Residence for

Garman Homes Lot 0170 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
4 - 4	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
- STRUCTURAL OPTIONS STRUCTURAL OPTIONS
- S5A BRICK FOUNDATION PLAN- LEFT & RIGHT
- 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: 29'-7"
- 5. COMPONENT & CLADDING DESIGNED FOR THE FOLLOWING LOADS:

MEAN ROOF HGT:	UP TO 30'	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 (SQ. FT.)		UNFINISHED (SQ. FT.)	
1ST FLOOR: 2ND FLOOR:	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:	525	TOTAL:	N/A
				OVERALL DIMEN	ISIONS
				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

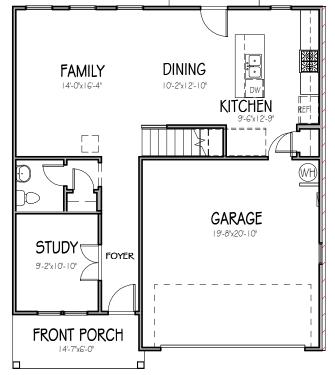
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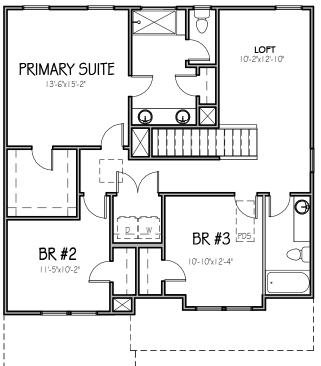
Plan Number

FP-1942

LOT 0170 SERENITY

PATIO





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MMH	
Checked By	
JM	
Date Drawn	
3/15/20	
Revision Date	
7/2/20	
4/5/22	
10/26/22	
2/21/23	

12 RIDGE VENT RIDGE VENT FIBERGLASS SHINGLE ROOF ALL WINDOWS ON CORNER LOTS ONLY (CLASS 'C' MIN.) TRUSS BRIDGE WINDOW BOARD & BATTEN AS SPEC CEMENTITIOUS SIDING 2ND FIN. FLR. CORNER TRIM AS SPEC WINDOW 8" BOXED COL. IST FIN. FLR. SLAB BRICK ROWLOCK (MAIN HOUSE) STEPS TO GRADE AS PER SITE

BRICK VENEER WITH ROWLOCK

STEPS AS PER GRADE

RIGHT SIDE ELEVATION

1/8" = 1'-O" WINDOW WITH CORNER LOTS ONLY

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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HONEYSUCKLE SER ELEVATION A LOT 0170 SERENITY

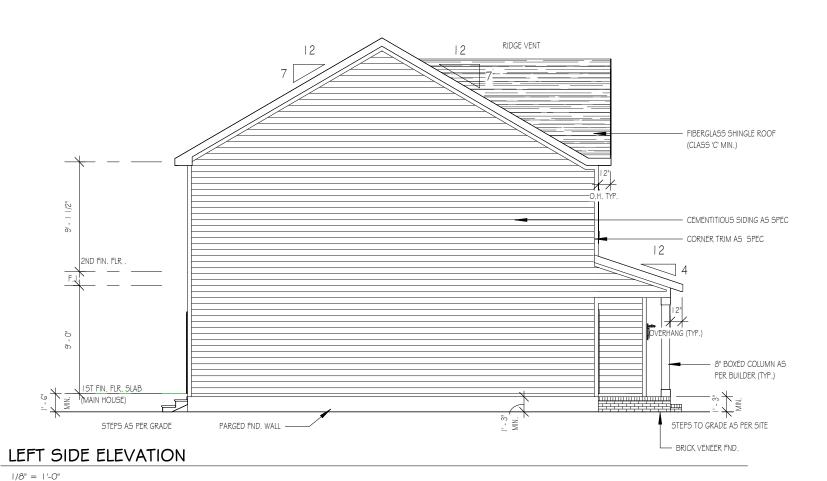
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CM
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4/8/20
Revision Date
7/1/20
4/5/22
10/26/22
2/21/23

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Sheet

1/8" = 1'-0"

