

**REAR ELEVATION**  
SCALE: -----1/4" = 1'-0"



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

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**ATTIC VENTILATION**  
2025 = 6.75 sq. ft. REQD.  
3000  
\* ( ) - BASE / VENTS =  
\* ( ) - BASE / VENTS =  
\* (58') - RIDGE VENT @ 9 sq.in./ft. = 3.62 SQ. FT.  
TOTAL = 3.62 SQ. FT.  
  
\*\* PROVIDE CONTINUOUS SOFFIT VENT SURROUND TO EQUAL OR EXCEED 3.31 SQ. FT.  
\*\*\* (OPT.) PROVIDE THERMOSTATICALLY CONTROLLED POWER VENT TO EQUAL OR EXCEED 3.31 SQ. FT.

**CODE INFORMATION**  
\* ZONE: (CHECK ONE)  
ZONE 1  
ZONE 2  
ZONE  
\* GLAZING U-FACTOR  
\* R-VALUES  
CEILING R-38  
WALL R-15  
FLOOR R-19  
BENT. WALL  
SLAB PERIMETER  
CRAWL SPACE WALL  
\* MEAN ROOF HEIGHT 30'-1"  
\* WALL AND ROOF CLADDING DESIGN VALUE: (MEAN ROOF HGT. 30 FT. OR LESS)  
CRAWL SPACE WALL  
WALLS +8.0, -24.1  
ROOF PITCH 0/12 TO 225/12 +10.0, -45.4  
ROOF PITCH 225/12 TO 1/12 +10.4, -34.8  
ROOF PITCH 1/12 TO 12/12 +16.5, -21.0  
EXPOSURE ADJUSTMENT x 1.05



MURPHY GARNOW DESIGN GROUP, INC.  
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HALCYON HOMES  
PRINCE PLACE  
LOT #65

DRAWN BY: TUG  
DATE: 1-6-11  
FILE NAME: HH-2-2T56  
REVISIONS  
1-8-21 TUG PLAN  
6-8-11 TUG PLAN  
6-26-11 TUG PLAN  
6-6-15 TUG PLAN

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HOUSE NAME: KEMPTON V

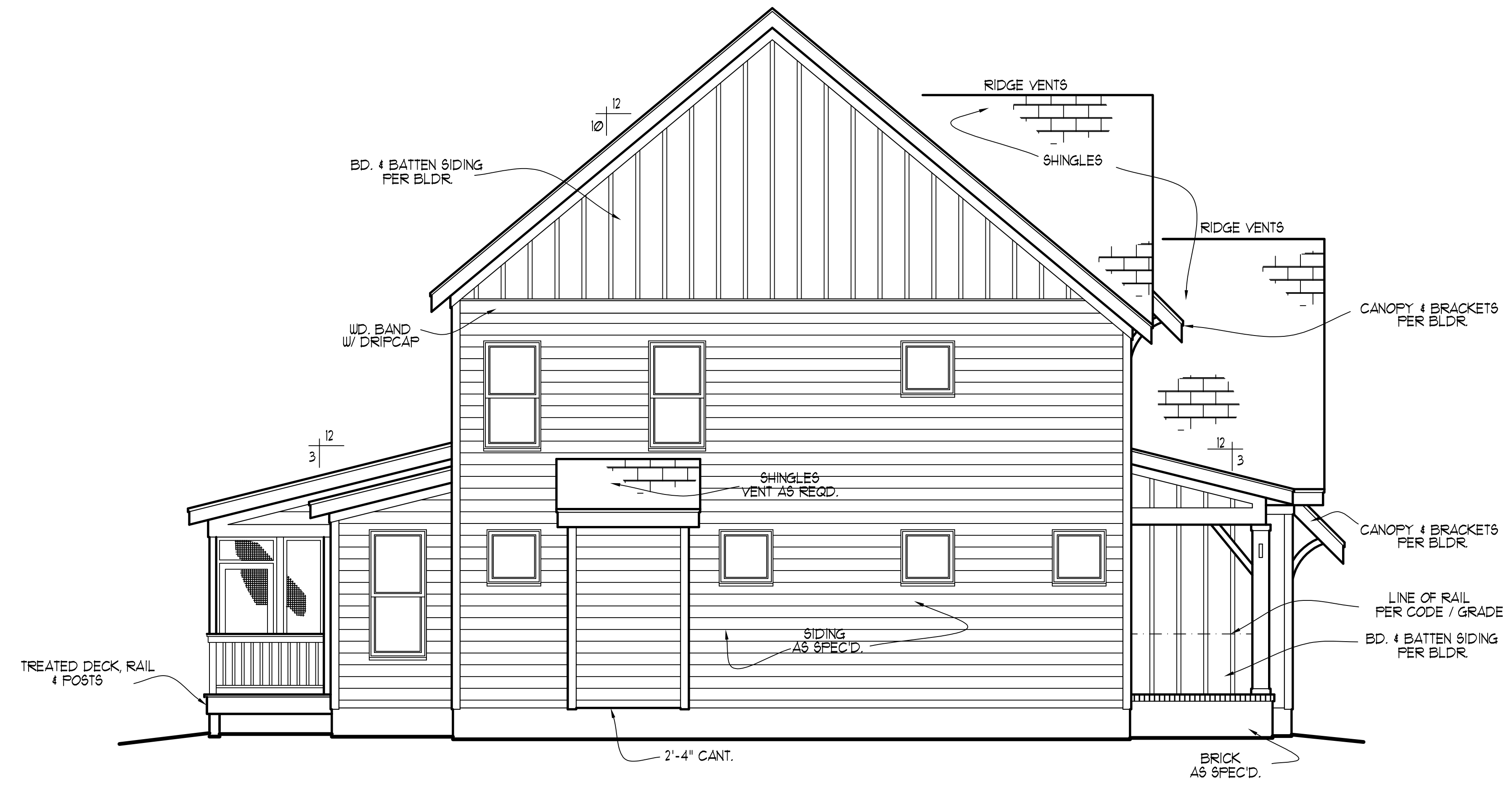
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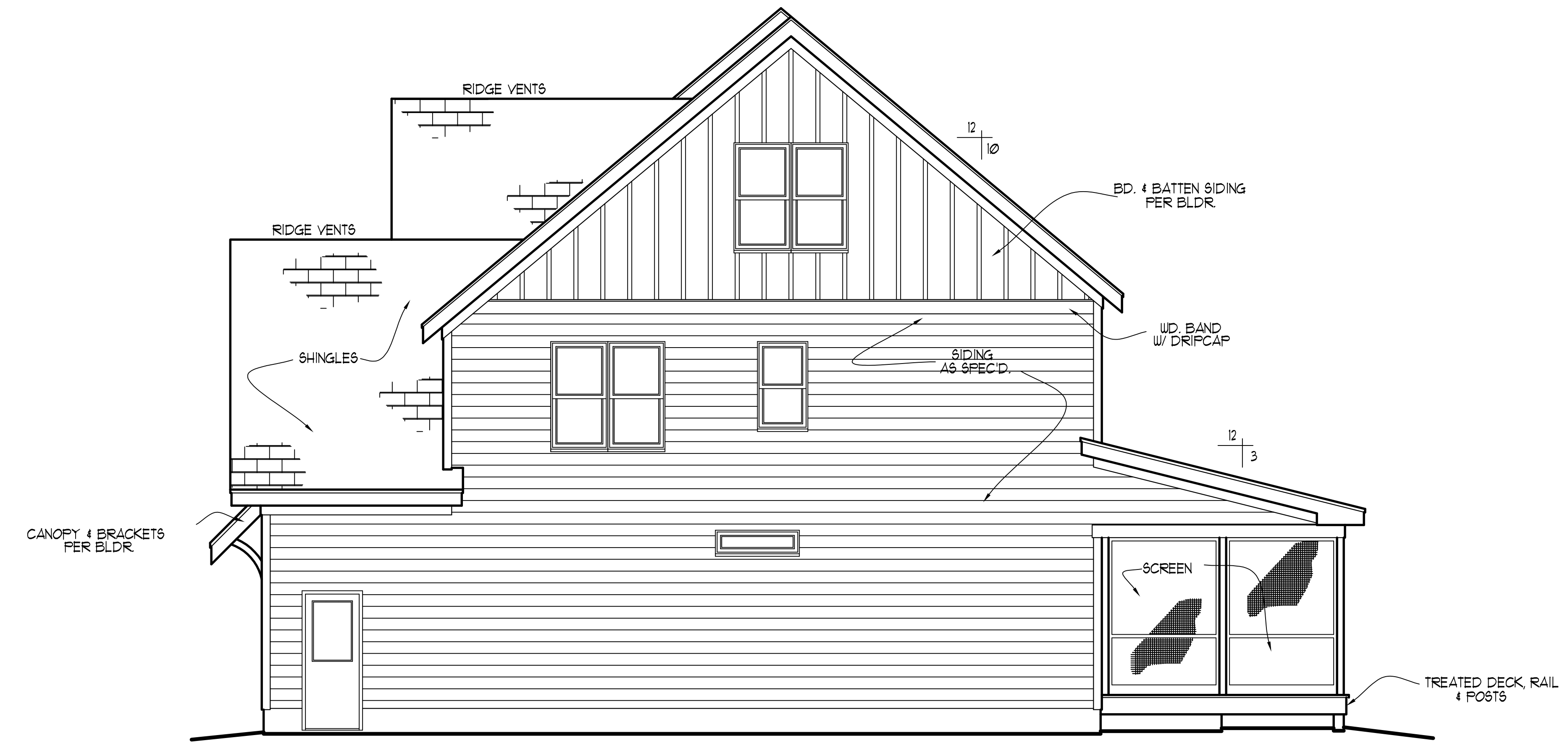
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**LEFT ELEVATION**  
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**RIGHT ELEVATION**  
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THESE PLANS MEET THE REQUIREMENTS OF THE INTERNATIONAL RESIDENTIAL CODE '2015' AND THE NORTH CAROLINA RESIDENTIAL CODE '2018' EDITION.

