### Residence for

### Garman Homes Lot 0191 Serenity Fuquay Varina, North Carolina

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- **BEAR & RIGHT SIDE FLEVATIONS**
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- FIRST & SECOND FLOOR MECHANICAL PLANS
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- FIRST FLOOR PLUMBING PLAN

- FOUNDATION PLAN & FIRST FLOOR FRAMING PLAN
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#### **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
- 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
- 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
- 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 .:	A	CONCRETE	ROUGH WOOD
		BRICK	BLOCKING
	XX	CONCRETE BLOCK/STONE	PLYWOOD
		STEEL	BATT INSULATION
		ALUMINUM	RIGID INSULATION

#### ATTIC VENTILATION REQUIREMENTS

**CALCULATIONS** 

<u>1357 SQ. FT.</u> = 9.05 SQ. FT. VENT REQ'D

NATURAL ROOF VENTILATION

BUILDER TO PROVIDE APPROPRIATE VENTILATING AS REQUIRED PER CODE

MECHANICAL ROOF VENTILATION CALCULATIONS 1357 SQ. FT. = 4.53 SQ. FT.

VENT REQ'D

BUILDER TO PROVIDE APPROPRIATE VENTILATING AS

#### 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"
- 4. MEAN ROOF HEIGHT: 35'-0"
- 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	18.0,-24.1	18.9,-25.3	18.9,-25.3	18.9,-25.3

- 6. MINIMUM VALUES FOR ENERGY COMPLIANCE: Zone 4
- 7. MAXIMUM GLAZING U-FACTOR: .35
- 8. INSULATING VALUES: CEILING: R-38 / WALLS: R-15 / FLOOR: R-19 SLABS: R-10. CODE REFERENCE: TABLE N1102.1

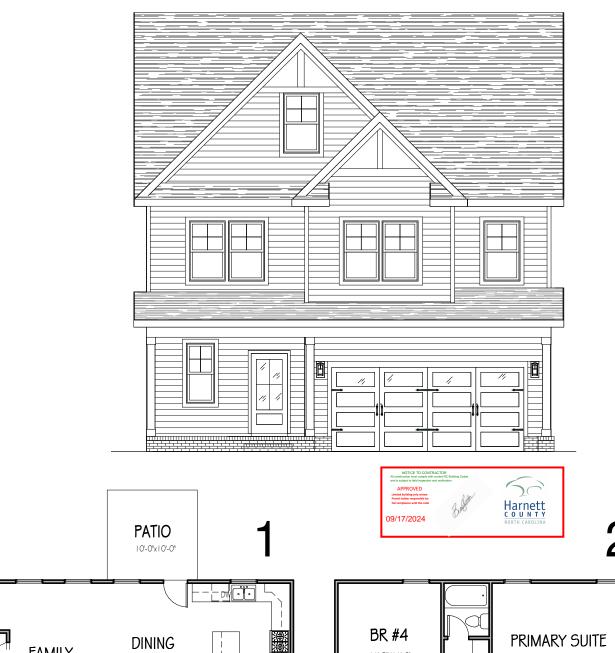
#### AREA CALCULATIONS

HEATED (SQ. FT.)		UNHEATED (SC	<u> 2. FT.)</u>	UNFINISHED (SQ. FT.)		
1ST FLOOR: 2ND FLOOR: 3RD FLOOR:	848 1186 489	GARAGE: FRONT PORCH: PATIO:	428 81 100	1ST FLOOR: 2ND FLOOR: 3RD FLOOR:	N/A N/A 63	
TOTAL:	2523	TOTAL: 609		TOTAL:	N/A	
				OVERALL DIMEN	NSIONS	
				WIDTH: DEPTH:	33'-8" 52'-3"	

#### FOUNDATION VENTILATION CALCULATIONS

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

NOT APPLICABLE WITH SLAB FOUNDATIONS



DINING

KITCHEN

**GARAGE** 

19'-10"X21'-6'

II REF

**FAMILY** 

NOOK

FRONT PORCH

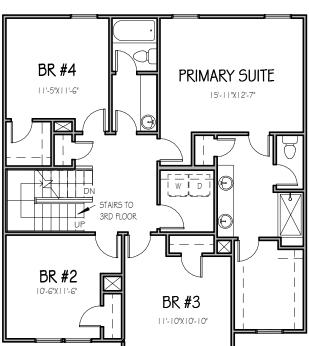


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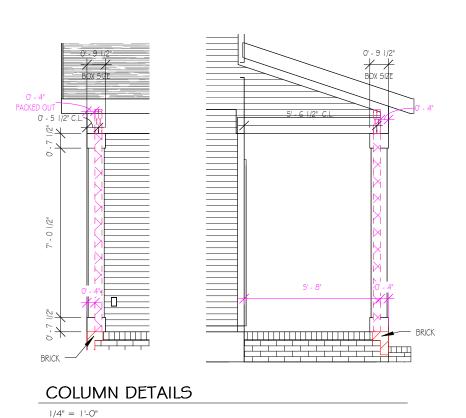
#### Project Number

Project Number Plan Number FP-2034

SER ELEVATION A LOT 0191 SERENITY



Drawn By MMH Checked By JM Date Drawn 3/18/20 Revision Date 7/2/20 4/5/22 11/7/22







