

TUTOR RESIDENCE

PERMIT NUMBER SFD 2408.0087

6560 COKESBURY ROAD

FUQUAY-VARINA, NORTH CAROLINA 27526

14 FEBRUARY 2025

DRAWING LEGEND

COVER	
A101	PLANS
A102	LIGHTING PLAN
A200	ELEVATIONS
S1	FOUNDATION PLAN
S2	CEILING FRAMING PLAN
S3	ROOF FRAMING PLAN



Architecture | Branding | Interiors

DesignLine Studios, PLLC
PO Box 1928 | Fuquay-Varina, NC 27526
www.designlinestudios.com | 919.604.2975



TUTOR RESIDENCE
6550 COKESBURY RD
DUNCAN, NORTH CAROLINA, 27526

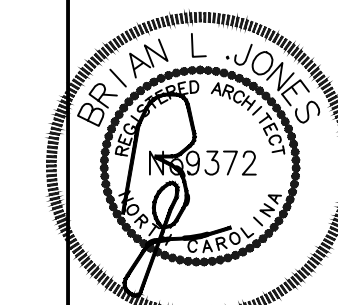
DESIGNED BY:
BLJ
DRAWN BY:
BLJ
CHECKED BY:
BLJ
SCALE:
1/4"=1'-0"
PROJECT NUMBER:

A101





CORPORATE SEAL



14 FEBRUARY 2025

PROFESSIONAL SEA

TUTOR RESIDENCE
6550 COKESBURY RD
DUNCAN, NORTH CAROLINA, 27526

DATES:
02.14.25

DESIGNED BY

BLJ
DRAWN BY:

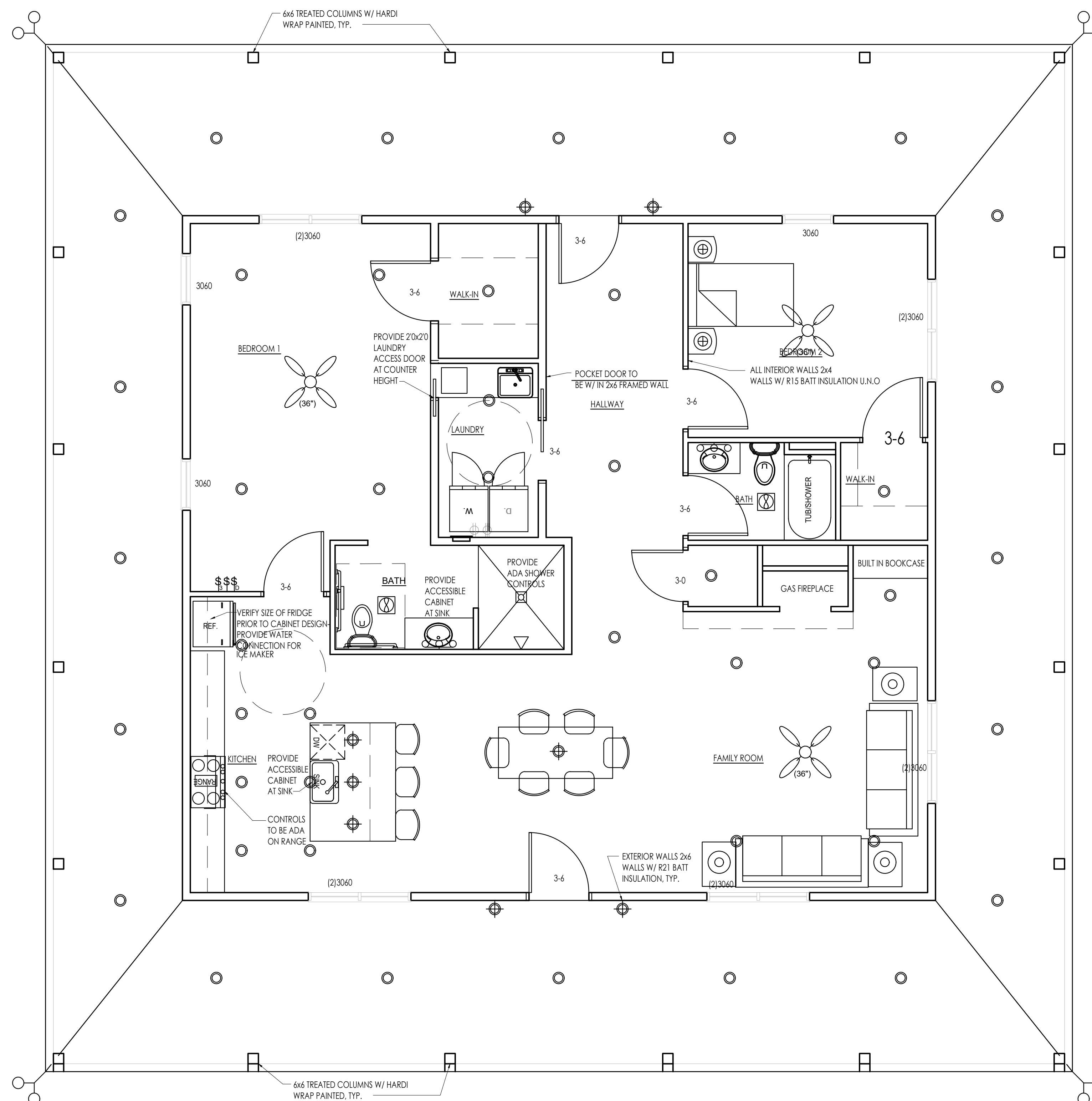
BLJ
CHECKED BY

BLJ
SCALE:

1/4"=1'-0"

LIGHTING
PLAN

A102





DesignLine Studios, PLLC
PO Box 1928 | Fuquay-Varina, NC 27526
www.designlinestudios.com | 919.604.2975



3 | LEFT ELEVATION
A2001 SCALE: 1/4" = 1'-0"



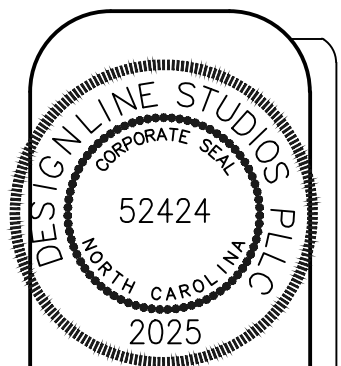
2 | RIGHT ELEVATION
A2001 SCALE: 1/4" = 1'-0"



