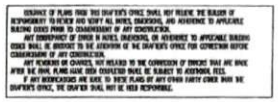
Vision
H&H HOMES - GARAGE RIGHT

PLAN REVISIONS



CSQ 000083 Inventory Marked

H&H HOMES

JOB NUMBER 000083.00
CUSTOMER VISION
DRAWN 08-18-17
REVISED

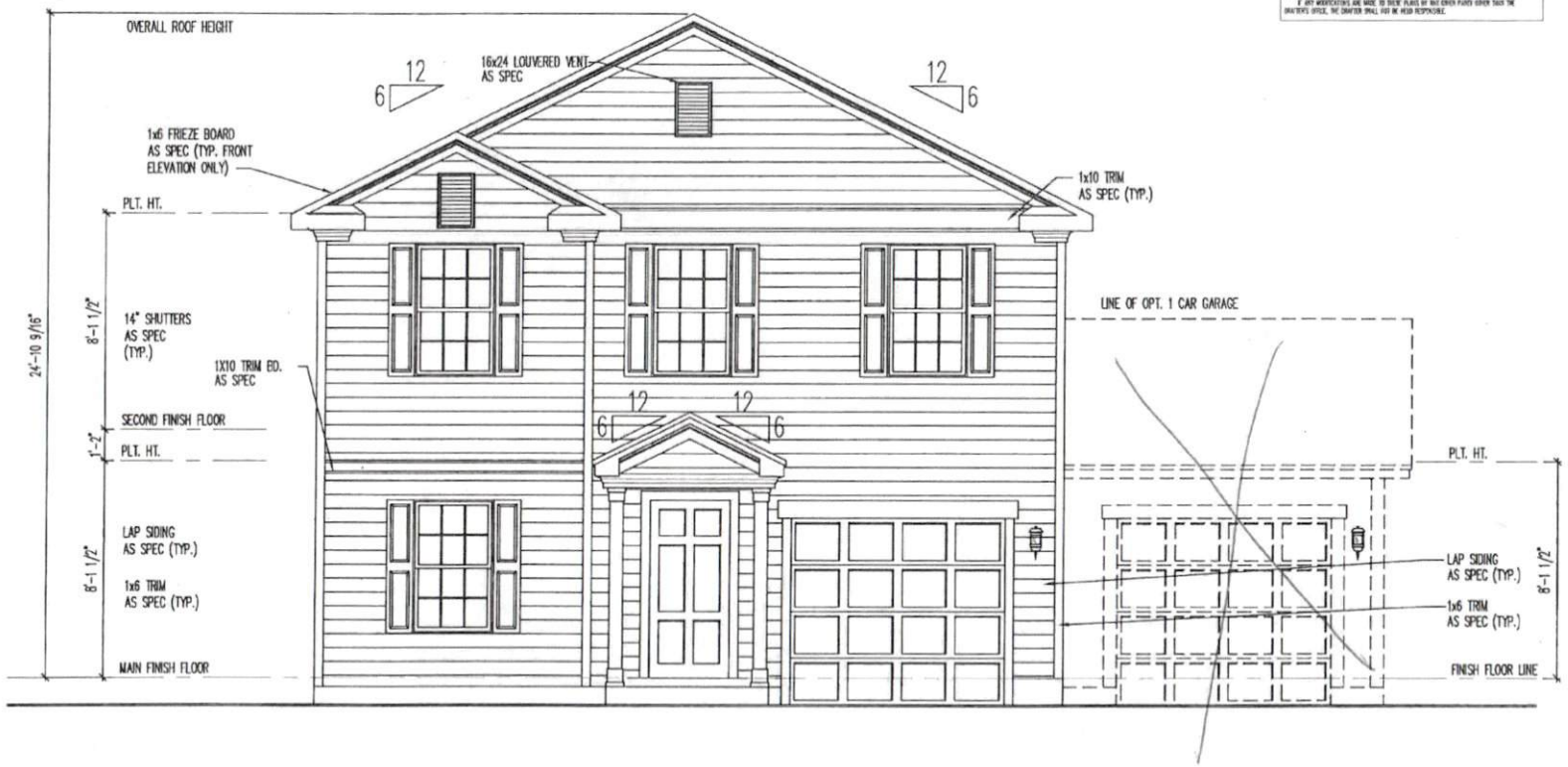
DRAWINGS ON 11"x17" SHEET ARE ONE HALF THE SCALE NOTED

VISION
H&H HOMES

1514

TITLE
REVISION LOG

SHEET
CS



FRONT ELEVATION

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

G.C. VERIFY VERTICAL DIMENSIONS INCREASE BY 1'-0 W/ OPT. 9 FT. PLT. HT. EXCLUDING WINDOW HD. HTS.

ELEVATION "A" - TRADITIONAL
GARAGE RIGHT

VISION
H&H HOMES

1514

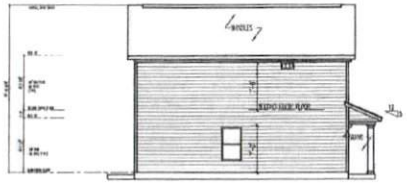
SHEET
A3.0

PROVISION OF PLANS FROM THE BUILDER'S OFFICE SHALL NOT RELIEVE THE BUILDER OF RESPONSIBILITY TO REVIEW AND VERIFY ALL NOTES, DIMENSIONS, AND ACHIEVEMENT TO APPLICABLE BUILDING CODES PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION.

ANY DISCREPANCY OF ERROR IN NOTES, DIMENSIONS, OR ACHIEVENCE TO APPLICABLE BUILDING CODES SHALL BE BROUGHT TO THE ATTENTION OF THE BUILDER'S OFFICE FOR CORRECTION BEFORE COMMENCEMENT OF ANY CONSTRUCTION.

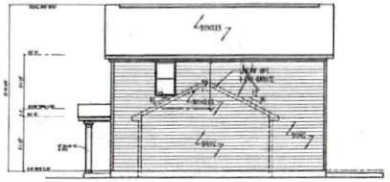
ANY REVISIONS OR CHANGES NOT RELATED TO THE CORRECTION OF ERRORS THAT ARE MADE AFTER THE FINAL PLANS HAVE BEEN COMPLETED SHALL BE SUBJECT TO ADDITIONAL FEES.

IF ANY MODIFICATIONS ARE MADE TO THESE PLANS BY ANY OTHER PARTY OTHER THAN THE DRAFTSMAN'S OFFICE, THE DRAFTSMAN SHALL NOT BE HELD RESPONSIBLE.

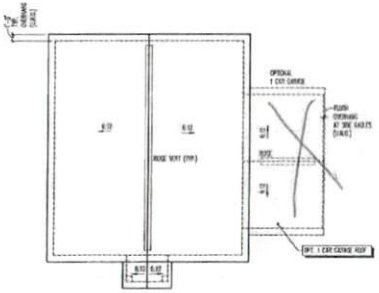


LEFT ELEVATION

REAR ELEVATION



RIGHT ELEVATION



ELEVATION "A" - TRADITIONAL
GARAGE RIGHT

H&H HOMES

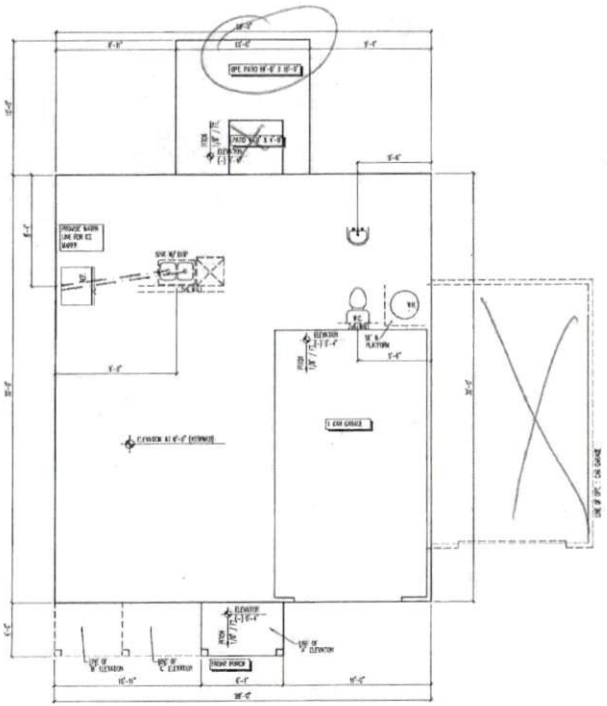
DRAWINGS ON 11"x17" SHEET ARE ONE HALF THE SCALE NOTED

VISION
H&H HOMES

1514

SIDE AND REAR ELEVATIONS
ROOF PLAN
BUILDING SECTION

SHEET
A3.1



SLAB INTERFACE PLAN

GARAGE RIGHT

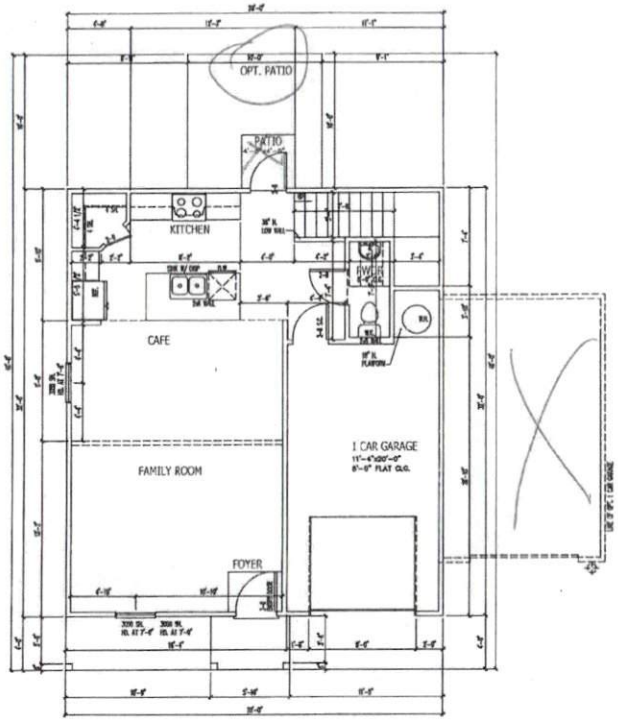
SCALE: 1/4" = 1'-0"

VISION
H&H HOMES

1514

SLAB INTERFACE PLAN

SHEET
A1.0



THE GARAGE SHALL BE SEPARATED FROM THE RESIDENCE AND ITS ATTIC AREA BY NOT LESS THAN 1/2 INCH (12.7 mm) GYPSUM BOARD APPLIED TO THE GARAGE SIDE. GARAGES BENEATH HABITABLE ROOMS SHALL BE SEPARATED FROM ALL HABITABLE ROOMS ABOVE BY NOT LESS THAN 5/8 INCH (15.9 mm) TYPE 'X' GYPSUM BOARD OR EQUIVALENT. WHERE THE SEPARATION IS A FLOOR-CEILING ASSEMBLY, THE STRUCTURE SUPPORTING THE SEPARATION SHALL ALSO BE PROTECTED BY NOT LESS THAN 1/2 INCH (12.7 mm) GYPSUM BOARD OR EQUIVALENT.