**FRAMING NOTE:** THIS PLAN IS DESIGNED FOR SPF #2 LUMBER. PLEASE NOTE THAT 5YP #2 LUMBER IS STRUCTURALLY INFERIOR TO 5PF #2 IN MOST SITUATIONS AND ANY SUBSTITUTION TO 5YP #2 IS AT THE DISCRETION OF THE BUILDER. HOWEVER, PLEASE NOTE THE FOLLOWING MAX. RECOMMENDED SPANS FOR 5YP #2 JOISTS FOR 40 PSF LIVE LOAD AND 10 PSF DEAD LOAD.  
 - 2X10 5YP #2 @ 16" O.C. - 13'-6" (MAX)  
 - 2X10 5YP #2 @ 12" O.C. - 15'-3" (MAX)

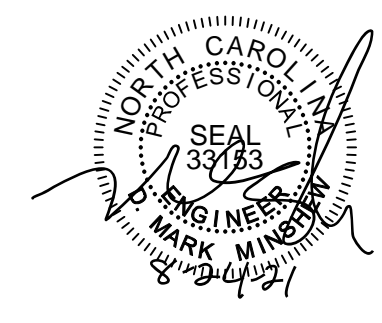
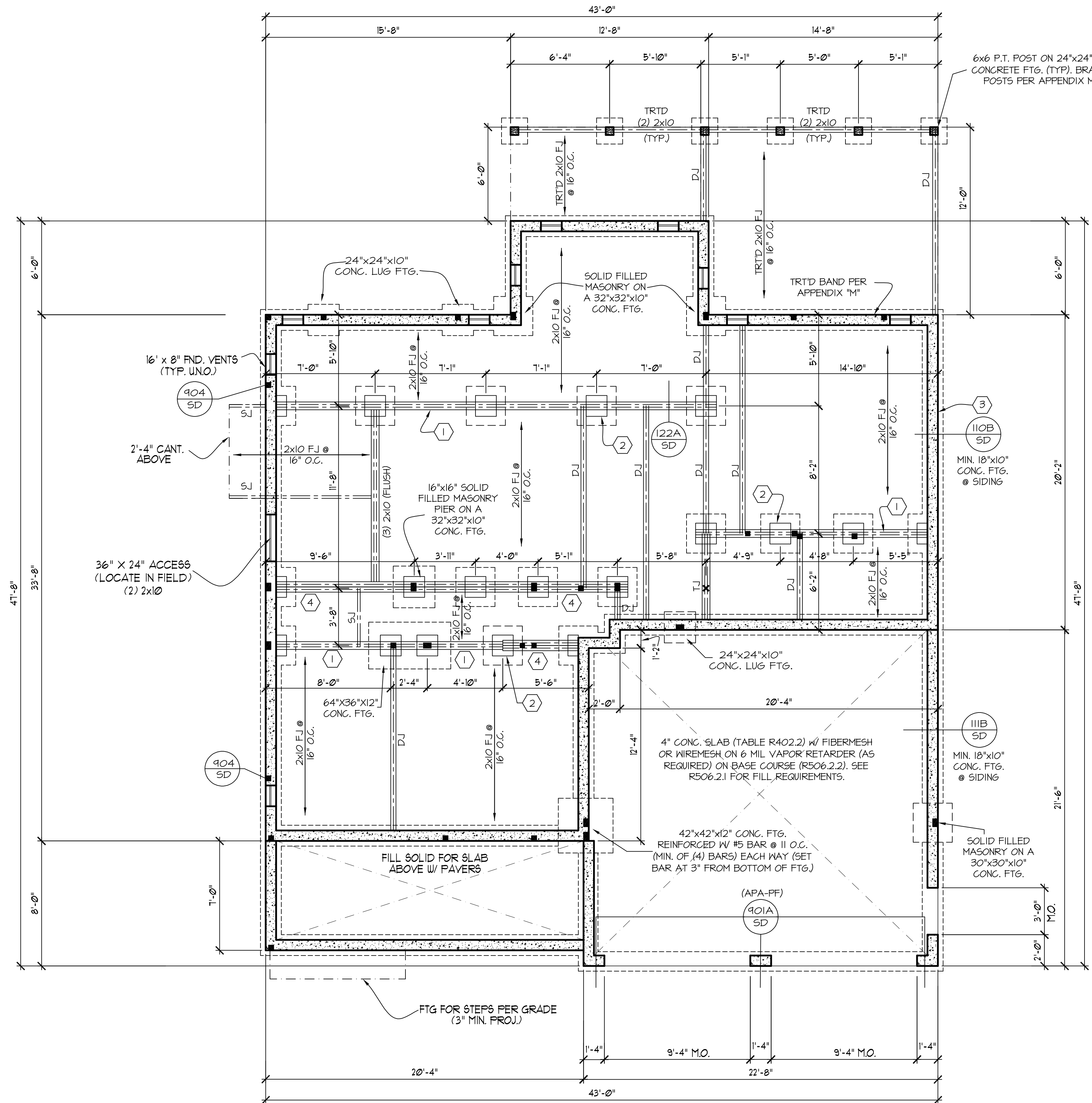
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**FND. VENTILATION**  
 1224 ± 8 1/8 SQ. FT. REQUIRED:  
 1500  
 OR  
 1224 ± 81 SQ. FT. REQUIRED:  
 1500  
 WITH APPROVED VAPOR RETARDER MATERIAL AND OPENINGS PLACED FOR CROSS VENTILATION  
 \* ONE VENTILATION OPENING SHALL BE WITHIN 3 FEET OF EACH CORNER OF THE BUILDING

**FOUNDATION STRUCTURAL NOTES**  
 NC (2018 NCRC): Wind: 115-120 mph - CRAWL

- (3) 2x10 SPF#2 GIRDER, TYPICAL UNO.
- CONCRETE BLOCK PIER SIZE SHALL BE:  
 SIZE HOLLOW SOLID  
 8x16 UP TO 32" UP TO 5'-0"  
 12x16 UP TO 45" UP TO 4'-0"  
 16x16 UP TO 64" UP TO 12'-0"  
 24x24 UP TO 96" UP TO 46"  
 WITH 30" x 30" x 10" CONCRETE FOOTINGS, UNO.
- WALL FOOTINGS AS FOLLOWS  
 DEPTH: 8" - UP TO 2 STORY  
 10" - 3 STORY  
 WIDTH:  
 SIDING: 16" - UP TO 2 STORY  
 18" - 3 STORY  
 BRICK: 16" - 1 STORY  
 20" - 2 STORY  
 24" - 3 STORY
- FOR FOUNDATION WALL HEIGHT AND BACKFILL REQUIREMENTS, REFER TO CODE TABLE R404.1.1 (1 THRU 4) NOTE. ASSUMED SOIL BEARING CAPACITY = 2000 PSF. CONTRACTOR MUST VERIFY SITE CONDITIONS AND CONTACT SOILS ENGINEER IF MARGINAL OR UNSTABLE SOILS ARE ENCOUNTERED.
- (4) 2x10 SPF #2 GIRDER  
 (2) 1.75x9.25 LVL OR LSL GIRDER  
 (3) 1.75x9.25 LVL OR LSL GIRDER
- \*■ DESIGNATES A SIGNIFICANT POINT LOAD TO HAVE SOLID BLOCKING TO PIER. SOLID BLOCK ALL BEAM BEARING POINTS NOTED TO HAVE THREE OR MORE STUDS TO FND, TYPICAL.
- ABBREVIATIONS:  
 "S.I." = SINGLE JOIST  
 "D.J." = DOUBLE JOIST  
 "T.J." = TRIPLE JOIST
- ADJUST SUBFLOOR THICKNESS OR JOIST SPACING AS REQ'D FOR FLOOR FINISH MATERIALS.



REFER TO "SD" SHEET(S) FOR STANDARD DETAILS, BRACING DETAILS AND STRUCTURAL NOTES.

STRUCTURAL DESIGN BY:  
 SOUTHERN ENGINEERS, P.A.  
 3716 BENSON DRIVE RALEIGH, NC 27609  
 LICENSE: C-4772, PHONE: 919-878-1617  
 PROJECT #: 21-2910

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 Any deviations or discrepancies on plans are to be brought to the immediate attention of Southern Engineers. Failure to do so will void Southern Engineer's liability.  
 Seal is valid for a project permitted within one year from date of seal.  
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**FOUNDATION PLAN**  
 SCALE: ----- 1/4"=1'-0"

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HALCYON HOMES  
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 LOT #65

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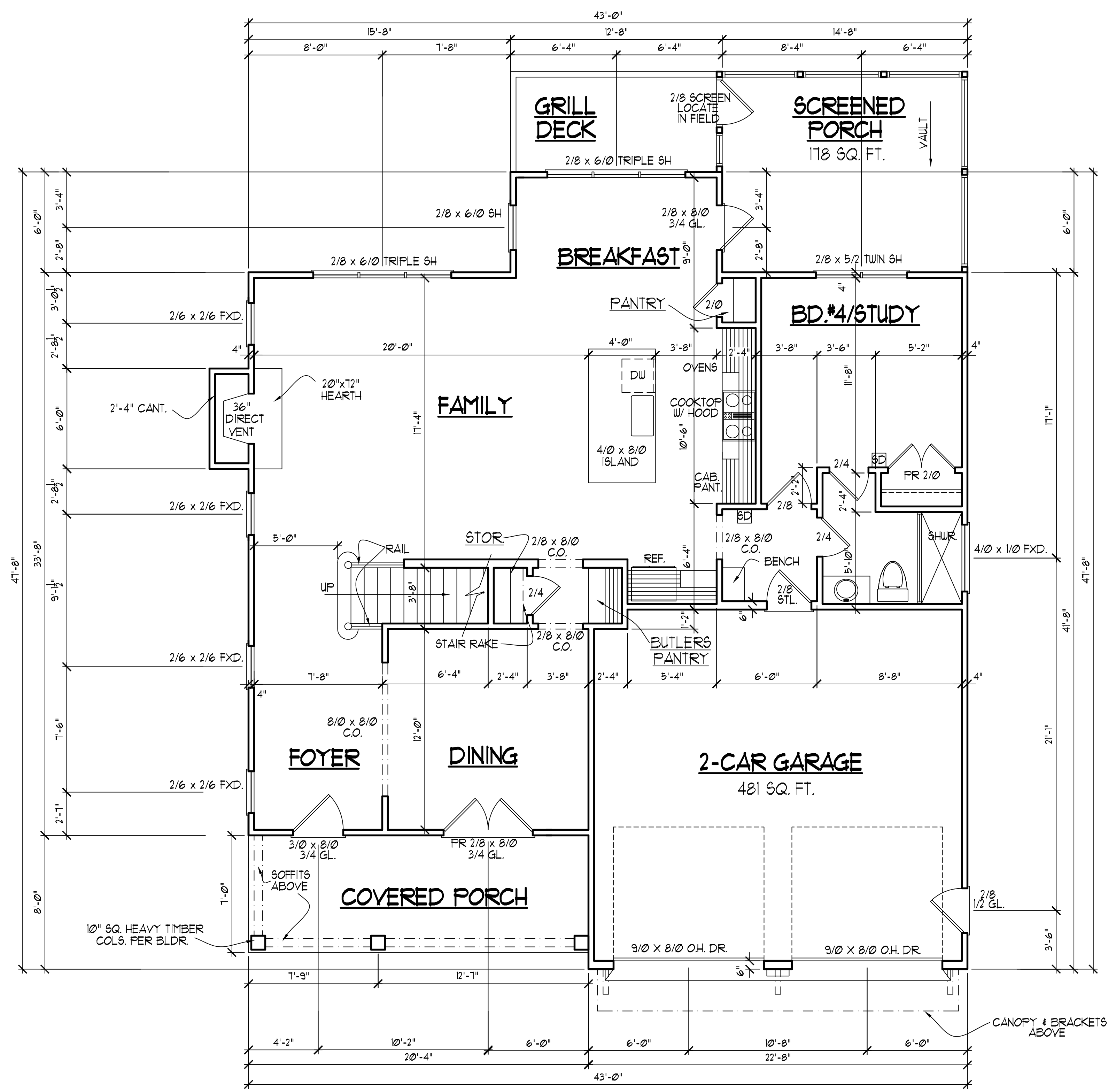
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- FIRST FLOOR NOTES:**
- 1) 9'-0" CLG. HGT. (TYP.) UNO.
  - 2) SET WINDOWS @ 1'-10" AFF. (TYP.) UNO.
  - 3) STAIRS: UP 15 RISERS @ 8" (+ -) (VERIFY W/ FLR. SYSTEM SPEC'D. BY ENG.) (TYP.) UNO.
  - 4) PROVIDE 5/8" TYPE 'X' GYPSUM @ GARAGE CEILING ADJACENT TO HTD. SPACES. PROVIDE 1/2" GYPSUM @ GARAGE WALLS ADJACENT TO HTD. SPACES.
  - 5) ALL WALLS FIGURED AT 4" WIDTHS FOR STUDS, 3" WIDTHS FOR STUD/BRICK (TYP.) UNO.
  - 6) VERIFY ROUGH OPNG'S, SPECS. FOR CODE REQUIREMENTS WITH WINDOW MANUF.
  - 7) SD = SMOKE DETECTOR
  - 8) ALL INT. DOORS TO BE 8'-0" HGT. (VERIFY W/ BLDG.)

