## Residence for

## Garman Homes Lot 0156 Serenity Fuquay Varina, North Carolina

## INDEX TO DRAWINGS

## **COVER SHEET**

- FRONT & LEFT SIDE ELEVATIONS
- **REAR & RIGHT SIDE ELEVATIONS** FIRST & SECOND FLOOR PLANS
- FIRST & SECOND FLOOR FLECTRICAL PLANS
- FIRST & SECOND FLOOR MECHANICAL PLANS
- FIRST FLOOR PLUMBING PLAN
- CONSTRUCTION DETAILS

## **GENERAL NOTES**

- 1. ALL WORK TO BE DONE IN STRICT ACCORDANCE WITH NORTH CAROLINA STATE RESIDENTIAL BUILDING CODE, 2018 EDITION (HEREWITH SHOWN AS N.C.S.R.B.C.).
- 2. DIMENSIONS SHOWN ON DRAWINGS GOVERN OVER SCALE.
- 3. STUD WALL DESIGN SHALL CONFORM TO ALL N.C.S.R.B.C.
- 4. CONTRACTOR SHALL USE TEMPERED SAFETY GLASS IN ALL LOCATIONS AS REQUIRED BY N.C.S.R.B.C., 2018 EDITION, SECTION
- 5. ANY HABITABLE ROOM SHALL MEET ALL LIGHT/VENTILATION AND EGRESS AS REQUIRED BY N.C.S.R.B.C. 2018 EDITION, SECTIONS R-303.1 AND R-310.1.
- 6. ALL EXTERIOR WALLS SHOWN ON FLOOR PLANS ARE 2X6 FRAME UNLESS NOTED OTHERWISE. ALL INTERIOR WALLS SHOWN ON FLOOR PLANS ARE 2X4 FRAME UNLESS NOTED OTHERWISE.
- 7. ALL ANGLED WALLS SHOWN ON FLOOR PLANS ARE 45 UNLESS NOTED OTHERWISE.
- 8. ALL WINDOWS SHALL HAVE A MINIMUM DPI RATING OF 25. BUILDER SHALL VERIFY WITH WINDOW MANUFACTURER THAT UNITS INSTALLED MEET THESE REQUIREMENTS AS PER N.C.S.R.B.C., 2018 EDITION, TABLE 301.2(4).
- 9. ENERGY EFFICIENCY REQUIREMENTS FOR THE SPECIFIC CLIMATE ZONE WHERE STRUCTURE IS BEING BUILT SHALL BE IN ACCORDANCE WITH CHAPTER 11 OF THE N.C.S.R.B.C., 2018 EDITION, AS SHOWN IN SECTION N1101.2.

## MATERIALS LEGEND

	EARTH/COMPACT FILL	FINISH WOOD
A	CONCRETE	ROUGH WOOD
	BRICK	BLOCKING
	CONCRETE BLOCK/STONE	PLYWOOD
	STEEL	BATT INSULATION
	ALUMINUM	RIGID INSULATION

## ATTIC VENTILATION REQUIREMENTS

NATURAL ROOF VENTILATION CALCULATIONS

1340 SQ. FT. = 8.93 SQ. FT. VENT REQ'D

BUILDER TO PROVIDE APPROPRIATE VENTILATING AS REQUIRED PER CODE

MECHANICAL ROOF VENTILATION CALCULATIONS

<u>1340 SQ. FT.</u> = 4.47 SQ. FT. VENT REQ'D

BUILDER TO PROVIDE APPROPRIATE VENTILATING AS REQUIRED PER CODE

## FOUNDATION PLAN & FIRST FLOOR FRAMING PLAN

SECOND FLOOR FRAMING PLAN & ROOF FRAMING PLAN

STRUCTUAL OPTIONS

STRUCTURAL OPTIONS
BRICK FOUNDATION PLAN- LEFT & RIGHT S5B

STRUCTURAL DETAILS

## RESIDENTIAL BUILDING CODE SUMMARY

- 1. PLANS ARE DESIGNED TO THE 2018 N.C.S.R.B.C.
- 2. HOUSE IS DESIGNED FOR 115 MPH ULTIMATE DESIGN WIND SPEED (89 MPH NOMINAL DESIGN WIND SPEED), EXPOSURE B.
- 3. ANCHOR BOLTS SHALL BE MIN. 1/2" DIAMETER AND SHALL EXTEND 7" MIN. INTO MASONRY OR CONCRETE. BOLTS TO BE NO MORE THAN 6' O.C. AND WITHIN 12" FROM THE CORNER.
- 4. MEAN ROOF HEIGHT: 28'-5"
- 5. COMPONENT & CLADDING DESIGNED FOR THE FOLLOWING LOADS:

MEAN ROOF HGT:	<b>UP TO 30'</b>	30'-1" TO 35'	35'-1" TO 40'	40'-1" TO 45'
ZONE 1	16.5,-18.0	17.3,-18.9	17.3,-18.9	17.3,-18.9
ZONE 2	16.5,-21.0	17.3,-22.1	17.3,-22.1	17.3,-22.1
ZONE 3	16.5,-21.0	17.3,-22.1	17.3,-22.1	17.3,-22.1
ZONE 4	18.0,-19.5	18.9,-20.5	18.9,-20.5	18.9,-20.5
ZONE 5	18.024.1	18.925.3	18.925.3	18.925.3

- 6. MINIMUM VALUES FOR ENERGY COMPLIANCE: Zone 4
- 7. MAXIMUM GLAZING U-FACTOR: .35
- 8. INSULATING VALUES: CEILING: R-49 / WALLS: R-15 / FLOOR: R-19 SLABS: R-10. CODE REFERENCE: TABLE N1102.1

## AREA CALCULATIONS

HEATED (SQ. FT.)		UNHEATED (SO	Q. FT.)	UNFINISHED (SQ. FT.)		
1ST FL 2ND F		830 1112	FRONT PORCH: GARAGE: PATIO:	85 425 100	BASEMENT: 1ST FLOOR: 2ND FLOOR:	N/A N/A N/A
TOTAL	:	1942			ATTIC:	N/A
			TOTAL:	610	TOTAL:	N/A
				OVERALL DIMENS	SIONS	
					WIDTH: DEPTH:	34'-4" 50'-2"

## FOUNDATION VENTILATION CALCULATIONS

(REFERENCE: N.C.S.R.B.C. 2018 EDITION SECTION R408.)

NOT APPLICABLE WITH SLAB FOUNDATIONS





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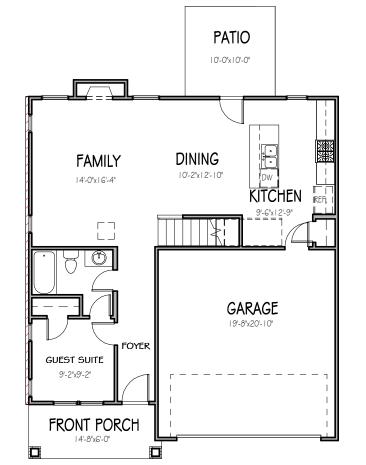
## Project Number

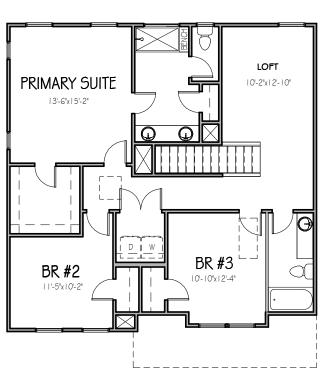
Project Number

Plan Number

FP-1942

LOT 0156 SERENITY





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Project Number Project Number Plan Number FP-1942

