

# CEDAR



COVER SHEET

H&H HOMES  
CEDAR

*Inventory Marked*  
*MLP000736*

## CEDAR REVISION LIST - STRUCTURAL:

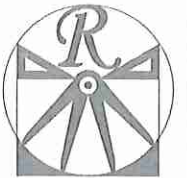
- 1.) CODE UPDATE TO 2018 NCRC
- 2.) CHANGED GARAGE WING WALLS TO 2x6, HEADERS TO (3) PLY
- 3.) (2) 2 x 6 HEADERS STANDARD
- 4.) SPECIFIED I-JOIST SERIES/SPACING ON CRAWL
- 5.) SHIFTED GIRDERS IN CRAWL
- 6.) ADDED FOUNDATION DETAIL CALLOUTS ON SLAB
- 7.) CHANGED DSP's TO TSP's
- 8.)
- 9.)
- 10.)
- 11.)
- 12.)
- 13.)
- 14.)
- 15.)
- 16.)
- 17.)
- 18.)
- 19.)
- 20.)
- 21.)
- 22.)
- 23.)
- 24.)
- 25.)
- 26.)
- 27.)
- 28.)
- 29.)
- 30.)

## CEDAR REVISION LIST - ARCHITECTURAL:

- 1.) SHOW FIREPLACE AS AN OPTION (5-14)
- 2.) ADDED ALL 4 SIDES BRICK ELEVATIONS (5-14)
- 3.) MADE CLOSET FOR FLEX/ BEDROOM #4 OPTIONAL (5-14)
- 4.) CHANGED NOOK LIGHTING FROM SINGLE WALL MOUNT TO TWO CAN LIGHTS (5-14)
- 6.) CHANGED OPT. FIREPLACE FROM 36" TO 32" (10-19)
- 7.) CHANGED "MASTER" TO "OWNER'S" BEDROOM AND BATH. (10-19)
- 8.) CHANGED FF WINDOW HEADER HEIGHT TO 7'-0" FROM 6'-10" (10-19)
- 9.) ADDED CEILING MOUNT LIGHT TO OWNER'S BATH WATER CLOSET (10-19)
- 10.) ELIMINATED ARCHES AT TWO CASED OPENINGS (DINING AND FOYER) (10-19)
- 11.) ADDED NOTE TO OPTIONAL CLOSET BEDROOM #4/ FLEX (10-19)
- 12.) CHANGED DSP TO TSP FOR ALL MULTIPLE WINDOW UNITS (10-19)
- 13.)
- 14.)
- 15.)
- 16.)
- 17.)
- 18.)
- 19.)
- 20.)
- 21.)
- 22.)
- 23.)
- 24.)
- 25.)
- 26.)
- 27.)
- 28.)
- 29.)
- 30.)

DATE: 10-4-19  
REV.:  
DRAWN BY: WG  
ENGINEERED BY:  
REVIEWED BY:

CS



RENAISSANCE  
RESIDENTIAL DESIGN, INC.

4810 GLENMIST CT. | RALEIGH, NC 27612  
(919) 439-1128

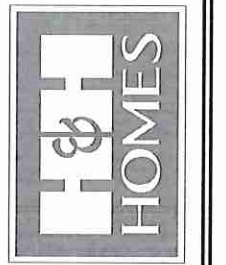
WWW.BRIDCARTOOLIA.COM

\*The art of transforming your vision into reality.\*

RENAISSANCE RESIDENTIAL DESIGN, INC. RESERVES THE RIGHT TO MAKE MODIFICATIONS TO FLOOR PLANS, DIMENSIONS, MATERIALS, AND SPECIFICATIONS WITHOUT NOTICE. THESE DRAWINGS ARE FOR THE PURPOSE OF CONVEYING AN ARCHITECTURAL CONCEPT ONLY.

RENAISSANCE RESIDENTIAL DESIGN, INC. HEREBY EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER PROPERTY RIGHTS IN THESE PLANS. THESE PLANS AND DRAWINGS ARE NOT TO BE REPRODUCED, CHANGED, OR COPIED IN ANY FORM OR MANNER WITHOUT FIRST OBTAINING THE EXPRESS WRITTEN CONSENT OF RENAISSANCE RESIDENTIAL DESIGN, INC. NOR ARE THEY TO BE ASSIGNED TO ANY THIRD PARTY WITHOUT FIRST OBTAINING SAID WRITTEN PERMISSION AND CONSENT.

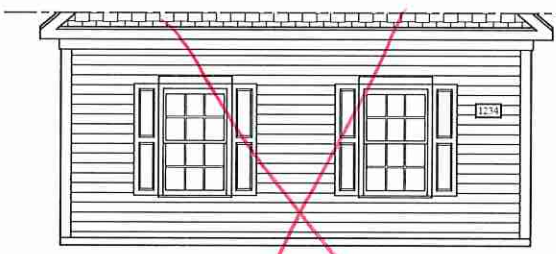
J.S. THOMPSON  
ENGINEERING, INC  
605 WARE AVE., SUITE 101  
RALEIGH, NC 27605  
PHONE (919) 760-9919  
FAX (919) 760-9121  
N.C. LICENSE NO. C-1753



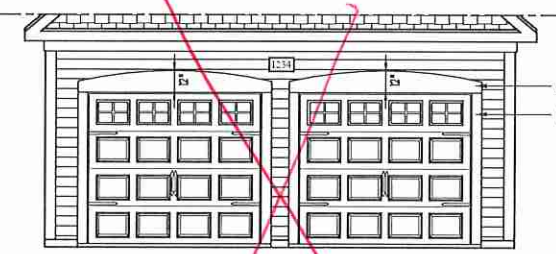
PRICES, PROMOTIONS, INCENTIVES, FEATURES, OPTIONS, FLOOR PLANS, ELEVATIONS, DESIGNS, MATERIALS AND DIMENSIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AND MAY VARY FROM ACTUAL CONSTRUCTION. ACTUAL POSITION OF HOUSE ON LOT WILL BE DETERMINED BY THE SITE PLAN AND LOT PLAN. THESE DRAWINGS ARE NOT TO BE REPRODUCED, CHANGED, OR COPIED IN ANY FORM OR MANNER WITHOUT FIRST OBTAINING THE EXPRESS WRITTEN CONSENT OF RENAISSANCE RESIDENTIAL DESIGN, INC. NOR ARE THEY TO BE ASSIGNED TO ANY THIRD PARTY WITHOUT FIRST OBTAINING SAID WRITTEN PERMISSION AND CONSENT.



FRONT ELEVATION-A  
SCALE: 1/4" = 1'-0"

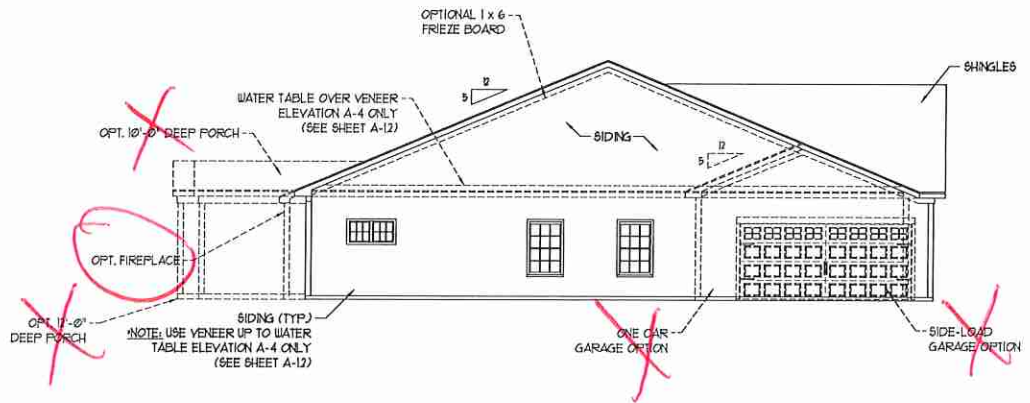


SIDE LOAD GARAGE OPTION  
SCALE: 1/4" = 1'-0"

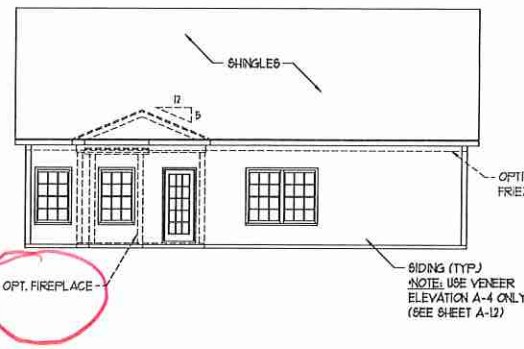


DOUBLE GARAGE DOOR OPTION  
SCALE: 1/4" = 1'-0"

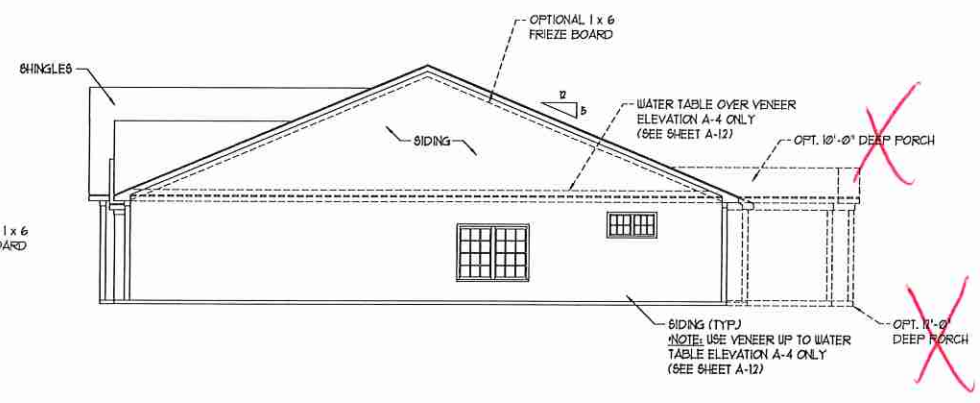
\*\* NOTE: SEE PAGE A-11 FOR SPECIFIC FRONT ELEVATION-A DETAILS. SEE PAGE A-12 FOR A-4 (ALL BRICK) ELEVATIONS



LEFT ELEVATION  
SCALE: 1/8" = 1'-0"



REAR ELEVATION  
SCALE: 1/8" = 1'-0"

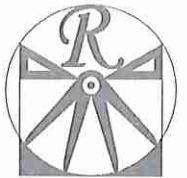


RIGHT ELEVATION  
SCALE: 1/8" = 1'-0"

H&H HOMES, INC.  
CEDAR DRIVE LEFT

DATE: OCTOBER 4, 2019  
REV:  
SCALE: AS NOTED  
DRAWN BY: WG  
ENGINEERED BY: WFB  
REVIEWED BY: JES

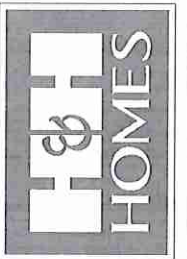
A - ELEVATIONS  
A-1



**RENAISSANCE**  
RESIDENTIAL DESIGN, INC.  
4819 GLENHURST CT., | RALEIGH, NC 27612  
819 945-4128  
WWW.RRDCARDINALVA.COM

"The art of transforming your vision into reality."  
RENAISSANCE RESIDENTIAL DESIGN, INC. RESERVES THE RIGHT TO MAKE MODIFICATIONS TO FLOOR PLANS, DIMENSIONS, MATERIALS, AND SPECIFICATIONS WITHOUT NOTICE. THESE DRAWINGS ARE FOR THE PURPOSE OF CONVEYING AN ARCHITECTURAL CONCEPT ONLY.  
RENAISSANCE RESIDENTIAL DESIGN, INC. HEREBY EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER PROPERTY RIGHTS IN THESE PLANS. THESE PLANS AND DRAWINGS ARE NOT TO BE REPRODUCED, COPIED, CHANGED, OR COPIED IN ANY FORM OR MANNER WITHOUT FIRST OBTAINING THE EXPRESS WRITTEN CONSENT OF RENAISSANCE RESIDENTIAL DESIGN, INC. NOR ARE THEY TO BE ASSIGNED TO ANY THIRD PARTY WITHOUT FIRST OBTAINING SAID WRITTEN PERMISSION AND CONSENT.