**SQUARE FOOTAGE**

	HTD.	UNHTD.
* BSMT.		
* FIRST FLR.	1224	481
* SECOND FLR.	1532	
* ATTIC (3rd. FLR.)		931
<b>TOTAL</b>	<b>2756</b>	<b>1412</b>
<b>MISC.</b>		
* COVERED PORCH		142
* SCREENED PORCH		178
* GRILL DECK		14
*		
*		

**WINDW. FALL PROTECTION NOTES:**  
 SEE CODE SECTIONS R612 THRU R612.4 FOR WINDOW FALL PROTECTION DEVICE REQUIREMENTS IF WINDOW SILL IS LESS THAN 24" ABV. FLR. WITH A 6'-0" OR GREATER DISTANCE TO A SURFACE OUTSIDE AND BELOW THE WINDOW.

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**FIRST FLOOR PLAN**  
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**SECOND FLOOR NOTES:**  
 1) 9'-0" CLG. HGT. (TYP.) UNO.  
 2) SET WINDOWS @ 1'-4" AFF. (TYP.) UNO.  
 3) STAIRS: UP 15 RISERS @ 8" (+) (TYP.) UNO.  
 4) ALL WALLS FIGURED AT 4" WIDTHS FOR STUDS, 9" WIDTHS FOR STUD/BRICK (TYP.) UNO.  
 5) VERIFY ROUGH OPNG'S, SPECS. FOR CODE REQUIREMENTS WITH WINDOW MANUF.  
 6) SD = SMOKE DETECTOR

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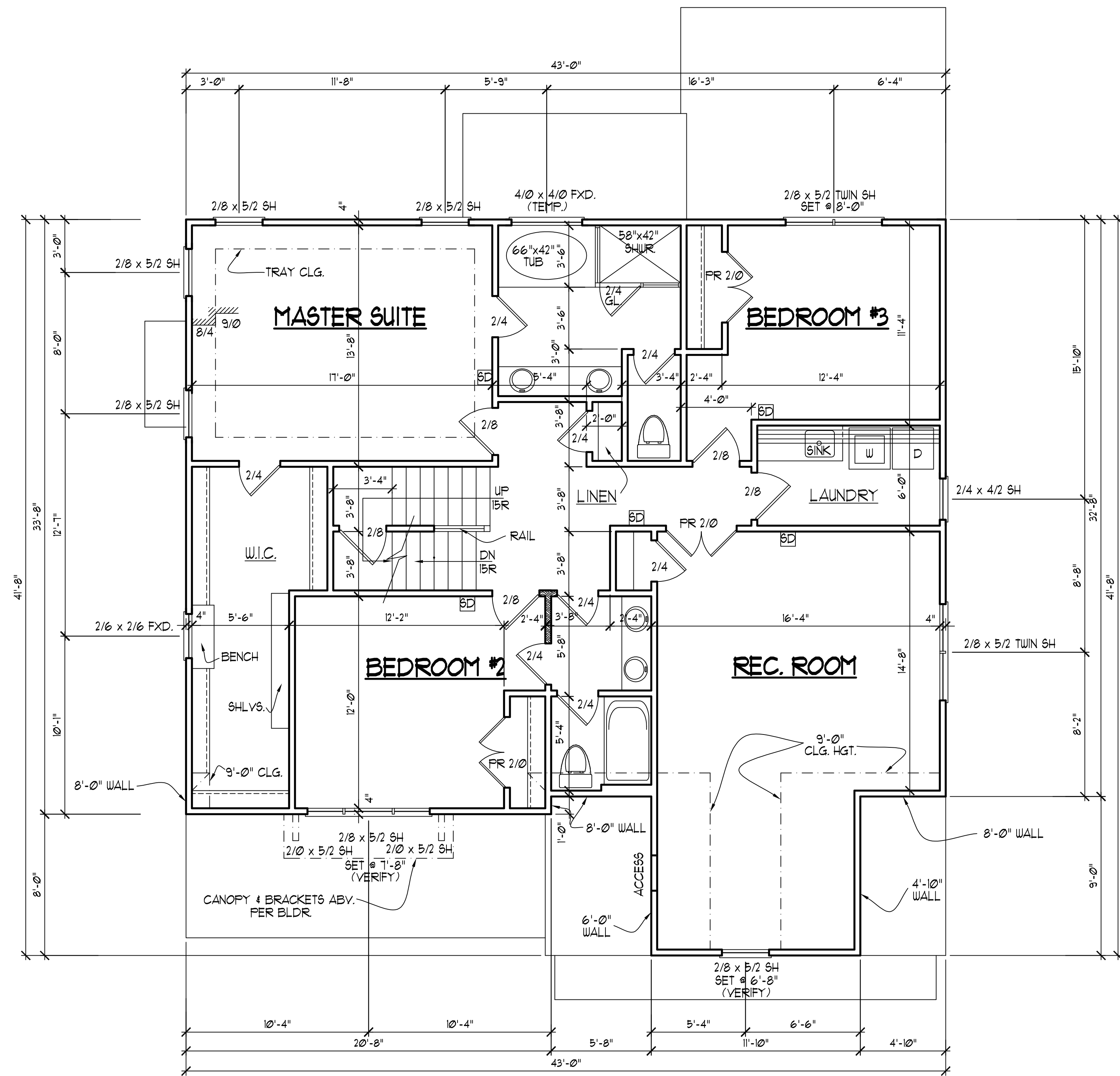
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**SECOND FLOOR PLAN**  
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**ATTIC FLOOR PLAN**

- 1) 9'-0" CLG. HGT. (TYP.) UNO.
- 2) SET WINDOWS @ 1'-4" AFF. (TYP.) UNO.
- 3) ALL WALLS FIGURED AT 4" WIDTHS FOR STUDS, 9" WIDTHS FOR STUD/BRICK (TYP.) UNO.
- 4) VERIFY ROUGH OPNG S, SPECS. FOR CODE REQUIREMENTS WITH WINDOW MANUF.
- 5) SD = SMOKE DETECTOR

**FRAMING NOTES**

- NC (2018 NCRG); Wind: 115-120 mph
1. BRACING METHOD AND TYPE: CONTINUOUSLY SHEATHED WSP. CS-WSP. NOTE THAT THE WALL BRACING AMOUNT PROVIDED ON THE PLANS (DETAILS AND SPECIFICATIONS) IS GREATER THAN THE AMOUNT OF WALL BRACING REQUIRED BY THE CODE. SEE NOTES BELOW FOR DETAILS AND SPECIFICATIONS FOR WALL BRACING AND WALL FRAMING.
  2. EXTERIOR WALL SHEATHING: WALLS SHALL BE BRACED BY SHEATHING WALLS ON ALL STORIES WITH WOOD STRUCTURAL PANEL SHEATHING (WSP) (EXPOSURE B, 7/16" EXPOSURE C, 15/32"). SHEATHING SHALL BE ATTACHED WITH 8d NAILS AT A 6"/12" NAILING PATTERN (6" OC AT PANEL EDGES AND 12" OC AT INTERMEDIATE SUPPORTS). INSTALL BLOCKING AT ALL PANEL EDGES.
  3. WSP SHEATHING SHALL EXTEND TO THE UPPERMOST DOUBLE BEARING PLATE. BLOCK AT ROOF AND ATTACH BRACED WALLS PER CODE. WSP SHEATHING BETWEEN FLOORS SHALL BE SPICED ALONG CONTINUOUS BAND OR THE WSP SHEATHING MAY BE SPICED ACROSS STUDS (CONTINUOUS ACROSS FLOOR SYSTEM) WITH BLOCKING AT PANEL EDGES. (MINIMUM 12" BEYOND FLOOR BREAK) OR OTHER APPROVED METHOD.
  4. "HD" = HOLDDOWN HOLD-DOWN DEVICE (NOTED AS "HD" ON PLANS) SHALL BE AN 800 POUND CAPACITY ASSEMBLY AS NOTED ON PLANS. SEE DETAILS FOR HD ASSEMBLY.
    - \*GROUND/FIRST FLOOR: USE "HD HOLD-DOWN DETAIL" ON SD SHEET (OR EQUIV.)
    - \*UPPER FLOORS: ATTACH BASE OF KING STUD WITH A SIMPSON C522 STRAP DOWN ACROSS THE BAND AND DOWN TO A STUD BELOW OR HEADER BELOW. EXTEND STRAP 1" MIN ALONG EACH STUD (OR HEADER) AND ATTACH EACH END W/ (7) 8d NAILS.
  5. INTERIOR BRACED WALL: (NOTED AS "IBW" ON PLANS) ATTACH 1/2" GYPSUM BOARD (GB) ON EACH SIDE OF WALL WITH A MIN. OF 5d COOLER NAILS OR #6 SCREWS @ 1" OC ALONG THE EDGES AND AT INTERMEDIATE SUPPORTS.
  6. INTERIOR BRACED WALL-WOOD STRUCTURAL PANEL: (NOTED AS "IBW-WSP" ON PLANS) ATTACH ONE SIDE WITH 3/4" WSP SHEATHING WITH 8d NAILS AT A 6"/12" NAILING PATTERN (6" OC AT PANEL EDGES AND 12" OC AT INTERMEDIATE SUPPORTS). INSTALL BLOCKING AT ALL PANEL EDGES. ATTACH GB OVER WSP AS REQUIRED. ATTACH OPPOSITE SIDE WITH 1/2" GB WITH A MIN. OF 5d COOLER NAILS OR #6 SCREWS @ 1" OC ALONG THE EDGES AND AT INTERMEDIATE SUPPORTS.

FRAMING NOTE: ALL DIMENSIONAL LUMBER ON THIS SHEET MAY BE SPF #2 OR SYP #2, UNLESS SPECIFICALLY NOTED OTHERWISE.