FRESH

:PAINT

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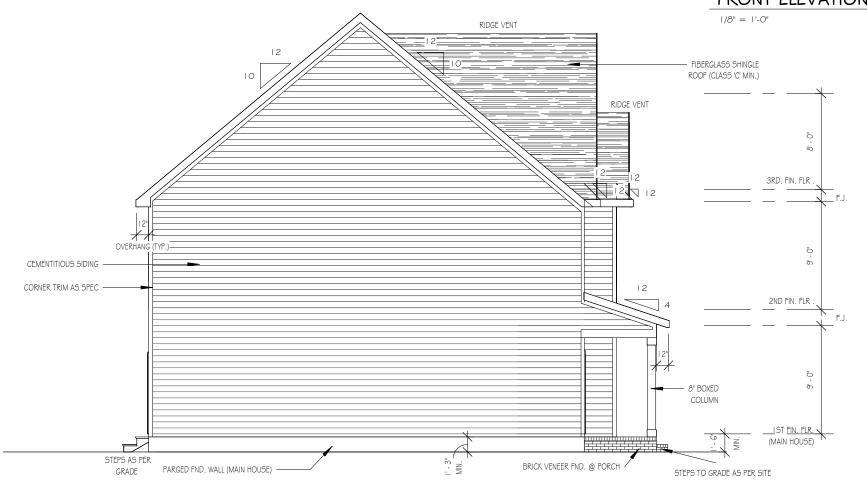
Project Number
Project Number

Plan Number

FP-2034

The plans, elevations, illustrations, and other material contained within this

NOTE - SLOPE ALL GRADES AWAY FROM HOUSE FOR POSITIVE DRAINAGE



#### LEFT SIDE ELEVATION

# | Drawn By | MH | Checked By | CM | Date Drawn | 4/8/20 | Revision Date | 7/1/20 | 4/5/22 | 11/2/22 |

1

Sheet



STEPS AS PER GRADE

3RD FIN. FLR.

IST FIN. FLR. (MAIN HOUSE)

STEPS AS PER GRADE

REAR 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-2034

# WISTERIA SER ELEVATION A LOT 0191 SERENITY

Drawn By

MH
Checked By
CM
Date Drawn
4/8/20
Revision Date
7/1/20
4/5/22
11/2/22

RIDGE VENT

12

FIBERGLASS SHINGLE

CEMENTITIOUS SIDING

CORNER TRIM AS SPEC

STEPS TO GRADE AS

PER SITE

BRICK VENEER PIER -

PROVIDE RAILS @ PORCH <u>ONLY</u> IF REQUIRED BY CODE

FOUNDATION FRONT

GRADE TO FINISHED FRONT PORCH ROOF

#### RIGHT SIDE ELEVATION

RIDGE VENT

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Project Number Project Number Plan Number

FP-2034

SPECIAL FIRE RATED WALL

ASSEMBLY

SER ELEVATION A LOT 0191 SERENITY **WISTERIA** 

Drawn By MH Checked By CM Date Drawn 4/8/20 Revision Date 7/1/20

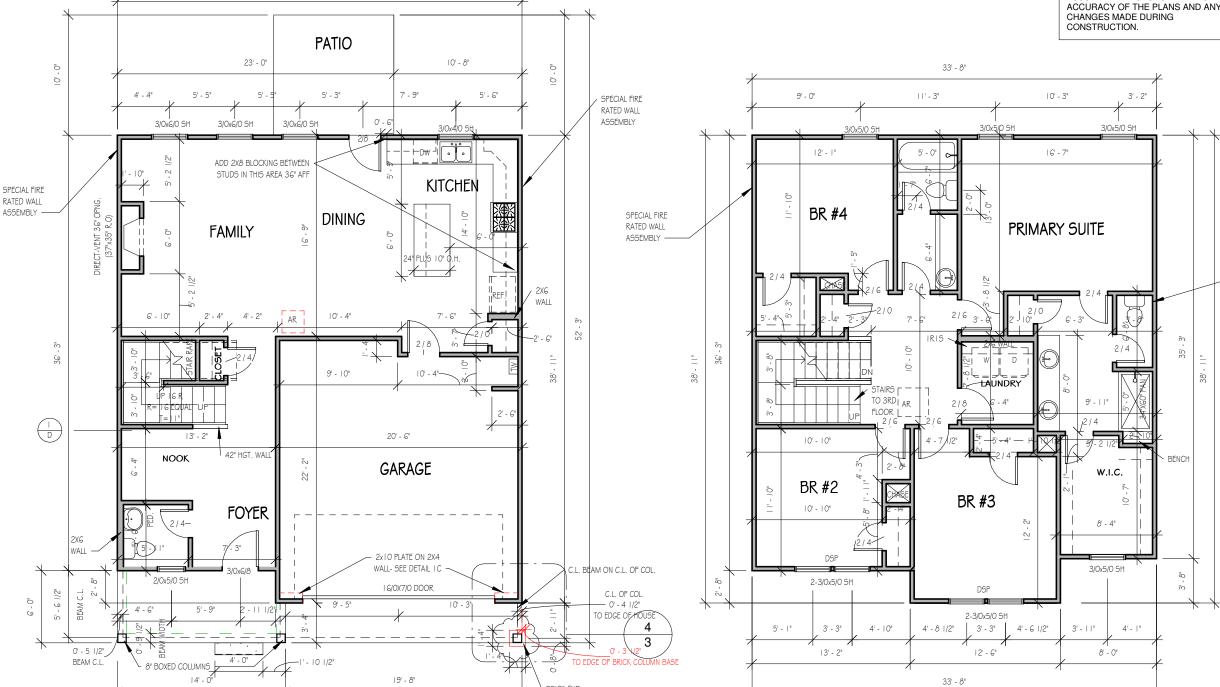
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9'-0" CLG. HGT. U.N.O. SET WINDOWS @ 7'-4" U.N.O.

SECOND FLOOR

1/8" = 1'-0"



BRICK FND

AT COLUMN

FIRST FLOOR

PROVIDE RAILS AT PORCH ONLY IF REQUIRED BY CODE

NOTE:

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

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

33' - 8"

GARAGE COLUMN DETAIL

C.L. OF BEAM C.L. OF BEAM ON C.L. OF COLUMN 0' - 9 1/2" BOX SIZE

O' - 3 1/2" HOUSE TO EDGE OF COLUMN

NOTES:

ROUGH FRAME ALL CASED OPENINGS 2" BIGGER THAN

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

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 GRILL) TO BE ADDED TO CORNER

FINISHED OPENING CALLS FOR

ALL EXTERIOR WALLS 2X4

LOT WINDOWS

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.