## Ш HONEYSUCKL SER ELEVATION B LOT 0156 SERENITY

Drawn By Checked By CM Date Drawn 4/8/20 **Revision Date** 7/1/20 4/5/22 2/22/23

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RIDGE VENT 12 FIBERGLASS SHINGLE ROOF (CLASS 'C' MIN.) 8" TRIM W/ DRIP CAP TRUSS BRIDGE WINDOWS OVFRHANG (TYP.)\_ - SHAKE SIDING 4" TRIM @ WINDOWS AND DOORS CORNER TRIM AS SPEC 2ND FIN. FLR - CEMENTITIOUS SIDING WINDOWS 10" SQ. COL. WITH 12" BOX ON\_ 16" SQ. BRICK PIER IST FIN. FLR. SLAE (MAIN HOUSE) STEPS TO GRADE BRICK VENEER FND. AS PER SITE BRICK FND. WALL @ FRONT

COLUMN DETAILS

## FRONT ELEVATION

1/8" = 1'-0"

NOTE:

PROVIDE RAILS @

REQUIRED BY CODE

FOUNDATION FRONT

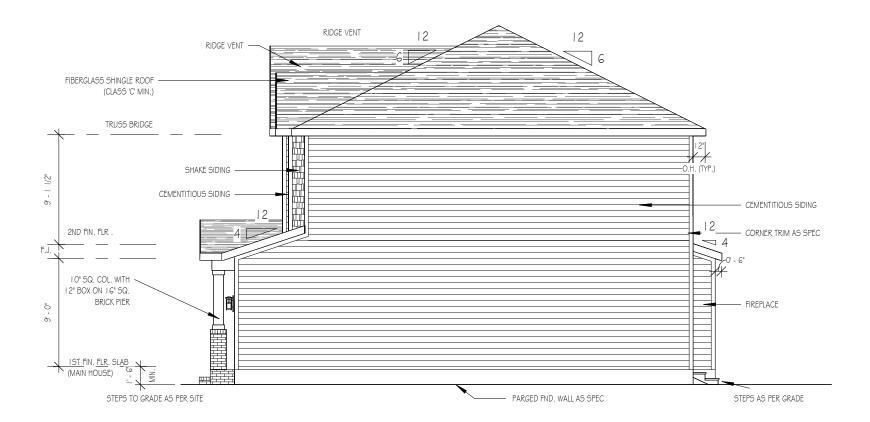
GRADE TO FINISHED FRONT PORCH

PORCH ONLY IF

15" MIN. HGT.

5' - 8"

NOTE - SLOPE ALL GRADE AWAY FROM HOUSE FOR POSITIVE DRAINAGE



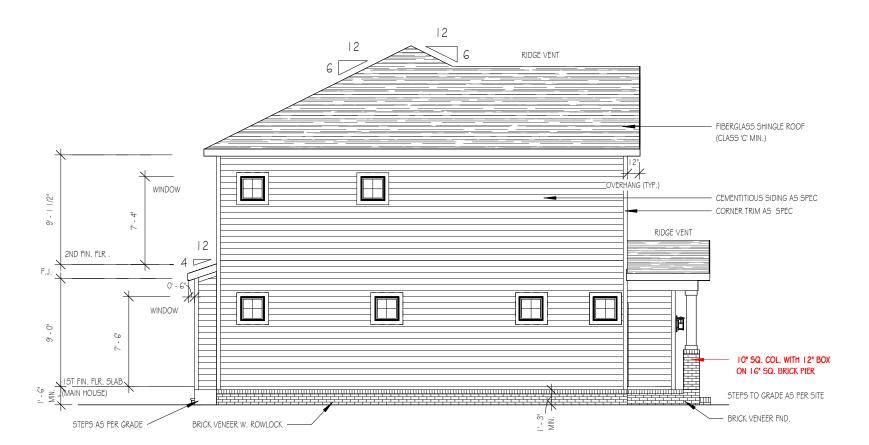
## RIGHT SIDE ELEVATION

ONLY (TYP. WHERE SHOWN)

## REAR ELEVATION

1/8" = 1'-0"

NOTE - SLOPE ALL GRADES AWAY FROM HOUSE FOR POSITIVE DRAINAGE



## LEFT SIDE ELEVATION

1/8" = 1'-0"

THE PURPOSE OF THESE DRAWINGS IS TO SHOW THE INTENT OF THE DESIGN AND CONSTRUCTION OF THIS HOME. CONTRACTOR SHOULD VERIFY ALL CONDITIONS AND DIMENSIONS PRIOR TO CONSTRUCTION. ONCE A PERMIT HAS BEEN ISSUED, CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY TO THE ACCURACY OF THE PLANS AND ANY CHANGES MADE DURING CONSTRUCTION.



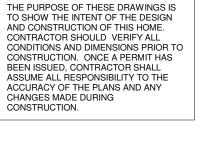
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## Project Number Project Number Plan Number FP-1942

## HONEYSUCKLE SER ELEVATION B LOT 0156 SERENITY

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Date Drawn	
4/8/20	
Revision Date	1
7/1/20	
4/5/22	
2/22/23	

2



SPECIAL FIRE

RATED WALL

ASSEMBLY

, SHOWER BENCH 20"H

25.5"X54" PDB 81X81 ATTIC PLATFORM

BR #3

11' - 2"

DSP 2-3/0x5/0 SH

9' - 2"

19' - 10"

5' - 4"

10' - 6"

LOFT



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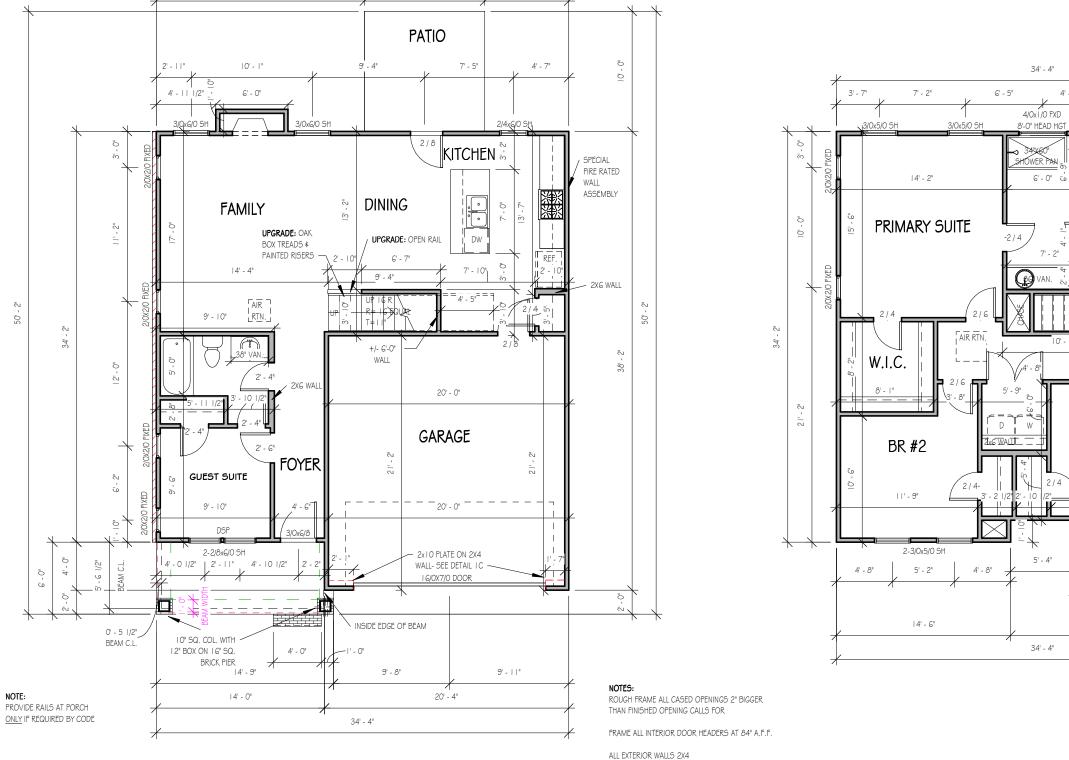
Project Number Project Number Plan Number

