

Date: September 9, 2024
Project: 94 Calhoun Street
Bluffton, SC



Job No.: 24754-0

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As requested, I have visited the above address. The purpose of this visit was to observe the constructed condition of the front porch renovation.

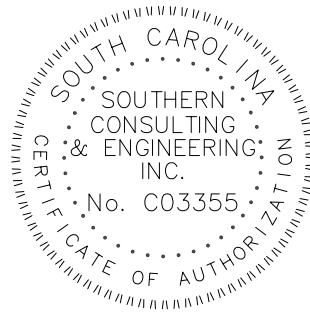
There is a damaged floor joist that has a crack emanating from a knot in in the member. An additional treated 2X12 should be sistered to the joist.

A timber girder has been cut and repaired with treated 2X12's. Where this occurs, the treated 2X12 on each side of the girder should be replaced with a 1.75X11.25" treated Parallam Plus. Attach the Parallam beams with (2) rows of #10 X 5" wood screws at 16" O.C., staggered (8" C-C). Cut back joists as required to hang from new Parallam beams.

If you have any questions or concerns please let me know.

A handwritten signature in blue ink that reads "Bill Metts".

Bill Metts, E.I.T.



Adam Austin, P.E. S.E.

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Southern Consulting and Engineering, Inc.

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ABBREVIATION LEGEND

T/	– TOP OR TOP OF
FTG	– FOOTING
SF	– STEP FOOTING (LOCATION)
CONC	– CONCRETE
WWM	– WELDED WIRE MESH
CMU	– CONCRETE MASONRY UNIT (CONCRETE BLOCK)
WCJ	– MASONRY / CONCRETE WALL CONTROL JOINT
STL	– STRUCTURAL STEEL OR STEEL
O.C.	– ON CENTER (SPACING)
PSI	– POUNDS PER SQUARE INCH (STRENGTH)
TYP	– TYPICAL
X	– READ AS 'BY'
CLR	– CLEAR
SQ	– SQUARE
DEG	– DEGREE OR DEGREES
E.W.	– EACH WAY
UNO	– UNLESS NOTED OTHERWISE
TD	– TREATED, PRESSURE TREATED PER AWWA SPECS, GROUND CONTACT WITHIN 1000 YRS FOR WATER, MARINE EXPOSURE.
CONT	– CONTINUOUS
W/	– WITH
W/OUT	– WITH OUT
A. BOLTS	– ANCHOR BOLTS OR BOLT
⊙	– READ AS 'AT'
PL	– PLATE
REINF	– REINFORCING
SHTHG	– SHEATHING, GENERALLY PLYWOOD
DIA	– DIAMETER

GEOTECHNICAL REPORTS: IF A SPECIFIC REPORT IS NOT ADDRESSED HEREIN THE PLANS HAVE BEEN DESIGNED BASED ON ASSUMPTIONS. IT IS THE SOLE RESPONSIBILITY OF THE OWNER TO RETAIN A QUALIFIED GEOTECHNICAL ENGINEER WHO SHALL PERFORM INVESTIGATIONS TO INSURE THAT THE SOIL CONDITIONS ARE AT LEAST THAT WHICH ARE REQUIRED HEREIN.

ANY AND ALL FILL SHALL BE ENGINEERED FILL AND PLACED IN STRICT ADHERENCE WITH THE PROJECT GEOTECHNICAL ENGINEERS REQUIREMENTS. FILL CAN AND WILL INDUCE SETTLEMENTS. PLACING FILL WITHOUT THE DIRECTION OF A GEOTECHNICAL ENGINEER IS PROHIBITED. FILL SHALL BE PLACED IN LIFTS NOT TO EXCEED 8 INCHES, LOOSE MEASURE. EACH LIFT SHALL BE COMPACTED TO WITHIN 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY PRIOR TO PROCEEDING WITH THE NEXT LIFT.

ALL SLABS ON GRADE, UNLESS NOTED OR REQUIRED OTHERWISE BY THE PROJECT GEOTECHNICAL ENGINEER, SHALL BE PLACED ON COMPACTED FILL OR SUBGRADE. ALL SLABS SHALL BE PLACED OVER MIN 10 MIL VAPOR BARRIER (VB). VB SHALL BE INSTALLED IN A SMOOTH CONDITION, LAP ENDS NOT LESS THAN 12 INCHES. REPAIR ANY AND ALL PUNCTURES PRIOR TO CONC. PLACEMENT.