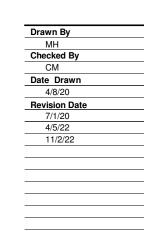


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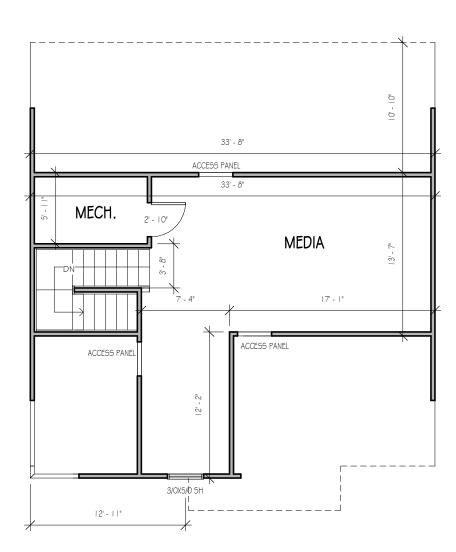
Project Number
Project Number
Plan Number

FP-2034

# WISTERIA SER ELEVATION A LOT 0191 SERENITY



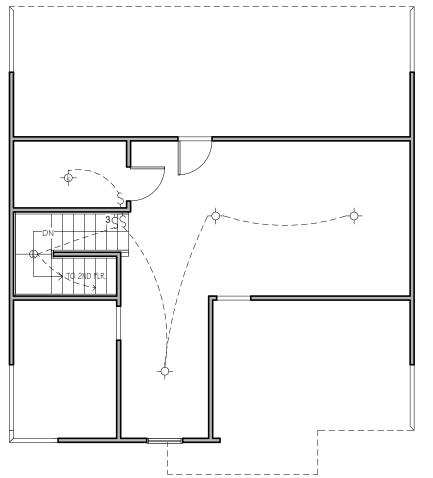
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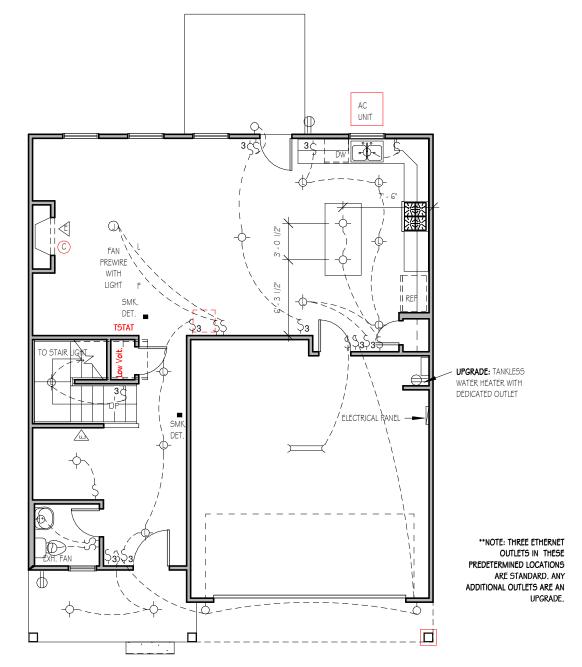


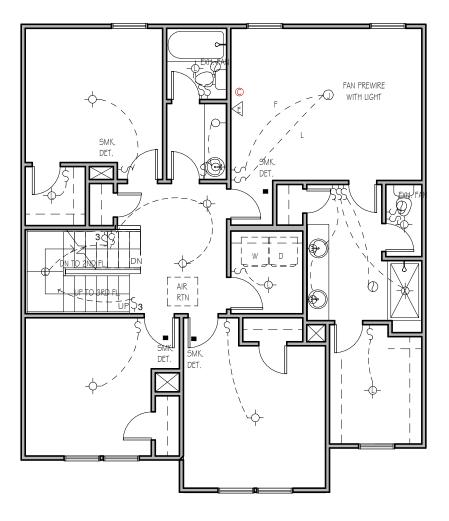
#### OPT. FINISHED THIRD FLOOR

OPT. FINISHED THIRD FLOOR ELECTRICAL

1/8" = 1'-0"







#### 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.

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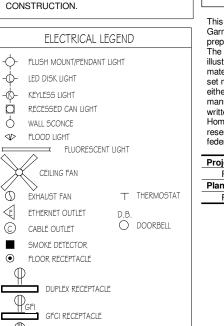
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220 VOLT RECEPTACLE

ELECTRICAL PANEL



DIMMER SWITCH

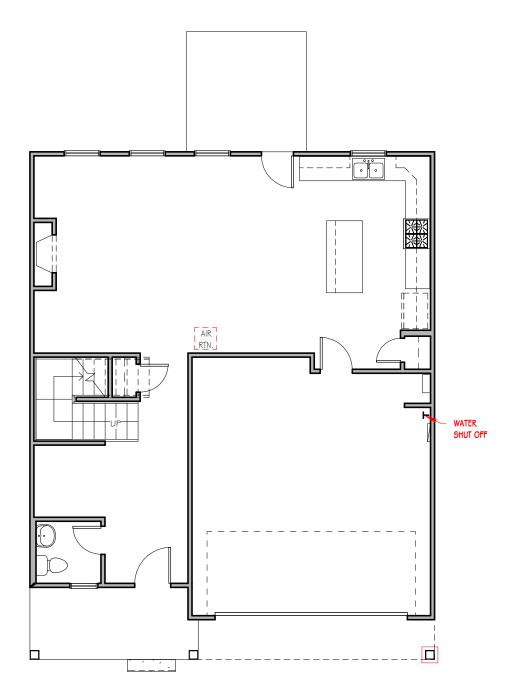
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FRESH

Project Number Project Number Plan Number FP-2034

## SER ELEVATION A LOT 0191 SERENITY **MISTERIA**

Drawn By	
MH	
Checked By	
CM	
Date Drawn	
4/8/20	
Revision Date	
7/1/20	
4/5/22	
11/2/22	