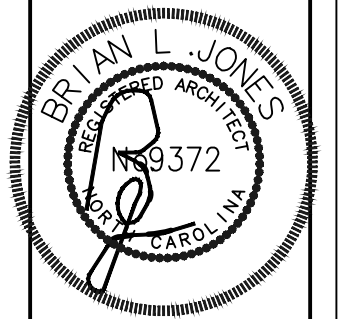
4 | REAR ELEVATION
A2001 SCALE: 1/4" = 1'-0"



1 | RIGHT SIDE ELEVATION
A2001 SCALE: 1/4" = 1'-0"



CORPORATE SEAL



PROFESSIONAL SEAL

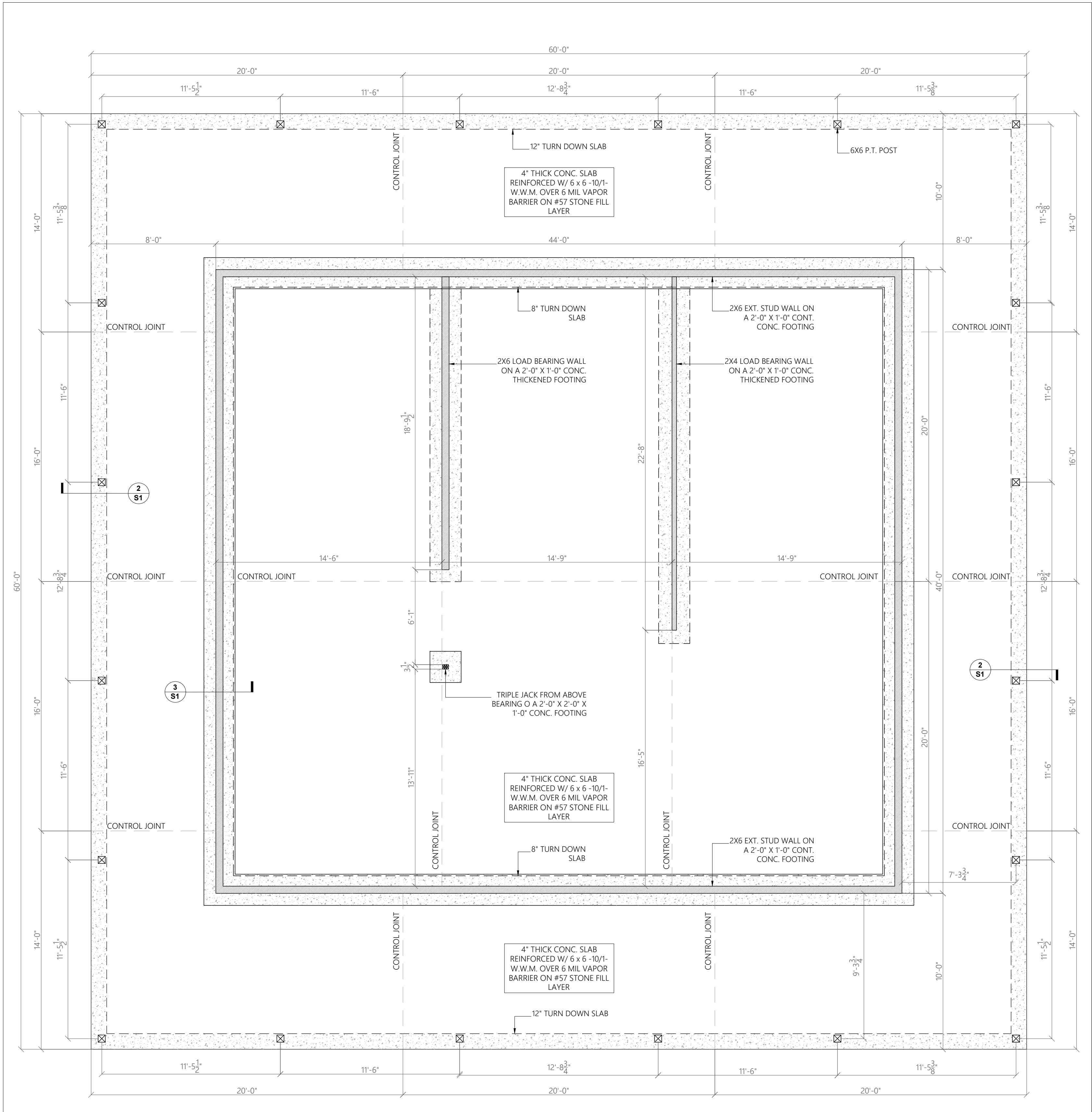
TUTOR RESIDENCE
6550 COKEBURY RD
DUNCAN, NORTH CAROLINA, 27526

DATES:

