# **WILLOW ELEVATION B**

# **PRINCE PLACE** LOT 8



SIDE LOAD **OPTION** 



**INCLUDED OPTIONS:** 1st FLOOR **COVERED REAR PORCH EXTENDED FAMILY ROOM GUEST SUITE W/ FULL BATH GUEST SHOWER ILO TUB** 2nd FLOOR

> **OWNERS TILE SHOWER SECOND SINK @ BATH 2**

WILLOW BASE HOUSE SQUARE FOOTAGE CALCULATIONS TOTAL							1
ELEVATIONS	1st FLOOR	2nd FLOOR	TOTAL FIN	FRONT PORCH	GARAGE	UNDER ROOF	
ELEV. B	1053 s.f.	1287 s.f.	2340 s.f.	159 s.f	466 s.f.	2,965 s.f.	]_
OPTIONS SQUARE FOOTAGE CALCULATIONS							MODEL
EXTENDED FA	MILY W/ AL	TERNATE GL	130 s.f.			SI	
COVERED PORCH				120 s.f.			

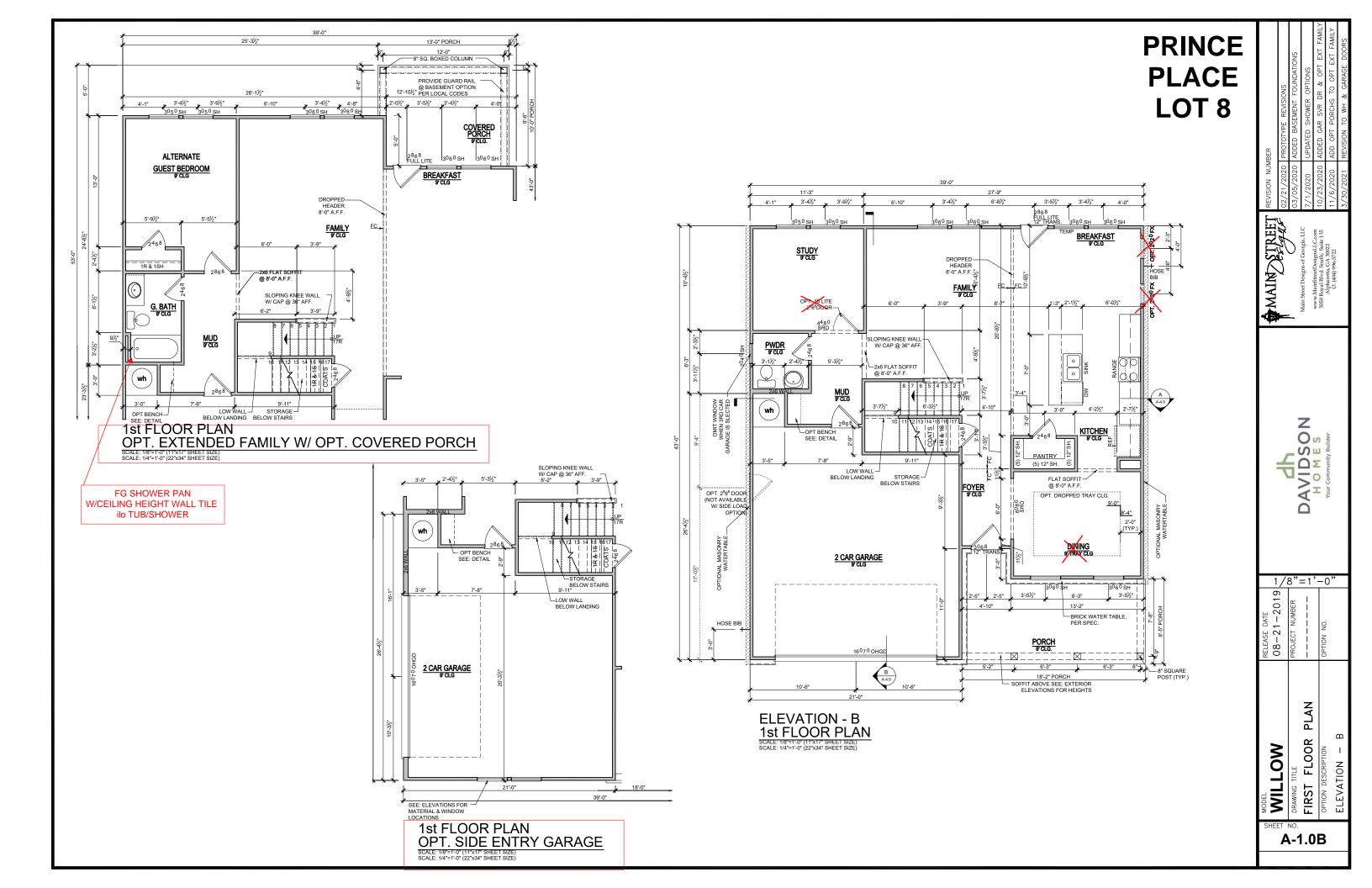


MAINDSTREET

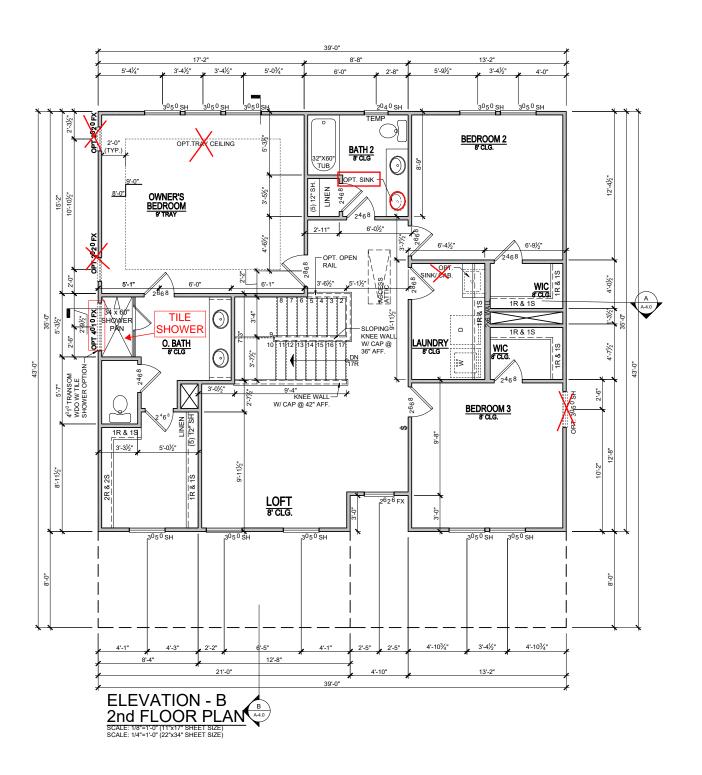
1/8"=1'-0" RELEASE DATE 08-21-2019

WILLOW

**CS-1.0** 



### PRINCE PLACE LOT 8





1/8	8"	=1'-	-0"
08-21-2019	PROJECT NUMBER	 	OPTION NO.
		Z	

SECOND FLOOR PLA
OPTION DESCRIPTION
ELEVATION - B

**A-2.0B** 

WILLOW





SCALE: 1/8"=1'-0" (11"X17" SHEET SIZE) SCALE: 1/4"=1'-0" (22"X34" SHEET SIZE)

BRICK FOUNDATION PER. COMM. SPECS.

### **PRINCE PLACE** LOT 8

MAIN STREET NAVIDSON HOMES 1/8"=1'-0"

RELEASE DATE 08-21-2019

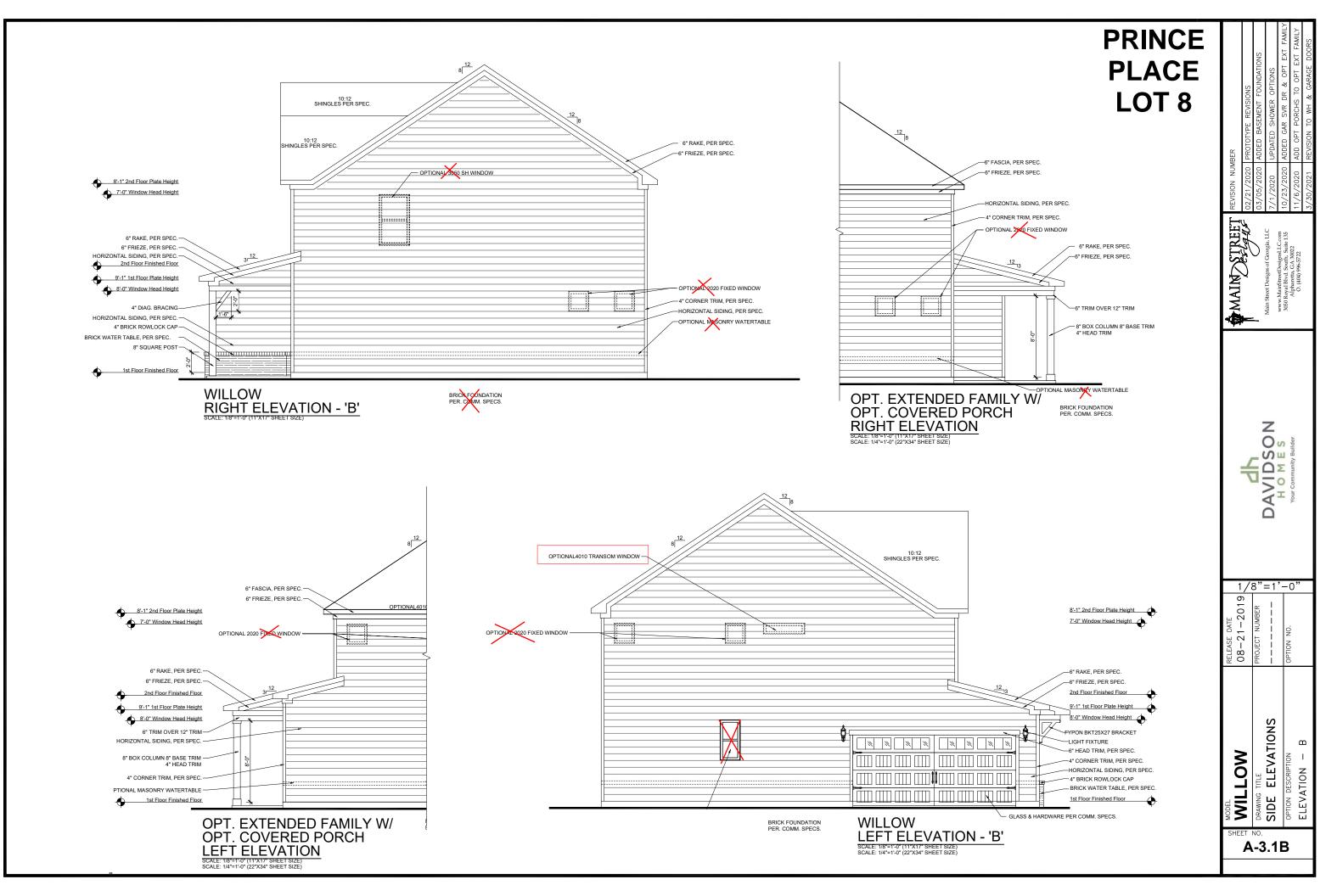
WILLOW

OPTIONS

PLAN

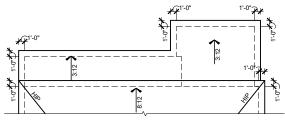
O-1.1B

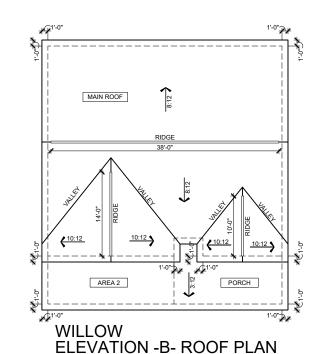
SIDE



### **ROOF PLAN** SCALE: 1/16"=1"-0" (11"X17" SHEET SIZE) SCALE: 1/8"=1'-0" (22"X34" SHEET SIZE)

OPT. EXTENDED FAMILY W/OPT. COVERED PORCH





SCALE: 1/16"=1'-0" (11"X17" SHEET SIZE SCALE: 1/8"=1'-0" (22"X34" SHEET SIZE)

## **PRINCE PLACE** LOT 8





1/8"=1'-0"ASE DATE -21-2019

08-

WILLOW PLAN

ROOF

OPTION DESCRIPTI

A-3.0B

#### ATTIC VENT CALCULATIONS

#### NOTES:

GENERAL CONTRACTOR SHALL VERIFY THE NET FREE GENERAL CONITACTOR SHALL VERIFY THE NET FREE VENTILATION OF THE VENT PRODUCT SELECTED BY OWNER. VERIFY WITH MANUFACTURER OF HIGH AND LOW VENTS TO BE USED FOR MINIMUM CALCULATED VENTS REQUIRED. THE REQUIRED VENTILATION SHALL BE MAINTAINED. PROVIDE INSULATION STOP SUCH THAT INSULATION DOES NOT OBSTRUCT FREE AIR MOVEMENT AS REQUIRED.

