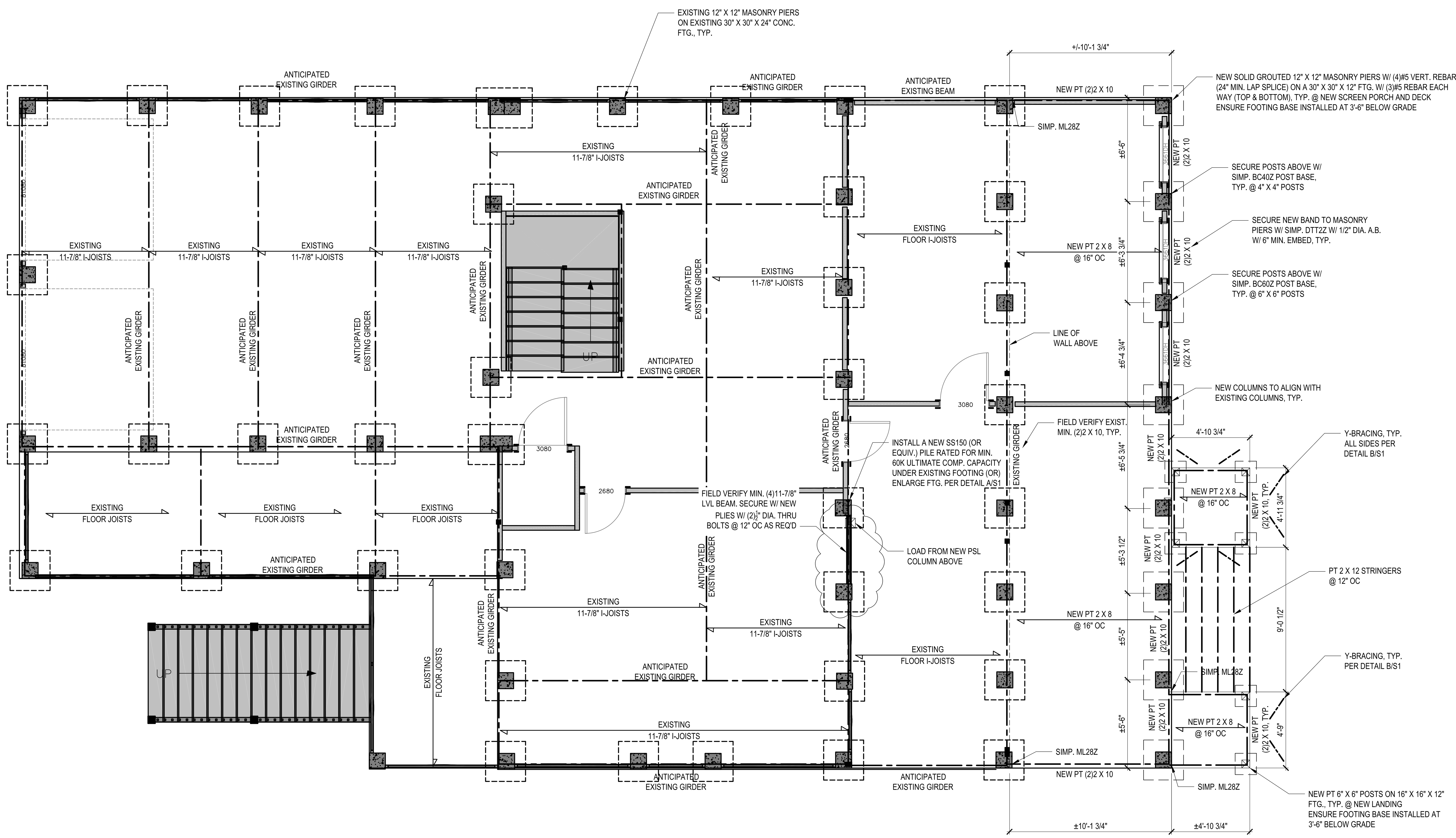
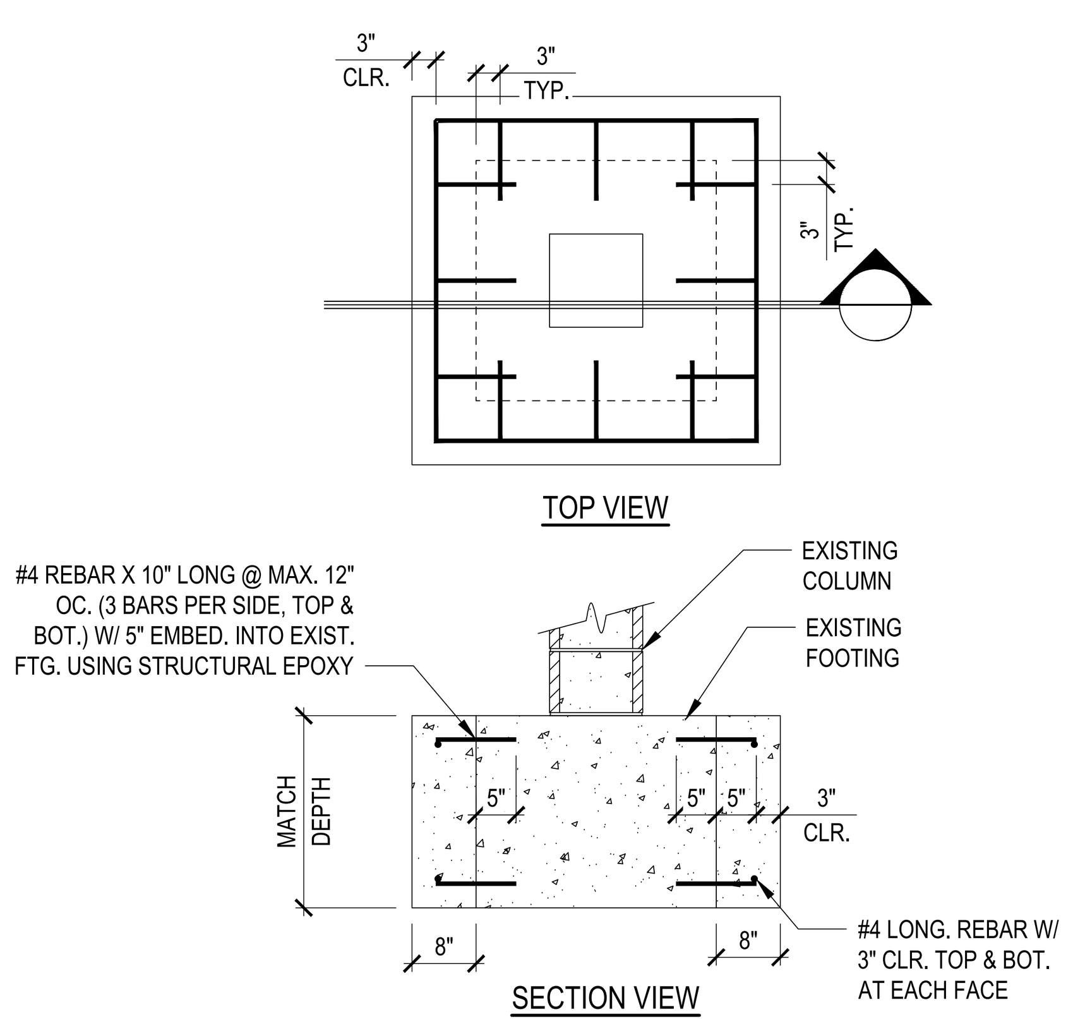
DESIGN LOADS

	LIVE LOAD (PSF)	DEAD LOAD (PSF)	DEFLECTION	
			LL	TL
FLOOR (primary)	40	10	L/360	L/240
FLOOR (secondary)	40	10	L/360	L/240
ATTIC (w/ storage)	20	10	L/240	L/180
ATTIC (no access)	10	5	L/240	L/180
EXTERNAL BALCONY	40	10	L/360	L/240
ROOF	20	10	L/240	L/180
ROOF TRUSS	20	20	L/240	L/180
WIND LOAD	BASED ON 150 MPH (EXPOSURE B)			
SEISMIC	BASED ON SEISMIC ZONES A-D			

STRUCTURAL NOTES:

1) ALL CONSTRUCTION SHALL CONFORM TO THE LATEST REQUIREMENTS OF "SOUTH CAROLINA STATE 2021 RESIDENTIAL BUILDING CODE", IN ADDITION TO ALL LOCAL CODES AND REGULATIONS.
2) IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND SQUARE FOOTAGE PRIOR TO CONSTRUCTION. TYNDALL ENGINEERING & DESIGN, PA IS NOT RESPONSIBLE FOR DIMENSIONS AND SQUARE FOOTAGE ERRORS ONCE CONSTRUCTION BEGINS.
3) ALL LUMBER SHALL BE SYP #2 (UNO)
ALL LVL LUMBER TO BE 1.75" WIDE NOMINAL EACH SINGLE MEMBER AND Fb = 2600 PSI, E = 1.9M PSI
(I.E. WEYERHAUSER MICROLAM)
ALL LSL LUMBER IS TO BE 1.55E (Fb = 2325 PSI)
4) ALL LOAD BEARING EXTERIOR WINDOW HEADERS SHOULD BE A (2)2x10 W/ (1)JACK STUD (MATCH WALL STUDS) AND KING STUDS PER THE SPECIFIED KING STUD CHART, AND NAILED TOGETHER w/ (2) 10d @ 8" O.C. (PROVIDED THAT THE TOP OF THE WINDOW HEIGHT IS 6'-8", MINIMUM BOTTOM OF THE WINDOW HEIGHT IS 1'-6"), UNLESS NOTED OTHERWISE ON THE PLANS. OTHERWISE REFER TO TABLE R602.7(1).
5) ALL INTERIOR LOAD BEARING HEADERS TO BE (2) 2x10 (U.N.O.) REFER TO TABLE R602.7(2) FOR JACK STUD REQUIREMENTS FOR HEADER SPANS FOR INTERIOR AND EXTERIOR LOAD CONDITIONS (UNO)
6) ALL STRUCTURAL STEEL SHALL BE ASTM A992 GRADE 50
Fy = 50 KSI MIN. (UNO)
7) ALL EXTERIOR LUMBER TO BE #2 SYP PT
8) ALL CONCRETE, fc = 4000 PSI MIN.
9) PRESUMPTIVE BEARING CAPACITY = 2000 PSF
10) 1/2"Ø ANCHOR BOLTS SHALL BE SPACED A MAXIMUM OF 6'-0" ON CENTER AND NOT MORE THAN 12" FROM CORNERS FOR (2)2X SILL PLATES. FOR (1)2X SILL PLATES, 1/2"Ø ANCHOR BOLTS SHALL BE SPACED A MAXIMUM OF 18" ON CENTER. A MINIMUM OF TWO BOLTS SHALL BE PROVIDED PER SILL PLATE SECTION. SILL PLATES SHALL BE ANCHORED WITH CONTINUOUS ANCHOR BOLTS EXTENDING INTO THE FOOTING, EACH WITH A 2"X2"X1/8" STEEL PLATE WASHER. ANCHOR BOLTS SHALL EMBED A MINIMUM OF 7" INTO TURNED-DOWN CONCRETE FOOTINGS.
11) PSL COLUMNS DESIGNED WITH MAX. HEIGHT OF 10'-0" (UNO)
12) PROVIDE A MECHANICAL CONNECTION WITH A MINIMUM 500# UPLIFT & LATERAL RATING AT TOP AND BOTTOM OF PORCH COLUMNS. (U.N.O.)
13) MAXIMUM MASONRY PIER HEIGHT SHALL NOT EXCEED FOUR TIMES ITS LEAST HORIZONTAL DIMENSION.
14) UPLIFT LOADS GREATER THAN 500# SHALL BE CONTINUOUSLY ANCHORED TO THE FOUNDATION.
15) METAL HANGERS SHALL BE SIMPSON OR APPROVED EQUAL.



