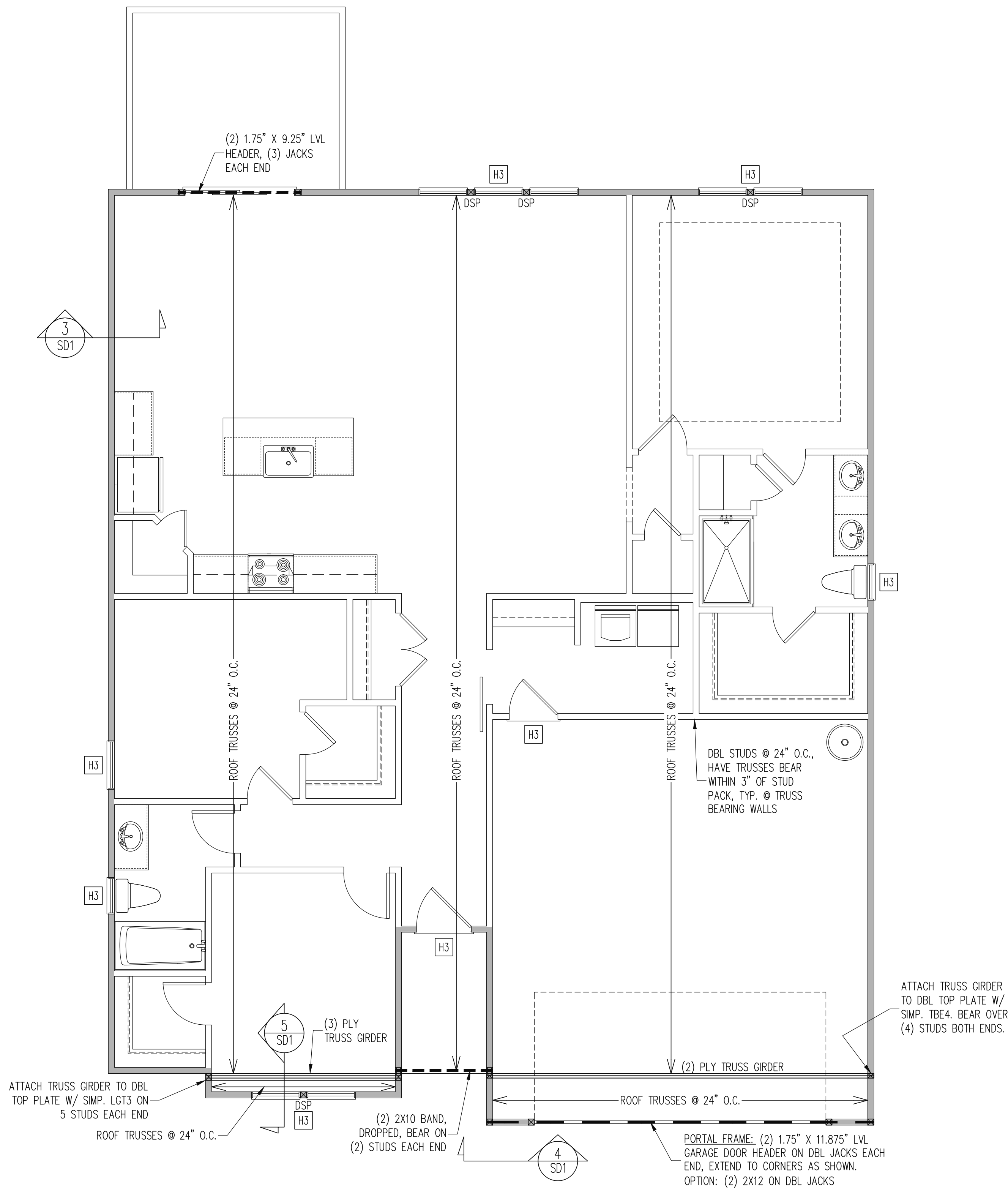
Client: **PAKT Construction
Ranch Plan**

Title: **ROOF PLAN 'B'**

Plan No. **1606**

Sheet No. **8** Of **8**

S1
1 of 5



WALL BRACING

SHADED WALLS:

ALL EXTERIOR STUD WALLS, EXTERIOR SIDE, ARE TO BE CONTINUOUSLY SHEATHED WITH 7/16 APA RATED OSB NAILED TO STUDS WITH 8d NAILS @ 6" O.C. AT PANEL EDGES, 12" O.C. IN PANEL FIELD.

WSP - ONE SIDE OF INTERIOR WALL OR INSIDE OF EXTERIOR WALL WITH 3/8" MIN. THICKNESS WOOD STRUCTURAL PANELING. ATTACH WSP TO STUD WALL WITH 8d NAILS @ 6" O.C. AT PANEL EDGES, 12" O.C. IN PANEL FIELD.

GB - INTERIOR BRACED WALL. 1/2" GB SECURED PER TABLE R602.10.2 OF THE 2018 NCRBC. (FASTENERS @ 7" O.C.) BOTH SIDES OF WALL, OR (FASTENERS @ 4" O.C.) ONE SIDE OF WALL AT STAIRS (BUILDER PERMITTED TO SUBSTITUTE "WSP" FOR ANY "GB" WALL)

2X - SHEATH BOTH SIDES OF STUD WALL WITH 7/16 APA RATED OSB, NAILED TO STUDS WITH 8d NAILS @ 6" O.C. AT PANEL EDGES, 12" O.C. IN PANEL FIELD.

NOTES:
PROVIDED CONTINUOUS SHEATHING = XXX' MIN.