NOTE - SLOPE ALL GRADES AWAY FROM HOUSE FOR POSITIVE DRAINAGE



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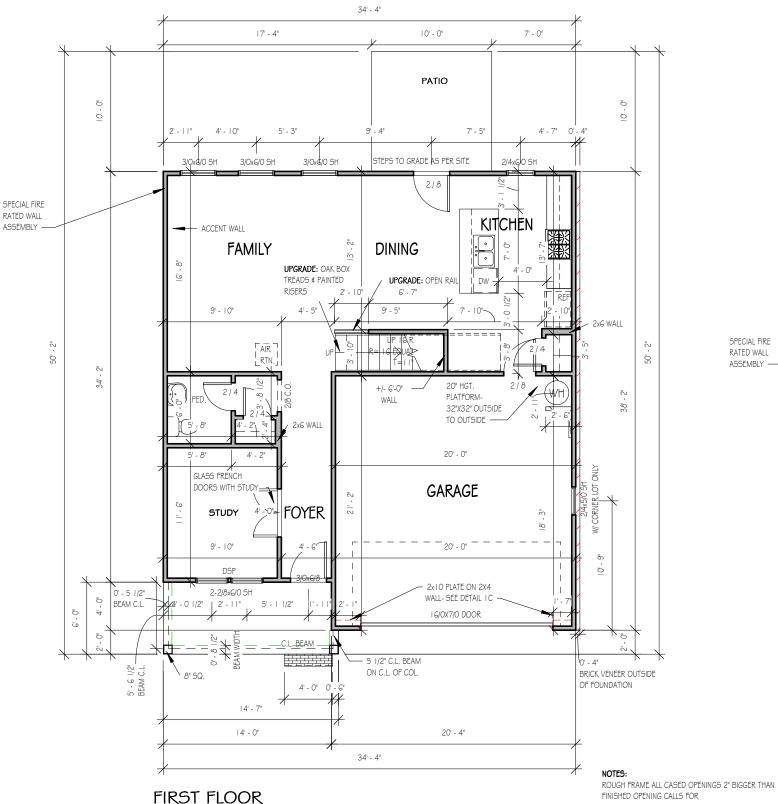


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HONEYSUCKLE SER ELEVATION A LOT 0170 SERENITY

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SPECIAL FIRE RATED WALL ASSEMBLY :

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Sheet

SECOND FLOOR

5' - 8"

34' - 4"

1/8" = 1'-0"

UPGRADE: SHOWER NICHE

3/0x5/0 SH

7' - 2"

14' - 2"

PRIMARY SUITE

ACCENT WALL

W.I.C.

BR #2

11' - 9"

5' - 7 1/2"

DSP

2-3/0x5/0 SH

3' - 3"

14' - 6"

3/0x5/0 SH

34' - 4"

4/0x1/0 FXD

8'-0" HEAD HGT

6' - 0"

4' - 10'

BENCH 20"H

25.5"X54" 8'X8' ATTIG

BR #3

11' - 2"

2-3/0x5/0 SH

19' - 10"

9' - 7"

3/0x5/0 SH

10'-6"

LOFT

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

5' - 4"

PROVIDE RAILS AT PORCH ONLY IF REQUIRED BY CODE 1/8" = 1'-0"

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

9'-0" CLG. HGT. U.N.O.

ROUGH FRAME ALL WINDOW OPENINGS 1/2" LARGER THAN FINISHED WINDOW CALLS FOR, WHEN PAIRED

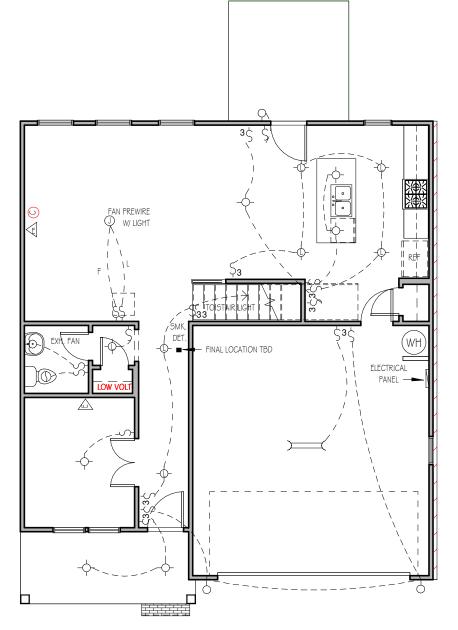
WITH ANOTHER WINDOW THAT CALLS FOR DSP, ADD EXTRA TO OUTSIDE MEASUREMENT OF WINDOW

FRAME ALL INTERIOR DOOR HEADERS AT 84" A.F.F.