ALL OVERLAP FRAMED ROOF AREAS SHALL HAVE

OPENINGS BETWEEN THE ADJACENT ATTICS IN THE ROOF SHEATHING (AS ALLOWED BY THE STRUCTURAL ENGINEER) TO ALLOW PASSAGE AND ATTIC VENTILATION BETWEEN THE TWO OR ISOLATED ATTIC SPACES SHALL BE VENTED INDEPENDENTLY TO CBC REQUIREMENTS.

PER DEVELOPER, AT ALL CANTILEVERED FLOORS, CANTILEVERED ARCHITECTURAL POP-OUTS, AND ANY DOUBLE FRAMING PROJECTIONS THAT ARE SEPARATED FROM THE VENTING CALCULATIONS SHOWN ABOVE, PROVIDE A CONTINUOUS 2" CORROSION RESISTANT SOFFIT VENT AT UNDERSIDE OF FRAMED ELEMENT.

ALL ROOF DRAINAGE SHALL BE PIPED TO STREET OR APPROVED DRAINAGE FACILITY.

DASHED LINES INDICATE WALL BELOW.

LOCATE GUTTER AND DOWNSPOUTS PER BUILDER.

PITCHED ROOFS AS NOTED.

TRUSS MANUFACTURER SHALL SUBMIT STRUCTURAL CALCS AND SHOP DRAWINGS TO THE BUILDER'S GENERAL CONTRACTOR AND BUILDING DEPARTMENT FOR REVIEW PRIOR TO FABRICATIONS

ALL PLUMBING VENTS SHALL BE COMBINED INTO A MINIMUM AMOUNT OF ROOF PENETRATIONS. ALL ROOF PENETRATIONS SHALL OCCUR TO THE REAR OF THE MAIN RIDGE

#### MAIN ROOF AREA 1

| 1350 | SQ FT UNDER ROOF ATTIC | | 300 SQ FT / 1 SQ FT = | 4.50 | SQ FT VENTILATION |

RIDGE VENTS 18 SQ IN = (.125 SQ FT) SOFFIT VENTS 9 SQ IN = (.0625 SQ FT) BOX VENTS 50 SQ IN = (.347 SQ FT)

4.50 SQ FT x 50% 2.250 SQ FT OF RIDGE 4.50 SQ FT x 50% 2.250 SQ FT OF SOFFIT

= 18.0 FEET OF RIDGE VENT

ACTUAL RIDGE VENT PROVIDED ACTUAL SOFFIT VENT PROVIDED NUMBER OF BOX VENTS NEEDED (REQ - ACTUAL x .347)

62 FEET 50 FEET -15.3 COUNT (NEGATIVE = 0)

#### AREA 2

168 SQ FT UNDER ROOF 150 SQ FT / 1 SQ FT = 1.12 SQ FT VENTILATION

SOFFIT VENTS 9 SQ IN = (.0625 SQ FT) ASSUME 100% VENTING @ SOFFIT

1.120 SQ FT = 17.9 FEET OF SOFFIT VENT

#### ACTUAL SOFFIT VENT PROVIDED 22 FEET PORCH ROOF

159 SQ FT UNDER ROOF 150 SQ FT / 1 SQ FT = 1.06 SQ FT VENTILATION

SOFFIT VENTS 9 SQ IN = (.0625 SQ FT) ASSUME 100% VENTING @ SOFFIT

1.060 SQ FT = 17.0 FEET OF SOFFIT VENT

ACTUAL SOFFIT VENT PROVIDED

#### ATTIC VENT CALCULATIONS

#### MAIN ROOF

ACTUAL RIDGE VENT PROVIDED ACTUAL SOFFIT VENT PROVIDED NUMBER OF BOX VENTS NEEDED (REQ - ACTUAL x .347)

SOFFIT VENTS 9 SQ IN = (.0625 SQ FT) ASSUME 100% VENTING @ SOFFIT 0.767 SQ FT = 12.3 FEET OF SOFFIT VENT

1518 SQ FT UNDER ROOF ATTIC 300 SQ FT / 1 SQ FT = 5.06 SQ FT VENTILATION

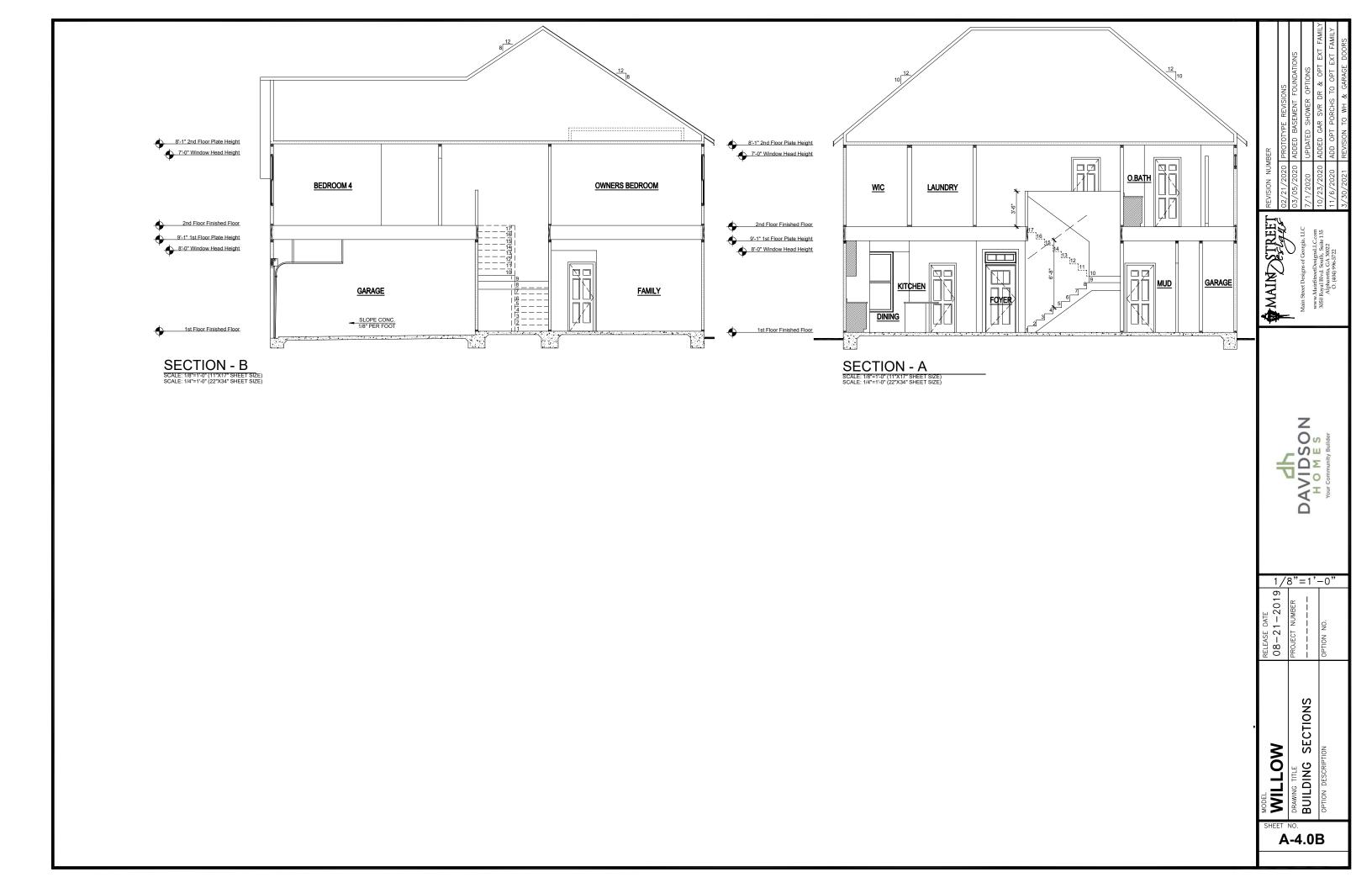
RIDGE VENTS 18 SQ IN = (.125 SQ FT) SOFFIT VENTS 9 SQ IN = (.0625 SQ FT) BOX VENTS 50 SQ IN = (.347 SQ FT)