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## HONEYSUCKL SER ELEVATION B LOT 0156 SERENITY

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Sheet



7' - 0"

34' - 4"

10' - 0"

17' - 4"

## FIRST FLOOR

1/8" = 1'-0"

9'-0" CLG. HGT. U.N.O. SET WINDOWS @ 7'-6" U.N.O. CASED OPENINGS 8'-0" TALL

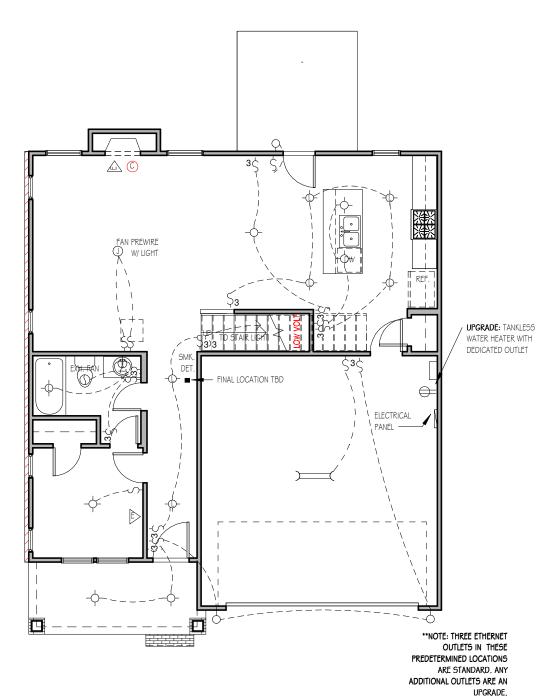
TOP OF ALL WINDOWS SILLS SHALL BE 24" MINIMUM ABOVE THE FINISHED FLOOR  $\underline{\mathsf{OR}}$  A FALL PREVENTION DEVICE SHALL BE INSTALLED IN ACCORDANCE WITH SECTION R312.2 OF N.C.S.R.B.C., 2018 EDITION

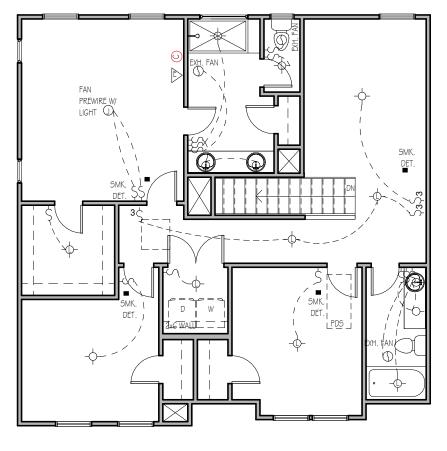
GBG (GRILL BETWEEN GLASS) TO BE ADDED TO CORNER LOT WINDOWS

## SECOND FLOOR

1/8" = 1'-0"

9'-0" CLG. HGT. U.N.O. SET WINDOWS @ 7'-4" U.N.O.





## FIRST FLOOR ELECTRICAL PLAN

1/8" = 1'-0"

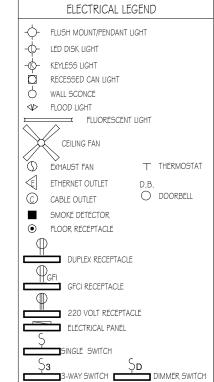
NOTE - ELECTRICAL RECEPTACLE AND SWITCH QUANTITIES AND LOCATIONS SHOWN ON PLAN ARE FOR ILLUSTRATION PURPOSES ONLY. ACTUAL NUMBER AN D LOCATIONS SHALL BE FIELD DETERMINED AS PER CLIENT AND BUILDER EXCEPT WHERE CODE REQUIREMENTS APPLY.

## SECOND FLOOR ELECTRICAL PLAN

1/8" = 1'-0"

NOTE - ELECTRICAL RECEPTACLE AND SWITCH QUANTITIES AND LOCATIONS SHOWN ON PLAN ARE FOR ILLUSTRATION PURPOSES ONLY. ACTUAL NUMBER AN D LOCATIONS SHALL BE FIELD DETERMINED AS PER CLIENT AND BUILDER EXCEPT WHERE CODE REQUIREMENTS APPLY.

THE PURPOSE OF THESE DRAWINGS IS TO SHOW THE INTENT OF THE DESIGN AND CONSTRUCTION OF THIS HOME.
CONTRACTOR SHOULD VERIFY ALL CONDITIONS AND DIMENSIONS PRIOR TO CONSTRUCTION. ONCE A PERMIT HAS BEEN ISSUED, CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY TO THE ACCURACY OF THE PLANS AND ANY CHANGES MADE DURING CONSTRUCTION.





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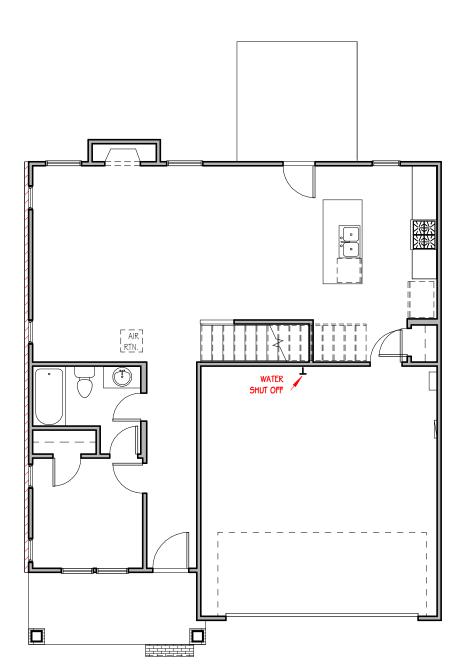
Project Number Project Number Plan Number FP-1942

## Ш HONEYSUCKL

# SER ELEVATION B LOT 0156 SERENITY

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## FIRST FLOOR MECHANICAL PLAN

1/8" = 1'-0"

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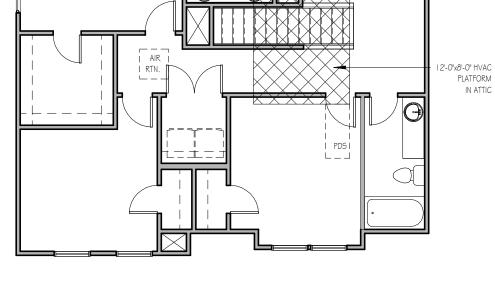
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# SER ELEVATION B LOT 0156 SERENITY