ALL EXTERIOR WALLS 2X4

TOP OF ALL WINDOWS SILLS SHALL BE 24" MINIMUM ABOVE THE FINISHED FLOOR 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

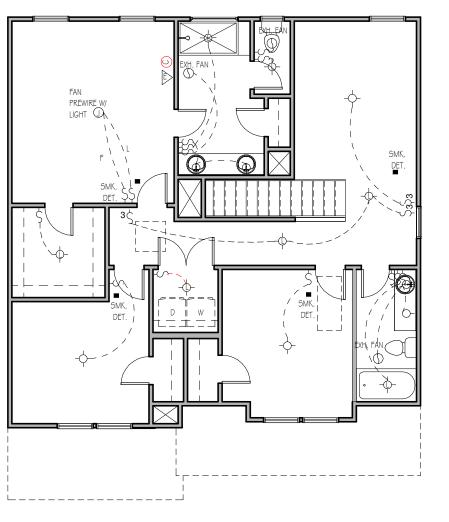


**NOTE: THREE ETHERNET OUTLETS IN THESE PREDETERMINED LOCATIONS ARE STANDARD. ANY ADDITIONAL OUTLETS ARE AN UPGRADE.

FIRST FLOOR ELECTRICAL PLANS

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.

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ELECTRICAL LEGEND

■ FLUORESCENT LIGHT

T THERMOSTAT

O DOORBELL

- FLUSH MOUNT/PENDANT LIGHT

-- LED DISK LIGHT

KEYLESS LIGHT
RECESSED CAN LIGHT
WALL SCONCE

◆FLOOD LIGHT

EXHAUST FAN

Œ

0

CEILING FAN

ETHERNET OUTLET

CABLE OUTLET
SMOKE DETECTOR

FLOOR RECEPTACLE

DUPLEX RECEPTACLE

GFCI RECEPTACLE

220 VOLT RECEPTACLE
ELECTRICAL PANEL

3-WAY SWITCH DIMMER SWITCH



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HONEYSUCKLE SER ELEVATION A LOT 0170 SERENITY

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BEEN ISSUED, CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY TO THE ACCURACY OF THE PLANS AND ANY CHANGES MADE DURING CONSTRUCTION.

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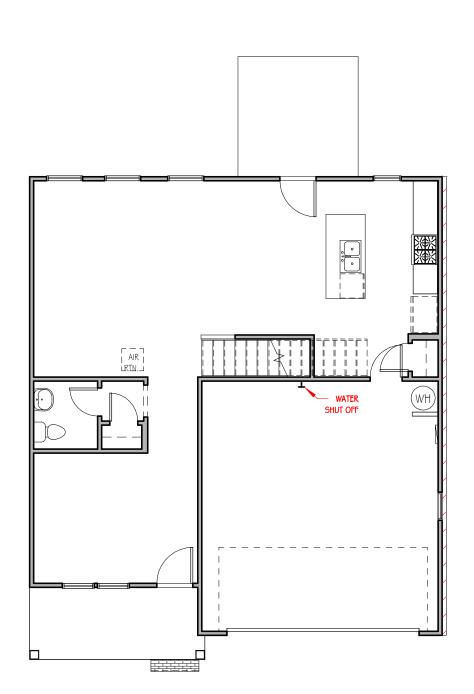
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HONEYSUCKLE SER ELEVATION A LOT 0170 SERENITY

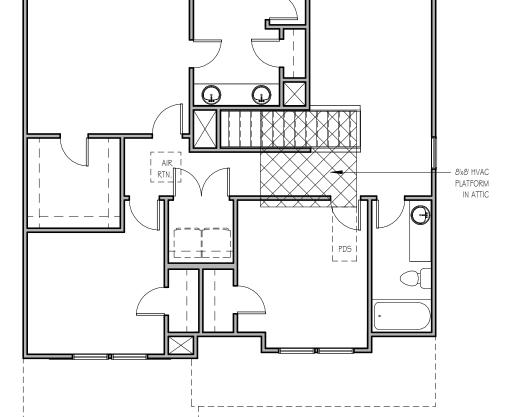
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FIRST FLOOR MECHANICAL PLAN

