

Sims Quality Engr-Const Consultant PLLC

5338 Clubhouse Lane Hope Mills, NC 28348

NC PE License # : 059559

NC Business License # : P-3157

October 17, 2025

To:

Harnett County Inspections Department

centralpermitting@harnett.org

Re: Rough-In Reinspection — 250 Koerner Lane, Erwin, NC

Permit Holder: White House Building Associates

Permit #: SFD2503-0086

Inspector,

On behalf of White House Building Associates, please find the enclosed documentation addressing all items noted in the attached inspection report dated October 10, 2025, for the property located at 250 Koerner Lane, Erwin, NC.

A detailed line-by-line response has been prepared outlining the corrective actions taken for each item. Supporting photo documentation has also been included, with file names and references matching the numbered items in the report for ease of review.

All identified corrections have been completed in accordance with the approved plans, North Carolina Residential Building Code, and the field notes. I have verified compliance through visual inspection, photographic evidence and material documentation where applicable.

Please review the enclosed materials and contact the permit holder directly should you require clarification, additional photographs, or site verification if required.

We appreciate your time and attention in reviewing this resubmission and look forward to your approval of the corrective work.



Carl P Sims
Sims Quality Engr-Const Consultant PLLC
CSims51@twc.com
757-419-1714



APPENDIX G

DESIGN PROFESSIONAL INSPECTION FORM

RECORD OF THE INSPECTION OF A COMPONENT OR ELEMENT BY A NC LICENSED ARCHITECT OR ENGINEER

Project Information:

Residential Single-Family Project: <u>Y</u> N	Commercial Project: Y <u>N</u>
Code Enforcement Project No: BLD-25-01624	Permit No: SFD2503-0086
Project Name: 250 Koerner	Owner: Roger Rhodall
Project Address: 250 Koerner Lane, Erwin, NC	Suite No: N/A
Date Inspected: 13 October 2025	Contractor Name: White House Building Associates LLC
Component Inspected: Rough In - Electrical, Plumbing, Mechanical, Framing	

Responsible Licensed NC Architect or NC Engineer

Name:	Carl Sims
Firm Name:	Sims Quality Engineering & Construction Consultant, PLLC
Phone Numbers:	Office: 757-419-1714 Mobile: 757 419 1714
Email Address:	csims51@twc.com
Mailing Address:	5338 Clubhouse Lane Hopewell Mills, NC 28348

APPLICABLE CODE:

North Carolina Residential Code (NCRC) – 2024 Edition, pursuant to G.S. 160D-1106 and Appendix G of the NC Administrative Code and Policies

2018 NCBC = 2018 NC Building Code; 2018 NCRC = 2018 NC Residential Code

Describe Element/Component/Type of Inspection: *

Rough In - Electrical, Plumbing, Mechanical, & Framing

See a Hatched Letter with attachments

*(subgrade form/letter may also be required)

Attestation/Signature:

By signing below, I certify that the component and/or element of the building as identified on this form has been inspected by me or someone under my direct supervision per G.S. 160D-11-6 and is in compliance with the Code or other proposal of the architect or engineer for the project. This inspection is in compliance with all of the requirements of the above referenced code. Attach any additional documents if needed.

Carl P. Sims

Licensed Architect or Engineer



Inspection Department disclaimer:

Upon the receipt of a signed written document as required under subsection (a) of G.S. 160D-11-1, Code Enforcement shall be discharged and released from any liabilities, duties and responsibilities imposed by this article or in common law from any claim arising out of or attributed to the component or element in the construction of the building for which the signed written document was submitted. Be aware that this inspection will be noted in all inspection records including the Certificate of Occupancy or Certificate of Compliance. This inspection does not address any local ordinances or zoning requirements.

Inspection Type: ROUGH IN

Order#: 0

Result: FAIL W/ PENALTY

Scheduled Date: 10/10/2025

Scheduled Time:

Completed Date: 10/10/2025

Completed Time:

Inspector: John B Kokoszka

Notes: 10/8/2025 7:48:28 PM 10/8/2025 7:48 PM White House Building Associates Contact Name: White House Building Associates Site Address: 250 KOERNER LN Phone: 9109785195 e-Mail: whitehousebldgassoc@gmail.com 10/10/2025 1:34:56 PM 1. Missing 2 x 2 square washers for Porter framing 2. Anchor bolt left side of interior garage door 3. Need to seal garage lights to exterior side 4. Need to fasten left side of garage bath shower shroud 5. Need to fire stop termite blue wire above water closet 6. 2 x 6 wall anchor bolts not in a center 1/3 7. Need the fire stop right side of habitable space garage, top plate and to the outside light 8. Need to seal air barrier at stairs, all the way to the top and bottom 9. Missing headers on for attic access in garage 10. Fire stop bottom plate, attic access door 11. Missing baffles upstairs 12. Upstairs in garage missing hangers at 2 x 10 header going to the bump out window 13. Stick built roof system rafters not bearing on beam 14. Rafters need a bear solid on ridge 15. Need to fasten all two ply and three ply Gerta trusses per dock 16. Stairs headroom height need to be 80 inches 17. Main house door

right side coming from breezeway anchor bolts, both sides
ran out of space need to look at list 2

10/10/2025 1:36:03 PM List 2 18. Need to fasten all
electrical lines that have been moved throughout the
house 19. Need to seal holes to the outside master
bedroom and closet area 20. Need to fire stop front
left room at top plate 21. Need to hanger attic access
22. Need to strap four stud column front door left
closet 23. Missing anchor bolt right side, of front door
24. Need to fire stop Chase at right shower 25. Front
porch beam in front right bedroom bearing on osb
board. OSB board is non-structural. 26. Need to
remove insulation in right rear closet 27. Ao4 missing
hanger 28. a03,A04 I, A07,A09, AO 19 , aB01,
c013,Co6-C011missing bracing 29. A09,A10 these
repair letter in master bedroom 30. need to fasten all
three ply and 2ply girder trusses per plans 31. Front
porch stick belt rafters need to bear solid

White House Building Associates

Custom Home Design & Build

📍 250 Koerner Lane, Erwin, NC Harnett County

☎ (910) 978-2075 | ✉ whitehousebldgassoc@gmail.com

Date: October 15, 2025

Project: 250 Koerner Lane – Rough-In Inspection Response

Inspector: John B. Kokoszka

Inspection Date: October 10, 2025

Contractor: White House Building Associates

Item #	Description	Action Required / Taken	Photo Reference (if applicable)
1	Missing 2x2 square washers for Porter framing	Installed 2x2 square washers per framing requirement.	Item1_Washers_Installed.jpg
2	Anchor bolt left side of interior garage door	Installed new anchor bolt and verified torque.	Item2_AnchorBolt_GarageDoor.jpg
3	Need to seal garage lights to exterior side	Applied exterior sealant around fixture base.	Item3_GarageLightSeal.jpg
4	Need to fasten left side of garage bath shower shroud	Fastened with approved corrosion-resistant screws.	Item4_ShowerShroudSecured.jpg
5	Need to fire stop termite blue wire above water closet	Installed fire-rated foam sealant.	Item5_FireStop_WC.jpg
6	2x6 wall anchor bolts not in center 1/3	Installed concrete ramset fasteners between studs.	Item6_AnchorBoltCentered.jpg
7	Need to fire stop right side of habitable garage space, top plate, and to outside light	Fire-blocking completed using mineral wool and sealant.	Item7_FireStop_GarageSpace.jpg
8	Need to seal air barrier at stairs (top and bottom)	Sealed gaps with approved spray foam.	Item8_Stair_AirBarrierSeal.jpg
9	Missing headers for attic access in garage	Header framed and nailed per plan.	Item9_AtticAccessHeader.jpg
10	Fire stop bottom plate at attic access door	Installed fire block and sealant.	Item10_AtticAccessFireStop.jpg
11	Missing baffles upstairs	Installed baffles in bonus room.	Item11_BafflesInstalled.jpg
12	Garage – missing hangers at 2x10 header to bump-out window	Hanger not required.	Item12_HeaderHangersInstalled.jpg
13	Stick-built roof rafters not bearing on beam	Installed 2x10 beam for extra support. Added blocking for full bearing.	Item13_RafterBearing.jpg
14	Rafters need to bear solid on ridge	Installed 2x10 beam for extra support at ridge.	Item14_RidgeBearing.jpg