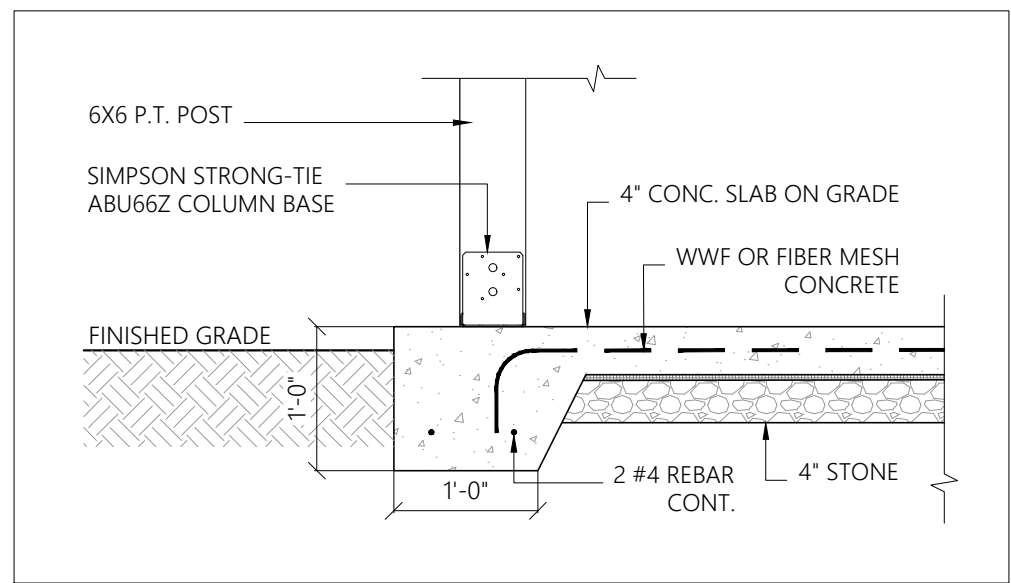
DESIGNED BY:
BLJ
DRAWN BY:
BLJ
CHECKED BY:
BLJ
SCALE:
VARIES
PROJECT NUMBER:
-

ELEVATIONS

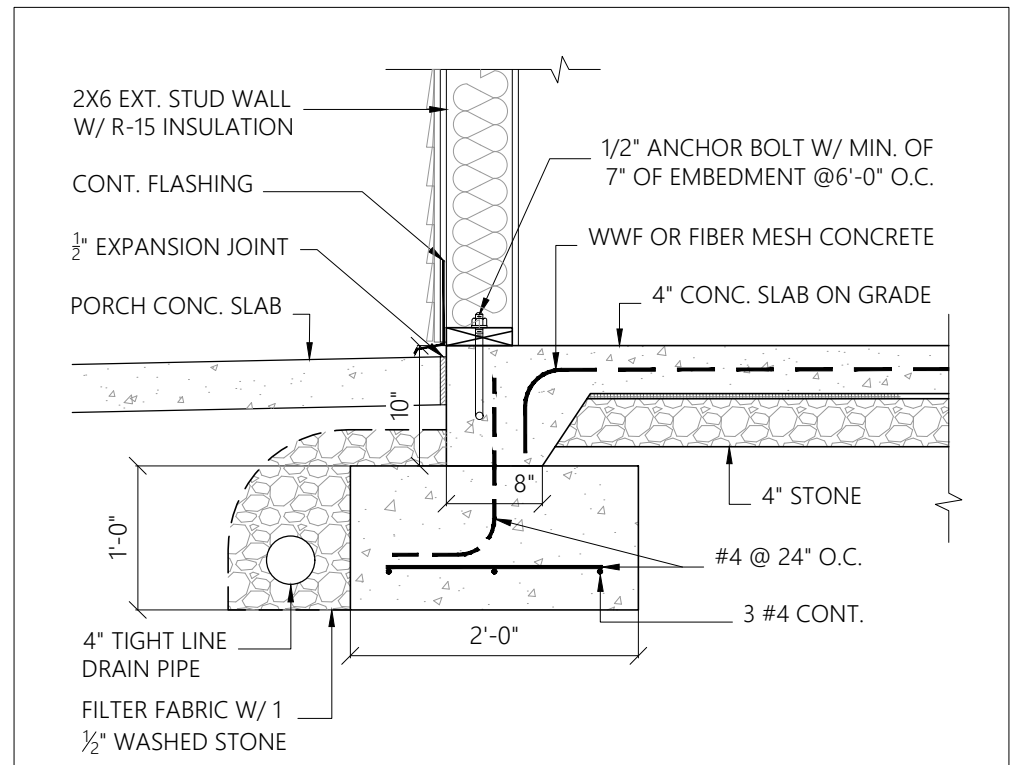
A200



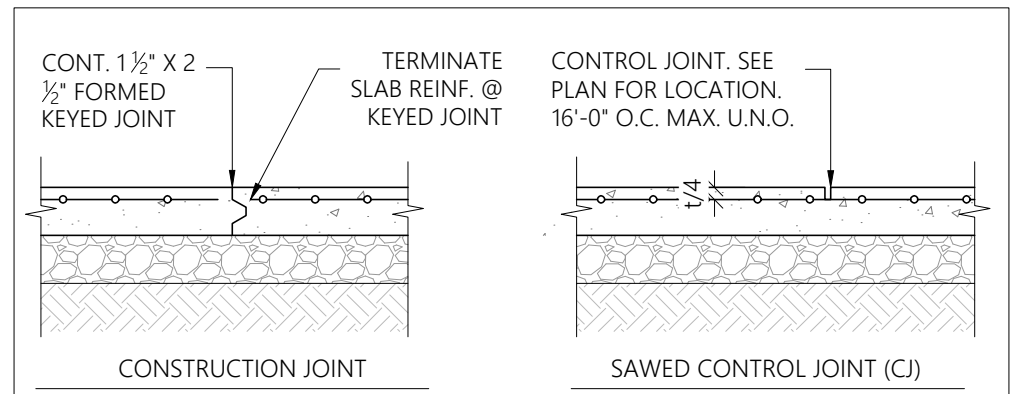
1
S1 FOUNDATION PLAN
SCALE: 1/4" = 1'-0"



2
S1 POST & FOOTING DETAIL
SCALE: 3/4" = 1'-0"



3
S1 EXTERIOR WALL & FOOTING DETAIL
SCALE: 3/4" = 1'-0"



4
S1 CONTROL JOINT DETAIL
SCALE: 3/4" = 1'-0"

PERMIT NUMBER SFD 2408.0087

HDS ENGINEERING IS NOT RESPONSIBLE FOR SAFETY PROGRAMS, METHODS OR PROCEDURES OF OPERATION OR CONSTRUCTION OF THE DESIGN SHOWN ON THESE DRAWINGS. DRAWINGS ARE FOR USE ON THIS PROJECT ONLY AND ARE NOT INTENDED FOR REUSE WITHOUT WRITTEN APPROVAL FROM HDS ENGINEERING.

DRAWINGS ARE ALSO NOT TO BE USED IN ANY MANNER THAT WOULD CONSTITUTE A DETRIMENT DIRECTLY OR INDIRECTLY TO HDS ENGINEERING.