THE GENERAL CONTRACTOR SHALL RETAIN THE SERVICES OF A QUALIFIED SURVEYOR WHO SHALL VERIFY ALL SITE AND BUILDING ELEVATIONS. THE GENERAL CONTRACTOR SHALL INSURE THAT THE LOWEST HORIZONTAL STRUCTURAL MEMBER IS ABOVE ANY AND ALL FEDERAL, STATE AND LOCAL REQUIREMENTS FOR CLEARANCE AND FLOOD ZONE RELATED ISSUES.

SEE ARCH'L DRAWINGS FOR ISSUES RELATED TO HYDROSTATIC VENTING, OPEN SIZES AND LOCATIONS. WHERE NOT SHOWN IN ARCH'L DRWGS ALLOW FOR THE MOST STRINGENT AND COSTLY APPROACH IN BASE BID AND AWAIT FURTHER DIRECTION FROM ARCHITECT.

FOR STRUCTURES LOCATED WITHIN A "V" FLOOD ZONE, ALL PERIMETER WALLS SHALL BE OF BREAKAWAY CONSTRUCTION, UNLESS THEY ARE SPECIFICALLY NOTED AS SHEAR WALLS HEREIN.

SHOP DRAWINGS ARE REQUIRED FOR THE FOLLOWING TRADES UNLESS SPECIFICALLY NOTED OTHERWISE. REINFORCING STEEL, STRUCTURAL STEEL, ENGINEERED LUMBER AND TRUSSES. ALL SHOP DRAWINGS SHALL BE REVIEWED AND ALL OUTSTANDING ISSUES RELATED TO COORDINATION AND DIMENSIONS RESOLVED PRIOR TO SUBMITTING TO THE ENGINEER FOR REVIEW. THE GENERAL CONTRACTOR SHALL STAMP ALL SHOP DRAWINGS "APPROVED" PRIOR TO SUBMITTING TO THE ENGINEER FOR REVIEW.

CONTRACTOR SHALL SUBMIT TO ENGINEER A SITE PLAN AND A LOCATION PLAN CLEARLY NOTING WHERE THE SITE IS GEOGRAPHICALLY LOCATED WITH RESPECT TO MEAN LOW WATER AND OTHER OPEN AREAS OR FEATURES THAT MAY IMPACT THE SITE EXPOSURE. ALONG WITH THE ABOVE, SUBMIT DP RATING OF SPECIFIC WINDOWS PROPOSED FOR THE PROJECT FOR REVIEW BY ENGINEER.

COPIES OF ALL WINDOW AND DOOR DP RATING LABELS SHALL BE SUBMITTED TO ENGINEER FOR REVIEW AND APROVAL PRIOR TO INSTALLATION.