FIRST FLOOR MECHANICAL PLAN

1/8" = 1'-0

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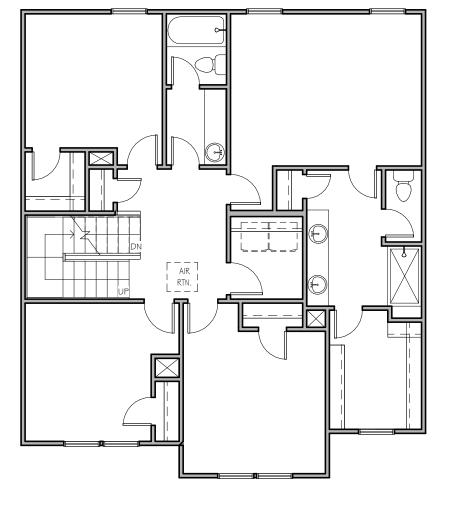
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WISTERIA SER ELEVATION A LOT 0191 SERENITY



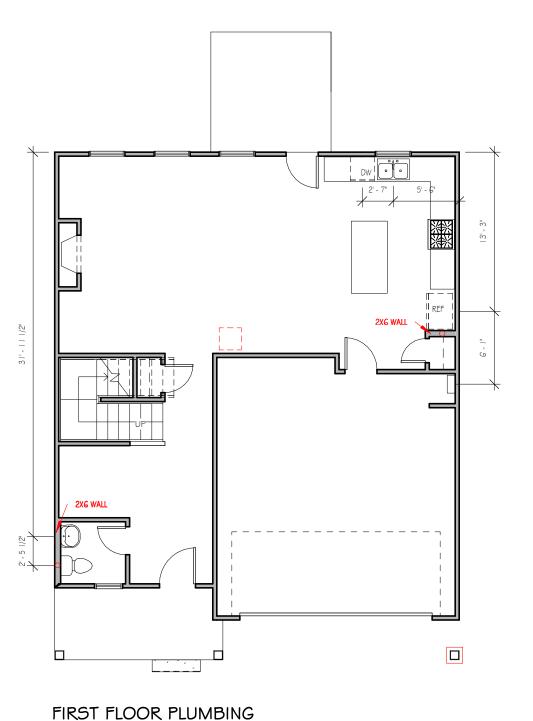
SECOND FLOOR MECHANICAL PLAN

1/8" = 1'-0"

Drawn By

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Checked By
CM
Date Drawn
4/8/20
Revision Date
7/1/20
4/5/22
11/2/22

Shee



1/8" = 1'-0"

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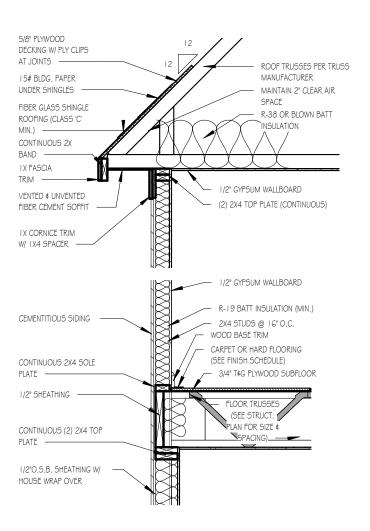
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### Project Number Project Number Plan Number FP-2034

# WISTERIA SER ELEVATION A LOT 0191 SERENITY

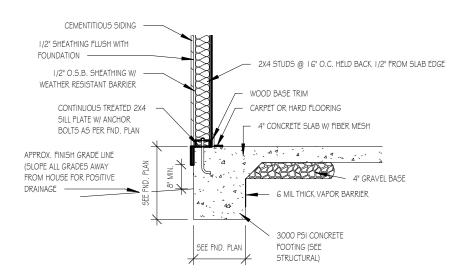
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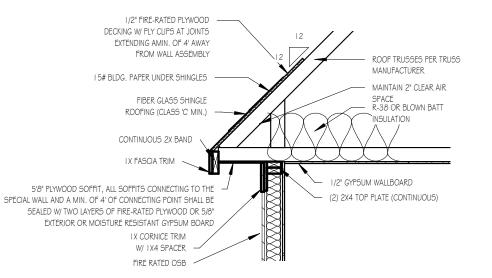
#### TWO-STORY WALL SECTION

1/2" = 1'-0"



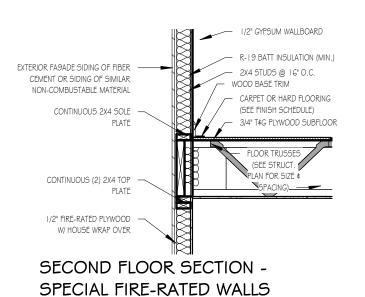
#### FOUNDATION DETAIL - SLAB

1/2" = 1'-0"

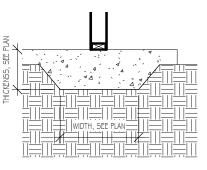


#### ROOF DETAIL SPECIAL FIRE-RATED WALLS

1/2" = 1'-0"



1/2" = 1'-0"