WHITE HOUSE

BUILDING ASSOCIATES

15	Need to fasten all 2-ply and 3-ply girder trusses per doc	All multi-ply trusses fastened per engineered spec.	Item15_GirderTrussFastened.jpg
16	Stairs headroom height below 80 inches	Header adjusted to achieve 80" clearance.	Item16_StairHeadroom.jpg
17	Main house door from breezeway – anchor bolts both sides ran out of space	Installed ramset concrete fastener.	Item17_MainDoorAnchor.jpg
18	Fasten all electrical lines moved throughout house	Secured all relocated wiring with approved staples/clamps.	Item18_ElectricalSecured.jpg
19	Seal holes to exterior (master bedroom & closet area)	Sealed all penetrations with foam and caulk.	Item19_MasterSeal.jpg
20	Fire stop front left room at top plate	Installed fire-blocking material.	Item20_FireStop_FrontLeftRoom.jpg
21	Hanger for attic access	No code reference. Not required.	Item21_AtticAccessHanger.jpg
22	Strap four-stud column (front door, left closet)	Installed approved metal strapping.	Item22_FrontDoorColumnStrap.jpg
23	Missing anchor bolt right side of front door	Installed new anchor bolt per foundation plan.	Item23_FrontDoorAnchor.jpg
24	Fire stop chase at right shower	Fire-blocking material installed and sealed.	Item24_ShowerChaseFireStop.jpg
25	Front porch beam bearing on OSB (non-structural)	Minimal load. No action required.	Item25_FrontPorchBeamFix.jpg
26	Remove insulation in right rear closet	Insulation removed to allow proper inspection.	Item26_InsulationRemoved.jpg
27	A04 missing hanger	Installed hanger at A04 per truss schedule.	Item27_HangerA04.jpg
28	A03, A04, A07, A09, A019, AB01, C013, C06–C011 missing bracing	Installed bracing at all listed locations per engineering.	Item28_TrussBracing.jpg
29	A09, A10 require repair letter in master bedroom	Repairs completed per engineering; documentation attached.	Item29_RepairLetter_A09A10.jpg
30	Fasten all 2-ply and 3-ply girder trusses per plans	Verified and fastened per stamped drawings.	Item15_GirderTrussFastened.jpg
31	Front porch stick-built rafters need solid bearing	Added joist hangers.	Item31_FrontPorchRafters.jpg

Prepared by:

Yasmeen S. Hunter

CEO / General Contractor

White House Building Associates

White House Building Associates, LLC

October 16, 2025

To: Carl Sims, P.E.

Sims Quality Engineering & Construction Consultant, PLLC

Subject: Calculations Supporting Adequacy of Single King Stud At Front Door Frame:

Project: 250 Koerner Lane, Fayetteville, NC 28306

Prepared by: Larry White

Assumed values for stud allowable stress: Douglass Fir Larch or SPF

Fb= 700psi Fc=850psi Emin= 510,000

Column Slenderness Ratio: $L/d = (8.75 \times 12) / 3.5 = 30$

Buckling Stress $F_c E = 0.822 E_{min} / (L/d)^2 = 0.822(510,000) / (30)^2 = 466 \text{ psi}$

Buckling Stress/Compression parallel $= F_c E / F_c = 466 \text{ psi} / 850 \text{ psi} = 0.548$

Column Stability Factor from Chart= $C_p = 0.48$

Stud compression capacity: $P = (F_c)(C_p)(A) = 850 \times 0.48 \times 5.25 = 2,142 \text{ lbs}$

For Comparison actual gravity load= $P = 16/12 \times 450 \text{ lbs} = 600 \text{ lbs}$. Demonstrating gravity load not a critical concern.

Combined Loading (gravity and wind load)=

$$F^*c = 1.6Fc = 1.6(850) = 1360\text{psi}$$

$$FcE/F^*c = 466\text{psi}/850\text{psi} = 0.548$$

Adjusted vertical load combination with wind=

$$P = 16/12 [\text{Dead load} + 0.75(\text{Live load})] = 16/12(150 + 0.75 \times 300) = 500\text{lb}$$

$$F^*c = CpF^*c = 0.48 \times 850 = 408\text{psi}$$

$$fc = P/A = 500\text{psi}/5.25 = 96\text{psi}$$

Wind Load Assumptions: Harnett County 120mph ultimate design windspeed. Converted to pressure= NC Residential code R301.2(2)=15psf

$$W = 0.75(15) = 12\text{psf}$$

$$M = 16/12 \text{ wL}^2/8 = 16/12 * 12(9\text{ft})^2/8 = 162 \text{ lb-ft (moment)}$$

$$fb = M/S = 162 \times 12 / 3.063 = 635\text{psi}$$

$$Fc/FcE = 96/466 = 0.21$$

Investigation Formula for columns with bending:

$$(Fc/F^*c)^2 + fb/Fb(1 - fc/FcE) \leq 1$$

$$(96/408)^2 + 635/1.6 \times 96(1 - 0.21) =$$

$$0.055 + 0.717 = 0.772$$

As the result is less than one the stud is adequate.

