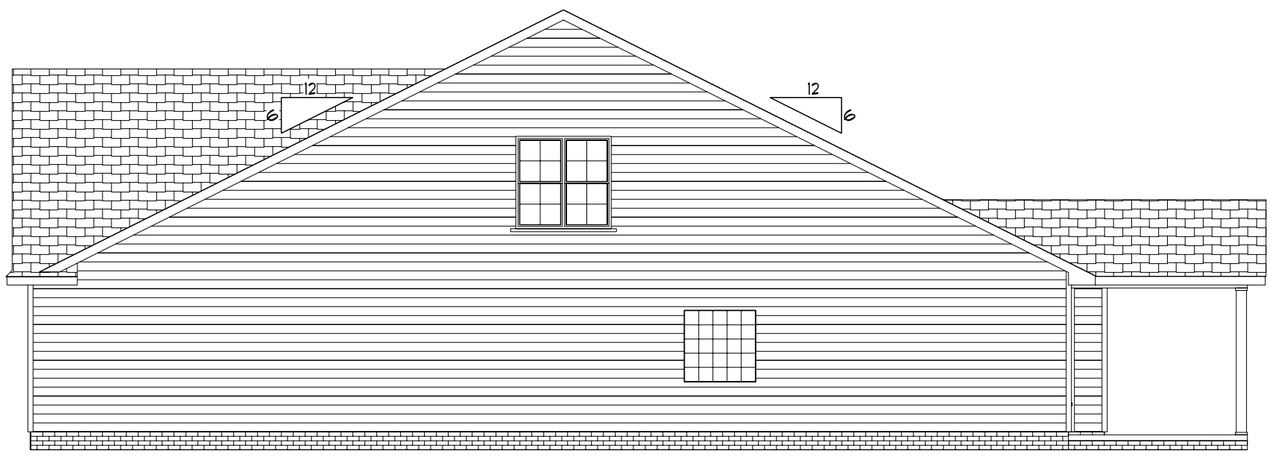
Front Elevation

Scale: 1/4"= 1'0"



Right Elevation

Scale: 1/8"= 1'0"

NOTICE TO CONTRACTOR
All construction must comply with current NC Building Codes and is subject to field inspection and verification.

APPROVED
Limited building only review
Permit holder responsible for full compliance with the code

01/24/2025

Harnett COUNTY NORTH CAROLINA

Left Elevation

Scale: 1/8"= 1'0"

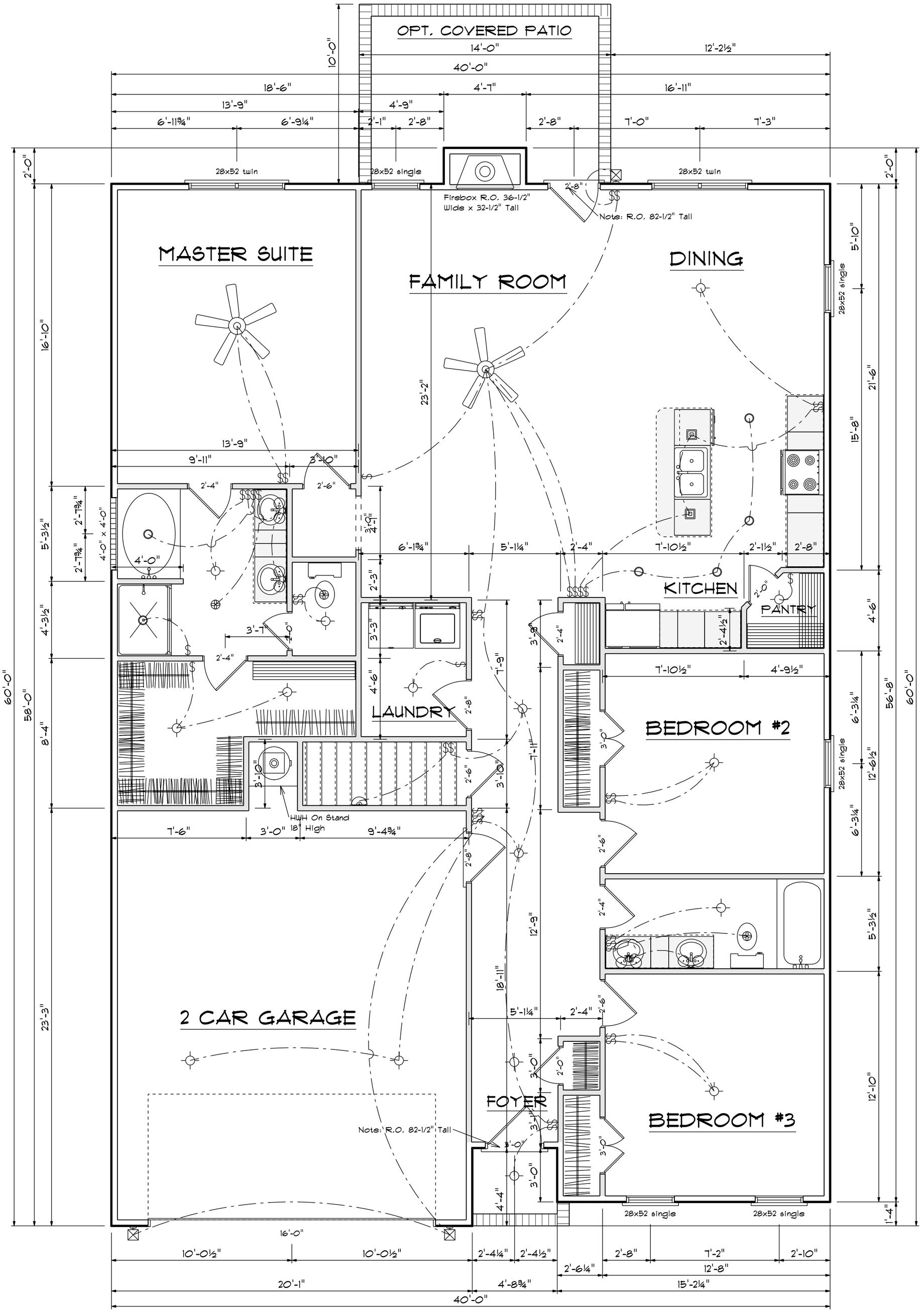
Rear Elevation

Scale: 1/8"= 1'0"

Welco Contractors Inc.