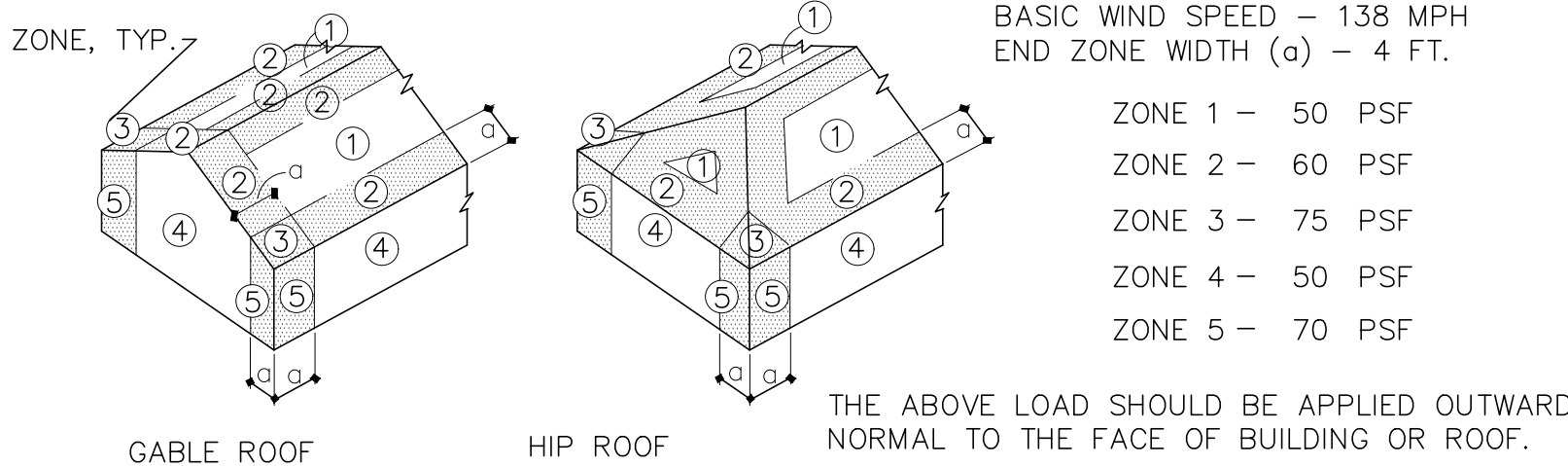
SEE THE ARCHITECTURAL DRAWINGS FOR ANY AND ALL DIMENSIONS AND CONDITIONS NOT NOTED HEREIN. WHERE DIMENSIONAL DIFFERENCES ARE FOUND, THE ARCHITECTURAL DRAWINGS SHALL GOVERN. THE CONTRACTOR SHALL COORDINATE ALL TOP OF BEAM, TOP OF CMU AND TOP OF STEEL ELEVATIONS WITH THE ARCHITECTURAL DRAWNGS.

WATER HEATERS AND MASONRY CHIMNEYS SHALL BE ANCHORED/STRAPPED TO THE MAIN STRUCTURE PER IRC R301.2.2.9 AND R301.2.2.10, RESPECTIVELY

THE GENERAL CONTRACTOR SHALL MAKE NO SUBSTITUTIONS FROM THOSE ITEMS SPECIFIED HEREIN WITHOUT THE EXPRESS WRITTEN PERMISSION OF THE ARCHITECT OR ENGINEER.

WIND LOADING DATA / NOTES

FOR THE BUILDER/OWNERS USE IN SELECTING AND ATTACHING COMPONENT AND CLADDING RELATED ITEMS, THE FOLLOWING WIND LOADING PRESSURES ARE PROVIDED. NOTIFY ENGINEER OF ANY CONDITION OR MATERIAL THAT ARE NOT CLEARLY ADDRESSES HEREIN.



GENERAL NOTES

1. Structural drawings shall be used in conjunction with architectural and mechanical drawings and drawings relating to other trades. Contractor shall be responsible for checking and coordinating dimensions, clearances, etc. with the work of other trades. In case of conflict between drawings, the more stringent requirement shall govern.
2. In case of conflict between drawings, notes and specifications, the specifications shall govern.
3. Work not indicated on a part of the drawings but reasonably implied to be similar to that shown at corresponding places shall be repeated.
4. Review all project documents prior to fabrication and start of construction. Report any discrepancies to the project Architect prior to proceeding with work.
5. It is the contractor's responsibility to protect existing facilities, structures and utility lines from all damage during construction.
6. Coordinate structural and other drawings that are part of the contract documents for anchored, embedded or supported items which may affect the structural drawings.
7. All details and sections on the drawings are intended to be typical and shall be construed to apply to any similar situation elsewhere on the project except where a separate detail is shown.
8. Use of contract drawings reproduces any part in shop drawing shall not relieve the contractor nor subcontractors from their responsibility to accurately layout, coordinate, detail, fabricate and install a complete structure.
9. Review all shop drawings for conformance with the contract documents and for completeness and answer all contractor related questions. Stamp and initial all sheets as Approved prior to submitting shop drawings to Architect for review.