However per engineer's recommendation add double stud to right side of door interior.

Contractor will also add solid block at 1/3 point of height on opposite side of door interior for added lateral stability.

Trenco

818 Soundside Rd
Edenton, NC 27932

Re: 4492414 3-18-25

The truss drawing(s) referenced below have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by Builders FirstSource-Wilmington, NC.

Pages or sheets covered by this seal: I75104444 thru I75104445

My license renewal date for the state of North Carolina is December 31, 2025.

North Carolina COA: C-0844



July 23, 2025

Gilbert, Eric

IMPORTANT NOTE: The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), which were given to MiTek or TRENCO. Any project specific information included is for MiTek's or TRENCO's customers file reference purpose only, and was not taken into account in the preparation of these designs. MiTek or TRENCO has not independently verified the applicability of the design parameters or the designs for any particular building. Before use, the building designer should verify applicability of design parameters and properly incorporate these designs into the overall building design per ANSI/TPI 1, Chapter 2.

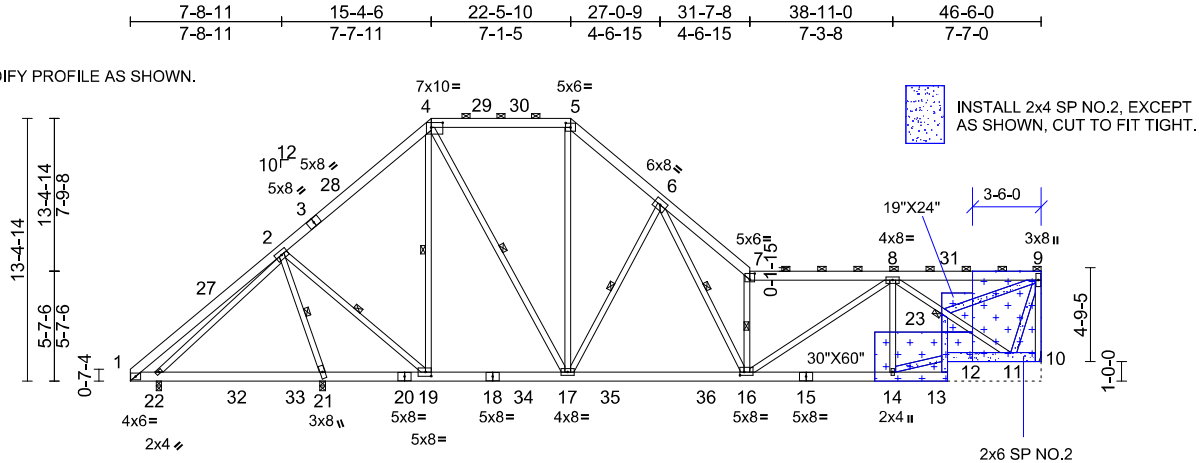
Job	Truss	Truss Type	Qty	Ply	Job Reference (optional)
4492414 3-18-25	A09	Piggyback Base	1	1	I75104444

Builders FirstSource (Wilmington, NC), Wilmington, NC - 28405,

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Page: 1

REPAIR: MODIFY PROFILE AS SHOWN.



Scale = 1:117.8

Plate Offsets (X, Y): [4:0-7-0,0-3-0], [5:0-3-0,0-2-12], [7:0-3-0,0-3-12], [16:0-2-8,0-2-0], [19:0-3-8,0-2-8]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.54	Vert(LL)	-0.19	16-17	>999	360	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.50	Vert(CT)	-0.36	16-17	>999	240	
BCLL	0.0*	Rep Stress Incr	YES	WB	0.86	Horz(CT)	-0.02	10	n/a	n/a	
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS		Wind(LL)	0.24	16-17	>999	240	Weight: 423 lb FT = 20%

LUMBER

TOP CHORD	2x6 SP No.2
BOT CHORD	2x6 SP No.2 *Except* 13-23:2x4 SP No.2
WEBS	2x4 SP No.3 *Except* 19-4,17-4,17-5,12-14,23-9,11-9:2x4 SP No.2