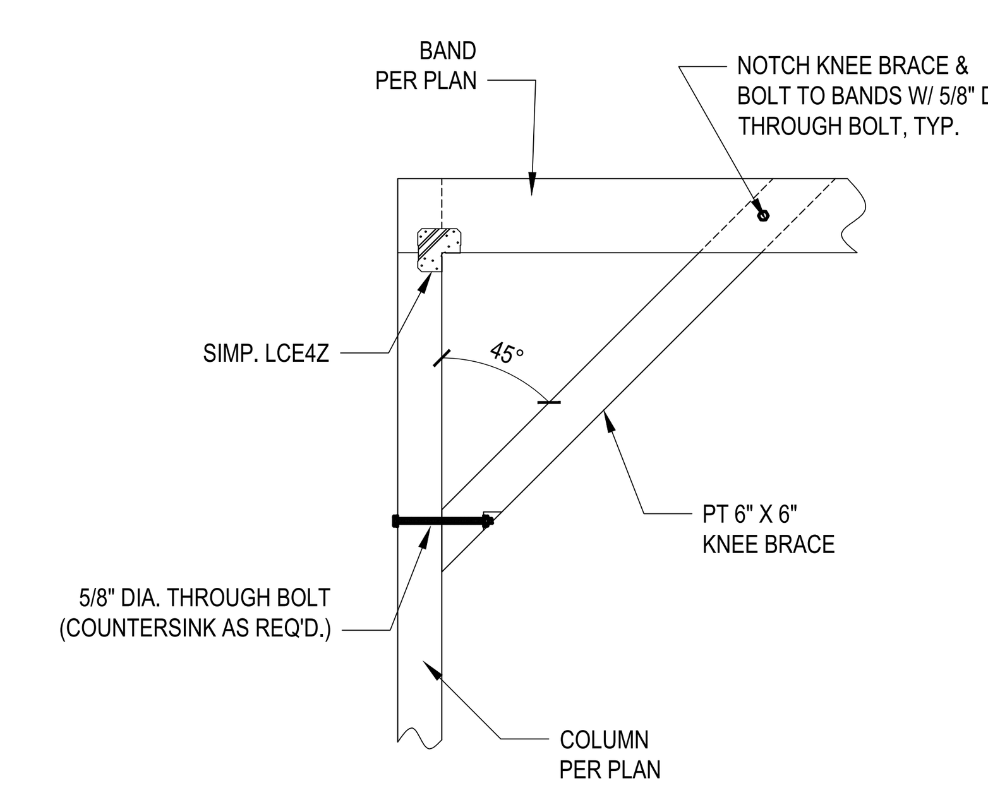


A EXISTING FOOTING ENLARGEMENT
SCALE: 1/2" = 1'-0"

NOTE:
FIELD VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION

NOTE:
THE EXISTING FRAMING SHOWN IS APPROXIMATE AND BASED ON LIMITED FIELD DATA AT TIME OF SITE VISIT. THE BUILDER SHALL FIELD VERIFY THE DIRECTION AND ACCURACY OF THE SHOWN FRAMING PRIOR TO DEMOLITION OR CONSTRUCTION. IF ANY EXISTING FRAMING DIFFERS FROM THAT SHOWN, THE BUILDER SHALL NOTIFY TE&D BEFORE PROCEEDING SO THAT THE PLANS CAN BE REVIEWED AND, IF NECESSARY, REVISED TO ENSURE STRUCTURAL ADEQUACY.

GROUND FLOOR PLAN
1/4" = 1'-0"



B Y-BRACING DETAIL
AT CORNER CONNECTION
SCALE: 1/2" = 1'-0"

*Engineers seal does not include construction means, methods, techniques, sequences, procedures or safety precaution.
*Any deviations or discrepancies on plans are to be brought to the immediate attention of Tyndall Engineering & Design, P.A. Failure to do so will void Tyndall Engineering & Design, P.A. liability.
*Please review these documents carefully. Tyndall Engineering & Design, P.A. will interpret that all dimensions, recommendations, etc. presented in these documents were deemed acceptable once construction begins.

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 24106 PRENTICE A TYNDALL JR 8/18/25

TYNDALL ENGINEERING & DESIGN, P.A.
T 919 773-1200 ▪ F 919 773-9658
250 Shipwash Drive ▪ Garner ▪ North Carolina ▪ 27529
www.tyndallengineering.com

SOUTH CAROLINA TYNDALL ENGINEERING AND DESIGN, PA No. 7320 CERTIFICATE OF AUTHORIZATION

Client: BETTER BY DESIGN

Plan: 3103 S SHORE DR CHARLESTON, SC

BASEMENT HEADER 1ST FLOOR FRAMING

Project #:	2504-010004
Date:	08/18/25
Engineered By:	AM
DWG. Checked By:	PAT
Scale:	SEE PLAN

REVISIONS

No.	Date:	Remarks
1		
2		
3		
4		

Sheet Number

S1

DESIGN LOADS

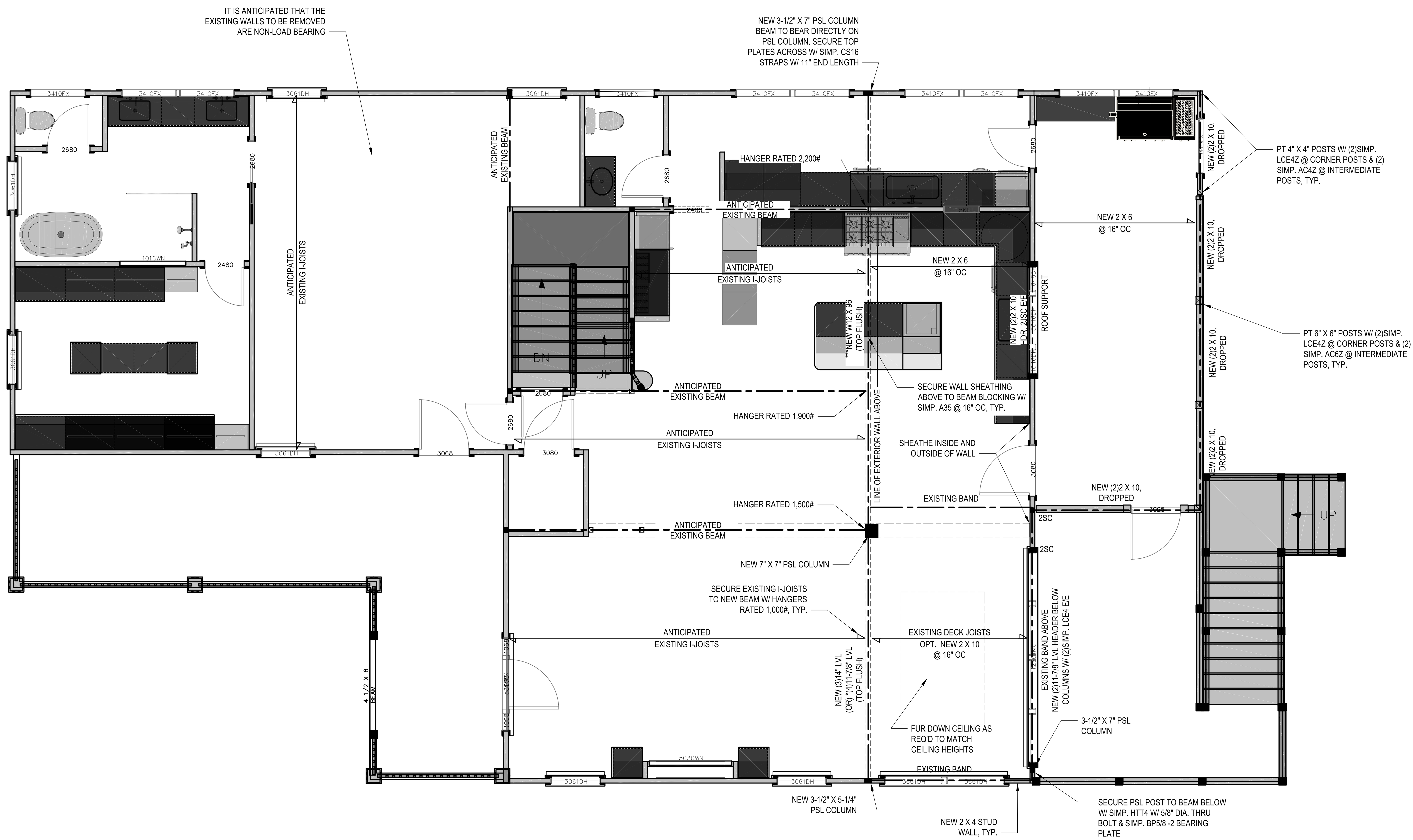
	LIVE LOAD (PSF)	DEAD LOAD (PSF)	DEFLECTION	
			LL	TL
FLOOR (primary)	40	10	L/360	L/240
FLOOR (secondary)	40	10	L/360	L/240
ATTIC (w/ storage)	20	10	L/240	L/180
ATTIC (no access)	10	5	L/240	L/180
EXTERNAL BALCONY	40	10	L/360	L/240
ROOF	20	10	L/240	L/180
ROOF TRUSS	20	20	L/240	L/180
WIND LOAD	BASED ON 150 MPH (EXPOSURE B)			
SEISMIC	BASED ON SEISMIC ZONES A-D			