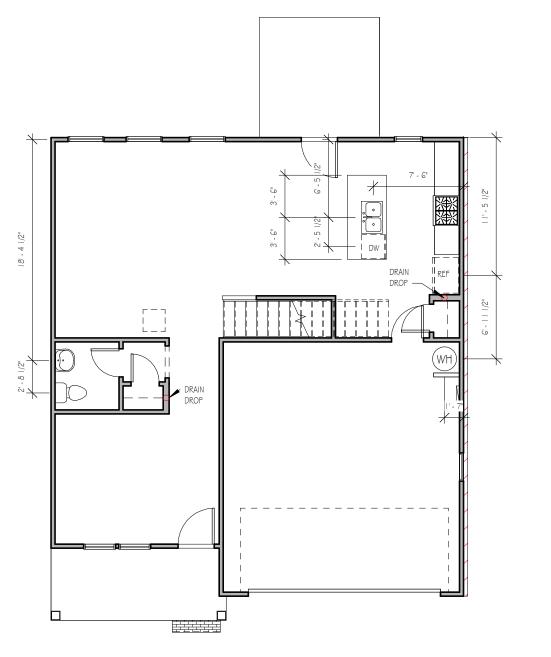
1/8" = 1'-0"



SECOND FLOOR MECHANICAL

PLAN

1/8" = 1'-0"



FIRST FLOOR PLUMBING

1/8" = 1'-0"

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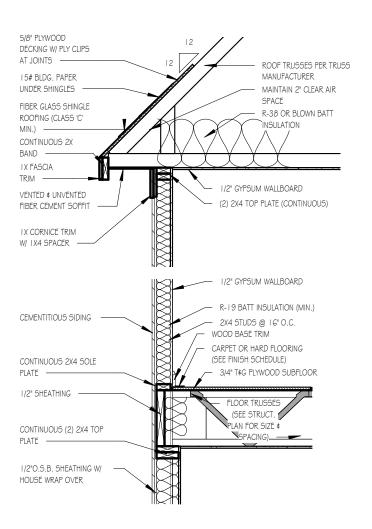
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HONEYSUCKLE SER ELEVATION A LOT 0170 SERENITY

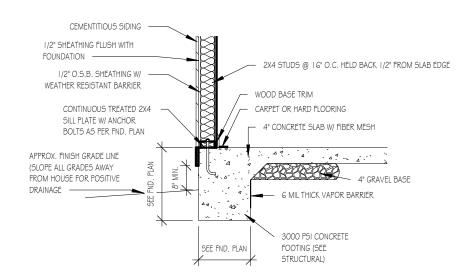
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TWO-STORY WALL SECTION

1/2" = 1'-0"



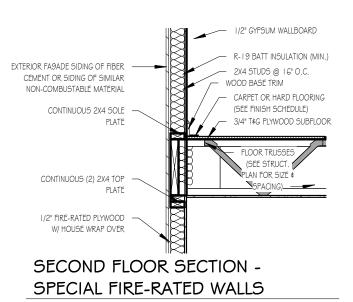
FOUNDATION DETAIL - SLAB

1/2" = 1'-0"

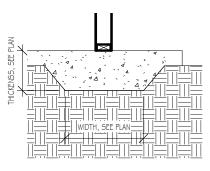
1/2" FIRE-RATED PLYWOOD -DECKING W/ PLY CLIPS AT JOINTS EXTENDING AMIN. OF 4' AWAY FROM WALL ASSEMBLY ROOF TRUSSES PER TRUSS MANUFACTURER 15# BLDG. PAPER UNDER SHINGLES MAINTAIN 2" CLEAR AIR FIBER GLASS SHINGLE SPACE R-38 OR BLOWN BATT ROOFING (CLASS 'C' MIN.) INSULATION CONTINUOUS 2X BAND LX FASCIA 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