FOUNDATION NOTES

1. Backfill and fill material shall be placed in thin successive layers, 8" loose measurement, and each layer shall be compacted to at least 95% of maximum laboratory density.
2. Backfill material shall consist of sand clay soil as directed and approved by the project geotechnical engineer.
3. Soil to be stripped, compacted and tested in accordance with the recommendations of the soils engineer.
4. Center all footings under their respective columns or walls unless otherwise shown on plans. Maximum misplacement or eccentricity – 2".
5. Horizontal joints in footings will not be permitted.
6. Where vertical construction joints occur in continuous footings, provide a minimum continuous 2" x 4" keyway across joint for each 12" of depth.
7. Notify Architect if soil conditions are uncovered that prevent the required soil bearing pressure from being obtained.
8. Coordinate plumbing and foundation elevations to minimize interference. Where plumbing interferes with footing, step footing down as directed by engineer.
9. Excavating under or near in-place footings/foundations which disturbs the compacted soil beneath the footings/foundations will not be permitted.
10. Reinforcing shall be supported on precast concrete pads or metal chairs.

CONCRETE NOTES

1. Typical 28 day concrete compressive strength (f'c).
LOCATION: f'c (psi)
Slab On Grade 3000
Footings 3000
NOTE: All concrete shall be normal weight unless noted otherwise.
2. Reinforcing steel: ASTM A 615, grade 60. Minimum lap shall be 40 bar diameters or 24 inches, U.N.O.
3. Welded wire fabric: ASTM A 185 or ASTM A 497. Lap all edges 1'-0" mesh minimum.
4. Concrete cover: Footings 3", slabs 1 1/2" (U.N.O.)
5. All footings shall rest either on undisturbed soil or a manually operated vibratory sled or tamper should be used to densify any soils in the bottom of the footing trenches loosened during the excavation operation.
6. Contractor is responsible for adequately protecting all excavation slopes.
7. No backfilling against foundation walls shall be done until concrete has attained 75% of its 28 day strength. Provide temporary bracing for walls sustaining more than 3'-6" of earth pressure. This bracing to remain until slabs on grade or floor framing supporting the wall have been poured and set.
8. All continuous horizontal reinforcing and vertical wall reinforcing shall be lapped according to lap splice and embedment requirements per ACI 318, latest edition.
9. Reinforcement shall be securely held in place while placing concrete. If required, additional bars and stirrups shall be provided by the contractor to furnish support for bars.
15. For waterproofing details and locations, see architectural drawings.
16. Dowels shall match wall reinforcing.
13. Contractor shall make no deviations from design drawings without written approval of the Project Architect.
19. Structural concrete shall conform to ACI 301 and have the following slumps and aggregate requirements
Location Slump Max. Aggregate
Footings 3" 1" ASTM #57
Slabs 4" 1" ASTM #57
All course granite shall be crushed granite.
20. All reinforcing steel shall be detailed, fabricated and installed in accordance with ACI 318 and ACI detailing manual, ACI-315 latest edition.
21. Not used.
22. Shop drawings for placement shall be submitted for review prior to rebar fabrication unless approved otherwise by project Architect.
23. No reinforcing bars shall be cut to accommodate the installation of anchors, embeds or other items.
24. Use the structural drawings including revisions and addenda in conjunction with reviewed shop drawings for placement of reinforcing.
25. At changes in direction of concrete walls, beams and strip footings, provide corner bars of same size and quantity (U.N.O.) as horizontal steel. Refer to typical detail.
26. Place concrete per ACI 304. Use internal mechanical vibration for all concrete. Limit maximum free fall drop of concrete to 6'-0" for #57 aggregate and 8'-0" for #8 aggregate. All precautions should be taken to avoid segregation of concrete during placement.
27. Saw cut all slabs not less than 1/4 slab depth. Cut shall be made as soon as possible without dislodging the course aggregate, same day as placement. ACI 302