STRUCTURAL NOTES:

1) ALL CONSTRUCTION SHALL CONFORM TO THE LATEST REQUIREMENTS OF "SOUTH CAROLINA STATE 2021 RESIDENTIAL BUILDING CODE", IN ADDITION TO ALL LOCAL CODES AND REGULATIONS.
2) IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND SQUARE FOOTAGE PRIOR TO CONSTRUCTION. TYNDALL ENGINEERING & DESIGN, PA IS NOT RESPONSIBLE FOR DIMENSIONS AND SQUARE FOOTAGE ERRORS ONCE CONSTRUCTION BEGINS.
3) ALL LUMBER SHALL BE SYP #2 (UNO)
ALL LVL LUMBER TO BE 1.75" WIDE NOMINAL EACH SINGLE MEMBER AND Fb = 2600 PSI, E = 1.9M PSI
(I.E. WEYERHAUSER MICROLAM)
ALL LSL LUMBER IS TO BE 1.55E (Fb = 2325 PSI)
4) ALL LOAD BEARING EXTERIOR WINDOW HEADERS SHOULD BE A (2)2x10 W/ (1)JACK STUD (MATCH WALL STUDS) AND KING STUDS PER THE SPECIFIED KING STUD CHART, AND NAILED TOGETHER w/ (2) 10d @ 8" O.C. (PROVIDED THAT THE TOP OF THE WINDOW HEIGHT IS 6'-8", MINIMUM BOTTOM OF THE WINDOW HEIGHT IS 1'-6"), UNLESS NOTED OTHERWISE ON THE PLANS. OTHERWISE REFER TO TABLE R602.7(1).
5) ALL INTERIOR LOAD BEARING HEADERS TO BE (2) 2x10 (U.N.O.) REFER TO TABLE R602.7(2) FOR JACK STUD REQUIREMENTS FOR HEADER SPANS FOR INTERIOR AND EXTERIOR LOAD CONDITIONS (UNO)
6) ALL STRUCTURAL STEEL SHALL BE ASTM A992 GRADE 50
Fy = 50 KSI MIN. (UNO)
7) ALL EXTERIOR LUMBER TO BE #2 SYP PT
8) ALL CONCRETE, fc = 4000 PSI MIN.
9) PRESUMPTIVE BEARING CAPACITY = 2000 PSF
10) 1/2"Ø ANCHOR BOLTS SHALL BE SPACED A MAXIMUM OF 6'-0" ON CENTER AND NOT MORE THAN 12" FROM CORNERS FOR (2)2X SILL PLATES. FOR (1)2X SILL PLATES, 1/2"Ø ANCHOR BOLTS SHALL BE SPACED A MAXIMUM OF 18" ON CENTER. A MINIMUM OF TWO BOLTS SHALL BE PROVIDED PER SILL PLATE SECTION. SILL PLATES SHALL BE ANCHORED WITH CONTINUOUS ANCHOR BOLTS EXTENDING INTO THE FOOTING, EACH WITH A 2"X2"X1/8" STEEL PLATE WASHER. ANCHOR BOLTS SHALL EMBED A MINIMUM OF 7" INTO TURNED-DOWN CONCRETE FOOTINGS.
11) PSL COLUMNS DESIGNED WITH MAX. HEIGHT OF 10'-0" (UNO)
12) PROVIDE A MECHANICAL CONNECTION WITH A MINIMUM 500# UPLIFT & LATERAL RATING AT TOP AND BOTTOM OF PORCH COLUMNS. (U.N.O.)
13) MAXIMUM MASONRY PIER HEIGHT SHALL NOT EXCEED FOUR TIMES ITS LEAST HORIZONTAL DIMENSION.
14) UPLIFT LOADS GREATER THAN 500# SHALL BE CONTINUOUSLY ANCHORED TO THE FOUNDATION.
15) METAL HANGERS SHALL BE SIMPSON OR APPROVED EQUAL.

STRUCTURAL SHEATHING NOTES

1) DESIGNED FOR SEISMIC ZONE A-D AND WIND SPEEDS OF 150 MPH OR LESS.
2) WALLS SHALL BE BRACED IN ACCORDANCE WITH ICC600-2020 OR FEMA 55.
3) PANELS SHALL BE APA RATED WOOD STRUCTURAL PANEL SHEATHING WITH AN EXPOSURE 1 BOND CLASSIFICATION UNLESS NOTED OTHERWISE. PANELS SHALL EXTEND OVER A MINIMUM OF THREE SUPPORTS AND SHALL BE INSTALLED IN FULL SHEETS EXCEPT AT ENDS OF WALL/ROOF SURFACES.
4) WALL SHEATHING MAY BE INSTALLED WITH STRENGTH AXIS PARALLEL OR PERPENDICULAR TO SUPPORTS. ROOF SHEATHING MUST BE INSTALLED WITH STRENGTH AXIS PERPENDICULAR TO SUPPORTS.
5) WALLS SHALL BE CONTINUOUSLY SHEATHED WITH WOOD STRUCTURAL PANELS USED TO RESIST BOTH SHEAR AND UPLIFT UNLESS NOTED OTHERWISE ON PLANS AND SHALL BE INSTALLED AS FOLLOWS:
   - MINIMUM 7/16 THICKNESS
   - PANELS SHALL BE ATTACHED TO FRAMING WITH 8d NAILS AS FOLLOWS (UNLESS NOTED OTHERWISE):
     -- 6" O.C. AT VERTICAL EDGES
     -- 6" O.C. AT INTERMEDIATE SUPPORTS
     -- 3" O.C. AT HORIZONTAL EDGES OR DOUBLE EDGE NAILING AT 3" O.C. WHERE REQUIRED. (NAIL SPACING IN ANY SINGLE ROW SHALL NOT BE LESS THAN 3" O.C.)
   - PANELS SHALL EXTEND MINIMUM 12" BEYOND HORIZONTAL CONSTRUCTION JOINTS AND SHALL OVERLAP GIRDERS THEIR FULL DEPTH EXCEPT WHERE THE HORIZONTAL JOINT OCCURS OVER A MINIMUM 1" THICK OSB OR PLYWOOD RIMBOARD WITH A MINIMUM 1-1/2" OVERLAP.
   - BLOCKING SHALL BE PROVIDED AT ALL PANEL EDGES.
6) ALL REQUIRED UPLIFT CONNECTORS SHALL BE INSTALLED ON THE SAME SIDE OF THE WALL AS THE SHEATHING TO PROVIDE A CONTINUOUS LOAD PATH. CONNECTORS INSTALLED THROUGH SHEATHING SHALL BE ATTACHED WITH MINIMUM 2-1/2" LONG NAILS.
7) INTERIOR SURFACES OF EXTERIOR WALLS AND ALL INTERIOR GYPSUM SHEAR WALLS SHALL BE SHEATHED WITH MIN. 1/2" THICK GYPSUM ATTACHED WITH 5d COOLER OR WALLBOARD NAILS @ 7" O.C.
8) HEADERS SHALL BE ATTACHED TO EACH JACK STUD AND EACH JACK STUD SHALL BE ATTACHED TO THE BAND OR RIM BOARD BELOW WITH A STRAP RATED FOR MIN. 1000 LBS.



NOTE:
ALL NEW LOAD BEARING HEADERS ARE TO BE (2)2 X 10 PER STRUCTURAL NOTES 4 & 5, UNLESS NOTED OTHERWISE

NOTE:
THE EXISTING FRAMING SHOWN IS APPROXIMATE AND BASED ON LIMITED FIELD DATA AT TIME OF SITE VISIT. THE BUILDER SHALL FIELD VERIFY THE DIRECTION AND ACCURACY OF THE SHOWN FRAMING PRIOR TO DEMOLITION OR CONSTRUCTION. IF ANY EXISTING FRAMING DIFFERS FROM THAT SHOWN, THE BUILDER SHALL NOTIFY TE&D BEFORE PROCEEDING SO THAT THE PLANS CAN BE REVIEWED AND, IF NECESSARY, REVISED TO ENSURE STRUCTURAL ADEQUACY.

