- IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY THAT ALL DIMENSIONS, ROOF PITCHES, AND SQUARE FOOTAGE ARE CORRECT PRIOR TO CONSTRUCTION. K&A HOME DESIGNS, INC. IS NOT RESPONSIBLE FOR ANY DIMENSIONING, ROOF PITCH, OR SQUARE FOOTAGE ERRORS ONCE CONSTRUCTION BEGINS.
- 2. ALL WALLS SHOWN ON THE FLOOR PLANS ARE DRAWN AT 4" UNLESS NOTED OTHERWISE.
- 3. ALL ANGLED WALL SHOWN ON THE PLANS ARE 45 DEGREES UNLESS NOTED OTHERWISE.
- 4. STUD WALL DESIGN SHALL CONFORM TO ALL NORTH CAROLINA STATE BUILDING CODE REQUIREMENTS.
- 5. DO NOT SCALE PLANS, DRAWING SCALE MAY BE DISTORTED DUE TO COPIER IMPERECTIONS
- 6. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH NORTH CAROLINA RESIDENTIAL STATE BUILDING CODE, 2018 EDITION.

SQUARE FOOTAGE

HEATED SQUARE FOOTAGE		UNHEATED SQUARE FOOTAGE	
FIRST FLOOR=	2005	GARAGE=	564
SECOND FLOOR=	932	FRONT PORCH=	176
THIRD FLOOR=	N/A	SCREEN PORCH=	214
BASEMENT=	N/A	SIDE PORCH=	21
		OPT. DECK=	81
		OPT. REC.=	221
TOTAL HEATED=	2937	TOTAL UNHEATED=	= 12 <u>77</u>

CRAWL SPACE VENTILATION CALCULATIONS

-VENT LOCATIONS MAY VARY FROM THOSE SHOWN ON THE PLAN BUT SHOULD BE PLACED TO PROVIDE ADEQUATE VENTILATION AT ALL POINTS TO PREVENT DEAD AIR POCKETS.

-100% VAPOR BARRIER MUST BE PROVIDED WITH 12" MIN. LAP JOINTS.

-THE TOTAL AREA OF VENTILATION OPENINGS MAY BE REDUCED TO 1/1500 AS LONG AS REQUIRED OPENINGS ARE PLACED SO AS TO PROVIDE CROSS-VENTILATION OF THE SPACE. THE INSTALLATION OF OPERABLE LOUVERS SHALL NOT BE PROHIBITED. (COMPLY WITH NC CODE MIN. WITH REGARD TO VENT PLACEMENT FROM CORNERS)

N/A SQ. FT. OF CRAWL SPACE/1500

N/A SQ. FT. OF REQUIRED VENTILATION

PROVIDED BY: N/A VENTS AT 0.45 SQ. FT. NET FREE

VENTILATION EACH= N/A SQ. FT. OF VENTILATION

**FOUNDATION DRAINAGE- WATERPROOFING PER SECTIONS 405 & 406.

ATTIC VENTILATION CALCULATIONS

- CALCULATIONS SHOWN BELOW ARE BASED ON VENTILATORS USED AT LEAST 3 FT. ABOVE THE CORNICE VENTS WITH THE BALANCE OF VENTIALTION PROVIDED BE EAVE VENTS.

- CATHEDRAL CEILINGS SHALL HAVE A MIN. 1" CLEARANCE BETWEEN THE BOTTOM OF THE ROOF DECK AND THE INSULATION.

2968 SQ. FT. OF ATTIC/300= 9.89

EACH OF INLET AND OUTLET REQUIRED.

*WALL AND ROOF CLADDING DESIGN VALUES

- WALL CLADDING IS DESIGNED FOR A 24.1 SQ. FT. OR GREATER POSITIVE AND NEGATIVE PRESSURE.

- ROOF VALUES BOTH POSITVE AND NEGATIVE SHALL BE AS FOLLOWS:

45.5 LBS. PER SQ. FT. FOR ROOF PITCHES OF 0/12 TO 2.25/12

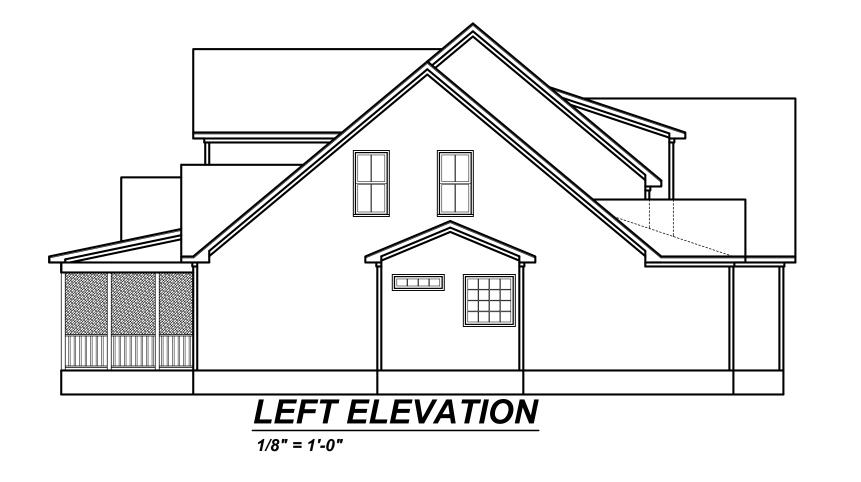
34.8 LBS. PER SQ. FT. FOR ROOF PITCHES OF 2.25/12 TO 7/12

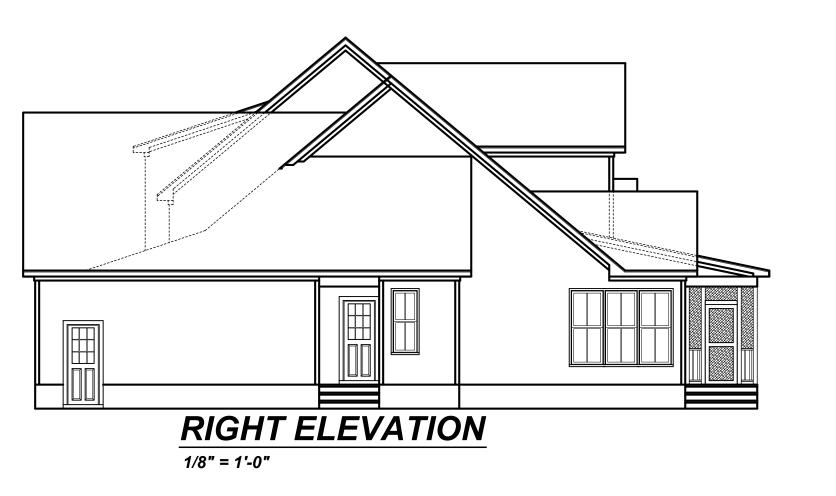
21 LBS. PER SQ. FT. FOR ROOF PITCHES OF 7/12 TO 12/12