#### LUG FOOTING

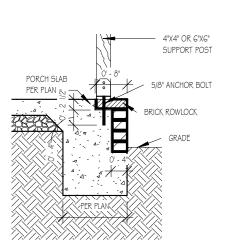
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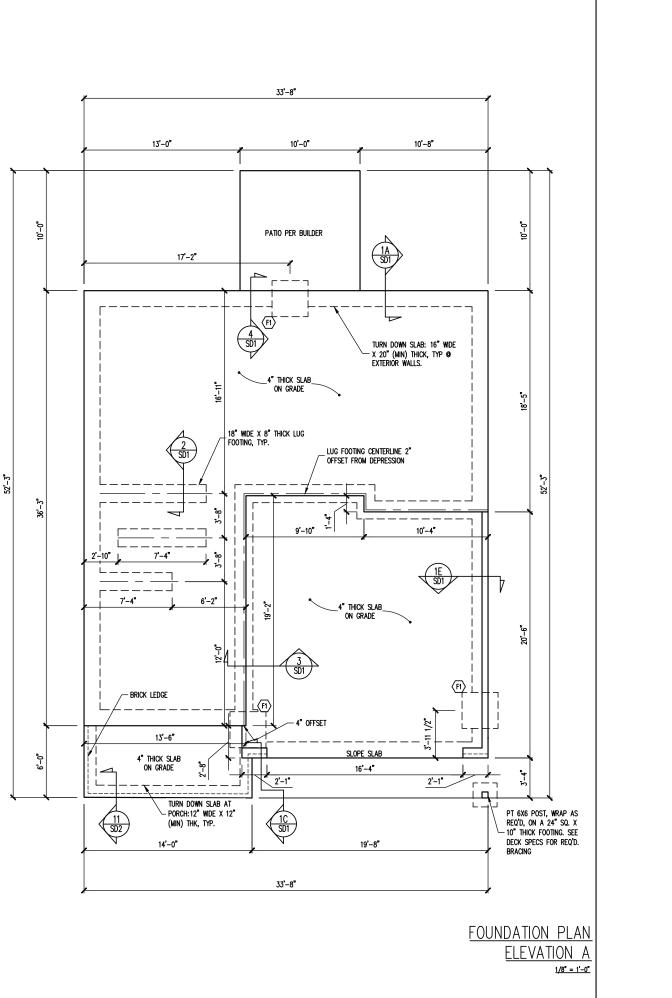
# SERENITY COLLECTION

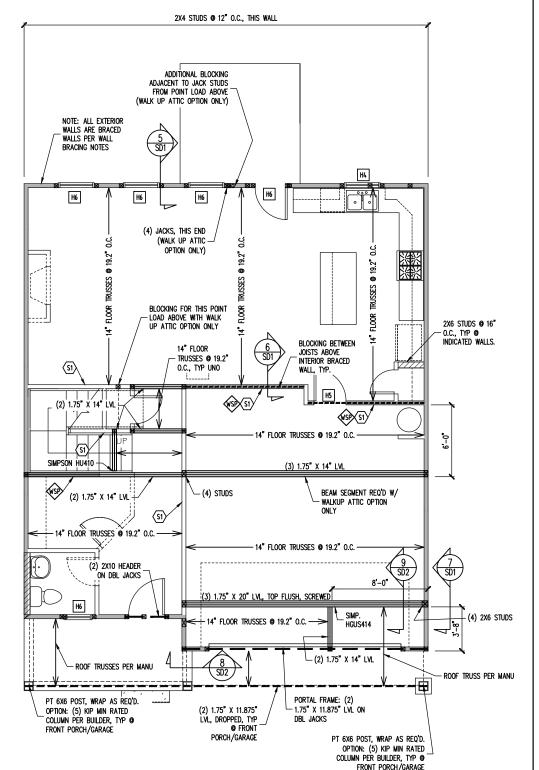


FRONT PORCH COLUMNS SUPPORT ATTACHMENT

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

1/2" = 1'-0"





FOUNDATION SCHEDULE

F1 12" THICK X 36" SQ. FOOTING

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

#### FRAMING SCEDULE

INTERIOR LOAD BEARING WALL: SECURE TO THICKENED SLAB BELOW WITH 1/2" RED 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 PLANS.

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. II 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)
- (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 DBL JACKS

1ST FLOOR FRAMING PLAN

WALLS AND CEILING

1/8" = 1'-0"

- 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.

SEAL 055544 05106 

> STRUCTURAL ENGINEERS
> License No. C-3870
> W Millbrook Rd, Suite 201
> leigh, North Carolina 27609
> Phone (919) 844-1661 Engineering from Engine only. ission listed perm client I for the without FRESH PAINT STRUCTURAL ADDENDUM plans are seal date P.A. These eering place

> > ENG: CMC DATE: 4/16/2024

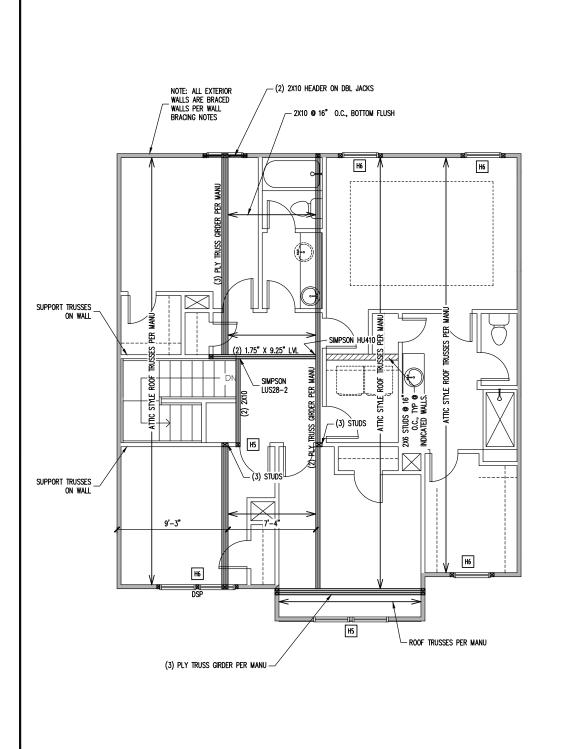
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O FOR 1 YEAR ONLY. If this plan is the property of E if construction or permitting to L VALID F sign of tl plans if

Engine takes



2ND FLOOR FRAMING PLAN

WALK UP ATTIC OPTION

ELEVATION A

1/8" = 1'-0"

NOTE TO TRUSS MANU: - REACTION FROM LVL = 2 KIPS, B.E. – (2) 1.75" X 9.25" LVL (2) 1.75" X 9.25" LVL NOTE TO TRUSS MANU: REACTION FROM LVL = 2 KIPS, B.E. H5 NOTE: ALL EXTERIOR GABLE END WALLS ARE CONTINUOUSLY SHEATHED BRACED WALLS PER WALL BRACING NOTES.