*NOTE: SECURE 4-PLY W/ 1/2"Ø THRU-BOLTS @ 24" O.C. (OR EQUIV. STRUCTURAL SCREWS)

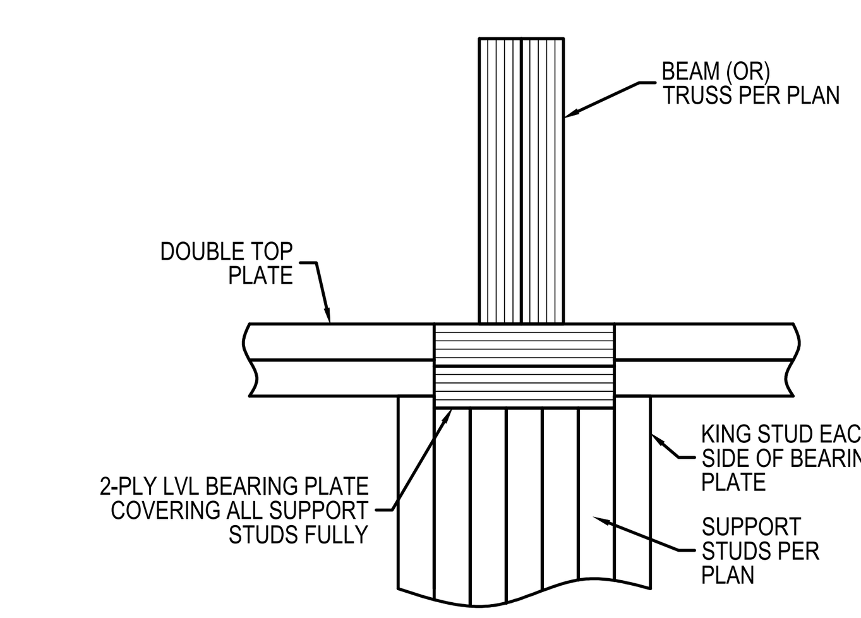
**W14 X 68, W16 X 57, AND W18 X 46 ARE ACCEPTABLE ALTERNATIVE STEEL BEAM SIZES

FIRST FLOOR PLAN

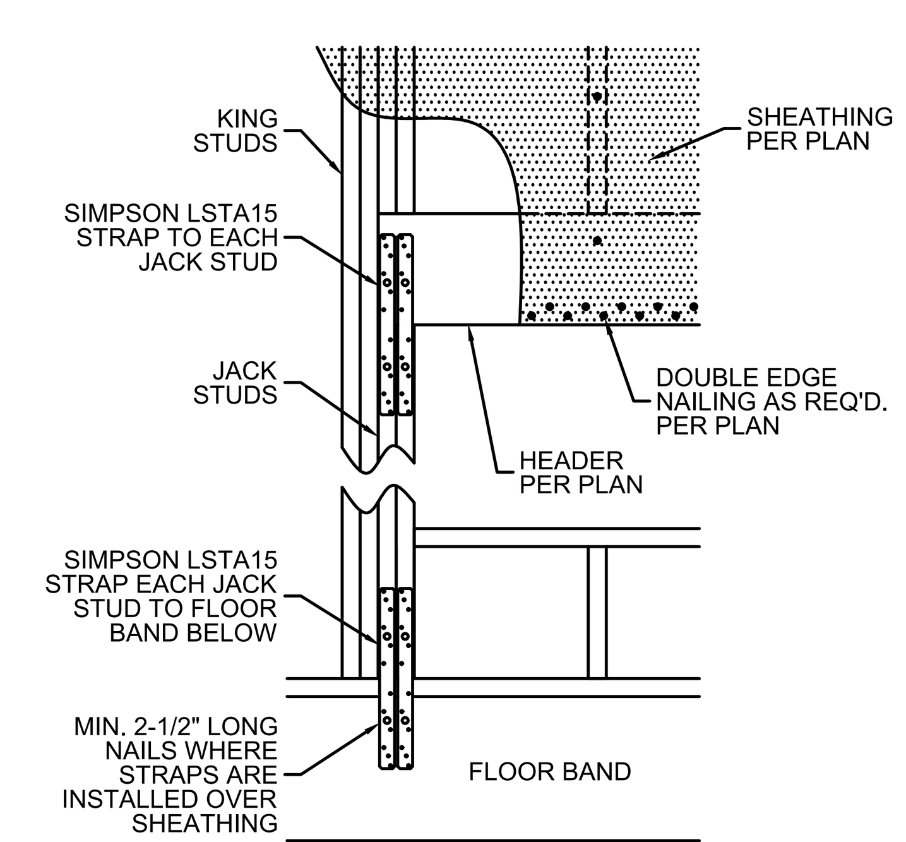
1/4" = 1'-0"

KING STUD SCHEDULE		
	MIN. # OF FULL HEIGHT STUDS (KING) E.E. OF OPENING PER WALL DEPTH	
HEADER SPAN (FT)	2 X 4 STUD WALL	2 X 6 STUD WALL
UP TO 3'-0"	2	1
3'-1" TO 6'-0"	3	1
6'-1" TO 9'-0"	3	2
9'-1" TO 12'-0"	4	2
12'-1" TO 15'-0"	6	3
15'-1" TO 18'-0"	7	3

NOTES*:
a. TABLE DENOTES REQUIRED MINIMUM NUMBER OF STUDS E/E OF HEADER, TYP. UNO ON PLANS
b. NUMBER OF KING STUDS LISTED ABOVE ARE BASED 10' NOMINAL WALL HEIGHT, STUD SPACING OF 16" O.C., AND ULTIMATE WIND SPEED OF 150 MPH (EXPOSURE B)
c. HEADER SPANS IN TABLE ARE BASED ON ROUGH OPENINGS. INTERPOLATION BETWEEN SPAN VALUES IS PERMITTED, ROUND UP NUMBER OF KING STUDS, EXTRAPOLATION IS PROHIBITED. CONTACT TYNDALL ENGINEERING AND DESIGN IF HEADER SPANS EXCEED TABLE VALUES
d. FOR BUILT-UP STUD ASSEMBLIES CONSISTING OF MORE THAN THREE STUDS, THE INDIVIDUAL MEMBERS SHALL BE SECURELY FASTENED TOGETHER TO ENSURE FULL COMPOSITE ACTION. FASTENERS (NAILS OR STRUCTURAL SCREWS) SHALL BE INSTALLED FROM BOTH SIDES OF THE ASSEMBLY IN A STAGGERED PATTERN AS REQUIRED



A LVL BEARING PLATE
SCALE: 1-1/2" = 1'-0"



B TYPICAL UPLIFT STRAPPING AT HEADERS
SCALE: 3/4" = 1'-0"

*Engineers seal does not include construction means, methods, techniques, sequences, procedures or safety precaution.
*Any deviations or discrepancies on plans are to be brought to the immediate attention of Tyndall Engineering & Design, P.A. Failure to do so will void Tyndall Engineering & Design, P.A. liability.
*Please review these documents carefully. Tyndall Engineering & Design, P.A. will interpret that all dimensions, recommendations, etc. presented in these documents were deemed acceptable once construction begins.

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 24106 PRENTICE A TYNDALL JR 8/18/25

TYNDALL ENGINEERING & DESIGN, P.A.
T 919 773-1200 • F 919 773-9658
250 Shipwash Drive • Garner • North Carolina • 27529
www.tyndallengineering.com

SOUTH CAROLINA TYNDALL ENGINEERING AND DESIGN, PA No. 7320 CERTIFICATE OF AUTHORIZATION

Client: BETTER BY DESIGN

Plan: 3103 S SHORE DR CHARLESTON, SC

1ST FLOOR HEADER 2ND FLOOR FRAMING

Project #:	2504-010004
Date:	08/18/25
Engineered By:	AM
DWG. Checked By:	PAT
Scale:	SEE PLAN

REVISIONS

No.	Date:	Remarks
1		
2		
3		
4		

Sheet Number

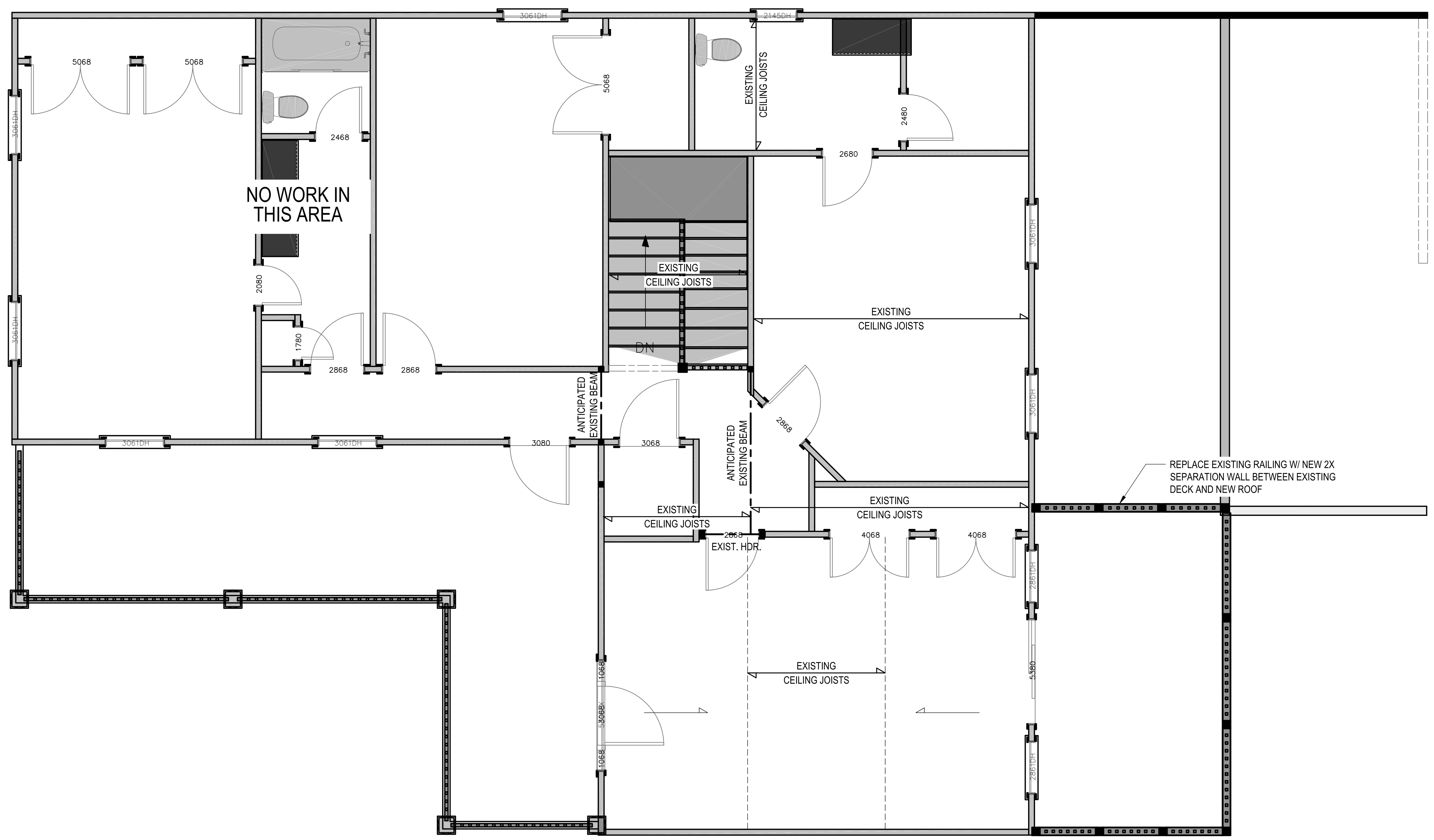
S2

DESIGN LOADS

	LIVE LOAD (PSF)	DEAD LOAD (PSF)	DEFLECTION	
			LL	TL
FLOOR (primary)	40	10	L/360	L/240
FLOOR (secondary)	40	10	L/360	L/240
ATTIC (w/ storage)	20	10	L/240	L/180
ATTIC (no access)	10	5	L/240	L/180
EXTERNAL BALCONY	40	10	L/360	L/240
ROOF	20	10	L/240	L/180
ROOF TRUSS	20	20	L/240	L/180
WIND LOAD	BASED ON 150 MPH (EXPOSURE B)			
SEISMIC	BASED ON SEISMIC ZONES A-D			