**J.S. THOMPSON**  
ENGINEERING, INC.  
606 WADE AVE., SUITE 104  
RALEIGH, NC 27603  
PHONE: (919) 750-8919  
FAX: (919) 750-0021  
N.C. LICENSE NO. C-1733



PRIZES, PROMOTIONS, INCENTIVES, FEATURES, OPTIONS, FLOOR PLANS, ELEVATIONS, DESIGNS, MATERIALS AND DIMENSIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AND MAY VARY AND DIMENSIONS WILL BE DETERMINED BY THE SITE PLAN AND P.L.O.F. PLAN. FLOOR PLANS AND ELEVATION DIMENSIONS ARE ARTIST PROPERTY OF H&H HOMES AND USE, REPRODUCTION, ADAPTATION, OR DISPLAY OF THE PLANS IS STRICTLY PROHIBITED. SEE H&H HOMES SALES CONSULTANT FOR CURRENT DETAILS. COPYRIGHT © 2015 H&H HOMES

H&H HOMES, INC.  
CEDAR  
DRIVE LEFT

DATE: OCTOBER 4, 2019  
REV.:  
SCALE: AS NOTED  
DRAWN BY: W/G  
ENGINEERED BY: WFB  
REVIEWED BY: JES

A - ELEVATION  
OPTIONS  
A-1.1



FRONT ELEVATION-A-1  
SCALE: 1/4" = 1'-0"



Stone

FRONT ELEVATION-A-2  
SCALE: 1/4" = 1'-0"

TOP OF LEDGE  
FINISHED FLOOR  
1'-0"



WOOD TRIM AS SPEC.

FRONT ELEVATION-A-3  
SCALE: 1/4" = 1'-0"

TOP OF LEDGE  
FINISHED FLOOR  
1'-0"



WATER TABLE  
AS SPEC.

WOOD TRIM AS SPEC.

FRONT ELEVATION-A-4  
SCALE: 1/4" = 1'-0"

WATER TABLE  
AS SPEC.

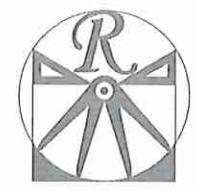
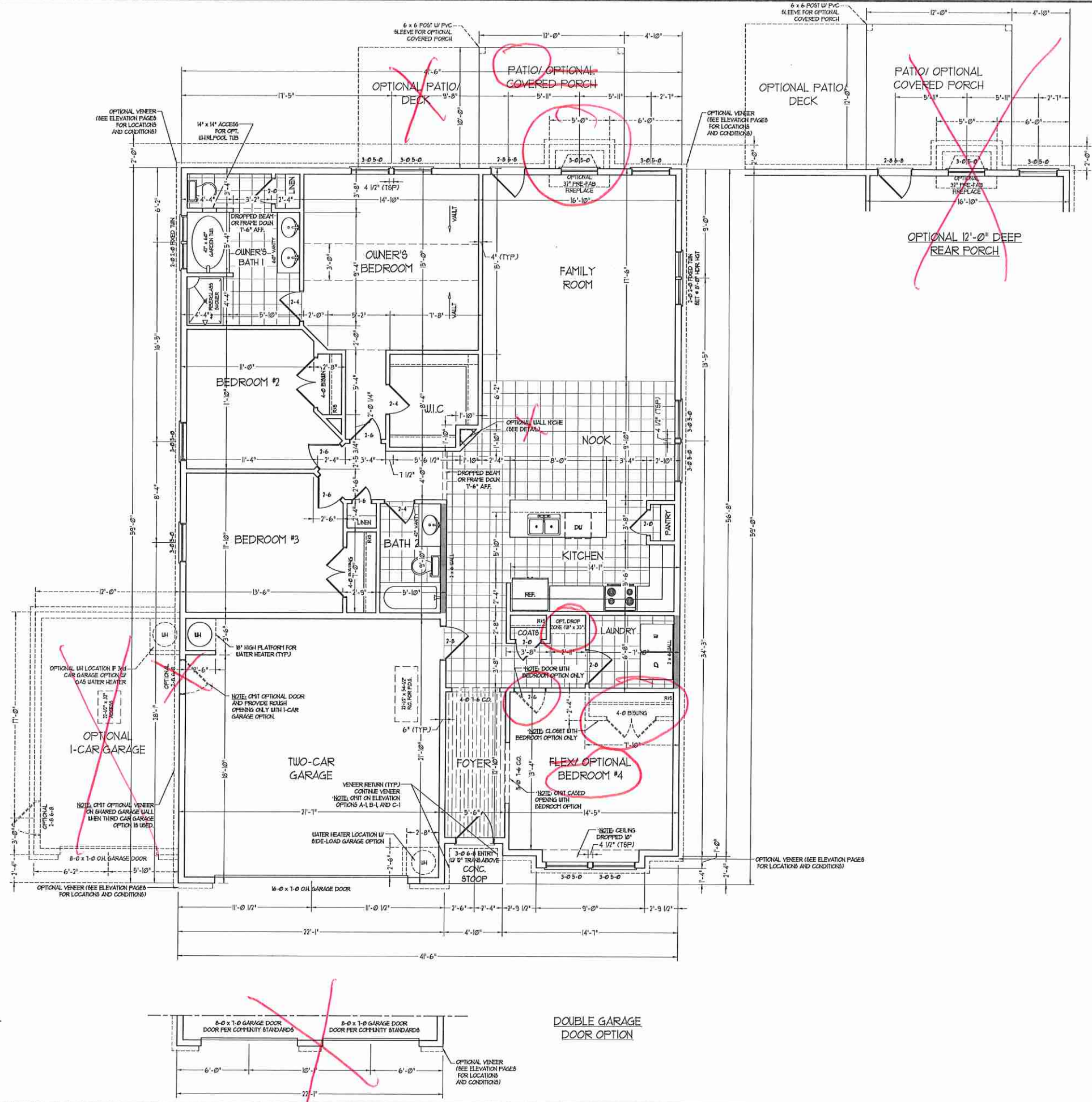
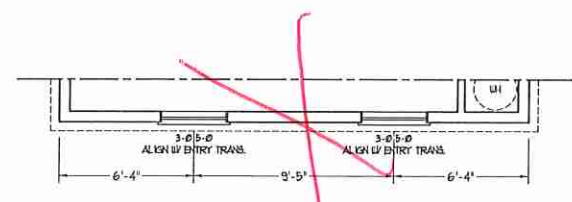
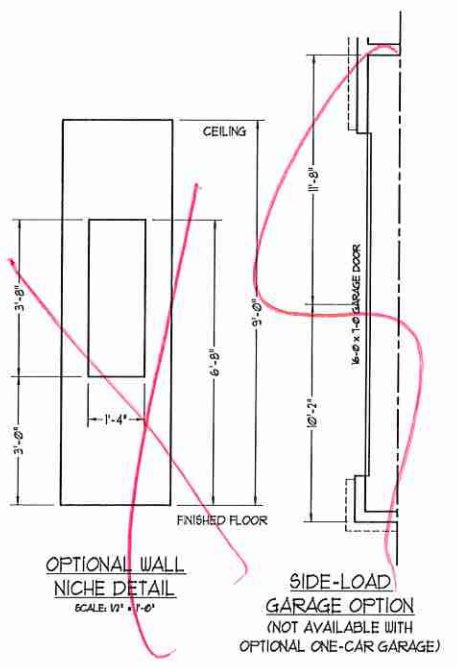
VENEER LEDGE AS SPEC.

| SQUARE FOOTAGE   |              |
|------------------|--------------|
| 1st FLOOR:       | 1933 SQ. FT. |
| TOTAL:           | 1933 SQ. FT. |
| FRONT STOOP:     | 16 SQ. FT.   |
| STD. REAR PATIO: | 120 SQ. FT.  |
| GARAGE:          | 473 SQ. FT.  |

| SQUARE FOOTAGE (OPTIONS)       |              |
|--------------------------------|--------------|
| 1st FLOOR (BRICK):             | 1993 SQ. FT. |
| REAR PORCH (10'-0" DEEP):      | 120 SQ. FT.  |
| REAR PORCH (12'-0" DEEP):      | 144 SQ. FT.  |
| OPT. PATIO/DECK (10'-0" DEEP): | 120 SQ. FT.  |
| OPT. PATIO/DECK (12'-0" DEEP): | 144 SQ. FT.  |
| I-CAR GARAGE:                  | 240 SQ. FT.  |

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

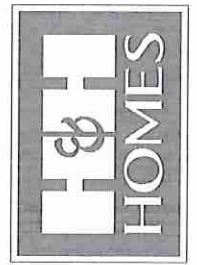
2x6 WALL  
 \* SHADED WALLS ARE TO BE 2 x 6 @ 16" O.C. (LOAD BEARING) OR 2 x 6 @ 24" O.C. (NON-LOAD BEARING) REGARDLESS OF EXTERIOR WALL CONDITION



**RENAISSANCE**  
 RESIDENTIAL DESIGN, INC.  
 919-514-1128  
 WWW.RHD-CAROLINA.COM

"The art of transforming your vision into reality."  
 RENAISSANCE RESIDENTIAL DESIGN, INC. HEREBY EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER PROPERTY RIGHTS IN THESE PLANS. THESE PLANS AND DRAWINGS ARE NOT TO BE REPRODUCED, COPIED, OR OTHERWISE TRANSMITTED IN ANY FORM OR BY ANY MEANS WITHOUT FIRST OBTAINING THE EXPRESS WRITTEN CONSENT OF RENAISSANCE RESIDENTIAL DESIGN, INC. NOR ARE THEY TO BE ASSIGNED TO ANY THIRD PARTY WITHOUT FIRST OBTAINING SAID WRITTEN PERMISSION AND CONSENT.

**J.S. THOMPSON**  
 ENGINEERING & ARCHITECTS  
 605 W. WALKER AVE., SUITE 104  
 RALEIGH, NC 27603  
 PHONE: (919) 750-9919  
 FAX: (919) 750-9921  
 N.C. LICENSE NO. C-1733



PLEASE PROMPTLY NOTIFY H&H HOMES OF ANY CHANGES TO THE PLANS OR SPECIFICATIONS. MATERIALS AND DIMENSIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE NOTED. CONSTRUCTION SHALL BE IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REQUIREMENTS. FLOOR PLANS AND ELEVATION DRAWINGS ARE THE PROPERTY OF H&H HOMES AND ARE NOT TO BE REPRODUCED, COPIED, OR OTHERWISE TRANSMITTED IN ANY FORM OR BY ANY MEANS WITHOUT FIRST OBTAINING THE EXPRESS WRITTEN CONSENT OF H&H HOMES. ADAPTATION OR DISPLAY OF THESE PLANS IS STRICTLY PROHIBITED. SEE H&H HOME SALES CONSULTANT FOR CURRENT DETAILS. COPYRIGHT © 2019 H&H HOMES