> ATTIC FRAMING PLAN (c) TYPICAL FOR ALL CONDITIONS NOT LISTED IN (A) OR (B) UNIO. ELEVATION A

WALLS AND CEILING 1/8" = 1'-0"

#### 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 = 145' 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 (2) 2X8'S ON SINGLE JACKS H6 (2) 2X8'S ON DBL 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.

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

Engineering Tech A from Engineering only. E listed permi client li written for the without siates, P.A. These plans are 1 year after the seal date eering place 1 Engine takes G SEAL VALID FOR 1 YEAR ONLY.

Iral design of this plan is the property of these plans if construction or permitting ENGINEERING S The structural liability for the

ciates, P.A. assumes no n Associates, P.A.	CARPILLIA CARPILLIA
STRUCTURAL ENGINEERS License No. C-3870 318 W Millbrook Rd, Suite 201 Raleigh, North Carolina 27609 Phone (919) 844-1661	DS5544 OS5544 OS5544 CHILLINIA

STRU STRUCTURAL ADDENDUM
TBD
WISTERIA SCOPE LOC: PLAN: ENG:

CMC DATE: 4/16/2024

PROJECT NO. 24-30-030

> SHEET NO. S3A 3 of 10

#### TRUSS UPLIFT CONNECTORS

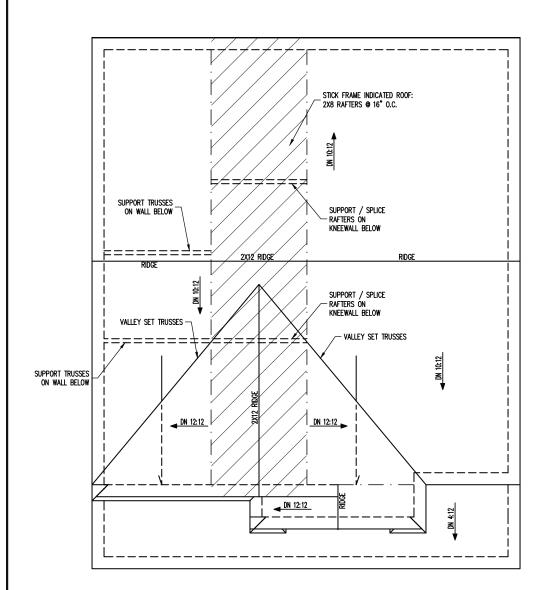
TRUSSES SHALL BE ATTACHED TO SUPPORT WALL FOR UPLIFT RESISTANCE. CONTINUOUS OSB WALL SHEATHING BELOW PROVIDES CONTINUOUS UPLIFT RESISTANCE TO FOUNDATION. ALL TRUSSES SUPPORTED BY INTERMEDIATE SUPPORT WALLS, KNEEWALLS OR BEAMS SHALL BE ATTACHED TO SUPPORTING MEMBER PER SCHEDULE BELOW.

ROOF SPAN IS MEASURED HORIZONTALLY BETWEEN FURTHEST SUPPORT POINTS.

OVER 28'

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

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



FRAMING NOTES

ROOF ONLY

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

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FRESH PAINT STRUCTURAL ADDENDUM WISTERIA TBD LOC: ENG: CMC DATE: 4/16/2024

> PROJECT NO. 24-30-030

> > SHEET NO.

S4A

4 of 10

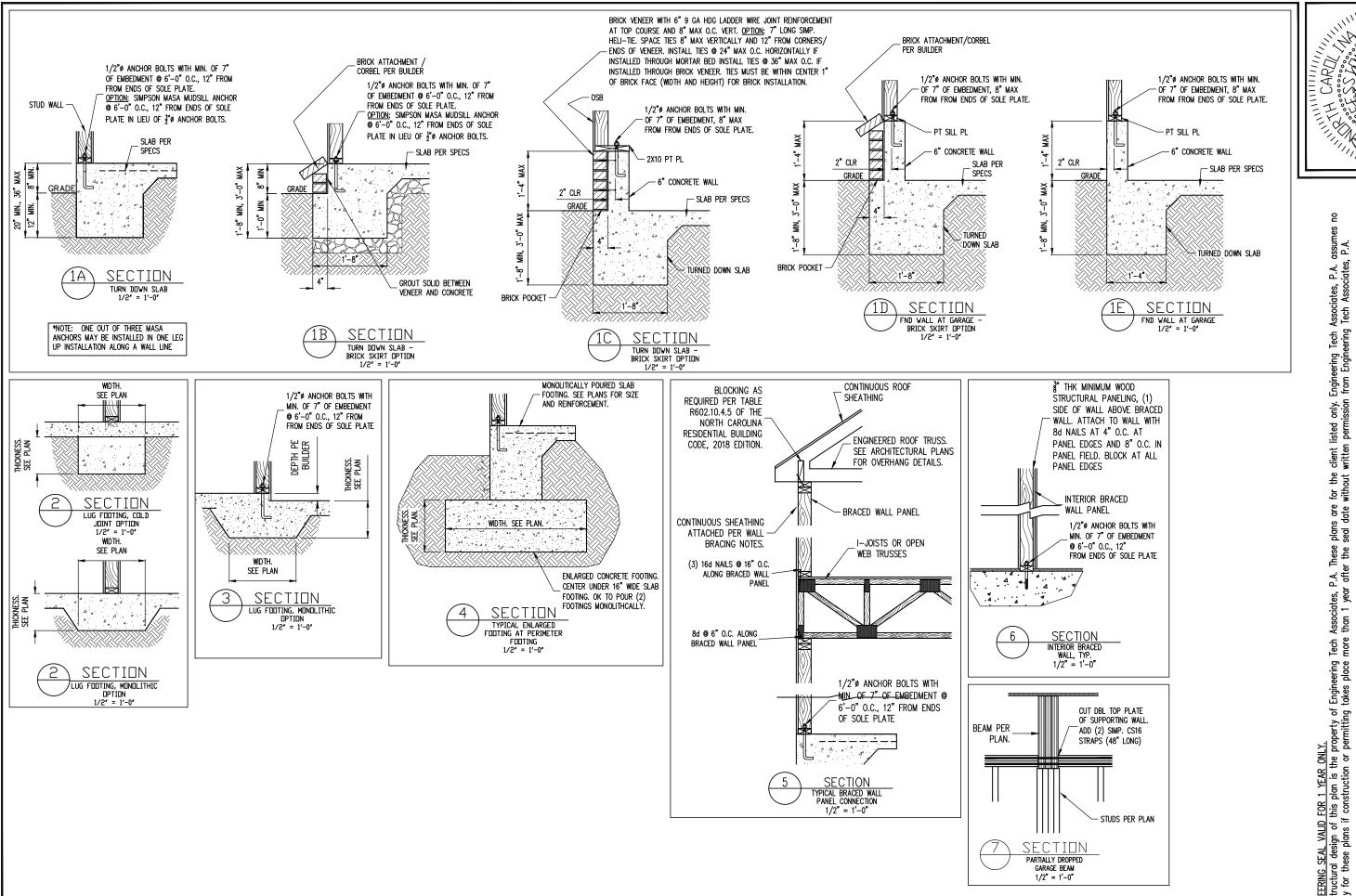
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License No. C-3870
318 W Millbrook Rd, Suite 201