REFERENCE PART 16.02 OF CONSTRUCTION SPECIFICATIONS FOR GENERAL WIND BRACING INFORMATION.

HEADER SCHEDULE

- H1 SINGLE 2X4 TURNED FLAT (A)
H2 (2) 2X4'S ON SINGLE JACKS (B)
H3 (2) 2X10'S ON SINGLE JACKS (C)
H4 (2) 1.75" X 9.25" LVL'S ON DBL JACKS
H5 (3) 2X10'S ON SINGLE JACKS

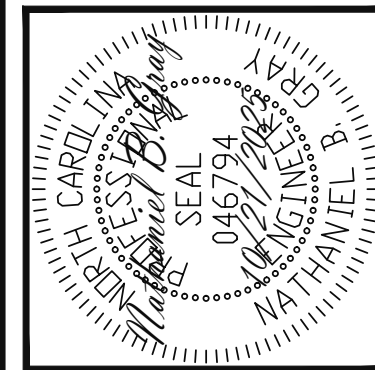
- (A) TYPICAL FOR INTERIOR NON LOAD BEARING WALLS ONLY, ROUGH OPENING 38" MAX.
(B) TYPICAL FOR INTERIOR NON LOAD BEARING WALLS ONLY, ROUGH OPNG 38" TO 74" MAX.
(C) TYPICAL FOR ALL CONDITIONS NOT LISTED IN (A) OR (B) UNO.

NOTES:
-HEADERS IN NON LOAD BEARING INTERIOR WALLS ARE NOT LABELED.

1ST FLOOR FRAMING PLAN

WALLS AND CEILING: 1/4" = 1'-0"

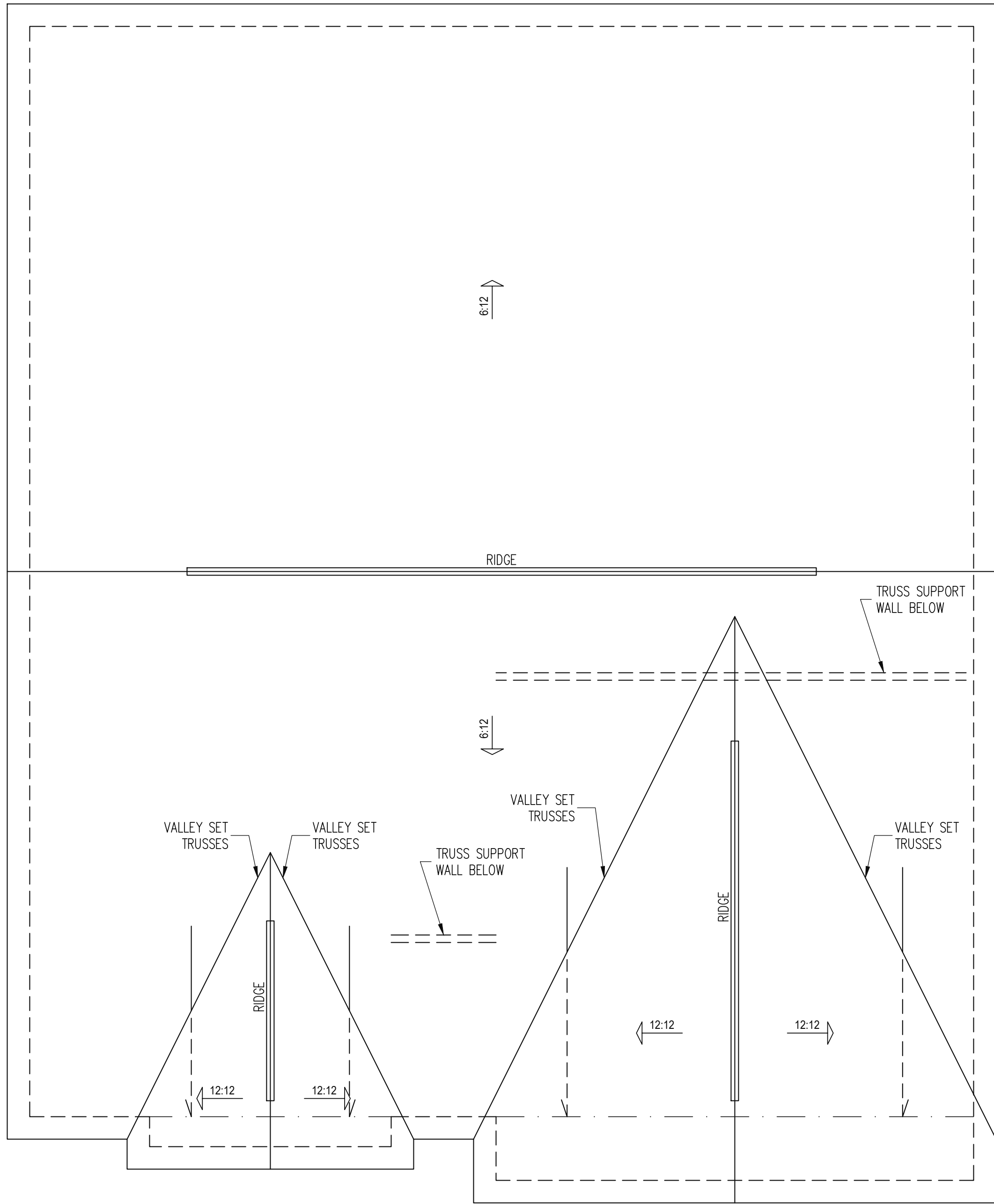
The structural design of this plan is the property of Engineering Tech Associates, P.A. These plans are for the one time use at the location and for the client listed. Engineering Tech Associates, P.A. assumes no liability for these plans if they are reproduced, in whole or in part, for construction at any other location without written permission from Engineering Tech Associates, P.A.