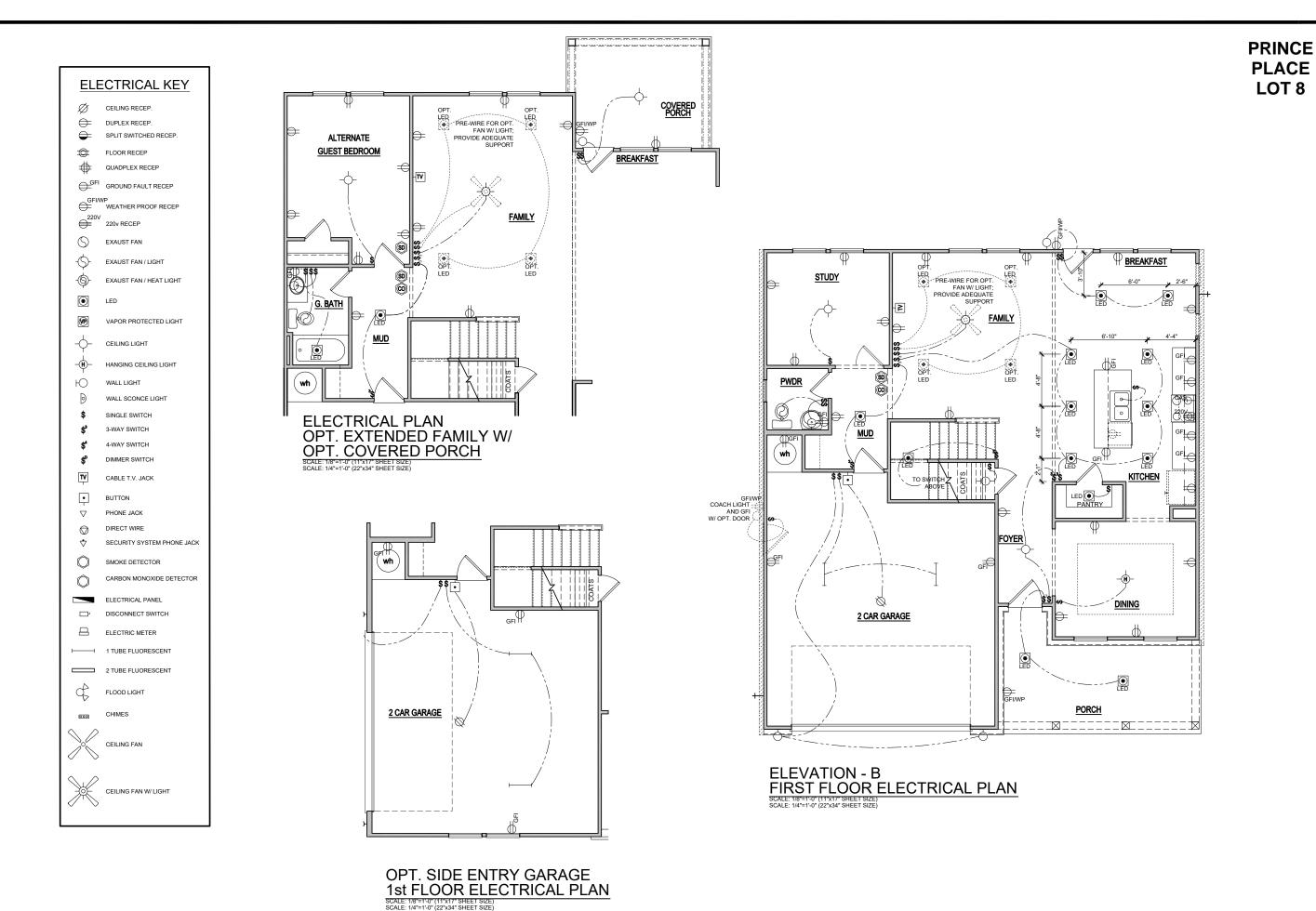
5.06 SQ FT x 50% 2.530 SQ FT OF RIDGE 5.06 SQ FT x 50% 2.530 SQ FT OF SOFFIT

#### PORCH ROOF

115 SQ FT UNDER ROOF 150 SQ FT / 1 SQ FT = 0.77 SQ FT VENTILATION

ACTUAL SOFFIT VENT PROVIDED





MAINDSTREET

Z

AVIDSON ES

1/8"=1'-0"

PLAN

ELEC.

FLOOR

1ST

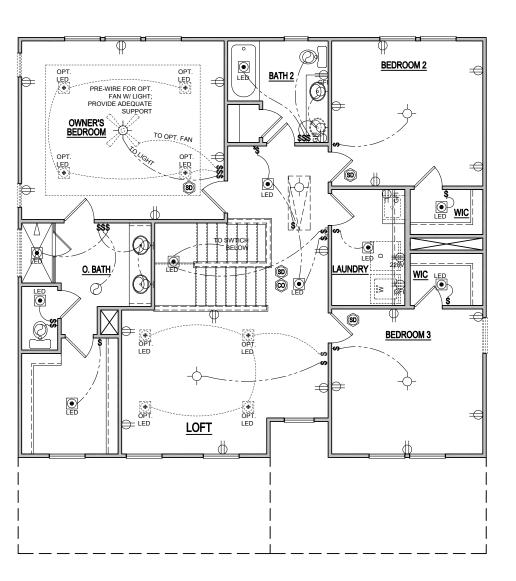
E-1.0B

RELEASE DATE 08-21-2019

WILLOW

00

# PRINCE PLACE LOT 8



ELEVATION - B SECOND FLOOR ELECTRICAL PLAN SCALE: 1/8"=1"-0" (12"x31" SHEET SIZE) SCALE: 1/4"=1"-0" (22"x34" SHEET SIZE)

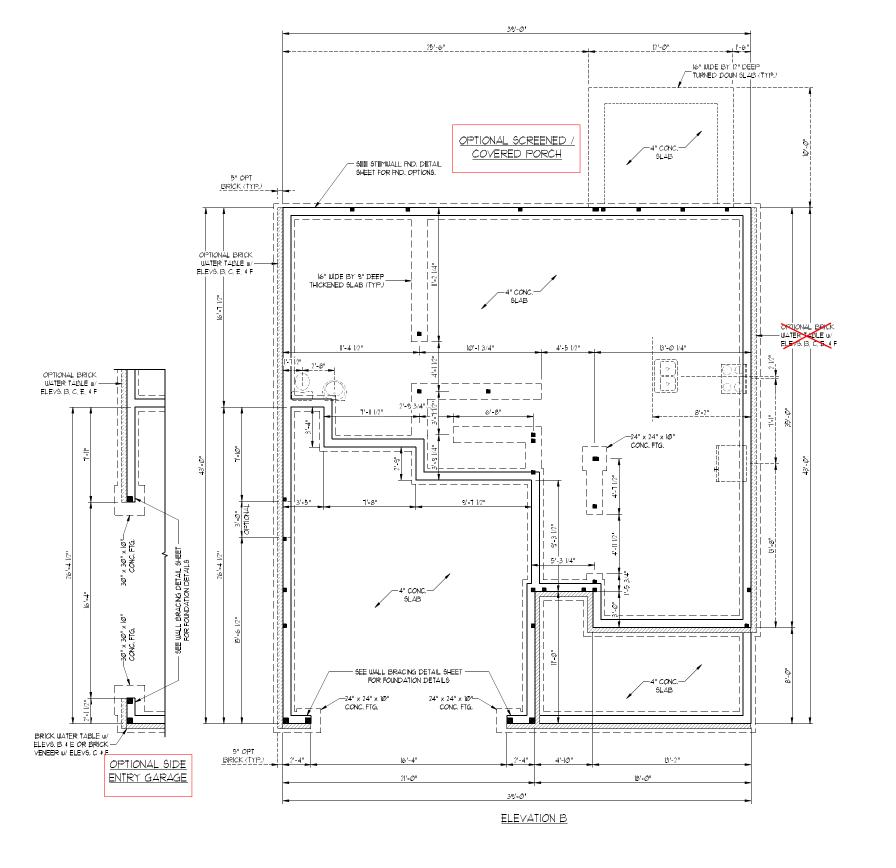




1/8	8":	=1'-	-0"
08-21-2019	PROJECT NUMBER		OPTION NO.
		z	

MODEL	œ
WILLOW	
DRAWING TITLE	₾
SECOND FLOOR PLAN	ı
OPTION DESCRIPTION	0
ELEVATION – B	
	ı

E-2.0B



SEE PAGE S-1.3d

FOR FAMILY ROOM

**EXTENSION** 

AND COVERED PORCH

<u>\$C.A.LE\_NOTE:</u> LARGE FORMAT PRINTS ARE TO SCALE AS NOTED. II" x IT" PRINTS ARE ONE HALF THE NOTED SCALE\_

**PRINCE PLACE** LOT 8

120 MPH ULTIMATE DESIGN WIND SPEED NOTES FOR LESS THAN 30' MEAN ROOF HEIGHT:

WILLOW DAVIDSON HOMES



DRAWN BY: MAIN STREET I

S-1.3a STEMWALL SLAB FOUNDATION PLAN

SHEET: 11 OF: 41

7/15/2021

S.THOMPSON

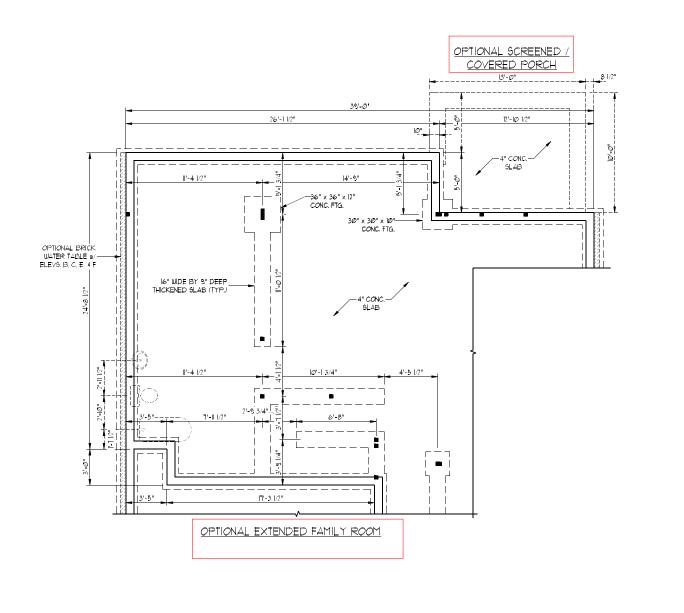
GENNEERING, INC.

668 WADEN, SUITE OF ALCEDY, NO. 2465

PHONE, (191) 788-9919

N.C. LICENSE NO. C. 1733

OATE: JULY 14, 2021



SCALE NOTE: LARGE FORMAT PRINTS ARE TO SCALE AS NOTED. II" x IT" PRINTS ARE ONE HALF THE NOTED SCALE

**PRINCE PLACE** LOT 8

J.S. THOMPSON
ENGINEERING, INC.
608 WADE NA. SUTE OF AALEICH, NC.7665
PHONE, (191) 78-9931
NC. LICENSENO. C.1733



7/15/2021

DRAWN BY: MAIN STREET

SHEET: 14 OF: 41

S-1.3d STEMWALL SLAB FOUNDATION PLAN

### **PRINCE PLACE** LOT 8 FASTEN SUBFLOOR TO TOP FLANGE W/ CONSTRUCTION PACK OUT WEB w/ 2x MATERIAL SECURED w/ (2) ROWS OF 1/2" THROUGH BOLTS # 24" O.C. BEAR PACK OUT MATERIAL FULLY ON BOTTOM FLANGE

ADHESIVE

FASTEN I-JOISTS W/ FACE-

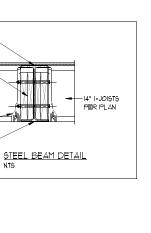
MOUNT HANGERS (TYP.)

STEEL BEAM

SEE PAGE S-3d

FOR FAMILY ROOM **EXTENSION** 

AND COVERED PORCH



(TYP. w/ OPT. SCREENED / COVERED PORCH) \_\_39'-Ø"\_5IDE 24\_ \_\_\_\_ . \_\_\_ . <u>1'-</u>1.1<u>/2"</u> . \_\_\_ . \_\_ (2) 2 x 10 CONT. (2) 2 x 10 CONT (2) 2 x 10 CON1 (3) 2 x 4 (5)2 x 4-OPT. DOOR 14" TJI 210 @ 19.2" O.C (OR EQUAL) OPTIONAL BRICK -WATER (ABLE W/ ELE/S. B, C, E, 4 F EXTRA JOIST WATER TABLE w/ -ELEVS. B, C, E, 4 F (D | 3/4" x 14" | 5[ FLUSH W/ SIMPSON HUSIAI/IØ HGR o.c. (OR EQUAL) 43'-Ø" SIDE 3A / REAR EXTENSION  $-(4)2 \times 4$ 14" TJI 210 @ 19.2" O.C. (OR EQUAL) 9'-1 1/2" GB CONTR 4'-9 3/4" - GARAGE PORTAL FRAME, SEE — IETHOD PF WALL BRACING DETAIL (5)2 x 4-(4)2 x 4 /--(5)2 x 4  $(4)2 \times 4$ (2) 2 x 10 DROPPED (TYP.) (3) 1 3/4" x || 1/8" LVL CONT. CORNER TO CORNER BRICK WATER TABLE W/ w/(2)2 x 6 JACKS AT EA. BEARING POINT 4 x 4 fRTD. POST ELEVS, B 4 E OR BRICK -VENEER W/ ELEVS, C 4 F MIN. (TYP.) GARAGE PORTAL FRAME, SEE 2"-6" CONTR. 3"-9" METHOD PF WALL BRACING DETAIL CONTR. OPTIONAL SIDE CA 3'-9" ENTRY GARAGE ELEVATION B

(2) 2 x I/2 CONT

TSP

BRICK WATER TABLE U/

ELEVS, B & E OR BRICK VENEER w/ ELEVS, C & F

OVERHANG ABOVE - SEE FRAMING ON SHEET 6-5a

SCALE NOTE:

LARGE FORMAT PRINTS ARE TO SCALE AS NOTED. II" x IT" PRINTS ARE ONE HALF THE NOTED SCALE

NOTE:

4 x 4 TRTD, POST MIN, -{TYP, w/ OPT, SCREENED

(COVERED PORCH)

(2) 2 x 10 DROPPED

7/15/2021

OPTIONAL SCREENED

/ COVERED PORCH

BCI 50008-18 JOISTS MAY BE USED IN LIEU OF TJI 210 JOISTS AT THE DEPTH AND SPACING INDICATED ON THE PLANS.