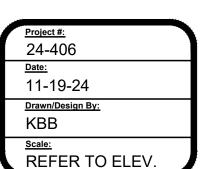
** MEAN ROOF HEIGHT 30' OR LESS











	RI	EVISIONS	1
<u>No.</u>	Date:	Remarks	
1			
2			
3			
4			

kaleigh, NC 27603 Office: (919) 302-0693





Porter Built Homes 2664 Timber Dr. Ste. 115 Garner, NC 27529

ELEVATIONS

of 4

Project #: 24-406

11-19-24

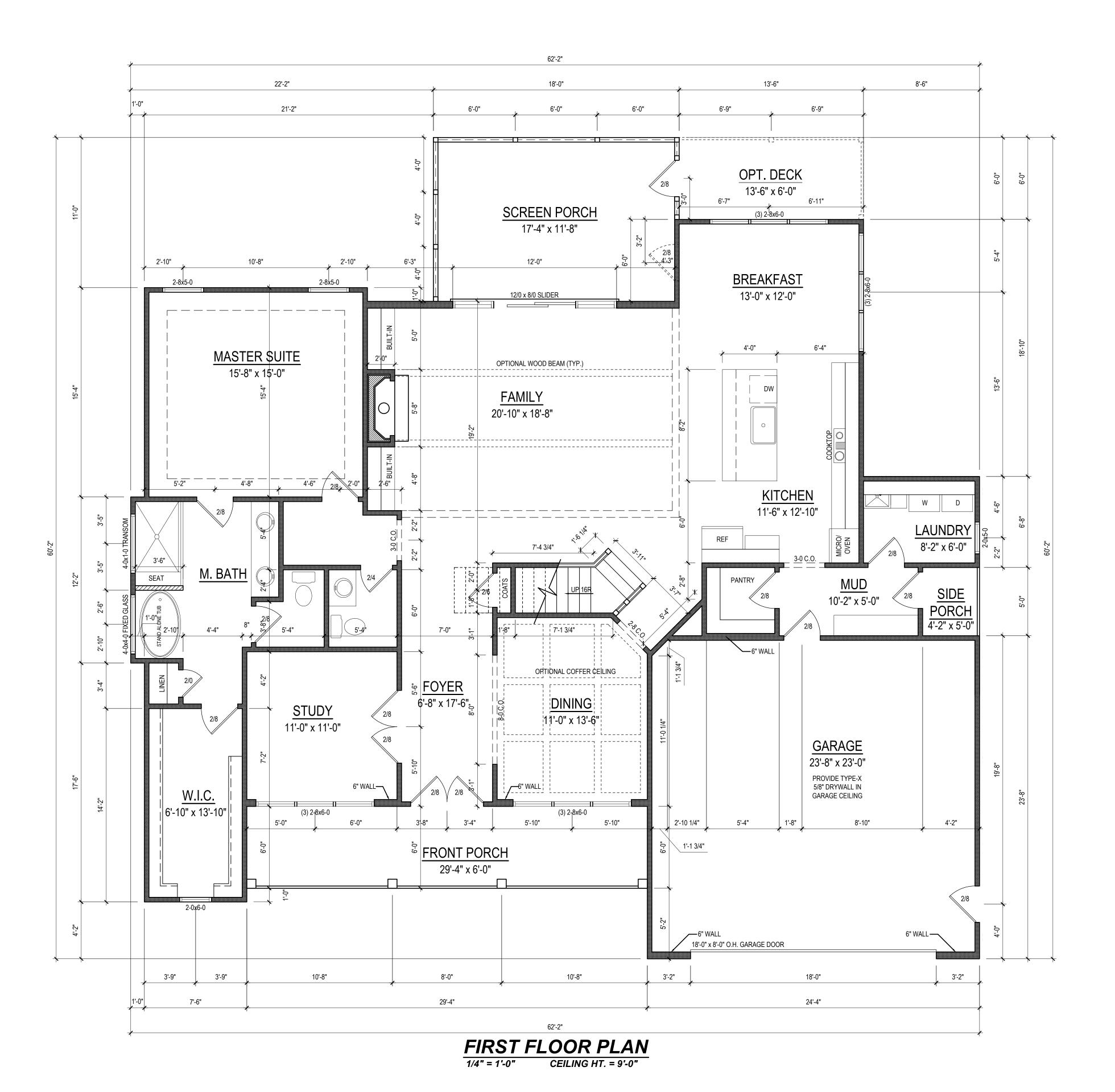
KBB

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FIRST FLOOR

Sheet Number

2



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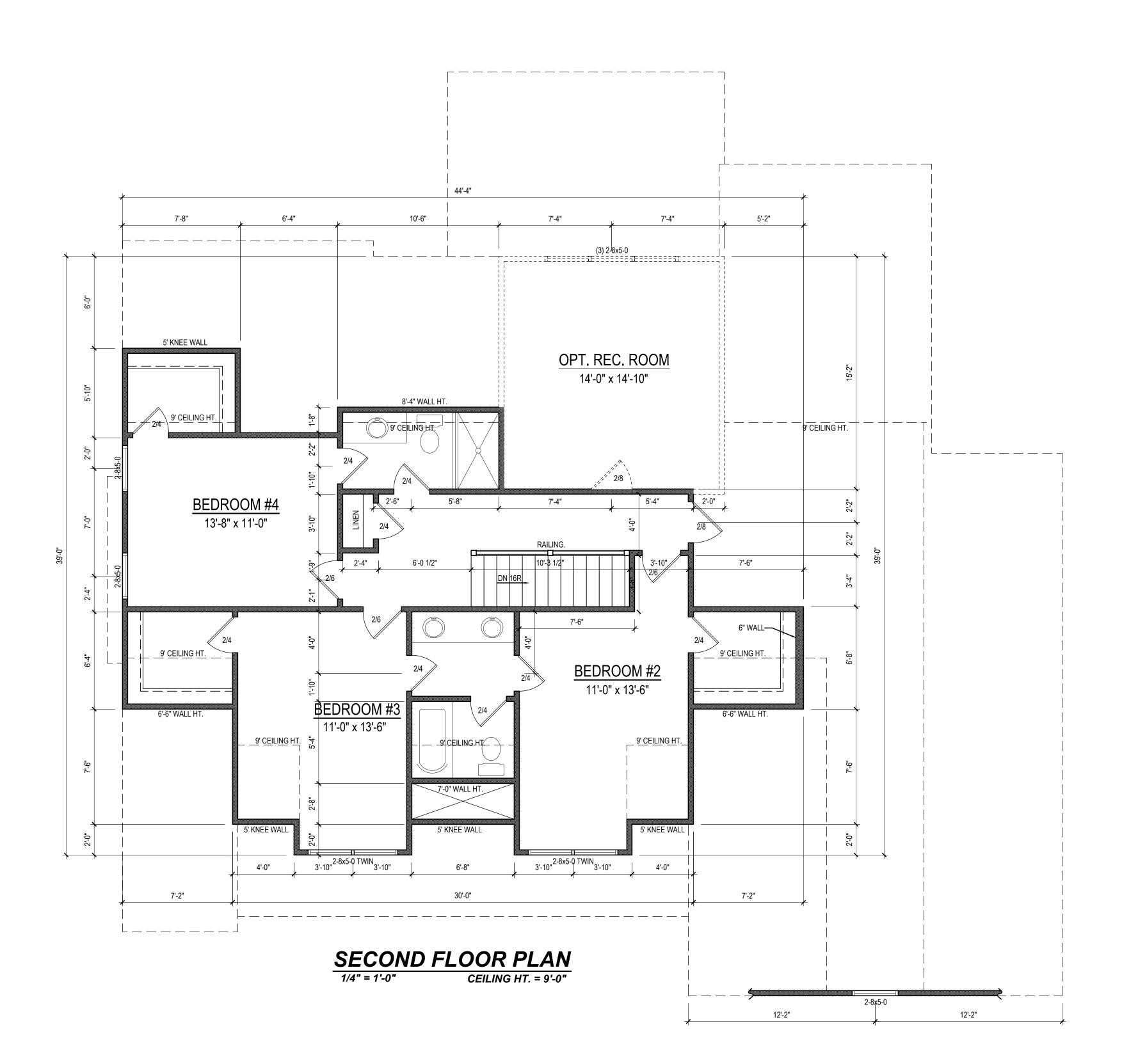