Plan# 2

SCALE: 1/4"		DATE: 12/15/2022	
DRAWN BY		REVISED	
APPROVED		DRAWING#	



First Floor Plan

Scale: 1/4"= 1'-0"

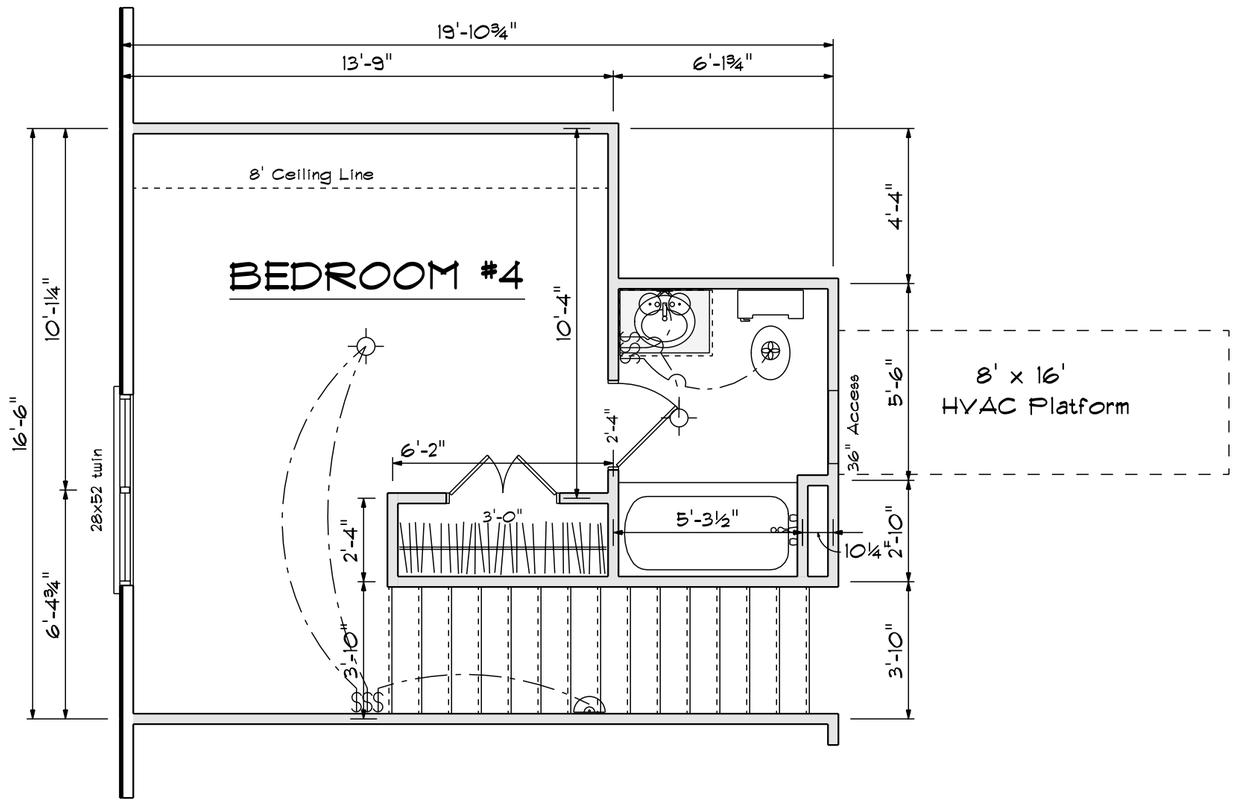
Areas

First Floor	1818
Second Floor	245
	=======
Total Heated	2063
Garage	486
Front Porch	26
Rear Opt. Porch	145

Welco Contractors Inc.