Engineering Tech Associates, P.A.
STRUCTURAL ENGINEERS
License No. C-3870
318 W Millbrook Rd. Unit 201
Raleigh, North Carolina 27609
Phone (919) 844-1661

SCOPE:	PAKT CONSTRUCTION		DATE
	REV #	REF PROJ #	
LOC:	LOT 1 CAROL WOOD		

ENG:	MRC/NBG
DATE	10/21/2025
PARENT	
PROJECT NO.	25-23-023
SHEET NO.	S2
	2 of 5



TRUSS UPLIFT CONNECTORS

EXPOSURE B, 115 MPH, ANY PITCH
24" O.C. MAX ROOF TRUSS SPACING

TRUSSES SHALL BE ATTACHED TO SUPPORT WALL FOR UPLIFT RESISTANCE. CONTINUOUS OSB WALL SHEATHING BELOW PROVIDES CONTINUOUS UPLIFT RESISTANCE TO FOUNDATION. ALL TRUSSES SUPPORTED BY INTERMEDIATE SUPPORT WALLS, KNEEWALLS OR BEAMS SHALL BE ATTACHED TO SUPPORTING MEMBER PER SCHEDULE BELOW.

ROOF SPAN IS MEASURED HORIZONTALLY BETWEEN FURTHEST SUPPORT POINTS.

ROOF SPAN	CONNECTOR
UP TO 28'	NAILING PER TABLE 602.3(1) NCRBC 2018 EDITION

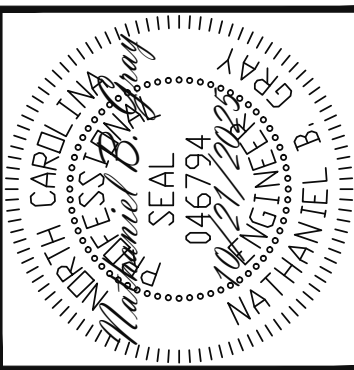
OVER 28'	(1) SIMPSON H2.5A HURRICANE CLIP TO DBL TOP PLATE OR BEAM
----------	---

FRAMING NOTES

ROOF ONLY
-ROOF TRUSSES PER MANU. TYPICAL U.N.O.
-VERIFY ALL HEEL HEIGHTS, ROOF PITCHES,
AND ARCHITECTURAL OVERHANGS PRIOR TO
CONSTRUCTION

ROOF FRAMING PLAN ELEVATION A

1/4" = 1'-0"



STRUCTURAL ENGINEERS
License No. C-3870
318 W Millbrook Rd. Unit 201
Raleigh, North Carolina 27609
Phone (919) 844-1661

Engineering Tech
ASSOCIATES, P.A.