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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

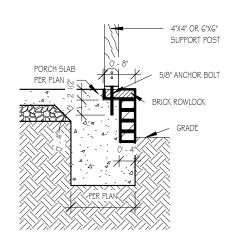
1/2" DIA. BOLTS. SEE

EMBEDMENT

REQUIREMENTS

PLATEtxS (S) SECURED BY

CHART FOR SPACING AND

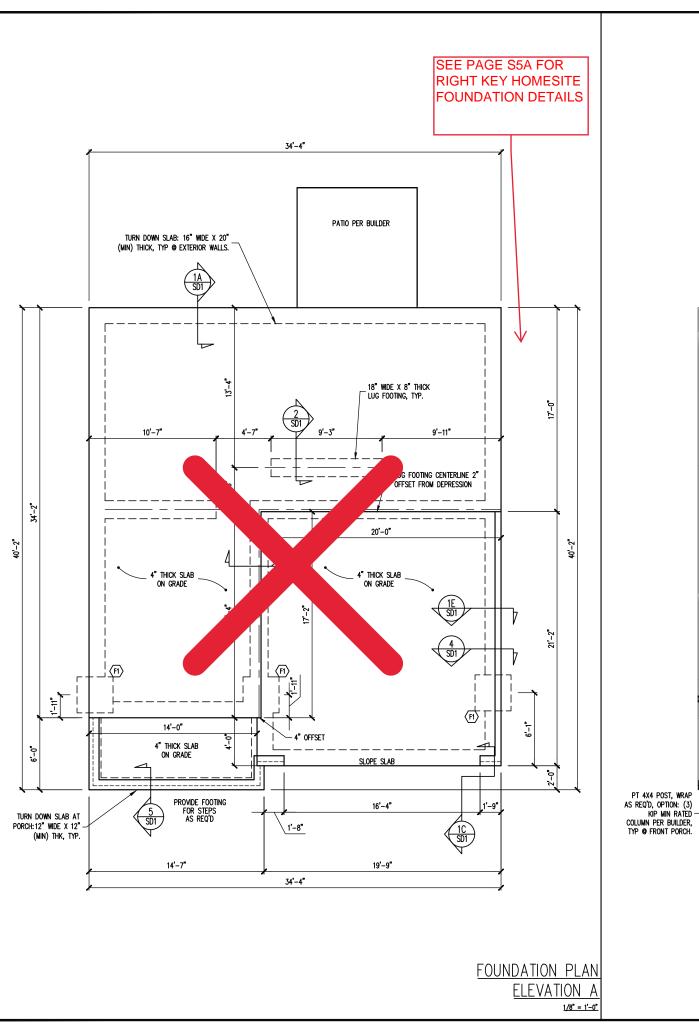


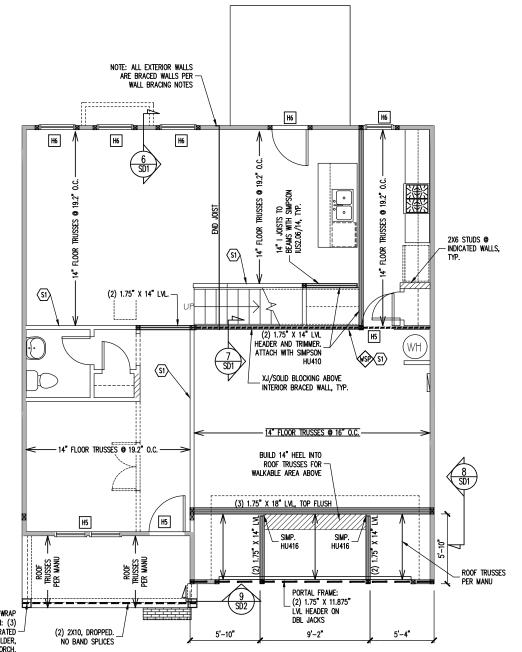
FRONT PORCH COLUMNS
SUPPORT ATTACHMENT

SUPPORT ATTACHMENT

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

D





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

FRAMING SCEDULE

JOIST SUBSTITUTION

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

MAINTAIN MINIMUM SPACING AS CALLED OUT ON PLANS.