Plan# 2

SCALE: 1/4"		DATE: 12/15/2022	
DRAWN BY		REVISED	
APPROVED		DRAWING#	

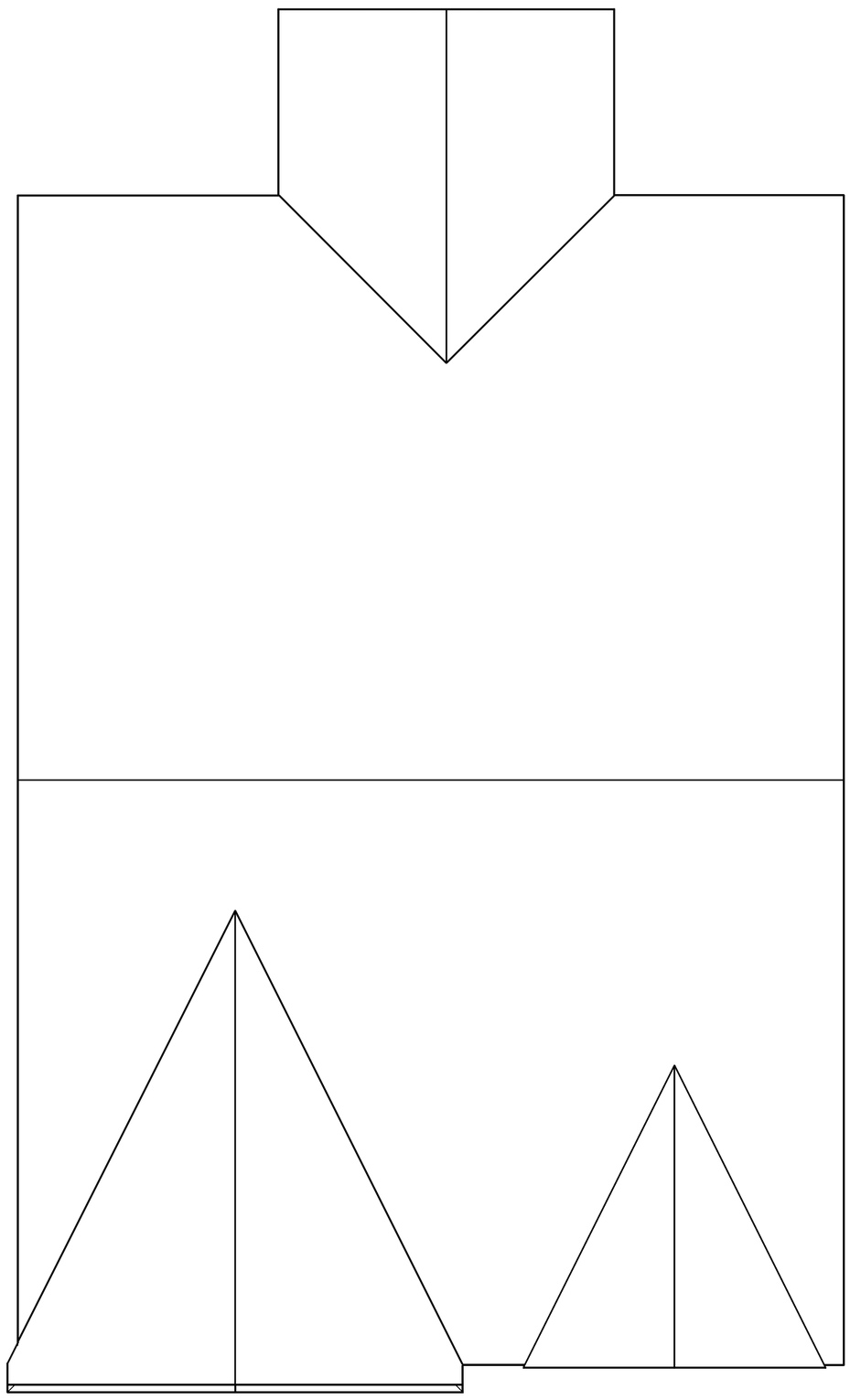


Second Floor Plan

Scale: 1/4"= 1'-0"

FIRST FLOOR OPENING SCHEDULE				
PRODUCT CODE	**SIZE**	**HINGE**	**REVERSED**	**COUNT**
36X80 COLONIAL A 1	3'-0"	R	NO	1
32X80 FRENCH A 1	2'-8"	L	NO	1
192X84 - 8 PANEL - GARAGE DOOR	16'-0"	U	NO	1
2-0 Door Unit	2'-0"	L	NO	1
2-0 Door Unit	2'-0"	R	NO	3
2-4 Door Unit	2'-4"	L	NO	1
2-4 Door Unit	2'-4"	R	NO	3
2-6 Door Unit	2'-6"	L	NO	3
2-6 Door Unit	2'-6"	R	NO	1
2-8 Door Unit	2'-8"	R	NO	1
2-8 Door Unit	2'-8"	L	NO	1
3-0 Doublehung Door Unit	3'-0"	LR	NO	1
3-0 Doublehung Door Unit	3'-0"	LR	NO	1
28x52 single	2'-8" x 5'-2"	N	NA	5
28x52 twin	5'-4" x 5'-2"	NN	NA	2
4X8 GLASS BLOCK	4'-0" x 4'-0"	N	NA	1

SECOND FLOOR OPENING SCHEDULE				
PRODUCT CODE	**SIZE**	**HINGE**	**REVERSED**	**COUNT**
2-4 Door Unit	2'-4"	R	NO	1
3-0 Doublehung Door Unit	3'-0"	LR	NO	1
28x52 twin	5'-4" x 5'-2"	NN	NA	1

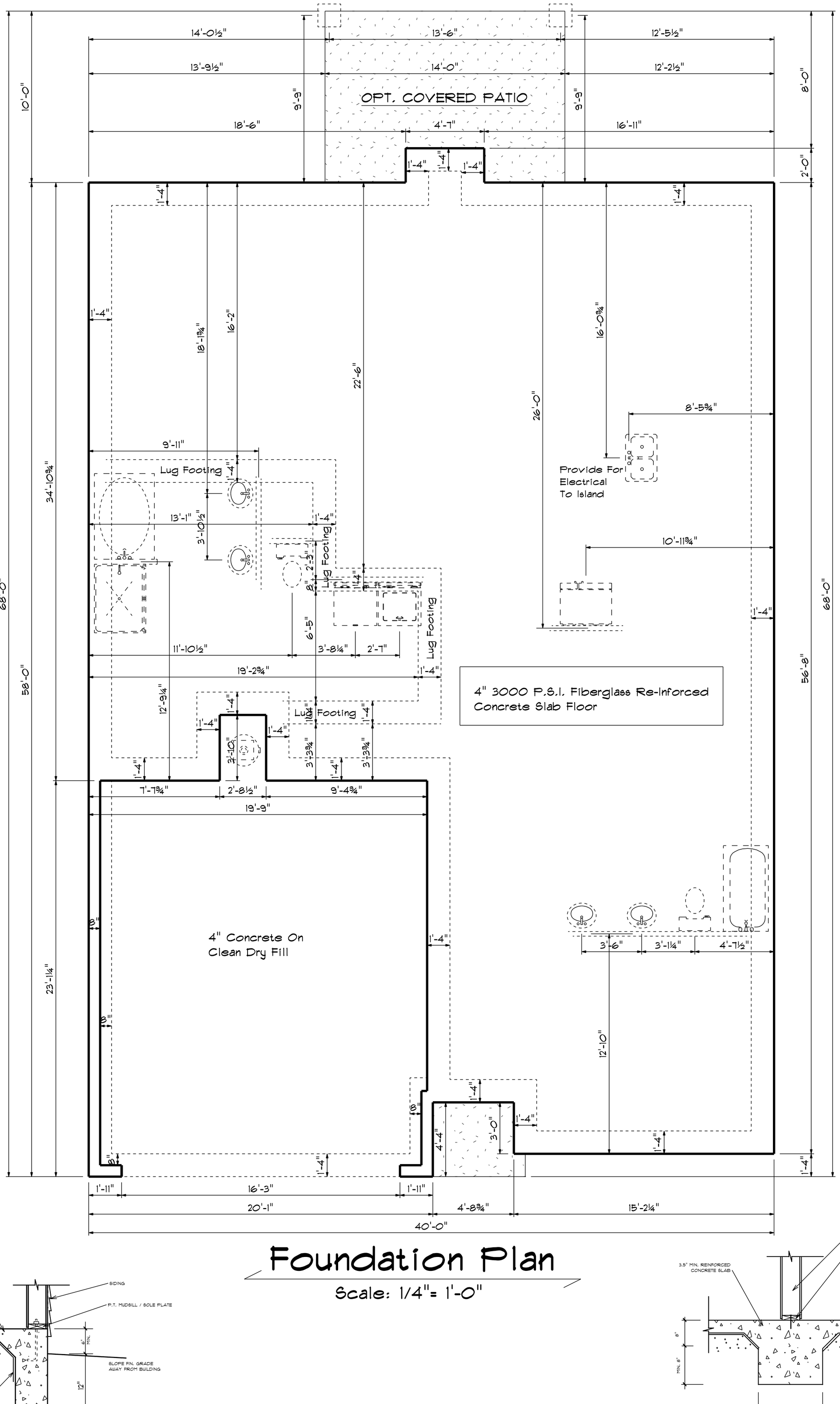


Roof Plan

Wellco Contractors Inc.