IF THIS DRAWING IS LESS THAN 18"x24" OR 24"x36" IT IS A REDUCED PRINT SCALE ACCORDINGLY.
CONTRACTOR SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS ON THE JOB. AND HDS ENGINEERING MUST BE NOTIFIED OF ANY VARIATIONS FROM THE DIMENSIONS AND CONDITIONS SHOWN ON THESE DRAWINGS. SHOP DETAILS SHOULD BE SUBMITTED TO HDS ENGINEERING BEFORE PROCEEDING WITH FABRICATION.

GENERAL NOTES

- THESE PLANS ARE INTENDED FOR USE BY A LICENSED GENERAL CONTRACTOR.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ALL PHASES OF CONSTRUCTION COMPLY WITH ALL BUILDING CODE REQUIREMENTS.
- PRIOR TO CONSTRUCTION, THE GENERAL CONTRACTOR IS TO REVIEW ALL PLANS AND BE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS AND CONDITIONS.
- ANY DISCREPANCIES IN THE PLANS SHOULD BE BROUGHT TO THE ATTENTION OF THE DESIGNER BEFORE CONSTRUCTION BEGINS.
- DO NOT SCALE DRAWINGS. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS.
- PLUMBING AND HVAC PLANS ARE TO BE MANAGED BY THE GENERAL CONTRACTOR UNLESS SPECIFIED OTHERWISE. EACH MUST COMPLY WITH ALL BUILDING CODE REQUIREMENTS.

STRUCTURAL NOTES

- THE ENGINEER WHOSE SEAL APPEARS ON THESE DRAWINGS IS THE STRUCTURAL ENGINEER OF RECORD FOR THIS PROJECT. NO OTHER PARTY MAY MODIFY OR REUSE THESE CONSTRUCTION DOCUMENTS WITHOUT WRITTEN PERMISSION FROM HDS ENGINEERING OR THE STRUCTURAL ENGINEER OF RECORD. THE ENGINEER'S SEAL ONLY APPLIES TO STRUCTURAL COMPONENTS AND SYSTEMS AND DOES NOT CERTIFY THE DIMENSIONAL ACCURACY OF THE ARCHITECTURAL LAYOUT.
- THE ENGINEER SHALL HAVE NO LIABILITY TO THE HOMEOWNER OR OTHERS FOR ACTS OR OMISSIONS OF THE CONTRACTOR/BUILDER OR ANY OTHERS PERFORMING WORK ON THIS PROJECT. THE ENGINEER IS NOT RESPONSIBLE FOR CONSTRUCTION SEQUENCES, METHODS, TECHNIQUES, OR SAFETY REQUIREMENTS IN CONNECTION WITH THE CONSTRUCTION OF THIS STRUCTURE.
- THE CONTRACTOR ASSUMES ALL RESPONSIBILITY FOR DEPICTED OR IMPLIED STRUCTURAL INFORMATION. SHOULD ANY DISCREPANCIES BECOME APPARENT, THE STRUCTURAL ENGINEER OF RECORD MUST BE NOTIFIED IMMEDIATELY BEFORE CONSTRUCTION BEGINS.
- ONLY SEALED DRAWINGS WITH THE LATEST REVISIONS ARE APPLICABLE FOR CONSTRUCTION.
- ALL CONSTRUCTION, WORKMANSHIP, AND MATERIALS SHALL CONFORM TO THE LATEST REQUIREMENTS OF THE '2018 NORTH CAROLINA BUILDING CODE' AND LOCAL REGULATIONS.
- DESIGN LOADS:

STRUCTURAL SYSTEM	L.L.	D.L.	T.L.	STRUCTURAL SYSTEM	L.L.	D.L.	T.L.
FLR (PRIMARY DWELL'G)	40	10	50	ATTICS W/ FIXED STAIRS	40	10	50
FLR (SLEEPING RMS.)	30	10	40	STAIRS	40	5	45
BALCONIES (EXTERIOR)	60	10	70	GUARDRAIL/ HANDRAIL	200		200
DECKS	40	10	50	ROOF SYSTEM	20	10	30
ATTICS W/OUT STOR.	10	10	20	CATHEDRAL	20	15	35
ATTICS W/ LIMITED STOR.	20	10	30	INTERIOR PART'N WALL	9	9	

SEISMIC DESIGN CATEGORY	DI
SNOW LOAD	25 PSF
SOIL BEARING PRESSURE	2000 PSF
WIND VELOCITY	115 MPH (ULTIMATE)
WIND EXPOSURE	B

- DEFLECTION: FLOOR: MIN 1/480, ATTIC WITH CEILING: 1/240, ROOF: 1/180 - MORE STRINGENT CRITERIA MAY BE USED AT THE ENGINEER'S DISCRETION OR AS REQUESTED.
- ALL GLASS IN DOORS, SIDELIGHTS, AND OTHER HAZARDOUS LOCATIONS TEMPERED GLASS (IRC 308.4)
- DO NOT SCALE DRAWINGS. THE CONTRACTOR SHALL CONTACT THE ARCHITECT FOR ITEMS NOT DIMENSIONED.