PAKT CONSTRUCTION		ENGINEERING ADDENDUM	
SCOPE	REV #	REF PROJ #	DATE
LOC:		LOT 1 CAROL WOOD	

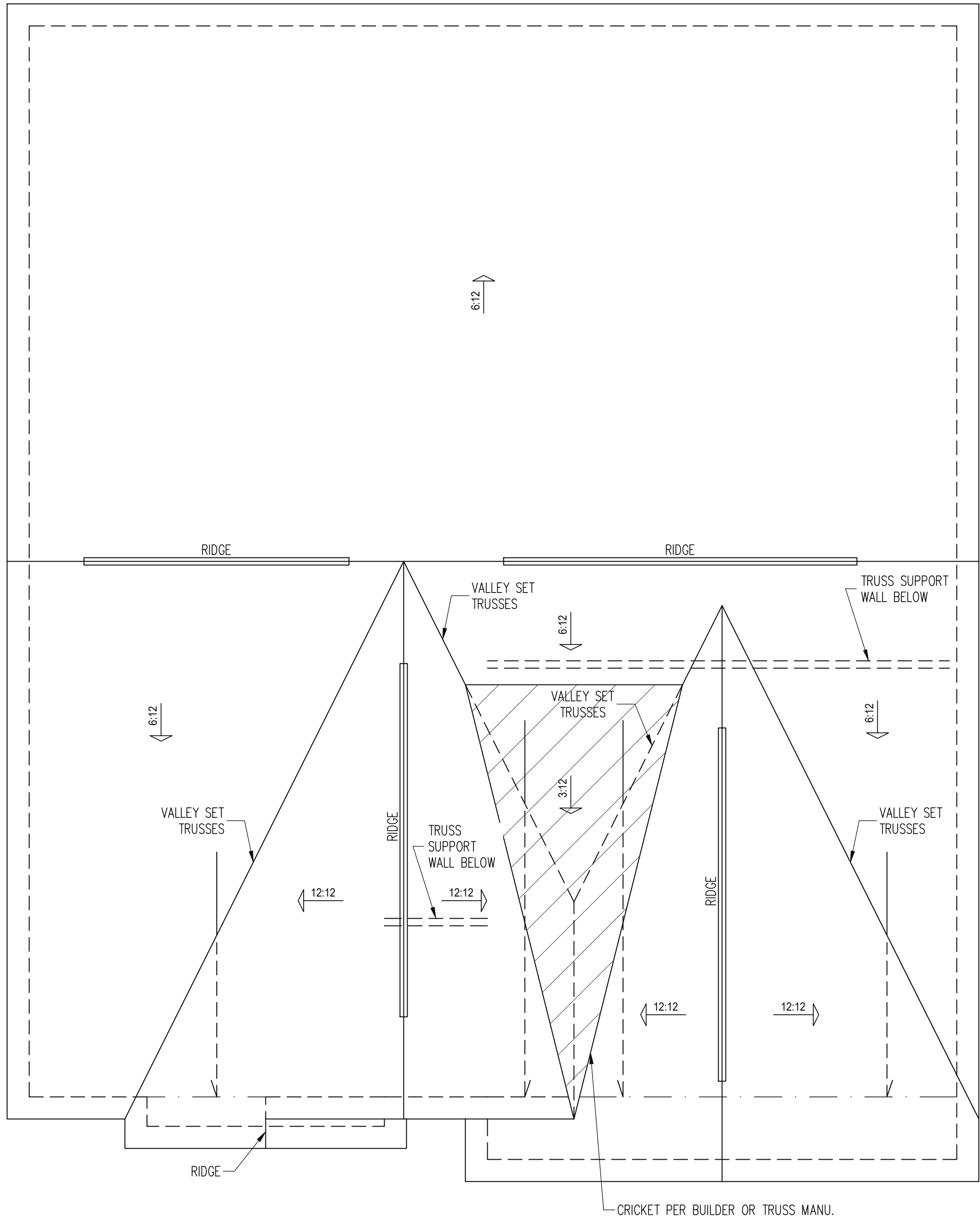
ENG: MRC/NBG
DATE 10/21/2025

PARENT

PROJECT NO.
25-23-023

SHEET NO.
S3
3 of 5

The structural design of this plan is the property of Engineering Tech Associates, P.A. These plans are for the one time use at the location and for the client listed. Engineering Tech Associates, P.A. assumes no liability for these plans if they are reproduced, in whole or in part, for construction at any other location without written permission from Engineering Tech Associates, P.A.



TRUSS UPLIFT CONNECTORS

EXPOSURE B, 115 MPH, ANY PITCH
24" O.C. MAX ROOF TRUSS SPACING

TRUSSES SHALL BE ATTACHED TO SUPPORT WALL FOR UPLIFT RESISTANCE. CONTINUOUS OSB WALL SHEATHING BELOW PROVIDES CONTINUOUS UPLIFT RESISTANCE TO FOUNDATION. ALL TRUSSES SUPPORTED BY INTERMEDIATE SUPPORT WALLS, KNEEWALLS OR BEAMS SHALL BE ATTACHED TO SUPPORTING MEMBER PER SCHEDULE BELOW.

ROOF SPAN IS MEASURED HORIZONTALLY BETWEEN FURTHEST SUPPORT POINTS.

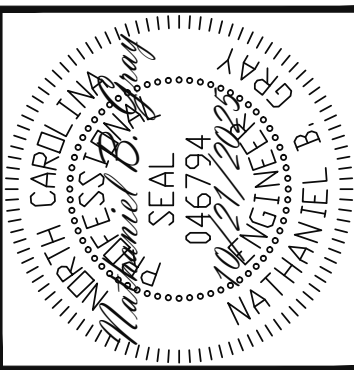
ROOF SPAN UP TO 28'	CONNECTOR NAILING PER TABLE 602.3(1) NCRBC 2018 EDITION
OVER 28'	(1) SIMPSON H2.5A HURRICANE CLIP TO DBL TOP PLATE OR BEAM

FRAMING NOTES

ROOF ONLY
-ROOF TRUSSES PER MANU. TYPICAL U.N.O.
-VERIFY ALL HEEL HEIGHTS, ROOF PITCHES,
AND ARCHITECTURAL OVERHANGS PRIOR TO
CONSTRUCTION

ROOF FRAMING PLAN
ELEVATION B

1/4" = 1'-0"



Engineering Tech
ASSOCIATES, P.A.

STRUCTURAL ENGINEERS
License No. C-3870
318 W Millbrook Rd. Unit 201
Raleigh, North Carolina 27609
Phone (919) 844-1661

PAKT CONSTRUCTION		ENGINEERING ADDENDUM	
SCOPE	LOC	REV #	REF PROJ #
LOT 1 CAROL WOOD			

ENG: MRC/NBG
DATE 10/21/2025

PARENT

PROJECT NO.
25-23-023

SHEET NO.
S4
4 of 5

The structural design of this plan is the property of Engineering Tech Associates, P.A. These plans are for the one time use at the location and for the client listed. Engineering Tech Associates, P.A. assumes no liability for these plans if they are reproduced, in whole or in part, for construction at any other location without written permission from Engineering Tech Associates, P.A.

CONSTRUCTION SPECIFICATIONS

1.01

CONSTRUCTION SHALL MEET THE REQUIREMENTS OF THE NORTH CAROLINA RESIDENTIAL CODE, 2018 EDITION.

1.02

DIMENSIONS SHOWN SHALL GOVERN OVER SCALE ON THESE DRAWINGS.

1.03

METHODS, PROCEDURES AND SEQUENCES OF CONSTRUCTION ARE THE RESPONSIBILITY OF THE CONTRACTOR, WHO SHALL TAKE ALL NECESSARY PRECAUTIONS TO MAINTAIN AND INSURE THE INTEGRITY OF THE STRUCTURE AT ALL STAGES OF CONSTRUCTION.