Plan# 2

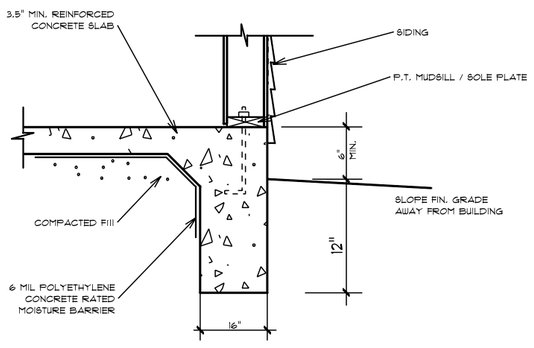
SCALE: 1/4"		DATE: 12/15/2022	
DRAWN BY		REVISED	
APPROVED		DRAWING#	



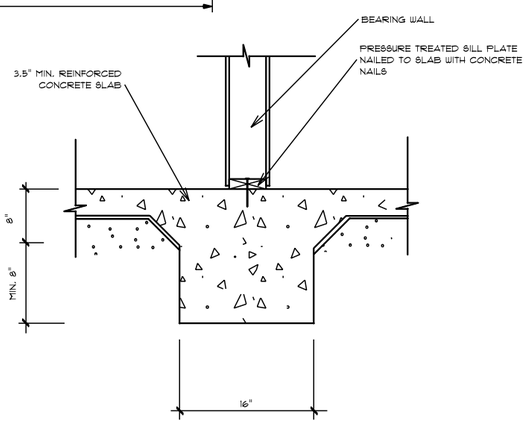
4" 3000 P.S.I. Fiberglass Re-Inforced Concrete Slab Floor

Foundation Plan

Scale: 1/4"= 1'-0"



TURN-DOWN
FOOTING DETAIL

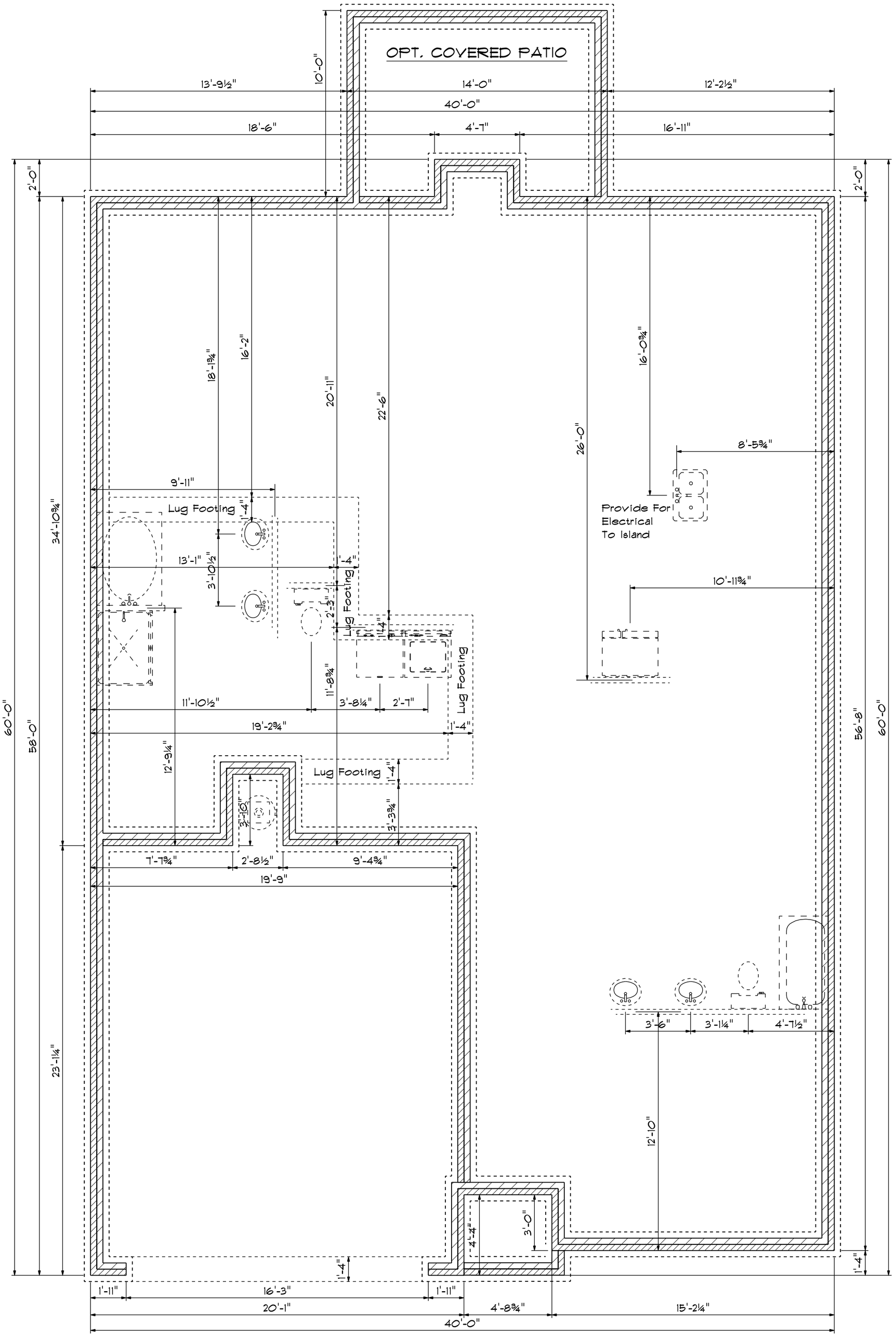


INTEGRAL SLAB FOOTING
DETAIL AT BEARING WALL

Welco Contractors Inc.