FOOTING AND FOUNDATIONS

- THE OWNER OR BUILDER IS RESPONSIBLE FOR VERIFYING SOIL BEARING CAPACITY, WITH A MINIMUM ASSUMED VALUE OF 2000 PSF.
- FOOTINGS AS SHOWN ARE MINIMUM ON DRAWING AND TO BE POURED ON CENTER OF WALL. DIMENSIONS, ON UNDISTURBED OR PROPERLY COMPACTED SOIL. MINIMUM SPREAD FOOTING SIZES: 2'-0" (28-DAY STRENGTH: MIN. 3000 PSI).
- FOOTINGS SHALL HAVE A MINIMUM 2" PROJECTION ON EACH SIDE OF THE FOUNDATION WALLS.
- FOUNDATION WALLS TO BE BUILT TO SIZE SPECIFIED ON DRAWINGS, WITH THE SPECIFIED THICKNESS AS MINIMUM REQUIREMENTS, AND TO BE 10" REINFORCED CONCRETE.
- REINFORCEMENT STEEL: AS SPECIFIED IN THICKNESS ON DRAWING, DETAILED AND PLACED IN ACCORDANCE WITH BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE, USING DEFORMED STEEL BARS CONFORMING TO ASTM A615, GRADE 40.
- ANCHOR BOLTS TO BE A MINIMUM OF 1/2" DIAMETER, SPACED AT A MAXIMUM OF 6'-0" ON CENTER AND A MAXIMUM OF 12" FROM CORNERS. BOLTS SHALL EXTEND A MINIMUM OF 7" INTO CONCRETE.
- INSTALL FOUNDATION WATERPROOFING, DRAIN TILE, STONE, AND POSITIVE DRAIN AS REQUIRED BY GRADE. A 4" PERFORATED DRAIN PIPE IS TO BE LAID AROUND THE PERIMETER OF THE FOOTING AND OVERLAID WITH 1/2"-2" DRAIN ROCK.
- GARAGE SLABS: 4" CONCRETE WITH 6X6 WWM OR FIBER MESH, WITH A 6 MIL VAPOR BARRIER OVER 4" OF CRUSHED STONE OR GRAVEL ON TAMPED EARTH. PORCHES, CARPORT SLABS, STEPS EXPOSED TO WEATHER, AND GARAGE SLABS SHALL HAVE A COMPRESSIVE STRENGTH OF NO LESS THAN 3000 PSI PER IRC TABLE R402.2.
- AN EXPANSION JOINT IS REQUIRED WHERE THE ENCLOSED SLAB MEETS THE FOUNDATION WALL. BASEMENT SLABS SAME AS GARAGE, WITH PERIMETER INSULATION AND NO EXPANSION JOINT REQUIRED.
- CONCRETE: "READY-MIXED CONCRETE" CONFORMING TO ASTM C94 (S BULK OR BETTER) WITH A COMPRESSIVE STRENGTH OF 2500PSI AFTER PROPER CURING UNLESS OTHERWISE SPECIFIED.
- CONCRETE WALL DAMP-PROOFING PER IRC 406.



THE DRAWINGS AND PLAN ENGINEERING ARE THE PROPERTY OF HDS ENGINEERING ISSUED EXCLUSIVELY FOR THIS PROJECT AND SHALL NOT BE DUPLICATED OR USED FOR OTHER PURPOSES, IN WHOLE OR PART, WITHOUT WRITTEN PERMISSION OF HDS ENGINEERING.

HDS ENGINEERING ASSUMES NO LIABILITY FOR DEVIATIONS FROM OR MODIFICATIONS MADE TO THE PLANS BY OTHERS. HDS ENGINEERING WILL NOT BE HELD RESPONSIBLE FOR CONTRACTOR'S FAILURE TO CONFORM TO CONSTRUCTION DOCUMENTS. FAILURE TO NOTIFY ENGINEER OF KNOWN DISCREPANCIES, OR CONSTRUCTION MEANS AND METHODS.

REVISIONS

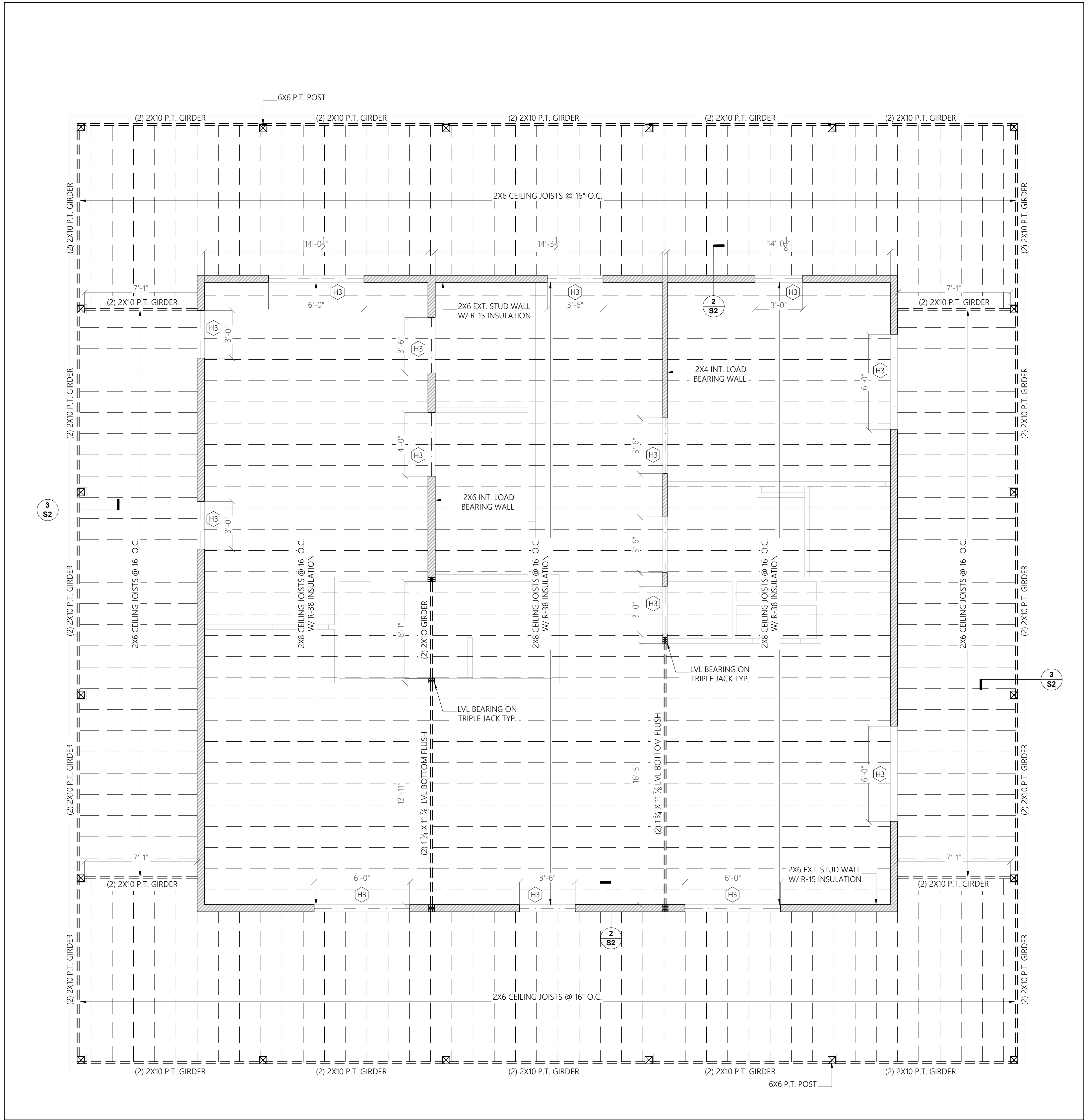
NO. DATE

PLAN INFORMATION

PROJECT NO: 25-108
FILENAME: Cokesbury Rd Tutor Residence
CHECKED BY: HDS
DRAWN BY: D.G.
DATE: 01-29-2024