**HEADER/BEAM & COLUMN NOTES**

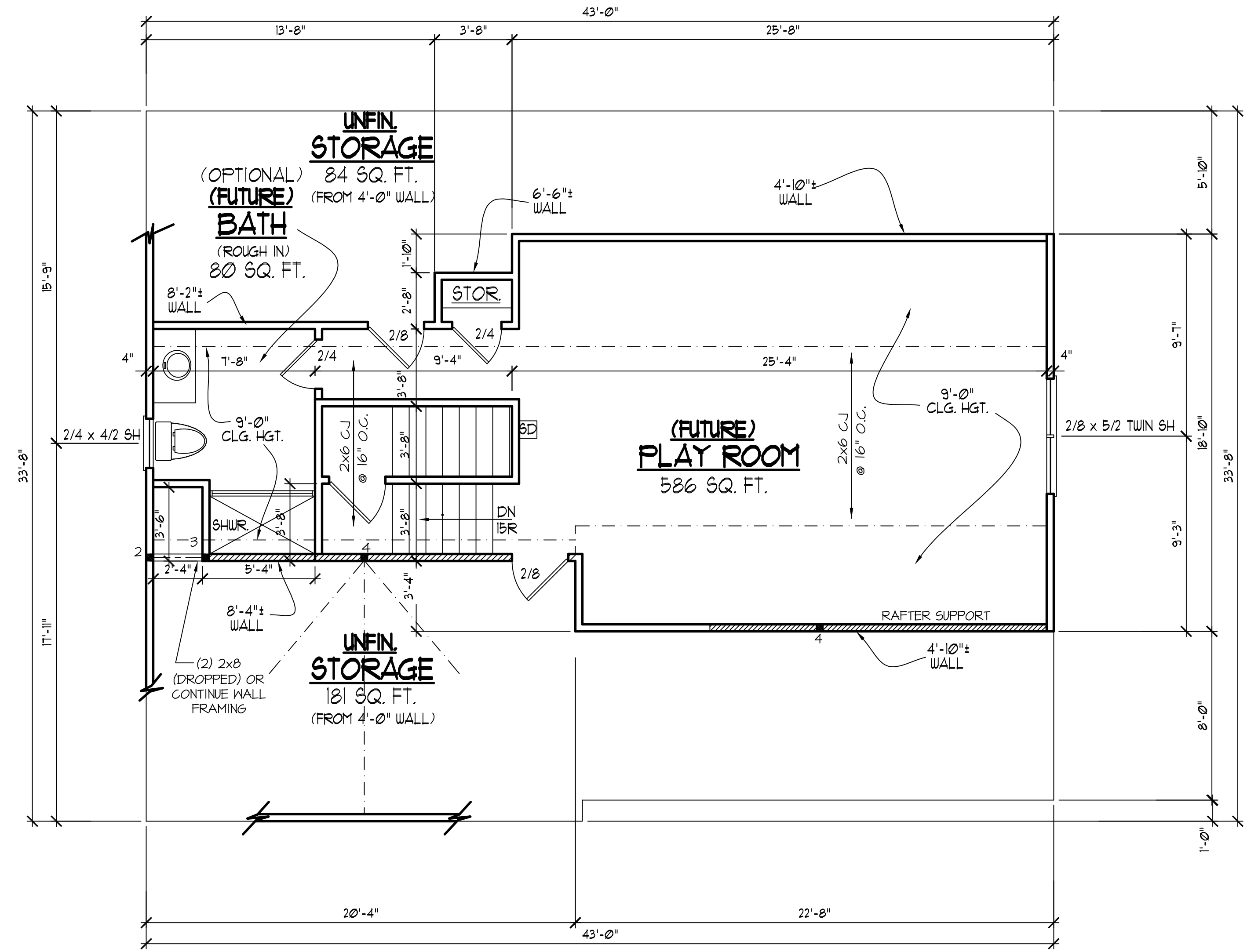
1. ALL EXTERIOR AND LOAD BEARING HEADERS SHALL BE MIN. (2)2x6 (4" WALL) OR (3)2x6 (6" WALL) WITH (1) SUPPORT STUD, UNLESS NOTED OTHERWISE.
2. THE NUMBER SHOWN AT BEAM AND HEADER SUPPORTS INDICATES THE NUMBER OF SUPPORT STUDS REQUIRED IN STUD POCKET OR COLUMN. THE NUMBER OF KING STUDS AT EACH END OF HEADERS IN EXTERIOR WALLS SHALL BE ACCORDING TO ITEM "d" IN TABLE R602.3(5) OR AS BELOW PER NCDOT COMMENTARY "KING STUDS AT WALL OPENINGS" REVISED 1-9-2020.
  - UP TO 3' SPAN: (1) KING STUD
  - OVER 3' UP TO 6' SPAN: (2) KING STUDS
  - OVER 6' UP TO 9' SPAN: (3) KING STUDS
  - OVER 9' UP TO 12' SPAN: (4) KING STUDS
  - OVER 12' UP TO 15' SPAN: (5) KING STUDS

REFER TO "SD" SHEET(S) FOR STANDARD DETAILS, BRACING DETAILS AND STRUCTURAL NOTES.

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3716 BENSON DRIVE RALEIGH, NC 27609  
LICENSE: C-4772, PHONE: 919-878-1617  
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NC (2018 NRCG); Wind: 115-120 mph

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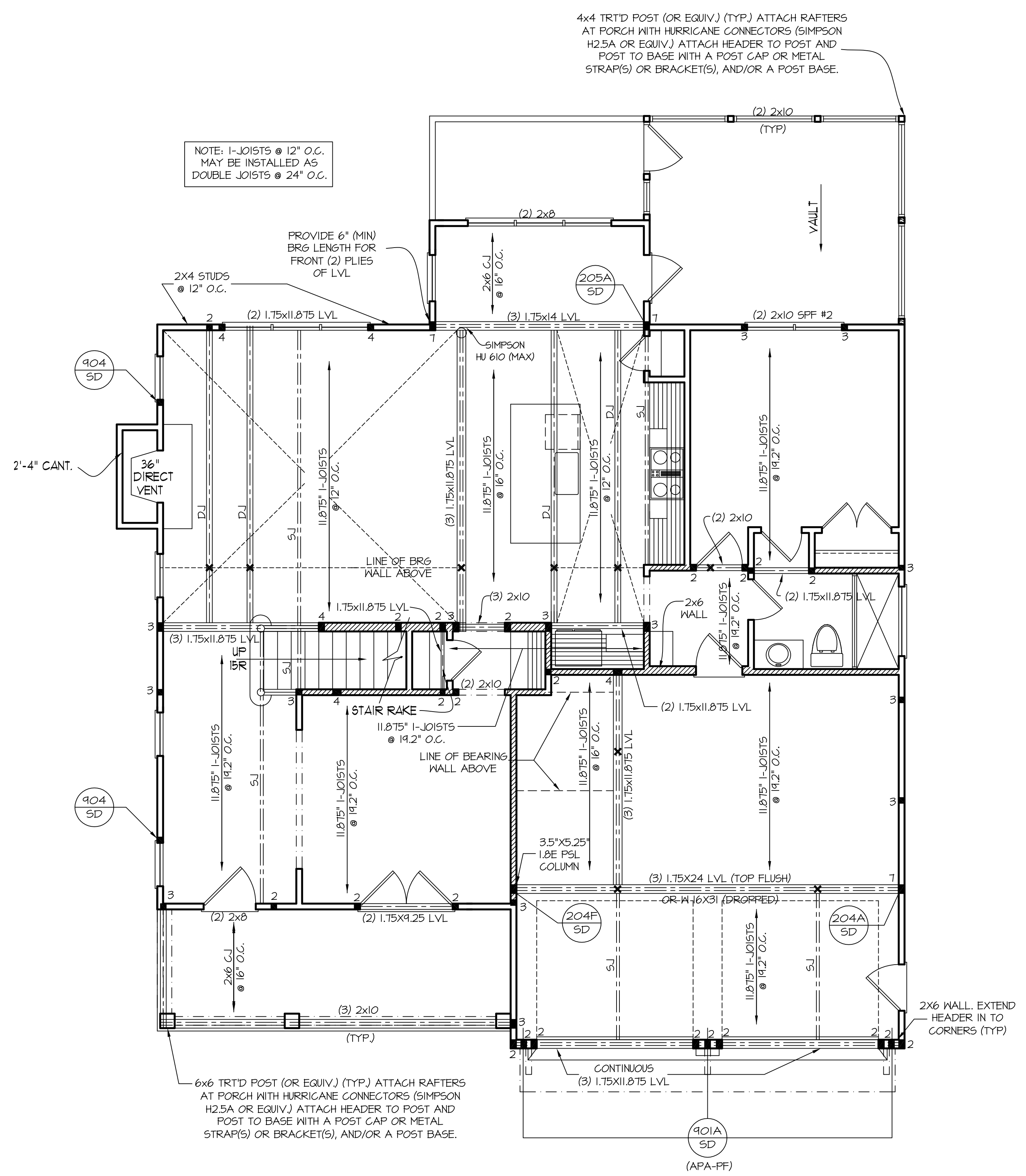
**WOOD "I" JOISTS**

- (SHALL BE ONE OF THE FOLLOWING):
- TJI 210 BY I-LEVEL
  - LFI 20 PLUS BY LP
  - BCI 5000S 1.8 BY BC
- ALL WOOD "I" JOISTS SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
- INSTALL SQUASH BLOCKS, WEB STIFFENERS, ETC. AS REQUIRED BY AND ACCORDING TO THE I-JOIST MANUFACTURER'S SPECIFICATIONS AND INSTRUCTIONS.
- HANGERS FOR I-JOISTS ARE THE RESPONSIBILITY OF THE I-JOIST SUPPLIER.
- ADJUST SUBFLOOR THICKNESS OR JOIST SPACING AS REQ'D FOR FLOOR FINISH MATERIALS

**HEADER/BEAM & COLUMN NOTES**

- ALL EXTERIOR AND LOAD BEARING HEADERS SHALL BE MIN. (2)2x6 (4" WALL) OR (3)2x6 (6" WALL) WITH (1) SUPPORT STUD, UNLESS NOTED OTHERWISE.
- THE NUMBER SHOWN AT BEAM AND HEADER SUPPORTS INDICATES THE NUMBER OF SUPPORT STUDS REQUIRED IN STUD POCKET OR COLUMN. THE NUMBER OF KING STUDS AT EACH END OF HEADERS IN EXTERIOR WALLS SHALL BE ACCORDING TO ITEM "d" IN TABLE R602.3(5) OR AS BELOW PER NCDOL COMMENTARY "KING STUDS AT WALL OPENINGS" REVISED 1-4-2020:
  - UP TO 3' SPAN: (1) KING STUD
  - OVER 3' UP TO 6' SPAN: (2) KING STUDS
  - OVER 6' UP TO 9' SPAN: (3) KING STUDS
  - OVER 9' UP TO 12' SPAN: (4) KING STUDS
  - OVER 12' UP TO 15' SPAN: (5) KING STUDS

FRAMING NOTE: ALL DIMENSIONAL LUMBER ON THIS SHEET MAY BE SPF #2 OR 5YP #2, UNLESS SPECIFICALLY NOTED OTHERWISE.



REFER TO "SD" SHEET(S) FOR STANDARD DETAILS, BRACING DETAILS AND STRUCTURAL NOTES.

STRUCTURAL DESIGN BY: SOUTHERN ENGINEERS, P.A. 3716 BENSON DRIVE RALEIGH, NC 27609 LICENSE: C-4772, PHONE: 919-878-1617 PROJECT #: 21-2910



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**FIRST FLOOR CEILING STRUCTURAL PLAN**  
SCALE: ----- 1/4" = 1'-0" 9'-0" CLG. HGT.