2.01

DESIGN LOADS SHALL CONFORM WITH THE TABLE BELOW:

USE	LIVE LOAD (PSF)	DEAD LOAD (PSF)
BALCONIES, DECKS, ATTICS WITH FIXED STAIR ACCESS, DWELLING UNITS INCLUDING ATTICS WITH FIXED STAIR ACCESS, STAIRS, FIRE ESCAPES	40	10
GARAGES (PASSENGER CARS ONLY)	50	---
ATTICS (NO STORAGE, LESS THAN 5' HEADROOM)	10	10
ATTICS (WITH STORAGE)	20	10
ROOF	20	10 (15 FOR VAULTS)

NOTES:

- INDIVIDUAL STAIR TREADS ARE TO BE DESIGNED FOR THE UNIFORMLY DISTRIBUTED LIVE LOAD OF 40 PSF OR A 300 LB. CONCENTRATED LOAD ACTING OVER AN AREA OF 4 SQ. WHICHEVER PRODUCES THE GREATER STRESS.
- BUILDER TO VERIFY DEAD LOAD DOES NOT EXCEED 10 PSF WHEN HEAVY FLOOR OR ROOF FINISHES SUCH AS TILE OR SLATE ARE UTILIZED. NOTIFY ENGINEERING UNDER THESE CONDITIONS.

2.02

INTERIOR WALLS: 5 PSF LATERAL.

2.03

BASIC WIND DESIGN VELOCITY OF 115 MPH.

2.04

SOIL BEARING CAPACITY 2000 PSF (PRESUMPTIVE).

3.01

WIDE FLANGE BEAMS AND TEE SECTIONS SHALL CONFORM TO ASTM A992 MINIMUM GRADE.

3.02

SQUARE AND RECTANGULAR TUBING SHALL CONFORM TO ASTM A500 GRADE B MINIMUM GRADE.

3.03

STEEL PIPE SHALL CONFORM TO ASTM A53 GRADE B, TYPE S, MINIMUM GRADE.

3.04

ALL OTHER STRUCTURAL STEEL SHALL CONFORM TO ASTM A36 MINIMUM GRADE.

3.05

STRUCTURAL STEEL CONSTRUCTION SHALL MEET THE REQUIREMENTS OF THE AISC SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS.

4.01

WELDING ELECTRODES SHALL BE E70XX AND ALL WELDING SHALL BE PERFORMED BY AN AWS CERTIFIED WELDER.

5.01

CAST IN PLACE CONCRETE SHALL BE OF NORMAL WEIGHT, 6% AIR ENTRAINMENT, AND SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS TYP UNO. ALL CONCRETE, INCLUDING CONCRETE FOR FOOTINGS, IS TO BE CAST IN PLACE, TYP UNO.

5.02

REINFORCED CAST IN PLACE CONCRETE SHALL BE PROPORTIONED, MIXED AND PLACED IN ACCORDANCE WITH THE SPECIFICATIONS OF ACI 318, LATEST EDITION.

5.03

SLABS ON GRADE, IF ANY, SHALL CONTAIN SYNTHETIC POLYPROPYLENE FIBRILLATED MICRO FIBERS, FIBER LENGTH 1 1/2", DOSAGE RATE 1 1/2 LBS/CU YD. SLAB TO BE PLACED ON A 6 MIL VAPOR BARRIER ON 2" MIN GRANULAR FILL ON SOIL WITH 90% MIN STANDARD PROCTOR DENSITY. VAPOR BARRIER MAY BE OMITTED FOR SLABS NOT IN ENCLOSED AREAS.

6.01

REBAR SHALL BE DEFORMED STEEL CONFORMING TO ASTM A615 GRADE 60 TYP UNO

6.02

LAP SPLICES SHALL BE CLASS B AS DEFINED BY ACI 318, TYP UNO

6.03

WIRE REINFORCEMENT SHALL BE 9 GA AND SHALL CONFORM TO ASTM A1064.

7.01

CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C90 AND C55, NORMAL WEIGHT, FW = 1500 PSI MIN.

7.02

CLAY MASONRY UNITS SHALL CONFORM TO ASTM C62-17 GRADE SW

7.03

MORTAR SHALL BE TYPE S MORTAR AND GROUT SHALL CONFORM TO ASTM C476, MIN COMPRESSIVE STRENGTH OF 2000 PSI.

7.04

MASONRY CONSTRUCTION SHALL CONFORM TO THE SPECIFICATIONS OF ACI 530

7.05

LADDER WIRE REINFORCEMENT SHALL CONFORM TO ASTM A951. 6" MIN LAPS FOR CONTINUOUS WALL APPLICATIONS.

8.01

BOLTS SHALL CONFORM TO ASTM A307 MINIMUM GRADE TYP UNO. INSTALL STANDARD STEEL WASHERS (ASTM F444-07a) FOR THE NUT / BOLT HEAD WHEN BOLTING WOOD MEMBERS

8.02

LAG SCREWS SHALL CONFORM TO ANSI/ASME STANDARD B18.2.1-1981. PILOT HOLES SHALL BE USED FOR LAG SCREW INSTALLATION AND SHALL BE BORED ACCORDING TO NDS SPECIFICATIONS. INSTALL STANDARD STEEL WASHERS (ASTM F444-07a) FOR SCREW HEAD

8.03

ANCHOR RODS AND BOLTS SHALL CONFORM TO ASTM F1554-15 GRADE 36 UNO. BENT ANCHOR BOLTS SHALL HAVE A 2" MIN HOOK UNO

9.01

NAILS, SPIKES AND STAPLES SHALL CONFORM TO ASTM F 1667-05. NAILS ARE TO BE COMMON WIRE OR BOX

10.01

SOLID SAWN WOOD FRAMING DESIGN IS BASED ON NO. 2 SPRUCE PINE FIR OR SYP #2 FOR JOISTS, PARTERS, BEAMS, STUDS, ETC.