SMP. 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 = 145' 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)
- (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.

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

FOUNDATION SCHEDULE

ENLARGE FOOTING TO 36" SQ. X 12" THK

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

G SEAL VALID FOR 1 YEAR ONLY. real design of this plan is the property of these plans if construction or permitting

Engineering from Engine only. ission listed perm client li written for the without plans are ciates, P.A. These I 1 year after the s eering place Engin takes

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License No. C-3870
B W Millbrook Rd Suite 201
leigh, North Carolina 27609
Phone (919) 844-1661 FRESH PAINT STRUCTURAL ADDENDUM TBD

318 W A Raleigh,

ENG:	NBG/CMC
ATE:	4/18/2023

MASTER

PROJECT NO. 23-30-028

> SHEET NO. S₁A 1 of 7

1ST FLOOR FRAMING PLAN **ELEVATION A**

WALLS AND CEILING

1/8" = 1'-0"

NOTE: ALL EXTERIOR WALLS ARE BRACED WALLS PER-WALL BRACING NOTES H5 H5 H5 H5 H5 NOTE: ALL EXTERIOR GABLE - BETWEEN TRUSSES END WALLS ARE 2X6 STUDS @ 16" SHEATHED BRACED WALLS PER WALL BRACING NOTES INDICATED WALLS _(2) PLY TRUSS ... GIRDER PER MANU (3) PLY TRUSS GIRDER PER MANU H5 ROOF TRUSSES PER MANU - ROOF TRUSSES PER MANU

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

- VALLEY SET TRUSSES TRUSSES - VALLEY SET TRUSSES VALLEY SET TRUSSES -DN 12:12 DN 12:12 ■ DN 12:12 DN 12:12

> ROOF FRAMING PLAN **ELEVATION A** 1/8" = 1'-0"

FRAMING NOTES

ROOF ONLY -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.

NOTES:

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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318 W A Raleigh,

FRESH PAINT STRUCTURAL ADDENDUM MASTER TBD

ENG: NBG/CMC DATE: 4/18/2023

> PROJECT NO. 23-30-028

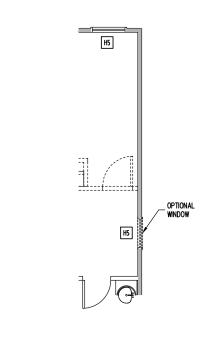
> > SHEET NO. S2A

2 of 7

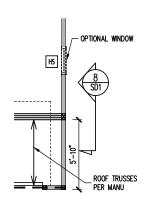
2ND FLOOR FRAMING PLAN ELEVATION A

WALLS AND CEILING

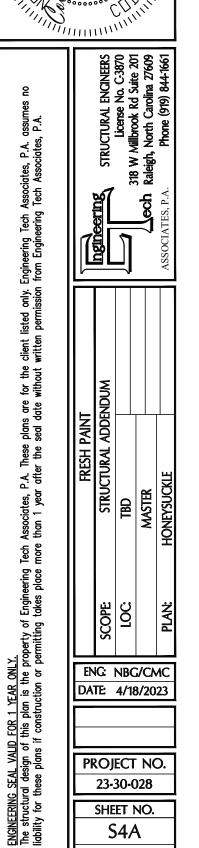
1/8" = 1'-0"