**H&H HOMES, INC.**  
 CEDAR DRIVE LEFT

DATE: OCTOBER 4, 2019  
 REV:  
 SCALE: 1/4" = 1'-0"  
 DRAWN BY: WG  
 ENGINEERED BY: WFB  
 REVIEWED BY: JES

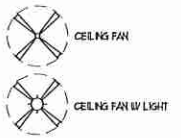
FIRST FLOOR PLAN  
**A-4**

**ELECTRICAL LAYOUT NOTES:**

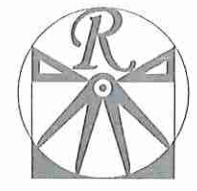
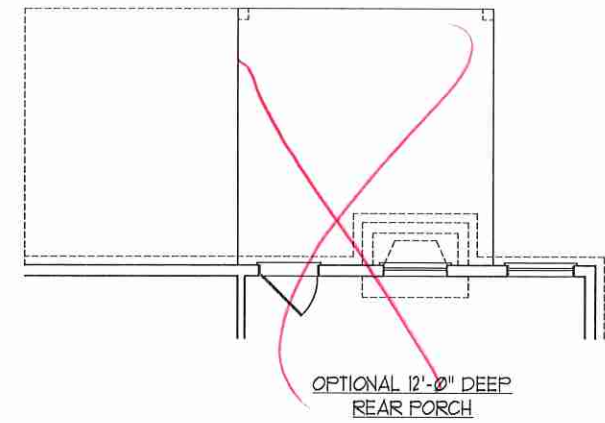
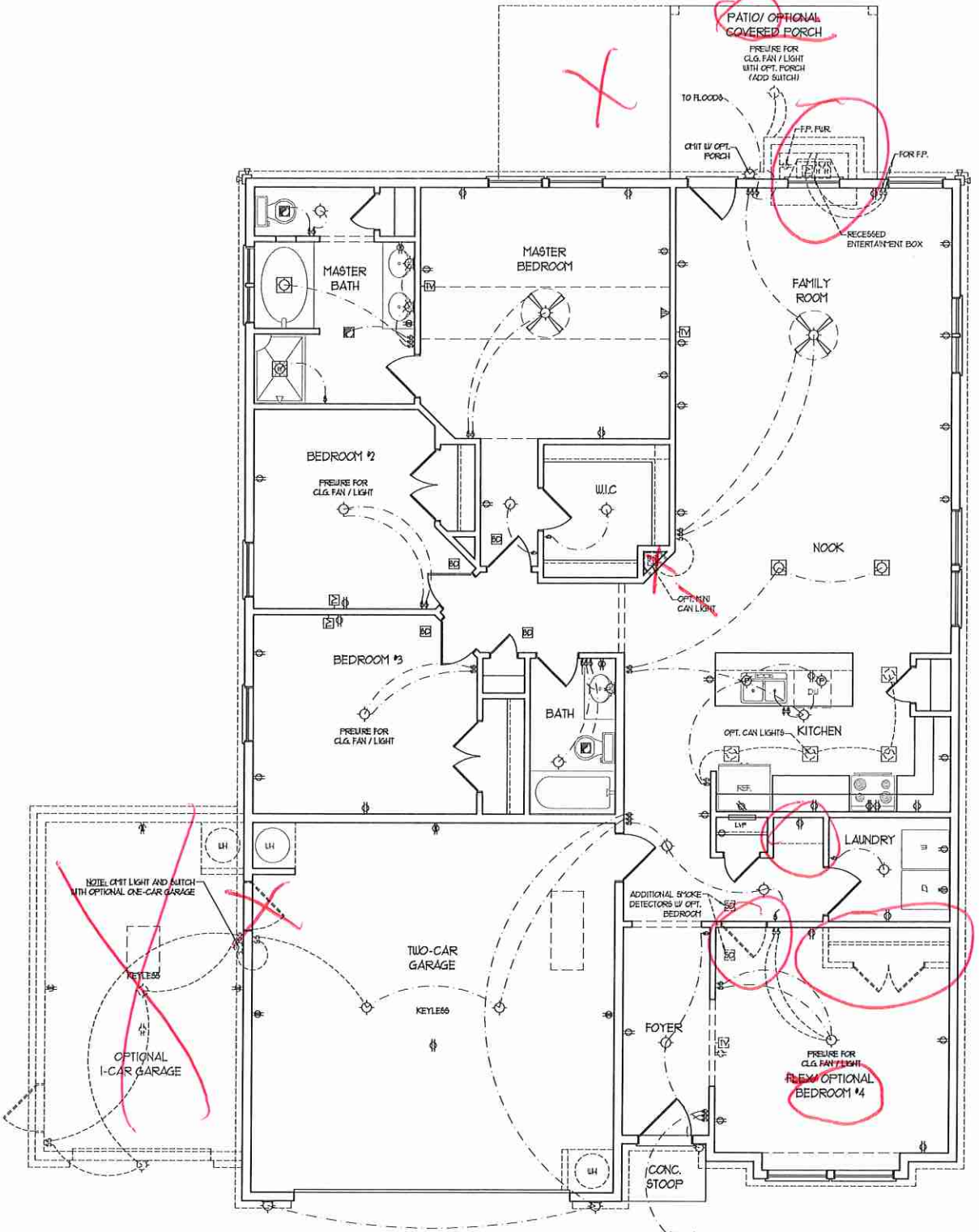
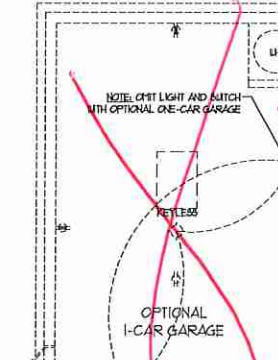
- 1) BLOCK AND WIRE FOR ALL CEILING FAN PER PLAN.
- 2) VANITY LIGHTS TO BE SET # 90° AFF. (TYP)
- 3) ADDITIONAL EXTERIOR OUTLETS REQUIRED BY CODE TO BE LOCATED BY ELECTRICIAN.
- 4) PLACE SWITCHES 6" FROM ROUGH OPENINGS.

**ELECTRICAL LEGEND**

- ⊕ 120 V OUTLET
- ⊕ 120 V GFI OUTLET
- ⊕ 120 V SWITCHED OUTLET
- ⊕ 120 V BASEBOARD OUTLET
- ⊕ 4-PLEX
- ⊕ COUNTER OR FLOOR MOUNTED
- ⊕ FLOOR MOUNTED 120V GFI
- ⊕ LEAKAGE-PROOF
- ⊕ 220 V OUTLET
- ⊕ 120 V DEDICATED CIRCUIT
- ⊕ 220 V DEDICATED CIRCUIT
- ⊕ SPECIAL PURPOSE (120 V, ETC.)
- ⊕ WALL MOUNT LIGHT
- ⊕ CEILING MOUNT LIGHT
- ⊕ PENDANT LIGHT
- ⊕ RECESSED CAN LIGHT
- ⊕ PTH CAN LIGHT
- ⊕ EYEBALL LIGHT
- ⊕ FLUORESCENT LIGHT
- ⊕ UNDERCABINET LIGHT
- ⊕ FLOOD LIGHT
- ⊕ SWITCH
- ⊕ 3-WAY SWITCH
- ⊕ 4-WAY SWITCH
- ⊕ DIMMER SWITCH
- ⊕ TELEPHONE
- ⊕ TV CONNECTION
- ⊕ CONDUIT FOR COMPONENT WIRING
- ⊕ SPEAKER
- ⊕ DOORBELL CHIME
- ⊕ 120 V SMOKE DETECTOR
- ⊕ EXHAUST FAN
- ⊕ LOW VOLTAGE PANEL



**SIDE-LOAD GARAGE OPTION**  
(NOT AVAILABLE WITH OPTIONAL ONE-CAR GARAGE)

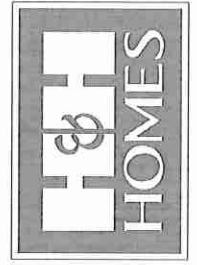


**RENAISSANCE**  
RESIDENTIAL DESIGN, INC.  
4810 GLENHIST CT., 1 RALEIGH, NC 27612  
919-810-4128  
WWW.RIDCAROLINA.COM

"The art of transforming your vision into reality."

RENAISSANCE RESIDENTIAL DESIGN, INC. HEREBY EXPRESSLY RESERVES ITS CONSULTANT COPYRIGHT AND OTHER PROPERTY RIGHTS IN THESE PLANS. THESE PLANS AND DRAWINGS ARE NOT TO BE REPRODUCED, CHANGED, OR COPIED IN ANY MANNER WITHOUT THE WRITTEN CONSENT OF RENAISSANCE RESIDENTIAL DESIGN, INC. IF THEY ARE TO BE ASSIGNED TO ANY THIRD PARTY WITHOUT FIRST OBTAINING WRITTEN PERMISSION AND CONSENT.

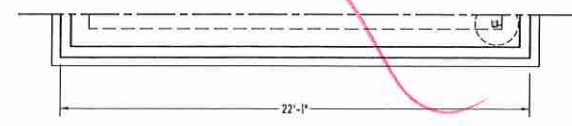
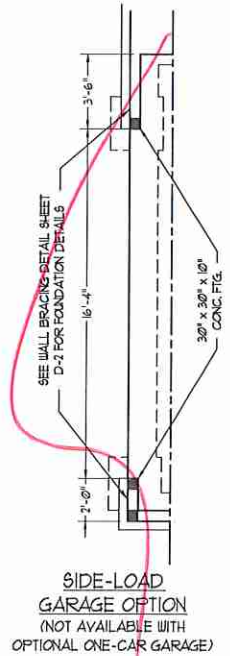
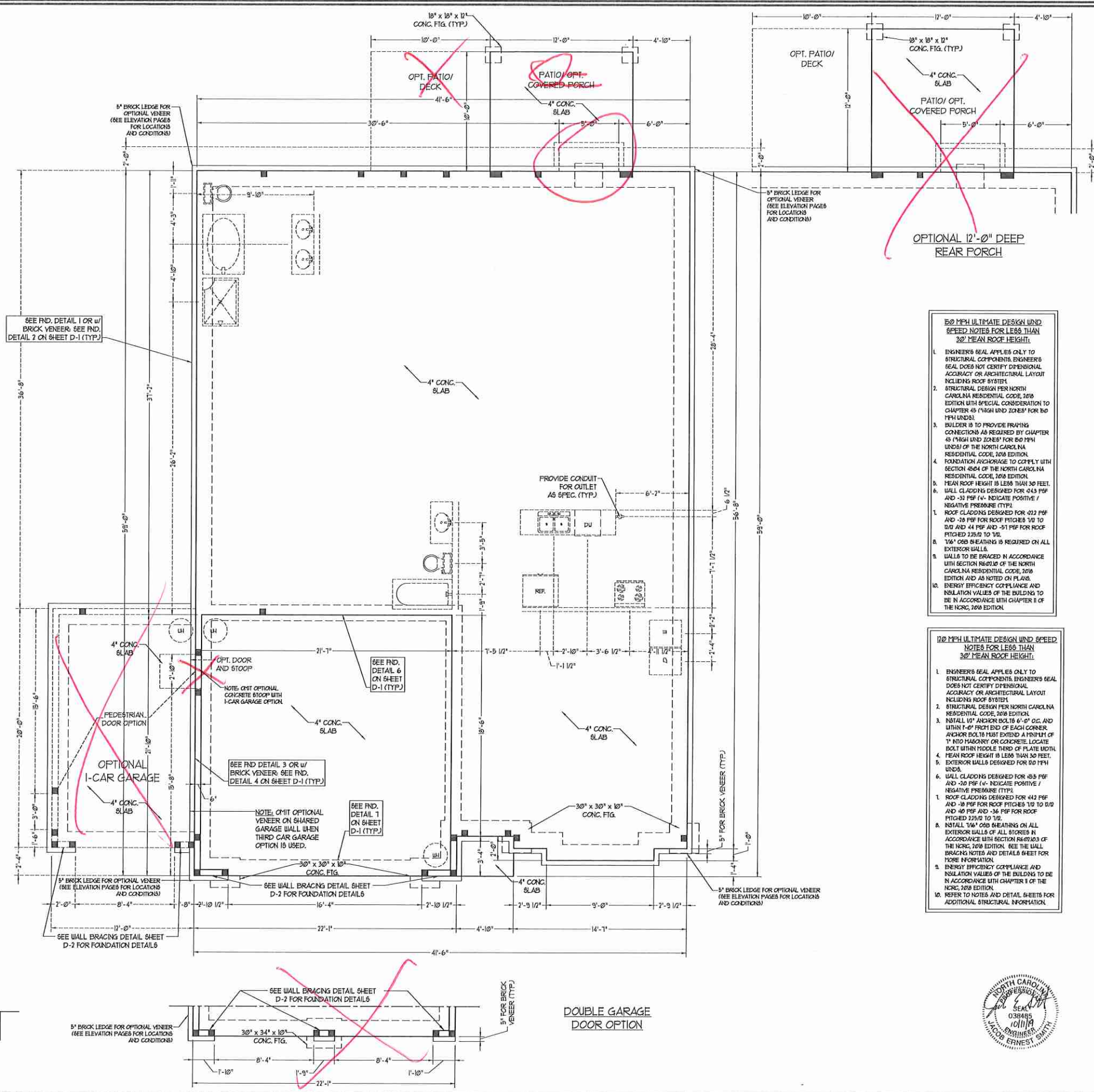
**J.S. THOMPSON ENGINEERING, INC.**  
105 WADE AVE., SUITE 104  
RALEIGH, NC 27605  
PHONE: (919) 788-0919  
FAX: (919) 788-9921  
N.C. LICENSE NO. C-1733



PRICES, PROMOTIONS, INCENTIVES, FEATURES, OPTIONS, FLOOR PLANS, ELEVATIONS, DESIGNS, MATERIALS AND DIMENSIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AND MAY VARY FROM THOSE ARE ESTIMATED AND MAY VARY FROM THOSE WILL BE DETERMINED BY THE SITE PLAN AND PLAN. FLOOR PLANS AND ELEVATION DIMENSIONS ARE ARTIST PROPERTY OF H&H HOMES AND USE, REPRODUCTION, ADAPTATION OR DISPLAY OF THE PLANS IS STRICTLY PROHIBITED. SEE BUYER HOME SALES CONSULTANT FOR CURRENT DETAILS. COPYRIGHT © 2015 H&H HOMES