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HALCYON HOMES  
PRINCE PLACE  
LOT #65

DRAWN BY: TUG  
DATE: 1-6-11  
FILE NAME: HH-2-2T56

REVISIONS	
1-8-21	TUG PLAN
6-8-11	TUG PLAN
6-26-11	TUG PLAN
6-6-15	TUG PLAN

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HOUSE NUMBER:

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PRINCE PLACE  
LOT #65

**FRAMING NOTES**

NC (2018 NRCG); Wind: 115-120 mph

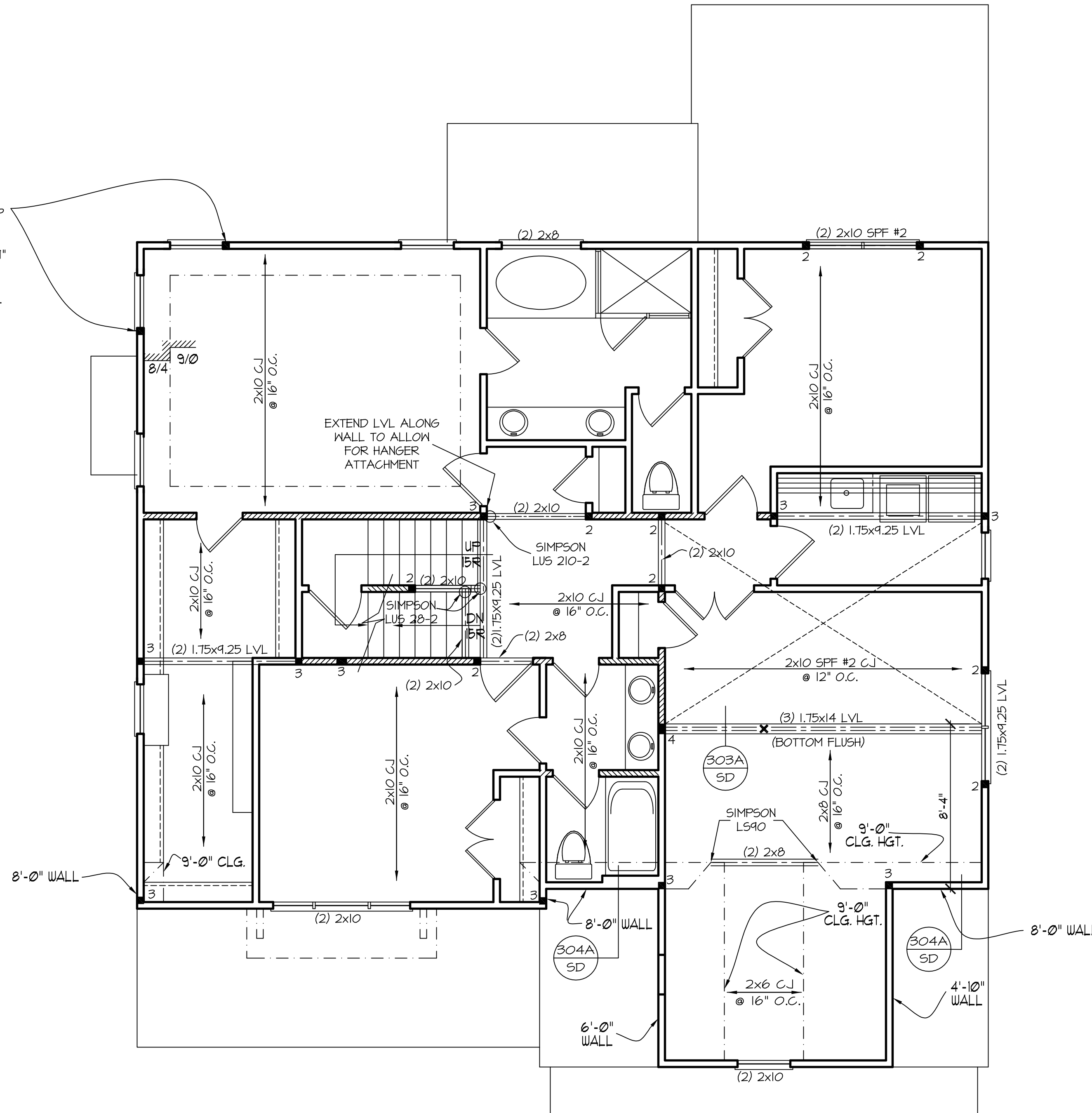
- BRACING METHOD AND TYPE: CONTINUOUSLY SHEATHED WSP. CS-WSP. NOTE THAT THE WALL BRACING AMOUNT PROVIDED ON THE PLANS (DETAILS AND SPECIFICATIONS) IS GREATER THAN THE AMOUNT OF WALL BRACING REQUIRED BY THE CODE. SEE NOTES BELOW FOR DETAILS AND SPECIFICATIONS FOR WALL BRACING AND WALL FRAMING.
- EXTERIOR WALL SHEATHING: WALLS SHALL BE BRACED BY SHEATHING WALLS ON ALL STORIES WITH WOOD STRUCTURAL PANEL SHEATHING (WSP) (EXPOSURE B: 7/16" EXPOSURE C: 15/32"). SHEATHING SHALL BE ATTACHED WITH 8d NAILS AT A 6" NAILING PATTERN (6" OC AT PANEL EDGES AND 12" OC AT INTERMEDIATE SUPPORTS). INSTALL BLOCKING AT ALL PANEL EDGES.
- WSP SHEATHING SHALL EXTEND TO THE UPPERMOST DOUBLE BEARING PLATE, BLOCK AT ROOF AND ATTACH BRACED WALLS PER CODE. WSP SHEATHING BETWEEN FLOORS SHALL BE SPLICED ALONG CONTINUOUS BAND OR THE WSP SHEATHING MAY BE SPLICED ACROSS STUDS (CONTINUOUS ACROSS FLOOR SYSTEM) WITH BLOCKING AT PANEL EDGES. (MINIMUM 12" BEYOND FLOOR BREAK) OR OTHER APPROVED METHOD.
- "HD" = HOLDDOWN; HOLD-DOWN DEVICE (NOTED AS "HD" ON PLANS) SHALL BE AN 800 POUND CAPACITY ASSEMBLY AS NOTED ON PLANS. SEE DETAILS FOR HD ASSEMBLY.
  - \*\*SECOND FLOOR: USE "HD HOLD-DOWN DETAIL" ON SD SHEET (OR EQUIV.)
  - \*\*UPPER FLOORS: ATTACH BASE OF KING STUD WITH A SIMPSON C522 STRAP DOWN ACROSS THE BAND AND DOWN TO A STUD BELOW OR HEADER BELOW. EXTEND STRAP 1" MIN ALONG EACH STUD (OR HEADER) AND ATTACH EACH END W/ (1) 8d NAIL.
- INTERIOR BRACED WALL: (NOTED AS "IBW" ON PLANS) ATTACH 1/2" GYPSUM BOARD (GB) ON EACH SIDE OF WALL WITH A MIN. OF 5d COOLER NAILS OR #6 SCREWS @ 1" OC ALONG THE EDGES AND AT INTERMEDIATE SUPPORTS.
- INTERIOR BRACED WALL-WOOD STRUCTURAL PANEL: (NOTED AS "IBWSP" ON PLANS). ATTACH ONE SIDE WITH 3/4" WSP SHEATHING WITH 8d NAILS AT A 6" NAILING PATTERN (6" OC AT PANEL EDGES AND 12" OC AT INTERMEDIATE SUPPORTS). INSTALL BLOCKING AT ALL PANEL EDGES. ATTACH GB OVER WSP AS REQUIRED. ATTACH OPPOSITE SIDE WITH 1/2" GB WITH A MIN. OF 5d COOLER NAILS OR #6 SCREWS @ 1" OC ALONG THE EDGES AND AT INTERMEDIATE SUPPORTS.

**HEADER/BEAM & COLUMN NOTES**

- ALL EXTERIOR AND LOAD BEARING HEADERS SHALL BE MIN. (2)2x6 (4" WALL) OR (3)2x6 (6" WALL) WITH (1) SUPPORT STUD, UNLESS NOTED OTHERWISE.
- THE NUMBER SHOWN AT BEAM AND HEADER SUPPORTS INDICATES THE NUMBER OF SUPPORT STUDS REQUIRED IN STUD POCKET OR COLUMN. THE NUMBER OF KING STUDS AT EACH END OF HEADERS IN EXTERIOR WALLS SHALL BE ACCORDING TO ITEM "d" IN TABLE R602.3(5) OR AS BELOW PER NCD01 COMMENTARY "KING STUDS AT WALL OPENINGS" REVISED 1-4-2020:
  - UP TO 3' SPAN: (1) KING STUD
  - OVER 3' UP TO 6' SPAN: (2) KING STUDS
  - OVER 6' UP TO 9' SPAN: (3) KING STUDS
  - OVER 9' UP TO 12' SPAN: (4) KING STUDS
  - OVER 12' UP TO 15' SPAN: (5) KING STUDS

FRAMING NOTE: ALL DIMENSIONAL LUMBER ON THIS SHEET MAY BE SPF #2 OR 5YP #2, UNLESS SPECIFICALLY NOTED OTHERWISE.

ATTACH BASE OF STUD WITH A SIMPSON C520 OR C5HP20 STRAP DOWN ACROSS THE BAND AND DOWN TO A STUD BELOW OR HEADER BELOW. EXTEND STRAP 9" MIN ALONG EACH STUD (OR HEADER) AND ATTACH EACH END W/ (8) 8d COMMON NAILS (OR EQ).



REFER TO "SD" SHEET(S) FOR STANDARD DETAILS, BRACING DETAILS AND STRUCTURAL NOTES.

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LICENSE: C-4772, PHONE: 919-878-1617  
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**SECOND FLOOR CEILING STRUCTURAL PLAN**  
SCALE: ----- 1/4" = 1'-0" 9'-0" CLG. HGT.

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DATE: 1-6-11  
FILE NAME: HH-2-2T56

REVISIONS	
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6-8-11	TUG PLAN
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6-6-15	TUG PLAN