2ND FLOOR FRAMING PLAN OPTIONAL WINDOW AT HALLWAY



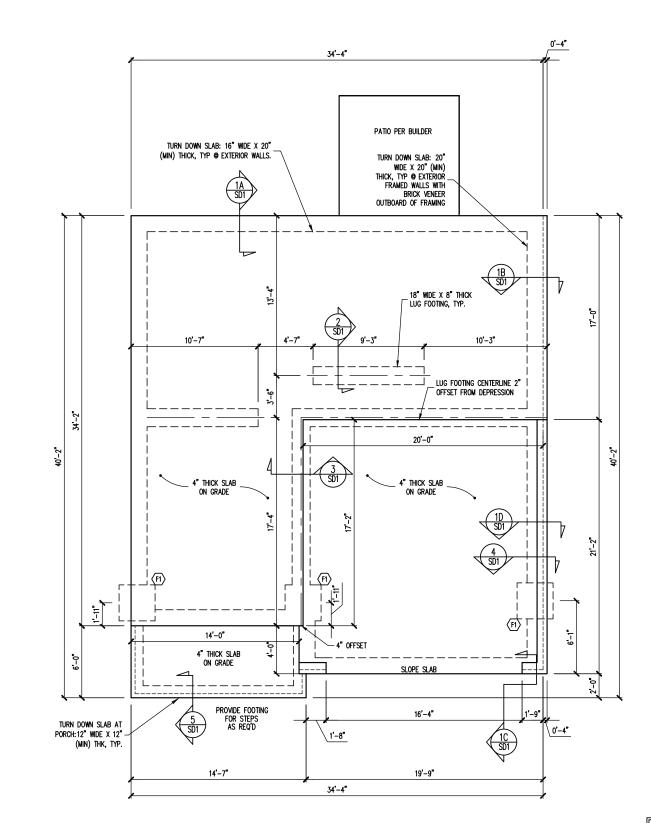
1ST FLOOR FRAMING PLAN OPTIONAL GARAGE WINDOW <u>1/8" = 1'-0"</u>



PROJECT NO.

23-30-028

SHEET NO. S4A 4 of 7



STRUCTURAL ENCINEERS
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318 W Millbrook Rd Suite 201
Raleigh, North Carolina 27609
Phone (919) 844-1661 ENGINEERING SEAL VALID FOR 1 YEAR ONLY.

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MASTER

PROJECT NO.

23-30-028

SHEET NO.