**H&H HOMES, INC.**  
CEDAR  
DRIVE LEFT

DATE: OCTOBER 4, 2019  
REV.:  
SCALE: 1/4" = 1'-0"  
DRAWN BY: W/G  
ENGINEERED BY: WFB  
REVIEWED BY: JES  
FIRST FLOOR ELECTRICAL PLAN

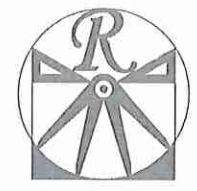


**80 MPH ULTIMATE DESIGN WIND SPEED NOTES FOR LESS THAN 20' MEAN ROOF HEIGHT:**

- ENGINEER'S SEAL APPLIES ONLY TO STRUCTURAL COMPONENTS. ENGINEER'S SEAL DOES NOT CERTIFY DIMENSIONAL ACCURACY OR ARCHITECTURAL LAYOUT INCLUDING ROOF SYSTEM.
- STRUCTURAL DESIGN PER NORTH CAROLINA RESIDENTIAL CODE, 2018 EDITION WITH SPECIAL CONSIDERATION TO CHAPTER 45 (HIGH WIND ZONES) FOR 80 MPH WINDS.
- BUILDER IS TO PROVIDE FRAMING CONNECTIONS AS REQUIRED BY CHAPTER 45 (HIGH WIND ZONES) FOR 80 MPH WINDS) OF THE NORTH CAROLINA RESIDENTIAL CODE, 2018 EDITION.
- FOUNDATION ANCHORAGE TO COMPLY WITH SECTION 4604 OF THE NORTH CAROLINA RESIDENTIAL CODE, 2018 EDITION.
- MEAN ROOF HEIGHT IS LESS THAN 30 FEET.
- WALL CLADDING DESIGNED FOR 0.43 PSF AND -31 PSF (N-). INDICATE POSITIVE / NEGATIVE PRESSURE (TYP).
- ROOF CLADDING DESIGNED FOR 0.12 PSF AND -18 PSF FOR ROOF PITCHES 1/12 TO 1/10 AND 0.18 PSF AND -31 PSF FOR ROOF PITCHES 2/12 TO 1/8.
- 1/4" OSB SHEATHING IS REQUIRED ON ALL EXTERIOR WALLS.
- WALLS TO BE BRACED IN ACCORDANCE WITH SECTION R601.03 OF THE NORTH CAROLINA RESIDENTIAL CODE, 2018 EDITION AND AS NOTED ON PLANS.
- ENERGY EFFICIENCY COMPLIANCE AND INSULATION VALUES OF THE BUILDING TO BE IN ACCORDANCE WITH CHAPTER 11 OF THE NRC, 2018 EDITION.

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

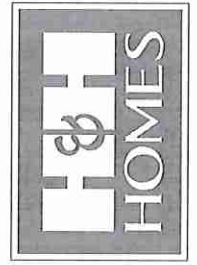
- ENGINEER'S SEAL APPLIES ONLY TO STRUCTURAL COMPONENTS. ENGINEER'S SEAL DOES NOT CERTIFY DIMENSIONAL ACCURACY OR ARCHITECTURAL LAYOUT INCLUDING ROOF SYSTEM.
- STRUCTURAL DESIGN PER NORTH CAROLINA RESIDENTIAL CODE, 2018 EDITION.
- INSTALL 1/2" ANCHOR BOLTS 6'-0" O.C. AND WITHIN 1'-0" FROM END OF EACH CORNER ANCHOR BOLTS MUST EXTEND A MINIMUM OF 1" INTO MASONRY OR CONCRETE. LOCATE BOLT WITHIN MIDDLE THIRD OF PLATE WIDTH.
- MEAN ROOF HEIGHT IS LESS THAN 30 FEET.
- EXTERIOR WALLS DESIGNED FOR 80 MPH WINDS.
- WALL CLADDING DESIGNED FOR 0.5 PSF AND -30 PSF (N-). INDICATE POSITIVE / NEGATIVE PRESSURE (TYP).
- ROOF CLADDING DESIGNED FOR 0.12 PSF AND -18 PSF FOR ROOF PITCHES 1/12 TO 1/10 AND 0.18 PSF AND -36 PSF FOR ROOF PITCHES 2/12 TO 1/8.
- INSTALL 1/4" OSB SHEATHING ON ALL EXTERIOR WALLS OF ALL STORES IN ACCORDANCE WITH SECTION R601.03 OF THE NRC, 2018 EDITION. SEE THE WALL BRACING NOTES AND DETAILS SHEET FOR MORE INFORMATION.
- ENERGY EFFICIENCY COMPLIANCE AND INSULATION VALUES OF THE BUILDING TO BE IN ACCORDANCE WITH CHAPTER 11 OF THE NRC, 2018 EDITION.
- REFER TO NOTES AND DETAIL SHEETS FOR ADDITIONAL STRUCTURAL INFORMATION.



**RENAISSANCE RESIDENTIAL DESIGN, INC.**  
RESIDENTIAL DESIGN, INC.  
4819 GLENNHURST CT., J. RALEIGH, NC 27612  
(919) 545-4168  
WWW.RRD-CAROLINA.COM

"The art of transforming your vision into reality."  
RENAISSANCE RESIDENTIAL DESIGN, INC. HEREBY EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER PROPERTY RIGHTS IN THESE PLANS. THESE PLANS AND DRAWINGS ARE NOT TO BE REPRODUCED, COPIED, OR COPIED IN ANY FORM OR BY ANY MEANS WITHOUT FIRST OBTAINING THE EXPRESS WRITTEN CONSENT OF RENAISSANCE RESIDENTIAL DESIGN, INC. NOR ARE THEY TO BE ASSIGNED TO ANY THIRD PARTY WITHOUT FIRST OBTAINING SAID WRITTEN PERMISSION AND CONSENT.

**J.S. THOMPSON ENGINEERING, INC.**  
100 WAVE AVE., SUITE 104  
RALEIGH, NC 27605  
PHONE: (919) 289-9919  
FAX: (919) 289-9921  
N.C. LICENSE NO. C-1733



PRICES, PROMOTIONS, INCENTIVES, FEATURES, OPTIONS, FLOOR PLANS, ELEVATIONS, DESIGNS, MATERIALS AND DIMENSIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AND MAY VARY FROM ACTUAL CONSTRUCTION. ACTUAL POSITION OF HOUSE ON LOT WILL BE DETERMINED BY THE SITE PLAN AND PLOT PLAN. FLOOR PLANS AND ELEVATION DRAWINGS ARE ARTIST CONCEPTS AND NOT TO BE USED FOR REPRODUCTION, ADAPTATION, OR DISPLAY OF THE PLANS IS STRICTLY PROHIBITED. SEE H&H HOME SALES CONSULTANT FOR CURRENT DETAILS. COPYRIGHT © 2018 H&H HOMES

**H&H HOMES, INC.**  
CEDAR  
DRIVE LEFT

DATE: OCTOBER 4, 2019

REV:

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

DRAWN BY: WFG

ENGINEERED BY: WFB

REVIEWED BY: JES

MONO SLAB  
FOUNDATION  
PLAN

S-1



**BRACED WALL DESIGN**

| RECTANGLE A                   | RECTANGLE B                   |
|-------------------------------|-------------------------------|
| <b>SIDE 1A (FRONT LOAD)</b>   | <b>SIDE 1B</b>                |
| METHOD: CS-USP/FF             | METHOD: FF/CS-USP             |
| TOTAL REQUIRED LENGTH: 111'   | TOTAL REQUIRED LENGTH: 46'    |
| TOTAL PROVIDED LENGTH: 145B'  | TOTAL PROVIDED LENGTH: 6'     |
| <b>SIDE 2A</b>                | <b>SIDE 2B</b>                |
| METHOD: CS-USP                | METHOD: CS-USP                |
| TOTAL REQUIRED LENGTH: 111'   | TOTAL REQUIRED LENGTH: 46'    |
| TOTAL PROVIDED LENGTH: 124'   | TOTAL PROVIDED LENGTH: 12'    |
| <b>SIDE 3A</b>                | <b>SIDE 3B/A</b>              |
| METHOD: CS-USP                | METHOD: CS-USP                |
| TOTAL REQUIRED LENGTH: 183'   | TOTAL REQUIRED LENGTH: 102B'  |
| TOTAL PROVIDED LENGTH: 45.56' | TOTAL PROVIDED LENGTH: 285'   |
| <b>SIDE 4A (SIDE LOAD)</b>    | <b>SIDE 4B</b>                |
| METHOD: CS-USP/FF             | METHOD: CS-USP                |
| TOTAL REQUIRED LENGTH: 183'   | TOTAL REQUIRED LENGTH: 3'     |
| TOTAL PROVIDED LENGTH: 33.64' | TOTAL PROVIDED LENGTH: 15.58' |

- BRACED WALL DESIGN NOTES:**
- BRACED WALL DESIGN PER SECTION R602.10 OF THE NRC 2018 EDITION.
  - CS-USP REFERS TO "CONTINUOUS SHEATHING - WOOD STRUCTURAL PANELS" CONTRACTOR IS TO INSTALL 1/2" OSB ON ALL EXTERIOR WALLS ATTACHED w/ 8d NAILS SPACED 6" O.C. ALONG PANEL EDGES AND 12" O.C. 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 1 1/4" SCREWS OR 1 5/8" NAILS SPACED 1" O.C. ALONG PANEL EDGES AND IN THE FIELD INCLUDING TOP AND BOTTOM FLATES.
  - 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 NRC 2018 EDITION.
  - SEE NOTES AND DETAIL SHEETS FOR ADDITIONAL BRACED WALL INFORMATION.

- STRUCTURAL NOTES:**
- ALL FRAMING LUMBER TO BE 5FT 2 (UNO). ALL TREATED LUMBER TO BE 5FT 2 (UNO).
  - ALL LOAD BEARING HEADERS TO BE (2) 2 x 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. ALL SQUARES TO BE (2) STUDS (UNO).
  - FOR HIGH WIND ZONES, ALL EXTERIOR WALLS TO BE SHEATHED WITH 1/2" OSB SHEATHING WITH JOINTS BLOCKED AND SECURED WITH 8d NAILS AT 3" O.C. ALONG EDGES AND 6" O.C. IN THE FIELD.
  - FOR HIGH WIND ZONES, SECURE ALL EXTERIOR WALL SHEATHING PANELS TO DOUBLE TOP FLATES, 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.
  - ALL 4 x 4 POSTS SHALL BE ANCHORED TO SLABS w/ SIMPSON ABW4 POST BASES (OR EQUAL) AND 6 x 6 POSTS w/ ABW6 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.