Lot 3, Purfoy

Porter Built Homes
2664 Timber Dr. Ste. 115
Garner, NC 27529

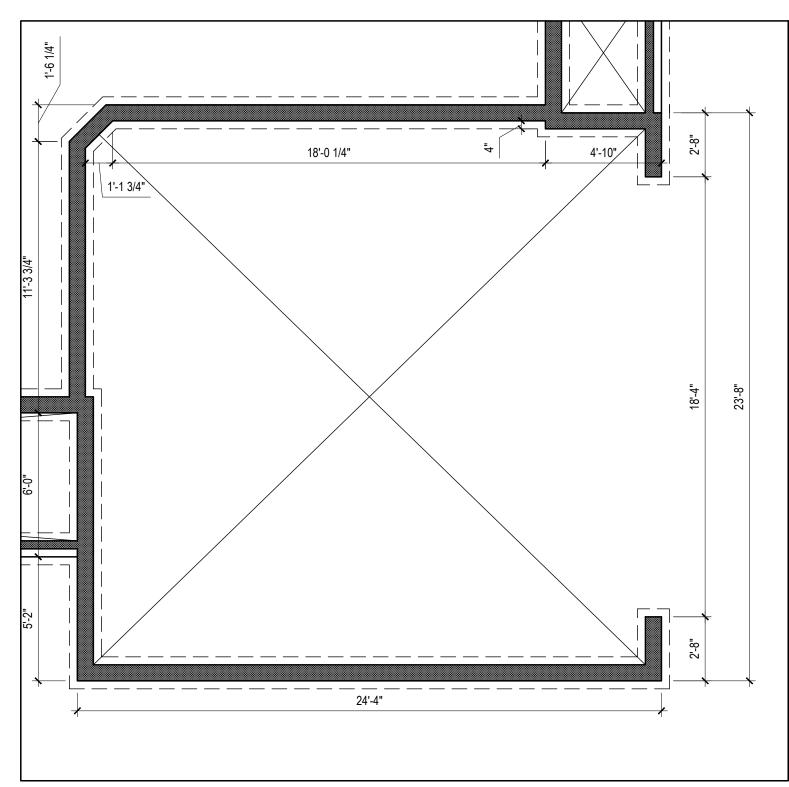
SECOND FLOOR

Sheet Number



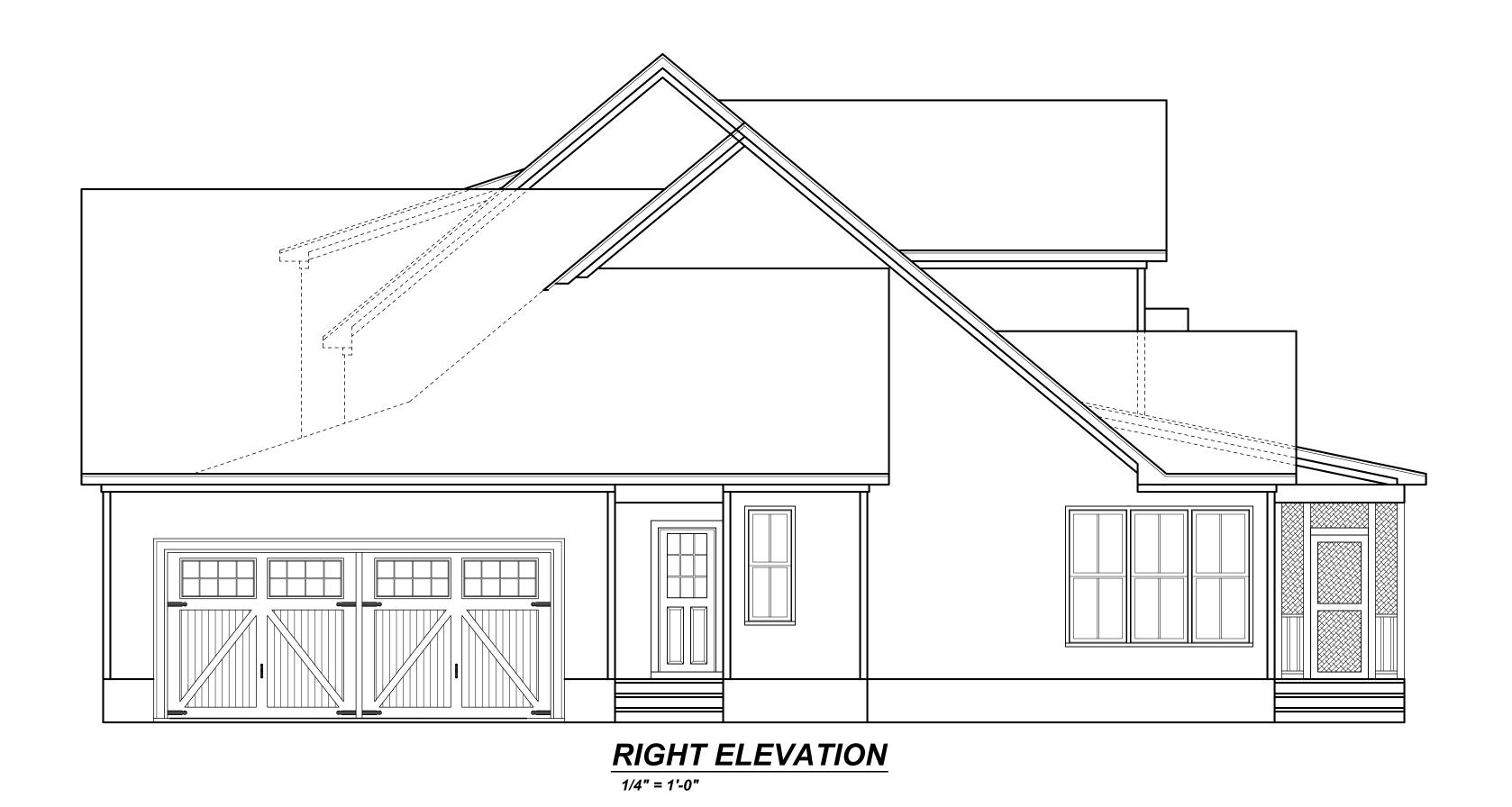
SIDE LOAD OPTION

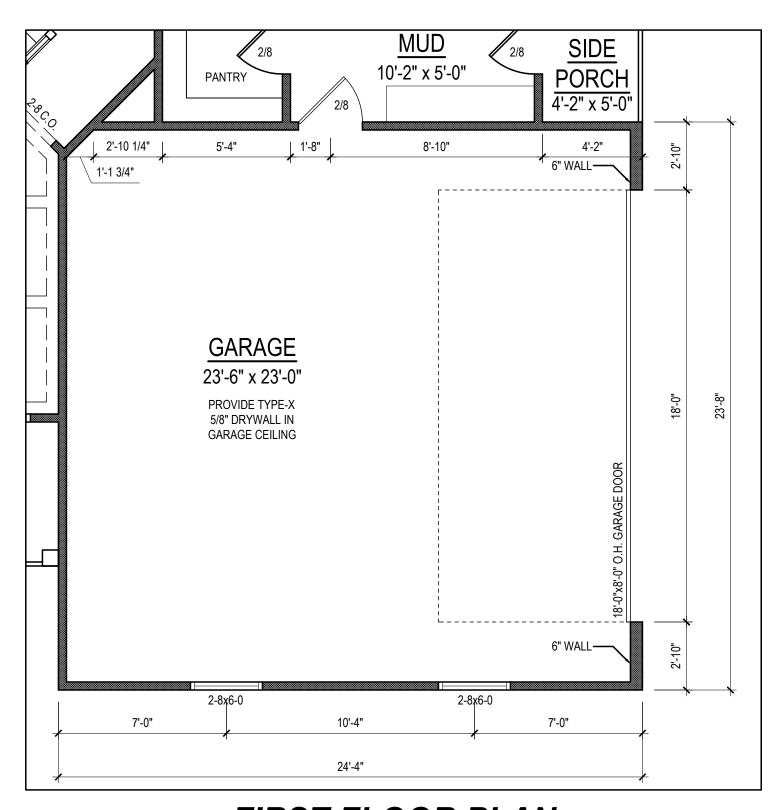




FOUNDATION PLAN

1/4" = 1'-0"







Project #:

24-406

Date:
11-19-24

Drawn/Design By:
KBB

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

	RI	REVISIONS		
<u>No.</u>	Date:	<u>Remarks</u>		
1				
2				
3				

303 2-0693

9101 Ten-Ten Kd. Raleigh, NC 27603 Office: (919) 302-0(



Lot 3,
Purfoy

Porter Built Homes 2664 Timber Dr. Ste. 115 Garner, NC 27529

SIDE LOAD GARAGE OPTION

Sheet Numbe



FOUNDATION STRUCTURAL NOTES NC (2018 NCRC): Wind: 115-120 mph - CRAWL

4x4 P.T. POST ON 16"x16"x8" CONCRETE FTG. (TYP). BRACE _ POSTS PER APPENDIX M.

6'-9"

-: TRT'D (2) 2x10 ;

TREATED BAND

PER APPENDIX

"M" OF CODE.

7'-10"

18'-0 1/4"

SOLID FILLED

MASONRY ON A

30"x30"x10"

CONC. FTG.

— 24"x24"xI*O*"

CONC. FTG.

4" CONC. SLAB (TABLE R402.2) W/ FIBERMESH OR WIREMESH ON 6 MIL YÁPOR RETARDER (AS

REQUIRED) ON BASE, COURSE (R506.2.2). SEE R506.2.I FOR/FILL REQUIREMENTS.

18'-4"

24'-4"

13'-10"

MASONRY ON A

36"x36"x12"

CONC. FTG.

SD ,

SOLID FILLED

MASONRY ON A-

36"x36"x12"

CONC. FTG.

4'-4"

1'-1 3/4"

3'-0"

8'-6"

—24"x24"xl0"

16" WIDE x

8" DEEP (MIN.)

—24"x24"xI0"

CONC. FTG.

4'-10"

SD /

16" WIDE x 8" DEEP (MIN.) CONC. FTG.

3'-0"

----24"x24"xI0"

CONC. FTG.

24"x24"xI0"

CONC. FTG.

CONC. FTG.

CONC. FTG.

62'-2"

18'-0"

4" CONC. SLAB

ON COMPACTED

FILL/STONE

SOLID FILLED

MASONRY ON A

30"x30"x10"

16'-4"

LOCATE ACCESS

DOOR AS REQUIRED

(3) 2x10

7'-9"

28"XI6" MASONRY

© FTG. MERGE WITH

24"x24"xI0" CONC. FTG.

7'-6"

42"X30"XI0" CONC ¬

ADJACENT FTG.

CONC. FTG.

7'-2"

PIERS ARE

FLUSH PIERS

7'-0"

CONC. FTG.

29'-4"

4" CONC. SLAB ON COMPACTED FILL/STONE

62'-2"

37'-10"

(3)2xIO SYP#2 OR SPF#2 GIRDER, TYPICAL UNO.

UP TO 32" UP TO 5'-0" UP TO 48" UP TO 9'-0" UP TO 64" UP TO 12'-0" UP TO 96" 24x24

③ WALL FOOTING AS FOLLOWS DEPTH: 8" - UP TO 2 STORY 10" - 3 STORY

SIDING: BRICK:

 FOR FOUNDATION WALL HEIGHT AND BACKFILL REQUIREMENTS, REFER TO CODE TABLE R404.I.I (I THRU 4) NOTE: ASSUMED SOIL BEARING CAPACITY = 2000 PSF. CONTRACTOR MUST VERIFY SITE CONDITIONS AND CONTACT SOILS ENGINEER IF MARGINAL OR UNSTABLE SOILS ARE ENCOUNTERED.

(4) 2xIO SPF #2 OR SYP #2 GIRDER

(5) (2) 1.75x9.25 LVL OR LSL GIRDER

(6) (3) 1.75x9.25 LVL OR LSL GIRDER

7. "B" DESIGNATES A SIGNIFICANT POINT LOAD TO MORE STUDS TO FND, TYPICAL.

8. ABBREVIATIONS: "SJ" = SINGLE JOIST

AS REQ'D FOR FLOOR FINISH MATERIALS.