11.01

LVL OR PS: MINIMUM ALLOWABLE DESIGN STRESSES ARE AS FOLLOWS:
E= 1.3 X 10⁶ PSI, F_b = 2800 PSI, F_v = 285 PSI, F_c = 760 PSI
L3: MINIMUM ALLOWABLE DESIGN STRESSES ARE AS FOLLOWS:
E= 1.3 X 10⁶ PSI, F_b = 1700 PSI, F_v = 400 PSI, F_c = 880 PSI

12.01

LUMBER IN CONTACT WITH THE GROUND, CONCRETE OR MASONRY SHALL BE PRESSURE TREATED IN ACCORDANCE WITH AWWA STANDARD C-15. ALL OTHER EXPOSED LUMBER SHALL BE TREATED IN ACCORDANCE WITH AWWA STANDARD C-2 OR BY ANY METHOD GIVING EQUAL PROTECTION. THE BUILDING CODE OFFICE MAY ALSO APPROVE A NATURAL DECAY RESISTANT WOOD PER SECTION 19-6(a)

13.01

FUTCH PLATE BEAMS SHALL CONSIST OF A CONTINUOUS STEEL PLATE BOLTED BETWEEN TWO PIECES OF CONTINUOUS LUMBER AS SIZED ON THE PLANS. BOLT PIECES TOGETHER USING 1/2" Ø BOLTS SPACED AT 24" O.C. STAGGERED TOP TO BOTTOM OF THE BEAM. MAINTAIN A 2" EDGE DISTANCE. PLACE TWO BOLTS, ONE ABOVE THE OTHER, 6" ± 2" FROM EACH END OF THE BEAM.

14.01

STEEL, ENGINEERED LUMBER, AND FUTCH PLATE BEAMS BEARING ON A STUD WALL SHALL BEAR AS FOLLOWS:
1-WHEN THE BEAM IS PERPENDICULAR TO, OR SKewed RELATIVE TO THE WALL, THE BEAM SHALL BEAR FULL WIDTH ON THE SUPPORTING WALL INDICATED AND SHALL BE SUPPORTED BY A MINIMUM OF THREE GANGED STUDS, OR A GANGED STUD COLUMN WITH A NUMBER OF STUDS SUCH THAT THE STUD COLUMN IS AT LEAST AS WIDE AS THE TRUE WIDTH OF THE BEAM BEING SUPPORTED, WHICHEVER IS GREATER, TYP UNO. FOR THE SKewed CONDITION PARTICULAR CARE SHALL BE TAKEN TO ENSURE STUD COLUMN IS CENTERED ON THE BEAM.
2-BEAMS BEARING ONTO THE END OF A STUD WALL PARALLEL TO THE BEAM SHALL BEAR A MINIMUM OF 4 1/2" ONTO THE WALL AND BE SUPPORTED BY A TYP. STUD GANGED COLUMN TYP UNO.

15.01

SOLID SAWN LUMBER JOISTS THAT ARE GANGED TO FORM A BEAM SHALL HAVE ADJACENT MEMBERS IN THE BEAM NAILED TOGETHER WITH THREE ROWS OF 10d NAILS Ø 16" O.C. FOR 2X10 OR LARGER, TWO ROWS OF 10d NAILS Ø 16" O.C. FOR 2X8, ONE ROW OF 10d NAILS Ø 16" O.C. FOR 2X6 OR SMALLER. STAGGER ROWS 5" MIN.

15.02

L/V MEMBERS THAT ARE GANGED TO FORM A BEAM SHALL HAVE ADJACENT MEMBERS IN THE BEAM FASTENED TOGETHER PER MANUFACTURER'S RECOMMENDATIONS, TYP UNO.

16.01

STUD WALLS SHALL CONSIST OF 2X4 STUDS SPACED AT 16" O.C. UNO. STUDS SHALL BE CONTINUOUS FROM SOLE PLATE AT FLOOR TO DOUBLE TOP PLATE AT THE CEILING OR ROOF. NO INTERMEDIATE BANDS OR PLATES SHALL CAUSE DISCONTINUITIES IN A STUD WALL EXCEPT AS REQUIRED FOR DOOR OR WINDOW OPENINGS. THE KING STUDS FOR SUCH OPENINGS SHALL BE CONTINUOUS, TYP UNO.
MAX ALLOWABLE WALL HEIGHTS FOR EXTERIOR STUD WALLS, WITH SOLE PLATE AND DEL TOP PLATE AND 7/16" O.S.B EXTERIOR BRACING AND ROW OF 2X4 / 2X6 FURRING AT 6" HEIGHT (AND AT 16" HEIGHT FOR TALL WALLS), TYP UNO:
2X4 Ø 16" O.C.: 11'-1 1/2"
2X6 Ø 16" O.C.: 17'-0"
2X4 Ø 12" O.C.: 12'-1 1/2"
2X6 Ø 12" O.C.: 18'-8"
DBL 2X4 Ø 16" O.C.: 15'-4"
DBL 2X6 Ø 16" O.C.: 21'-0"

17.01

KING STUDS FOR OPENINGS IN EXTERIOR WALLS SHALL BE AS FOLLOWS:
NUMBER OF KING STUDS
MAX OPENING WIDTH: 5'-0" 8'-0" 12'-0" 17'-0" 21'-0"
STUD SIZE: 2X6 2 1 1 2 2 2
2X8 1 1 1 2 1 2

18.01

MATERIAL OR MEMBER SIZE SUBSTITUTIONS OR PLAN DEVIATIONS REQUIRE THE WRITTEN AUTHORIZATION OF THE DESIGNER. UNAUTHORIZED DEVIATIONS ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

19.01

THE STRUCTURAL DESIGN OF THIS PLAN IS THE PROPERTY OF ENGINEERING TECH ASSOCIATES (ETA). THESE PLANS ARE FOR THE ONE TIME USE, AT THE LOCATION INDICATED AND FOR THE CLIENT LISTED. ETA ASSUMES NO LIABILITY FOR THESE PLANS IF THEY ARE REPRODUCED, IN WHOLE OR IN PART, FOR CONSTRUCTION AT ANY OTHER LOCATION WITHOUT WRITTEN PERMISSION FROM ETA.