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

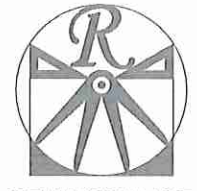
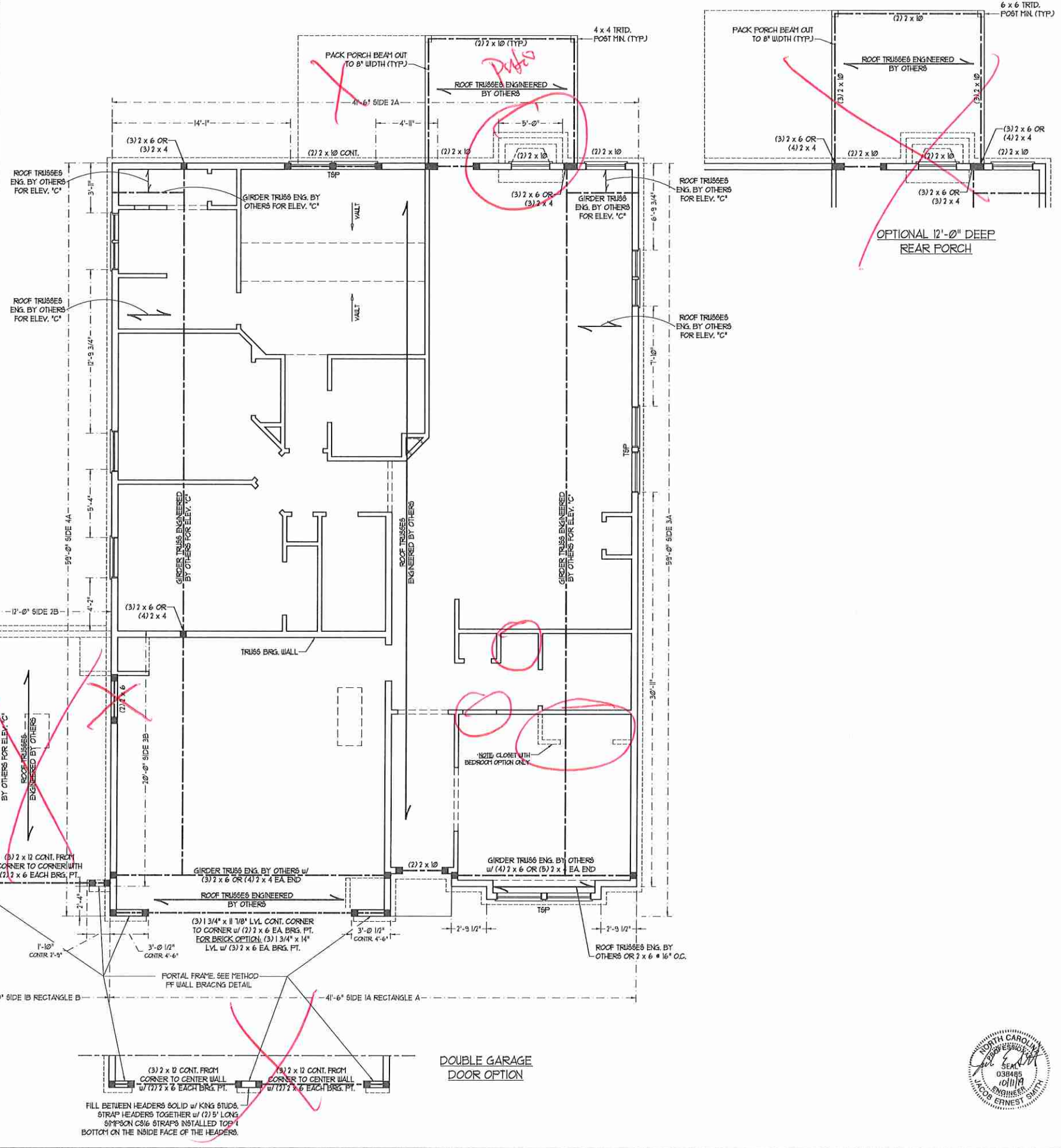
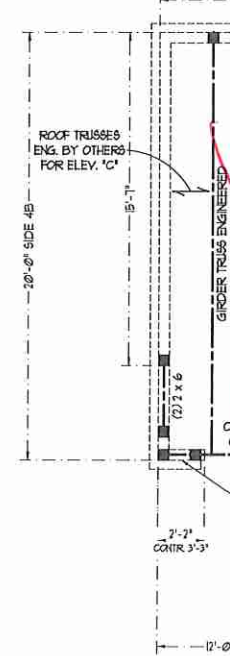
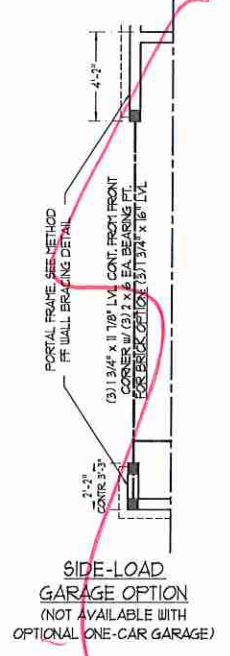
**TABLE R602.15**  
MINIMUM NUMBER OF FULL HEIGHT STUDS AT EACH END OF HEADERS IN EXTERIOR WALLS

| HEADER SPAN (FEET) | MAXIMUM STUD SPACING (INCHES) (PER TABLE R602.15) | MINIMUM NUMBER OF STUDS |
|--------------------|---|-------------------------|
| UP TO 3'           | 16  | 2                       |
| 4'                 | 2   | 1                       |
| 8'                 | 3   | 2                       |
| 12'                | 5   | 3                       |
| 16'                | 6   | 4                       |

**LINTEL SCHEDULE FOR BRICK/NATURAL STONE SUPPORT**

| LENGTH (FT.)  | SIZE OF LINTEL         |
|---------------|------------------------|
| UP TO 4 FT.   | L 3 1/2 x 3 1/2 x 1/4  |
| 4-8           | L 5 x 3 1/2 x 5/16 LLY |
| 8 AND GREATER | L 6 x 4 x 5/16 LLY     |

- BRICK SUPPORT NOTES:**
- LINTEL SCHEDULE APPLIES TO ALL OPENINGS IN BRICK VENEER (UNO). SEE ARCH DWGS. FOR SIZE AND LOCATION OF OPENINGS.
  - (LLV) = LONG LEG VERTICAL
  - LENGTH = CLEAR OPENING
  - ENBED ALL ANGLE IRONS MIN. 4" EACH SIDE INTO VENEER TO PROVIDE BEARING.
  - FOR ALL HEADERS 8'-0" AND GREATER IN LENGTH, ATTACH STEEL ANGLE TO HEADER w/ 1/2" LAG SCREWS @ 12" O.C. STAGGERED.
  - FOR ALL BRICK SUPPORT @ ROOF LINES, FASTEN (2) 2 x 10 BLOCKING BETWEEN STUDS w/ (4) 10d NAILS PER FLY. FASTEN A 6" x 4" x 5/16" STEEL ANGLE TO (2) 2 x 10 BLOCKING w/ (2) 10" LAG SCREWS @ 12" O.C. STAGGERED. SEE SECTION R103.02 OF THE 2018 NRC FOR ADDITIONAL BRICK SUPPORT INFORMATION.
  - PRECAST REINFORCED CONCRETE LINTELS ENGINEERED BY OTHERS MAY BE USED IN LIEU OF STEEL LINTELS.



**RENAISSANCE**  
RESIDENTIAL DESIGN, INC.  
4810 GLENHIST CT., 1 RALEIGH, NC 27612  
(919) 649-4158  
WWW.PRDCAROLINA.COM

RENAISSANCE RESIDENTIAL DESIGN, INC. HEREBY EXPRESSLY RESERVES ITS COPYRIGHT AND OTHER PROPERTY RIGHTS IN THESE PLANS. THESE PLANS AND DRAWINGS ARE NOT TO BE REPRODUCED, CHANGED, OR COPIED IN ANY FORM OR MANNER WITHOUT FIRST OBTAINING THE EXPRESS WRITTEN CONSENT OF RENAISSANCE RESIDENTIAL DESIGN, INC. FOR ARE THEY TO BE ASSIGNED TO ANY THIRD PARTY WITHOUT FIRST OBTAINING THE WRITTEN PERMISSION AND CONSENT.

**J.S. THOMPSON**  
ENGINEERING, INC.  
606 WADE AVE., SUITE 104  
RALEIGH, NC 27605  
PH: (919) 788-9919  
FAX: (919) 788-9921  
N.C. LICENSE NO.: C-1735



PRICES, PROMOTIONS, INCENTIVES, FEATURES, OPTIONS, FLOOR PLANS, ELEVATIONS, DESIGN, MATERIALS AND DIMENSIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE. DIMENSIONS AND FINISHES ARE ESTIMATED AND MAY VARY FROM DIMENSIONS WILL BE DETERMINED BY THE SITE PLAN AND PLOT OF LAL. FLOOR PLANS AND ELEVATION DRAWINGS ARE ARTIST CONCEPTS AND NOT TO BE USED FOR CONSTRUCTION. ADAPTATION OR DISPLAY OF THE PLANS IS STRICTLY PROHIBITED. SEE NEW HOME SALES CONSULTANT FOR CURRENT DETAILS. COPYRIGHT © 2015 H&H HOMES

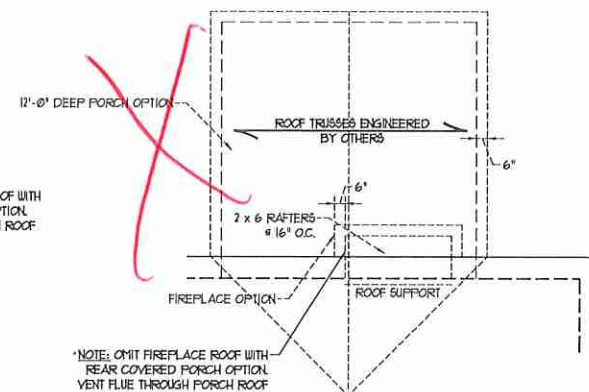
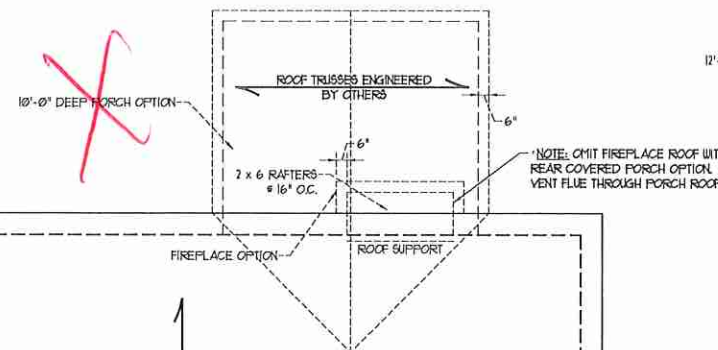
**H&H HOMES, INC.**  
CEDAR  
DRIVE LEFT

DATE: OCTOBER 4, 2019  
REV.:  
SCALE: 1/4" = 1'-0"  
DRAWN BY: WG  
ENGINEERED BY: WFB  
REVIEWED BY: JES

SECOND FLOOR  
FRAMING PLAN  
**S-2**



**ATTIC VENT CALCULATION:**  
 124 SQ. FT. OF ATTIC DIVIDED BY 150 REQUIRES 0.8 SQ. FT. OF NET FREE VENTILATING AREA (MIN).



**12'-0" DEEP REAR PORCH OPTION**  
 SCALE: 1/4" = 1'-0"

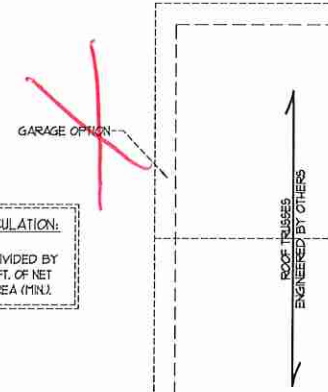
**ATTIC VENT CALCULATION:**  
 150 SQ. FT. OF ATTIC DIVIDED BY 150 REQUIRES 1.0 SQ. FT. OF NET FREE VENTILATING AREA (MIN).

**ATTIC VENT CALCULATION:**  
 2131 SQ. FT. OF ATTIC DIVIDED BY 150 REQUIRES 14.2 SQ. FT. OF NET FREE VENTILATING AREA (MIN).

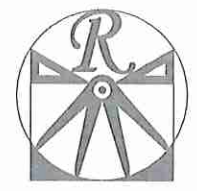
- STRUCTURAL NOTES:**
- ALL FRAMING LUMBER TO BE #2 SFT (UND).
  - CIRCLES DENOTE (3) 2 x 4 POSTS FOR ROOF SUPPORT.
  - FRAME DORMER WALLS ON TOP OF DOUBLE OR TRIPLE RAFTERS.
  - HIP SPLICES ARE TO BE SPACED A MIN. OF 8'-0". FASTEN MEMBERS WITH THREE ROWS OF 12d NAILS @ 16" O.C. (TYP).
  - STICK FRAME 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.
  - FASTEN FLAT VALLEYS TO RAFTERS OR TRUSSES WITH SIMPSON HUBA 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) 12d TOE NAILS.
- REFER TO SECTION R802.11 OF THE 2018 NRC FOR REQUIRED UPLIFT RESISTANCE AT RAFTERS AND TRUSSES.
  - REFER TO NOTES AND DETAIL SHEETS FOR ADDITIONAL STRUCTURAL INFORMATION.

- BRICK SUPPORT NOTE:**
- FASTEN (2) 2 x 10 BLOCKING BETWEEN WALL STUDS w/ (4) 12d NAILS PER FLY. FASTEN A 6" x 4" x 5/16" STEEL ANGLE TO (2) 2 x 10. BLOCKING w/ (2) 1/2" LAG SCREWS @ 12" O.C. STAGGERED. SEE SECTION R103.8.2.1 OF THE 2018 NRC FOR ADDITIONAL BRICK SUPPORT INFORMATION.
  - WHERE ROOF SLOPES EXCEED 1:12, INSTALL 3" x 3" x 1/4" STEEL PLATE 6" OFF AT 24" O.C. PER SECTION R103.8.2.1 OF THE NORTH CAROLINA RESIDENTIAL CODE, 2018 EDITION.

**ATTIC VENT CALCULATION:**  
 286 SQ. FT. OF ATTIC DIVIDED BY 150 REQUIRES 1.9 SQ. FT. OF NET FREE VENTILATING AREA (MIN).