# HONEYSUCKLE

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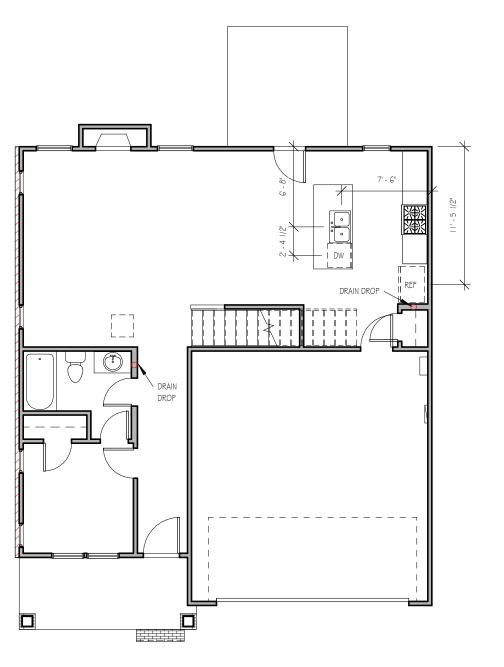
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SECOND FLOOR MECHANICAL

PLAN

1/8" = 1'-0"



## FIRST FLOOR PLUMBING

1/8" = 1'-0"

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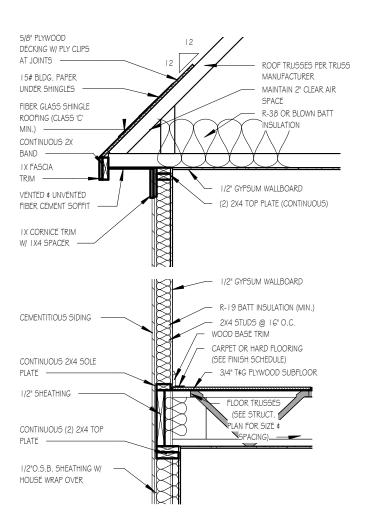
## Project Number Project Number Plan Number FP-1942

# HONEYSUCKLE SER ELEVATION B LOT 0156 SERENITY

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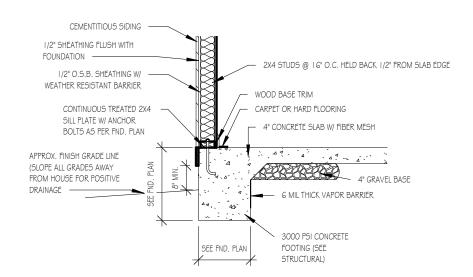
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## TWO-STORY WALL SECTION

1/2" = 1'-0"



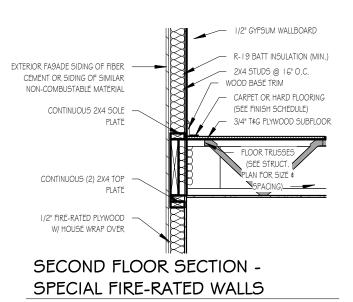
## FOUNDATION DETAIL - SLAB

1/2" = 1'-0"

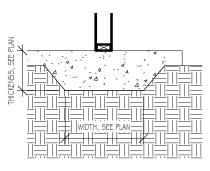
1/2" FIRE-RATED PLYWOOD -DECKING W/ PLY CLIPS AT JOINTS EXTENDING AMIN. OF 4' AWAY FROM WALL ASSEMBLY ROOF TRUSSES PER TRUSS MANUFACTURER 15# BLDG. PAPER UNDER SHINGLES MAINTAIN 2" CLEAR AIR FIBER GLASS SHINGLE SPACE R-38 OR BLOWN BATT ROOFING (CLASS 'C' MIN.) INSULATION CONTINUOUS 2X BAND LX FASCIA TRIM 1/2" GYPSUM WALLBOARD 5'8" PLYWOOD SOFFIT, ALL SOFFITS CONNECTING TO THE (2) 2X4 TOP PLATE (CONTINUOUS) SPECIAL WALL AND A MIN. OF 4' OF CONNECTING POINT SHALL BE SEALED W/ TWO LAYERS OF FIRE-RATED PLYWOOD OR 5/8" EXTERIOR OR MOISTURE RESISTANT GYPSUM BOARD IX CORNICE TRIM W/ IX4 SPACER FIRE RATED OSB

## ROOF DETAIL SPECIAL FIRE-RATED WALLS

1/2" = 1'-0"



1/2" = 1'-0"



## LUG FOOTING

THE PURPOSE OF THESE DRAWINGS IS TO SHOW THE INTENT OF THE DESIGN AND CONSTRUCTION OF THIS HOME. CONTRACTOR SHOULD VERIFY ALL CONDITIONS AND DIMENSIONS PRIOR TO CONSTRUCTION. ONCE A PERMIT HAS BEEN ISSUED, CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY TO THE ACCURACY OF THE PLANS AND ANY CHANGES MADE DURING CONSTRUCTION.

2X4 STUD FRAMING (UNO)



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\_Project Number \_\_\_\_Project Number \_\_\_\_Plan Number

## TYPICAL DETAIL SHEET

SERENITY COLLECTION

# SHEET METAL FLASHING SHEATHING SIDING AS SPEC. EMBEDDED LADDER WIRE OR WALL TIES @ 16" O.C. EVERY OTHER COURSE BRICK ROWLOCK BRICK VENEER

## TYPICAL SLAB W/ BRICK VENEER

3/4" = 1'-0

2X4 TRTD. BOTTOM

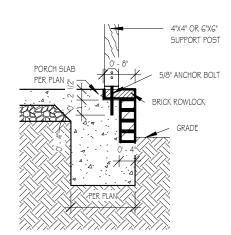
1/2" DIA. BOLTS. SEE

EMBEDMENT

REQUIREMENTS

PLATEtxS (S) SECURED BY

CHART FOR SPACING AND

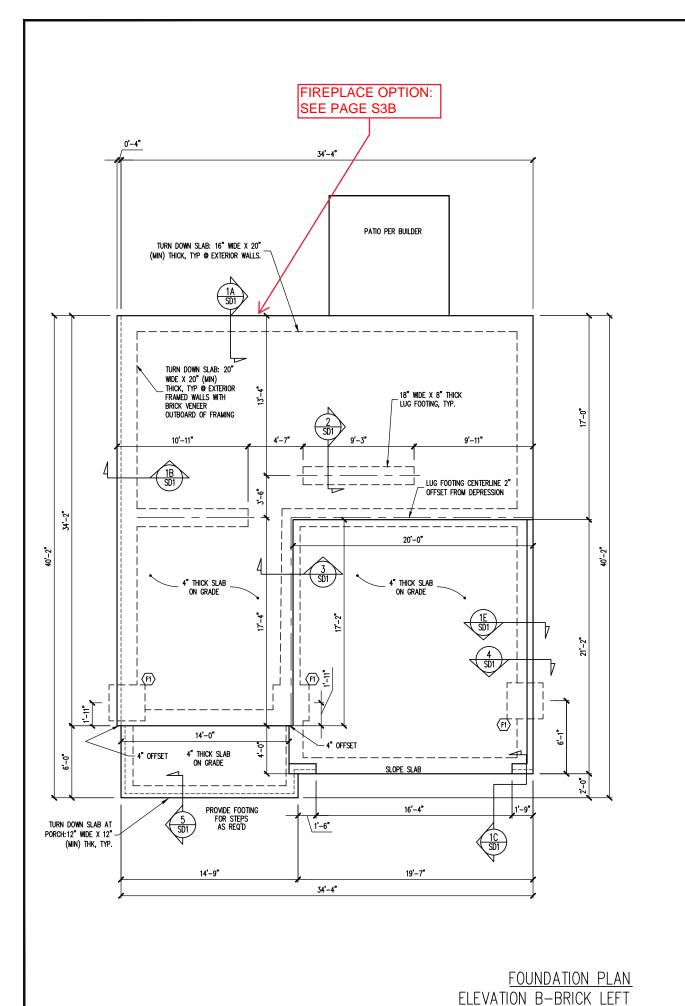


FRONT PORCH COLUMNS
SUPPORT ATTACHMENT

SUPPORT ATTACHMENT

Drawn By	
MMH	
Checked By	
JM	
Date Drawn	
10/28/20	
Revision Date	
9/14/22	
9/20/22	

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1/8" = 1'-0"

FOUNDATION SCHEDULE

F1 ENLARGE FOOTING TO 36" SQ. X 12" THK

IUTES:
-HEIGHT AND BACKFILL LIMITATIONS FOR
FOUNDATION WALLS ARE TO BE GOVERNED
BY THE NCSBC, LATEST EDITION.