BRACING

TOP CHORD	Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (4-6-8 max.): 4-5, 7-9,
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BOT CHORD	Rigid ceiling directly applied.
WEBS	1 Row at midpt 2-21, 2-19, 4-19, 4-17, 6-17, 6-16, 7-16

JOINTS	1 Brace at Jt(s): 23, 9
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REACTIONS	(lb/size) 10=1380/ Mechanical, 21=2205/0-3-8, 22=123/0-3-0
	Max Horiz 22=586 (LC 12)
	Max Uplift 10=-671 (LC 13), 21=-882 (LC 12), 22=-136 (LC 24)
	Max Grav 10=1380 (LC 1), 21=2226 (LC 2), 22=327 (LC 23)

FORCES

TOP CHORD	(lb) - Maximum Compression/Maximum Tension
	1-27=-222/415, 2-27=-59/447, 2-3=-649/407, 3-28=-610/427, 4-28=-595/462, 4-29=-1048/699, 29-30=-1048/699, 5-30=-1048/699, 5-6=-1281/770, 6-7=-2953/1443, 7-8=-2272/1024, 8-31=-965/415, 9-31=-965/415, 9-10=-1309/630

BOT CHORD	1-22=-125/119, 22-32=-360/292, 32-33=-360/292, 21-33=-360/292, 20-21=-890/613, 19-20=-890/613, 18-19=-238/454, 18-34=-238/454, 17-34=-238/454, 17-35=-576/1307, 35-36=-576/1307, 16-36=-576/1307, 15-16=-786/1649, 14-15=-786/1649, 13-14=-82/144, 11-12=-785/1651, 10-11=-24/29, 12-13=-9/31, 12-23=-236/583
WEBS	2-21=-2300/1162, 2-19=-569/1622, 4-19=-976/476, 4-17=-521/1000, 5-17=-211/535, 6-17=-1280/861, 6-16=-1039/2076, 7-16=-2151/1173, 8-16=-309/847, 8-14=-441/331, 8-23=-863/468, 11-23=-1584/767, 2-22=-523/447, 12-14=-750/1604, 9-23=-311/725, 9-11=-349/883

NOTES

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) 0-0-0 to 4-6-3, Interior (1) 4-6-3 to 15-4-6, Exterior (2) 15-4-6 to 19-10-9, Interior (1) 19-10-9 to 22-5-10, Exterior (2) 22-5-10 to 27-0-9, Interior (1) 27-0-9 to 46-4-4 zone; cantilever left exposed; end vertical left exposed; porch left exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Provide adequate drainage to prevent water ponding.
- 4) N/A
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- 6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 7) Refer to girder(s) for truss to truss connections.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 882 lb uplift at joint 21, 671 lb uplift at joint 10 and 136 lb uplift at joint 22.
- 9) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- 10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



July 23, 2025

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacompnents.com)