16" MAX UNBALANCED FILL RECOMMENDED FOR HOLLOW 8" MASONRY STEMMALLS SHOWN ON NOTED DETAILS AND AT PORCHES. HIGHER UNBALANCED FILL MAY BE UTILIZED AT THE BUILDER'S AND/OR OWNER'S DISCRETION PROVIDED THAT CONSTRUCTION IS WITHIN THE CONSTRAINTS OF THE 2018 NC RESIDENTIAL CODE, ANY LOCAL CODES, DESIGN BY OTHERS, AND/OR THE BUILDING INSPECTOR'S

• WITH 30" x 30" x 10" CONCRETE FOOTING, UNO. 16" - UP TO 2 STORY 20" - 3 STORY 16" - I STORY 20" - 2 STORY 24" - 3 STORY .A 7609

PROJECT #

24-2030

uthern Engineers,
6 Benson Drive, Raleigh, NC
Phone: (919) 878-1617
License: C-4772
www.southernengineers.com

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Southern 3716 Benson D

HAVE SOLID BLOCKING TO PIER. SOLID BLOCK ALL BEAM BEARING POINTS NOTED TO HAVE THREE OR

• "DJ" = DOUBLE JOIST

"TJ" = TRIPLE JOIST

9. ADJUST SUBFLOOR THICKNESS OR JOIST SPACING

FRAMING NOTE: ALL DIMENSIONAL LUMBER ON THIS SHEET MAY BE SPF #2 OR SYP #2,

INTERPRETATION OR APPROVAL.

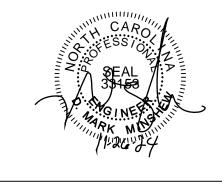
THE STRUCTURAL DESIGN OF THIS PLAN IS THE PROPERTY OF SOUTHERN ENGINEERS, P.A. THIS PLAN IS FOR ONE TIME USE FOR THE CLIENT AND LOCATION NOTED. SOUTHERN ENGINEERS, P.A. ASSUMES NO LIABILITY FOR THIS PLAN IF IT IS REPRODUCED AND/OR USED, IN WHOLE OR IN PART, FOR CONSTRUCTION AT ANY OTHER LOCATION WITHOUT WRITTEN PERMISSION FROM SOUTHERN ENGINEERS, PA. STRUCTURAL PLANS SHALL BE REVIEWED BY DESIGNER, BUILDER, AND/OR OWNER FOR CONFORMANCE WITH THE ARCHITECTURAL DESIGN CONCEPT PROVIDED. ALL DIMENSIONS SHALL BE VERIFIED BY DESIGNER, BUILDER, AND/OR OWNER PRIOR TO CONSTRUCTION.

FOUNDATION STRUCTURAL PLAN

SCALE: 1/4"=1'-0" REFER TO "SD" SHEET(S) FOR STANDARD DETAILS AND STRUCTURAL NOTES

PORTER BUILT

4



PROJECT #

24-2030

.A 7609

South 3716 Ben

enson Drive, Raleigh, NC Phone: (919) 878-1617 License: C-4772 ww.southernengineers.com

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FRAMING NOTES

- WALLS ON ALL STORIES WITH WOOD STRUCTURAL PANEL SHEATHING ATTACHED WITH 8d NAILS AT A 6"/I2" NAILING PATTERN (6" OC AT PANEL EDGES AND 12" OC AT INTERMEDIATE SUPPORTS). INSTALL BLOCKING AT ALL PANEL EDGES.
- MSP SHEATHING SHALL EXTEND TO THE UPPERMOST DOUBLE BEARING PLATE. BLOCK AT ROOF PER SECTION R602.10.4.5 AND ATTACH BRACED WALLS PER CODE. WSP SHEATHING BETWEEN FLOORS SHALL BE SPLICED ALONG CONTINUOUS BAND OR THE WSP SHEATHING MAY BE SPLICED ACROSS STUDS (CONTINUOUS ACROSS FLOOR SYSTEM) WITH BLOCKING AT PANEL EDGES. (MINIMUM 12" BEYOND FLOOR BREAK) OR OTHER APPROVED METHOD.
- OR EQUIV.) **UPPER FLOORS: ATTACH BASE OF KING STUD WITH A SIMPSON CS20 OR CSHP20 STRAP DOWN ACROSS THE BAND AND DOWN TO A
- INTERIOR BRACED WALL: (NOTED AS "IBW" ON PLANS) ATTACH 1/2" GYPSUM BOARD (GB) ON EACH SIDE OF WALL WITH A MIN. OF 5d COOLER NAILS OR #6 SCREWS @ 7" O.C. ALONG THE EDGES AND AT INTERMEDIATE SUPPORTS. SEE SECTION R602.10.4.4 OF THE CODE.
- INTERIOR BRACED WALL-WOOD STRUCTURAL PANEL: (NOTED AS "IBM-WSP" ON PLANS). ATTACH ONE SIDE WITH 1/6" WSP SHEATHING WITH 8d NAILS AT A 6"/12" NAILING PATTERN (6" OC AT PANEL EDGES AND 12" OC AT INTERMEDIATE SUPPORTS). INSTALL BLOCKING AT ALL PANEL EDGES. ATTACH GB OVER WSP AS REQUIRED. ATTACH OPPOSITE SIDE WITH 1/2" GB WITH A MIN. OF 5d COOLER NAILS OR #6 SCREWS @ 7" OC ALONG THE EDGES AND AT INTERMEDIATE SUPPORTS. SEE SECTION R602.10.4.4 OF THE CODE.

HEADER/BEAM & COLUMN NOTES

- ALL EXTERIOR AND LOAD BEARING HEADERS SHALL BE MIN. (2)2x6 (4" WALL) OR (3)2x6 (6" MALL) MITH (I) SUPPORT STUD, UNLESS NOTED OTHERWISE.
- STUDS REQUIRED IN STUD POCKET OR COLUMN. THE NUMBER OF KING STUDS AT EACH END OF HEADERS IN EXTERIOR WALLS SHALL BE ACCORDING TO ITEM "d" IN TABLE R602.3(5) OR AS BELOW PER NCDOI COMMENTARY "KING STUDS AT WALL OPENINGS" REVISED 1-9-2020:
- OVER 12' UP TO 15' SPAN: (5) KING STUDS
- PORCH POST NOTES: 4X4 (6x6) TRT'D POST (OR EQUAL). ATTACH TRUSSES (RAFTERS) AT PORCH WITH
- POST CAP: SIMPSON AC4-MAX (AC6-MAX) POST CAP AT CORNER: (2) SIMPSON LCE4 (MITER HEADER AT CORNER). HIGH WIND; ADD (I)
- POST BASE: SIMPSON ABU44 (ABU66). 3.I. <u>MONO</u>: %" ANCHOR (EMBED 7")
- . POST BASE: WOOD FOUNDATION: (2) SIMPSON CSI6 STRAPS AT POSTS. EXTEND 12" ONTO EACH POST (UPPER AND LOWER) OR TO GIRDER.

NOTE: THE ABOVE CONNECTORS ARE SUGGESTIONS. EQUIVALENT CONNECTORS THAT MEET THE REQUIREMENTS OF THE NO RESIDENTIAL BUILDING CODE, LOCAL CODES, AND/OR ARE APPROVED BY THE BUILDING INSPECTOR MAY BE SUBSTITUTED.

FRAMING NOTE: ALL DIMENSIONAL LUMBER ON THIS SHEET MAY BE SPF #2 OR SYP #2, UNLESS SPECIFICALLY NOTED OTHERWISE.

NC (2018 NCRC): Wind: 115-120 mph

- BRACING METHOD AND TYPE: CONTINUOUSLY SHEATHED WSP: CS-WSP. NOTE THAT THE WALL BRACING AMOUNT PROVIDED ON THE PLANS (DETAILS AND SPECIFICATIONS) IS GREATER THAN THE AMOUNT OF WALL BRACING REQUIRED BY SECTION R602.10 OF THE CODE. SEE NOTES BELOW FOR DETAILS AND SPECIFICATIONS FOR WALL BRACING AND WALL FRAMING.
- EXTERIOR WALL SHEATHING: WALLS SHALL BE BRACED BY SHEATHING (MSP) (EXPOSURE B: 7/16". EXPOSURE C: 15/32"). SHEATHING SHALL BE
- "HD" = HOLDOWN: HOLD-DOWN DEVICE (NOTED AS "HD" ON PLANS) SHALL BE AN 800 POUND CAPACITY ASSEMBLY AS NOTED ON PLANS. SEE DETAILS FOR HD ASSEMBLY. **GROUND/FIRST FLOOR: USE "HD HOLD-DOWN DETAIL" ON SD SHEET
- STUD BELOW OR HEADER BELOW. EXTEND STRAP 7" MIN ALONG EACH STUD (OR HEADER) AND ATTACH EACH END W/ (7) 8d NAILS.

- THE NUMBER SHOWN AT BEAM AND HEADER
- •• UP TO 3' SPAN: (I) KING STUD •• OVER 3' UP TO 6' SPAN: (2) KING STUDS OVER 6' UP TO 9' SPAN: (3) KING STUDS OVER 9' UP TO 12' SPAN: (4) KING STUDS
- HURRICANE CONNECTORS.
- 3.2. <u>CMU</u>: %" ANCHOR (EXTEND TO FOOTING -HIGH WIND ONLY)

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MOOD I-JOISTS

TJI 2IO BY TRUS JOIST

• BCI 5000s I.8 BY BC • BLI 40 BY ONCENTER

AND INSTRUCTIONS.

"HEAVY" I-JOISTS

LPI 42 PLUS BY LP

BCI 60s 2.0 BY BC

SPECIFICATIONS.

AND INSTRUCTIONS.