STRUCTURAL NOTES:

1) ALL CONSTRUCTION SHALL CONFORM TO THE LATEST REQUIREMENTS OF "SOUTH CAROLINA STATE 2021 RESIDENTIAL BUILDING CODE", IN ADDITION TO ALL LOCAL CODES AND REGULATIONS.
2) IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND SQUARE FOOTAGE PRIOR TO CONSTRUCTION. TYNDALL ENGINEERING & DESIGN, PA IS NOT RESPONSIBLE FOR DIMENSIONS AND SQUARE FOOTAGE ERRORS ONCE CONSTRUCTION BEGINS.
3) ALL LUMBER SHALL BE SYP #2 (UNO)
ALL LVL LUMBER TO BE 1.75" WIDE NOMINAL EACH SINGLE MEMBER AND Fb = 2600 PSI, E = 1.9M PSI
(I.E. WEYERHAUSER MICROLAM)
ALL LSL LUMBER IS TO BE 1.55E (Fb = 2325 PSI)
4) ALL LOAD BEARING EXTERIOR WINDOW HEADERS SHOULD BE A (2)2x10 W/ (1)JACK STUD (MATCH WALL STUDS) AND KING STUDS PER THE SPECIFIED KING STUD CHART, AND NAILED TOGETHER w/ (2) 10d @ 8" O.C. (PROVIDED THAT THE TOP OF THE WINDOW HEIGHT IS 6'-8", MINIMUM BOTTOM OF THE WINDOW HEIGHT IS 1'-6"), UNLESS NOTED OTHERWISE ON THE PLANS. OTHERWISE REFER TO TABLE R602.7(1).
5) ALL INTERIOR LOAD BEARING HEADERS TO BE (2) 2x10 (U.N.O.) REFER TO TABLE R602.7(2) FOR JACK STUD REQUIREMENTS FOR HEADER SPANS FOR INTERIOR AND EXTERIOR LOAD CONDITIONS (UNO)
6) ALL STRUCTURAL STEEL SHALL BE ASTM A992 GRADE 50
Fy = 50 KSI MIN. (UNO)
7) ALL EXTERIOR LUMBER TO BE #2 SYP PT
8) ALL CONCRETE, fc = 4000 PSI MIN.
9) PRESUMPTIVE BEARING CAPACITY = 2000 PSF
10) 1/2"Ø ANCHOR BOLTS SHALL BE SPACED A MAXIMUM OF 6'-0" ON CENTER AND NOT MORE THAN 12" FROM CORNERS FOR (2)2X SILL PLATES. FOR (1)2X SILL PLATES, 1/2"Ø ANCHOR BOLTS SHALL BE SPACED A MAXIMUM OF 18" ON CENTER. A MINIMUM OF TWO BOLTS SHALL BE PROVIDED PER SILL PLATE SECTION. SILL PLATES SHALL BE ANCHORED WITH CONTINUOUS ANCHOR BOLTS EXTENDING INTO THE FOOTING, EACH WITH A 2"X2"X1/8" STEEL PLATE WASHER. ANCHOR BOLTS SHALL EMBED A MINIMUM OF 7" INTO TURNED-DOWN CONCRETE FOOTINGS.
11) PSL COLUMNS DESIGNED WITH MAX. HEIGHT OF 10'-0" (UNO)
12) PROVIDE A MECHANICAL CONNECTION WITH A MINIMUM 500# UPLIFT & LATERAL RATING AT TOP AND BOTTOM OF PORCH COLUMNS. (U.N.O.)
13) MAXIMUM MASONRY PIER HEIGHT SHALL NOT EXCEED FOUR TIMES ITS LEAST HORIZONTAL DIMENSION.
14) UPLIFT LOADS GREATER THAN 500# SHALL BE CONTINUOUSLY ANCHORED TO THE FOUNDATION.
15) METAL HANGERS SHALL BE SIMPSON OR APPROVED EQUAL.



STRUCTURAL SHEATHING NOTES

1) DESIGNED FOR SEISMIC ZONE A-D AND WIND SPEEDS OF 150 MPH OR LESS.
2) WALLS SHALL BE BRACED IN ACCORDANCE WITH ICC600-2020 OR FEMA 55.
3) PANELS SHALL BE APA RATED WOOD STRUCTURAL PANEL SHEATHING WITH AN EXPOSURE 1 BOND CLASSIFICATION UNLESS NOTED OTHERWISE. PANELS SHALL EXTEND OVER A MINIMUM OF THREE SUPPORTS AND SHALL BE INSTALLED IN FULL SHEETS EXCEPT AT ENDS OF WALL/ROOF SURFACES.
4) WALL SHEATHING MAY BE INSTALLED WITH STRENGTH AXIS PARALLEL OR PERPENDICULAR TO SUPPORTS. ROOF SHEATHING MUST BE INSTALLED WITH STRENGTH AXIS PERPENDICULAR TO SUPPORTS.
5) WALLS SHALL BE CONTINUOUSLY SHEATHED WITH WOOD STRUCTURAL PANELS USED TO RESIST BOTH SHEAR AND UPLIFT UNLESS NOTED OTHERWISE ON PLANS AND SHALL BE INSTALLED AS FOLLOWS:
   - MINIMUM 7/16 THICKNESS
   - PANELS SHALL BE ATTACHED TO FRAMING WITH 8d NAILS AS FOLLOWS (UNLESS NOTED OTHERWISE):
     - 6" O.C. AT VERTICAL EDGES
     - 12" O.C. AT INTERMEDIATE SUPPORTS (6" OC WHERE LESS THAN 50 PERCENT OF WALL IS SHEATHED)
     - 3" O.C. AT HORIZONTAL EDGES OR DOUBLE EDGE NAILING AT 3" O.C. WHERE REQUIRED. (NAIL SPACING IN ANY SINGLE ROW SHALL NOT BE LESS THAN 3" O.C.)
   - PANELS SHALL EXTEND MINIMUM 12" BEYOND HORIZONTAL CONSTRUCTION JOINTS AND SHALL OVERLAP GIRDERS THEIR FULL DEPTH EXCEPT WHERE THE HORIZONTAL JOINT OCCURS OVER A MINIMUM 1" THICK OSB OR PLYWOOD RIMBOARD WITH A MINIMUM 1-1/2" OVERLAP.
   - BLOCKING SHALL BE PROVIDED AT ALL PANEL EDGES.
6) ALL REQUIRED UPLIFT CONNECTORS SHALL BE INSTALLED ON THE SAME SIDE OF THE WALL AS THE SHEATHING TO PROVIDE A CONTINUOUS LOAD PATH. CONNECTORS INSTALLED THROUGH SHEATHING SHALL BE ATTACHED WITH MINIMUM 2-1/2" LONG NAILS.
7) INTERIOR SURFACES OF EXTERIOR WALLS AND ALL INTERIOR GYPSUM SHEAR WALLS SHALL BE SHEATHED WITH MIN. 1/2" THICK GYPSUM ATTACHED WITH 5d COOLER OR WALLBOARD NAILS @ 7" O.C.
8) HEADERS SHALL BE ATTACHED TO EACH JACK STUD AND EACH JACK STUD SHALL BE ATTACHED TO THE BAND OR RIM BOARD BELOW WITH A STRAP RATED FOR MIN. 1000 LBS.

NOTE:

THE EXISTING FRAMING SHOWN IS APPROXIMATE AND BASED ON LIMITED FIELD DATA AT TIME OF SITE VISIT. THE BUILDER SHALL FIELD VERIFY THE DIRECTION AND ACCURACY OF THE SHOWN FRAMING PRIOR TO DEMOLITION OR CONSTRUCTION. IF ANY EXISTING FRAMING DIFFERS FROM THAT SHOWN, THE BUILDER SHALL NOTIFY TE&D BEFORE PROCEEDING SO THAT THE PLANS CAN BE REVIEWED AND, IF NECESSARY, REVISED TO ENSURE STRUCTURAL ADEQUACY.