ENGINEERING BY
TRENCO
A MiTek Affiliate

818 Soundside Road
Edenton, NC 27932

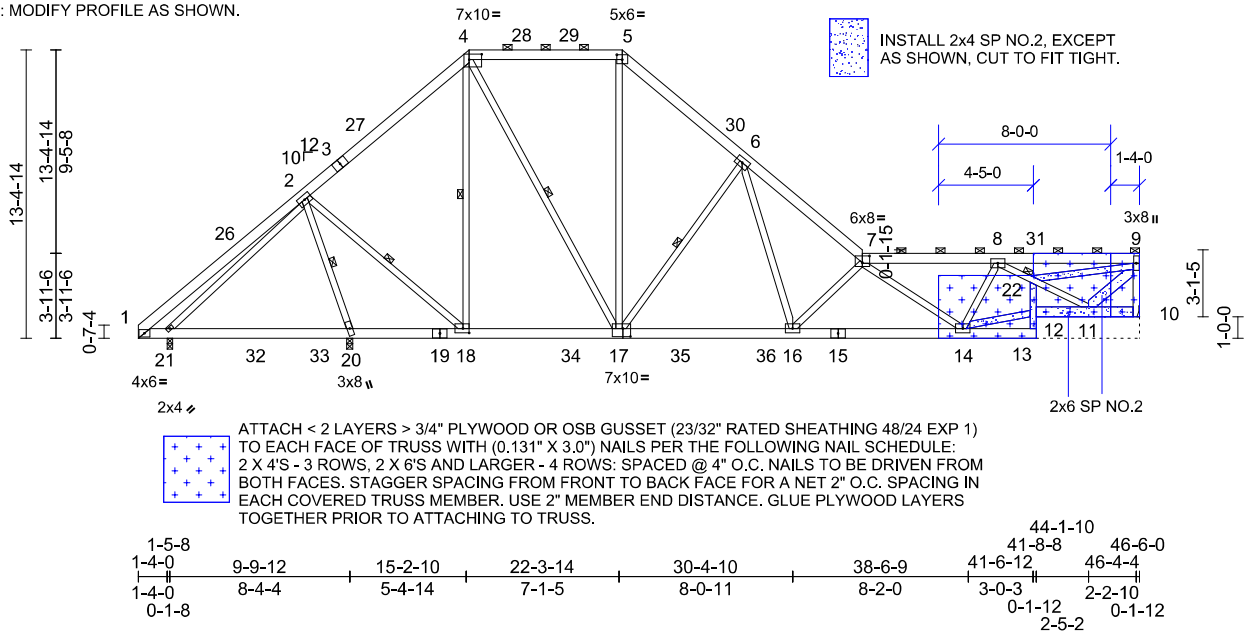
Job	Truss	Truss Type	Qty	Ply	Job Reference (optional)
4492414 3-18-25	A010	Piggyback Base	1	1	I75104445

Builders FirstSource (Wilmington, NC), Wilmington, NC - 28405,

Run: 8.83 E Feb 18 2025 Print: 8.830 E Feb 18 2025 MiTek Industries, Inc. Wed Jul 23 11:07:31
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Page: 1

REPAIR: MODIFY PROFILE AS SHOWN.



Scale = 1:107.2

Plate Offsets (X, Y): [4:0-7-0,0-3-0], [5:0-3-0,0-2-12], [7:0-4-0,0-3-12], [17:0-4-4,0-4-8], [18:0-3-8,0-2-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.39	Vert(LL)	-0.16	16-17	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.59	Vert(CT)	-0.32	14-16	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.92	Horz(CT)	0.03	10	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS		Wind(LL)	0.24	14-16	>999	240	Weight: 410 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.2
BOT CHORD 2x6 SP No.2 *Except* 13-22:2x4 SP No.2
WEBS 2x4 SP No.3 *Except*
18-4, 17-4, 17-5, 12-14:2x4 SP No.2, 11-9:2x6 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (4-6-8 max.): 4-5, 7-9.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 2-20, 2-18, 4-18, 4-17, 6-17

JOINTS 1 Brace at Jt(s): 22, 9

REACTIONS (lb/size) 10=1366/ Mechanical, 20=2280/0-3-8, 21=63/0-3-0
Max Horiz 21=554 (LC 9)
Max Uplift 10=659 (LC 13), 20=882 (LC 12), 21=196 (LC 24)
Max Grav 10=1366 (LC 1), 20=2280 (LC 1), 21=292 (LC 23)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-26=-214/418, 2-26=-53/449, 2-3=-637/415, 3-27=-599/434, 4-27=-583/470, 4-28=-1062/712, 28-29=-1062/712, 5-29=-1062/712, 5-30=-1236/760, 6-30=-1277/721, 6-7=-2520/1169, 7-8=-2397/1071, 8-31=-1755/780, 9-31=-1755/780, 9-10=-1374/677

BOT CHORD 1-21=-126/118, 21-32=-442/390, 32-33=-442/390, 20-33=-442/390, 19-20=-1046/722, 18-19=-1046/722, 18-34=-232/482, 17-34=-232/482, 17-35=-587/1422, 35-36=-587/1422, 16-36=-587/1422, 15-16=-1419/3099, 14-15=-1419/3099, 13-14=-192/385, 12-13=-20/60, 12-22=-219/529, 11-12=-1147/2412, 10-11=-36/42, 2-20=-2395/1168, 2-18=-573/1679, 4-18=-1011/481, 4-17=-541/994, 5-17=-177/485, 6-17=-1404/900, 6-16=-687/1565, 7-16=-1840/1043, 7-14=-945/450, 8-14=-7/292, 8-22=-776/439, 11-22=-1662/824, 2-21=-519/492, 12-14=-992/2100, 9-11=-570/1341, 9-22=-377/845