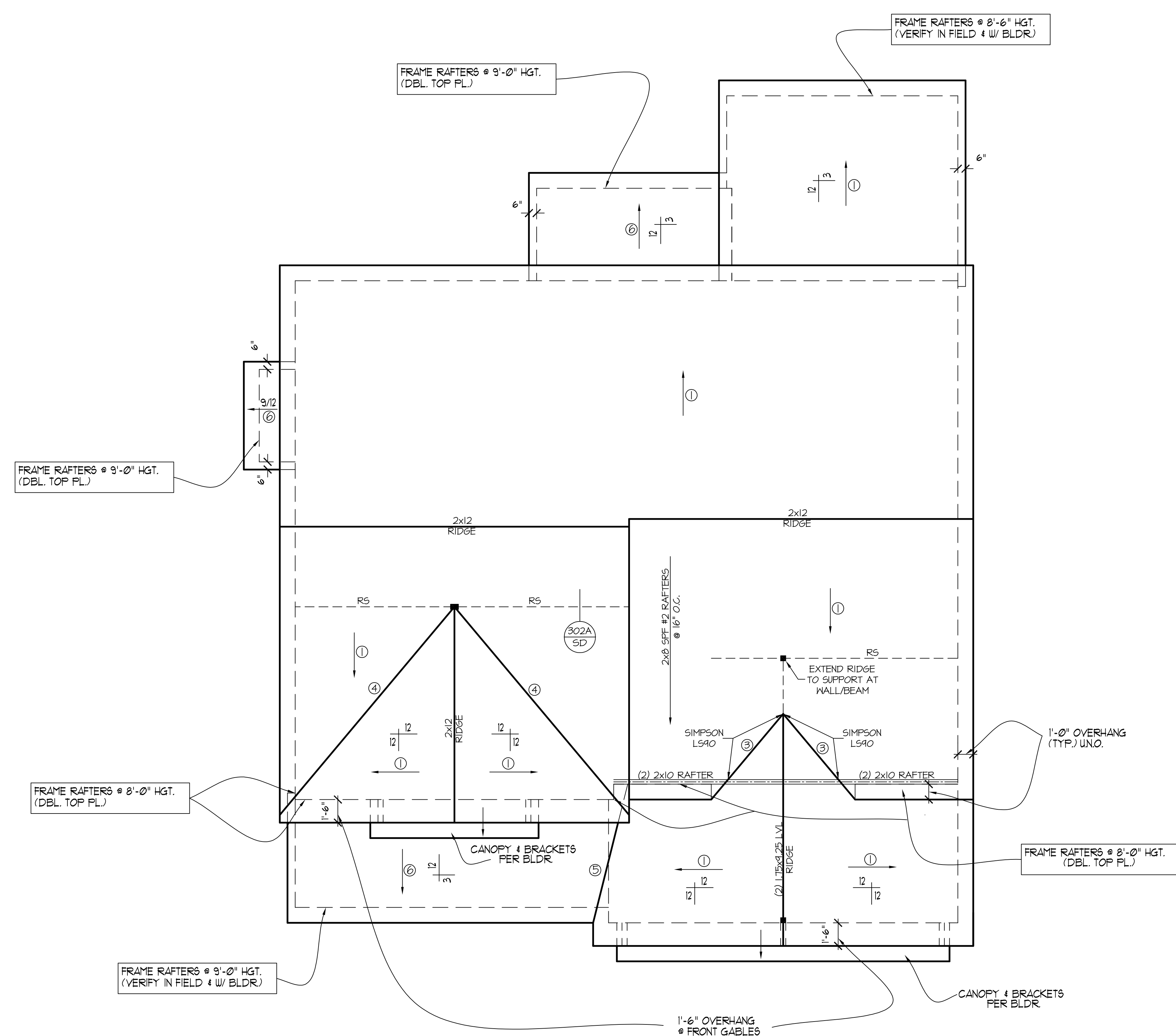
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**ROOF FRAMING NOTES:**  
 1) ALL ROOF PITCHES TO BE 10/12 (TYP.) UNO.  
 2) PROVIDE 2x4 COLLAR BEAMS EVERY OTHER RAFTER (TYP.)  
 3) PROVIDE "HURRICANE CLIPS" AT ALL VALLEYS AND OPPOSING DBL. RAFTERS  
 4) PROVIDE DBL. HEADERS AND TRIMMERS AT ALL ROOF OPENINGS (EX: DORMERS, SKYLIGHTS, CHIMNEYS ETC.)  
 5) 2x8 RAFTERS @ CATH. OR VAULTED CLGGS. TO BE FURRED DOWN OR USE DEEFER RAFTERS (VERIFY BRNG. HGT. FOR PROPER INSULATION PER CODE  
 6) VERIFY ALL RAFTER BRNG. HGT'S. BEFORE CONSTR. HAS BEGUN

**ROOF FRAMING NOTES:**  
 NC (2018 NCR): Wind: 115-120 mph

- 2x8 RAFTERS @ 16" O.C. WITH 2x10 RIDGE, UNO.
- 2x10 OR 1.75x11.875 LVL HIP. (2) 2x10 HIP'S MAY BE SPLICED WITH A MIN. 6'-0" OVERLAP AT CENTER
- 2x10 OR 1.75x9.25 LVL VALLEY. DO NOT SPLICE VALLEYS
- 1.75x11.875 LVL OR (2) 1.75x9.25 LVL VALLEY
- FALSE FRAME VALLEY ON 2x10 FLAT PLATE
- 2x6 RAFTERS @ 16" O.C. W/ 2x8 RIDGE, UNO.
- 2x10 RAFTERS @ 16" O.C. W/ 2x12 RIDGE, UNO.
- EXTEND RIDGE 12" BEYOND INTERSECTION

- "SR" = SINGLE RAFTER
- "DR" = DOUBLE RAFTER
- "TR" = TRIPLE RAFTER
- "RS" = ROOF SUPPORT
- "■" = (3) STUD OR 4x4 POST FOR ROOF SUPPORT (USE 2X6 STUDS OR 6X6 POST FOR SUPPORT OVER 10'-0" IN HEIGHT)
- ATTACH VAULTED RAFTERS WITH HURRICANE CLIPS: SIMPSON "H-2.5A" OR EQUIVALENT. TIES TO BE INSTALLED ON THE OUTSIDE FACE OF FRAMING.
- INSTALL RAFTER TIES AND COLLAR TIES PER SECTION R802.3.1 OF THE 2018 NC RESIDENTIAL CODE.

FRAMING NOTE: ALL DIMENSIONAL LUMBER ON THIS SHEET MAY BE SPF #2 OR SYP #2, UNLESS SPECIFICALLY NOTED OTHERWISE.

REFER TO "SD" SHEET(S) FOR STANDARD DETAILS, BRACING DETAILS AND STRUCTURAL NOTES.

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**ROOF FRAMING PLAN**  
 SCALE: .....1/4" = 1'-0"