S5A 5 of 7

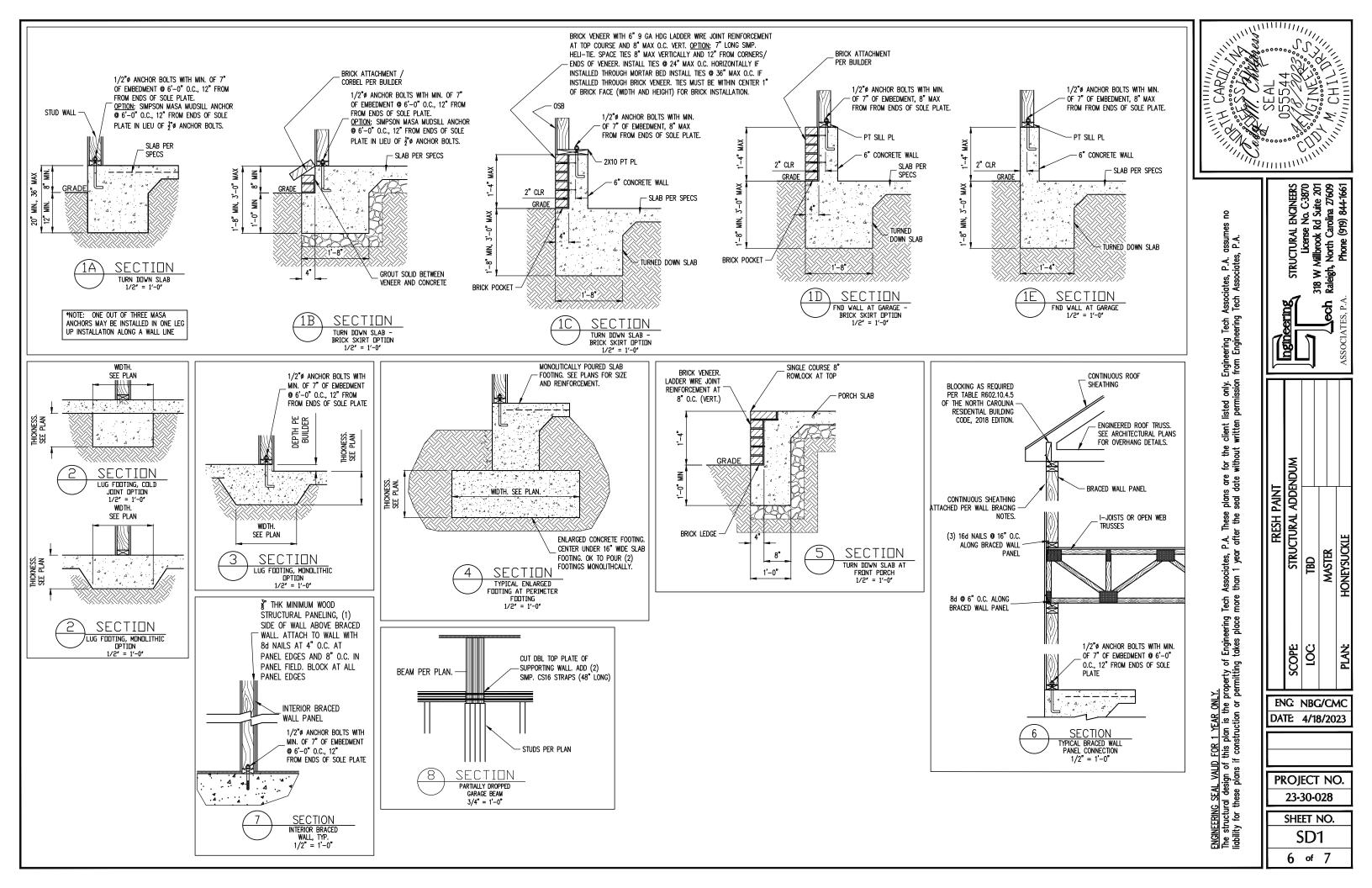
FOUNDATION SCHEDULE

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

NOTES:

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

FOUNDATION PLAN ELEVATION A-BRICK RIGHT <u>1/8" = 1'-0"</u>



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:

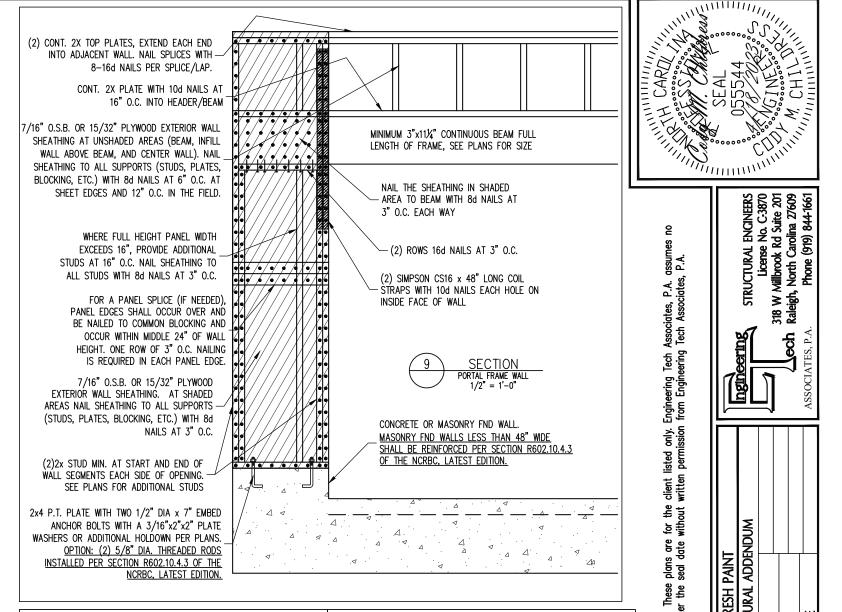
MAX OPENING	WIDTH	5'-0"			ig studs 17'-0"	21'-0"
STUD SIZE	2X4 2X6 2X8	1 1	2 1	3 2 1	4 2 1	5 2

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 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 TRUSS DRAWING SHOULD BE SUBMITTED TO THE EOR FOR REVIEW

ALLOWABLE I-JOIST SUBSTITUTION

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

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

TRIPLE STUD POCKE

Engineering from Engine only. ission listed perm client I written for the without plans are seal date v These P.A. Traffer eering place Engin takes property of permitting t the pro FOR 1 this p

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318 W A Raleigh, nglin **FRESH PAINT** STRUCTURAL MASTER 8 ENG: NBG/CMC DATE: 4/18/2023

RAL ENCINERS arse No. C-3870 ok Rd Suite 201 Carolina 27609 § (919) 844-1661

PROJECT NO. 23-30-028 SHEET NO.

SD2 7 of 7