DECK SPECIFICATIONS

1.

A DECK IS AN EXPOSED EXTERIOR WOOD FLOOR STRUCTURE WHICH MAY BE ATTACHED TO A STRUCTURE OR BE FREE STANDING. ROOFED PORCHES, OPEN OR SCREENED IN, MAY BE CONSTRUCTED USING THESE PROVISIONS.

2.

SUPPORT POSTS SHALL BE SUPPORTED BY A FOOTING.

3.

WHEN ATTACHED TO A STRUCTURE, THE STRUCTURE TO WHICH ATTACHED SHALL HAVE A TREATED WOOD BAND FOR THE LENGTH OF THE DECK, OR CORROSION RESISTANT FLASHING SHALL BE USED TO PREVENT MOISTURE FROM COMING IN CONTACT WITH THE UNTREATED FRAMING OF THE STRUCTURE. THE DECK BAND AND THE STRUCTURE BAND SHALL BE CONSTRUCTED IN CONTACT WITH EACH OTHER EXCEPT AT BRICK VENEER AND WHERE PLYWOOD SHEATHING IS REQUIRED AND PROPERLY FLASHED. SIDING SHALL NOT BE INSTALLED BETWEEN THE STRUCTURE AND THE DECK BAND. IF ATTACHED TO A BRICK STRUCTURE, NEITHER FLASHING NOR A TREATED BAND FOR THE BRICK STRUCTURE IS REQUIRED. IN ADDITION, THE TREATED DECK BAND SHALL BE CONSTRUCTED IN CONTACT WITH THE BRICK

4.

WHEN THE DECK IS SUPPORTED AT THE STRUCTURE BY ATTACHING THE DECK TO THE STRUCTURE, THE FOLLOWING ATTACHMENT SCHEDULES SHALL APPLY FOR ATTACHING THE DECK BAND TO THE STRUCTURE:
A. ALL STRUCTURES EXCEPT BRICK STRUCTURES
B. BRICK VENEER STRUCTURES
C. IF THE DECK BAND IS SUPPORTED BY A 1/2" MINIMUM MASONRY LEDGE ALONG THE FOUNDATION WALL, 5/8" Ø BOLTS SPACED Ø 48" O.C. MAY BE USED FOR SUPPORT.
D. OTHER MEANS OF SUPPORT, SUCH AS JOIST HANGERS, MAY BE USED TO CONNECT DECK JOISTS TO A TREATED STRUCTURE BAND
E. ORDERS SHALL BEAR DIRECTLY ON POSTS OR BE CONNECTED TO THE SIDES OF POSTS WITH 2 - 5/8" Ø BOLTS
F. FLOOR DECKING SHALL BE NO. 2 GRADE TREATED SOUTHERN PINE OR EQUIVALENT. THE MINIMUM FLOOR DECKING THICKNESS SHALL BE AS FOLLOWS:

JOIST SPAN

DECKING

12" O.C.
16" O.C.
24" O.C.
32" O.C.

1" S4S
1" T&G
1 1/4" S4S
2" S4S

POST SIZE

MAX POST HEIGHT

4X4
6X6
ENGINEERED

8'
20' +

NOTES: 1) THIS TABLE IS BASED ON NO. 2 TREATED SOUTHERN PINE POSTS.
2) THIS TABLE IS BASED ON A MAXIMUM TRIBUTARY AREA OF 128 SQ. FT.
3) POST HEIGHT IS FROM TOP OF FOOTING TO BOTTOM OF GIRDER.

10.

DECKS SHALL BE BRACED TO PROVIDE LATERAL STABILITY BY ONE OF THE FOLLOWING METHODS:
A. WHEN THE DECK FLOOR HEIGHT IS LESS THAN 4'-0" AND THE DECK IS ATTACHED TO THE STRUCTURE IN ACCORDANCE WITH SECTION 4, LATERAL BRACING IS NOT REQUIRED.
B. 4X4 WOOD KNEE BRACES MAY BE PROVIDED ON EACH COLUMN IN BOTH DIRECTIONS. THE KNEE BRACES SHALL ATTACH TO EACH POST AT A POINT NOT LESS THAN 1/3 OF THE POST LENGTH FROM THE TOP OF THE POST, AND THE BRACES SHALL BE ANGLED BETWEEN 45° AND 60° FROM THE HORIZONTAL. KNEE BRACES SHALL BE ATTACHED AT THE ENDS TO THE GIRDER AND THE POST WITH ONE - 5/8" Ø BOLT
C. FOR FREE STANDING DECKS WITHOUT KNEE BRACES OR DIAGONAL BRACING, LATERAL STABILITY MAY BE PROVIDED BY EMBEDDING THE POSTS IN CONCRETE IN ACCORDANCE WITH THE FOLLOWING:
D. 2X6 DIAGONAL VERTICAL CROSS BRACING SHALL BE PROVIDED IN TWO PERPENDICULAR DIRECTIONS FOR FREE STANDING DECKS OR PARALLEL TO THE STRUCTURE AT THE EXTERIOR COLUMN LINE FOR ATTACHED DECKS. THE BRACES SHALL BE ATTACHED TO THE POSTS WITH ONE - 5/8" Ø BOLT AT EACH END OF THE BRACE.