SECOND FLOOR PLAN

1/4" = 1'-0"

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 24106 PRENTICE A TYNDALL JR 8/18/25

TYNDALL ENGINEERING & DESIGN, P.A.
250 Shipwash Drive • Garner • North Carolina • 27529
T 919 773-1200 • F 919 773-9658
www.tyndallengineering.com

SOUTH CAROLINA TYNDALL ENGINEERING AND DESIGN, PA No. 7320 CERTIFICATE OF AUTHORIZATION

Client: BETTER BY DESIGN

Plan: 3103 S SHORE DR CHARLESTON, SC

2ND FLOOR HEADER
2ND FLR. CLG. FRAMING

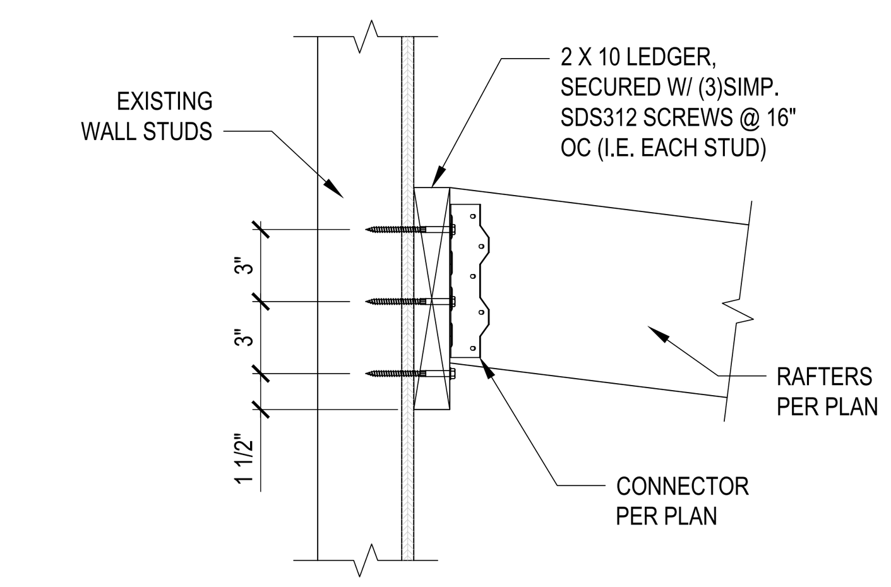
Project #:	2504-010004
Date:	08/18/25
Engineered By:	AM
DWG. Checked By:	PAT
Scale:	SEE PLAN

REVISIONS

No.	Date:	Remarks
1		
2		
3		
4		

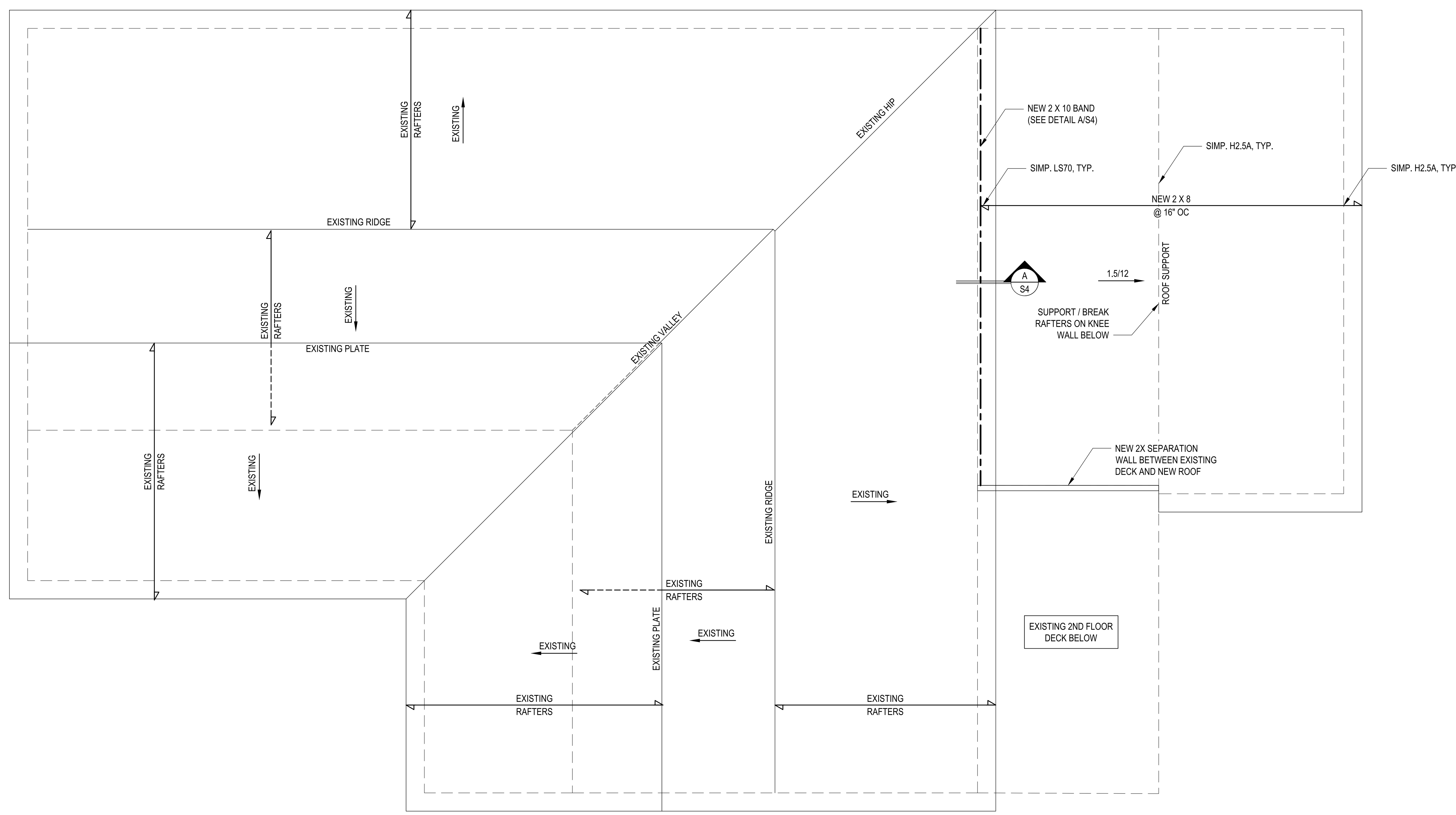
Sheet Number

S3



A SHED ROOF LEDGER ATTACHMENT

SCALE: 1-1/2" = 1'-0"



ROOF PLAN

1/4" = 1'-0"

*Engineers seal does not include construction means, methods, techniques, sequences, procedures or safety precaution.
*Any deviations or discrepancies on plans are to be brought to the immediate attention of Tyndall Engineering & Design, P.A. Failure to do so will void Tyndall Engineering & Design, P.A. liability.
*Please review these documents carefully. Tyndall Engineering & Design, P.A. will interpret that all dimensions, recommendations, etc. presented in these documents were deemed acceptable once construction begins.

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 24106 PRENTICE A TYNDALL JR 8/18/25

TYNDALL
ENGINEERING & DESIGN, P.A.
T 919 773-1200 ▪ F 919 773-9658
250 Shipwash Drive ▪ Garner ▪ North Carolina ▪ 27529
www.tyndallengineering.com

SOUTH CAROLINA TYNDALL ENGINEERING AND DESIGN, PA No. 7320 CERTIFICATE OF AUTHORIZATION

Client: BETTER BY DESIGN

Plan: 3103 S SHORE DR CHARLESTON, SC

ROOF PLAN

Project #:	2504-010004
Date:	08/18/25
Engineered By:	AM
DWG. Checked By:	PAT
Scale:	SEE PLAN

REVISIONS

No.	Date:	Remarks
1		
2		
3		
4		

Sheet Number

S4

STRUCTURAL NOTES

1) ALL CONSTRUCTION SHALL CONFORM TO THE LATEST REQUIREMENTS OF "SOUTH CAROLINA STATE 2021 RESIDENTIAL BUILDING CODE", IN ADDITION TO ALL LOCAL CODES AND REGULATIONS.

2) DESIGN LOADS:

	LIVE LOAD (PSF)	DEAD LOAD (PSF)	DEFLECTION DL	DEFLECTION LL
ALL FLOORS	40	10	L/360	L/240
ATTIC (w/ walk up stairs)	30	10	L/360	L/240
ATTIC (pull down access)	20	10	L/240	L/180
ATTIC (no access)	10	5	L/240	L/180
EXTERNAL BALCONY	60	10	L/360	L/240
ROOF	20	10	L/180	L/180
ROOF TRUSS	20	20	L/240	L/180
WIND LOAD	[BASED ON 150 MPH (ULTIMATE)]			

3) MINIMUM ALLOWABLE SOIL BEARING PRESSURE = 2000 PSF

4) CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4000 PSI AND A MAXIMUM SLUMP OF FIVE INCHES UNLESS NOTED OTHERWISE. (U.N.O.)

5) MAXIMUM DEPTH OF UNBALANCED FILL AGAINST FOUNDATION WALLS TO BE LESS THAN 4'-0" WITHOUT USING SUFFICIENT WALL BRACING. REFER TO SECTION R404 OF 2021 SC RESIDENTIAL CODE FOR BACKFILL LIMITATIONS BASED ON WALL HEIGHT, WALL THICKNESS, SOIL TYPE, AND UNBALANCED BACKFILL HEIGHT.

6) ALL FRAMING LUMBER SHALL BE SYP #2 (FB = 800 PSI, BASED ON 2x10) UNO.
ALL FRAMING LUMBER EXPOSED TO THE ELEMENTS SHALL BE TREATED MATERIAL.
ALL LVL LUMBER TO BE 1.75" WIDE NOMINAL EACH SINGLE MEMBER AND Fb = 2600 PSI, E = 1.9M PSI (U.N.O.)
ALL LSL LUMBER TO BE 3.5" WIDE NOMINAL EACH SINGLE MEMBER AND Fb = 2325 PSI, E = 1.6M PSI (U.N.O.)
ALL PSL LUMBER TO BE 3.5" WIDE NOMINAL EACH SINGLE MEMBER AND Fb = 2400 PSI, E E 1.8M PSI (U.N.O.)

7) ALL LOAD BEARING EXTERIOR HEADERS SHALL BE AT (2) 2x10. (U.N.O.) REFER TO TABLE R602.7(1) & (2) FOR JACK STUD REQUIREMENTS FOR HEADER SPANS FOR INTERIOR AND EXTERIOR LOAD CONDITIONS UNLESS SPECIFICALLY NOTED ON PLANS.

8) ALL STRUCTURAL STEEL W-SHAPES (I-BEAMS) SHALL BE ASTM A992 GRADE 50.
ALL STEEL ANGLES, PLATES, AND C-CHANNELS SHALL BE ASTM A36.
ALL STEEL PIPE SHALL BE ASTM A53 GRADE B.