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) 0-0-0 to 4-7-13, Interior (1) 4-7-13 to 15-4-6, Exterior (2) 15-4-6 to 20-0-2, Interior (1) 20-0-2 to 22-5-10, Exterior (2) 22-5-10 to 27-1-7, Interior (1) 27-1-7 to 46-4-4 zone; cantilever left exposed; end vertical left exposed; porch left exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Provide adequate drainage to prevent water ponding.
- All plates are 5x8 (=) MT20 unless otherwise indicated.
- N/A

6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 882 lb uplift at joint 20, 659 lb uplift at joint 10 and 196 lb uplift at joint 21.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



July 23, 2025

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

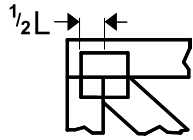
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacompnents.com)

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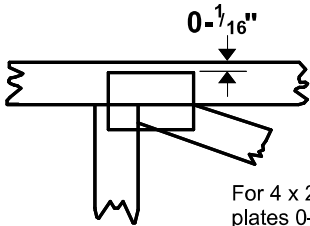
818 Soundside Road
Edenton, NC 27932

Symbols

PLATE LOCATION AND ORIENTATION



Center plate on joint unless x, y offsets are indicated. Dimensions are in ft-in-sixteenths. Apply plates to both sides of truss and fully embed teeth.



For 4 x 2 orientation, locate plates 0- 1/16" from outside edge of truss.



This symbol indicates the required direction of slots in connector plates.

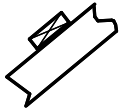
* Plate location details available in MiTek software or upon request.

PLATE SIZE

4 x 4

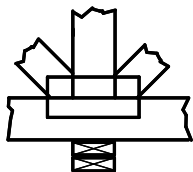
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



Indicated by symbol shown and/or by text in the bracing section of the output. Use T or I bracing if indicated.

BEARING

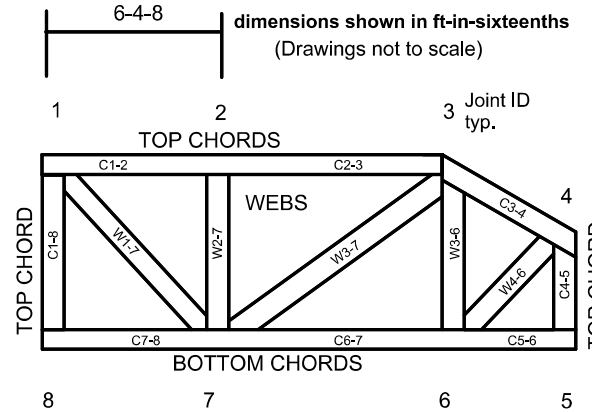


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-22: Design Standard for Bracing.
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses.

Numbering System



JOINTS ARE GENERALLY NUMBERED/LETTERED CLOCKWISE AROUND THE TRUSS STARTING AT THE JOINT FARTHEST TO THE LEFT.

CHORDS AND WEBS ARE IDENTIFIED BY END JOINT NUMBERS/LETTERS.

Product Code Approvals

ICC-ES Reports:

ESR-1988, ESR-2362, ESR-2685, ESR-3282
ESR-4722, ESL-1388

Design General Notes

Trusses are designed for wind loads in the plane of the truss unless otherwise shown.

Lumber design values are in accordance with ANSI/TPI 1 section 6.3 These truss designs rely on lumber values established by others.

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MiTek Engineering Reference Sheet: MII-7473 rev. 1/2/2023

General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative Tor I bracing should be considered.
3. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
4. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
5. Cut members to bear tightly against each other.
6. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TPI 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TPI 1.
8. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
9. Unless expressly noted, this design is not applicable for use with fire retardant, preservative treated, or green lumber.
10. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
11. Plate type, size, orientation and location dimensions indicated are minimum plating requirements.
12. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
13. Top chords must be sheathed or purlins provided at spacing indicated on design.
14. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
15. Connections not shown are the responsibility of others.
16. Do not cut or alter truss member or plate without prior approval of an engineer.
17. Install and load vertically unless indicated otherwise.
18. Use of green or treated lumber may pose unacceptable environmental, health or performance risks. Consult with project engineer before use.
19. Review all portions of this design (front, back, words and pictures) before use. Reviewing pictures alone is not sufficient.
20. Design assumes manufacture in accordance with ANSI/TPI 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.