#### BRACED WALL DESIGN NOTES:

- BRACED WALL DESIGN PER SECTION R60210 OF THE NORC 2018 EDITION. CS-WSP REFERS TO "CONTINUOUS SHEATHING WOOD
- CS-USP REPERS TO "CONTINUES SHEATHING WOOD" STRUCTURED, PANELS" CONTRACTOR IS TO INSTALL THE" OSB ON ALL EXTERIOR WALLS ATTACHED W 8d NAILS SPACED 6" OC. ALONG PANEL EDGES AND 12" OC. IN THE FIELD.

  "GB REFERS TO "GYPSUM BOARD" CONTRACTOR IS TO INSTALL 1/2" (MIN) GYPSUM WALL BOARD WHERE NOTED ON THE PLANS. FASTEN GB WITH I VI" SCREWS OR I 5/8" NAILS SPACED TO OC.
- FASTEN GB WITH I I I A" SCREWS OR I 5/8" NAILS SPACED " OC.
  ALONG PARKE EDGES AND IN THE FIELD INCLUDING TOP AND
  BOTTOM PLATES.
  BRACED WALL DESIGN APPLIED IN WIND ZONES UP TO 130 MPH.
  FOR HIGH WIND ZONES BRACE WALLS ARE TO BE CONSTRUCTED
  IN ACCORDANCE WITH CHAPTER 45 OF THE NORC 2018 EDITION.
- SEE NOTES AND DETAIL SHEETS FOR ADDITIONAL BRACED WALL INFORMATION.

#### BRACED WALL DESIGN

RECTANGLE A RECTANGLE B SIDE IA (FRONT LOAD)

METHOD: CS-WSP/GB/PF

SIDE 24 (OPT. EXTENSIONS) METHOD: CS-WSP SIDE 2B METHOD; CS-WSP

TOTAL REQUIRED LENGTH: 12.71 TOTAL REQUIRED LENGTH: 2.57'
TOTAL PROVIDED LENGTH: 12.0' TOTAL PROVIDED LENGTH: 15.88" SIDE 3B

<u>SIDE 3A (SIDE LOAD)</u> METHOD: CS-WSP/PF METHOD: CS-WSP TOTAL REQUIRED LENGTH: 10.64' TOTAL REQUIRED LENGTH: 20' TOTAL PROVIDED LENGTH: 26.151 TOTAL PROVIDED LENGTH: 19.33

SIDE 4B/3A COMBINED SIDE 4A METHOD: CS-WSP TOTAL REQUIRED LENGTH: 10.64"

#### STRUCTURAL NOTES:

- ALL FRAMING LUMBER TO BE SPF 12 (UNO). ALL TREATED
- LUMBER TO BE SYP 12 (UNO.)
  ALL LOAD BEARING HEADERS TO BE (2) 2 × 6 SFF 12 OR SYP 12 (KILN DRIED) (UNO), HEADERS HAVE BEEN DESIGNED BASED ON CALCULATED LOADS, CODE TABLES HAVE NOT BEEN USED. INSTALL AN EXTRA JOIST UNDER WALLS PARALLEL TO FLOOR
- JOISTS WHERE NOTED ON THE PLANS.
- WINDOW AND DOOR HEADERS TO BE SUPPORTED W/ (1) JACK STUD AND (1) KING STUD EA. END (UNO.). SEE TABLE R602.7.5 FOR ADDITIONAL KING STUD REQUIREMENTS.
- SQUARES DENOTE POINT LOADS WHICH REQUIRE SOLID BLOCKING TO GIRDER OR FOUNDATION. ALL SQUARES TO BE (2) STUDS (UNO.)
  ALL 4 × 4 POSTS SHALL BE ANCHORED TO SLABS W/ SIMPSON
- ABU44 POST BASES (OR EQUAL) AND 6 x 6 POSTS W/ ABU66 POST BASES (OR EQUAL) (UNO). ALL 4 x 4 AND 6 x 6 POSTS TO BE INSTALLED WITH 100 LB CAPACITY UPLIFT CONNECTORS AT TOP (UNO.)
- FOR FIBERGLASS, ALUMINUM, OR COLUMN ENG. BY OTHERS, SECURE TO SLAB w/ (2) METAL ANGLES USING 2" CONC. SCREWS, FASTEN ANGLES TO COLUMNS w/ 1/4" THROUGH BOLTS w/ NUTS AND WASHERS, LOCATE ANGLES ON OPPOSITE SIDES OF COLUMN. THROUGH BOLTS MUST BE INSTALLED PRIOR TO SETTING COLUMN
- REFER TO NOTES AND DETAIL SHEETS FOR ADDITIONAL STRUCTURAL INFORMATION

"TSP" INDICATES TRIPLE STUD POCKET BETWEEN WINDOW UNITS.

### TABLE R602.75 MINIMUM NUMBER OF FULL HEIGHT STUDS AT EACH END OF HEADERS IN EXTERIOR WALLS

HEADER SPAN	MAXIMUM STUD SPACING (INCHES (PER TABLE R602.3(5)		
((	16	24	
UP TO 3'	1	1	
4'	2	1	
8'	3	2	
12"	5	3	
16'	6	4	

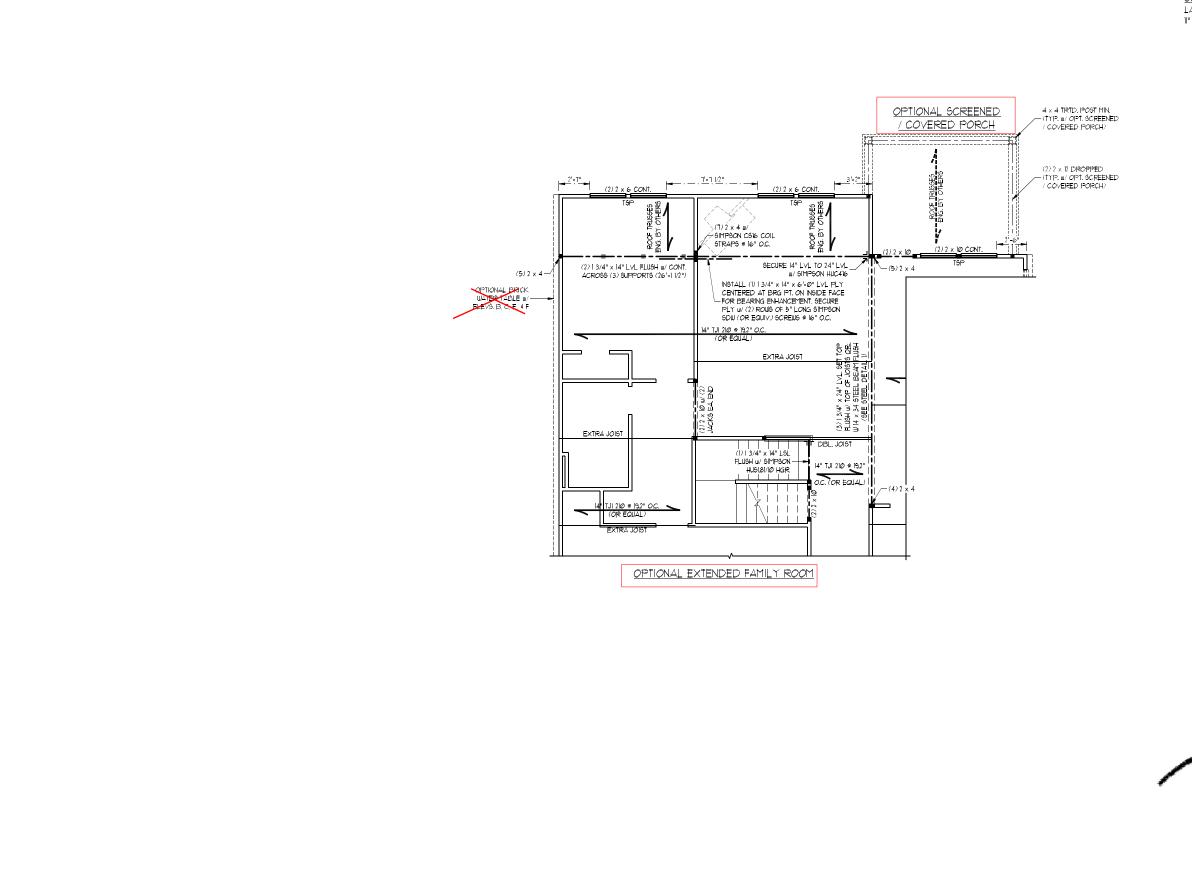
SON 1. INC 1789921 THOMPS, IN EERING, ADEAN, SUBSECTION, NEW, 61917 785-9917 INC. LICENSEND, C1733 S 

WILLOW DAVIDSON HOMES

TE: JULY 14, 2021 Δ1 E: 1/4" = 1'.0" RAWN BY: MAIN STREE

SHEET: 23 OF: 41 S-3a

SECOND FLOOR FRAMING PLAN



SCALE NOTE: LARGE FORMAT PRINTS ARE TO SCALE AS NOTED. 11" × 17" PRINTS ARE ONE HALF THE NOTED SCALE

**PRINCE PLACE** LOT 8

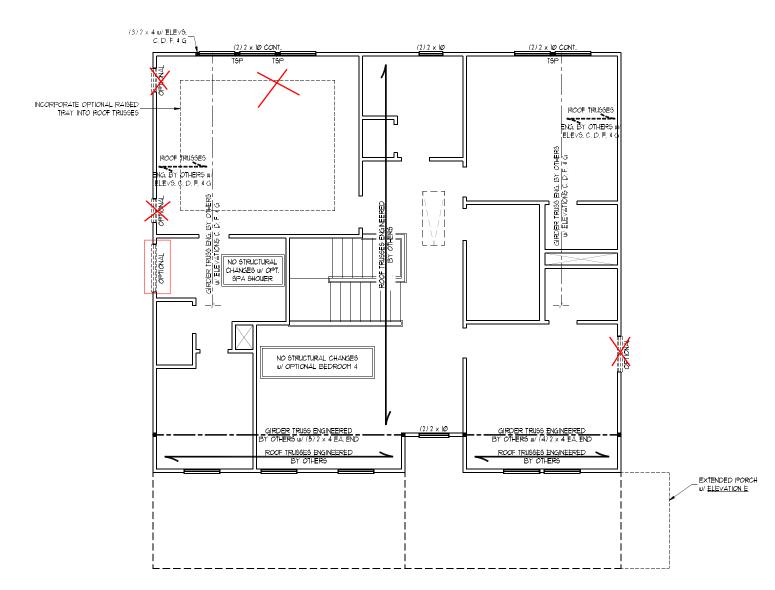
S. THOMPSON
NGINEERING, INC
608 WADEALS, SUTE OF NALIGHA, NC.7665
PHONE, (919) 788-9991 PAX, (919) 788-9921
NC. LICENSE NO. C1733