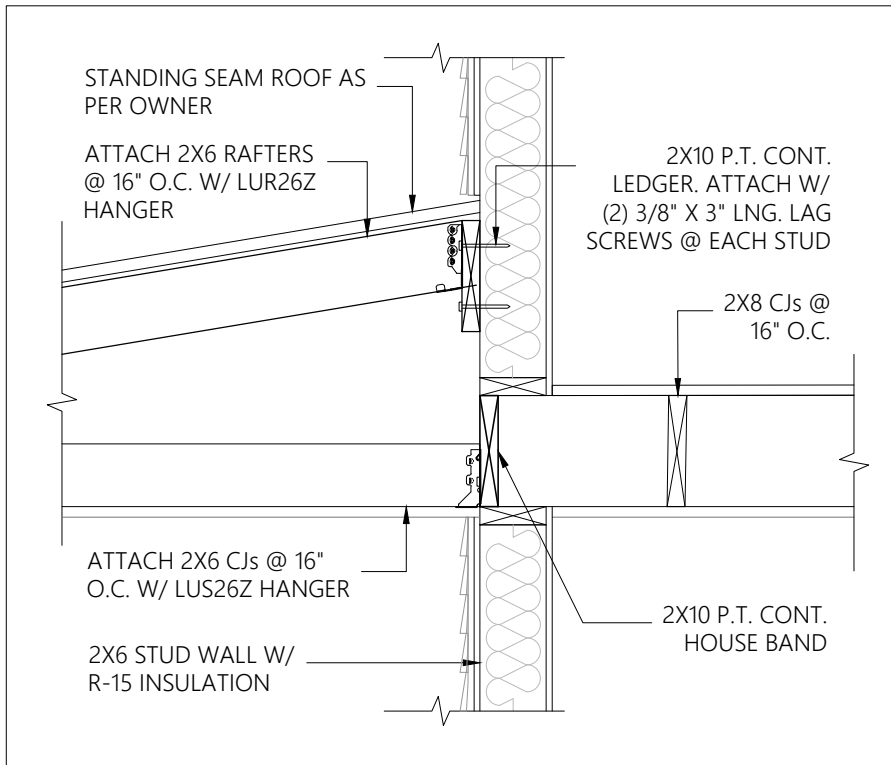
CONTENT

FOUNDATION PLAN
DETAILS
NOTES



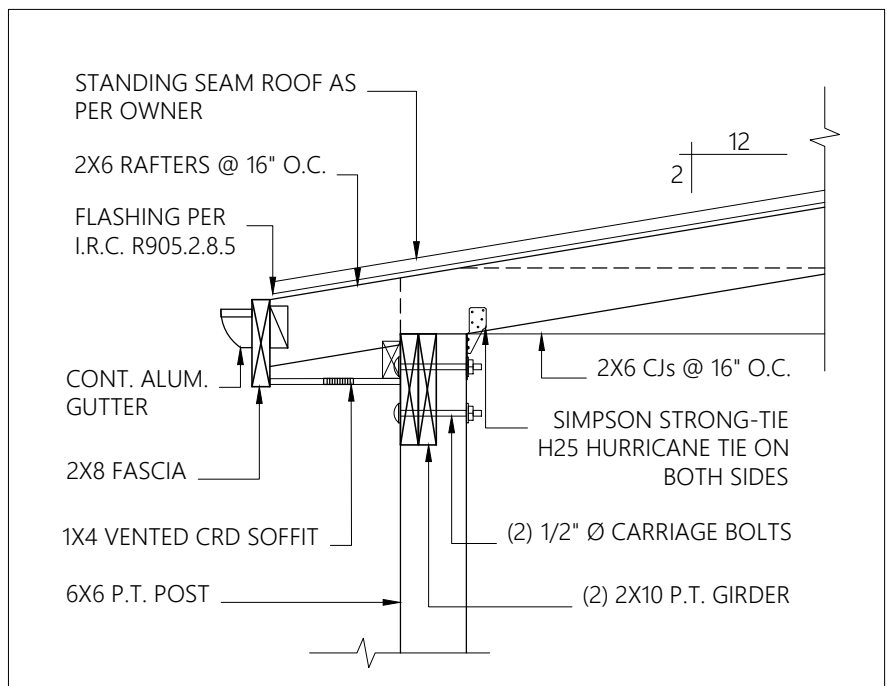
1
S2

CEILING FRAMING PLAN
SCALE: 1/4" = 1'-0"