Raleigh, North Carolina 27609

A. Phone (919) 844-1661

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ROOF FRAMING PLAN WALK UP ATTIC OPTION ELEVATION A 1/8" = 1'-0"



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STRUCTURAL ADDENDUM FRESH PAINT WISTERIA

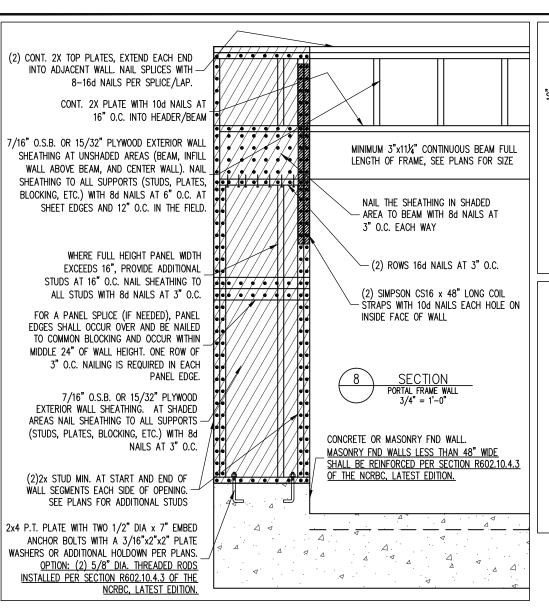
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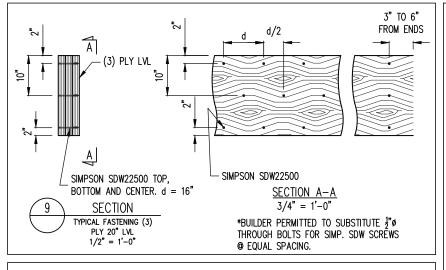
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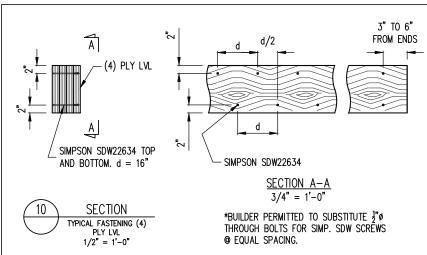
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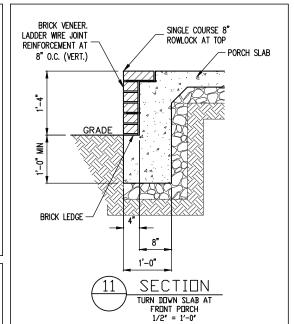
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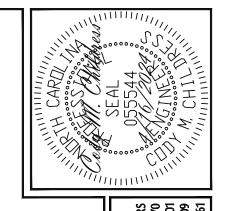
8 of 10











STRUCTURAL ADDENDUM FRESH PAINT WISTERIA

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> PROJECT NO. 24-30-030

SHEET NO. SD2 9 of 10

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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.
- 1.05 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.

  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

#### PART 2: DESIGN LOADS

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)	ı	50	
ATTICS (NO STORAGE, LESS THAN 5' HEADROOM)	1	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 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.
- 2.04 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
- 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

#### PART 6: REBAR AND WIRE REINFORCEMENT

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

LADDER WIRE REINFORCEMENT SHALL CONFORM TO ASTM A951. 6" MIN LAPS FOR CONTINUOUS WALL APPLICATIONS 7.05

#### PART 8: BOLTS AND LAG SCREWS

#### PART 9: DRIVEN FASTENERS

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. 10.01

#### PART 11: ENGINEERED LUMBER

- 11.01 LVL OR PSL MINIMUM ALLOWABLE DESIGN STRESSES ARE AS FOLLOWS: E= 1.9 X 10E6 PSI, Fb = 2600 PSI, Fv = 285 PSI, Fc = 750 PSI LSL MINIMUM ALLOWABLE DESIGN STRESSES ARE AS FOLLOWS: E= 1.3 X 10E6 PSI, Fb = 1700 PSI, Fv = 400 PSI, Fc = 680 PSI
- 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 WAY ALSO APPROVE A NATURAL 12.01 DECAY RESISTANT WOOD PER SECTION 19-6(A)