MAIN FLOOR	659 S.F.
UPPER FLOOR	855 S.F.
TOTAL LIVING	1514 S.F.
GARAGE	237 S.F.
FRONT PORCH	23 S.F.
TOTAL SQ. FT.	1774 S.F.

ISSUANCE OF PLANS FROM THIS DRAFTER'S OFFICE SHALL NOT RELIEVE THE BUILDER OF RESPONSIBILITY TO REVIEW AND VERIFY ALL SITES, CONDITIONS, AND ACCESSIBILITY TO APPLICABLE BUILDING CODES PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION.

ANY DISCREPANCY OF ERROR IN NOTES, DIMENSIONS, OR ADHERENCE TO APPLICABLE BUILDING CODES SHALL BE BROUGHT TO THE ATTENTION OF THE DRAFTER'S OFFICE FOR CORRECTION BEFORE COMMENCEMENT OF ANY CONSTRUCTION.

ANY REVISIONS OR CHANGES, NOT RELATED TO THE CORRECTION OF ERRORS THAT ARE MADE AFTER THE FINAL PLANS HAVE BEEN COMPLETED SHALL BE SUBJECT TO ADDITIONAL FEES.

IF ANY MODIFICATIONS ARE MADE TO THESE PLANS BY ANY OTHER PARTY OTHER THAN THE DRAFTER'S OFFICE, THE DRAFTER SHALL NOT BE HELD RESPONSIBLE.

H&H HOMES

JOB NUMBER 0000LOT
DATE FILE NAME VISION-1
SCALE 1/4"=1'-0"
REVISED 05-16-17

DRAWINGS ON 11"x17" SHEET ARE ONE HALF THE SCALE NOTED

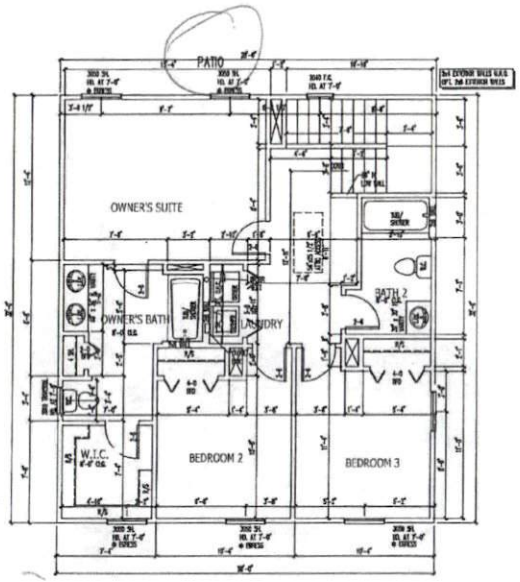
VISION
H&H HOMES

1514

TITLE
MAIN FLOOR PLAN
STAIR SECTION

SHEET
A2.0

MAIN FLOOR PLAN
SCALE: 1/4" = 1'-0"
GARAGE RIGHT



H&H HOMES

DRAWINGS ON 11"x17" SHEET ARE ONE HALF THE SCALE NOTED

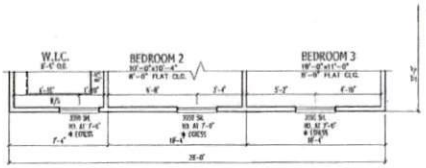
VISION
H&H HOMES

1514

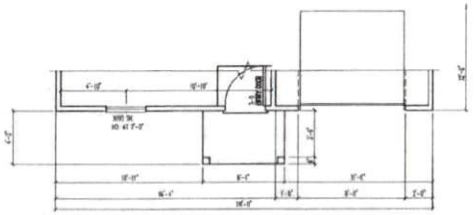
TITLE
UPPER FLOOR PLAN

SHEET
A2.1

UPPER FLOOR PLAN
SCALE: 1/4" = 1'-0"
GARAGE RIGHT



PARTIAL UPPER FLOOR PLAN



PARTIAL MAIN FLOOR PLAN

PARTIAL PLANS AT ELEVATION "A"
GARAGE RIGHT

H&H HOMES

DRAWINGS ON 11"x17" SHEET ARE ONE HALF THE SCALE NOTED

VISION
H&H HOMES

1514

PLAN OPTIONS

SHEET
A2.2

ELECTRICAL KEY

- DUPLEX CONVENIENCE OUTLET
- DUPLEX OUTLET ABOVE COUNTER
- WEATHERPROOF DUPLEX OUTLET
- GROUND FAULT INTERRUPTER DUPLEX OUTLET
- HALF-SWITCHED DUPLEX OUTLET
- SPECIAL PURPOSE OUTLET
- DUPLEX OUTLET IN FLOOR
- 220 VOLT OUTLET
- WALL SWITCH
- THREE-WAY SWITCH
- FOUR-WAY SWITCH
- DIMMER SWITCH
- CEILING MOUNTED INCANDESCENT LIGHT FIXTURE
- WALL MOUNTED INCANDESCENT LIGHT FIXTURE
- RECESSED INCANDESCENT LIGHT FIXTURE
- LIGHT FIXTURE WITH PULL CHAIN
- TRACK LIGHT
- FLUORESCENT LIGHT FIXTURE
- CEILING FAN
- EXHAUST FAN/LIGHT COMBINATION
- ELECTRIC DOOR OPERATOR (OPTIONAL)
- CHIMES (OPTIONAL)
- PUSH-BUTTON SWITCH (OPTIONAL)
- CARBON MONOXIDE DETECTOR
- SMOKE DETECTOR
- SMOKE / CARBON MONO. COMBO DETECTOR
- TELEPHONE (OPTIONAL)
- TELEVISION (OPTIONAL)
- DOORBELL
- ELECTRIC METER
- ELECTRIC PANEL
- DISCONNECT SWITCH
- SPEAKER (OPTIONAL)
- WIRING IN FOR OPT. CEILING FAN
- CEILING MOUNTED INCANDESCENT LIGHT FIXTURE W/ WIRING IN FOR OPT. CEILING FAN

NOTES:

1. PROVIDE AND INSTALL SMOKE (HEAT OR/OR) ALARM(S) (SLF.) AS INDICATED ON PLANS OR AS PER NO. 4 AND 5 BELOW PARAGRAPH.

2. UNLESS OTHERWISE INDICATED, NORMAL SWITCHES AND RECEPTACLES AT THE FOLLOWING HEIGHTS ABOVE FINISHED FLOOR:
   SWITCHES . . . 42"
   OUTLETS . . . . 16"
   TELEPHONE . . 16" (ABOVE ANY COUNTERTOP)
   TELEVISION . . 16"

3. ALL SMOKE DETECTORS SHALL BE HARDWIRED INTO AN ELECTRICAL POWER SOURCE AND SHALL BE EQUIPPED WITH A MONITORED BATTERY BACKUP. PHOTO AND IONIZATION LOCALLY APPROVED SMOKE DETECTORS.

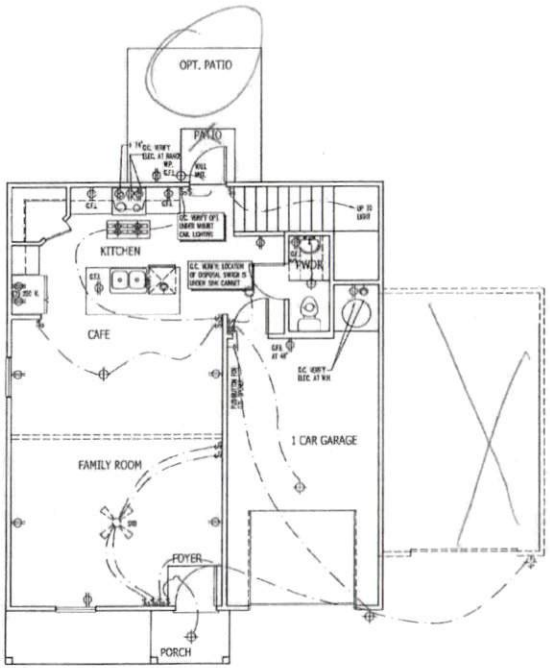
4. ALL 15A AND 20A RECEPTACLES IN SLEEPING ROOMS, FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, DENS, BATHROOMS, RECREATION ROOMS, CLOSETS, HALLWAYS, AND SIMILAR AREAS WILL REQUIRE A COMBINATION TYPE ARC-FAULT DEVICE AND TAMPER-PROOF RECEPTACLES PER N.E.C. 2011 406(12) AND 406(13)

5. ALL 15A AND 20A 125V RECEPTACLES LOCATED IN THE GARAGE AND UTILITY SHOPS SHALL BE G.F.C.I. PROTECTED (G.F.I).

6. IT IS THE RESPONSIBILITY OF THE LICENSED ELECTRICIAN TO ENSURE THAT ALL ELECTRICAL WORK IS IN FULL COMPLIANCE WITH N.F.P.A. 70, N.E.C. 2011, AND ALL APPLICABLE LOCAL STANDARDS, CODES, AND ORDINANCES.