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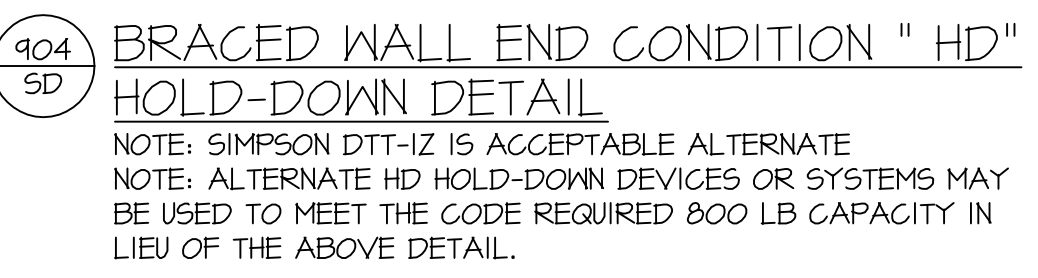
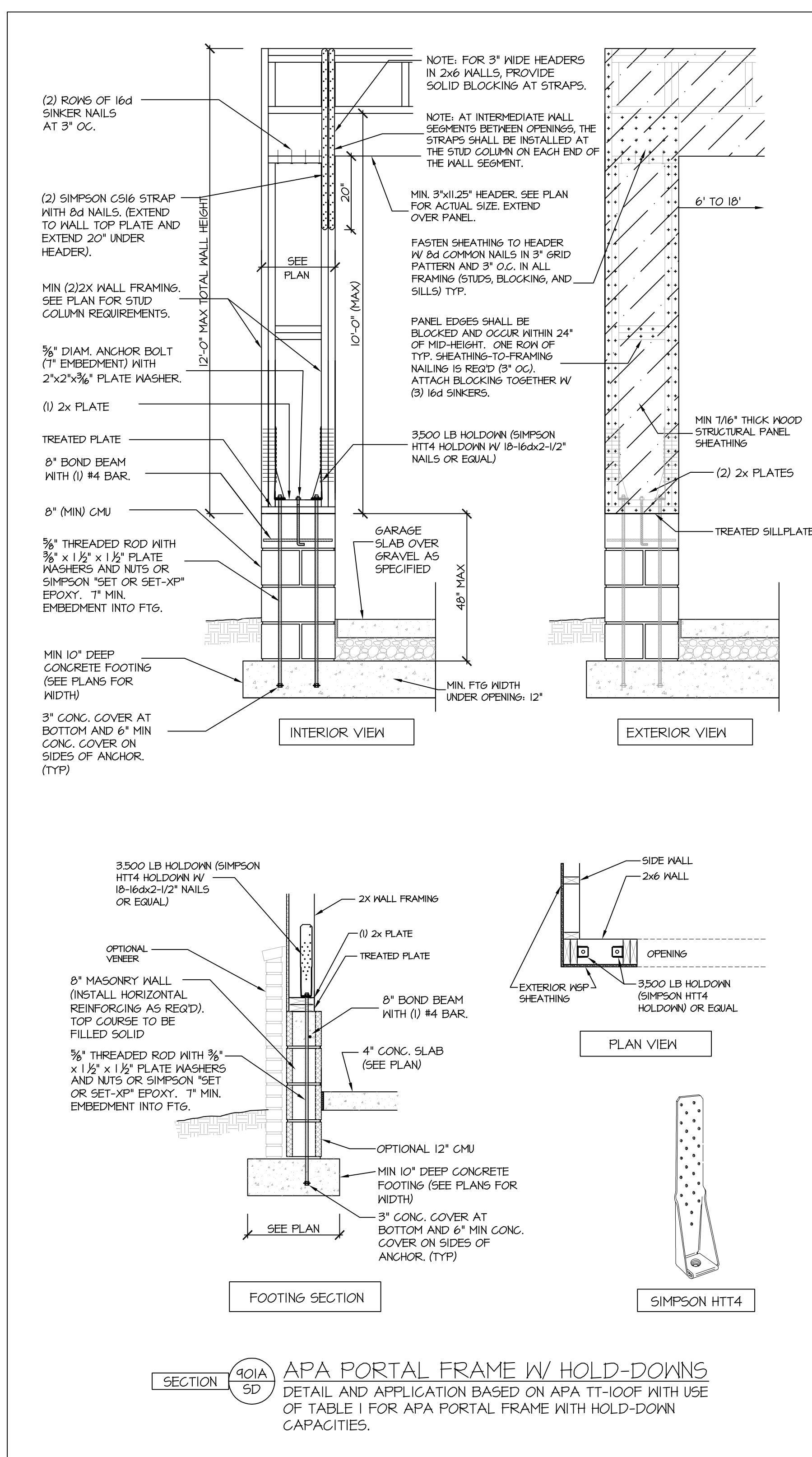
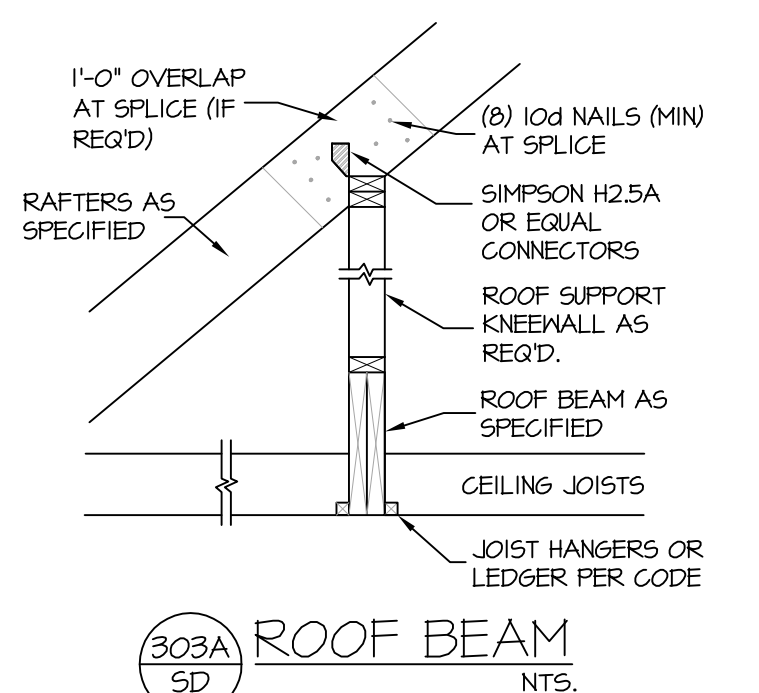
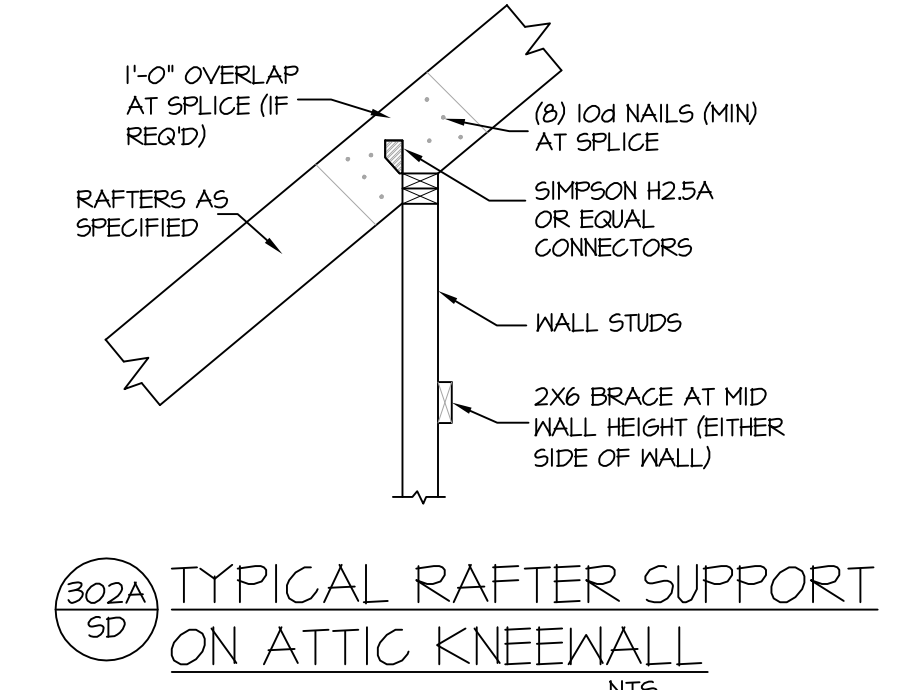
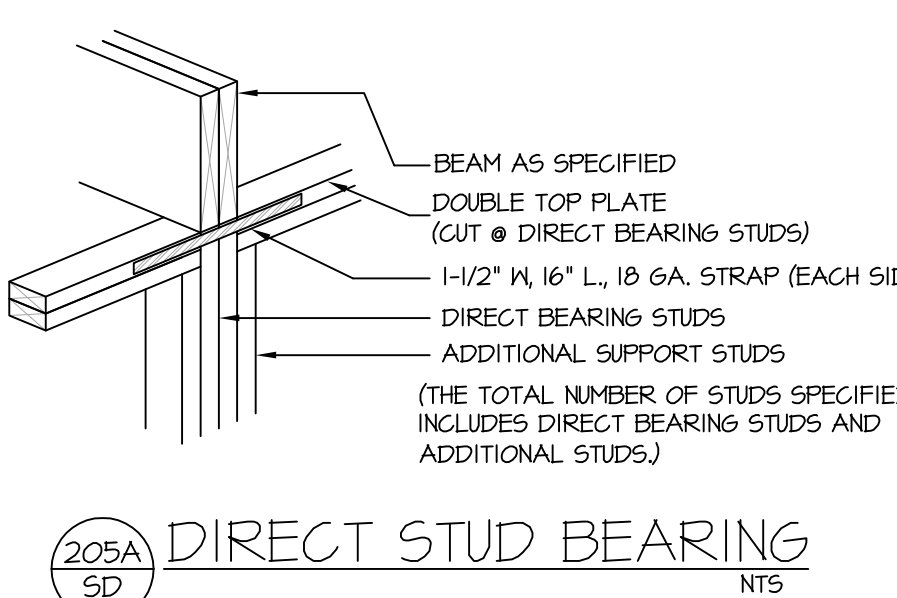
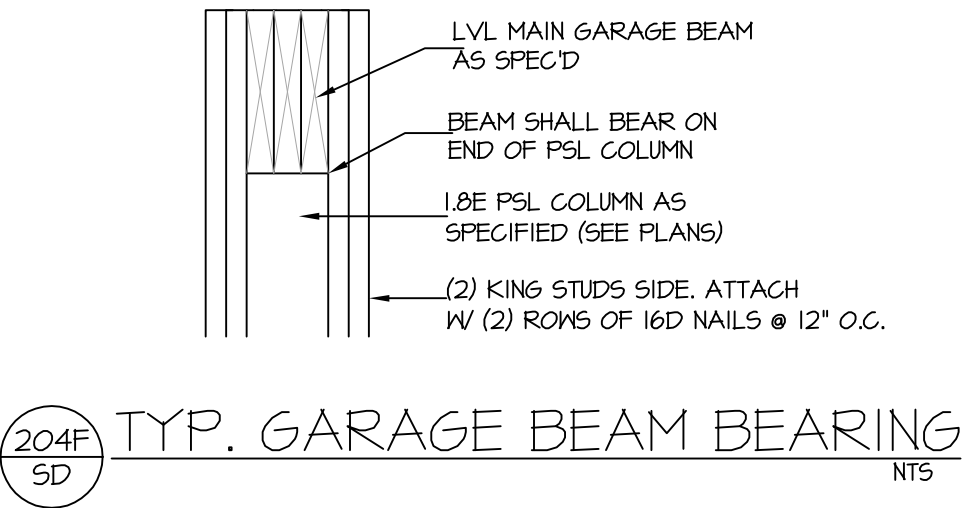
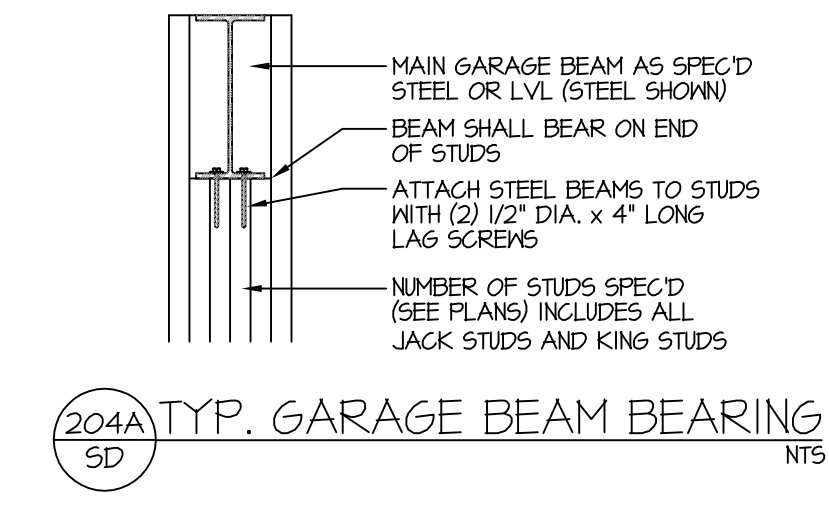
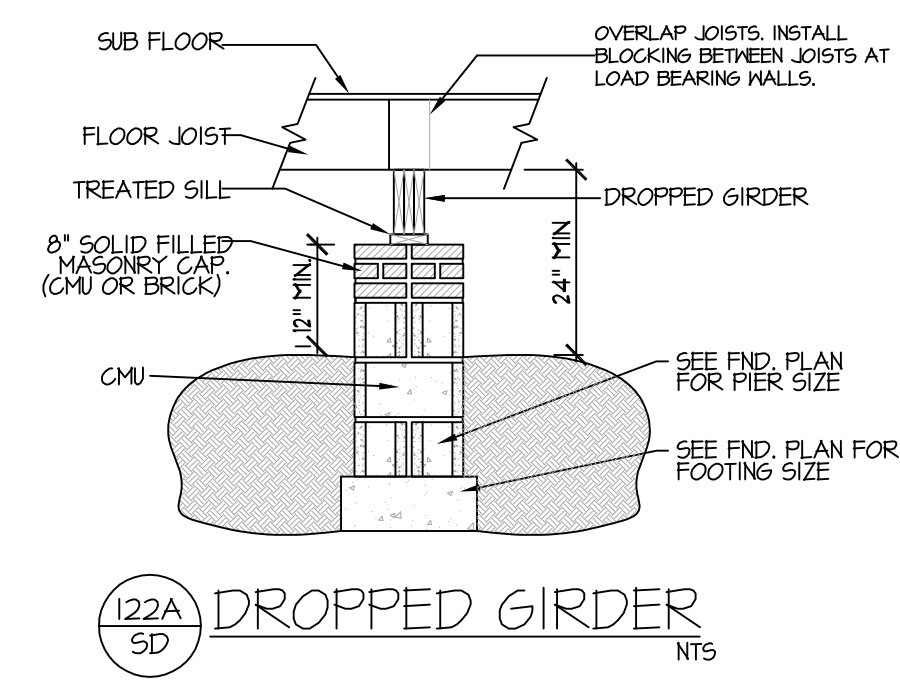
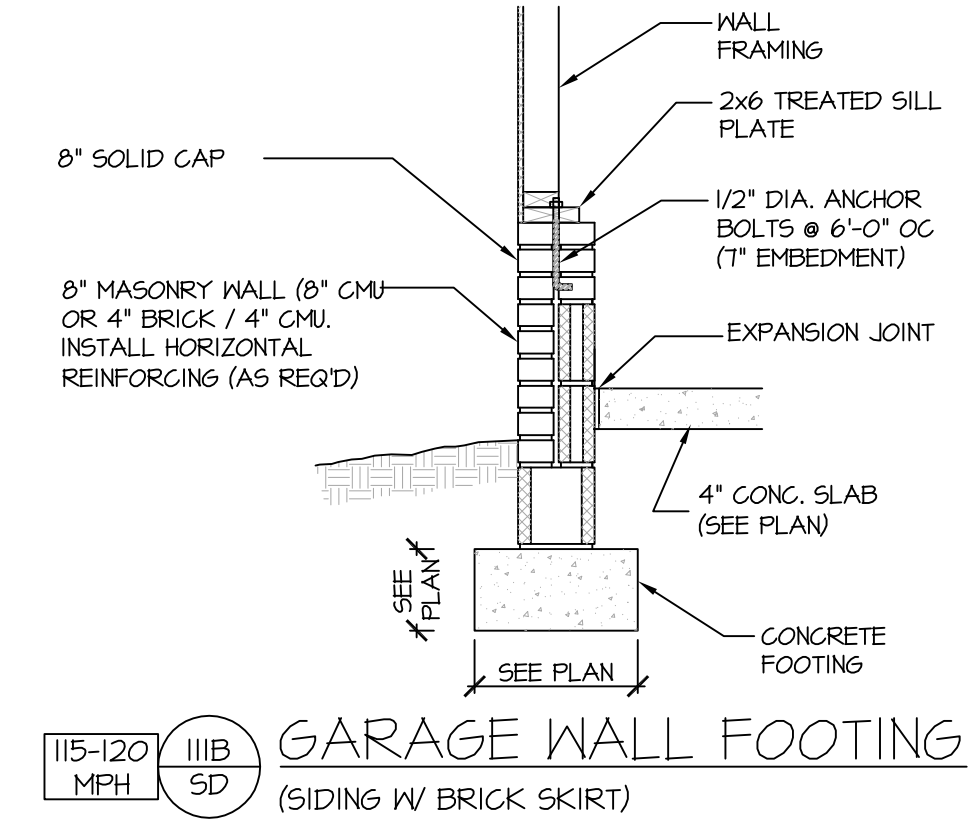
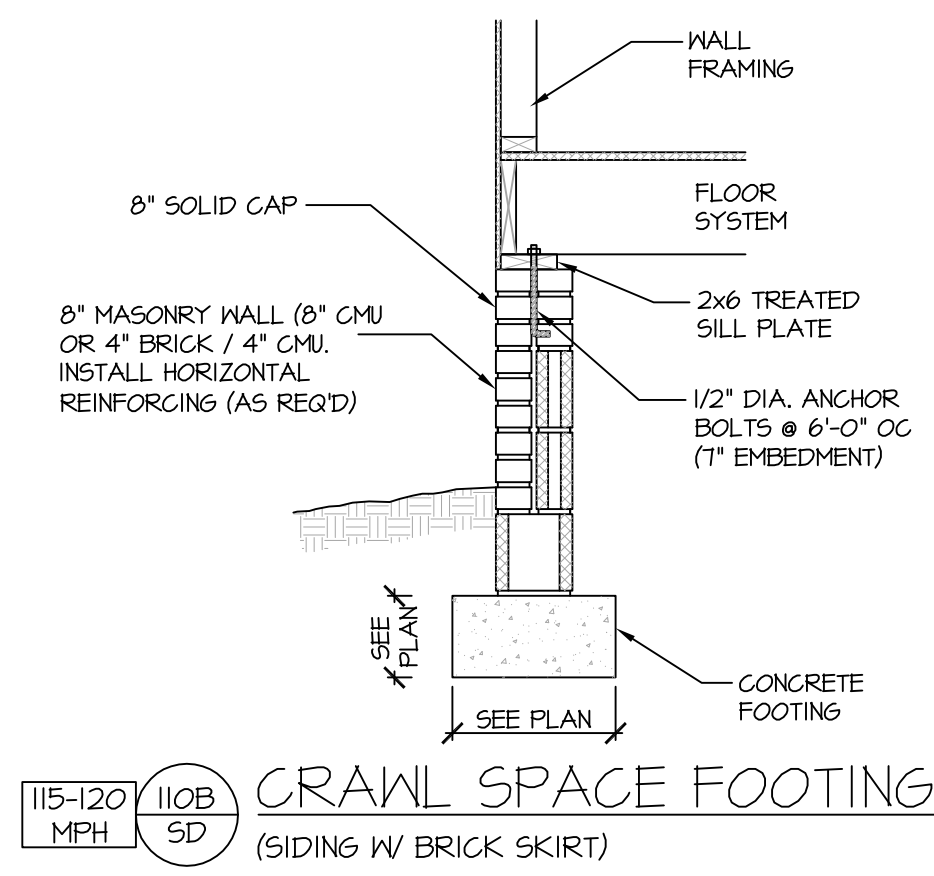
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6-26-11	TUG	PLAN	
6-6-19	TUG	PLAN	