#### PART 14: STUD SUPPORTS FOR BEAMS

STEEL, ENGINEERED LUMBER, AND FLITCH PLATE BEAMS BEARING ON A STUD WALL SHALL BEAR AS FOLLOWS: 14.01

- 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 garged studs, or a ganged stud column with a number of studs such that the stud column is a least as wide as the true width of the beam being supported, whichever is greater, typ und, for the skewed CONDITION PARTICULAR CARE SHALL BE TAKEN TO ENSURE STUD COLUMN IS CENTERED ON
- 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 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 WIDTH AS THE BEAM TYP UNO. (E.G. A TRIPLE 2X10 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 OF 10d NAILS @ 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 10d NAILS @ 16" O.C. FOR 2X6 OR SMALLER. STAGGER ROWS 5" MIN.
- LVL 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

STUD WALLS SHALL CONSIST OF 2X4 STUDS SPACED AT 16" O.C. LINO. STUDS SHALL STUD WALLS SHALL CONSIST OF 2X4 STUDS SPACED AT 16 O.C. UND. STUDS SHALL BE CONTINUOUS FROM SOLE PLATE AT FLOOR TO DOUBLE TOP PLATE AT THE CELLING 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 UND.

MAX ALLOWABLE WALL HEIGHTS FOR EXTERIOR STUD WALLS, WITH SOLE PLATE AND DBL TOP PLATE AND 7/16" OSE EXTERIOR BRACING AND ROW OF 2X4 /

2X6 PURLINS AT 8' HEIGHT (AND AT 16' HEIGHT FOR TALL WALLS), TYP UNO:
2X4 © 16" 0.C.: 11'-0"
2X4 © 12" 0.C.: 12'-0"

DBL 2X4 © 16" 0.C.: 13'-4"

DBL 2X4 © 16" 0.C.: 21'-0"

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
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
R602.35 AND R802.11 UNILESS NOTED OTHERWISE ON STRUCTURAL PLANS.

-MAY SUBSTITUTE WSP FOR GB
-SINGLE JOIST, CONTINUOUS RIM JOIST, OR BLOCKING OF EQUAL DEPTH IS REQUIRED
ABOVE AND BELOW 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) 16d 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.

#### PART 17: KING STUDS

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

			NUMBE	r of Kin	ig studs		
AX OPENIN	G WIDTH	5'-0"	9'-0"	13'-0"	17'-0"	21'-0"	
	2X4	1	2	3	4	5	
STUD SIZE	2X6	1	1	2	2	2	
	2X8	1	1	1	1	2	

#### PART 18: SUBSTITUTIONS

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

#### 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 WITHOUT WRITTEN PERMISSION FROM ETA

#### **NOTES**

THE BUILDER IS RESPONSIBLE FOR REVIEWING PLANS PRIOR TO CONSTRUCTION. THE BUILDER SHALL IMMEDIATELY CONTACT THE ENGINEER OF RECORD (EOR) BEFORE PROCEEDING IF THE FOLLOWING CONDITIONS ARE NOTED BEFORE OR DURING CONSTRUCTION:

- 1) THE WORKING PLANS DO NOT BEAR THE SEAL OF THE FOR
- 2) THE PLANS CONTAIN DISCREPANT OR INCOMPLETE INFORMATION

ANY ERRORS DUE TO A FAILURE TO FOLLOW THE ABOVE PROCEDURES SHALL NOT BE THE RESPONSIBILITY OF THE EOR. FURTHERMORE, IT IS THE RESPONSIBILITY OF THE BUILDER TO ENSURE THAN ANY REVISIONS ISSUED BY THE EOR ARE PROMPLY DISTRIBUTED TO THE

THE EOR DOES NOT PERFORM FENESTRATION OR VENTING CALCULATIONS OR ANY OTHER CALCULATIONS THAT ARE NOT DIRECTLY RELATED TO STRUCTURAL ENGINEERING.

ROOF AND FLOOR TRUSSES TO BE DESIGNED BY AN ENGINEER REGISTERED BY THE STATE. FINAL TRUSS DRAWING SHOULD BE SUBMITTED TO THE EOR FOR REVIEW

#### **ABBREVIATIONS**

ABV	ABOVE	FND	FOUNDATION	TJ	TRIPLE JOIST
В.	BOTH	FTG	FOOTING	TYP	TYPICAL
B.E.	BOTH ENDS	HDG	HOT DIPPED	TRPL	TRIPLE
BTWN	BETWEEN		GALVANIZED	TSP	TRIPLE STUD POCK
CIP	CAST IN PLACE	HGR	HANGER	UNO	UNLESS NOTED
CONC	CONCRETE	LVL	LAMINATED VENEER		otherwise
CS	CONTINUOUS SHEATHING		LUMBER	XJ	EXTRA JOIST
DIA	DIAMETER	NTS	NOT TO SCALE		
DBL	DOUBLE	0.C.	ON CENTER		
DJ	DOUBLE JOIST	PSL	PARALLEL STRAND		
DSP	DBL STUD POCKET		LUMBER		
EQ	EQUAL	PT	PRESSURE TREATED		
EA	EACH	QJ	QUAD JOIST		
FLG	FLANGE	SP	STUD POCKET		
FL PL	FLITCH PLATE	SQ	SQUARE		

FLR FLOOR

#### 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	14"	BLI 40	IUS2.56/14	ITS2.56/14
BOISE CASCADE	14"	BCI 5000s	IUS2.06/14	ITS2.06/14
BOISE CASCADE	14"	BCI 6000S	IUS2.37/14	ITS2.37/14
LP CORP	14"	LPI 20+	IUS2.56/14	ITS2.56/14
NORDIC	14"	NI 40X	IUS2.56/14	ITS2.56/14
ROSEBURG	14"	RFPI 40s	IUS2.56/14	ITS2.56/14
WEYERHAEUSER	14"	TJI 210	IUS2.06/14	ITS2.06/14
WEYERHAEUSER	14"	EEI-20	IUS2.37/14	ITS2.73/14

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

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

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ENG: CMC DATE: 4/16/2024

PROJECT NO. 24-30-030

> SHEET NO. SD3

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