WILLOW DAVIDSON HOMES

DRAWN BY: MAIN STREET

SHEET: 26 OF: 41 S-3d SECOND FLOOR FRAMING PLAN

7/15/2021



ELEVATIONS B & E

<u>SCALE NOTE:</u> LARGE FORMAT PRINTS ARE TO SCALE AS NOTED. 11" x 17" PRINTS ARE ONE HALF THE NOTED SCALE

### **PRINCE PLACE** LOT 8

#### BRAÇED WALL DESIGN NOTES:

- BRACED WALL DESIGN PER SECTION R602.00 OF THE NORC 2018 EDITION.
  CS-WSF REFERS TO "CONTINUOUS SHEATHING WOOD STRUCTURAL PANELS" CONTRACTOR 15 TO NSTALL 1/16" OSB ON ALL EXTERIOR WALLS STRUCTED W 8d NALLS SPACED 6" OC. ALONG PANEL EDGES AND 12" OC. IN THE FIELD.
  GES REFERS TO "SYPSUM BOARD" CONTRACTOR 15 TO INSTALL 1/2" (MIN) GYPSUM WALL BOARD WHERE NOTED ON THE PLANS, FASTEN GB WITH 1/4" SCREWS OR 15:6" NAILS SPACED 1" OC. ALONG PANEL EDGES AND IN THE FIELD IN GUIDNIST OF ADD. FASTEN GIB WITH 114" SCREWS ORE 15-8" NALLS SPACED 1" O.C.
  ALONG PANEL EDGES AND IN THE FIELD INCLUDING TOP AND
  BOTTOM PLATES.
  BRACED WALL DESIGN APPLIED IN WIND ZONES UP TO 180 MIPH.
  FOR HIGH WIND ZONES BRACE WALLS ARE TO BE CONSTRUCTED
  IN ACCORDANCE WITH CHAPTER AS OF THE NORC 2018 EDITION.
  SEE NOTES AND DETAIL SHEETS FOR ADDITIONAL BRACED
  WALL INFORMATION.

#### NOTE:

- PER SECTION 186021032 OF THE 2018 NGRC, THE AMOUNT OF BRACING ON THE SECOND FLOOR EXCEEDS THE AMOUNT REQUIRED FOR THE FIRST FLOOR AND NO BRACED WALL ANALYSIS IS REQUIRED
- 2. SHEATH ALL EXTERIOR WALLS WITH 1/16" OSB SHEATHING ATTACHED WITH 8d NAILS AT 6" O.C. ALONG PANEL EDGES AND 12" O.C. IN THE FIELD.

#### STRUCTURAL NOTES:

- ALL FRAMING LUMBER TO BE 1/2 9PF
- (UNO).

  LI LOAD BEARING HEADERS TO BE
  (2) 2 × 6 (UNO).

  WINDOW AND DOOR HEADERS TO BE
- SUPPORTED w/ (1) JACK STUD AND (1) KING STUD EA. END (UNO.). SEE TABLE R602.15 FOR ADDITIONAL KING STUD REQUIREMENTS.

  SQUARES DENOTE POINT LOADS
- WHICH REQUIRE SOLID BLOCKING TO GIRDER OR FOUNDATION, SQUARES
- TO BE (2) STUDS (UNO.) REFER TO NOTES AND DETAIL SHEETS FOR ADDITIONAL STRUCTURAL INFORMATION.

"TSP" INDICATES TRIPLE STUD POCKET BETUEEN WINDOW UNITS.

TABLE R602.7.5 MINIMUM NUMBER OF FULL HEIGHT STUDS

AT EACH END OF HEADERS IN EXTERIOR WALL:				
HEADER SPAN	MAXIMUM STUD SPACING (INCHES (PER TABLE R602.3(5)			
(I LLI)	16	24		
UP TØ 3′	I			
4'	2	I		
8'	3	2		
121	5	3		
16'	6	4		



SHEET: 27 OF: 41 S-4a

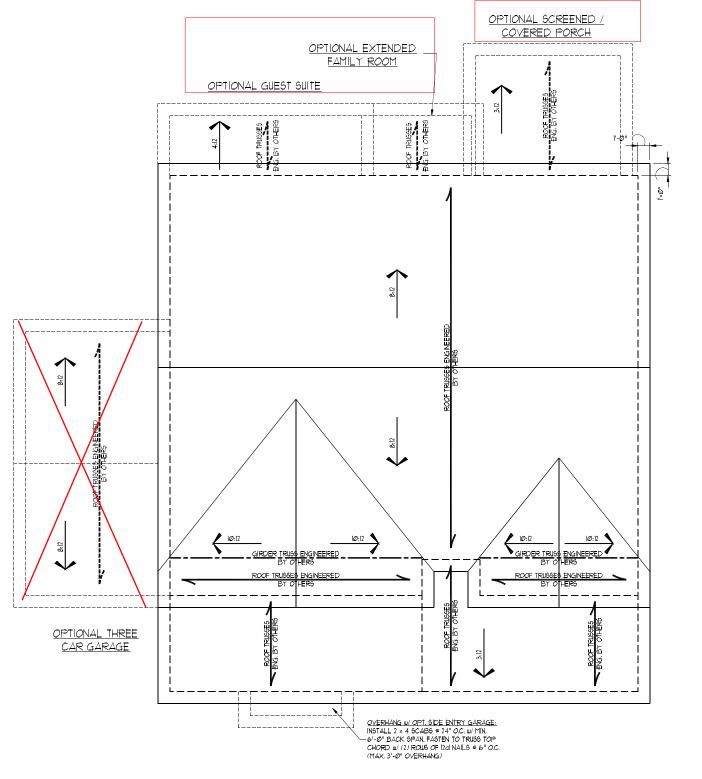
7/15/2021

J.S.THOMPSON
ENGINEERING, INC
608 WALE MALS, SUITE OF A ALHOLH, NG. 7665
PHONE, (919) 788-9911
NC. LICENSE NO. C.1733

WILLOW DAVIDSON HOMES

ATE: JULY 14, 2021 RAWN BY: MAIN STREET DI NEERED BY: ZHH

ATTIC FLOOR FRAMING PLAN



ELEVATION B

SCALE NOTE: LARGE FORMAT PRINTS ARE TO SCALE AS NOTED. II" x IT" PRINTS ARE ONE HALF THE NOTED SCALE

### **PRINCE PLACE** LOT 8

#### STRUCTURAL NOTES:

- ALL FRAMING LUMBER TO BE "2 9FF (UNO).

  STICK FRAME OVER-FRAMED ROOF SECTIONS W! 2 x 8 RIDGES, 2 x 6 RAFTERS 9 is "0.C. AND FLAT 2 x io VALLEYS OR USE VALLEY TRUSSES.

  FASTEN FLAT VALLEYS TO RAFTERS OR TRUSSES WITH SIMPSON H25A HURRICANE TIES 9 22" O.C. MAX. PASS HURRICANE TIES 19 THEOLIGH NEODE SHEATHING. EACH RAFTER IS TO BE FASTENED TO THE FLAT VALLEY WITH A HIN. OF (6) 12d TOE NAILS.

  REFER TO SECTION R2021 OF THE 2010 NCRC FOR REQUIRED UPLET RESISTANCE AT RAFTERS AND TRUSSES.
- TRUSSES.

  REFER TO NOTES AND DETAIL
  SHEETS FOR ADDITIONAL
  STRUCTURAL INFORMATION.

S. THOMPSON
NGINEERING, INC
608 WADEANE, SUITE 104 RALEICH, NO. 27605
HOUNE, (191) 789-9921
NC. LICENSE NO. C. 1733

WILLOW DAVIDSON HOMES



SHEET: 29 OF: 41 S-5a ROOF FRAMING PLAN

DRAWN BY: MAIN STREET DI

DATE: JULY 14, 2021

7/15/2021

LARGE FORMAT PRINTS ARE TO SCALE AS NOTED. 11" × 17" PRINTS ARE ONE HALF THE NOTED SCALE

SON 1. INC 1789921 HOMPS

VEERING

VE. SUTE 104 RALEIGH

(919) 788-9919 FAX. (919) 788-9919 FAX. (919) 782-9919 FAX. (919) 78 S

WILLOW DAVIDSON HOMES

ATE: JULY 14, 2021

ALE: 1/4" = 1'0" RAWN BY: MAIN STREET DES

NEERED BY: ZHH

SHEET: 38 OF: 41 D-2 STEM WALL

FOUNDATION DETAILS

MASONRY STEMWALL SPECIFICATIONS MASONRY WALL TYPE WALL HEIGHT 4" BRICK AND 4" BRICK AND (FEET) 8" CMU 12" CMU 4" CMU ย" CMU 2 AND UNGROUTED GROUT SOLID UNGROUTED UNGROUTED BELOW UNGROUTED GROUT SOLID UNGROUTED UNGROUTED GROUT SOLID w/ 44 GROUT SOLID W/ #4 GROUT SOLID GROUT SOLID REBAR © 48" O.C. REBAR @ 64" O.C. GROUT SOLID w/ #4 GROUT SOLID w/ #4 GROUT SOLID w/ #4 NOT APPLICABLE REBAR @ 36" O.C. REBAR @ 64" O.C. REBAR @ 36" O.C. GROUT SOLID w/ #4 GROUT SOLID W/ 44 GROUT SOLID w/ #4 NOT APPLICABLE REBAR ⊕ 64" O.C. T AND ENGINEERED DESIGN BASED ON SITE CONDITIONS GREATER

#### STRUCTURAL NOTES:

- WALL HEIGHT MEASURED FROM TOP OF FOOTING TO TOP OF THE WALL.
   THE MULTIPLE WYTHES TOGETHER WITH LADDER WIRE AT 16\* O.C. VERTICALLY.
- CHART APPLICABLE FOR HOUSE FOUNDATION ONLY, CONSULT ENGINEER FOR DESIGN OF GARAGE FOUNDATION NOT COMMON TO HOUSE
- 4) BACKFILL OF CLEAN 151 / 161 WASHED STONE IS ALLOWABLE.
- 5) BACKFILL OF WELL DRAINED OR SAND GRAVEL MIXTURE SOILS (45 PSF/FT BELOW GRADE) CLASSIFIED AS GROUP I ACCORDING TO UNIFIED SOILS CLASSIFICATION SYSTEM IN ACCORDANCE WITH TABLE RADD, OF THE 2018 NORTH CAROLINA REGIDENTIAL CODE ARE ALLOWABLE.
- 6) PREP 6LAB PER <u>R506.21</u> AND <u>R506.22</u> BASE AND <u>EXCEPTION</u> OF 2018 NORTH CAROLINA RESIDENTIAL CODE.
- 1) MINIMUM 24" LAP SPLICE LENGTH.
- 8) LOCATE REBAR IN CENTER OF FOUNDATION WALL.
- 9) WHERE REQUIRED, FILL BLOCK SOLID WITH TYPE "S" MORTAR OR 3000 PSI GROUT, USE OF "LOW LIFT GROUTING" METHOD REQUIRED WHEN FILLING WALLS WITH GROUT AT HEIGHTS OF 5" AND GREATER.