BLI 65 BY ONCENTER

TJI 360 BY TRUS JOIST

LPI 20 PLUS BY LP

(SHALL BE ONE OF THE FOLLOWING):

ALL I-JOISTS SHALL BE INSTALLED

ACCORDING TO MANUFACTURER'S

HANGERS FOR I-JOISTS ARE THE

INSTALL SQUASH BLOCKS, WEB STIFFENERS,

ETC. AS REQUIRED BY AND ACCORDING TO

RESPONSIBILITY OF THE I-JOIST SUPPLIER.

(SHALL BE ONE OF THE FOLLOWING OR EQUAL):

ALL I-JOISTS SHALL BE INSTALLED

ACCORDING TO MANUFACTURER'S

HANGERS FOR I-JOISTS ARE THE

INSTALL SQUASH BLOCKS, WEB STIFFENERS,

ETC. AS REQUIRED BY AND ACCORDING TO

RESPONSIBILITY OF THE I-JOIST SUPPLIER.

THE I-JOIST MANUFACTURER'S SPECIFICATIONS

LINE OF 750 PLF

WALL ABOVE

IBW-WSP

THE I-JOIST MANUFACTURER'S SPECIFICATIONS

4x4 TRT'D POST (OR-

JOISTS AT

12" THIS

AREA

SIMPSON

HGU95.50/12

-LINE OF

670 PLF

\ ABOVE

||(2)1.75x14 L`

(3) I.75x9.25 LVL | 3 ||

(2) 2x10 (TYP.)

(2)1.75x14 LVL 3

(2) 1.75×9.25 LVL

4x4 TRT'D POST (OR-

CRITICAL NOTE: INSTALL 影" WSP SHEATHING AT ENTIRE FRONT WALL OF HOUSE AND ATTACH WITH 8d NAILS AT 3" O.C. ALONG PANEL EDGES AND AT 6" O.C. AT INTERMEDIATE STUDS.

EQUAL). SEE "PORCH

POST NOTES"

(2) 2x8

MALL ABOVE||

6" WALL

(2) 1.75x14 LVL

@ 16" O.C.

(2) 2x8

WALL ABOVE

(4) 2x6 W/-

(3) 2x4

- LINE OF 395 -

PLF WALL

AB0VE

(2)1.75x14 LV

- — - | - - - - -

1.75×14 LVL

6" WALL-

EXTEND LEFT (2) -

PLIES OF BEAM

12" ALONG WALL

FOR HANGER

ATTACHMENT.

(3) 1.75x14 LVL (FLUSH)

SIMPSON HHUS5.50/10 (2) 2x8

- SIMPSON -

HGUS5.50/12

000

2x10 CJ

2x4 STUDS-

@ 12" O.C.

(2) 2x8

DOUBLE 16" I-JOISTS @ 19.2" O.C

OR 16" HEAVY I-JOISTS @ 12" O.C.

=:=:=:=:=:=:=:=:=:

(3) 1.75x11.875 LVL

=======

(3) 1.75x14 LVL

SIMPSON

HHUS5.50/10

IBM

2x4 STUDS

@ 12" O.C.

6" WALL

EQUAL). SEE "PORCH

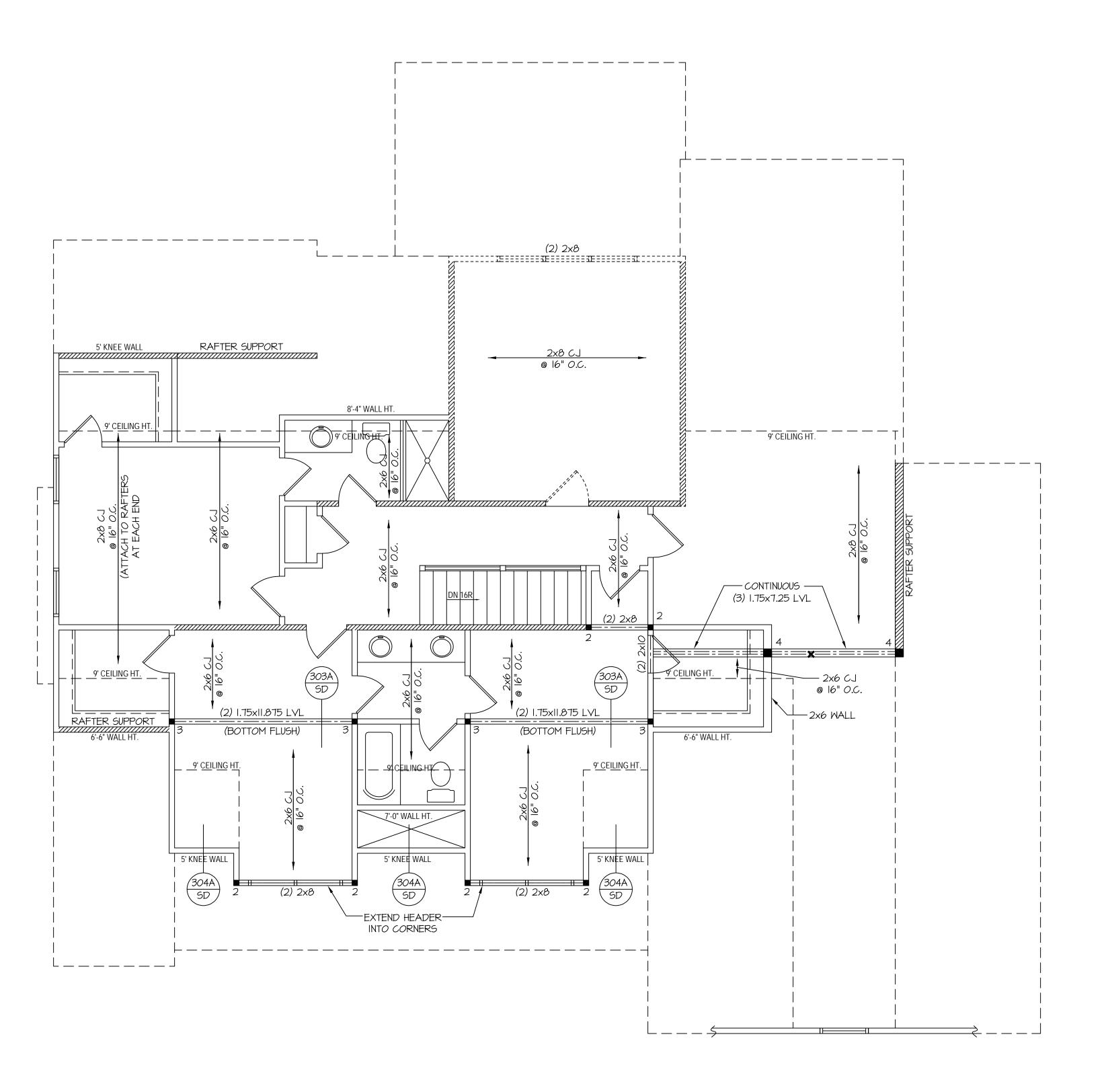
POST NOTES"

FIRST FLOOR STRUCTURAL PLAN

SCALE: 1/4"=1'-0" REFER TO "SD" SHEET(S) FOR STANDARD DETAILS AND STRUCTURAL NOTES PORTER BUILT

HOMES

d



THE STRUCTURAL DESIGN OF THIS PLAN IS THE PROPERTY OF SOUTHERN ENGINEERS, P.A. THIS PLAN IS FOR ONE TIME USE FOR THE CLIENT AND LOCATION NOTED. SOUTHERN ENGINEERS, P.A. ASSUMES NO LIABILITY FOR THIS PLAN IF IT IS REPRODUCED AND/OR USED, IN WHOLE OR IN PART, FOR CONSTRUCTION AT ANY OTHER LOCATION WITHOUT WRITTEN PERMISSION FROM SOUTHERN ENGINEERS, PA. STRUCTURAL PLANS SHALL BE REVIEWED BY DESIGNER, BUILDER, AND/OR OWNER FOR CONFORMANCE WITH THE ARCHITECTURAL DESIGN CONCEPT PROVIDED. ALL DIMENSIONS SHALL BE VERIFIED BY DESIGNER, BUILDER, AND/OR OWNER PRIOR TO CONSTRUCTION.