9) STEEL BEAMS SHALL BE SUPPORTED AT EACH END WITH A MINIMUM BEARING LENGTH OF 3-1/2" AND FULL FLANGE WIDTH. PROVIDE SOLID BEARING FROM BEAM SUPPORT TO FOUNDATION. BEAMS SHALL BE ATTACHED TO EACH SUPPORT WITH TWO (2) LAG SCREWS (1/2"Φ x 4" LONG). LATERAL SUPPORT IS CONSIDERED ADEQUATE PROVIDED THE JOISTS ARE TOE NAILED TO THE SOLE PLATES, AND THE SOLE PLATES ARE NAILED OR BOLTED TO THE BEAM FLANGES @ 48" O.C.

10) FOUNDATION DRAINAGE-DAMP PROOFING OR WATERPROOFING PER SECTION 405 AND 406 OF 2021 SC RESIDENTIAL CODE.

11) FOR ROOF SLOPES FROM 2/12 THROUGH 4/12, BUILDER TO INSTALL 2 LAYERS OF 15# FELT PAPER.

12) REFER TO TABLE N1102.1 FOR PRESCRIPTIVE BUILDING ENVELOPE THERMAL COMPONENT CRITERIA.

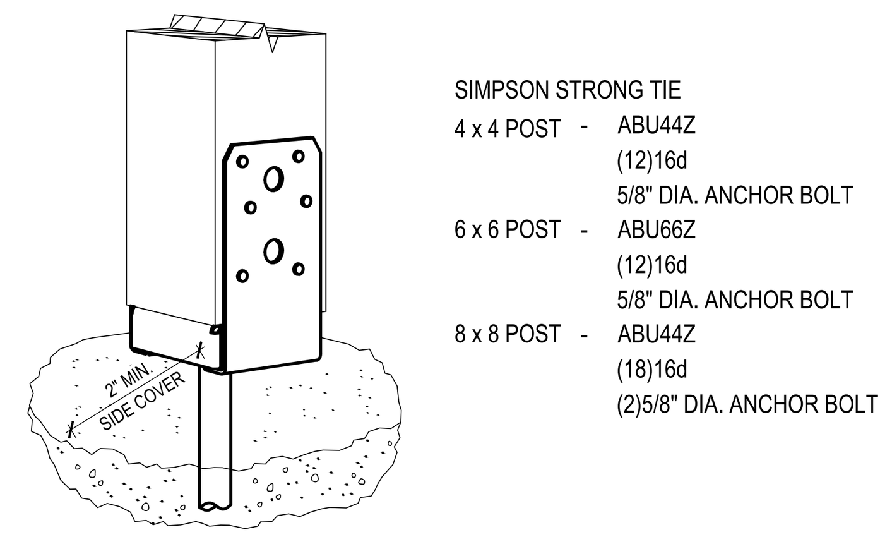
13) IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND SQUARE FOOTAGE PRIOR TO CONSTRUCTION. TYNDALL ENGINEERING & DESIGN, PA IS NOT RESPONSIBLE FOR DIMENSION OR SQUARE FOOTAGE ERRORS ONCE CONSTRUCTION BEGINS.

HIGH WIND WALL BRACING NOTE:
ALL STORIES - WOOD STRUCTURAL SHEATHING PANELS REQUIRED.

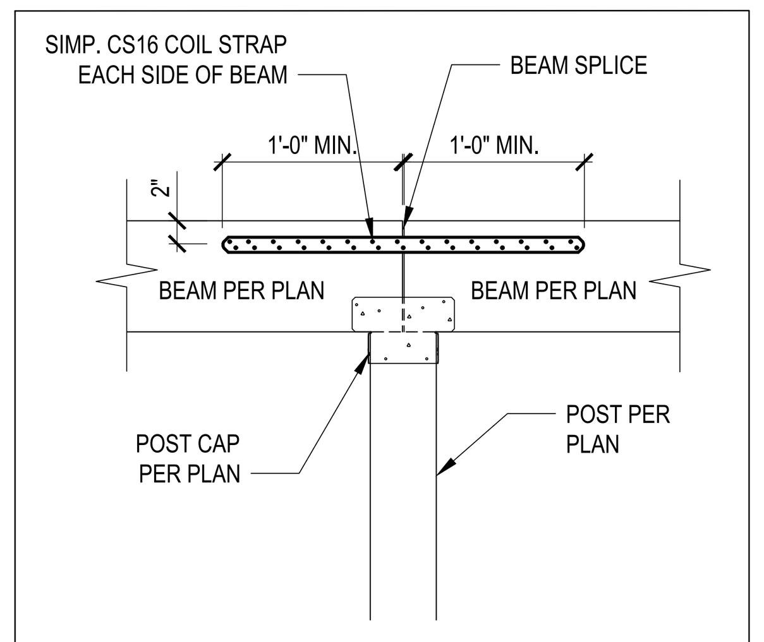
GABLE ENDWALL BRACING NOTE:
GABLE ENDWALLS SHALL EITHER BE SUPPORTED BY LATERAL BRACING AT THE CEILING OR HAVE CONTINUOUS STUDS FROM FLOOR TO ROOF. 2x4 STUDS @ 16" O.C. ARE LIMITED TO 10'-0" IN LENGTH BETWEEN SUPPORTS. NON-BEARING 2x6 SYP #2 STUDS @ 16" O.C. w/ 7/16" WOOD STRUCTURAL PANEL SHEATHING ARE LIMITED TO 14'-0" (TYP).

DEFINITIONS FOR COMMON ABBREVIATIONS

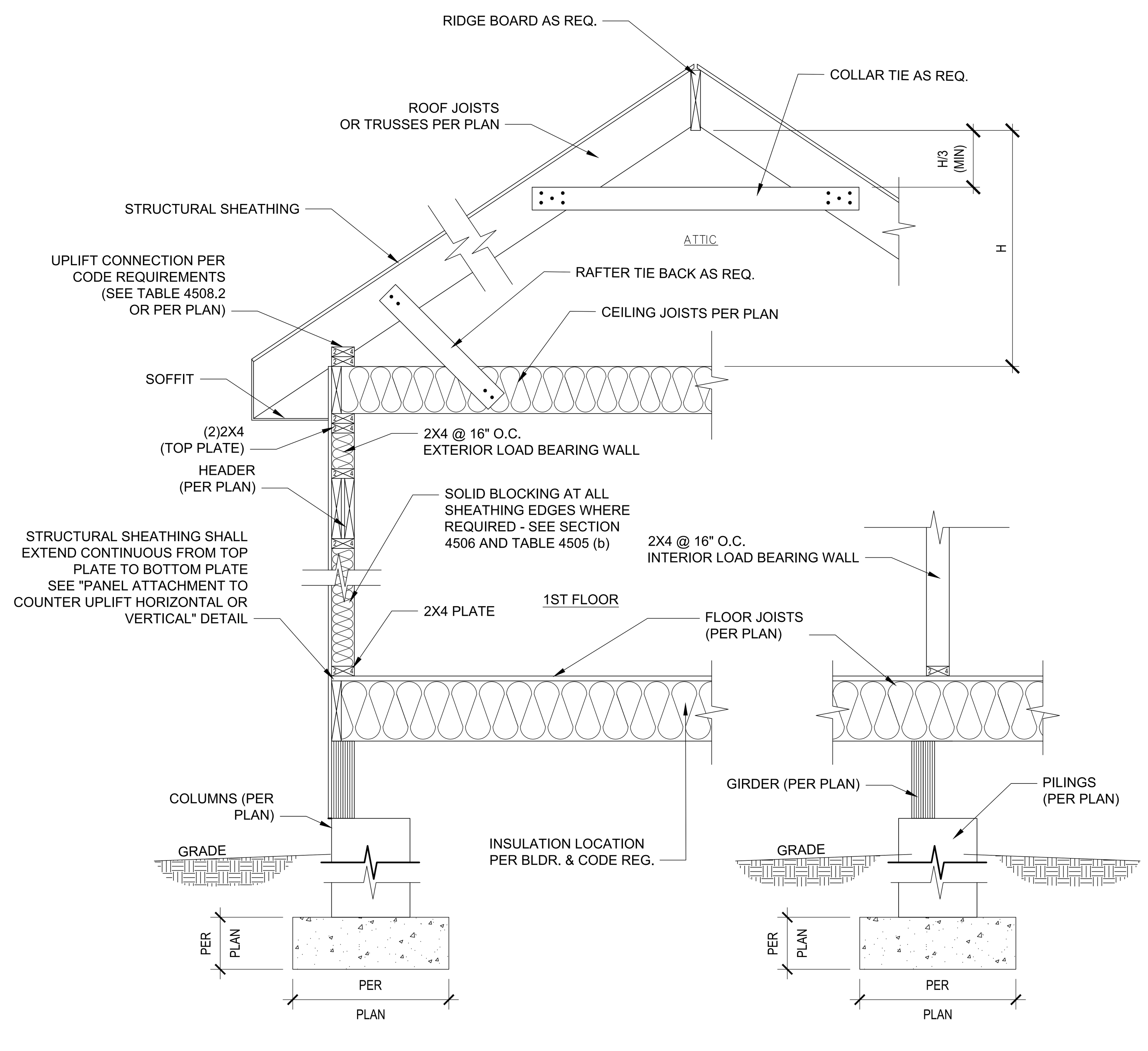
ALT	ALTERNATE	MANUF	MANUFACTURER
CANT	CANTILEVER	MAX	MAXIMUM
CJ	CEILING JOIST	MIN	MINIMUM
CMU	CONCRETE MASONRY UNIT	NOM	NOMINAL
COL	COLUMN	O.C.	ON CENTER
CONC	CONCRETE	PL	POINT LOAD
CONT	CONTINUOUS	PT	PRESSURE TREATED
CT	COLLAR TIE	REINF	REINFORCED
DBL	DOUBLE	REQ'D	REQUIRED
DIA	DIAMETER	RJ	ROOF JOIST
DJ	DOUBLE JOIST	RS	ROOF SUPPORT
DR	DOUBLE RAFTER	SC	STUD COLUMN
DSP	DOUBLE STUD POCKET	SCH	SCHEDULE
EA	EACH	SPEC	SPECIFIED
EE	EACH END	TH	THICK
FJ	FLOOR JOIST	TJ	TRIPLE JOIST
FND	FOUNDATION	TRTD	TREATED
FTG	FOOTING	TSP	TRIPLE STUD POCKET
GALV	GALVANIZED	TYP	TYPICAL
HORIZ	HORIZONTAL	UNO	UNLESS NOTED OTHERWISE
HT	HEIGHT	W	WIDE FLANGE BEAM
JSC	JACK STUD	WWF	WELDED WIRE FABRIC
KS	KING STUD	XJ	EXTRA JOIST