STEM WALL FON. DETAIL	STEM WALL FDN, W/ BRICK AND CURB (2)
2 × 4 STILD FRAMING (UND)  W TRID, BOTTOM PLATE(S)  2 × 4 TRID, BOTTOM PLATE(S)  3 × 6 * HORIZONTALLY  4 ** BRICK VENEER  4 ** BRICK TIES 6  1 - 4 ** BRICK TIES 6  1 - 4 ** DRICK TIES 6  2 ** HORIZONTALLY AND  1 - 4 ** DRICK TIES 6  2 ** HORIZONTALLY AND  2 ** DRICK TIES 6  1 - 4 ** DRICK TIES 6  2 ** HORIZONTALLY AND  2 ** DRICK TIES 6  2 ** HORIZONTALLY AND  2 ** DRICK TIES 6  3 ** DRICK TIES 6  2 ** DRICK TIES 6  3 ** DRICK TIES 6  4 ** DRICK TIES 6  2 ** DRICK TIES 6  2 ** DRI	2 × 4 STUD FRAMING (UND) W TRITD, BOTTOM PLATE(5) 9 SECURED BY 10" DIA BOLTS 9 SECURER OR 9 PLATE (5) 9 SECURER OR 9 PLATE (6) 9 SECURER OR 9 PLATE (7) 9 SECURER WITE FRAME (7) 9 SECURER OR 9 SECURER (7) 9 SECURER WITE FRAME (7) 9 SECURER WITE FRAME (7) 9 SECURER WITE FRAME (7) 9 SECURER (7
STEM WALL FON, W/ BRICK DETAIL (3)	STEM WALL FDN. W/ OPTIONAL BRICK WATERTABLE DETAIL (4)

2 x 4 STUD FRAMING (UNO)-

BRICK TIES @

-4" BRICK VENEER

—FLASHING —WEEP HOLES

I'-4' VERTICALLY AND 2'-6" HORIZONTALLY

LADDER WIRE EVERY OTHER COURSE

—WALL REINFORCEMENT,

--20" WIDE BY 8" DEEP CONT. CONC. FTG.

SEE CHART FOR SPACING

-12" CMU BLOCK

W/ TRTD, BOTTOM PLATE(5)

2 x 4 fRtp. BottoM PLATE(6)

SECURED BY 1/2" DIA BOLTS. SEE CHART FOR SPACING AND

4" CONCRETE SLAB-

III/ FIBER REINFORCING OR WELDED WIRE FABRIC

6 MIL, VAPOR BARRIER 4" WASHED STONE

UNDISTURBED FARTH-COMPACTED FILL OR WASHED STONE

TOP TWO COURSES OF STEM WALL AND TALL CELLS W/ REINFORCEMENT TO BE FILLED SOLID.

EMBEDMENT REQUIREMENTS

	ANCHOR SPACING AND	EMBEDMENT
WIND ZONE	120 MPH	130 MPH
SPACING	6'-0" O.C. INSTALL MIN. (2) ANCHORS PER PLATE SECTION AND (1) ANCHOR WITHIN 12" OF CORNERS	4'-0" O.C. INSTALL MIN. (2) ANCHORS PER PLATE SECTION AND (1) ANCHOR WITHIN 12" OF CORNERS
EMBEDMENT	7"	I5" INTO MASONRY T" INTO CONCRETE

-SIDING AS SPEC.

-LADDER WIRE IN TOP TWO

-OPTIONAL BRICK VENEER

COURSES (w/ VENEER ONLY)

—FINISHED GRADE

—LADDER WIRE EVERY OTHER COURSE

—8" сми вь*о*ск

WALL REINFORCEMENT, SEE CHART FOR SPACING

-SHE4THING

2 x 4 STUD FRAMING (UNO)-W/TRTD, BOTTOM PLATE(\$)

2 x 4 TRTD. BOTTOM PLATE(\$)-SECURED BY 1/2" DIA, BOLTS, SEE CHART FOR SPACING AND

EMBEDMENT REQUIREMENTS

THICKENED SLAB-NOT REQUIRED

4" CONCRETE SLAB-

WIFIBER REINFORCING TO

6 MIL. VAPOR

UNDISTURBED EARTH-

BARRIER

COMPACTED FILL

OR WASHED STONE

TOP TWO COURSES OF STEM WALL AND-ALL CELLS W/ REINFORCEMENT TO BE

FILLED SOLID.

OR WELDED WIRE FABRIC

4" WASHED STONE

ADED ROD WITH EPOXY. SON TITEN HD, OR APPROVED HORS SPACED AS REQUIRED ROVIDE EQUIVALENT HORAGE TO 1/2" DIAMETER HOR BOLTS MAY BE USED IN OF 1/2" ANCHOR BOLTS.

7/15/2021

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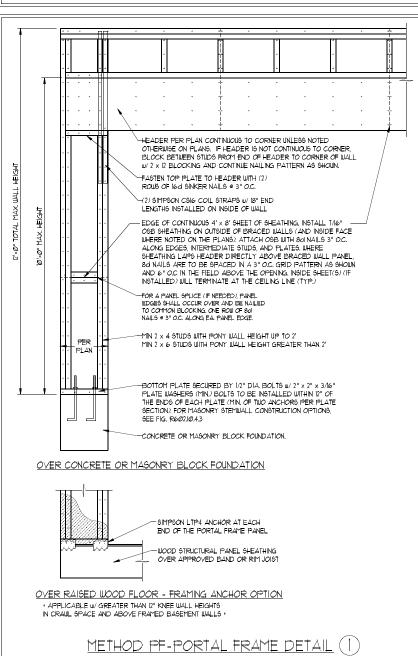
- WALL BRACING DESIGNED IN ACCORDANCE WITH CHAPTER 6 OF THE 2018 NC RESIDENTIAL BUILDING CODE (NCRC). TABLES AND FIGURES REFERENCED ARE FROM THE 2018 NCRC.
- 2. SEE THIS SHEET FOR GENERAL DETAILS. REFER TO THE 2018 NORC FOR ADDITIONAL INFORMATION AS NEEDED.

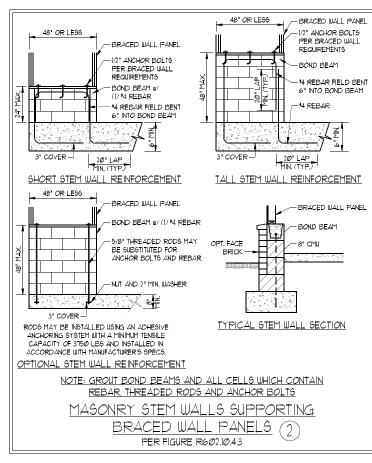
  3. BRACED EXTERIOR WALLS SUPPORTING ROOF TRUSSES AND RAFTERS, INCLUDING STORIES BELOW THE TOP FLOOR, HAVE BEEN DESIGNED PER R60/3.5 (3), WALL SHEATHING AND FASTENERS HAVE BEEN DESIGNED TO RESIST COMBINED UPLIFT AND SHEAR FORCES IN ACCORDANCE WITH ACCEPTED ENGINEERED PRACTICE.

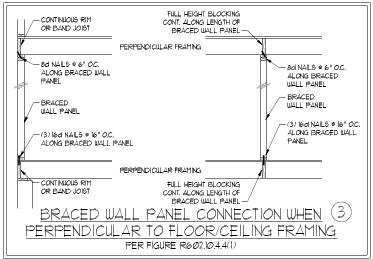
  4. SEE STRUCTURAL SHEETS FOR BRACED WALL LOCATIONS, DIMENSIONS, HOLD DOWN TYPE AND LOCATIONS, BRACED WALL
- LINE KEY WITH WALL DESIGN SUMMARY OF REQUIRED/PROVIDED TOTALS FOR EACH WALL LINE AND ANY SPECIAL NOTES OR REQUIREMENTS.
- 5. ALL EXTERIOR WALLS ARE TO BE SHEATHED WITH CS-WSP IN ACCORDANCE WITH SECTION R602.10.3 UNLESS NOTED
- 6. ALL EXTERIOR AND INTERIOR WALLS TO HAVE 1/2" GYPSUM INSTALLED, WHEN NOT USING METHOD "GB", GYPSUM TO BE
- FASTENED PER TABLE R10235. METHOD GB TO BE FASTENED PER TABLE R602101 CS-USP REFERS TO THE "CONTINUOUS SHEATHING WOOD STRUCTURAL PANELS" WALL BRACING METHOD. 1/16" OSB SHEATHING IS TO BE INSTALLED ON ALL EXTERIOR WALLS ATTACHED W/ 6d COMMON NAILS OR 8d (2 1/2" LONG x 0.113" DIAMETER: NAILS SPACED 6" OC. ALONG PANEL EDGES AND (2" OC. IN THE FIELD (UNO.).

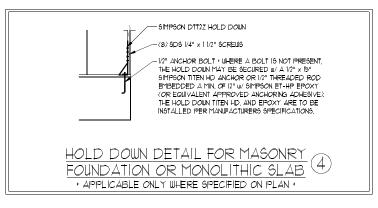
  8. GB REFERS TO THE "GYPSUM BOARD" WALL BRACING METHOD. 1/2" (MIN.) GYPSUM WALL BOARD IS TO BE INSTALLED ON
- BOTH SIDES OF THE BRACED WALL FASTENED WITH 1 1/4" SCREUS OR 15/8" NAILS SPACED 1" OC. ALONG PANEL EDGES INCLUDING TOP AND BOTTOM PLATES AND INTERMEDIATE SUPPORTS (UN.O.). VERIFY ALL FASTENER OPTIONS FOR 1/2" AND 5/8" GYPAIM PRIOR TO CONSTRUCTION FOR INTERIOR FASTENER OPTIONS SEE TABLE R10235. FOR EXTERIOR FASTENER OPTIONS SEE TABLE REQUISID. EXTERIOR GB TO BE NOTALLED VERTICALLY.

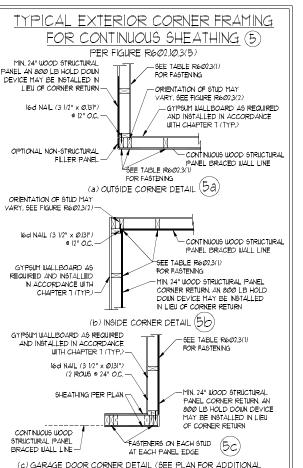
  REQUIRED BRACED WALL LENGTH FOR EACH SIDE OF THE CIRCUMSCRIBED RECTANGLE ARE INTERPOLATED PER TABLE
- R602. 10.3, METHOD C5-WSP CONTRIBUTES ITS ACTUAL LENGTH, METHOD GB CONTRIBUTES 5 ITS ACTUAL LENGTH, AND METHOD PF CONTRIBUTES 15 TIMES ITS ACTUAL LENGTH.











STRUCTURAL INFORMATION OR ALTERNATE CONFIGURATIONS)

- CONTINUOUS RIM OR BAND JOIST

- 8d NAILS @ 6" O.C. ALONG

BRACED WALL PANEL

BRACED WALL PANEL

-(3) 16d NAILS @ 16" O.C.