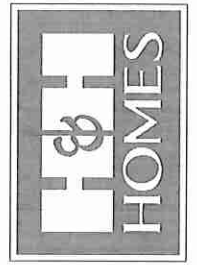
12" O.H. (TYP)  
 NOTE: INCREASE O.H. TO 11" WITH FULL BRICK VENEER



**RENAISSANCE**  
 RESIDENTIAL DESIGN, INC.  
 4810 GLENHURST CT., J. RALEIGH, NC 27612  
 819-549-4128  
 WWW.RRDCAROLINA.COM

RENAISSANCE RESIDENTIAL DESIGN, INC. RESERVES THE RIGHT TO MAKE MODIFICATIONS TO FLOOR PLANS, DIMENSIONS, MATERIALS, AND SPECIFICATIONS WITHOUT NOTICE. THESE DRAWINGS ARE FOR THE PURPOSE OF CONVEYING AN ARCHITECTURAL CONCEPT ONLY.  
 RENAISSANCE RESIDENTIAL DESIGN, INC. HEREBY EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER PROPERTY RIGHTS IN THESE PLANS. THESE PLANS AND DRAWINGS ARE NOT TO BE REPRODUCED, CHANGED, OR COPIED IN ANY FORM OR MANNER WITHOUT FIRST OBTAINING THE EXPRESS WRITTEN CONSENT OF RENAISSANCE RESIDENTIAL DESIGN, INC. AND ARE NOT TO BE ASSIGNED TO ANY THIRD PARTY WITHOUT FIRST OBTAINING THE WRITTEN PERMISSION AND CONSENT.

**J.S. THOMPSON**  
 ENGINEERING, INC.  
 606 W. WALKER AVE., SUITE 104  
 RALEIGH, NC 27605  
 PHONE: (919) 284-9919  
 FAX: (919) 238-9921  
 N.C. LICENSE NO.: C-1733



PRICES, PROMOTIONS, INCENTIVES, FEATURES, OPTIONS, FLOOR PLANS, ELEVATIONS, DESIGNS, MATERIALS AND DIMENSIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AND MAY VARY IN ACTUAL CONSTRUCTION. ACTUAL POSITION OF HOUSE ON LOT WILL BE DETERMINED BY THE SITE PLAN AND PLOT PLAN. DIMENSIONS AND ELEVATIONS SHOWN ARE ARTIST CONCEPTIONS AND NOT TO BE USED FOR REPRODUCTION, ADAPTATION, OR DISPLAY OF THE PLANS IS STRICTLY PROHIBITED. SEE NEW HOME SALES CONSULTANT FOR CURRENT DETAILS. COPYRIGHT © 2018 H&H HOMES

**H&H HOMES, INC.**  
 CEDAR  
 DRIVE LEFT

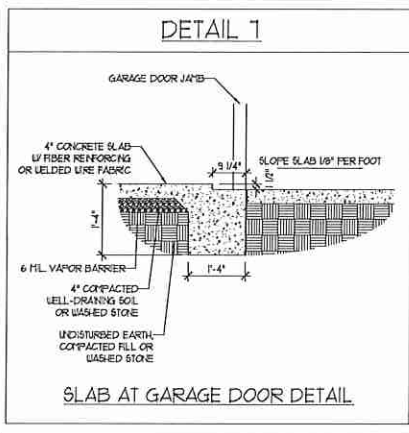
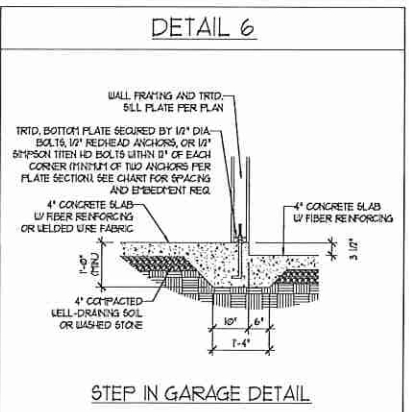
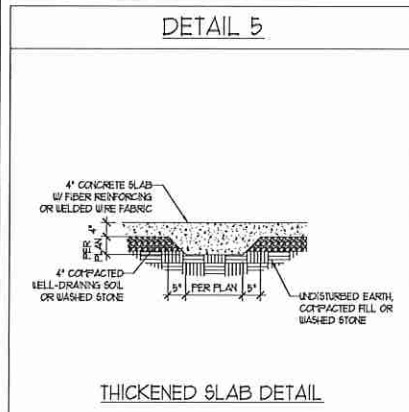
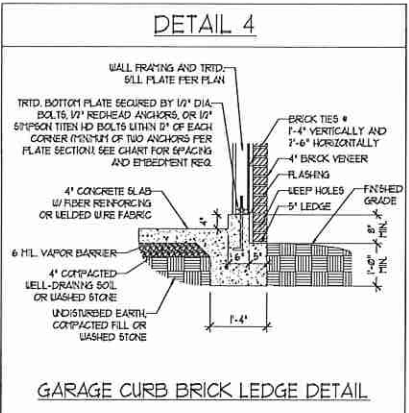
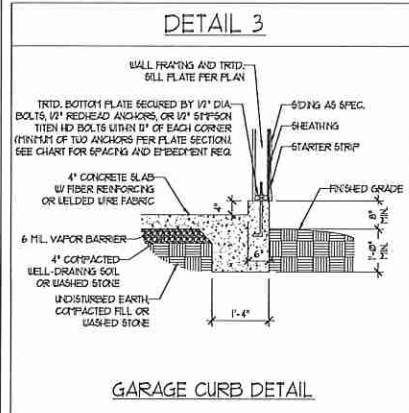
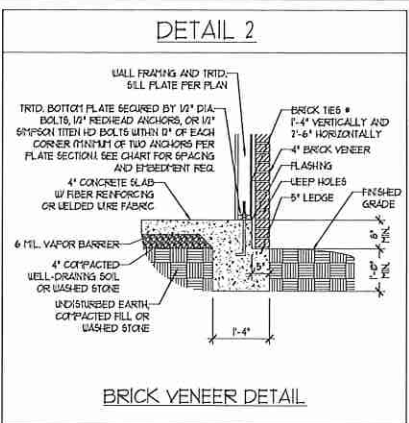
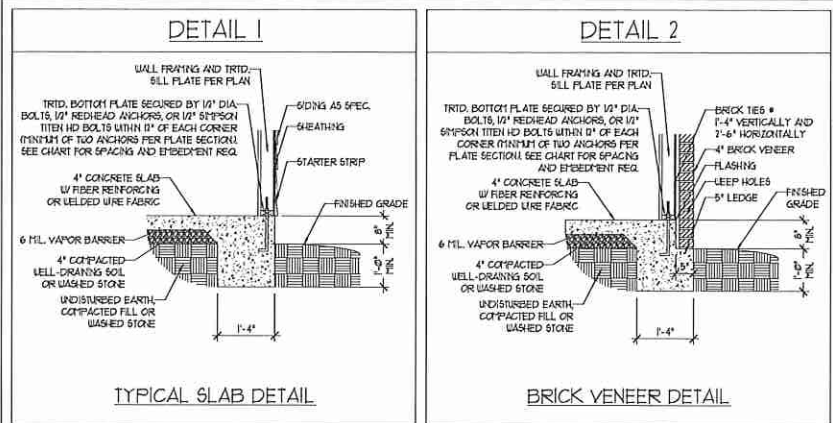
DATE: OCTOBER 4, 2019  
 REV.:  
 SCALE: 1/4" = 1'-0"  
 DRAWN BY: WJG  
 ENGINEERED BY: WFB  
 REVIEWED BY: JES

ROOF PLAN  
 ELEVATION - A  
**S-3**

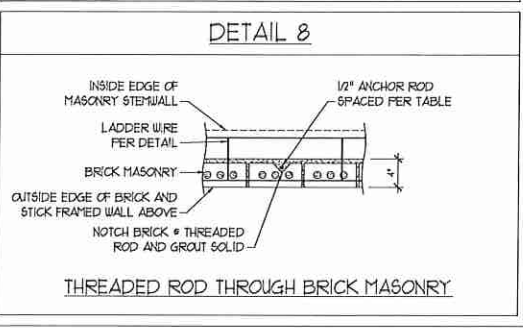
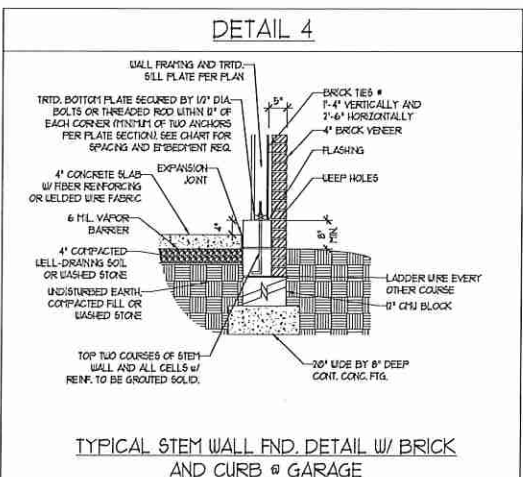
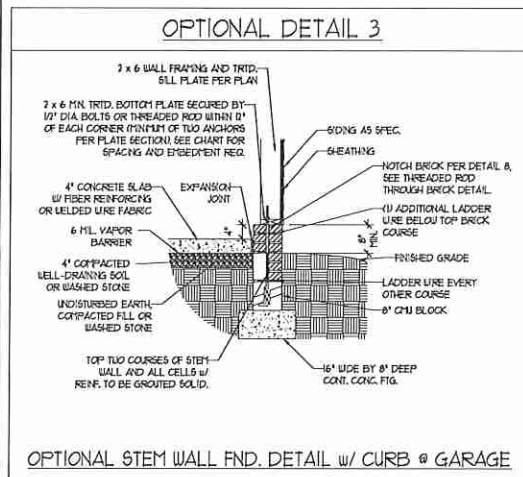
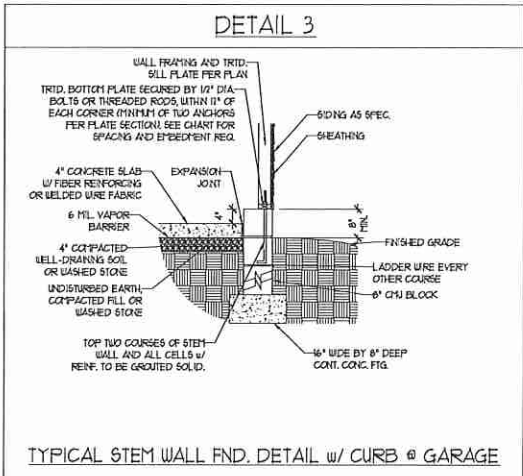
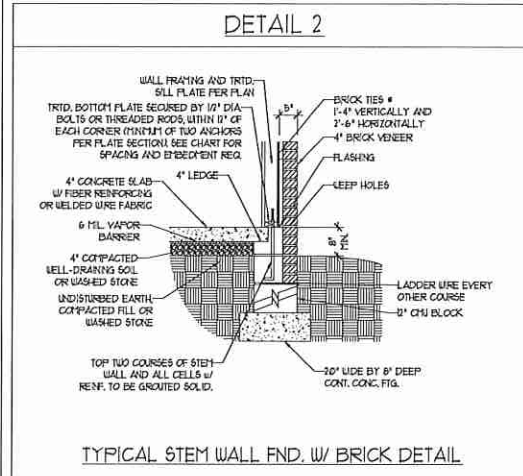
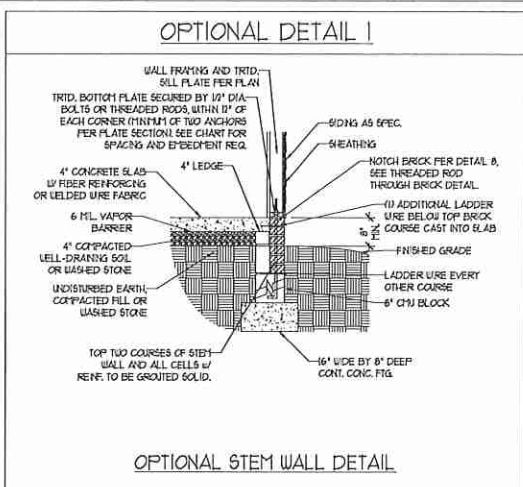
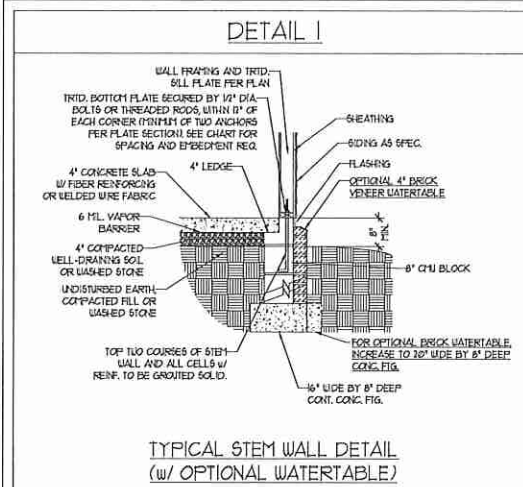