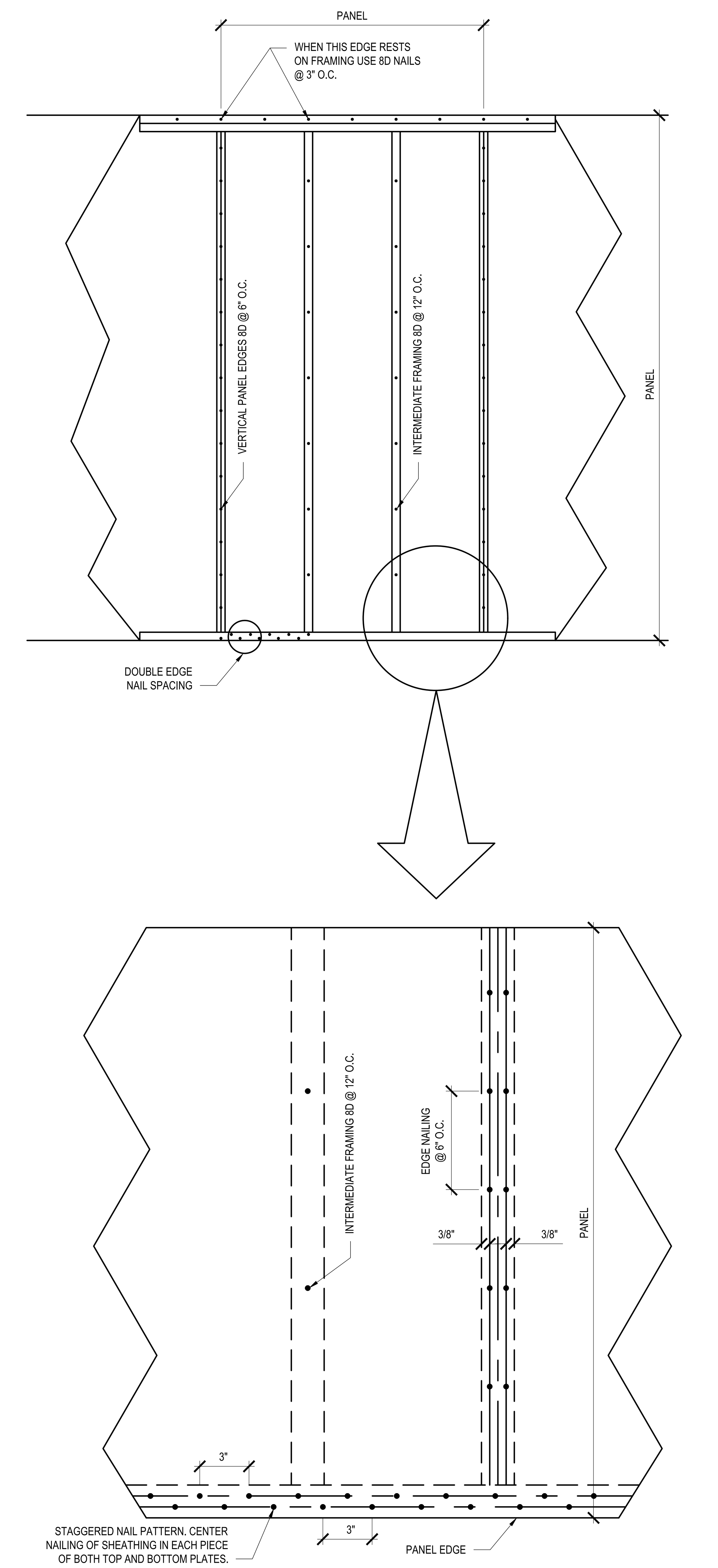
PORCH POST ANCHOR DETAIL
NO SCALE



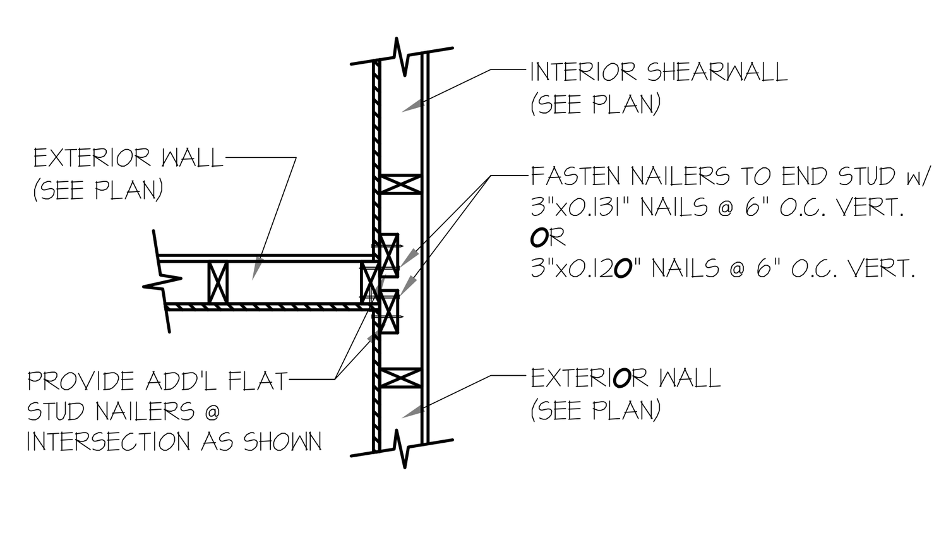
BEAM SPLICE AT COLUMN
NO SCALE



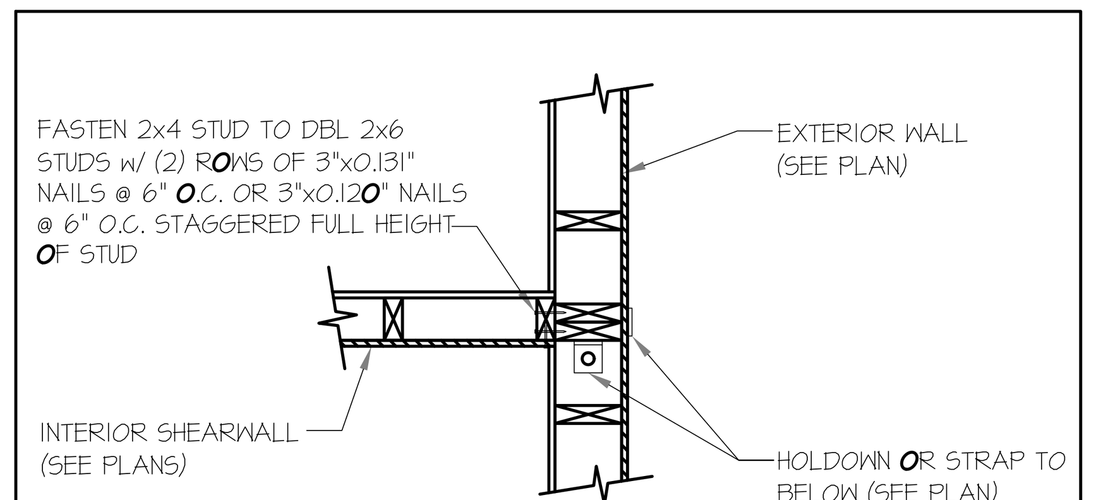
ONE-STORY ON PILES
TYPICAL WALL DETAIL
NO SCALE



PANEL ATTACHMENT TO COUNTER UPLIFT HORIZONTAL OR VERTICAL
NO SCALE REF 4508.4



SHEAR TRANSFER DETAIL @ INTERSECTING INT. SHEARWALL
SCALE: 3/4"=1'-0" SHTG. ON SAME FACE



SHEAR TRANSFER DETAIL @ INTERSECTING INT. SHEARWALL
SCALE: N.T.S.

*Engineers seal does not include construction means, methods, techniques, sequences, procedures or safety precaution.
*Any deviations or discrepancies on plans are to be brought to the immediate attention of Tyndall Engineering & Design, P.A. Failure to do so will void Tyndall Engineering & Design, P.A. liability.
*Please review these documents carefully. Tyndall Engineering & Design, P.A. will interpret that all dimensions, recommendations, etc. presented in these documents were deemed acceptable once construction begins.

SOUTH CAROLINA No. 24106 PRENTICE A TYNDALL JR. 8/18/25

TYNDALL ENGINEERING & DESIGN P.A.
+919 773-3005 • +919 773-9668
280 Shipwash Drive • Garner • North Carolina • 27529
www.tyndallengineering.com

SOUTH CAROLINA TYNDALL ENGINEERING AND DESIGN, PA No. 7320 CERTIFICATE OF AUTHORIZATION

Client: BETTER BY DESIGN
Plan: 3103 S SHORE DR CHARLESTON, SC

STANDARD DETAILS

Project #: 2504-010004
Date: 08/18/25
Engineered By: AM
DWG. Checked By: PAT
Scale: SEE PLAN

REVISIONS

No.	Date:	Remarks
1		
2		
3		
4		

Sheet Number
D1

FILENAME: Z:\CHARLESTON OFFICE\STRUCTURAL ENGINEERING\2025 STRUCTURAL ENGINEERING\2504-010004 - BETTER BY DESIGN - 3103 S SHORE DR\2504-010004\CAD_FILES\2504-010004_E.DWG SAVED BY: VANESSA LAST PLOT DATE:8/18/2025 11:14 AM