NOTES: 1) ALL NAILS AND BOLTS ARE TO BE HOT DIPPED GALVANIZED.
2) MINIMUM EDGE DISTANCE FOR BOLTS IS 2 1/2"
3) NAILS MUST PENETRATE THE SUPPORTING STRUCTURE BAND A MINIMUM OF 1 1/2".

1/2" Ø ANCHOR BOLTS WITH MIN. OF 7" OF EMBEDMENT Ø 6"-0" O.C., 12" FROM ENDS OF SOLE PLATE

2X4 P.T. SILL PLATE

WELDED WIRE FABRIC

BRICK VENEER

FND DRAINAGE PER CODE

WASHED STONE

8" MASONRY BLOCK

POURED CONCRETE FOOTING PER PLAN

1 SECTION
S1
TYPICAL FND WALL, POURED CONC SLAB 3/4" = 1'-0"

2 SECTION
S1
TURN DOWN SLAB @ PORCH 3/4" = 1'-0"

CONTINUOUS ROOF SHEATHING

ENGINEERED ROOF TRUSS. SEE ARCHITECTURAL PLANS FOR OVERHANG DETAILS.

BRACED WALL PANEL

ANCHOR BOLTS PER FND DETAIL

SLAB BY OTHERS

3 SECTION
S2
TYPICAL BRACED WALL PANEL CONNECTION 3/4" = 1'-0"

TRUSS GIRDER PER PLANS

TRUSS BEARING ENHANCER PER PLANS.

DBL TOP PLATE

STUD COLUMN CENTERED BELOW TRUSS GIRDER. SEE PLANS FOR NUMBER OF STUDS.

5 SECTION
S2
TRUSS BEARING ENHANCER, TYPICAL 3/4" = 1'-0"

(2) CONT. 2X TOP PLATES, EXTEND EACH END INTO ADJACENT WALL. NAIL SPLICES WITH 8-16d NAILS PER SPLICE/LAP.

CONT. 2X PLATE WITH 10d NAILS AT 16" O.C. INTO HEADER/BEAM

7/16" O.S.B. OR 15/32" PLYWOOD EXTERIOR WALL SHEATHING AT UNSHADED AREAS (BEAM, INFILL WALL ABOVE BEAM, AND CENTER WALL). NAIL SHEATHING TO ALL SUPPORTS (STUDS, PLATES, BLOCKING, ETC.) WITH 8d NAILS AT 6" O.C. AT SHEET EDGES AND 12" O.C. IN THE FIELD.

WHERE FULL HEIGHT PANEL WIDTH EXCEEDS 16", PROVIDE ADDITIONAL STUDS AT 16" O.C. NAIL SHEATHING TO ALL STUDS WITH 8d NAILS AT 3" O.C.

FOR A PANEL SPLICE (IF NEEDED), PANEL EDGES SHALL OCCUR OVER AND BE NAILED TO COMMON BLOCKING AND OCCUR WITHIN MIDDLE 24" OF WALL HEIGHT. ONE ROW OF 3" O.C. NAILING IS REQUIRED IN EACH PANEL EDGE.

7/16" O.S.B. OR 15/32" PLYWOOD EXTERIOR WALL SHEATHING. AT SHADED AREAS NAIL SHEATHING TO ALL SUPPORTS (STUDS, PLATES, BLOCKING, ETC.) WITH 8d NAILS AT 3" O.C.

(2)2x STUD MIN. AT START AND END OF WALL SEGMENTS EACH SIDE OF OPENING. SEE PLANS FOR ADDITIONAL STUDS

2x4 P.T. PLATE WITH TWO 1/2" DIA x 7" EMBED ANCHOR BOLTS WITH A 3/16"x2"x2" PLATE WASHERS OR ADDITIONAL HOLDOWN PER PLANS. OPTION: (2) 5/8" DIA. THREADED RODS INSTALLED PER SECTION R602.10.4.3 OF THE NCRBC, LATEST EDITION.

MINIMUM 3"x11 1/2" CONTINUOUS BEAM FULL LENGTH OF FRAME, SEE PLANS FOR SIZE

NAIL THE SHEATHING IN SHADED AREA TO BEAM WITH 8d NAILS AT 3" O.C. EACH WAY

(2) ROWS 16d NAILS AT 3" O.C.

(2) SIMPSON CS16 x 48" LONG COIL STRAPS WITH 10d NAILS EACH HOLE ON INSIDE FACE OF WALL

CONCRETE OR MASONRY FND WALL. MASONRY FND WALLS LESS THAN 48" WIDE SHALL BE REINFORCED PER SECTION R602.10.4.3 OF THE NCRBC, LATEST EDITION.

4 SECTION
S2
PORTAL FRAME WALL 3/4" = 1'-0"

Engineering Tech Associates, P.A.

STRUCTURAL ENGINEERS
License No. C33870
318 W. Millbrook Rd. Unit 201
Raleigh, North Carolina 27609
Phone (919) 844-1661

PAK CONSTRUCTION
ENGINEERING ADDENDUM
REV # REF PROJ # DATE
SCOPE: LOT 1 CAROL WOOD
LOC: LOT 1 CAROL WOOD

ENG: MRC/NBG
DATE: 10/21/2025
PARENT
PROJECT NO.
25-23-023
SHEET NO.
SD1
5 of 5