ALONG BRACED IIIALL PANEL

NITINI KA IS PIM III/ FINGER

JOISTS OR DBL. BAND JOIS

BRACED WALL PANEL CONNECTION WHEN 6

- ADDITIONAL FRAMING

MEMBER DIRECTLY ABOVE BRACED WALL PANEL

-8d NAILS ® 6" O.C. ALONG

BRACED WALL PANEL

- BRACED WALL PANEL

DDITIONAL FRAMING

BRACED WALL PANEL

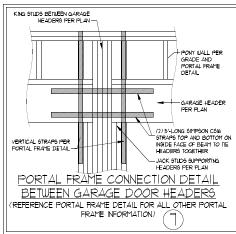
MEMBER DIRECTLY BELOW

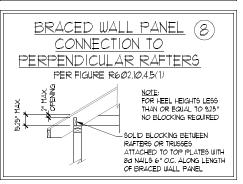
ALONG BRACED WALL PANEL

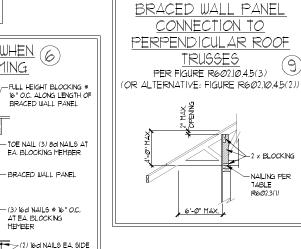
PARALLEL TO FLOOR/CEILING FRAMING

PER FIG. R602.10.4.4(2)

SCALE NOTE: LARGE FORMAT PRINTS ARE TO SCALE AS NOTED 11" x 17" PRINTS ARE ONE HALF THE NOTED SCALE







SHEET: 40 OF: 41 D-4 WALL BRACING

RAWN BY: MAIN STREET DES

ON 127605

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EERIN SUITE 104 RALE 7899919 FAX.(6 LICENSE NO., C.1

Zŝ

WILLOW DAVIDSON HOMES

Q 1919 1733

NOTES AND DETAILS

7/15/2021

MEMBER

FULL HEIGHT BLOCKING ®

16" O.C. ALONG LENGTH OF

BRACED WALL PANEL

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#### GENERAL NOTES

- ENGINEER'S SEAL APPLIES ONLY TO STRUCTURAL COMPONENTS INCLUDING ROOF RAFTERS, HIPS, VALLEYS, RIDGES, FLOORS, WALLS, BEAMS, HEADERS, COLUMNS, CANTILEVERS, OFFSET LOAD BEARING WALLS, PIERS, GIRDER SYSTEM AND FOOTING. ENGINEER'S SEAL DOES NOT CERTIFY DIMENSIONAL ACCURACY OF ARCHITECTURAL LAYOUT INCLUDING ROOF, ENGINEER'S SEAL DOES NOT APPLY TO 1-JOIST OR FLOOR/ROOF TRUSS LAYOUT DESIGN AND ACCURACY.
- 2. ALL CONSTRUCTION SHALL CONFORM TO THE LATEST REQUIREMENTS OF THE NORTH CAROLINA RESIDENTIAL CODE (NCRC.), 2018 EDITION, PLUS ALL LOCAL CODES AND REGULATIONS. THE STRUCTURAL ENGINEER IS NOT RESPONSIBLE FOR, AND WILL NOT HAVE CONTROL OF, CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, OR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE CONSTRUCTION WORK. NOR WILL THE ENGINEER BE RESPONSIBLE FOR THE CONTRACTORS FAILURE TO CARRY OUT THE CONSTRUCTION WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS
- 3. STRUCTURAL DESIGN BASED ON THE PROVISIONS OF THE NCRC, 2018 EDITION (R301.4 R301.1)

DESIGN CRITERIA:	LIVE LOAD (PSF)	DEAD LOAD (PSF)	DEFLECTION (IN)
ATTIC WITH LIMITED STORAGE	20	10	L/240 (L/360 w/ BRITTLE FINISHES)
ATTIC WITHOUT STORAGE	10	100	L/36Ø
DECKS	4Ø	10	L/36Ø
EXTERIOR BALCONIES	4Ø	100	L/36Ø
FIRE ESCAPES	4Ø	10	L/36Ø
HANDRAILS/GUARDRAILS	200 LB OR 50 (PLF)	10	L/36Ø
PASSENGER VEHICLE GARAGE	5∅	10	L/36Ø
ROOMS OTHER THAN SLEEPING ROOM	4Ø	10	L/36Ø
SLEEPING ROOMS	3Ø	100	L/36Ø
STAIRS	4Ø	10	L/36Ø
WIND LOAD	(BASED ON TABLE R3012(	4) WIND ZONE AND EXPOSURE)	
GROUND SNOW LOAD: Pg	2Ø (PSF)		

- I-JOIST SYSTEMS DESIGNED WITH 12 PSF DEAD LOAD AND DEFLECTION (IN) OF L/480
- FLOOR TRUSS SYSTEMS DESIGNED WITH IS PSE DEAD LOAD
- FOR 115 AND 120 MPH WIND ZONES, FOUNDATION ANCHORAGE IS TO COMPLY WITH SECTION R403.16 OF THE NCRC, 2016 EDITION. FOR 130 MPH, 140 MPH, AND 150 MPH WIND ZONES, FOUNDATION ANCHORAGE IS TO COMPLY WITH SECTION 4504 OF THE NCRC, 2018 EDITION.
- 5. ENERGY EFFICIENCY COMPLIANCE AND INSULATION VALUES OF THE BUILDING TO BE IN ACCORDANCE WITH CHAPTER II OF THE NCRC, 2018 EDITION.

#### FOOTING AND FOUNDATION NOTES

- FOUNDATION DESIGN BASED ON A MINIMUM ALLOUIABLE BEARING CAPACITY OF 2000 PSE. CONTACT GEOTECHNICAL ENGINEER IF BEARING CAPACITY IS NOT ACHIEVED.
- 2. FOR ALL CONCRETE SLABS AND FOOTINGS, THE AREA WITHIN THE PERIMETER OF THE BUILDING ENVELOPE SHALL HAVE ALL VEGETATION, TOP SOIL AND FOREIGN MATERIAL REMOVED. FILL MATERIAL SHALL BE FREE OF VEGETATION AND FOREIGN MATERIAL. THE FILL SHALL BE COMPACTED TO ASSURE UNIFORM SUPPORT OF THE SLAB, AND EXCEPT WHERE APPROVED, THE FILL DEPTHS SHALL NOT EXCEED 24" FOR CLEAN SAND OR GRAVEL A 4" THICK BASED COURSE CONSISTING OF CLEAN GRADED SAND OR GRAVEL SHALL BE PLACED. A BASE COURSE IS NOT REQUIRED WHERE A CONCRETE SLAB IS INSTALLED ON WELL-DRAINED OR SAND-GRAVEL MIXTURE SOILS CLASSIFIED AS GROUP I, ACCORDING TO THE UNITED SOIL CLASSIFICATION SYSTEM IN ACCORDANCE WITH TABLE R4051 OF THE NCRC, 2018 EDITION.
- 3. PROPERLY DEWATER EXCAVATION PRIOR TO POURING CONCRETE WHEN BOTTOM OF CONCRETE SLAB IS AT OR BELOW WATER TABLE. IF APPLICABLE, 3/4" - 1" DEEP CONTROL JOINTS ARE TO BE SAWED WITHIN 4 TO 12 HOURS OF CONCRETE FINISHING AND WALL LOCATIONS HAVE BEEN MARKED ADJUST WHERE NECESSARY
- 4. CONCRETE SHALL CONFORM TO SECTION R4022 OF THE NCRC, 2018 EDITION. CONCRETE REINFORCING STEEL TO BE ASTM A615 GRADE 60. WELDED WIRE FABRIC TO BE ASTM AI85, MAINTAIN A MINIMUM CONCRETE COVER AROUND REINFORCING STEEL OF 3" IN FOOTINGS AND 1 1/2" IN SLABS. FOR POURED CONCRETE WALLS, CONCRETE COVER FOR REINFORCING STEEL MEASURED FROM THE INSIDE FACE OF THE WALL SHALL NOT BE LESS THAN 3/4". CONCRETE COVER FOR REINFORCING STEEL MEASURED FROM THE OUTSIDE FACE OF THE WALL SHALL NOT BE LESS THAN 1 1/2" FOR #5 BARS OR SMALLER, AND NOT LESS THAN 2" FOR #6 BARS OR LARGER,
- 5. MASONRY UNITS TO CONFORM TO ACE 530/ASCE 5/TMS 402. MORTAR SHALL CONFORM TO ASTM C270.
- 6. THE UNSUPPORTED HEIGHT OF MASONRY PIERS SHALL NOT EXCEED FOUR TIMES THEIR LEAST DIMENSION FOR UNFILLED HOLLOW CONCRETE MASONRY UNITS AND TEN TIMES THEIR LEAST DIMENSION FOR SOLID OR SOLID FILLED PIERS. PERS MAY BE FILLED SOLID WITH CONCRETE OR TYPE M OR 5 MORTAR PIERS AND WALLS SHALL BE CAPPED WITH 8" OF SOLID MASONRY.
- T. THE CENTER OF EACH OF THE PIERS SHALL BEAR IN THE MIDDLE THIRD OF ITS RESPECTIVE FOOTING, EACH GIRDER SHALL BEAR IN THE
- 8. ALL CONCRETE AND MASONRY FOUNDATION WALLS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE PROVISIONS OF SECTION R404 OF THE NCRC, 2018 EDITION OR IN ACCORDANCE WITH ACI 318, ACI 332, NCMA TR68-A OR ACE 530/ASCE 5/TMS 402. MASONRY FOUNDATION WALLS ARE TO BE REINFORCED PER TABLE R404 (KI) R404 (K2) R404 (K3) OR R404 (K3) OR R404 (K4) OF THE NCRC 2018 EDITION. CONCRETE FOUNDATION WALLS ARE TO BE REINFORCED PER TABLE R404.I(B) OF THE NORC, 2018 EDITION. STEP CONCRETE FOUNDATION WALLS TO 2 X 6 FRAMED WALLS AT 16" OC WHERE GRADE PERMITS (UNO)

#### FRAMING NOTES

- 1. ALL FRAMING LUMBER SHALL BE 12 SPF MINIMUM (Fb = 875 PS), Fv = 375 PS), E = 1600000 PS)) UNLESS NOTED OTHERWISE (UNO). ALL TREATED LUMBER SHALL BE #2 SYP MINIMUM (Fb = 975 PSI, Fv = 175 PSI, E = 16000000 PSI) UNLESS NOTED OTHERWISE (UNO).
- 2. LAMINATED VENEER LUMBER (LVL) SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES: Fb =2600 PSI, Fv = 285 PSI, E = 1900000 PSI. LAMINATED STRAND LUMBER (LSL) SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES: Fb = 2325 PG; Fv = 310 PG; E = 1550000 PG; PARALLEL STRAND LUMBER (PSL) UP TO 1" DEPTH SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES: Fc = 2500 PSI, E =1800000 PSI. PARALLEL STRAND LUMBER (PSL) MORE THAN 7" DEPTH SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES: Fc = 2900 PSI, E = 20000000 PSI, INSTALL ALL CONNECTIONS PER MANUFACTURER'S SPECIFICATIONS.
- 3. STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING, ASTM SPECIFICATIONS

W AND WT SHAPES: CHANNELS AND ANGLES:

PLATES AND BARS: ASTM A36 HOLLOW STRUCTURAL SECTIONS:

ASTM A500 GRADE B Ď STEEL PIPE.