MASONRY NOTES

1. Masonry construction shall conform to ACI "Building Code Requirements for Masonry Structures" (ACI/ASCE 530) and "Specifications for Masonry Structures" (ACI/ASCE 530.1), except as amended below.
2. Obtain copy of masonry code and specifications for reference at the job site.
4. Use type "S" mortar with minimum compressive strength of 1800 psi.
5. Masonry units shall conform to ASTM C90 with a minimum compressive strength of 1900 psi on net section, to provide net area compressive strength of masonry (F'm) of 1500 psi.
6. Provide filled cells as shown on plans. In addition, provide filled cells adjacent to all openings, at anchorage of connections.
7. Provide full mortar bedding around all filled cells with vertical reinforcing.
8. Reinforcing for filled cells shall conform to ASTM A615, Grade 60. Provide the following lap splices for reinforcing: #4 Bars 24" #5 Bars 30"
9. Reinforce wall with ladder type reinforcement in bed joints at 16" o.c. measured vertically. Lap splice all horizontal wall reinforcing 6". Provide prefabricated "tee" or corner sections at all intersecting walls.
10. Refer to typical wall sections for maximum construction height of masonry walls. Provide clean-out holes at base of filled cell when the concrete pour exceeds 5 feet in height.
11. Concrete for filled cells shall be vibrated during placement using a "pencil" type vibrator.
12. The masonry walls are not designed to withstand temporary construction loads. It is the contractor's responsibility at all times to maintain wall stability during the construction phase of this project.
14. The use of solid load bearing masonry units is prohibited on this project.
15. Masonry wall construction requires expansion/contraction joints. Locate these joints as directed by the project Architect not more than 40 feet on center. Avoid locations near windows and doors or other geometry that would lend to the formation of expansion cracks.
16. All lintels over masonry openings shall be Cast-Crete Lintels. Cast-Crete lintels are available from General Materials, Inc.
17. Provide seismically rated brick ties for all brick veneer in accordance with man'f install instructions.

STRUCTURAL STEEL NOTES

1. Structural Steel materials shall conform to the following ASTM specification (U.N.O.):
Angles, plates, misc. steel ASTM A36, Fy=36 ksi
Tubes ASTM A500, Grade B
Anchor Bolts ASTM A449
2. Provide temporary bracing or guys to provide lateral support until permanent lateral bracing is installed.
3. The contractor shall coordinate the bottom of base plate elevation with the top of concrete and masonry elevation. In case of conflict, the contractor shall make allowance in his bid for the more stringent requirement.
4. All steel details and connections shall be in accordance with the requirement of the AISC SPECIFICATIONS (Latest Edition), including all supplements and revisions.
5. Shop connections not specifically detailed on the drawings may be welded or bolted. Field connections not specifically detailed on the drawing shall be bolted.
6. Fabrication and erection of structural steel shall conform to the AISC "Manual of Steel Construction," and the AISC "Specification for Structural Steel Buildings," latest Editions.
7. All bolts cast in concrete shall conform to ASTM A-36 or A-307.
8. Beams shall be supported on columns by tab plates welded through the center line of the column unless specifically shown otherwise herein.
9. All beams shall be punched for two rows of bolts for the attachment of wood blocking. Blocking shall be placed along the top flange, along the web and along the bottom flange unless specified otherwise. Bolts shall be two rows at 16" o.c. staggered.