7. EVERY DWELLING HAVING A FUEL-FUEL-BURNING HEATER OR APPLIANCE, FIREPLACE, OR AN ATTACHED GARAGE SHALL HAVE AN OPERATIONAL CARBON MONOXIDE DETECTOR INSTALLED WITHIN 10 FEET OF EACH ROOM USED FOR SLEEPING PURPOSES.

8. ALARMS SHALL RECEIVE THEIR PRIMARY POWER FROM THE BUILDING WIRING WHEN SUCH WIRING IS SERVED FROM THE COMMERCIAL POWER SUPPLY. SUCH ALARMS SHALL HAVE BATTERY BACKUP. COMBINATION SMOKE/CARBON MONOXIDE ALARMS SHALL BE LISTED OR LABELED BY A NATIONALLY RECOGNIZED TESTING LABORATORY.



H&H HOMES

JOB NUMBER 00000.00
CUSTFILE NAME VISION_2
DRAWN BY 10-10-17
REVISIONS

DRAWINGS ON 11"x17" SHEET ARE ONE HALF THE SCALE NOTED

VISION
H&H HOMES

1514

TITLE
MAIN FLOOR ELEC. PLAN

SHEET
E1

MAIN FLOOR ELECTRICAL PLAN
GARAGE RIGHT

ELECTRICAL KEY

- DUPLEX CONVENIENCE OUTLET
- DUPLEX OUTLET ABOVE COUNTER
- WEATHERPROOF DUPLEX OUTLET
- GFI/CBAC FAULT INTERRUPTED DUPLEX OUTLET
- HALF-SWITCHED DUPLEX OUTLET
- SPECIAL PURPOSE OUTLET
- DUPLEX OUTLET IN FLOOR
- TOP WAY OUTLET
- WALL SWITCH
- THREE-WAY SWITCH
- FOUR-WAY SWITCH
- DIMMER SWITCH
- CEILING MOUNTED INCANDESCENT LIGHT FIXTURE
- WALL MOUNTED INCANDESCENT LIGHT FIXTURE
- RECESSED INCANDESCENT LIGHT FIXTURE
- LIGHT FIXTURE WITH PULL CHAIN
- MOTION LIGHT
- FLUORESCENT LIGHT FIXTURE
- EXHAUST FAN
- EXHAUST FAN/LIGHT COMBINATION
- ELECTRIC DOOR OPENER (OPTIONAL)
- CHIMES (OPTIONAL)
- THERMOSTAT SWITCH (OPTIONAL)
- CARBON MONOXIDE DETECTOR
- SMOKE DETECTOR
- SMOKE / CARBON MONO. COMBO DETECTOR
- TELEPHONE (OPTIONAL)
- TELEVISION (OPTIONAL)
- THERMOSTAT
- ELECTRIC METER
- ELECTRIC PANEL
- DISCONNECT SWITCH
- BREAKER (OPTIONAL)
- MOUNTED AS PER GFI, CEILING FAN
- CEILING MOUNTED INCANDESCENT LIGHT FIXTURE W/ MOUNTED AS PER GFI, CEILING FAN

NOTES:

1. PROVIDE AND INSTALL GROUND FAULT CIRCUIT-INTERRUPTERS (GFCI) AS INDICATED ON PLANS OR AS PER NO. 4 AND 5 BELOW INDICATES.

2. UNLESS OTHERWISE INDICATED, INSTALL SWITCHES AND RECEPTACLES AT THE FOLLOWING HEIGHTS ABOVE FINISHED FLOOR:
   SWITCHES . . . 48"
   OUTLETS . . . . 18"
   TELEPHONE . . . 24" (UNLESS ABV COUNTERTOP)
   TELEVISION . . 18"

3. ALL SMOKE DETECTORS SHALL BE HARDWIRED PER AS ELECTRICAL POWER SOURCE, AND SHALL BE EQUIPPED WITH A MONITORED BATTERY BACKUP. PROVIDE AND INSTALL ADEQUATELY CONFIRED SMOKE DETECTORS.

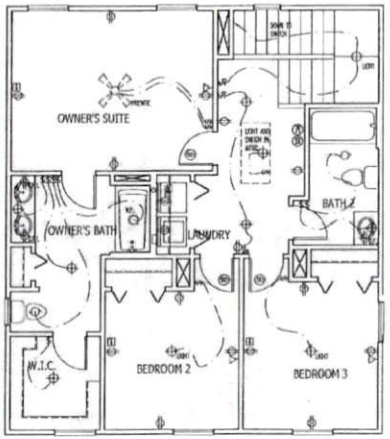
4. ALL 15A AND 20A RECEPTACLES IN SLEEPING ROOMS, FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, DENS, SUNROOMS, RECREATION ROOMS, CLOSETS, HALLWAYS, AND SIMILAR AREAS WILL RECEIVE A COMBINATION TYPE A.F.C.I. DEVICE AND TAMPER-PROOF RECEPTACLES PER N.E.C. 2001 406.12 AND 406.17.

5. ALL 15A AND 20A 120V RECEPTACLES LOCATED IN THE GARAGE AND UTILITY ROOMS SHALL BE G.F.C.I. PROTECTED (210.8).

6. IT IS THE RESPONSIBILITY OF THE LICENSED ELECTRICIAN TO ENSURE THAT ALL ELECTRICAL WORK IS IN FULL COMPLIANCE WITH N.F.P.A. 70, N.E.C. 2011, AND ALL APPLICABLE LOCAL STANDARDS, CODES, AND ORDINANCES.

7. EVERY BUILDING HAVING A FOSSIL-FUEL-BURNING HEATER OF APPLIANCE, FIREPLACE, OR AN ATTACHED GARAGE SHALL HAVE AN APPROVED, CARBON MONOXIDE DETECTOR INSTALLED WITHIN 15 FEET OF EACH ROOM USED FOR SLEEPING PURPOSES.

8. ALWAYS SHALL RESERVE THEIR PRIVATELY OWNED POWER FROM THE ELECTRIC UTILITY WHEN SUCH UTILITY IS SERVED FROM THE LOCAL POWER SYSTEM. SUCH ALLOWS SHALL HAVE BATTERY BACKUP. COMBINATION SMOKE/CARBON MONOXIDE ALARMS SHALL BE LISTED OR LABELED BY A NATIONALLY RECOGNIZED TESTING LABORATORY.



UPPER FLOOR ELECTRICAL PLAN
GARAGE RIGHT

H&H HOMES

DRAWINGS ON 11"x17" SHEET ARE ONE HALF THE SCALE NOTED

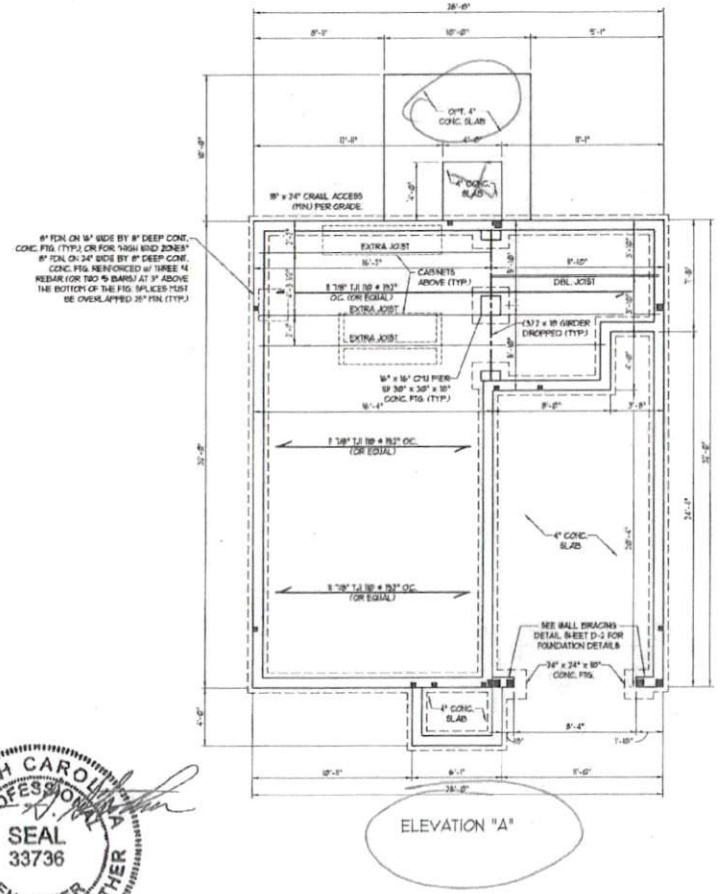
VISION
H&H HOMES

1514

TITLE
UPPER FLOOR ELEC. PLAN

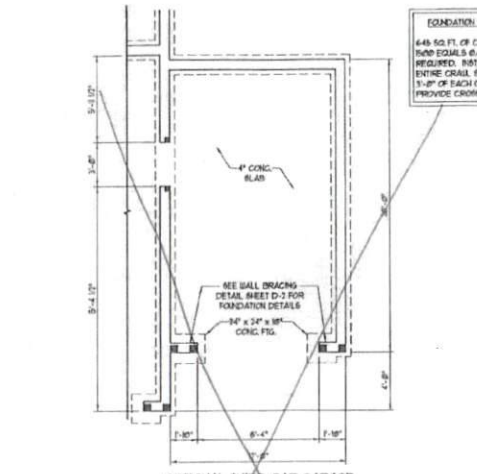
SHEET
E2

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

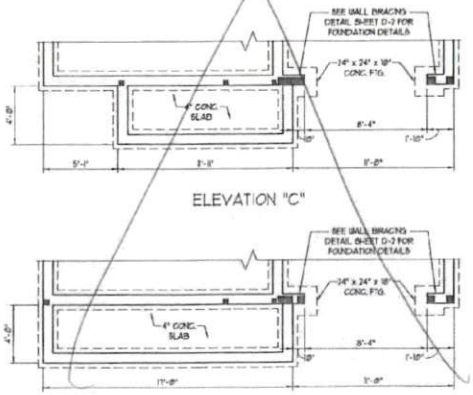


FOUNDATION VENTILATION CALCULATION

648 SQ. FT. OF CRAWL SPACE DIVIDED BY 1500 EQUALS 0.43 SQ. FT. OF NET FREE AREA REQUIRED. INSTALL 6 MIL POLY TO COVER ENTIRE CRAWL SPACE. LOCATE VENTS WITHIN 3'-0" OF EACH CORNER OF THE BUILDING TO PROVIDE CROSS-VENTILATION.