FRAMING NOTES NC (2018 NCRC): Wind: 115-120 mph

- BRACING METHOD AND TYPE: CONTINUOUSLY SHEATHED WSP: CS-WSP. NOTE THAT THE WALL BRACING AMOUNT PROVIDED ON THE PLANS (DETAILS AND SPECIFICATIONS) IS GREATER THAN THE AMOUNT OF WALL BRACING REQUIRED BY SECTION R602.10 OF THE CODE. SEE NOTES BELOW FOR DETAILS AND SPECIFICATIONS FOR WALL BRACING AND WALL FRAMING.
- EXTERIOR WALL SHEATHING: WALLS SHALL BE BRACED BY SHEATHING WALLS ON ALL STORIES WITH WOOD STRUCTURAL PANEL SHEATHING (WSP) (EXPOSURE B: 7/16". EXPOSURE C: 15/32"). SHEATHING SHALL BE ATTACHED WITH 8d NAILS AT A 6"/12" NAILING PATTERN (6" OC AT PANEL EDGES AND 12" OC AT INTERMEDIATE SUPPORTS). INSTALL BLOCKING AT ALL PANEL EDGES.
- WSP SHEATHING SHALL EXTEND TO THE UPPERMOST DOUBLE BEARING PLATE. BLOCK AT ROOF PER SECTION R602.10.4.5 AND ATTACH BRACED WALLS PER CODE. WSP SHEATHING BETWEEN FLOORS SHALL BE SPLICED ALONG CONTINUOUS BAND OR THE WSP SHEATHING MAY BE SPLICED ACROSS STUDS (CONTINUOUS ACROSS FLOOR SYSTEM) WITH BLOCKING AT PANEL EDGES. (MINIMUM 12" BEYOND FLOOR BREAK) OR OTHER APPROVED METHOD.
- "HD" = HOLDOWN: HOLD-DOWN DEVICE (NOTED AS "HD" ON PLANS) SHALL BE AN 800 POUND CAPACITY ASSEMBLY AS NOTED ON PLANS. SEE DETAILS FOR HD ASSEMBLY. **GROUND/FIRST FLOOR: USE "HD HOLD-DOWN DETAIL" ON SD SHEET
- (OR EQUIV.) **UPPER FLOORS: ATTACH BASE OF KING STUD WITH A SIMPSON
- CS20 OR CSHP20 STRAP DOWN ACROSS THE BAND AND DOWN TO A STUD BELOW OR HEADER BELOW. EXTEND STRAP 7" MIN ALONG EACH STUD (OR HEADER) AND ATTACH EACH END W/ (7) 8d NAILS.
- INTERIOR BRACED WALL: (NOTED AS "IBW" ON PLANS) ATTACH I/2" GYPSUM BOARD (GB) ON EACH SIDE OF WALL WITH A MIN. OF 5d COOLER NAILS OR #6 SCREWS @ 7" O.C. ALONG THE EDGES AND AT INTERMEDIATE SUPPORTS. SEE SECTION R602.10.4.4 OF THE CODE.
- INTERIOR BRACED WALL-WOOD STRUCTURAL PANEL: (NOTED AS "IBW-WSP" ON PLANS). ATTACH ONE SIDE WITH 1/6" WSP SHEATHING WITH 8d NAILS AT A 6"/12" NAILING PATTERN (6" OC AT PANEL EDGES AND 12" OC AT INTERMEDIATE SUPPORTS). INSTALL BLOCKING AT ALL PANEL EDGES. ATTACH GB OVER WSP AS REQUIRED. ATTACH OPPOSITE SIDE WITH I/2" GB WITH A MIN. OF 5d COOLER NAILS OR #6 SCREWS @ 7" OC ALONG THE EDGES AND AT INTERMEDIATE SUPPORTS. SEE SECTION R602.10.4.4 OF THE CODE.

HEADER/BEAM & COLUMN NOTES

ALL EXTERIOR AND LOAD BEARING HEADERS SHALL BE MIN. (2)2x6 (4" WALL) OR (3)2x6 (6" WALL) WITH (I) SUPPORT STUD, UNLESS NOTED OTHERWISE.

- 2. THE NUMBER SHOWN AT BEAM AND HEADER STUDS REQUIRED IN STUD POCKET OR COLUMN. THE NUMBER OF KING STUDS AT EACH END OF HEADERS IN EXTERIOR WALLS SHALL BE ACCORDING TO ITEM "d" IN TABLE R602.3(5) OR AS BELOW PER NCDOI COMMENTARY "KING STUDS AT WALL OPENINGS" REVISED 1-9-2020:
- •• UP TO 3' SPAN: (I) KING STUD •• OVER 3' UP TO 6' SPAN: (2) KING STUDS •• OVER 6' UP TO 9' SPAN: (3) KING STUDS OVER 9' UP TO 12' SPAN: (4) KING STUDS
- OVER 12' UP TO 15' SPAN: (5) KING STUDS

FRAMING NOTE: ALL DIMENSIONAL LUMBER ON THIS SHEET MAY BE SPF #2 OR SYP #2, UNLESS SPECIFICALLY NOTED OTHERWISE.

PROJECT #

24-2030

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Southern 3716 Benson D

hern Engineers, enson Drive, Raleigh, NC Phone: (919) 878-1617 License: C-4772 ww.southernengineers.com

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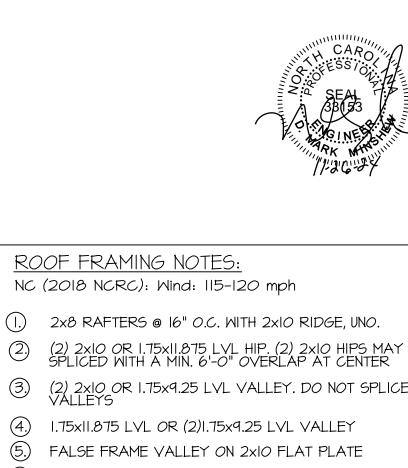
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DESIG]

PORTER BUILT HOMES

SECOND FLOOR STRUCTURAL PLAN

SCALE: 1/4"=1'-0" REFER TO "SD" SHEET(S) FOR STANDARD DETAILS AND STRUCTURAL NOTES



(I.) 2x8 RAFTERS @ 16" O.C. WITH 2x10 RIDGE, UNO. (2) 2xIO OR 1.75xII.875 LVL HIP. (2) 2xIO HIPS MAY BE SPLICED WITH A MIN. 6'-O" OVERLAP AT CENTER

(2) 2xIO OR 1.75x9.25 LVL VALLEY. DO NOT SPLICE VALLEYS

(4) 1.75x11.875 LVL OR (2)1.75x9.25 LVL VALLEY

(6) 2x6 RAFTERS @ 16" O.C. W/ 2x8 RIDGE, UNO. (7.) 2xIO RAFTERS @ 16" O.C. W/ 2xI2 RIDGE, UNO.

(8) EXTEND RIDGE 12" BEYOND INTERSECTION

"SR" = SINGLE RAFTER"DR" = DOUBLE RAFTER"TR" = TRIPLE RAFTER

"RS" = ROOF SUPPORT "■" = (3) STUD OR 4x4 POST FOR ROOF SUPPORT (USE 2X6 STUDS OR 6X6 POST FOR SUPPORT OVER IO'-O" IN

 ATTACH VAULTED RAFTERS WITH HURRICANE CLIPS: SIMPSON "H-2.5A" OR EQUIVALENT. TIES TO BE INSTALLED

ON THE OUTSIDE FACE OF FRAMING.

INSTALL RAFTER TIES AND COLLAR TIES PER SECTION R802.3.I OF THE 2018 NC RESIDENTIAL CODE.

FRAMING NOTE: ALL DIMENSIONAL LUMBER ON THIS SHEET MAY BE SPF #2 OR SYP #2, UNLESS SPECIFICALLY NOTED OTHERWISE.

INSTALL 2x6 COLLAR TIES — @ 16" O.C. @ 24" BELOW THE BOTTOM OF THE RIDGE IN THIS AREA. ATTACH W/ (6) I2d NAILS 10:12 10:12 10:12 10:12 4 10:12 RS 2xl2 RIDGE 2x8— RIDGE RS START LVL VALLEY @ SUPPORT ON BEAM BELOW 12:12 12:12 **12:12 ■**