TIMBER FRAMING NOTES

1. All timber construction shall be in accordance with AITC specifications and requirements.
2. All timber framing, unless noted otherwise, shall be not less than #2 SYP or SPF kiln dried with minimum properties of: (Fb=1300 psi, Ft=675 psi, Fc=1200 psi).
3. All engineered timber shall have minimum properties of: (Fb=2800 psi, Ft=2600 psi, Fc=2400 psi).
4. Any and all timbers exposed to the earth, weather or in contact with concrete or masonry components or withing eight (8) inches of exposed grade shall be treated in accordance with AWWA standards.
5. All connectors shall be by the simpson company unless approved otherwise by the project Architect, G90 finishes.
6. All floor/roof bracing, blocking and connections shall be by the truss or Engineered component manufacturer.
7. All multiple ply girders shall be glued and nailed together with three rows of 16d nails at 8" o.c. per row and per layer or ply.
8. Provide a double joist below all parallel walls not shown otherwise. Provide a double joist adjacent to all changes in span to minimize differential settlement.
9. Layout all plumbing line and fixture locations and space joists to avoid cutting of joists. Where a joist must be cut provide an additional joist on each side of the cut joist, as close as possible. If cut joists supports more than standrard floor loadings notify engineer for review.
10. Support all joists and beams on joist and beam hangers. Nailers shall not be permitted without prior authorization from engineer.
11. Provide simpson CS16 X 24" straps across all ridges at 32" o.c. Install to prevent against uplift forces (i.e. across tops of ridges), or collar ties at the same spacing.
12. Solid blocking that matches the depth of the floor joists, shall be installed between joists along all interior and exterior walls. Additional blocking shall be installed between joists at 1/3 points for 2x joist framing.
14. All walls supporting two floors and a roof shall be 2x6's at 16" o.c., 2x4's at 8" o.c. or 3x4's at 12" o.c.
15. The GC shall anticipate and provide furring strips or blocking as may be required to provide a smooth surface for the application of sheetrock. This requirement primarily occurs at, but is not limited to, vaulted ceilings and other such special conditions.
16. The framing and foundations shown herein are based on normal carpet and vinyl floor finishes, normal weight cabinets and counter tops. If heavier materials are used notify engineer and await framing modifications prior to proceeding.
17. Where roof trusses are used, provide uplift connectors with uplift ratings in excess of the uplift reactions listed within the roof truss shop drawings. Contact engineer for specific directions if required.
18. Top plates, drag struts, shall be nailed together with two rows of 16d nails at 12" o.c. staggered.
19. Bottom plate splices shall have attachments on either side. Where the plate is attached to concrete you can provide 1/2" dia exp'n bolt with 12" ea. side of ea. splice, or you may provide two powder driven fasteners within 8" ea. side of ea. splice. Plates attached to timber framing shall have two 16d nails driven into the supporting framing within 6" ea. side of ea. splice.
20. Provide min 3" x 3" x 1/4" square plate washers between TD bottom wall plates and the nut for anchor bolts.
21. Steel beams and columns shall not bear on timber framing. Provide embedded weld plates and steel columns bearing directly on concrete or masonry as necessary for proper support.
22. All timber framing, unless addressed otherwise herein, shall be installed in accordance with the current edition of the Wood Framed Construction Manual.

DESIGN CRITERIA

DESIGN BASED ON THE 2021 IRC (WIND/SEISMIC: ASCE-7/16)

DEAD LOADINGS
ACTUAL SELF WEIGHT

DESIGN LOADS & INFORMATION	
BASIC WIND SPEED	138 MPH
WIND EXPOSURE CAT.	EXPOSURE C
SEISMIC DESIGN INFORMATION	ASCE-7
RISK CATEGORY	II
Sds	.39
Sd1	.2
SITE CLASS	D
SEISMIC DESIGN CATEGORY	D
SEISMIC FORCE RESIST. SYSTEM	LT. FRAMEWALL/SHEAR PANELS
DESIGN BASE SHEAR	3,000 LBS
ANALYSIS PROCEDURE	SIMPLE STATIC
FLOOR LL	40 PSF
FLOOR DL	25 PSF
ROOF LL	20 PSF
ROOF DL	20 PSF
DECKS & PORCHES LL	60 PSF
DECKS & PORCHES DL	15 PSF
STAIRS LL	40 PSF
GROUND SNOW LOAD	5 PSF

WHERE REQUIRED, WINDOWS AND DOORS SHALL HAVE A MINIMUM RATING AS NOTED. HOWEVER, THE GEOGRAPHICAL LOCATION OF A GIVEN BUILDING MAY REQUIRE THAT A HIGHER DP RATING BE USED. THE CONTRACTOR SHALL VERIFY WITH THE LOCAL BUILDING OFFICIAL THE REQUIRED DP RATING FOR THE SPECIFIC SITE OF THIS STRUCTURE.

(ASD PRESSURES SHOWN)		138 MPH EXPOSURE C
GLAZING SIZE AREA (SQ FT)	WITHIN 48" CORNERS	INTERIOR ZONES
0 TO 10	+35/-41	+35/-35
11 TO 20	+30/-39	+30/-35
21 TO 50	+30/-35	+30/-30
51 TO 100	+30/-35	+30/-30