OPTIONAL THIRD CAR GARAGE



ELEVATION "C"

ELEVATION "B"

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

1. ENGINEER'S SEAL APPLIES ONLY TO STRUCTURAL COMPONENTS. ENGINEER'S SEAL DOES NOT CERTIFY DIMENSIONAL ACCURACY OR ARCHITECTURAL LAYOUT INCLUDING ROOF SYSTEM.
2. STRUCTURAL DESIGN PER NORTH CAROLINA RESIDENTIAL CODE, 2018 EDITION WITH SPECIAL CONSIDERATION TO CHAPTER 44 ("HIGH WIND ZONES" FOR 140 MPH LISTED)
3. BUILDER IS TO PROVIDE FRAMING CONNECTIONS AS REQUIRED BY CHAPTER 44 ("HIGH WIND ZONES") FOR 140 MPH WINDS OF THE NORTH CAROLINA RESIDENTIAL CODE, 2018 EDITION.
4. FOUNDATION ASSEMBLAGE TO COMPLY WITH SECTION 1604.11 OF THE NORTH CAROLINA RESIDENTIAL CODE, 2018 EDITION.
5. MEAN ROOF HEIGHT IS LESS THAN 30 FEET.
6. WALL CLADDING DESIGNED FOR -24.3 PSF AND -33 PSF I.W. (WINDS PERPENDICULAR TO RIDGE) POSITIVE / NEGATIVE PRESSURE (TYP.)
7. ROOF CLADDING DESIGNED FOR -19.2 PSF AND -36 PSF I.W. (WINDS PERPENDICULAR TO RIDGE) POSITIVE / NEGATIVE PRESSURE (TYP.)
8. INSTALL 7/16" OSB SHEATHING ON ALL EXTERIOR WALLS OF ALL STORIES IN ACCORDANCE WITH SECTION R602.3(3) OF THE 2018 EDITION. SEE THE WALL BRACING NOTES AND DETAILS SHEET FOR MORE INFORMATION.
9. ENERGY EFFICIENCY COMPLIANCE AND INSULATION VALUES OF THE BUILDING TO BE IN ACCORDANCE WITH CHAPTER 11 OF THE NCRC, 2018 EDITION.
10. REFER TO NOTES AND DETAIL SHEETS FOR ADDITIONAL STRUCTURAL INFORMATION.

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

1. ENGINEER'S SEAL APPLIES ONLY TO STRUCTURAL COMPONENTS. ENGINEER'S SEAL DOES NOT CERTIFY DIMENSIONAL ACCURACY OR ARCHITECTURAL LAYOUT INCLUDING ROOF SYSTEM.
2. STRUCTURAL DESIGN PER NORTH CAROLINA RESIDENTIAL CODE, 2018 EDITION.
3. INSTALL 1/2" ANCHOR BOLTS 6'-0" O.C. AND SIMPSON PAB2 PB2 EACH SIDE OF EACH CORNER. ANCHOR BOLTS MUST EXTEND A MINIMUM OF 7" INTO MASONRY OR CONCRETE. LOCATE BOLT WITHIN MIDDLE THIRD OF PLATE WIDTH.
4. MEAN ROOF HEIGHT IS LESS THAN 30 FEET.
5. EXTERIOR WALLS DESIGNED FOR 90 MPH WINDS.
6. WALL CLADDING DESIGNED FOR -19.9 PSF AND -20 PSF I.W. (WINDS PERPENDICULAR TO RIDGE) POSITIVE / NEGATIVE PRESSURE (TYP.)
7. ROOF CLADDING DESIGNED FOR -14.2 PSF AND -18 PSF FOR ROOF PITCHES 3:12 TO 9:12 AND -12 PSF AND -34 PSF FOR ROOF PITCHES 10:12 TO 12:12.
8. INSTALL 7/16" OSB SHEATHING ON ALL EXTERIOR WALLS OF ALL STORIES IN ACCORDANCE WITH SECTION R602.3(3) OF THE NCRC, 2018 EDITION. SEE THE WALL BRACING NOTES AND DETAILS SHEET FOR MORE INFORMATION.
9. ENERGY EFFICIENCY COMPLIANCE AND INSULATION VALUES OF THE BUILDING TO BE IN ACCORDANCE WITH CHAPTER 11 OF THE NCRC, 2018 EDITION.
10. REFER TO NOTES AND DETAIL SHEETS FOR ADDITIONAL STRUCTURAL INFORMATION.

STRUCTURAL NOTES:

1. ALL FRAMING LUMBER TO BE #2 SPF UNO. ALL TREATED LUMBER TO BE #2 SYP (SND.)
2. INSTALL AN EXTRA OR DOUBLE JOIST UNDER WALLS PARALLEL TO FLOOR JOISTS WHERE NOTED ON THE PLANS.
3. SQUARES DENOTE POINT LOADS WHICH REQUIRE SOLID BLOCKING TO GIRDER OR FOUNDATION.
4. SHADED PIERS TO BE FILLED SOLID.
5. INSTALL LADDER WIRE # 9/9" O.C. TO SECURE MULTIPLE CMU FOUNDATION WALLS TOGETHER.
6. REFER TO NOTES AND DETAIL SHEETS FOR ADDITIONAL STRUCTURAL INFORMATION.

J.S. THOMPSON ENGINEERING, INC
109 TRADE AVE., SUITE 104 RALEIGH, NC 27607
PHONE: (919) 789-9949 FAX: (919) 789-9921
N.C. CERTIFICATE NO. C-1737

VISION
H & H HOMES

DATE: 8/21/19
SCALE: 1/4" = 1'-0"
DRAWING: H & H HOMES, ETC.
ENGINEER: M. WH

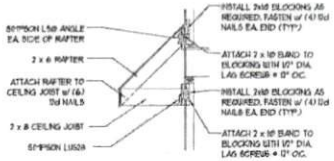
SHEET 1 OF 8
S-1a
CRAWL FOUNDATION PLAN

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 33736 MATTHEW G. STROTHER

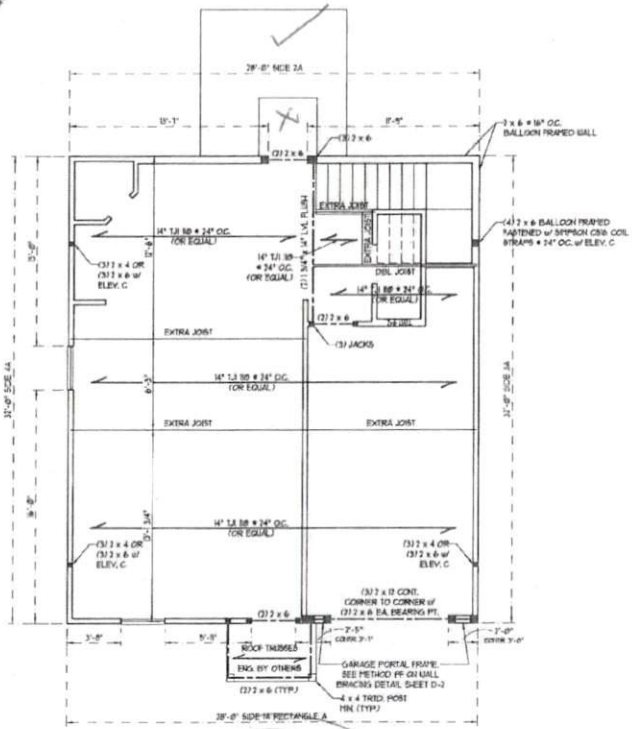
7/22/19

NORTH CAROLINA PROFESSIONAL SEAL 33736 ENGINEER MATTHEW G. STROTHER

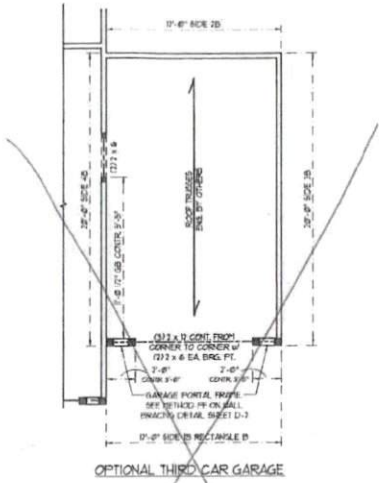
7/22/19



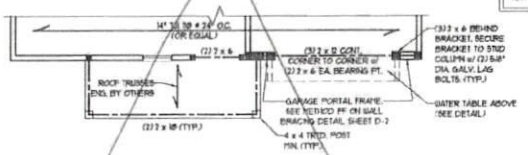
WATER TABLE DETAIL
SCALE: NTS



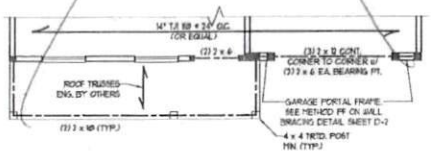
ELEVATION "A"



OPTIONAL THIRD CAR GARAGE



ELEVATION "C"



ELEVATION "B"

NOTE: ALL FIRST FLOOR EXTERIOR WALLS ARE TO BE 2 x 4 @ 16" O.C. (UNO). 2 x 6 @ 16" O.C. FIRST FLOOR EXTERIOR WALLS MAY BE CONSTRUCTED IN LIEU OF 2 x 4 WALLS (UNO). ALL INTERIOR LOAD BEARING AND NON-LOAD BEARING WALLS ARE TO BE 2 x 4 SPF #2 @ 24" O.C. (UNO).