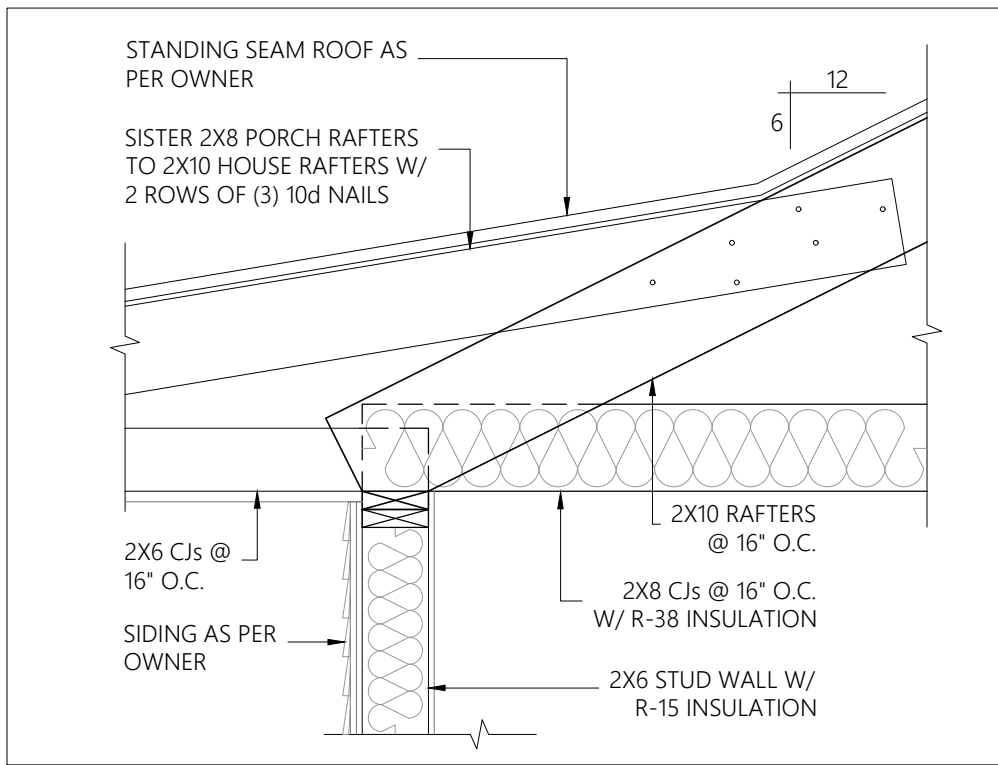
2
S2

LEDGER DETAIL
SCALE: 3/4" = 1'-0"



3
S2

PORCH RAFTER DETAIL
SCALE: 3/4" = 1'-0"



4
S2

HOUSE & PORCH RAFTER DETAIL
SCALE: 3/4" = 1'-0"

PERMIT NUMBER SFD 2408.0087

FRAMING NOTES:

- ALL FRAMING LUMBER SHALL BE SPF #2 (E = 1,400,000 PSI, FB = 875 PSI). TREATED LUMBER SHALL BE SYP #2 (E = 1,400,000 PSI, FB = 975 PSI). STUDS SHALL BE MIN #2 OR STUD GRADE.
- LVL SHALL BE LAMINATED VENEER LUMBER OR PARALLEL STRAND LUMBER (PSL) WITH THE FOLLOWING PROPERTIES: E = 2,000,000 PSI, FB = 2900 PSI, FV = 290 PSI.
- PROVIDE DOUBLE TOP PLATES IN ALL EXTERIOR WALLS. STAGGER JOINTS MIN 24", W/ (4) 16D NAILS.
- WALL BRACING SHALL CONFORM TO R602.10.
- SET ALL JOISTS AND BEAMS WITH NATURAL CAMBER UP. ENDS LAPPED MIN. 6" OVER BEARING SHALL BE SECURELY NAILED TOGETHER. PROVIDE AT MIN. 1-1/2" BEARING FOR ALL JOISTS AND MIN. 3" FOR BEAMS (U.N.O.).
- ALL FRAMING EXPOSED TO CONCRETE OR WEATHER TO BE PRESSURE TREATED. SILLS MIN. 2X6.
- STRUCTURAL MEMBER FASTENING TO CONFORM TO TABLE R602.3 (1) AND (2).
- DOUBLE ALL JOISTS: A) UNDER PARALLEL PARTITIONS; B) OPENING HEADERS/TRIMMERS; C) UNDER TUBS W/ 12" OR GREATER SPAN.
- STUDS SHALL NOT BE CUT FOR PLUMBING/ELECTRICAL/MECHANICAL RUNS WITHOUT STRAPPING AT EACH SIDE PER R602.6. ENGINEER IS NOT RESPONSIBLE FOR FAILURES IN CUT MEMBERS. DO NOT CUT BEAMS OR GIRDERS.
- BALLOON FRAME GABLE END VAULTED WALLS AND ALL WALLS HIGHER THAN 10' W/ 2X4 @ 12" O.C. OR (2) 2X4 @ 16". MULTIPLE UNIT WINDOWS IN WALLS HIGHER THAN 10' TO HAVE MIN. DOUBLE STUD POCKETS, U.N.O.
- INSTALL I-JOISTS PER MANUFACTURER'S SPECIFICATIONS. MIN. I-JOIST BEARING: 1-3/4" AT ENDS, 3-1/2" AT INTERMEDIATE SUPPORTS.
- TRUSS DRAWINGS MUST BE SEALED BY THE TRUSS MANUFACTURER AND REVIEWED BY HDS ENGINEERING. TRUSS DRAWINGS TO DESIGN AND DOCUMENT ALL REQUIRED BEAMS, HANGERS, AND POINT LOAD REACTIONS. TRUSS DESIGN, FABRICATION, AND DOCUMENTATION SHALL MEET ALL REQUIREMENTS OF R502.11.
- ALL POINT LOADS TO BE COLUMBED/BLOCKED DOWN TO FOUNDATION.
- FIREBLOCK TO CONFORM WITH R302.11.
- MINIMUM HEADER SIZE AND SUPPORT:

# JACK STUD REQUIREMENTS FOR HEADERS				
SPAN	BEAM*	ROOF/CLG	ROFF/CLG + FLR	ROOF/CLG+2FLR
4'-0"	2-2X6	2X4	2X4	2-2X4
4'-6"	2-2X10	2X4	2X4	3-2X4
6'-8"	2-2X10	2X4	3-2X4	4-2X4
8'-10"	2-2X12	2-2X4	4-2X4	4-2X4
10'-0"	SEE PLAN	SEE PLAN	SEE PLAN	SEE PLAN

WALL FRAMING AND BRACED WALL REQUIREMENTS:

- EXTERIOR WOOD FRAMED WALLS TO BE 2X6 SYP #2 WITH STUDS @ 16" O.C. PER IRC 602.3. HEIGHT OF EXTERIOR WALL AS SHOWN.
- ALL EXTERIOR WALLS TO BE SHEATHED WITH 1/2" STRUCTURAL PLYWOOD OR 1/16" OSB.
- WINDOW HEADERS AND BEARING WALL BEAMS TO BE 4X10 UNLESS SPECIFIED ON DRAWINGS.
- INTERIOR WALLS TO BE 2X4 CONSTRUCTION PLACED @ 16" O.C. STUD HEIGHT AS SHOWN.
- INTERIOR BATHROOM WALLS WITH EXTENSIVE PLUMBING FIXTURES MAY HAVE 2X6 FRAMED WALLS.
- BATHROOM WALL COVERINGS TO BE MOISTURE-RESISTANT CEMENT PLASTER, TILE, OR APPROVED EQUAL TO 12" ABOVE DRAIN AT SHOWERS OR TUBS WITH SHOWERS (R102.2.5 & R102.4.2).
- NOTCHING & DRILLING OF FRAMING TO BE DONE IN ACCORDANCE WITH IRC 602.6 & 602.6.1.
- BRACING MATERIALS & METHODS TO COMPLY WITH SECTION R602.10.1 AND LOAD PATH DETAILING IN ACCORDANCE WITH SECTION R602.10.4.
- EXTERIOR WALL BRACING, UNLESS SPECIFIED OTHERWISE, SHALL BE CONTINUOUS SHEATHING METHOD (CS-WSP) AS SPECIFIED IN TABLE R602.10.1.
- INTERIOR WALL BRACING PANELS, UNLESS SPECIFIED OTHERWISE, SHALL BE GYPSUM BOTH SIDES (GB) AS SPECIFIED IN TABLE R602.10.1.
- EXTERIOR AND INTERIOR BRACED WALL PANELS, IF SPECIFIED, SHALL BE ATTACHED TOP AND BOTTOM PER SECTION R602.10.4.4 AND FIGURES R602.10.4.4(1) OR R602.10.4.4(2).
- EXTERIOR WALL BRACING PORTAL FRAMES, IF SPECIFIED WITHOUT HOLD DOWNS, SHALL BE INSTALLED PER FIGURE R602.10.1 OR ALTERNATE DETAIL PROVIDED.

CONNECTIONS:

- ALL CONNECTORS ARE SPECIFIED AS SIMPSON. EQUIVALENT LUMBERLOCK CONNECTORS WILL BE SATISFACTORY.
- NAILING SCHEDULE TO BE IN ACCORDANCE WITH TABLE R602.3 (1).

BEAM BEARING POINTS IN WALLS:

ALL BEAM BEARING POINTS IN WALLS MUST HAVE 2X STUDS NAILED TOGETHER TO A MINIMUM WITH NOT LESS THAN BEAM BEING SUPPORTED.

HEADER SCHEDULE:

	SPECIFICATION	SIZE
H1	SINGLE 2X4 TURNED FLAT	A
H2	(2) 2X4 ON SINGLE JACKS	B
H3	(2) 2X10 ON SINGLE JACKS	C
H4	(2) 1 1/2" X 9 1/2" LVL ON DBL JACKS	
H5	(3) 2X10 ON SINGLE 2X6 JACKS	

NOTES:

- TYPICAL FOR INTERIOR NON LOAD BEARING WALLS ONLY. ROUGH OPENING 38" MAX.
 - TYPICAL FOR INTERIOR NON LOAD BEARING WALLS ONLY. ROUGH OPENING 38" TO 74" MAX.
 - TYPICAL FOR ALL CONDITIONS NOT LISTED IN A. OR B. UNO.
- HEADERS IN NON LOAD BEARING INTERIOR WALLS ARE NOT LABELED.
- REFER TO STRUCTURAL PLANS FOR REQUIRED NUMBER OF KING STUDS AT OPENINGS.

INSULATION SPECIFICATIONS

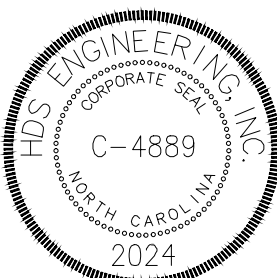
2018 NORTH CAROLINA STATE BUILDING CODE: ENERGY CONSERVATION CODE

A. MINIMUM INSULATION:

- CEILING: R-38 INSULATION.
- VAULTED CEILING: R-38 INSULATION.
- WALLS ABOVE GRADE: R-15 INSULATION.
- FLOOR: R-19 INSULATION.
- SLAB ON GRADE: R-10 INSULATION (ENTIRE SLAB).

B. EXTERIOR WALLS AND VAPOR BARRIER:

- ALL EXTERIOR WALLS ARE TO HAVE EITHER VAPOR BARRIER (A) OR (B) INSTALLED AS PER MANUFACTURER'S SPECIFICATIONS, WITH WINDOW AND JOINT TAPE PER IRC 103 & TABLE IRC 103.3(1).
- USE TYVEK HOUSE WRAP AND DUPONT FLASHING SYSTEMS FOR ALL WINDOWS AND DOORS. CONSULT THE DUPONT MANUAL AND REPRESENTATIVE FOR INSTALLATION INSTRUCTIONS.



THE DRAWINGS AND PLAN
ENGINEERING ARE THE
PROPERTY OF HDS ENGINEERING
ISSUED EXCLUSIVELY FOR THIS
PROJECT AND SHALL NOT BE
DUPLICATED OR USED FOR
OTHER PURPOSES, IN WHOLE
OR PART, WITHOUT WRITTEN
PERMISSION OF HDS
ENGINEERING.

HDS ENGINEERING ASSUMES NO
LIABILITY FOR DEVIATIONS FROM
OR MODIFICATIONS MADE TO
THE PLANS BY OTHERS. HDS
ENGINEERING WILL NOT BE
HELD RESPONSIBLE FOR
CONTRACTOR'S FAILURE TO
CONFORM TO CONSTRUCTION
DOCUMENTS. FAILURE TO
NOTIFY ENGINEER OF KNOWN
DISCREPANCIES, OR
CONSTRUCTION MEANS AND
METHODS.

REVISIONS

NO. DATE

PLAN INFORMATION

PROJECT NO: 25-108
FILENAME: Cokesbury Rd Tutor
Residence
CHECKED BY: HDS
DRAWN BY: D.G.
DATE: 01-29-2024

CONTENT

CEILING FRAMING PLAN
DETAILS
NOTES