ENGINEERING SEAL VALID FOR 1 YEAR ONLY.
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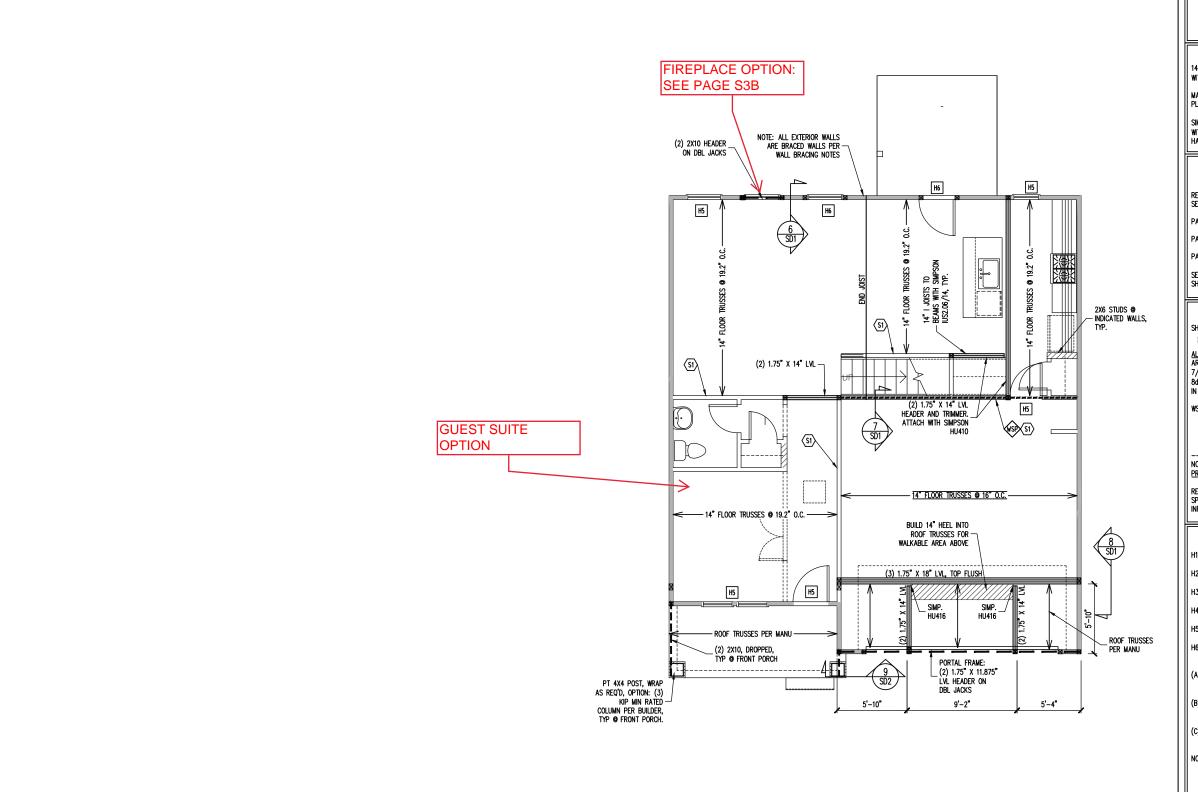
PROJECT NO.

24-30-029

SHEET NO.

S5B

5 of 7



FRAMING SCEDULE

INTERIOR LOAD BEARING WALL: SECURE TO THICKENED SLAB BELOW WITH 1/2" FED HEADER ANCHOR (OR EQUAL) @ 6'-0" O.C., 12" MAX FROM ENDS / CORNERS OF WALL, 7 MIN EMBEDMENT INTO SLAB BELOW.

## JOIST SUBSTITUTION

14" FLOOR TRUSSES PERMITTED TO BE SUBSTITUTED WITH 14" I-JOISTS.

MAINTAIN MINIMUM SPACING AS CALLED OUT ON

SIMP. IUS/ITS3.56/14 HANGERS TO BE SUBSTITUTED WITH SIMP. IUS/ITS2.06/14 HANGER WHEN I-JOISTS HAVE BEEN INSTALLED.

## CONSTRUCTION SPECIFICATIONS INSTANT REFERENCES

REFER TO THE CONSTRUCTION SPECIFICATIONS SECTIONS FOR THE FOLLOWING INFORMATION:

PART 1.01: CURRENT GOVERNING CODE

PART 14: STUD SUPPORT FOR BEAMS

PART 17: KING STUDS FOR EXTERIOR WALLS

SEE DETAIL / CONSTRUCTION SPECIFICATIONS SHEETS FOR I-JOISTS ALLOWABLE SUBSTITUTIONS

## 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 @ 4" O.C. AT PANEL EDGES, 8" O.C. IN PANEL FIELD.

PROVIDED CONTINUOUS SHEATHING = 155' MIN.

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

## **HEADER SCHEDULE**

- SINGLE 2X4 TURNED FLAT (A)
- H2 (2) 2X4'S ON SINGLE JACKS (B)
- H3 (2) 2X10'S ON SINGLE JACKS (C)
- (2) 1.75" X 9.25" LVL'S ON DBL JACKS
- (2) 2X8'S ON SINGLE JACKS
- (2) 2X8'S ON DOUBLE JACKS
- TYPICAL FOR INTERIOR NON LOAD BEARING WALLS ONLY, ROUGH OPENING 38" MAX.
- TYPICAL FOR INTERIOR NON LOAD BEARING WALLS ONLY, ROUGH OPNG 38" TO 74" MAX.
- TYPICAL FOR ALL CONDITIONS NOT LISTED IN (A) OR (B) UNO.

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

## FOUNDATION SCHEDULE

1ST FLOOR FRAMING PLAN

**ELEVATION B** 

WALLS AND CEILING 1/8" = 1'-0" ENLARGE FOOTING TO 36" SQ. X 12" THK

OLES: -HEIGHT AND BACKFILL LIMITATIONS FOR FOUNDATION WALLS ARE TO BE GOVERNED BY THE NCSBC, LATEST EDITION.