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

BRACED WALL DESIGN NOTES:

1. BRACED WALL DESIGN PER SECTION R602.10 OF THE NCRC 2018 EDITION.
2. GB-GSP REFERS TO "CONTINUOUS SHEATHING - WOOD STRUCTURAL PANELS" CONTRACTOR IS TO INSTALL 7/16" OSB ON ALL EXTERIOR WALLS ATTACHED w/ 8d NAILS SPACED 6" O.C. ALONG PANEL EDGES AND 12" O.C. IN THE FIELD.
3. GB REFERS TO "GYPSUM BOARD" CONTRACTOR IS TO INSTALL 1/2" (MIN.) GYPSUM WALL BOARD WHERE NOTED ON THE PLANS. FASTEN GB WITH 1 1/4" SCREWS OR 1 3/4" NAILS SPACED 7" O.C. ALONG PANEL EDGES AND IN THE FIELD INCLUDING TOP AND BOTTOM PLATES.
4. 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 NCRC 2018 EDITION.
5. SEE NOTES AND DETAIL SHEETS FOR ADDITIONAL BRACED WALL INFORMATION.

BRACED WALL DESIGN

RECTANGLE A	RECTANGLE B
SIDE 1A METHOD: GB-GSP*4 TOTAL REQUIRED LENGTH: 9.1' TOTAL PROVIDED LENGTH: 16.7' SIDE 3A METHOD: GB-GSP TOTAL REQUIRED LENGTH: 9.1' TOTAL PROVIDED LENGTH: 29.33' SIDE 3A + 4B COMBINED METHOD: GB-GSP* TOTAL REQUIRED LENGTH: 9.88' TOTAL PROVIDED LENGTH: 30.8' SIDE 4A METHOD: GB-GSP TOTAL REQUIRED LENGTH: 9.88' TOTAL PROVIDED LENGTH: 29.8'	SIDE 1B METHOD: GB-GSP*9 TOTAL REQUIRED LENGTH: 3.8' TOTAL PROVIDED LENGTH: 6.8' SIDE 2B METHOD: GB-GSP TOTAL REQUIRED LENGTH: 3.8' TOTAL PROVIDED LENGTH: 12.8' SIDE 2B METHOD: GB-GSP* TOTAL REQUIRED LENGTH: 8.26' TOTAL PROVIDED LENGTH: 30.8' SIDE 4B + 3A COMBINED METHOD: GB-GSP(2)(3) TOTAL REQUIRED LENGTH: 13.54' TOTAL PROVIDED LENGTH: 15'

STRUCTURAL NOTES:

1. ALL FRAMING LUMBER TO BE SPF #2 (UNO). ALL TREATED LUMBER TO BE SYP #2 (UNO).
2. ALL LOAD BEARING HEADERS TO BE (2) 2 x 6 (UNO).
3. INSTALL AN EXTRA JOIST UNDER WALLS PARALLEL TO FLOOR JOISTS WHERE NOTED ON THE PLANS.
4. WINDOW AND DOOR HEADERS TO BE SUPPORTED w/ (1) JACK STUD AND (1) KING STUD EA. END (UNO.) SEE TABLE R602.3.5 FOR ADDITIONAL KING STUD REQUIREMENTS.
5. SQUARES DENOTE POINT LOADS WHICH REQUIRE SOLID BLOCKING TO GIRDER OR FOUNDATION. ALL SQUARES TO BE (3) STUDS (UNO.)
6. FOR HIGH WIND ZONES, ALL EXTERIOR WALLS TO BE SHEATHED WITH 7/16" OSB SHEATHING WITH JOINTS BLOCKED AND NAILED WITH 8d NAILS AT 3" O.C. ALONG EDGES AND 6" O.C. IN THE FIELD.
7. FOR HIGH WIND ZONES, SECURE ALL EXTERIOR WALL SHEATHING PANELS TO DOUBLE TOP PLATES, BANDS, JOISTS, AND GIRDERS WITH (2) ROWS OF 8d NAILS STAGGERED AT 3" O.C. PANELS SHALL EXTEND 12" BEYOND CONSTRUCTION JOINTS AND SHALL OVERLAP GIRDERS AND DOUBLE SILL PLATES THEIR FULL DEPTH.
8. ALL 4 x 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 7,000 LB. CAPACITY UPLIFT CONNECTORS AT TOP (UNO.)
9. FOR FIBERGLASS, ALUMINUM, OR COLUMN ENDS 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.
10. REFER TO NOTES AND DETAIL SHEETS FOR ADDITIONAL STRUCTURAL INFORMATION.

TABLE R602.3.5
MINIMUM NUMBER OF FULL HEIGHT STUDS AT EACH END OF HEADERS IN EXTERIOR WALLS

HEADER SPAN (FEET)	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	

J.S. THOMPSON ENGINEERING, INC
609 SPRUCE AVE., SUITE 104, RALEIGH, NC 27603
PHONE: (919) 789-9977 FAX: (919) 789-9421
NC LICENSE #C-0793

VISION
H & H HOMES

DATE: JULY 19, 2019
SCALE: 1/4" = 1'-0"
DRAWN BY: H & H HOMES, PLLC
ENGINEERED BY: WFF

SHEET 4 OF 6

S-2
SECOND FLOOR FRAMING PLAN

NOTE: ALL SECOND FLOOR EXTERIOR WALLS AND ATTIC WALLS ARE TO BE 2 x 4 SPF #2 @ 24" O.C. 2 x 6 SPF #2 @ 24" O.C. (UNO). SECOND FLOOR EXTERIOR WALLS MAY BE CONSTRUCTED IN LIEU OF 2 x 4 WALLS (UNO). ALL INTERIOR LOAD BEARING AND NON-LOAD BEARING WALLS ARE TO BE 2 x 4 SPF #2 @ 24" O.C. (UNO).

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

BRACED WALL DESIGN NOTES:

1. BRACED WALL DESIGN PER SECTION R602.10 OF THE NCRC 2018 EDITION.
2. CS-WSP REFERS TO "CONTINUOUS SHEATHING - WOOD STRUCTURAL PANELS" CONTRACTOR IS TO INSTALL 7/16" OSB ON ALL EXTERIOR WALLS ATTACHED w/ 8d NAILS SPACED 6" O.C. ALONG PANEL EDGES AND 12" O.C. IN THE FIELD.
3. GB REFERS TO "GYPSUM BOARD" CONTRACTOR IS TO INSTALL 1/2" (MIN.) GYPSUM WALL BOARD WHERE NOTED ON THE PLANS. FASTEN GB WITH 1 1/4" SCREWS OR 1 5/8" NAILS SPACED 7" O.C. ALONG PANEL EDGES AND IN THE FIELD, INCLUDING TOP AND BOTTOM PLATES.
4. 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 NCRC 2018 EDITION.
5. SEE NOTES AND DETAIL SHEETS FOR ADDITIONAL BRACED WALL INFORMATION.

NOTE:

1. PER SECTION R602.10.3.2 OF THE 2018 NCRC, 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 7/16" OSB SHEATHING ATTACHED WITH 8d NAILS AT 6" O.C. ALONG PANEL EDGES AND 12" O.C. IN THE FIELD.

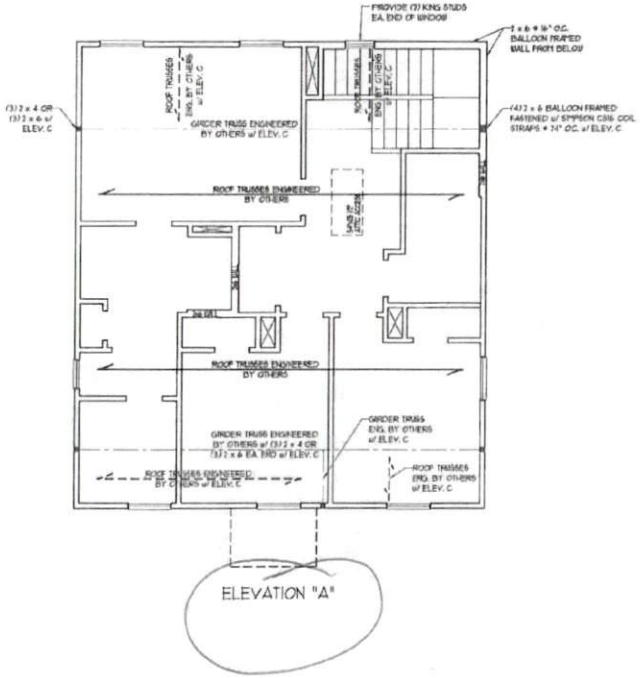
STRUCTURAL NOTES:

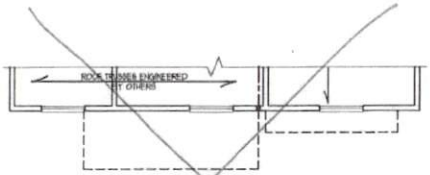
1. ALL FRAMING LUMBER TO BE SPF #2 (UNO). ALL TREATED LUMBER TO BE SYP #2 (UNO.)
2. ALL LOAD BEARING HEADERS TO BE (2) 2 x 6 (UNO).
3. WINDOW AND DOOR HEADERS TO BE SUPPORTED w/ (1) JACK STUD AND (1) KING STUD EA. END (UNO.) SEE TABLE R602.7.5 FOR ADDITIONAL KING STUD REQUIREMENTS.
4. SQUARES DENOTE POINT LOADS WHICH REQUIRE SOLID BLOCKING TO GIRDER OR FOUNDATION. ALL SQUARES TO BE (1) STUDS (UNO.)
5. FOR HIGH WIND ZONES, ALL EXTERIOR WALLS TO BE SHEATHED WITH 7/16" OSB SHEATHING WITH JOINTS BLOCKED AND SECURED WITH 8d NAILS AT 3" O.C. ALONG EDGES AND 6" O.C. IN THE FIELD.
6. FOR HIGH WIND ZONES, SECURE ALL EXTERIOR WALL SHEATHING PANELS TO DOUBLE TOP PLATES, BANDS, JOISTS, AND GIRDERS WITH (3) ROWS OF 8d NAILS STAGGERED AT 3" O.C. PANELS SHALL EXTEND UP BEYOND CONSTRUCTION JOINTS AND SHALL OVERLAP GIRDERS AND DOUBLE SILL PLATES THEIR FULL DEPTH.
7. REFER TO NOTES AND DETAIL SHEETS FOR ADDITIONAL STRUCTURAL INFORMATION.