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ROOF STRUCTURAL PLAN

SCALE: 1/4"=1'-0" REFER TO "SD" SHEET(S) FOR STANDARD DETAILS AND STRUCTURAL NOTES

P.A. 27609

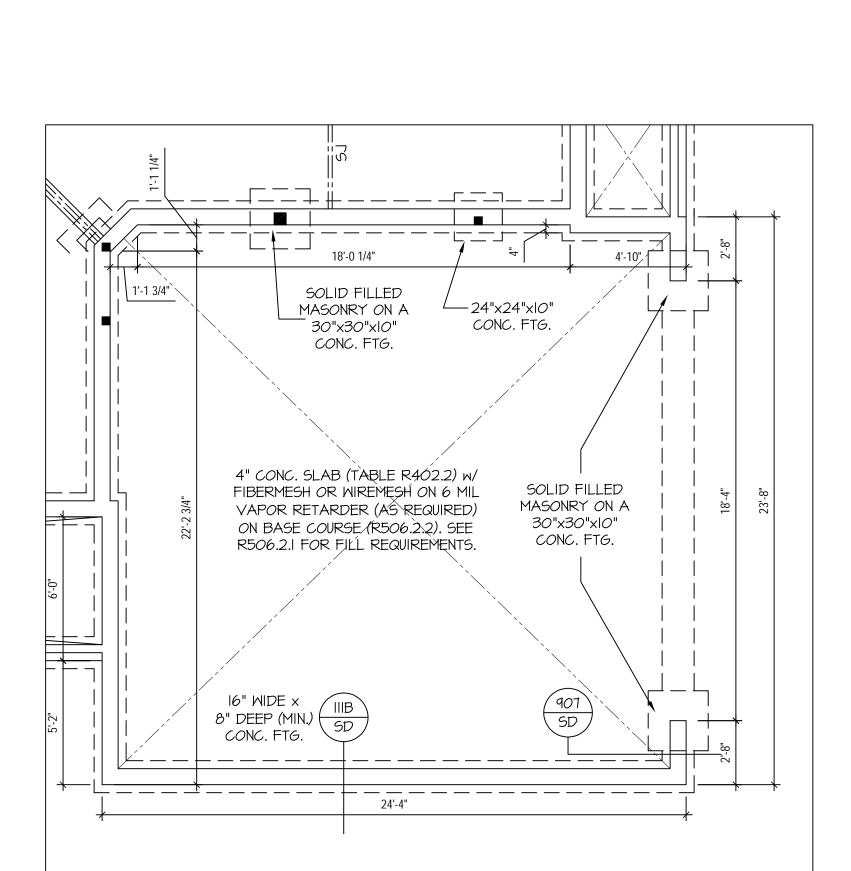
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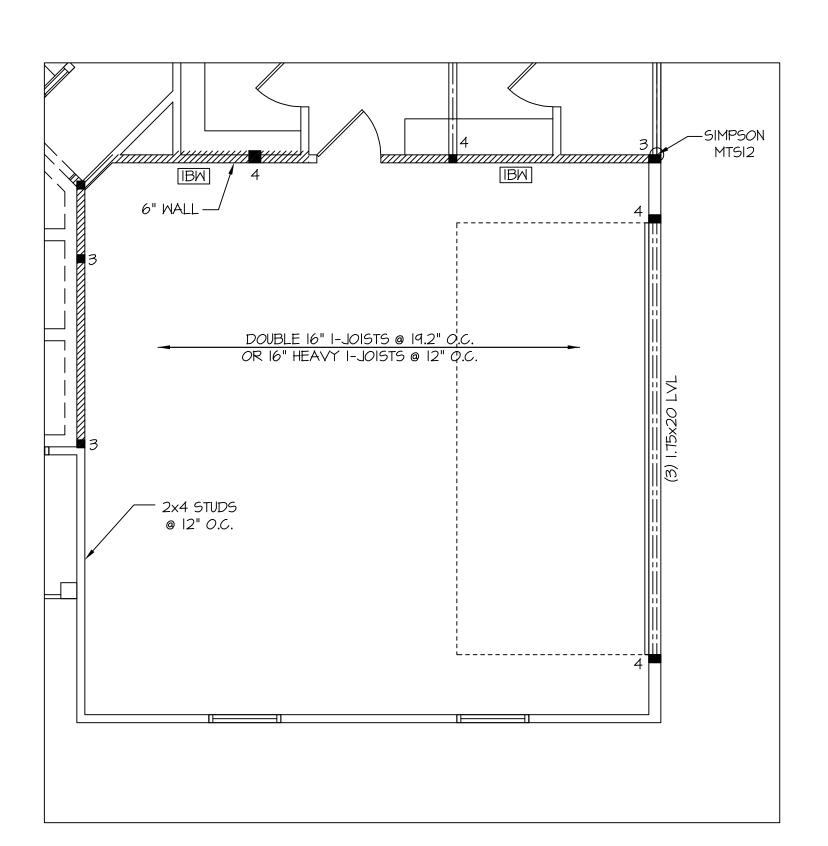
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DESIG

PORTER BUILT HOMES Purfoy



FOUNDATION STRUCTURAL PLAN SCALE: 1/4"=1'-0"



FIRST FLOOR STRUCTURAL PLAN SCALE: 1/4"=1'-0"

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SIDE LOAD GARAGE PLANS

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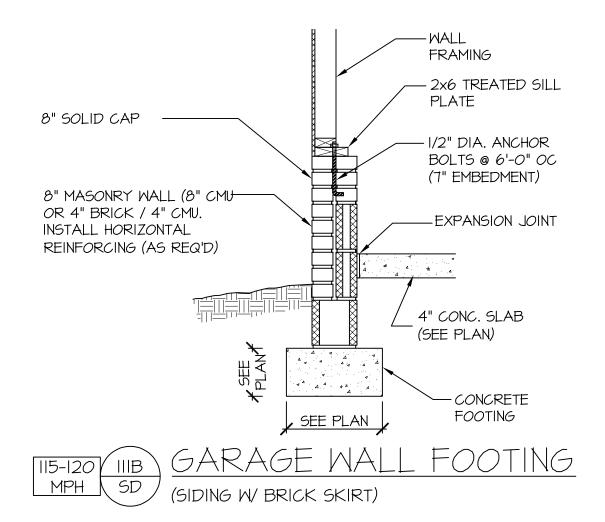
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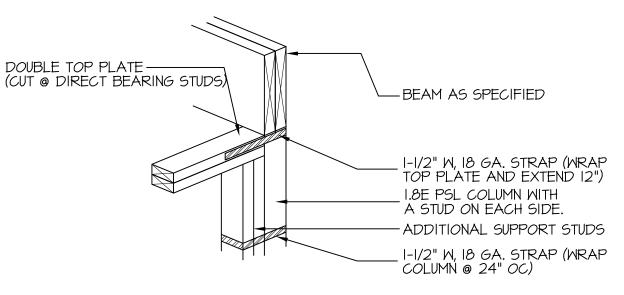
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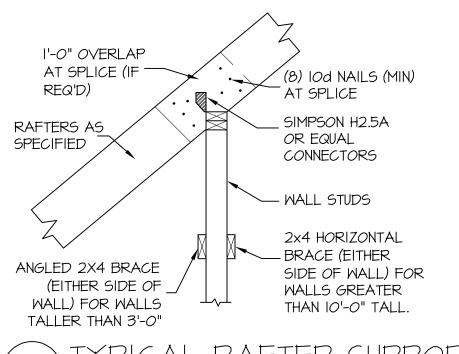
PORTER BUILT HOMES Purfoy

(SIDING W/ BRICK SKIRT)

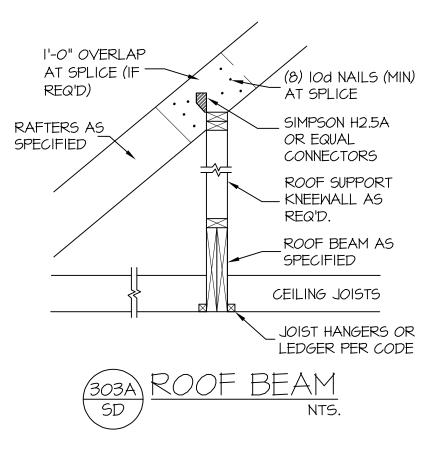


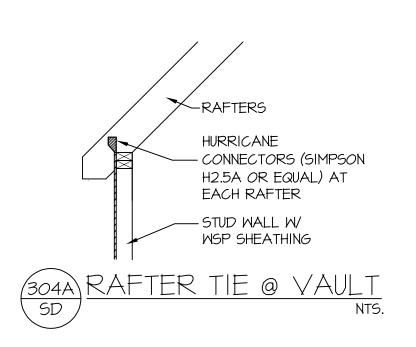


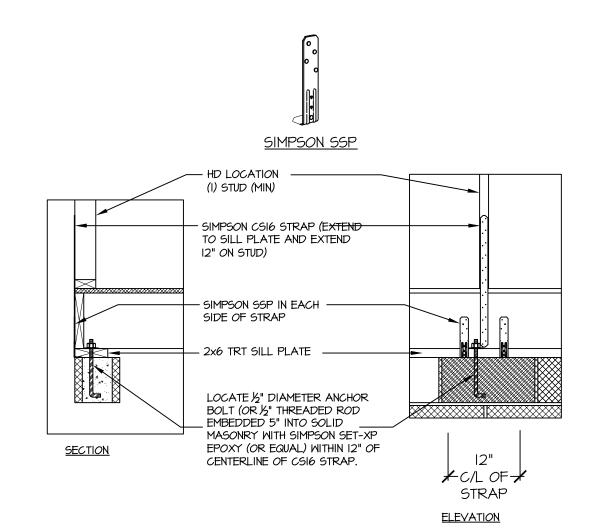






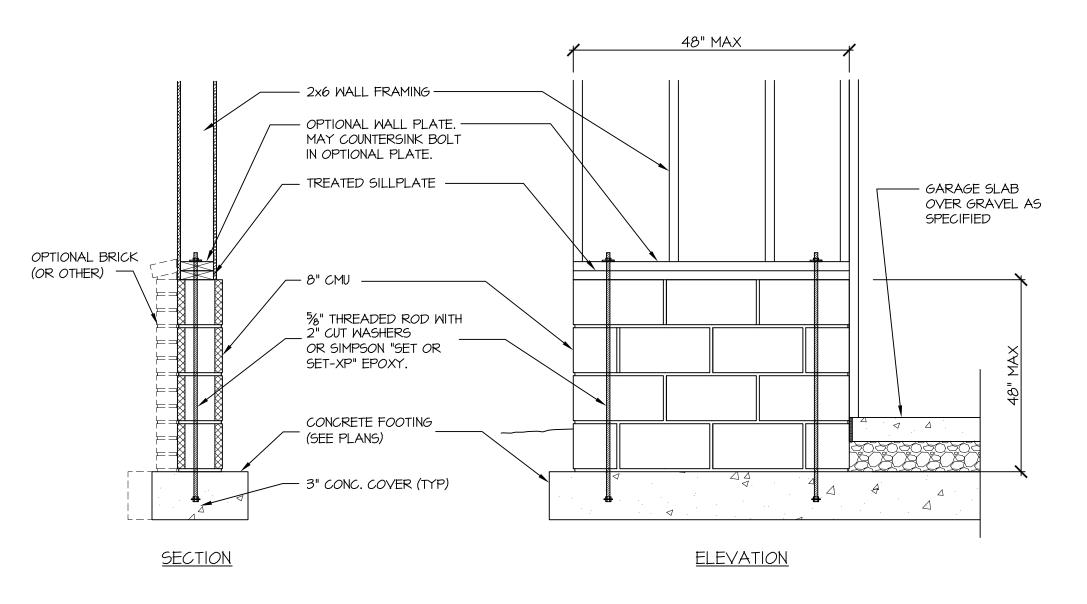






BRACED WALL END CONDITION " HD" _D-DOWN DETAIL

> NOTE: SIMPSON DTT-IZ IS ACCEPTABLE ALTERNATE NOTE: ALTERNATE HD HOLD-DOWN DEVICES OR SYSTEMS MAY BE USED TO MEET THE CODE REQUIRED 800 LB CAPACITY IN LIEU OF THE ABOVE DETAIL.