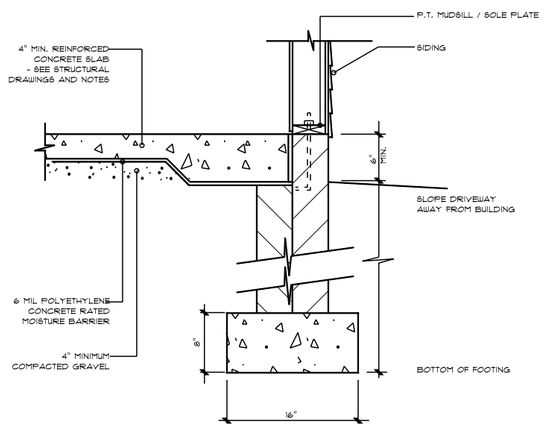
Plan# 2

SCALE: 1/4"		DATE: 12/15/2022	
DRAWN BY		REVISED	
APPROVED		DRAWING#	

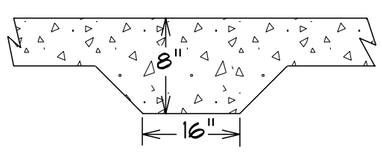


Foundation Plan

Scale: 1/4"= 1'-0"



STEM WALL FOOTING DETAIL



LUG FOOTING DETAIL

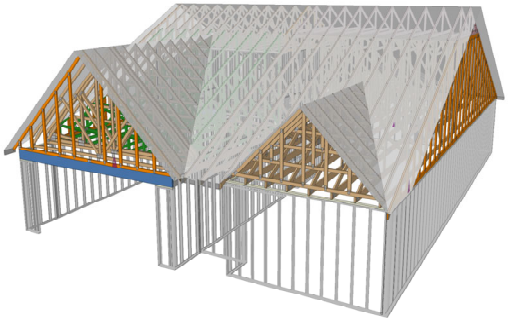
Welco Contractors Inc.

Plan# 2

SCALE: 1/4"		DATE: 12/15/2022	
DRAWN BY		REVISED	
APPROVED		DRAWING#	

Carter Sanford Component Plant
298 Harvey Faulk Rd
Sanford, NC 27332

Phone #:919-775-1450



Builder: **Wellco Contractor**

Model: **128 Hidden Lakes - Plan 2 GLH**

THE PLACEMENT PLAN NOTES:

1. The Placement Plan is a diagram for truss installation. It is not an engineered drawing and has not been reviewed by an engineer. The Owner/Building Designer is responsible for obtaining an engineer's review if one is required by the local jurisdiction.
2. The responsibilities of the Owner, Contractor, Building Designer, Component Designer and Component Manufacturer shall be as set forth in ANSI/TPI 1. Capitalized terms shall be as defined in ANSI/TP 1 unless otherwise indicated.
3. Each Component is designed as an individual component utilizing information provided by others. The Owner/Building Designer is responsible for reviewing all Component Submittal Packages and individual Component Design Drawings for compliance with the Construction Documents and compatibility with the overall Building design.
4. Contractor will not proceed with component installation until the Owner/Building Designer has reviewed the Component Submittal Package. Questions on the suitability of any Component will be resolved by the Building Designer.
5. The Building Designer and Contractor are responsible for all temporary and permanent bracing.
6. The Placement Plan assumes the building is dimensionally correct, structurally sound, and in a suitable condition to support each Component during installation and thereafter, including but not limited to installation of all bearing points. Proper design and construction of all structural components, including foundations, headers, beams, walls and columns are the responsibility of the Owner, Building Designer and Contractor.
7. Do not cut, drill, or modify any Component without first consulting the Component Manufacturer or Building Designer. Damaged Components shall not be installed unless directed by the Building Designer or approved by the Component Manufacturer.
8. Components must be handled and installed following all applicable safety standards and best practices, including but not limited to BCSI, OSHA, TPI and local codes. Failure to properly handle, brace or otherwise install Component can result in serious injury or death.
9. All uplift connectors shown within these documents are recommendations only. Per ANSI/TPI 1, all uplift connectors are the responsibility of the building designer and or contractor.

Approved By: _____ **Date:** _____

General Notes:

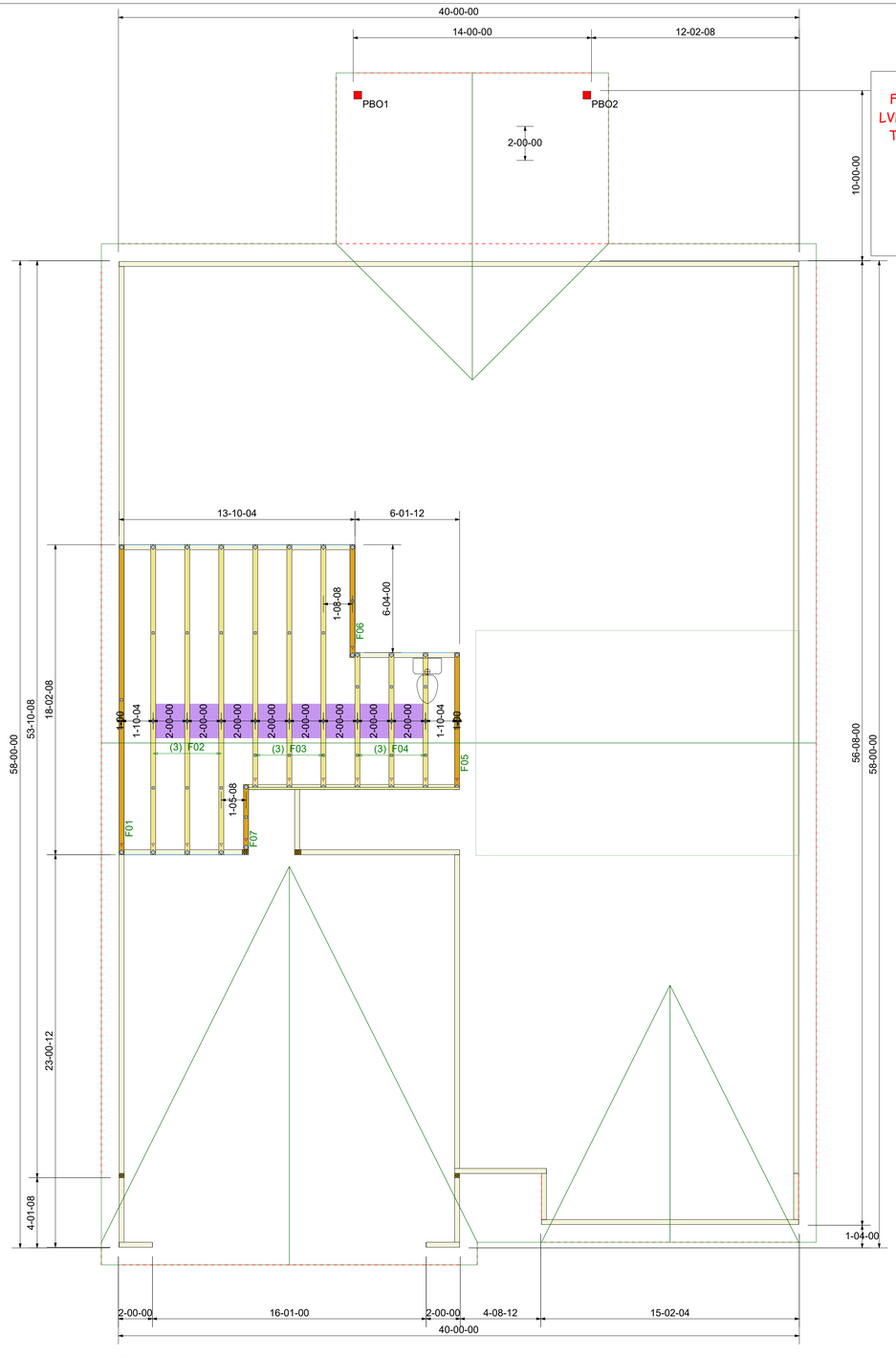
** CUTTING OR DRILLING OF COMPONENTS SHOULD NOT BE DONE WITHOUT CONTACTING COMPONENT SUPPLIER FIRST. CUSTOMER TAKES FULL RESPONSIBILITY FOR COMPONENTS IF CUT BEFORE AUTHORIZATION.