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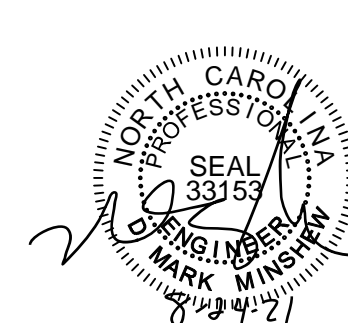
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- STRUCTURAL NOTES**  
 NC (2018 NCGC); Wind: 115-120 mph
- ENGINEER'S SEAL APPLIES ONLY TO STRUCTURAL COMPONENTS INCLUDING ROOF RAFTERS, HIPs, VALLEYS, RIDGES, FLOORS, WALLS, BEAMS AND HEADERS, COLUMNS, CANTILEVERS, OFFSET LOAD BEARING WALLS, PIER & GIRDER SYSTEM, FOOTING, AND PILING SYSTEM. ENGINEER'S SEAL DOES NOT CERTIFY DIMENSIONAL ACCURACY OR ARCHITECTURAL LAYOUT INCLUDING ROOF SYSTEM. ALL REQUIREMENTS FOR PROFESSIONAL CERTIFICATION SHALL BE PROVIDED BY THE APPROPRIATE PROFESSIONAL. SOUTHERN ENGINEERS, P.A. CERTIFIES ONLY THE STRUCTURAL COMPONENTS AS SPECIFICALLY STATED.
  - ALL CONSTRUCTION SHALL CONFORM TO THE LATEST REQUIREMENTS OF THE 2018 NC RESIDENTIAL CODE, 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 FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE CONSTRUCTION WORK, NOR WILL THE ENGINEER BE RESPONSIBLE FOR THE CONTRACTOR'S FAILURE TO CARRY OUT THE CONSTRUCTION WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. "CONSTRUCTION REVIEW" SERVICES ARE NOT PART OF OUR CONTRACT. ALL MEMBERS SHALL BE FRAMED ANCHORED, TIED AND BRACED IN ACCORDANCE WITH GOOD CONSTRUCTION PRACTICE AND THE BUILDING CODE.
  - DESIGN LOADS (LISTED AS: LIVE LOAD, DEAD LOAD, DEFLECTION)
    - ROOMS OTHER THAN SLEEPING ROOMS: (40 PSF, 10 PSF, L/360)
    - SLEEPING ROOMS: (30 PSF, 10 PSF, L/360)
    - ATTIC WITH PERMANENT STAIR: (40 PSF, 10 PSF, L/360)
    - ATTIC WITHOUT PERMANENT STAIR: (20 PSF, 10 PSF, L/360)
    - ATTIC WITHOUT STORAGE: (10 PSF, 10 PSF, L/240)
    - STAIRS: (40 PSF, 10 PSF, L/360)
    - EXTERIOR BALCONIES: (60 PSF, 10 PSF, L/360)
    - DECKS: (40 PSF, 10 PSF, L/360)
    - GUARDRAILS AND HANDRAILS: (200 LBS)
    - PASSENGER VEHICLE GARAGES: (50 PSF, 10 PSF, L/360)
    - FIRE ESCAPES: (40 PSF, 10 PSF, L/360)
    - SNOW: (20 PSF)
  - WALLS SHALL BE BRACED BY SHEATHING WALLS ON ALL STORIES WITH WOOD STRUCTURAL PANELS. SEE FRAMING NOTES FOR THICKNESS AND NAILING REQUIREMENTS.
  - SEE APPENDIX M (DCA6) FOR EXTERIOR DECK REQUIREMENTS INCLUDING ATTACHMENTS FOR LATERAL LOADS.
  - CONCRETE SHALL HAVE A MINIMUM 28 DAY STRENGTH OF 3000 PSI AND A MAXIMUM SLUMP OF 5 INCHES UNLESS NOTED OTHERWISE (NO). AIR ENTRAINMENT PER TABLE 402.2. ALL CONCRETE SHALL BE PROPORTIONED, MIXED, HANDLED, SAMPLED, TESTED, AND PLACED IN ACCORDANCE WITH ACI STANDARDS. ALL SAMPLES FOR PUMPING SHALL BE TAKEN FROM THE EXIT END OF THE PUMP. CONTROL JOINTS IN SLABS SHALL BE SPACED ON A GRID OF +30 TIMES THE DEPTH (D). CONTROL JOINTS SHALL BE SAWCUT TO A DEPTH OF 1/2". (I.E. 4" CONCRETE SLABS SHALL HAVE 1/2" DEEP CONTROL JOINTS SAWCUT IN SLAB ON A +10'-0" x +10'-0" GRID).
  - ALLOWABLE SOIL BEARING PRESSURE ASSUMED TO BE 2000 PSF. THE CONTRACTOR MUST CONTACT A GEOTECHNICAL ENGINEER AND THE STRUCTURAL ENGINEER IF UNSATISFACTORY SUBSURFACE CONDITIONS ARE ENCOUNTERED. THE SURFACE AREA ADJACENT TO THE FOUNDATION WALL SHALL BE PROVIDED WITH ADEQUATE DRAINAGE, AND SHALL BE GRADED SO AS TO DRAIN SURFACE WATER AWAY FROM FOUNDATION WALLS.
  - ALL FRAMING LUMBER SHALL BE SPF #2 (Fb = 875 PSI) UNLESS NOTED OTHERWISE (NO). ALL TREATED LUMBER SHALL BE SYP #2. PLATE MATERIAL MAY BE SPF #3 OR SYP #3 (F<sub>c</sub>(perp) = 425 PSI - MIN).
  - L.V.L. SHALL BE LAMINATED VENEER LUMBER: F<sub>b</sub>=2600 PSI, F<sub>v</sub>=285 PSI, E=1.4x10<sup>6</sup> PSI.
    - P.S.L. SHALL BE PARALLEL STRAND LUMBER: F<sub>b</sub>=2400 PSI, F<sub>v</sub>=240 PSI, E=2.0x10<sup>6</sup> PSI.
    - L.S.L. SHALL BE LAMINATED STRAND LUMBER: F<sub>b</sub>=2250 PSI, F<sub>v</sub>=400 PSI, E=1.55x10<sup>6</sup> PSI. INSTALL ALL CONNECTIONS PER MANUFACTURER'S INSTRUCTIONS.
  - ALL ROOF TRUSS AND I-JOIST LAYOUTS SHALL BE PREPARED IN ACCORDANCE WITH THE SEALED STRUCTURAL DRAWINGS. TRUSSES AND I-JOISTS SHALL BE INSTALLED ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS. ANY CHANGE IN TRUSS OR I-JOIST LAYOUT SHALL BE COORDINATED WITH SOUTHERN ENGINEERS.
  - ALL STRUCTURAL STEEL SHALL BE ASTM A-36. STEEL BEAMS SHALL BE SUPPORTED AT EACH END WITH A MINIMUM BEARING LENGTH OF 3 1/2" INCHES AND FULL FLANGE WIDTH. PROVIDE SOLID BEARING FROM BEAM SUPPORT TO FOUNDATION. BEAMS SHALL BE ATTACHED TO EACH SUPPORT WITH TWO LAG SCREWS (1/2" DIAMETER x 4" LONG). LATERAL SUPPORT IS CONSIDERED ADEQUATE PROVIDING THE JOIST ARE TOE NAILED TO THE SOLE PLATE, AND SOLE PLATE IS NAILED OR BOLTED TO THE BEAM FLANGE @ 48" O.C. ALL STEEL TUBING SHALL BE ASTM A500.
  - REBAR SHALL BE DEFORMED STEEL, ASTM#615, GRADE 60. LAP ALL REBAR SPLICES 30 BAR DIAMETERS.
  - FLITCH BEAMS SHALL BE BOLTED TOGETHER USING (2) ROWS OF 1/2" DIAMETER BOLTS (ASTM A325) WITH WASHERS PLACED UNDER THE THREADED END OF BOLT. BOLTS SHALL BE SPACED AT 24" O.C. (MAX), AND STAGGERED AT THE TOP AND BOTTOM OF BEAM (2" EDGE DISTANCE), WITH 2 BOLTS LOCATED AT 6" FROM EACH END.
  - BRICK LINTELS (WHEN REQUIRED) SHALL BE 3 1/2"x3 1/2"x1/4" STEEL ANGLE FOR UP TO 6'-0" SPAN AND 6"x4"x5/16" STEEL ANGLE WITH 6" LEG VERTICAL FOR SPANS UP TO 9'-0". SEE PLANS FOR SPANS OVER 9'-0". SEE ALSO SECTION R703.8.3 LINTELS.



REFER TO "SD" SHEET(S) FOR STANDARD DETAILS, BRACING DETAILS AND STRUCTURAL NOTES.

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**STRUCTURAL DETAILS**