THE ABOVE WIND PRESSURES HAVE BEEN REDUCED BY 0.6W. TO CONVERT TO STRENGTH LEVEL, DIVIDE BY 0.6

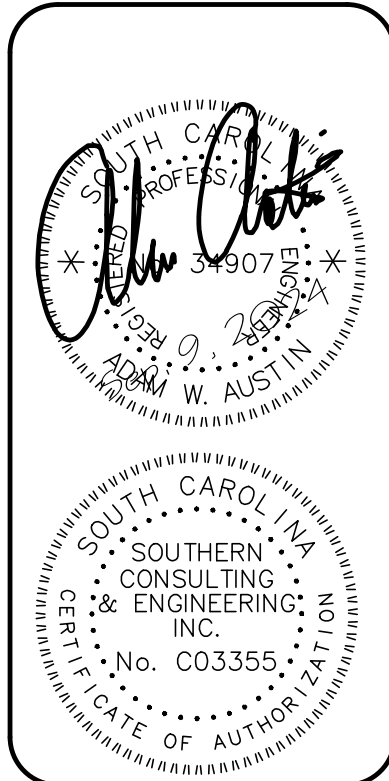
WHERE WIND BORN DEBRI PROTECTION IS REQUIRED, PROVIDE REMOVABLE IMPACT PANELS. THESE PANELS MAY BE COMMERCIALY MANUFACTURED PANELS INTENDED FOR THIS SPECIFIC PURPOSE OR CONSTRUCTED FROM 7/16" OSB PLYWOOD.

REV.	BY	DATE

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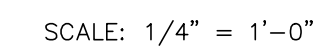
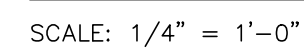
94 Calhoun Street
Bluffton, SC

DATE
September 9, 2024
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SEE PLAN
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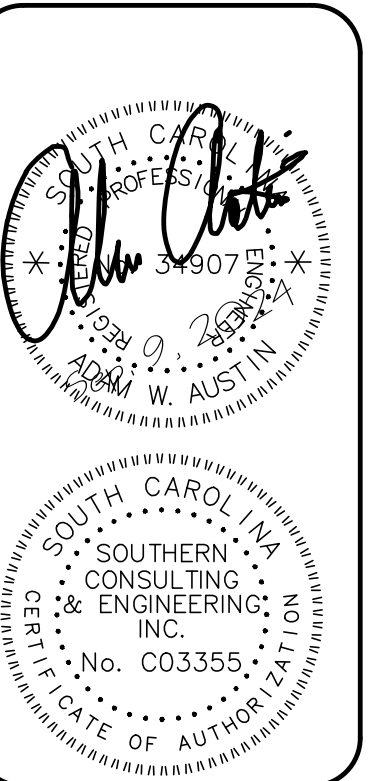
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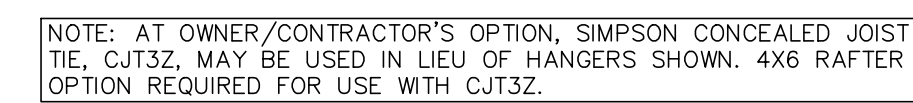
TYP. PORCH COL. DETAIL



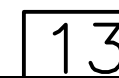
PORCH ATTACHMENT



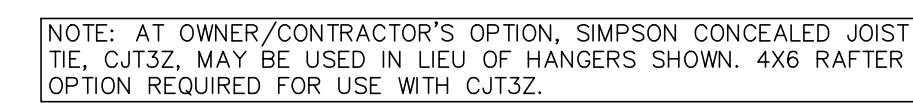
COLUMN ATTACHMENT



SLOPED RAFTER BEARING



13



SLOPED RAFTER BEARING

1. FASTENER ROWS ARE TO BE STAGGERED
2. FOR LVL BEAMS 17" OR MORE IN DEPTH, INSTALL AN ADDITIONAL ROW OF THE FASTENER SHOWN ABOVE. IE. 3 ROWS BECOME 4 ROWS.
3. WHERE THE MULTIPLE LVL SUPPORTS A PERPENDICULAR BEAM, INSTALL 2 1/2"Ø THROUGH BOLTS WITHIN 8" EACH SIDE OF PERPENDICULAR BEAM.
4. 4 PLY AND 5 PLY BEAMS ARE TO BE TOP LOADED ONLY AND SHOULD NOT BE SIDE LOADED WITHOUT A CLEAR AND SPECIFIC DETAIL FROM TRUSS PROVIDER OR ENGINEER.

LOADED WITHOUT A CLEAR AND SPECIFIC DETAIL FROM TRUSS PROVIDER OR ENGINEER. 16