** ALL POINT LOADS FROM ABOVE MUST BE TRANSFERRED TO BEARING FROM UNDER SIDE OF SHEATHING.

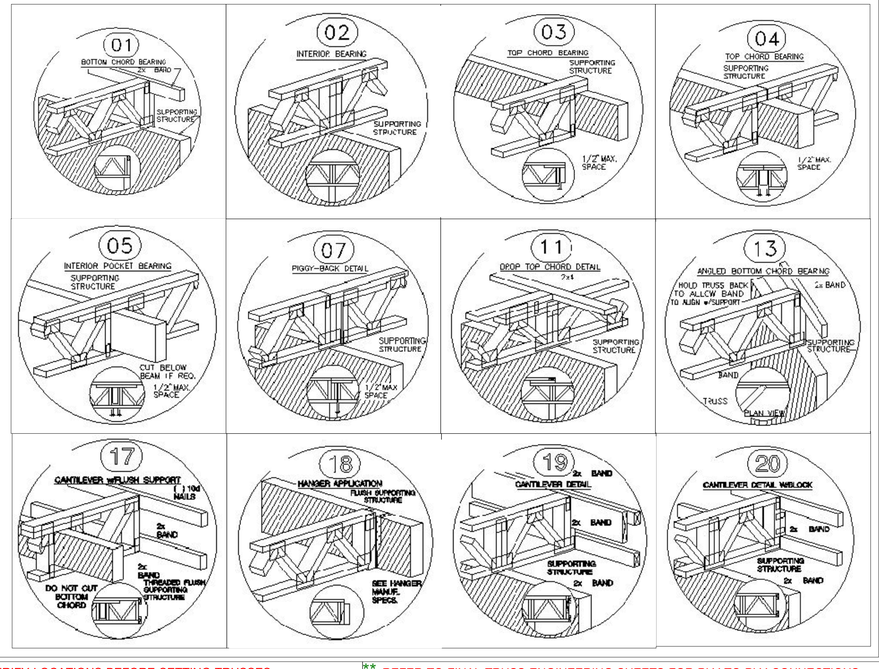
** ALL BEARING POINTS MUST BE INSTALLED PRIOR TO SETTING ANY COMPONENTS.

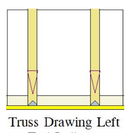
** DAMAGED COMPONENTS SHOULD NOT BE INSTALLED UNLESS TOLD TO BY THE COMPONENT PLANT.

** FRAMER MUST REFER TO PLANS WHILE SETTING COMPONENTS.

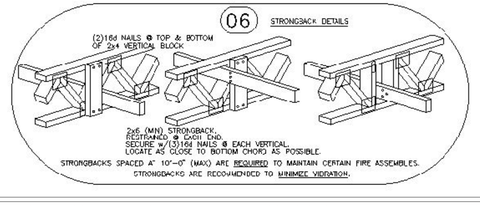


KEMPSVILLE BUILDING MATERIALS IS NOT RESPONSIBLE FOR THE DESIGN OR CALCULATION OF ANY AND ALL I-JOIST AND LVL/PSL BEAM MATERIAL. ALL ENGINEERING AND INFORMATION FOR THIS MATERIAL IS TO BE PROVIDED BY THE ENGINEER OF RECORD MARKED ON APPROVED SET OF PLANS. ALL BEAM PLACEMENTS ARE PER THE ENGINEERING RECEIVED. ALL CONNECTION DETAILS TO BE PROVIDED BY ENGINEER OF RECORD. REFER TO ENGINEER OR RECORD FOR ALL MULTI-PLY LVL/ I-JOIST CONNECTION PATTERNS. BUILDER TO VERIFY ALL MATERIAL LENGTHS, QUANTITIES, AND SIZES PRIOR TO ORDERING.





Truss Drawing Left End Indicator



FB# - Flush Beam
DB# - Dropped Beam
BBO - Beam that is not supplied by the component plant

** TRUSS TO TRUSS CONNECTIONS ARE TOE-NAILED, UNLESS NOTED OTHERWISE.

** DIMENSIONS ARE READ AS: FOOT-INCH-SIXTEENTH.

** GIRDERS MUST BE FULLY CONNECTED TOGETHER PRIOR TO ADDING ANY LOADS.

** TRIANGULAR SYMBOL NEAR END OF TRUSS INDICATES LEFT END OF TRUSS AS SHOWN ON INDIVIDUAL TRUSS DRAWINGS.

** PLUMBING DROPS NOTED ARE IN THE APPROXIMATE LOCATIONS PER PLAN. BUILDER TO VERIFY LOCATIONS BEFORE SETTING TRUSSES.

** REFER TO FINAL TRUSS ENGINEERING SHEETS FOR PLY TO PLY CONNECTIONS.

Revisions	
00/00/00	Name
00/00/00	Name
00/00/00	Name
00/00/00	Name
00/00/00	Name

THIS IS A TRUSS PLACEMENT DIAGRAM ONLY. These trusses are designed as individual components to be incorporated into the building design at the specification of the building designer. See Individual design sheets for each truss design identified on the placement drawing. The building designer is responsible for temporary and permanent bracing of the roof and floor systems and for the overall structure. The design of the truss supporting structure including headers, beams and columns is the responsibility of the building designer. For general guidance regarding the bracing, consult "Bracing of Wood Trusses" available from the Truss Plate Institute, 583 D'Onofrio Drive; Madison, WI 53179

CARTER Lumber

Wellco Contractor
128 Hidden Lakes North-2nd
Floor-Plan 2 GLH

FLOOR PLACEMENT PLAN

Scale: NTS
Date: 1/12/2025
Designer: Aaron Rogers
Project Number: 25010025-A
Sheet Number: 1/1

ENGINEERING BY
TRENCO
A MiTek Affiliate

Trenco
818 Soundside Rd
Edenton, NC 27932

Re: 25010025-A
128 Hidden Lakes North-2nd Floor-Plan 2 GLH

The truss drawing(s) referenced below have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by Carter Components (Sanford, NC)).