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

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Engineering from Engine only. ission listed perm client li written for the without plans are seal date P.A. These eering place Engin takes

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SHEET NO. S<sub>1</sub>B

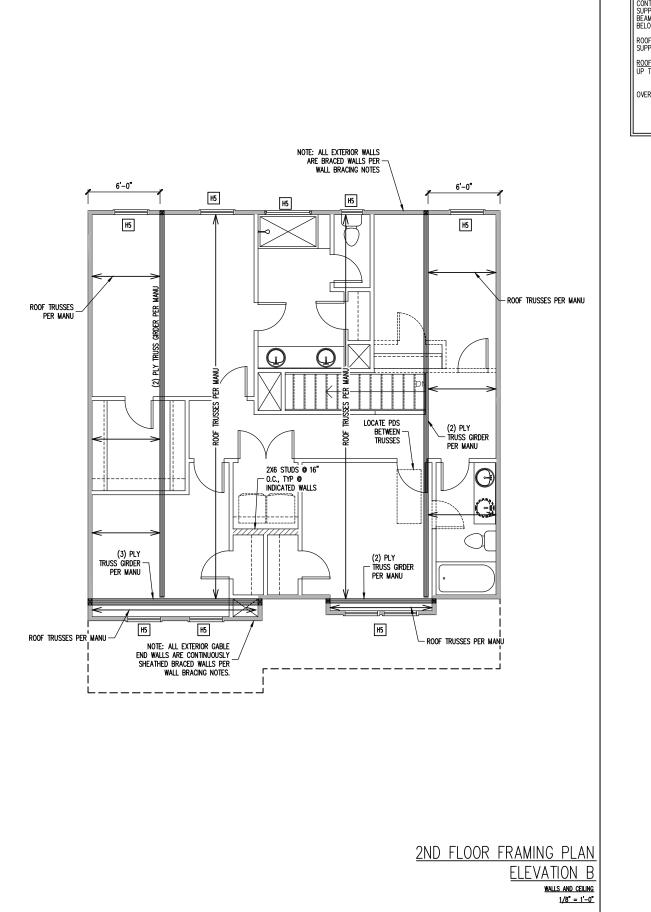
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24-30-029

MASTER

CMC

TBD



## TRUSS UPLIFT CONNECTORS

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.

OVER 28'

OR (1) SIMPSON H3 CLIP TO SINGLE 2X4 PLATE

- OPTIONAL SCREENED PORCH ■ DN 4:12 DN 4:12

■ DN 10:12 DN 10:12 RIDGE VALLEY SET TRUSSES VALLEY - SET VALLEY SET TRUSSES TRUSSES DN 10:12 DN 10:12 ■ DN 10:12 DN 10:12 DN 4:12 VALLEY SET TRUSSES -

> **ELEVATION B** 1/8" = 1'-0"

## FRAMING NOTES

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

## **CONSTRUCTION SPECIFICATIONS** INSTANT REFERENCES

REFER TO THE CONSTRUCTION SPECIFICATIONS SECTIONS FOR THE FOLLOWING INFORMATION:

PART 1.01: CURRENT GOVERNING CODE PART 14: STUD SUPPORT FOR BEAMS

PART 17: KING STUDS FOR EXTERIOR WALLS

## 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.

PROVIDED CONTINUOUS SHEATHING = 139' MIN.

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

## **HEADER SCHEDULE**

- SINGLE 2X4 TURNED FLAT (A)
- (2) 2X4'S ON SINGLE JACKS (B)
- (2) 2X10'S ON SINGLE JACKS (C)
- H4 (2) 1.75" X 9.25" LVL'S ON DBL JACKS
- H5 (2) 2X8'S ON SINGLE JACKS
- TYPICAL FOR INTERIOR NON LOAD BEARING WALLS ONLY, ROUGH OPENING 38" MAX.
- TYPICAL FOR INTERIOR NON LOAD BEARING WALLS ONLY, ROUGH OPNG 38" TO 74" MAX.
- TYPICAL FOR ALL CONDITIONS NOT LISTED IN (A) OR (B) UNO.

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

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License No. C-3870
8 W Millbrook Rd Suite 201
aleigh, North Carolina 27609
Phone (919) 844-1661 318 W A Raleigh,

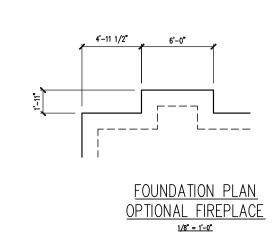
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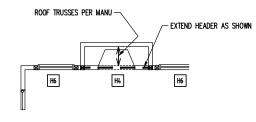
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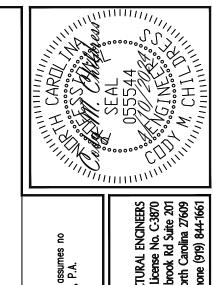
ROOF FRAMING PLAN





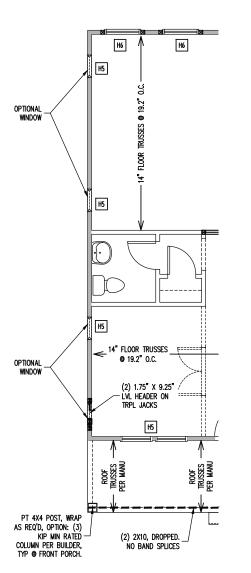
1ST FLOOR FRAMING PLAN OPTIONAL FIREPLACE

1/8" = 1'-0"

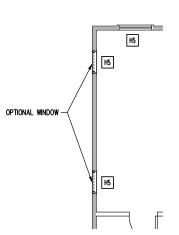


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1ST FLOOR FRAMING PLAN OPTIONAL WINDOWS <u>1/8" = 1'-0"</u>



2ND FLOOR FRAMING PLAN OPTIONAL WINDOWS, PRIMARY SUITE 1/8" = 1'-0"

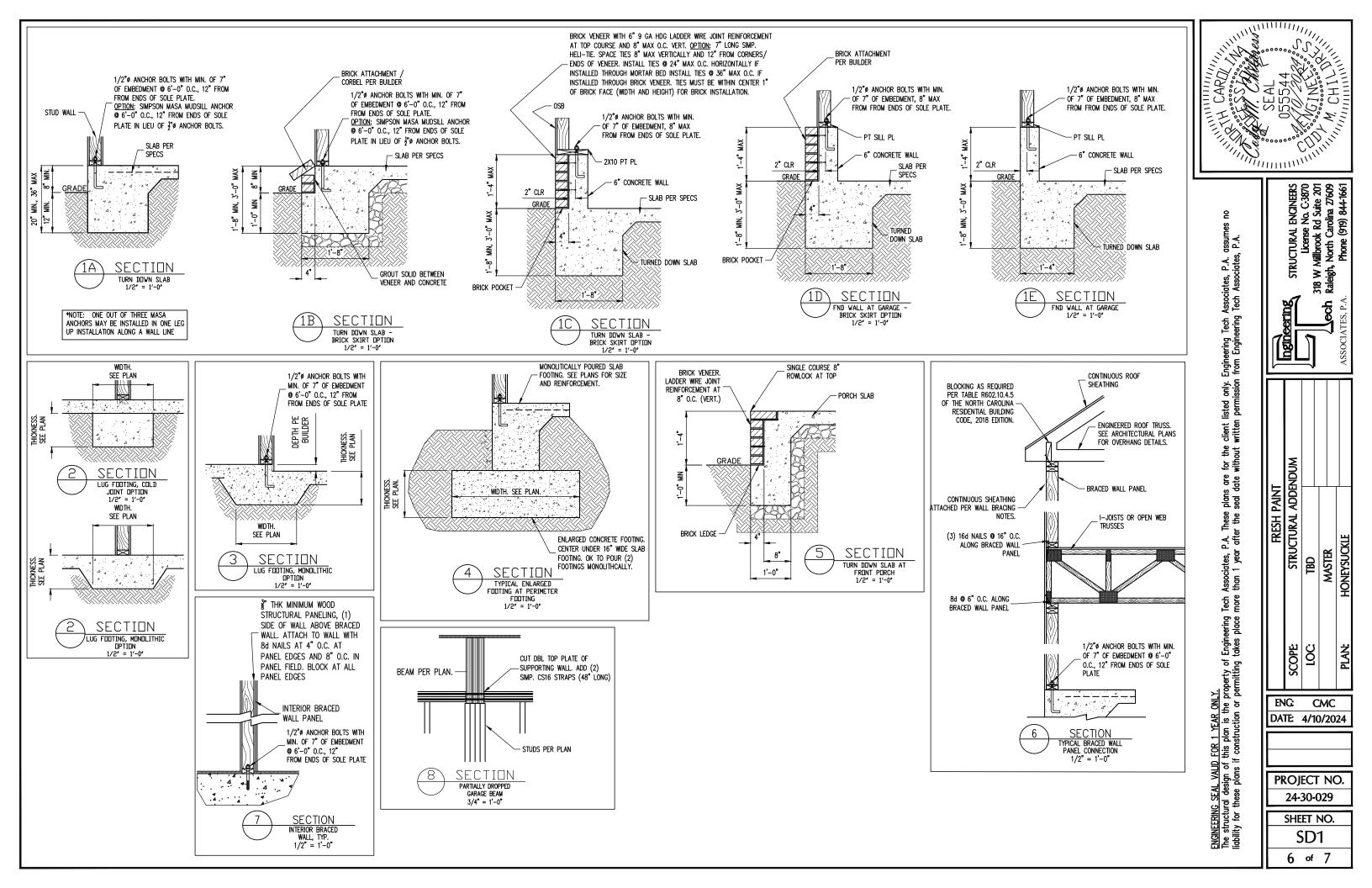
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## CONSTRUCTION SPECIFICATIONS