"DSP" INDICATES DOUBLE STUD POCKET BETWEEN WINDOW UNITS.

TABLE R602.7.5
MINIMUM NUMBER OF FULL HEIGHT STUDS AT EACH END OF HEADERS IN EXTERIOR WALLS

HEADER SPAN (FEET)	MAXIMUM STUD SPACING (INCHES) (PER TABLE R602.3(5))	
	16	24
UP TO 3'	1	1
4'	2	1
6'	3	2
8'	3	3
10'	4	4





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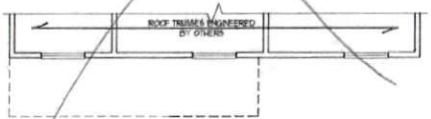


ELEVATION "B"

NORTH CAROLINA PROFESSIONAL SEAL 33736 ENGINEER MATTHEW G. STROTHER
7/22/19

J.S. THOMPSON ENGINEERING, INC
NC LICENSE NO. C-2780

VISION
H & H HOMES

DATE: JULY 16, 2019
SCALE: 1/4" = 1'-0"
DRAWN BY: H & H HOMES, LLC.
ENGINEERING: WFF

SHEET 5 OF 8
S-3
CEILING FRAMING PLAN

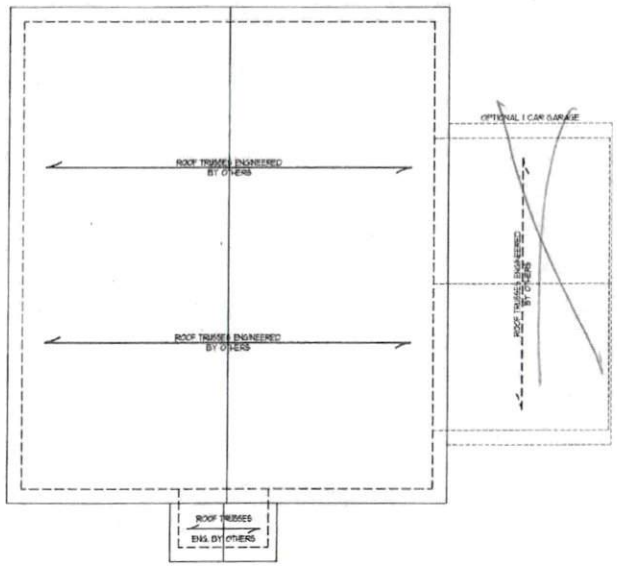
SCALE NOTE:
LARGE FORMAT PRINTS ARE TO SCALE AS NOTED.
11" x 17" PRINTS ARE ONE HALF THE NOTED SCALE

ATTIC VENT CALCULATION:

101 SQ FT. OF ATTIC DIVIDED BY 150 REQUIRES 0.67 SQ FT. OF NET FREE VENTILATING AREA (FHA)

STRUCTURAL NOTES:

1. ALL FRAMING LUMBER TO BE #2 SYP (SPIB).
2. CIRCLES DENOTE (3) 2 x 4 POSTS FOR ROOF SUPPORT.
3. PRAPIE DORMER WALLS ON TOP OF DOUBLE OR TRIPLE RAFTERS.
4. HIP SPLICES ARE TO BE SPACED A MIN. OF 8'-0". FASTEN MEMBERS WITH THREE ROWS OF 10d NAILS @ 16" O.C. (TYP.)
5. STOCK PRAPIE OVER-FRAMED ROOF SECTIONS W/ 2 x 8 RIDGES, 2 x 6 RAFTERS @ 16" O.C. AND FLAT 2 x 10 VALLEYS OR USE VALLEY TRUSSES.
6. FASTEN FLAT VALLEYS TO RAFTERS OR TRUSSES WITH SIMPSON H2.5A HURRICANE TIES @ 32" O/C MAX. (PASS HURRICANE TIES THROUGH NOTCH IN ROOF SHEATHING. EACH RAFTER IS TO BE FASTENED TO THE FLAT VALLEY WITH A MIN. OF (6) 10d TOE NAILS.
7. REFER TO SECTION R802.11 OF THE 2018 NCRC FOR REQUIRED UPLIFT RESISTANCE AT RAFTERS AND TRUSSES.
8. REFER TO NOTES AND DETAIL SHEETS FOR ADDITIONAL STRUCTURAL INFORMATION.



ELEVATION "A" - TRADITIONAL

NORTH CAROLINA PROFESSIONAL SEAL 33736 ENGINEER MATTHEW G. STROTHER

7/22/19

J.S. THOMPSON ENGINEERING, INC
PHONE, WEBSITE, SUITE 104, RALEIGH, NC 27607
NC LICENSE NO. C-1771

VISION
H & H HOMES

DATE: JULY 19, 2019
SCALE: 1/4" = 1'-0"
DRAWN BY: M. G. S. / W. F. / J. S. T.
JOB NUMBER: 9701

SHEET 6 OF 8

S-4a
ROOF FRAMING PLAN

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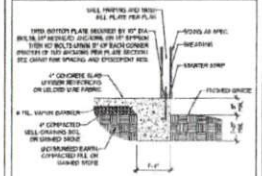
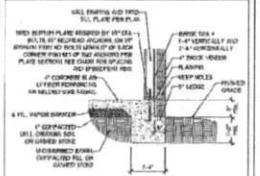
MONOLITHIC SLAB DETAILS

DETAIL 1



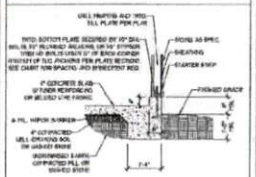
TYPICAL SLAB DETAIL

DETAIL 2



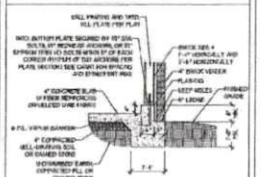
BRICK VENEER DETAIL

DETAIL 3



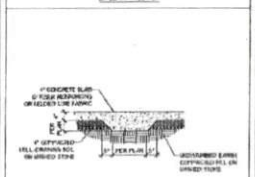
GARAGE CURB DETAIL

DETAIL 4



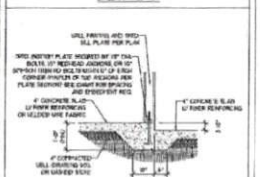
GARAGE CURB BRICK LEDGE DETAIL

DETAIL 5



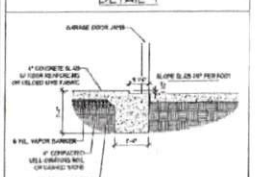
THICKENED SLAB DETAIL

DETAIL 6



STEP IN GARAGE DETAIL

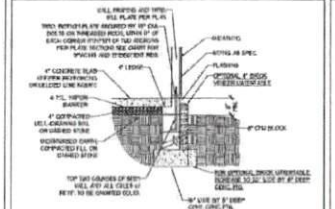
DETAIL 7



SLAB AT GARAGE DOOR DETAIL

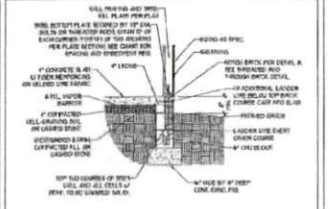
STEMWALL DETAILS

DETAIL 1



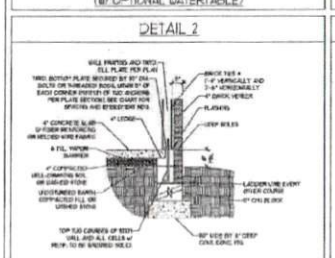
TYPICAL STEM WALL DETAIL
(w/ OPTIONAL WATERTABLE)

OPTIONAL DETAIL 1



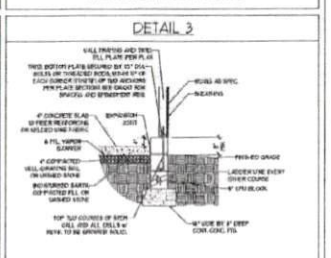
OPTIONAL STEM WALL DETAIL

DETAIL 2



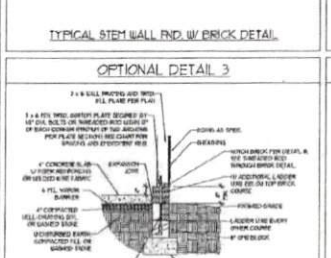
TYPICAL STEM WALL FND. W/ BRICK DETAIL

DETAIL 3



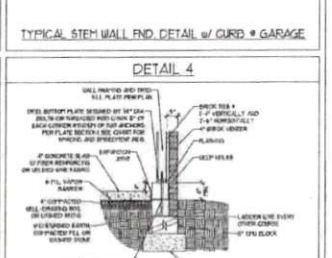
TYPICAL STEM WALL FND. DETAIL w/ CURB @ GARAGE