Pages or sheets covered by this seal: I70703587 thru I70703593

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

North Carolina COA: C-0844

January 13,2025

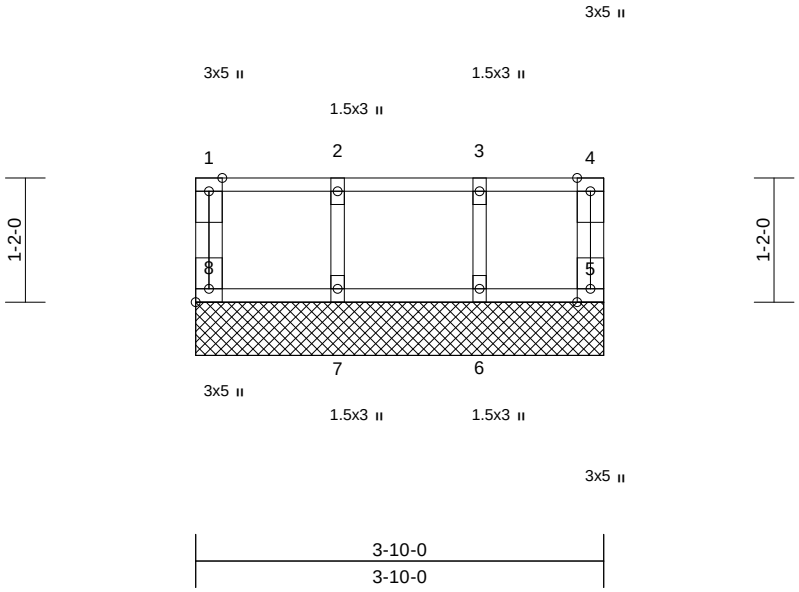
Johnson, Andrew

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	128 Hidden Lakes North-2nd Floor-Plan 2 GLH
25010025-A	F07	Floor Supported Gable	1	1	I70703587 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Dec 5 2024 Print: 8.730 S Dec 5 2024 MiTek Industries, Inc. Sun Jan 12 15:39:58 Page: 1
ID:Uo7BmGJNKNA4BKN_0JJPbxzw3CD-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:21.6

Plate Offsets (X, Y): [8:Edge,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.01	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.03	Horiz(TL)	0.00	5	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-MR							Weight: 20 lb	FT = 20%F, 11%E

LUMBER
TOP CHORD 2x4 SP No.2(flat)
BOT CHORD 2x4 SP No.2(flat)
WEBS 2x4 SP No.3(flat)
OTHERS 2x4 SP No.3(flat)

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-10-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 5=3-10-0, 6=3-10-0, 7=3-10-0, 8=3-10-0
Max Grav 5=53 (LC 1), 6=132 (LC 1), 7=148 (LC 1), 8=61 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-8=-55/0, 4-5=-47/0, 1-2=-9/0, 2-3=-9/0, 3-4=-9/0
BOT CHORD 7-8=0/9, 6-7=0/9, 5-6=0/9
WEBS 2-7=-134/0, 3-6=-122/0

NOTES
1) Gable requires continuous bottom chord bearing.
2) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
3) Gable studs spaced at 1-4-0 oc.
4) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.

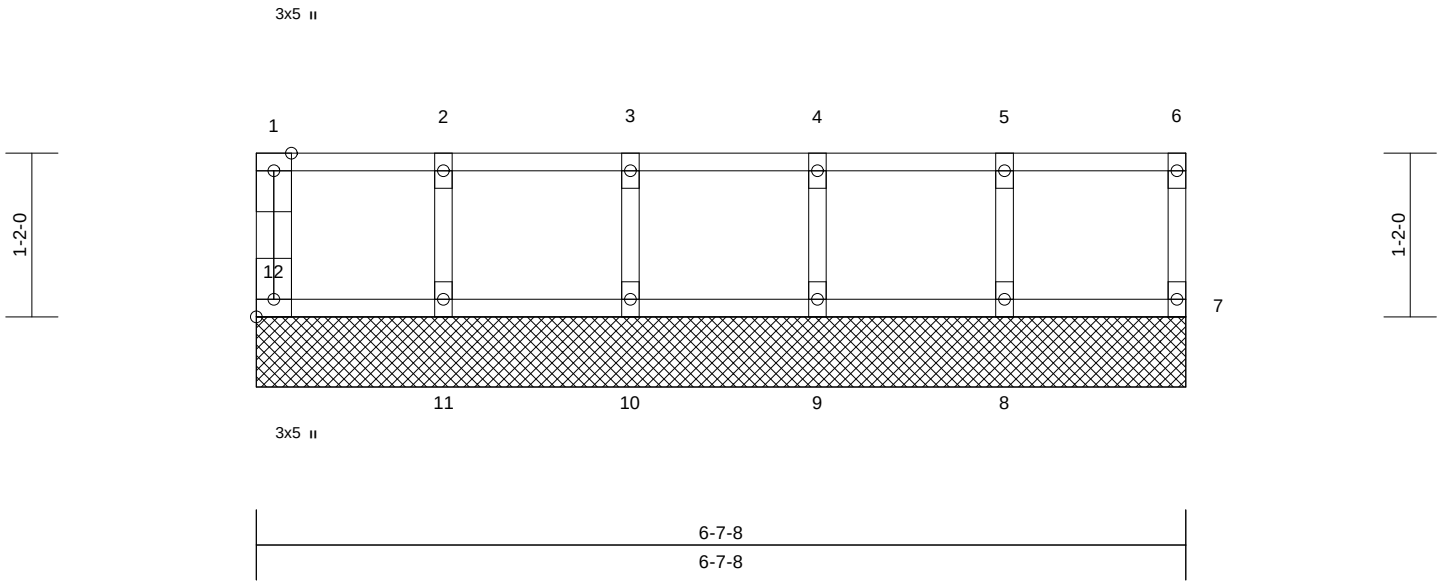
LOAD CASE(S) Standard

January 13,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	128 Hidden Lakes North-2nd Floor-Plan 2 GLH
25010025-A	F06	Floor Supported Gable	1	1	I70703588 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Dec 5 2024 Print: 8.730 S Dec 5 2024 MiTek Industries, Inc. Sun Jan 12 15:39:58 Page: 1
ID:ieUche_NEaJg_QzrZCLc7lzw3Dx-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:16.4