## PART 1: GENERAL

- CONSTRUCTION SHALL MEET THE REQUIREMENTS OF THE NORTH CAROLINA RESIDENTIAL CODE. 2018 EDITION.
- 1.02 DIMENSIONS SHOWN SHALL GOVERN OVER SCALE ON THESE DRAWINGS.
- 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.

## PART 2: DESIGN LOADS

2.01 DESIGN LOADS SHALL CONFORM WITH THE TABLE BELOW: USE

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)

LIVE LOAD (PSF) DEAD LOAD (PSF)

- 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
- 2.02 INTERIOR WALLS: 5 PSF LATERAL
- 2.03 BASIC WIND DESIGN VELOCITY OF 120 MPH.
- SOIL BEARING CAPACITY 2000 PSF (PRESUMPTIVE).

## PART 5: CONCRETE AND SLABS ON GRADE

- 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
- 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% ARD PROCTOR DENSITY. VAPOR BARRIER MAY BE OMITTED FOR SLABS NOT

## PART 7: MASONRY

- 7.03 MORTAR SHALL BE TYPE S. MORTAR AND GROUT SHALL CONFORM TO ASTM C476, MIN COMPRESSIVE STRENGTH OF 2000 PSI.
- LADDER WIRE REINFORCEMENT SHALL CONFORM TO ASTM A951. 6 MIN LAPS FOR CONTINUOUS WALL APPLICATIONS

## PART 8: BOLTS AND LAG SCREWS

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

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

## PART 10: DIMENSIONAL LUMBER

SOLID SAWN WOOD FRAMING DESIGN IS BASED ON NO. 2 SPRUCE PINE FIR  $\underline{OR}$  SYP #2 FOR JOISTS, RAFTERS, GIRDERS, BEAMS, STUDS, ETC.

## PART 11: ENGINEERED LUMBER

- LVL OR PSL MINIMUM ALLOWABLE DESIGN STRESSES ARE AS FOLLOWS: E= 1.9 X 10E6 PSl, Fb = 2600 PSl, Fv = 285 PSl, Fc = 750 PSl LSL MINIMUM ALLOWABLE DESIGN STRESSES ARE AS FOLLOWS: E= 1.3 X 10E6 PSl, Fb = 1700 PSl, Fv = 400 PSl, Fc = 680 PSl
- 11.02 LVL OR PSL MEMBERS MAY BE RIPPED FROM DEEPER MEMBERS TO MATCH THE MEMBER

## PART 12: PRESSURE TREATED LUMBER

LUMBER IN CONTACT WITH THE GROUND, CONCRETE OR MASONRY SHALL BE PRESSURE TREATED IN ACCORDANCE WITH AWPA STANDARD C-15. ALL OTHER EXPOSED LUMBER SHALL BE TREATED IN ACCORDANCE WITH AWPA 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)

## PART 14: STUD SUPPORTS FOR BEAMS

14.01 STEEL, ENGINEERED LUMBER, AND FLITCH PLATE BEAMS BEARING ON A STUD WALL

- 1-WHEN THE BEAM IS PERPENDICULAR TO, OR SKEWED RELATIVE TO THE WALL, THE BEAM SHALL BEAR <u>FULL WIDTH</u> 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 PARTLEL TO THE BEAM SHALL BEAR A MINIMUM OF A 1.0° CONTO THE WALL AND BE SUPPORTED BY A TOPL STUD CANCED.
- A MINIMUM OF 4 1/2" ONTO THE WALL AND BE SUPPORTED BY A TRPL STUD GANGED
- 4.02 DIMENSIONAL LUMBER 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 <u>full width</u> on the supporting wall indicated (less 1 1/2" to allow for a continuous rim joist where applicable) and shall be supported by a GANGED STUD COLUMN THE SAME MOTH AS THE BEAM TYP UNO. (E.G. A TRIPLE 2XIO IS TO BE SUPPORTED BY (3) STUDS). 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 3" ONTO THE WALL AND BE SUPPORTED BY A DBL STUD GANGED COLUMN
- 14.03 Extra joists bearing on a stud wall perpendicular to or skewed relative to the beam shall be supported by one additional stud.
- STUDS THAT ARE GANGED TO FORM A COLUMN SHALL HAVE ADJACENT STUDS WITHIN THE COLUMN NAILED TOGETHER WITH ONE ROW OF 10d NAILS AT 8" O.C. (TWO ROWS THE COLOMIN NAILS OF 8" O.C., 3" APART, FOR 2X8 OR 2X10 STUDS) ALL COLUMNS SHALL BE CONTINUOUS DOWN TO THE FOUNDATION OR OTHER PROPERLY DESIGNED STRUCTURAL ELEMENT SUCH AS A BEAM. COLUMNS TRANSFERRING LOADS THROUGH FLOOR LEVELS SHALL BE SOLIDLY BLOCKED FOR THE FULL WIDTH OF THE STUD COLUMN WITHIN THE CAVITY FORMED BY THE

## PART 15: NAILING OF MULTI PLY WOOD BEAMS

- 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 @ 16" O.C. FOR 2X10 OR LARGER, TWO ROWS OF 10d NAILS @ 16" O.C. FOR 2X8, ONE 15.01 ROW OF 10d NAILS @ 16" O.C. FOR 2X6 OR SMALLER. STAGGER ROWS 5" MIN.
- 15.02 LV. MEMBERS THAT ARE GANGED TO FORM A BEAM SHALL HAVE ADJACENT MEMBERS IN THE BEAM FASTENED TOGETHER PER MANUFACTURERS RECOMMENDATIONS, TYP

## PART 16: WALL FRAMING AND BRACING

6.01 STUD WALLS SHALL CONSIST OF 2X4 STUDS SPACED AT 16" O.C. UNO. STUDS SHALL STUD WALLS SHALL CONSIST OF ZXA 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 DBL TOP PLATE AND 7/16" OSB EXTERIOR BRACING AND ROW OF ZXA /

2X6 PURLINS AT 8' HEIGHT (AND AT 16' HEIGHT FOR TALL WALLS), TYP UNO:

16.02 FOR WALL BRACING THE FOLLOWING SHALL APPLY:

-BLOCKING AT UNSUPPORTED PANEL EDGES IS REQUIRED TYP UNO.