MONOLITHIC SLAB DETAILS



STEMWALL DETAILS



MASONRY STEMWALL SPECIFICATIONS

| WALL HEIGHT (FEET) | MASONRY WALL TYPE                          |                                    |                                    |                                    |
|--------------------|--|------------------------------------|------------------------------------|------------------------------------|
|                    | 8" CMU                                     | 4" BRICK AND 4" CMU                | 4" BRICK AND 8" CMU                | 12" CMU                            |
| 2 AND BELOW        | UNGRADED                                   | GROUT SOLID                        | UNGRADED                           | UNGRADED                           |
| 3                  | UNGRADED                                   | GROUT SOLID                        | UNGRADED                           | UNGRADED                           |
| 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 @ 36" O.C.         | NOT APPLICABLE                     | GROUT SOLID w/ #4 REBAR @ 36" 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. |
| 1 AND GREATER      | ENGINEERED DESIGN BASED ON SITE CONDITIONS |                                    |                                    |                                    |

STRUCTURAL NOTES:

- WALL HEIGHT MEASURED FROM TOP OF FOOTING TO TOP OF THE WALL.
- TIE 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.
- BACKFILL OF CLEAN #1 / #1 WASHED STONE IS ALLOWABLE.
- BACKFILL OF WELL DRAINED OR SAND - GRAVEL MIXTURE SOILS (45 PLS/FT BELOW GRADE) CLASSIFIED AS GROUP 1 ACCORDING TO UNIFIED SOILS CLASSIFICATION SYSTEM IN ACCORDANCE WITH TABLE 8405J OF THE 2018 INTERNATIONAL RESIDENTIAL CODE ARE ALLOWABLE.
- FREP SLAB PER RS06.21 AND RS06.22 BASE OF THE 2018 INTERNATIONAL RESIDENTIAL CODE. MINIMUM 24" LAP SPLICE LENGTH.
- LOCATE REBAR IN CENTER OF FOUNDATION WALL.
- 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.

ANCHOR SPACING AND EMBEDMENT

| WIND ZONE | 120 MPH    | 130 MPH                             |
|-----------|------------|-------------------------------------|
| SPACING   | 6'-0" O.C. | 4'-0" O.C.                          |
| EMBEDMENT | 1"         | 5" INTO MASONRY<br>1" INTO CONCRETE |

**J.S. THOMPSON ENGINEERING, INC.**  
606 WADE AVE, SUITE 100, RALEIGH, NC 27605  
PHONE: (919) 789-9100 FAX: (919) 789-9921  
N.C. LICENSE NO: C-1733

120 MPH - 130 MPH ULTIMATE DESIGN WIND SPEED  
FOUNDATION DETAILS

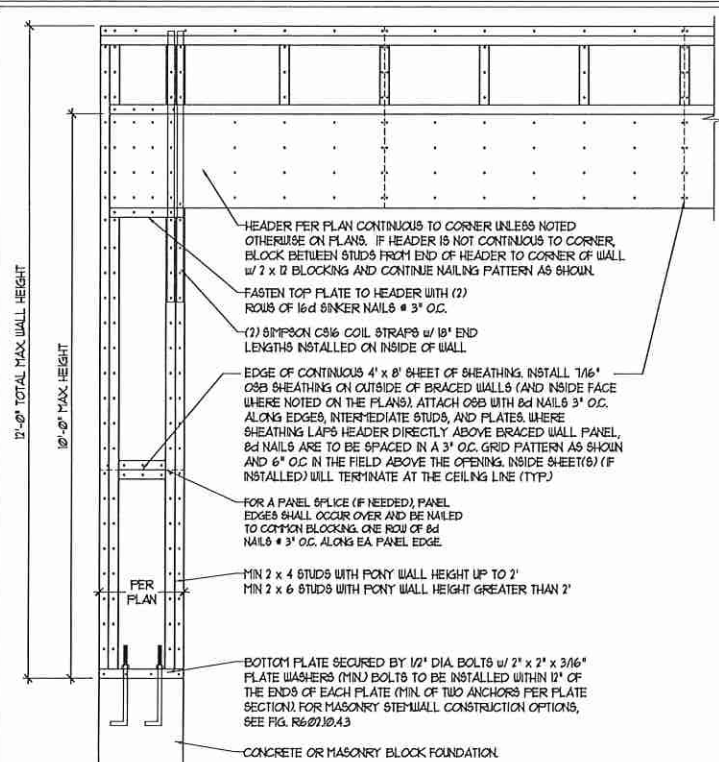
DATE: NOVEMBER 14, 2018  
SCALE: NTS  
DRAWN BY: JST  
ENGINEERED BY: JES



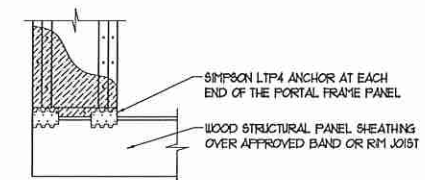
D-1  
FOUNDATION DETAILS

**GENERAL WALL BRACING NOTES:**

1. WALL BRACING DESIGNED IN ACCORDANCE WITH CHAPTER 6 OF THE 2018 NC RESIDENTIAL BUILDING CODE (NRC). TABLES AND FIGURES REFERENCED ARE FROM THE 2018 NRC.
2. SEE THIS SHEET FOR GENERAL DETAILS. REFER TO THE 2018 NRC FOR ADDITIONAL INFORMATION AS NEEDED.
3. 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.
4. ALL EXTERIOR WALLS ARE TO BE SHEATHED WITH CS-USP IN ACCORDANCE WITH SECTION R602.10.3 UNLESS NOTED OTHERWISE.
5. ALL EXTERIOR AND INTERIOR WALLS TO HAVE 1/2" GYPSUM INSTALLED. WHEN NOT USING METHOD "GB", GYPSUM TO BE FASTENED PER TABLE R102.3.5. METHOD GB TO BE FASTENED PER TABLE R602.10.1.
6. CS-USP REFERS TO THE "CONTINUOUS SHEATHING - WOOD STRUCTURAL PANELS" WALL BRACING METHOD. 1/8" OSB SHEATHING IS TO BE INSTALLED ON ALL EXTERIOR WALLS ATTACHED w/ 6d COMMON NAILS OR 8d (2 1/2" LONG x 0.13" DIAMETER) NAILS SPACED 6" O.C. ALONG PANEL EDGES AND 12" O.C. IN THE FIELD (UNO).
7. 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" SCREWS OR 1 5/8" NAILS SPACED 1" O.C. ALONG PANEL EDGES INCLUDING TOP AND BOTTOM PLATES AND INTERMEDIATE SUPPORTS (UNO). VERIFY ALL FASTENER OPTIONS FOR 1/2" AND 5/8" GYPSUM PRIOR TO CONSTRUCTION. FOR INTERIOR FASTENER OPTIONS SEE TABLE R102.3.5. FOR EXTERIOR FASTENER OPTIONS SEE TABLE R602.3(1). EXTERIOR GB TO BE INSTALLED VERTICALLY.
8. REQUIRED BRACED WALL LENGTH FOR EACH SIDE OF THE CIRCUMSCRIBED RECTANGLE ARE INTERPOLATED PER TABLE R602.10.3. METHOD CS-USP CONTRIBUTES ITS ACTUAL LENGTH, METHOD GB CONTRIBUTES 3/4 ITS ACTUAL LENGTH, AND METHOD PF CONTRIBUTES 1/5 TIMES ITS ACTUAL LENGTH.

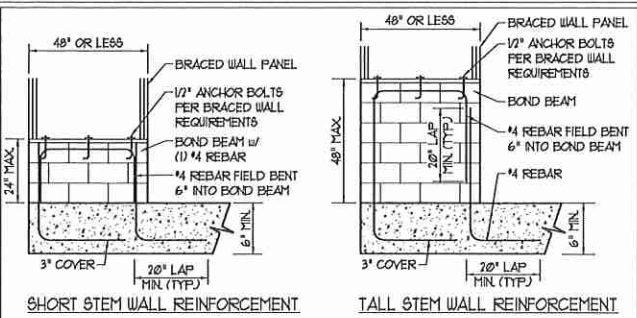


OVER CONCRETE OR MASONRY BLOCK FOUNDATION

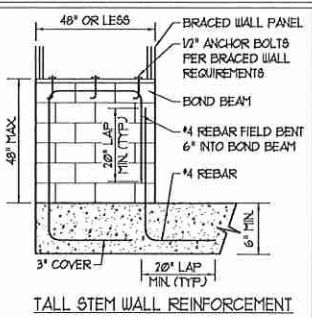


OVER RAISED WOOD FLOOR - FRAMING ANCHOR OPTION  
\* APPLICABLE w/ GREATER THAN 12" KNEE WALL HEIGHTS IN CRAWL SPACE AND ABOVE FRAMED BASEMENT WALLS \*

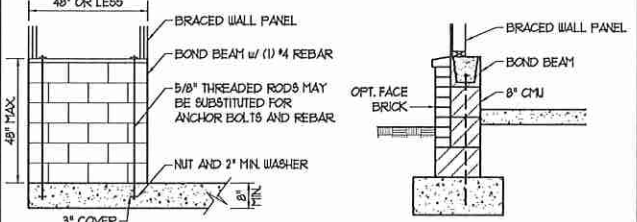
**METHOD PF-PORTAL FRAME DETAIL ①**



SHORT STEM WALL REINFORCEMENT



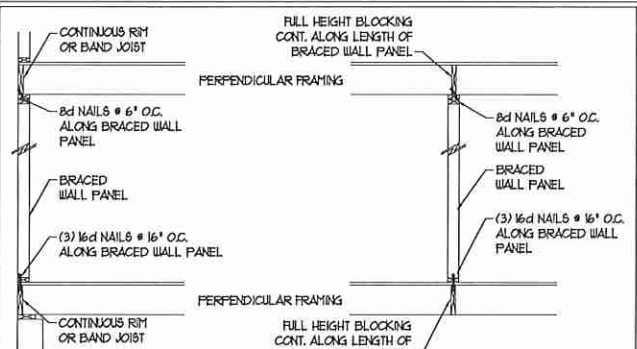
TALL STEM WALL REINFORCEMENT



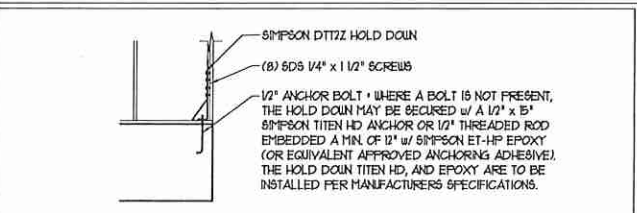
TYPICAL STEM WALL SECTION

RODS MAY BE INSTALLED USING AN ADHESIVE ANCHORING SYSTEM WITH A MINIMUM TENSILE CAPACITY OF 3150 LBS AND INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPEC'S.