OPTIONAL DETAIL 3



OPTIONAL STEM WALL FND. DETAIL w/ CURB @ GARAGE

DETAIL 4



TYPICAL STEM WALL FND. DETAIL W/ BRICK AND CURB @ GARAGE

DETAIL 8

THREADED ROD THROUGH BRICK MASONRY

MASONRY STEMWALL SPECIFICATIONS

WALL HEIGHT (FEET)	MASONRY WALL TYPE			
	8" CMU	4" BRICK AND 4" CMU	4" BRICK AND 8" CMU	12" CMU
3 AND BELOW	UNGROUTED	GROUT SOLID	UNGROUTED	UNGROUTED
3	UNGROUTED	GROUT SOLID	UNGROUTED	UNGROUTED
4	GROUT SOLID	GROUT SOLID w/ #4 REBAR @ 48" O.C.	GROUT SOLID	GROUT SOLID w/ #4 REBAR @ 64" O.C.
5	GROUT SOLID w/ #4 REBAR @ 32" O.C.	NOT APPLICABLE	GROUT SOLID w/ #4 REBAR @ 32" O.C.	GROUT SOLID w/ #4 REBAR @ 64" O.C.
6	GROUT SOLID w/ #4 REBAR @ 24" O.C.	NOT APPLICABLE	GROUT SOLID w/ #4 REBAR @ 24" O.C.	GROUT SOLID w/ #4 REBAR @ 64" O.C.
7 AND GREATER	ENGINEERS DESIGN BASED ON SITE CONDITIONS			

STRUCTURAL NOTES:

1. WALL HEIGHT MEASURED FROM TOP OF FOOTING TO TOP OF THE WALL.
2. TIE TWO PLIES OF BRICK TOGETHER WITH LADDER WIRE AT 16" O.C. VERTICALLY.
3. CHART APPLICABLE FOR HOME FOUNDATION ONLY. CONSULT ENGINEER FOR DESIGN OF GARAGE FOUNDATION NOT COMMON TO HOUSE.
4. BACKFILL OF CLEAN #57 OR #67 GRADED STONE IS ALLOWABLE.
5. BACKFILL OF WELL DRAINED OR SAND - GRAVEL MIXTURE SOILS (45 PERCENT BELOW GRADE) CLASSIFIED AS GROUP 1 ACCORDING TO UNIFIED SOILS CLASSIFICATION SYSTEM IN ACCORDANCE WITH TABLE R405.1 OF THE 2018 INTERNATIONAL RESIDENTIAL CODE ARE ALLOWABLE.
6. PREP SLAB PER R506.2.1 AND R506.2.3 RAKE OF THE 2018 INTERNATIONAL RESIDENTIAL CODE. PROVIDE 24" LAP SPLICE LENGTH.
7. LOCATE REBAR IN CENTER OF FOUNDATION WALL.
8. WHERE REQUIRED, FILL BLOCK SOLID WITH TYPE "S" MORTAR OR 3000 PSI GROUT. USE OF "LOW LIFT GROUTING" PERMITTED WHERE REQUIRED WHEN FILLING WALLS WITH GROUT AT HEIGHTS OF 5' AND GREATER.

ANCHOR SPACING AND EMBEDMENT

WIND ZONE	120 MPH	130 MPH
SPACING	6'-0" OC.	4'-0" OC.
EMBEDMENT	7"	8" MIN MASONRY 7" MIN CONCRETE

NORTH CAROLINA PROFESSIONAL SEAL 33736 ENGINEER MATTHEW G. STROTHER

7/22/19

J.S. THOMPSON ENGINEERING, INC
FIRM NO. C-0805

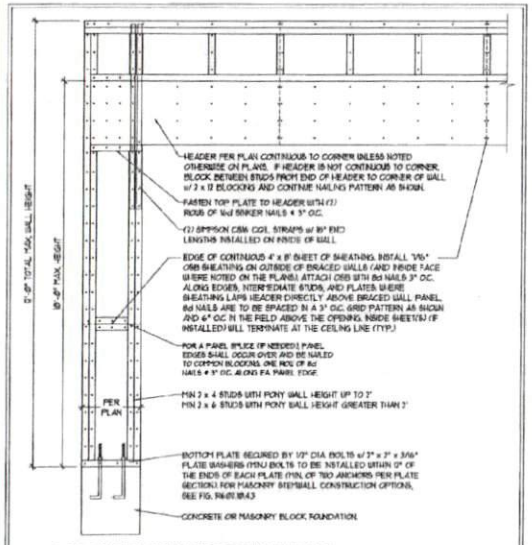
120 MPH - 130 MPH ULTIMATE DESIGN WIND SPEED
FOUNDATION DETAILS

D-1
FOUNDATION DETAILS

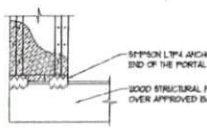
Z:\CAD Drawings\Details and Notes\Wall bracing notes and details\Wall bracing notes and details 10-18.dwg, 2/22/2019 11:18:15 AM, Whitney Faulkner, J.S. Thompson Engineering Inc.

GENERAL WALL BRACING NOTES:

1. WALL BRACING DESIGNED IN ACCORDANCE WITH CHAPTER 6 OF THE 2018 IRC RESIDENTIAL BUILDING CODE (NCRC). TABLES AND FIGURES REFERENCED ARE FROM THE 2018 NCRC.
2. SEE THIS SHEET FOR GENERAL DETAILS. REFER TO THE 2018 NCRC FOR ADDITIONAL INFORMATION AS NEEDED.
3. BRACED EXTERIOR WALLS SUPPORTING ROOF TRUSSES AND RAFTERS, INCLUDING STORIES BELOW THE TOP FLOOR, HAVE BEEN DESIGNED PER R602.10.3. (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 OTHERWISE.
6. ALL EXTERIOR AND INTERIOR WALLS TO HAVE 1/2" GYPSUM INSTALLED, WHEN NOT USING METHOD "GB", GYPSUM TO BE FASTENED PER TABLE R702.3.5, METHOD GB TO BE FASTENED PER TABLE R602.10.1
7. CS-WSP REFERS TO THE "CONTINUOUS SHEATHING - WOOD STRUCTURAL PANELS" WALL BRACING METHOD. 7/16" OSB SHEATHING IS TO BE INSTALLED ON ALL EXTERIOR WALLS ATTACHED w/ 8d COMMON NAILS OR 8d (2 1/2" LONG x 0.113" DIAMETER) NAILS SPACED 6" OC. ALONG PANEL EDGES AND 12" OC. IN THE FIELD (U.N.O.).
8. GB REFERS TO THE "GYPSUM BOARD" WALL BRACING METHOD. 1/2" (1/8U) GYPSUM WALL BOARD IS TO BE INSTALLED ON BOTH SIDES OF THE BRACED WALL FASTENED WITH 1 1/4" SCREWS OR 1 5/8" NAILS SPACED 7" O.C. ALONG PANEL EDGES INCLUDING TOP AND BOTTOM PLATES AND INTERMEDIATE SUPPORTS (U.N.O.). VERIFY ALL FASTENER OPTIONS FOR 1/2" AND 5/8" GYPSUM PRIOR TO CONSTRUCTION. FOR INTERIOR FASTENER OPTIONS SEE TABLE R702.3.5. FOR EXTERIOR FASTENER OPTIONS SEE TABLE R602.3(3). EXTERIOR GB TO BE INSTALLED VERTICALLY.
9. REQUIRED BRACED WALL LENGTH FOR EACH SIDE OF THE CIRCUMSCRIBED RECTANGLE ARE INTERPOLATED PER TABLE R602.10.3. "METHOD CS-WSP CONTRIBUTES ITS ACTUAL LENGTH, METHOD GB CONTRIBUTES .5 ITS ACTUAL LENGTH, AND METHOD PF CONTRIBUTES 1.5 TIMES ITS ACTUAL LENGTH.



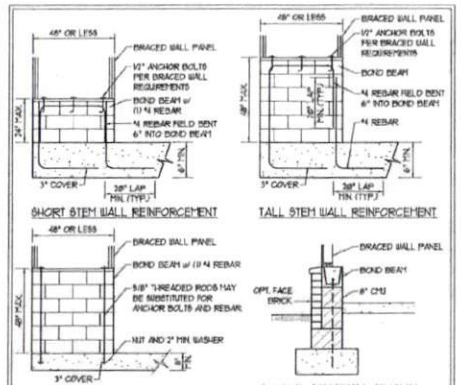
OVER CONCRETE OR MASONRY BLOCK FOUNDATION



OVER RAISED WOOD FLOOR - FRAMING ANCHOR OPTION

* APPLICABLE w/ GREATER THAN 0" KNEE WALL HEIGHTS IN CRAWL SPACE AND ABOVE FINISHED BASEMENT WALLS *

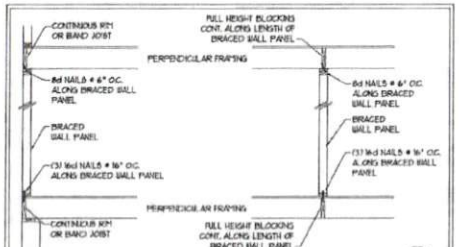
METHOD PF-PORTAL FRAME DETAIL (1)



NOTE: GROUT BOND BEAMS AND ALL CELLS WHICH CONTAIN REBAR, THREADED RODS AND ANCHOR BOLTS

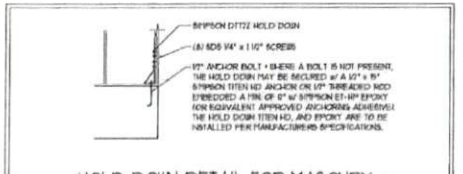
MASONRY STEM WALLS SUPPORTING BRACED WALL PANELS (2)