-WALL BRACING IS BY ENGINEERED DESIGN AND NOT PRESCRIPTIVE PER SECTION 602.10 OF THE 2018 NCRC. CONTINUOUS SHEATHING HAS BEEN PROVIDED, ALONG WITH ALTERNATIVE METHODS TO INSURE THE MINIMUM INTENT OF SECTION 602.10

WITH ALTERNATIVE METHODS TO INSURE THE MINIMUM INTENT OF SECTION 602.10 OF THE 2018 NCRC HAS BEEN MET AND EXCEEDED.

-BRACED WALL PANELS SHALL BE FASTENED IN ACCORDANCE WITH TABLE 602.3(1) TO PROVIDE CONTINUOUS PANEL UPLIFT RESISTANCE AND COMPLIANCE WITH NCRBC R602.3.5 AND R802.11 UNLESS NOTED OTHERWISE ON STRUCTURAL PLANS.

-MAY SUBSTITUTE WSP FOR GB
-SINGLE JOIST, CONTINUOUS RIM JOIST, OR BLOCKING OF EQUAL DEPTH IS REQUIRED ABOVE AND BELLOW ALL BRACED WALLS. NAIL BLOCKING ABOVE WALL TO TOP PLATE WITH 16d TOE NAILS @ 6" O.C. NAIL SOLE PLATE OF BRACED WALL TO BLOCKING BELOW WITH (3) IGH NAILS © 16" O.C. BLOCKING AT HORIZONTAL JOINTS IN BRACED WALL LINES ONLY REQUIRED AT SHADED WALLS. UNO. WALL LINES ONLY REQUIRED AT SHADED WALLS, UNO.

17.01 KING STUDS FOR OPENINGS IN EXTERIOR WALLS SHALL BE AS FOLLOWS:

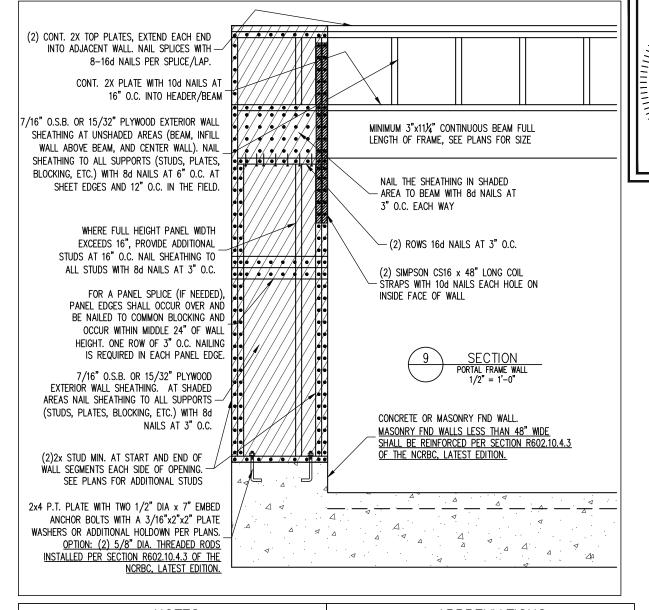
MAX OPENING	WIDTH	5'-0"			ig studs 17'-0"	21'-0"
STUD SIZE	2X4 2X6 2X8	1 1	2 1	3 2 1	4 2 1	5 2

## PART 18: SUBSTITUTIONS

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

## PART 19: OWNERSHIP OF STRUCTURAL DESIGN

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



## **ABBREVIATIONS NOTES** THE BUILDER IS RESPONSIBLE FOR REVIEWING PLANS PRIOR TO CONSTRUCTION. THE BUILDER FND FOUNDATION ABV ABOVE TJ TRIPLE JOIST SHALL IMMEDIATELY CONTACT THE ENGINEER OF RECORD (EOR) BEFORE PROCEEDING IF THE TYP TYPICAL FOLLOWING CONDITIONS ARE NOTED BEFORE OR DURING CONSTRUCTION: BOTH FNDS HDG HOT DIPPED TRPL TSP TRIPI F GALVANIZED TRIPLE STUD POCKE BTWN BETWEEN 1) THE WORKING PLANS DO NOT BEAR THE SEAL OF THE EOR HGR HANGER CAST IN PLACE UNO UNLESS NOTED 2) THE PLANS CONTAIN DISCREPANT OR INCOMPLETE INFORMATION LVL LAMINATED VENEER CONCRETE CONC OTHERWISE CONTINUOUS SHEATHING XJ EXTRA JOIST ANY ERRORS DUE TO A FAILURE TO FOLLOW THE ABOVE PROCEDURES SHALL NOT BE THE NTS NOT TO SCALE DIA DIAMETER RESPONSIBILITY OF THE FOR, FURTHERMORE, IT IS THE RESPONSIBILITY OF THE BUILDER TO DBL DOUBLE O.C. ON CENTER ENSURE THAN ANY REVISIONS ISSUED BY THE EOR ARE PROMPLY DISTRIBUTED TO THE DOUBLE JOIST PSL PARALLEL STRAND DSP DBI STUD POCKET LUMBER PT PRESSURE TREATED THE EOR DOES NOT PERFORM FENESTRATION OR VENTING CALCULATIONS OR ANY OTHER EA EACH QJ QUAD JOIST CALCULATIONS THAT ARE NOT DIRECTLY RELATED TO STRUCTURAL ENGINEERING. FLG FLANGE SP STUD POCKET L PL FLITCH PLATE SQ SQUARE ROOF AND FLOOR TRUSSES TO BE DESIGNED BY AN ENGINEER REGISTERED BY THE STATE, FINA

FIR FLOOR

## ALLOWABLE I-JOIST SUBSTITUTION

NOTE: MAINTAIN JOIST DEPTH, DIRECTION, AND SPACING SPECIFIED ON PLANS.

TRUSS DRAWING SHOULD BE SUBMITTED TO THE EOR FOR REVIEW

MANUFACTURER	DEPTH	SERIES	SIMPSON FACE MOUNT HGR	SIMPSON TOP FLANGE HGR
BLUELINX BOISE CASCADE BOISE CASCADE LP CORP NORDIC ROSEBURG WEYERHAEUSER WEYERHAEUSER	14" 14" 14" 14" 14" 14" 14"	BLI 40 BCI 5000s BCI 6000S LPI 20+ NI 40X RFPI 40s TJI 210 EEI-20	IUS2.56/14 IUS2.06/14 IUS2.37/14 IUS2.56/14 IUS2.56/14 IUS2.56/14 IUS2.06/14 IUS2.37/14	ITS2.56/14 ITS2.06/14 ITS2.37/14 ITS2.56/14 ITS2.56/14 ITS2.56/14 ITS2.06/14 ITS2.73/14

JOISTS NOT LISTED IN THE ABOVE TABLE MAY BE LISED PROVIDED THEY MEET OR EXCEED THE PROPERTIES OF THOSE LISTED. SUBSTITUTE USP BRAND HANGERS WITH EQUIVALENT VALUES AS DESIRED

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