ASTM A53 GRADE BITTER FOR S F

4. STEEL BEAMS SHALL BE SUPPORTED AT EACH END WITH A MINIMUM BEARING LENGTH OF 3 1/2" AND FULL FLANGE WIDTH (UNO). PROVIDE SOLID BEARING FROM BEAM SUPPORT TO FOUNDATION. BEAMS SHALL BE ATTACHED AT THE BOTTOM FLANGE TO EACH SUPPORT AS FOLLOUIS (UNO)-

A. WOOD FRAMING (2) 1/2" DIA, x 4" LONG LAG SCREWS (2) 1/2" DIA. x 4" WEDGE ANCHORS B. CONCRETE (2) 1/2" DIA. x 4" LONG SIMPSON TITEN HD ANCHORS C. MASONRY (FULLY GROUTED)

ASTM A992

ASTM A36

LATERAL SUPPORT IS CONSIDERED ADEQUATE PROVIDING THE JOISTS ARE TOE NAILED TO THE 2X NAILER ON TOP OF THE STEEL BEAM, AND

THE 2x NAILER IS SECURED TO THE TOP OF THE STEEL BEAM w/ (2) ROWS OF SELF TAPPING SCREWS @ 16" O.C. OR (2) ROWS OF 1/2" DIAMETER BOLTS @ 16" O.C. IF 1/2" BOLTS ARE USED TO FASTEN THE NAILER, THE STEEL BEAM SHALL BE FABRICATED W/ (2) ROWS OF 9/16" DIAMETER HOLES @ 16" OC

- SQUARES DENOTE POINT LOADS WHICH REQUIRE SOLID BLOCKING TO GIRDER OR FOUNDATION, SHADED SQUARES DENOTE POINT LOADS FROM ABOVE WHICH REQUIRE SOLID BLOCKING TO SUPPORTING MEMBER BELOW.
- 6. ALL LOAD BEARING HEADERS TO CONFORM TO TABLE R602.7(1) AND R602.7(2) OF THE NCRC 2018 EDITION OR BE (2) 2 x 6 WITH (1) JACK AND (1) KING STUD EACH END (UNO), WHICHEVER IS GREATER ALL HEADERS TO BE SECURED TO EACH JACK STUD WITH (4) 8d NAILS. ALL BEAMS TO BE SUPPORTED WITH (2) STUDS AT EACH BEARING POINT (UNO). INSTALL KING STUDS PER SECTION R602.75 OF THE NORTH CAROLINA RESIDENTIAL CODE, 2018 EDITION,
- 1. ALL BEAMS, HEADERS, OR GIRDER TRUSSES PARALLEL TO WALL ARE TO BEAR FULLY ON (1) JACK OR (2) STUDS MINIMUM OR THE NUMBER OF JACKS OR STUDS NOTED. ALL BEAMS OR GIRDER TRUSSES PERPENDICULAR TO WALL AND SUPPORTED BY (3) STUDS OR LESS ARE TO HAVE 1 1/2" MINIMUM BEARING (UNO). ALL BEAMS OR GIRDER TRUSSES PERPENDICULAR TO WALL AND SUPPORTED BY MORE THAN (3) STUDS OR OTHER NOTED COLUMN ARE TO BEAR FULLY ON SUPPORT COLUMN FOR ENTIRE WALL DEPTH (UNO), BEAM ENDS THAT BUTT INTO ONE ANOTHER ARE TO EACH BEAR EQUAL LENGTHS (UNO).
- 8. FLITCH BEAMS SHALL BE BOLTED TOGETHER USING 1/2" DIAMETER BOLTS (ASTM A307) WITH WASHERS PLACED AT THREADED END OF BOLT. BOLTS SHALL BE SPACED AT 24" CENTERS (MAXIMUM), AND STAGGERED AT TOP AND BOTTOM OF BEAM (2" EDGE DISTANCE), WITH (2) BOLTS LOCATED AT 6" FROM EACH END (UNO).
- 9. ALL I-JOIST OR TRUSS LAYOUTS ARE TO BE IN COMPLIANCE WITH THE OVERALL DESIGN SPECIFIED ON THE PLANS, ALL DEVIATIONS ARE TO BE BROUGHT TO THE ATTENTION OF THE ENGINEER OF RECORD PRIOR TO INSTALLATION.
- 10. BRACED WALL PANELS SHALL BE CONSTRUCTED ACCORDING TO THE NORTH CAROLINA RESIDENTIAL CODE 2018 EDITION WALL BRACING CRITERIA THE AMOUNT LENGTH AND LOCATION OF BRACING SHALL COMPLY JUITH ALL APPLICABLE TABLES IN SECTION R60210.
- PROVIDE DOUBLE JOIST UNDER ALL WALLS PARALLEL TO FLOOR JOISTS. PROVIDE SUPPORT UNDER ALL WALLS PARALLEL TO FLOOR TRUSSES OR I-JOISTS PER MANUFACTURER'S SPECIFICATIONS. INSTALL BLOCKING BETWEEN JOISTS OR TRUSSES FOR POINT LOAD SUPPORT FOR ALL POINT LOADS ALONG OFFSET LOAD LINES.
- 12. FOR ALL HEADERS SUPPORTING BRICK VENEER THAT ARE LESS THAN 8'-Ø" IN LENGTH, REST A 6" x 4" x 5/16" STEEL ANGLE WITH 6" MINIMUM EMBEDMENT AT SIDES FOR BRICK SUPPORT (UN.O.). FOR ALL HEADERS 8'-O" AND GREATER IN LENGTH, BOLT A 6" x 4" x 5/16" STEEL ANGLE TO HEADER WITH 1/2" LAG SCREWS AT 12" O.C. STAGGERED FOR BRICK SUPPORT. FOR ALL BRICK SUPPORT AT ROOF LINES, BOLT A 6" x 4" x 5/16" STEEL ANGLE TO (2) 2 x 10 BLOCKING INSTALLED W/ (4) 12d NAILS EA, PLY BETWEEN WALL STUDS WITH (2) ROWS OF 1/2" LAG SCREWS AT 12" OC STAGGERED AND IN ACCORDANCE JUITH SECTION RTIØ3821 OF THE NORG 2018 EDITION
- 13. FOR STICK FRAMED ROOFS: CIRCLES DENOTE (3) 2 x 4 POSTS FOR ROOF MEMBER SUPPORT, HIP SPLICES ARE TO BE SPACED A MINIMUM OF 8'-0". FASTEN MEMBERS WITH THREE ROWS OF 12d NAILS AT 16" O.C. FRAME DORMER WALLS ON TOP OF DOUBLE OR TRIPLE RAFTERS AS
- 14. FOR TRUSSED ROOFS: FRAME DORMER WALLS ON TOP OF 2 x 4 LADDER FRAMING AT 24" O.C. BETWEEN ADJACENT ROOF TRUSSES, STICK FRAME OVER-FRAMED ROOF SECTIONS WITH 2 x 8 RIDGES, 2 x 6 RAFTERS AT 16" O.C. AND FLAT 2 x 10 VALLEYS (UNO).
- 15 ALL 4 x 4 AND 6 x 6 POSTS TO BE INSTALLED WITH 100 LB CAPACITY UPLIET CONNECTORS TOP AND BOTTOM (UNO.) POSTS MAY BE SECURED USING ONE SIMPSON H6 OR LTSIZ UPLIFT CONNECTOR FASTENED TO THE BAND AT THE BOTTOM AND THE BEAM AT THE TOP OF EACH POST. ONE 16" SECTION OF SIMPSON CSIG COIL STRAPPING WITH (8) 8d HDG NAILS AT EACH END MAY BE USED IN LIEU OF EACH TWIST STRAP IF DESIRED. FOR MASONRY OR CONCRETE FOUNDATION USE SIMPSON POST BASE.

SCALE NOTE:

LARGE FORMAT PRINTS ARE TO SCALE AS NOTED. II" x IT" PRINTS ARE ONE HALF THE NOTED SCALE

S Д MO S

WILLOW DAVIDSON HOMES

7/15/2021

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TE: JULY 14, 2021

RAWN BY: MAIN STREET DES EERED BY: ZHH

SHEET: 41 OF: 41 D-5 STANDARD STRUCTURAL NOTES

# J.S. THOMPSON ENGINEERING, INC

structural and geotechnical custom residential design

March 19, 2021

Joshua Clowes Davidson Homes, LLC 4208 Six Forks Road Suite 1000 Raleigh, NC 27609

Re:

"Willow" plan

All elevations under construction

Dear Mr. Clowes:

Per your request, the plan noted above was reviewed to address an alternative for the LVL beam above the family room/kitchen.

Analysis revealed a W 14 x 34 steel beam may be installed in lieu of the plan specified (3) 1 3/4" x 24" LVL beam. The beam is to be installed flush within the floor system and the subfloor is to be fastened to the top flange with construction adhesive. The beam is to be packed out at each side with 2x material fastened with (2) rows of 1/2" through bolts with nuts and washers at 24" o.c. The beam is to be supported by (5) jacks at each end. This configuration will provide the required support for all applied loads.

Please call me if you have any questions.

Sincerely,

J.S. Thompson Engineering, Inc. N.C. License No. C-1733

Joshua Grantham

Matthew G. Strother, P.E.

SEAL 33736 G. STROMBER 3/19/2021

606 Wade Avenue Raleigh, NC 27605 (919) 789-9919 OFFICE (919) 789-9921 FAX

# J.S. THOMPSON ENGINEERING, INC

structural and geotechnical custom residential design

April 29, 2021

Josh Clowes Davidson Homes, LLC 4208 Six Forks Road Suite 1000 Raleigh, NC 27609

Re: "Willow" plan- all elevations

Dear Mr. Clowes:

Per your request, the plan noted above was reviewed to address the use of BCI joists in lieu of TJI joists as indicated on the structural plans. Analysis revealed the following:

- 1) 14" BCI 4500s-1.8 joists at 19.2" o.c. may be used in lieu of 14" TJI 210 joists at 19.2" o.c. for the second floor system with the exception of the joists above the two-car garage. 14" BCI 4500s-1.8 joists at 12" o.c. may be used in lieu of 14" TJI 210 joists at 16" o.c. above the two-car garage.
- 2) 11 7/8" BCI 4500s-1.8 joists at 19.2" o.c. may be used in lieu of 11 7/8" TJI 210 joists at 19.2" o.c. for the crawl space first floor system.

This configuration will provide the required support for all applied loads.

Please call me if you have any questions.

Sincerely,

J.S. Thompson Engineering, Inc. N.C. License No. C-1733

Joshua A. Grantham

Matthew G. Strother, P.E.



606 Wade Avenue Raleigh, NC 27605 (919) 789-9919 OFFICE (919) 789-9921 FAX

# J.S. THOMPSON ENGINEERING, INC

structural and geotechnical custom residential design

May 3, 2021

Garrison Safriet Davidson Homes, LLC 4208 Six Forks Road Suite 1000 Raleigh, NC 27609

Re: "Willow" plan

Dear Mr. Safriet:

The above noted plan was reviewed to address using Thermo-Ply Blue sheathing in lieu of 7/16" OSB sheathing at exterior walls and gypsum board at interior braced walls.

Review revealed that Thermo-Ply Blue may be used in place of 7/16" OSB for all exterior walls with the exception of portal framed garage walls. Thermo-Ply Blue may also be used in place of gypsum board at all interior braced walls designated by the plan as "GB" wall bracing method. To install Thermo-Ply Blue sheathing, block all horizontal joints and fasten the sheathing with min. 15/16" crown, 16 ga. staples or .012" min. diameter 3/8" head diameter, 11 ga. 1 1/4" length nails. Space fasteners at 3" o.c. along panel edges and in the field with minimum 1" embedment into framing. Do not countersink fasteners. Install per manufacturer's specifications. This configuration will provide the required support for all applied loads.

Please call me if you have any questions.

Sincerely,

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5/3/2021

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