PER FIGURE R602.10.4.3



BRACED WALL PANEL CONNECTION WHEN PERPENDICULAR TO FLOOR/CEILING FRAMING (3)

PER FIGURE R602.10.4.4(1)

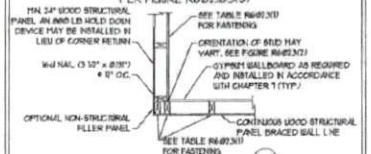


HOLD DOWN DETAIL FOR MASONRY FOUNDATION OR MONOLITHIC SLAB (4)

* APPLICABLE ONLY WHERE SPECIFIED ON PLAN *

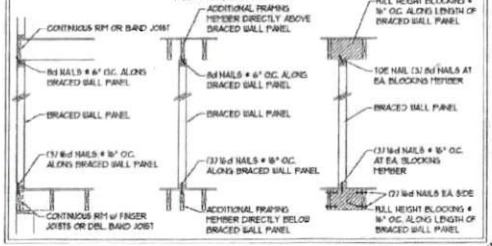
TYPICAL EXTERIOR CORNER FRAMING FOR CONTINUOUS SHEATHING (5)

PER FIGURE R602.10.3(5)

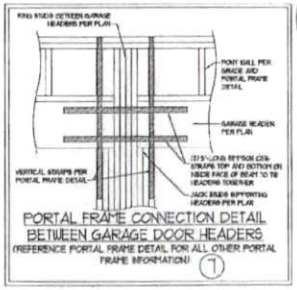


BRACED WALL PANEL CONNECTION WHEN PARALLEL TO FLOOR/CEILING FRAMING (6)

PER FIG. R602.10.4.4(2)



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

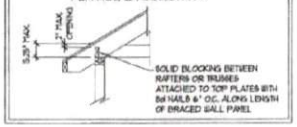


PORTAL FRAME CONNECTION DETAIL BETWEEN GARAGE DOOR HEADERS

(REFERENCE PORTAL FRAME DETAIL FOR ALL OTHER PORTAL FRAME INFORMATION) (7)

BRACED WALL PANEL CONNECTION TO PERPENDICULAR RAFTERS (8)

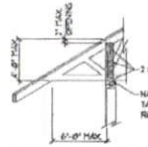
PER FIGURE R602.10.4.5(1)



BRACED WALL PANEL CONNECTION TO PERPENDICULAR ROOF TRUSSES (9)

PER FIGURE R602.10.4.5(3)

(OR ALTERNATIVE: FIGURE R602.10.4.5(2))



NORTH CAROLINA PROFESSIONAL SEAL 33736 ENGINEER MATTHEW G. STROTHER

7/22/19

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N.C. LICENSE NO. C-2753

120 MPH - 130 MPH ULTIMATE DESIGN WIND SPEED
WALL BRACING NOTES AND DETAILS

DATE ACCESSED: 5/17/19
SCALE: 1/4" = 1'-0"
DRAWN BY: JDP
ENGINEERED BY: GGT

D-2
BRACED WALL NOTES AND DETAILS AND PF DETAILS

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

GENERAL NOTES

1. 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 I-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 – R301.7)

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	10	L/180
DECKS	40	10	L/360
EXTERIOR BALCONIES	40	10	L/360
FIRE ESCAPES	40	10	L/360
HANDRAILS/GUARDRAILS	200 LB OR 50 (PLF)	10	L/360
PASSENGER VEHICLE GARAGE	50	10	L/360
ROOMS OTHER THAN SLEEPING ROOM	40	10	L/360
SLEEPING ROOMS	30	10	L/360
STAIRS	40	10	L/360
WIND LOAD	(BASED ON TABLE R301(2)4 WIND ZONE AND EXPOSURE)		
GROUND SNOW LOAD: P_g	20 (PSF)		

- I-JOIST SYSTEMS DESIGNED WITH 2 PSF DEAD LOAD AND DEFLECTION (IN) OF L/480
- FLOOR TRUSS SYSTEMS DESIGNED WITH 15 PSF DEAD LOAD

4. FOR 115 AND 130 MPH WIND ZONES, FOUNDATION ANCHORAGE IS TO COMPLY WITH SECTION R403.1.6 OF THE NCRC, 2018 EDITION. FOR 100 MPH, 140 MPH, AND 150 MPH WIND ZONES, FOUNDATION ANCHORAGE IS TO COMPLY WITH SECTION 404.1 OF THE NCRC, 2018 EDITION.

5. ENERGY EFFICIENCY COMPLIANCE AND INSULATION VALUES OF THE BUILDING TO BE IN ACCORDANCE WITH CHAPTER 11 OF THE NCRC, 2018 EDITION.

FOOTING AND FOUNDATION NOTES

1. FOUNDATION DESIGN BASED ON A MINIMUM ALLOWABLE BEARING CAPACITY OF 2000 PSF. 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 R405.1 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 8 HOURS OF CONCRETE FINISHING AND WALL LOCATIONS HAVE BEEN MARKED. ADJUST WHERE NECESSARY.

4. CONCRETE SHALL CONFORM TO SECTION R402.2 OF THE NCRC, 2018 EDITION. CONCRETE REINFORCING STEEL TO BE ASTM A615 GRADE 60. WELDED WIRE FABRIC TO BE ASTM A185. 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 STANDARD ASTM C 90. 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. PIERS MAY BE FILLED SOLID WITH CONCRETE OR TYPE M OR S MORTAR. PIERS AND WALLS SHALL BE CAPPED WITH 8" OF SOLID MASONRY.

7. THE CENTER OF EACH OF THE PIERS SHALL BEAR IN THE MIDDLE THIRD OF ITS RESPECTIVE FOOTING. EACH GIRDER SHALL BEAR IN THE MIDDLE THIRD OF THE PIERS.

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 53(MANCE 8/TMS 402. MASONRY FOUNDATION WALLS ARE TO BE REINFORCED PER TABLE R404.1(1), R404.1(2), R404.1(3), OR R404.1(4) OF THE NCRC, 2018 EDITION. CONCRETE FOUNDATION WALLS ARE TO BE REINFORCED PER TABLE R404.1(5) OF THE NCRC, 2018 EDITION. STEP CONCRETE FOUNDATION WALLS TO 7 x 6 FRAMED WALLS AT 16" O.C. WHERE GRADE PERMITS (UNO).

FRAMING NOTES

1. ALL FRAMING LUMBER SHALL BE #2 SPF MINIMUM (Fb = 875 PSI, Fv = 135 PSI, E = 1600000 PSI) UNLESS NOTED OTHERWISE (UNO). ALL TREATED LUMBER SHALL BE #2 SYP MINIMUM (Fb = 975 PSI, Fv =175 PSI, E = 1600000 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 = 1925 PSI, Fv = 310 PSI, E = 1550000 PSI. PARALLEL STRAND LUMBER (PSL) UP TO 11" DEPTH SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES: Fb = 2500 PSI, E =1800000 PSI. PARALLEL STRAND LUMBER (PSL) MORE THAN 11" DEPTH SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES: Fb = 2500 PSI, E = 1800000 PSI. INSTALL ALL CONNECTIONS PER MANUFACTURER'S SPECIFICATIONS.

3. STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING ASTM SPECIFICATIONS:

A.	W AND HP SHAPES:	ASTM A992
B.	CHANNELS AND ANGLES:	ASTM A36
C.	PLATES AND BARS:	ASTM A36
D.	HOLLOW STRUCTURAL SECTIONS:	ASTM A500 GRADE B
E.	STEEL PIPE:	ASTM A53, GRADE B, TYPE E OR S

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 FOLLOWS (UNO):

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

LATERAL SUPPORT IS CONSIDERED ADEQUATE PROVIDING THE JOISTS ARE TOE NAILED TO THE 3x NAILER ON TOP OF THE STEEL BEAM, AND THE 3x 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" O.C.

5. 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)1 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 R602.3.5 OF THE NORTH CAROLINA RESIDENTIAL CODE, 2018 EDITION.

7. 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 WITH ALL APPLICABLE TABLES IN SECTION R602.10.

11. 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'-0" IN LENGTH, REST A 6" x 4" x 5/16" STEEL ANGLE WITH 6" MINIMUM EMBEDMENT AT SIDES FOR BRICK SUPPORT (UNO). FOR ALL HEADERS 8'-0" 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 (3) 2 x 10 BLOCKING INSTALLED w/ (4) 8d NAILS EA. PLY BETWEEN WALL STUDS WITH (2) ROWS OF 1/2" LAG SCREW AT 12" O.C. STAGGERED AND IN ACCORDANCE WITH SECTION R703.8.3.1 OF THE NCRC, 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 8d NAILS AT 16" O.C. FRAME DORMER WALLS ON TOP OF DOUBLE OR TRIPLE RAFTERS AS SHOWN (UNO).

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 1600 LB CAPACITY UPLIFT CONNECTORS TOP AND BOTTOM (UNO). POSTS MAY BE SECURED USING ONE SIMPSON MD OR LTP20 UPLIFT CONNECTION FASTENED TO THE RIMBD AT THE BOTTOM AND THE BEAM AT THE TOP OF EACH POST. ONE 16" SECTION OF SIMPSON CMA-CDS, STRAPPING WITH (8) 8d NOG NAILS AT EACH END MAY BE USED IN LIEU OF EACH TUXT STRAP IF DESIRED. FOR MASONRY OR CONCRETE FOUNDATION USE SIMPSON POST BASE.

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 33736 MATTHEW G. STROTHER
7/22/19

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N.C. LICENSE NO.: C-1731

120 MPH - 130 MPH ULTIMATE DESIGN WIND SPEED
STANDARD STRUCTURAL NOTES

DATE: NOVEMBER 14, 2018

S.0
STRUCTURAL NOTES