OPTIONAL STEM WALL REINFORCEMENT  
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

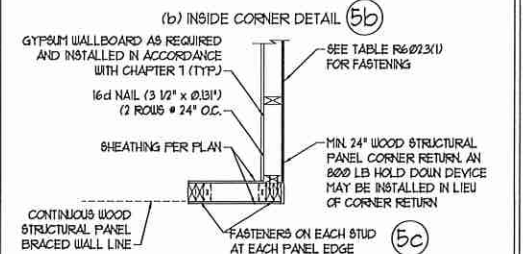
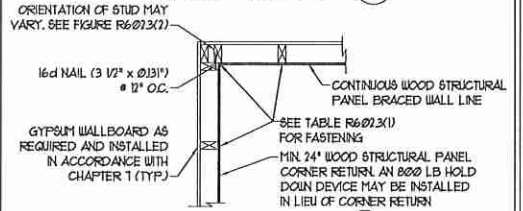
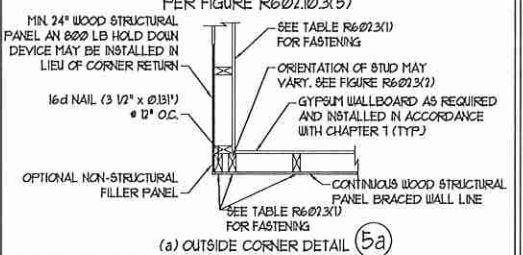


**BRACED WALL PANEL CONNECTION WHEN PERPENDICULAR TO FLOOR/CEILING FRAMING ③**  
PER FIGURE R602.10.4.4(1)



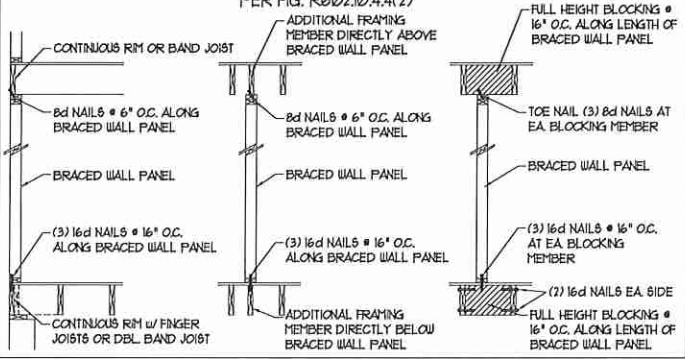
**HOLD DOWN DETAIL FOR MASONRY FOUNDATION OR MONOLITHIC SLAB ④**  
\* APPLICABLE ONLY WHERE SPECIFIED ON PLAN \*

**TYPICAL EXTERIOR CORNER FRAMING FOR CONTINUOUS SHEATHING ⑤**



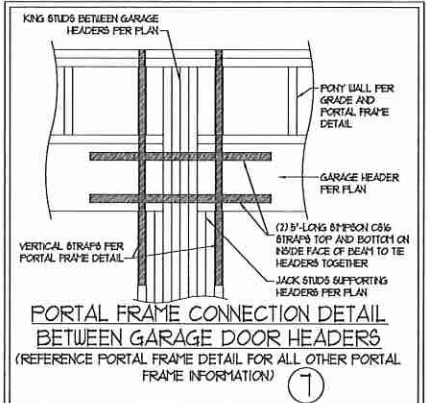
(c) GARAGE DOOR CORNER DETAIL (SEE PLAN FOR ADDITIONAL STRUCTURAL INFORMATION OR ALTERNATE CONFIGURATIONS)

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

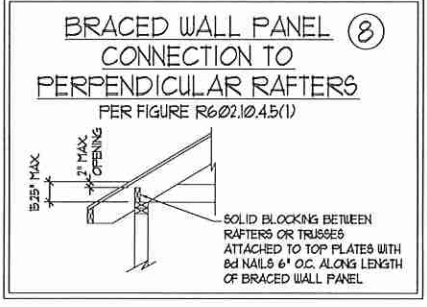


PER FIG. R602.10.4.4(2)

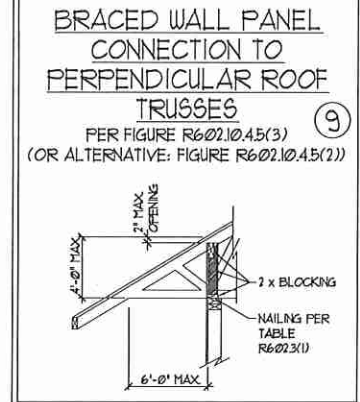
This sealed page is to be used in conjunction with a full plan set engineered by J.S. Thompson Engineering, Inc. only. Use of this individual sealed page within architectural pages or shop drawings by others is a punishable offense under N.C. Statute § 89C-23



**PORTAL FRAME CONNECTION DETAIL BETWEEN GARAGE DOOR HEADERS ⑦**  
(REFERENCE PORTAL FRAME DETAIL FOR ALL OTHER PORTAL FRAME INFORMATION)



**BRACED WALL PANEL CONNECTION TO PERPENDICULAR ROOF TRUSSES ⑧**  
PER FIGURE R602.10.4.5(3) (OR ALTERNATIVE: FIGURE R602.10.4.5(2))



PER FIG. R602.10.4.4(2)

**J.S. THOMPSON ENGINEERING, INC.**  
608 WADE AVE., SUITE 101, RALEIGH, NC 27605  
PHONE: (919) 789-1000 FAX: (919) 789-9921  
N.C. LICENSE NO.: C-1173

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

DATE: NOVEMBER 14, 2018  
SCALE: 1/4" = 1'-0"  
DRAWN BY: JST  
ENGINEERED BY: JST



D-2  
BRACED WALL NOTES AND DETAILS AND PF DETAIL

**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 I-JOIST OR FLOOR/ROOF TRUSS LAYOUT DESIGN AND ACCURACY.
  - ALL CONSTRUCTION SHALL CONFORM TO THE LATEST REQUIREMENTS OF THE NORTH CAROLINA RESIDENTIAL CODE (NRC), 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.
  - STRUCTURAL DESIGN BASED ON THE PROVISIONS OF THE NRC, 2018 EDITION (R301.4 - R301.7)
- | DESIGN CRITERIA:               | LIVE LOAD (PSF)                                   | DEAD LOAD (PSF) | DEFLECTION (IN)                  |
|--------------------------------|---|-----------------|----------------------------------|
| ATTIC WITH LIMITED STORAGE     | 20  | 10              | L/140 (L/360 w BRITTLE FINISHES) |
| ATTIC WITHOUT STORAGE          | 10  | 10              | L/360                            |
| DECKS                          | 40  | 10              | L/360                            |
| EXTERIOR BALCONIES             | 40  | 10              | L/360                            |
| FIRE ESCAPES                   | 40  | 10              | L/360                            |
| HANDRAIL 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 R301.1(4) WIND ZONE AND EXPOSURE) |                 |                                  |
| GROUND SNOW LOAD: Pg           | 20 (PSF)  |                 |                                  |
- I-JOIST SYSTEMS DESIGNED WITH 10 PSF DEAD LOAD AND DEFLECTION (IN) OF L/400
  - FLOOR TRUSS SYSTEMS DESIGNED WITH 15 PSF DEAD LOAD
- FOR 115 AND 120 MPH WIND ZONES, FOUNDATION ANCHORAGE IS TO COMPLY WITH SECTION R403.16 OF THE NRC, 2018 EDITION. FOR 130 MPH, 140 MPH, AND 150 MPH WIND ZONES, FOUNDATION ANCHORAGE IS TO COMPLY WITH SECTION 4504 OF THE NRC, 2018 EDITION.
  - ENERGY EFFICIENCY COMPLIANCE AND INSULATION VALUES OF THE BUILDING TO BE IN ACCORDANCE WITH CHAPTER II OF THE NRC, 2018 EDITION.

**FOOTING AND FOUNDATION NOTES**

- FOUNDATION DESIGN BASED ON A MINIMUM ALLOWABLE BEARING CAPACITY OF 2000 PSF. CONTACT GEOTECHNICAL ENGINEER IF BEARING CAPACITY IS NOT ACHIEVED.
- 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 1, ACCORDING TO THE UNITED SOIL CLASSIFICATION SYSTEM IN ACCORDANCE WITH TABLE R405.1 OF THE NRC, 2018 EDITION.
- 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 SAILED WITHIN 4 TO 12 HOURS OF CONCRETE FINISHING AND WALL LOCATIONS HAVE BEEN MARKED. ADJUST WHERE NECESSARY.
- CONCRETE SHALL CONFORM TO SECTION R402.2 OF THE NRC, 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.
- MASONRY UNITS TO CONFORM TO ACE 530/ASCE 5/11/15 402. MORTAR SHALL CONFORM TO ASTM C270.
- 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.
- 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.
- ALL CONCRETE AND MASONRY FOUNDATION WALLS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE PROVISIONS OF SECTION R404 OF THE NRC, 2018 EDITION OR IN ACCORDANCE WITH ACI 318, ACI 332, NCHA TR68-A OR ACE 530/ASCE 5/11/15 402. MASONRY FOUNDATION WALLS ARE TO BE REINFORCED PER TABLE R404.1(1), R404.1(2), R404.1(3), OR R404.1(4) OF THE NRC, 2018 EDITION. CONCRETE FOUNDATION WALLS ARE TO BE REINFORCED PER TABLE R404.1(5) OF THE NRC, 2018 EDITION. STEEP CONCRETE FOUNDATION WALLS TO 2 x 6 FRAMED WALLS AT 16" O.C. WHERE GRADE PERMITS (NO).

This sealed page is to be used in conjunction with a full plan set engineered by J.S. Thompson Engineering, Inc. only. Use of this individual sealed page within architectural pages or shop drawings by others is a punishable offense under N.C. Statute § 89C-23

**FRAMING NOTES**

- ALL FRAMING LUMBER SHALL BE #2 SFF MINIMUM (Fb = 815 PSI, Fv = 315 PSI, E = 1600000 PSI) UNLESS NOTED OTHERWISE (INO). ALL TREATED LUMBER SHALL BE #1 SYP MINIMUM (Fb = 515 PSI, Fv = 115 PSI, E = 1600000 PSI) UNLESS NOTED OTHERWISE (INO).
- LAMINATED VENEER LUMBER (LVL) SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES: Fb = 2600 PSI, Fv = 205 PSI, E = 1800000 PSI. LAMINATED STRAND LUMBER (LSL) SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES: Fb = 2375 PSI, Fv = 310 PSI, E = 5500000 PSI. PARALLEL STRAND LUMBER (PSL) UP TO 7" DEPTH SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES: Fb = 2500 PSI, E = 18000000 PSI. PARALLEL STRAND LUMBER (PSL) MORE THAN 7" DEPTH SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES: Fb = 2500 PSI, E = 20000000 PSI. INSTALL ALL CONNECTIONS PER MANUFACTURER'S SPECIFICATIONS.
- STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING ASTM SPECIFICATIONS
 

|                                |                                |
|--------------------------------|--------------------------------|
| A. W AND WT 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 |
- STEEL BEAMS SHALL BE SUPPORTED AT EACH END WITH A MINIMUM BEARING LENGTH OF 3 1/2' AND FULL FLANGE WIDTH (INO). PROVIDE SOLID BEARING FROM BEAM SUPPORT TO FOUNDATION. BEAMS SHALL BE ATTACHED AT THE BOTTOM FLANGE TO EACH SUPPORT AS FOLLOWS (INO):
 

|                            |   |
|----------------------------|---|
| 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" DIA x 4" LONG SIMPSON TITEN HD ANCHORS |

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 3/16" DIAMETER HOLES @ 16" O.C.
- 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.
- ALL LOAD BEARING HEADERS TO CONFORM TO TABLE R602.1(1) AND R602.1(2) OF THE NRC, 2018 EDITION OR BE (2) 2 x 6 WITH (1) JACK AND (1) KING STUD EACH END (INO), 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 (INO). INSTALL KING STUDS PER SECTION R602.15 OF THE NORTH CAROLINA RESIDENTIAL CODE, 2018 EDITION.
- 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 (INO). 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 (INO). BEAM ENDS THAT BUTT INTO ONE ANOTHER ARE TO EACH BEAR EQUAL LENGTHS (INO).
- 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 (INO).
- 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.
- 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.
- 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.
- 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 (INO). 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 (2) 2 x 10 BLOCKING INSTALLED w/ (4) 8d NAILS EA. PLY BETWEEN WALL STUDS WITH (2) ROWS OF 1/2" LAG SCREWS AT 12" O.C. STAGGERED AND IN ACCORDANCE WITH SECTION R103.2(2) OF THE NRC, 2018 EDITION.
- 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 (INO).
- 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 (INO).
- ALL 4 x 4 AND 6 x 6 POSTS TO BE INSTALLED WITH 1000 LB CAPACITY UPLIFT CONNECTORS TOP AND BOTTOM (INO). POSTS MAY BE SECURED USING ONE SIMPSON H6 OR L180 UPLIFT CONNECTOR FASTENED TO THE BAND AT THE BOTTOM AND THE BEAM AT THE TOP OF EACH POST. ONE 1/2" SECTION OF SIMPSON C86 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.

**J.S. THOMPSON ENGINEERING, INC.**  
 605 WADE AVE., SUITE 104, RALEIGH, NC 27605  
 PHONE: (919) 789-9919 FAX: (919) 789-9921  
 N.C. LICENSE NO. C-1173

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

DATE: NOVEMBER 14, 2018  
 SCALE: 1/4" = 1'-0"  
 DRAWN BY: JES  
 ENGINEERED BY: JST



S-0  
 STRUCTURAL  
 NOTES