(907) GARAGE 'WING WALL' REINFORCING SD PER IRC FIGURE R602.10.4.3



STRUCTURAL NOTES NC (2018 NCRC): Wind: 115-120 mph

- ENGINEER'S SEAL APPLIES ONLY TO STRUCTURAL COMPONENTS INCLUDING ROOF RAFTERS, HIPS, VALLEYS, RIDGES, FLOORS, WALLS, BEAMS AND HEADERS, COLUMNS, CANTILEVERS, OFFSET LOAD BEARING WALLS, PIER & GIRDER SYSTEM, FOOTING, AND PILING SYSTEM. ENGINEER'S SEAL DOES NOT CERTIFY DIMENSIONAL ACCURACY OR ARCHITECTURAL LAYOUT INCLUDING ROOF SYSTEM. ALL REQUIREMENTS FOR PROFESSIONAL CERTIFICATION SHALL BE PROVIDED BY THE APPROPRIATE PROFESSIONAL. SOUTHERN ENGINEERS, P.A. CERTIFIES ONLY THE STRUCTURAL COMPONENTS AS SPECIFICALLY STATED.
- 2. ALL CONSTRUCTION SHALL CONFORM TO THE LATEST REQUIREMENTS OF THE 2018 NC RESIDENTIAL CODE, PLUS ALL LOCAL CODES AND REGULATIONS. THE STRUCTURAL ENGINEER IS NOT RESPONSIBLE FOR, AND WILL NOT HAVE CONTROL OF, CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE CONSTRUCTION WORK, NOR WILL THE ENGINEER BE RESPONSIBLE FOR THE CONTRACTOR'S FAILURE TO CARRY OUT THE CONSTRUCTION WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. "CONSTRUCTION REVIEW" SERVICES ARE NOT PART OF OUR CONTRACT. ALL MEMBERS SHALL BE FRAMED ANCHORED, TIED AND BRACED IN ACCORDANCE WITH GOOD CONSTRUCTION PRACTICE AND THE BUILDING CODE.
- DESIGN LOADS (LISTED AS: LIVE LOAD, DEAD LOAD, DEFLECTION)
- ROOMS OTHER THAN SLEEPING ROOMS: (40 PSF, IO PSF, L/360)
- SLEEPING ROOMS: (30 PSF, IO PSF, L/360)
- ATTIC WITH PERMANENT STAIR: (40 PSF, IO PSF, L/360) • ATTIC WITHOUT PERMANENT STAIR: (20 PSF, IO PSF, L/360)
- ATTIC WITHOUT STORAGE: (10 PSF, 10 PSF, L/240)
- STAIRS: (40 PSF, IO PSF, L/360)
- DECKS AND EXTERIOR BALCONIES: (40 PSF, IO PSF, L/360)
- PASSENGER VEHICLE GARAGES: (50 PSF, IO PSF, L/360) • SNOW: (20 PSF)
- 4. WALLS SHALL BE BRACED BY SHEATHING WALLS ON ALL STORIES WITH WOOD STRUCTURAL PANELS. SEE FRAMING NOTES FOR THICKNESS AND NAILING REQUIREMENTS.
- 5. SEE APPENDIX M (DCA6) FOR EXTERIOR DECK REQUIREMENTS INCLUDING ATTACHMENTS FOR LATERAL LOADS.
- 6. CONCRETE SHALL HAVE A MINIMUM 28 DAY STRENGTH OF 3000 PSI AND A MAXIMUM SLUMP OF 5 INCHES UNLESS NOTED OTHERWISE (UNO). AIR ENTRAINED PER TABLE 402.2. ALL CONCRETE SHALL BE PROPORTIONED, MIXED, HANDLED, SAMPLED, TESTED, AND PLACED IN ACCORDANCE WITH ACI STANDARDS. ALL SAMPLES FOR PUMPING SHALL BE TAKEN FROM THE EXIT END OF THE PUMP. CONTROL JOINTS IN SLABS SHALL BE SPACED ON A GRID OF +-30 TIMES THE DEPTH (D). CONTROL JOINTS SHALL BE SAWCUT TO A DEPTH OF I/D. (I.E. 4" CONCRETE SLABS SHALL HAVE 4" DEEP CONTROL JOINTS SAWCUT IN SLAB ON A +-10'-0" x +-10'-0" GRID).
- ALLOWABLE SOIL BEARING PRESSURE ASSUMED TO BE 2000 PSF. THE CONTRACTOR MUST CONTACT A GEOTECHNICAL ENGINEER AND THE STRUCTURAL ENGINEER IF UNSATISFACTORY SUBSURFACE CONDITIONS ARE ENCOUNTERED. THE SURFACE AREA ADJACENT TO THE FOUNDATION WALL SHALL BE PROVIDED WITH ADEQUATE DRAINAGE, AND SHALL BE GRADED SO AS TO DRAIN SURFACE WATER AWAY FROM FOUNDATION WALLS.
- 8. ALL FRAMING LUMBER SHALL BE SPF #2 (Fb = 875 PSI) UNLESS NOTED OTHERWISE (UNO). ALL TREATED LUMBER SHALL BE SYP # 2. PLATE MATERIAL MAY BE SPF # 3 OR SYP #3 (Fc(perp) = 425 PSI - MIN).
- 9. L.V.L. SHALL BE LAMINATED VENEER LUMBER: Fb=2600 PSI, Fv=285 PSI, E=1.9xI0 PSI. 9.1. P.S.L. SHALL BE PARALLEL STRAND LUMBER: Fb=2900 PSI, Fv=290 PSI, E=2.0x10 PSI. 9.2. L.S.L. SHALL BE LAMINATED STRAND LUMBER: Fb=2250 PSI, Fv=400 PSI, E=1.55xI0 PSI. INSTALL ALL CONNECTIONS PER MANUFACTURERS INSTRUCTIONS.
- IO. ALL ROOF TRUSS AND I-JOIST LAYOUTS SHALL BE PREPARED IN ACCORDANCE WITH THE SEALED STRUCTURAL DRAWINGS. TRUSSES AND I-JOISTS SHALL BE INSTALLED ACCORDING TO THE MANUFACTURE'S SPECIFICATIONS. ANY CHANGE IN TRUSS OR I-JOIST LAYOUT SHALL BE COORDINATED WITH SOUTHERN ENGINEERS.
- II. ALL STRUCTURAL STEEL SHALL BE ASTM A-36. STEEL BEAMS SHALL BE SUPPORTED AT EACH END WITH A MINIMUM BEARING LENGTH OF 3 1/2" INCHES AND FULL FLANGE WIDTH. PROVIDE SOLID BEARING FROM BEAM SUPPORT TO FOUNDATION. BEAMS SHALL BE ATTACHED TO EACH SUPPORT WITH TWO LAG SCREWS (1/2" DIAMETER x 4" LONG). LATERAL SUPPORT IS CONSIDERED ADEQUATE PROVIDING THE JOIST ARE TOE NAILED TO THE SOLE PLATE, AND SOLE PLATE IS NAILED OR BOLTED TO THE BEAM FLANGE @ 48" O.C. ALL STEEL TUBING SHALL BE ASTM A500.
- 12. REBAR SHALL BE DEFORMED STEEL, ASTM615, GRADE 60. LAP ALL REBAR SPLICES 30 BAR DIAMETERS.
- 13. FLITCH BEAMS SHALL BE BOLTED TOGETHER USING (2) ROWS OF 1/2" DIAMETER BOLTS (ASTM A325) WITH WASHERS PLACED UNDER THE THREADED END OF BOLT. BOLTS SHALL BE SPACED AT 24" O.C. (MAX), AND STAGGERED AT THE TOP AND BOTTOM OF BEAM (2" EDGE DISTANCE), WITH 2 BOLTS LOCATED AT 6" FROM EACH END.
- 14. BRICK LINTELS (WHEN REQUIRED) SHALL BE 3 1/2"x3 1/2"x1/4" STEEL ANGLE FOR UP TO 6'-0" SPAN AND 6"x4"x5/16" STEEL ANGLE WITH 6" LEG VERTICAL FOR SPANS UP TO 9'-0". SEE PLANS FOR SPANS OVER 9'-0". SEE ALSO SECTION R703.8.3 LINTELS.
- 15. METAL CONNECTORS REFERENCED ON PLANS CORRESPOND TO SIMPSON STRONG-TIE BRAND. CONNECTORS OF EQUAL OR BETTER CAPACITY ARE ACCEPTABLE. CORROSION RESISTANCE PER CODE AND AS RECOMMENDED BY MANUFACTURER.

PROJECT # 24-2030

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Sou 3716