Plate Offsets (X, Y): [12:Edge,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.02	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.03	Horiz(TL)	0.00	7	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-MR							Weight: 29 lb	FT = 20%F, 11%E

LUMBER
TOP CHORD 2x4 SP No.2(flat)
BOT CHORD 2x4 SP No.2(flat)
WEBS 2x4 SP No.3(flat)
OTHERS 2x4 SP No.3(flat)

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 7=6-7-8, 8=6-7-8, 9=6-7-8, 10=6-7-8, 11=6-7-8, 12=6-7-8
Max Grav 7=63 (LC 1), 8=146 (LC 1), 9=147 (LC 1), 10=147 (LC 1), 11=144 (LC 1), 12=62 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-12=-56/0, 6-7=-55/0, 1-2=-9/0, 2-3=-9/0, 3-4=-9/0, 4-5=-9/0, 5-6=-9/0
BOT CHORD 11-12=0/9, 10-11=0/9, 9-10=0/9, 8-9=0/9, 7-8=0/9
WEBS 2-11=-131/0, 3-10=-134/0, 4-9=-133/0, 5-8=-135/0

NOTES
1) All plates are 1.5x3 MT20 unless otherwise indicated.
2) Gable requires continuous bottom chord bearing.
3) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
4) Gable studs spaced at 1-4-0 oc.
5) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.

LOAD CASE(S) Standard

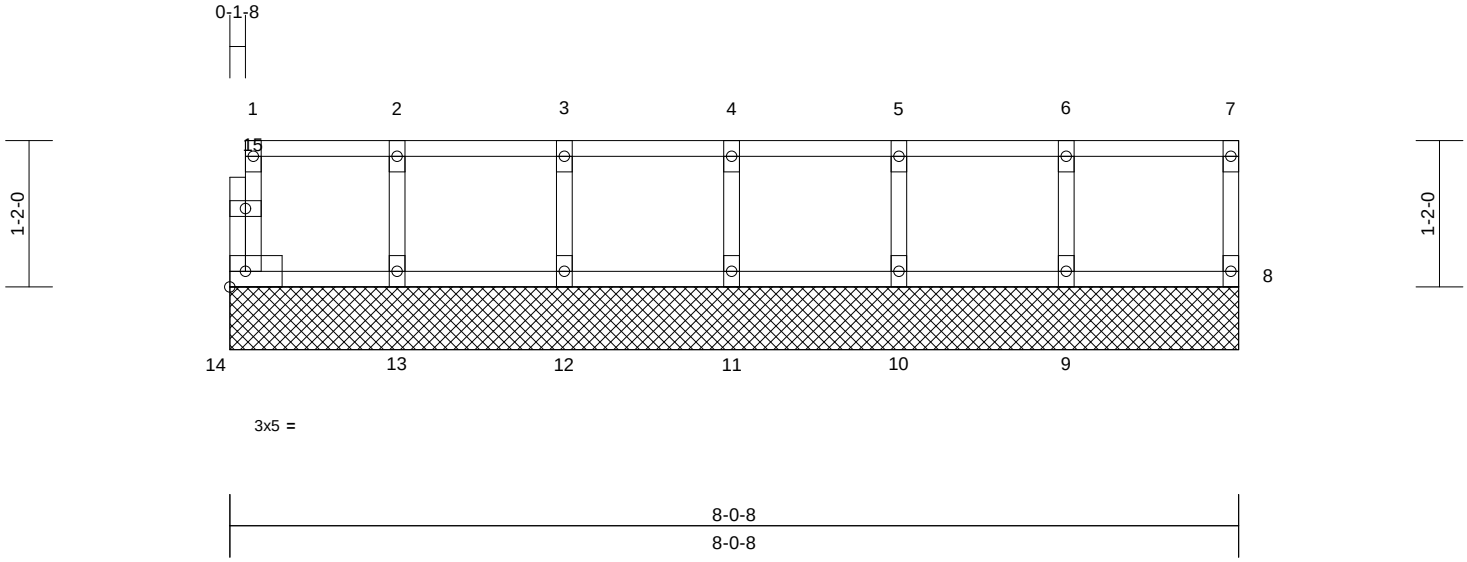
January 13,2025

ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	128 Hidden Lakes North-2nd Floor-Plan 2 GLH
25010025-A	F05	Floor Supported Gable	1	1	I70703589 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Dec 5 2024 Print: 8.730 S Dec 5 2024 MiTek Industries, Inc. Sun Jan 12 15:39:58
ID:e0cM6K?dmBZOEk7EhdN4DAzw3Dv-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:18.4

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.02	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.03	Horiz(TL)	0.00	8	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-MR							Weight: 34 lb	FT = 20%F, 11%E

LUMBER

TOP CHORD	2x4 SP No.2(flat)
BOT CHORD	2x4 SP No.2(flat)
WEBS	2x4 SP No.3(flat)
OTHERS	2x4 SP No.3(flat)

BRACING

TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 8=8-0-8, 9=8-0-8, 10=8-0-8, 11=8-0-8, 12=8-0-8, 13=8-0-8, 14=8-0-8
Max Grav 8=67 (LC 1), 9=152 (LC 1), 10=146 (LC 1), 11=147 (LC 1), 12=148 (LC 1), 13=143 (LC 1), 14=56 (LC 1)

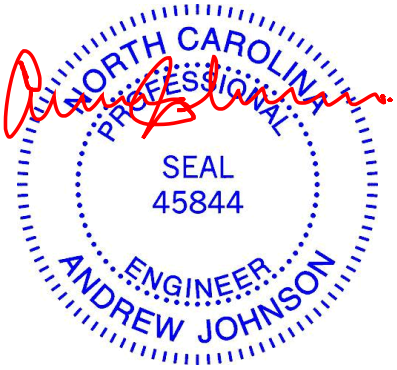
FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-14=-51/0, 7-8=-59/0, 1-2=-10/0, 2-3=-10/0, 3-4=-10/0, 4-5=-10/0, 5-6=-10/0, 6-7=-10/0
BOT CHORD	13-14=0/10, 12-13=0/10, 11-12=0/10, 10-11=0/10, 9-10=0/10, 8-9=0/10
WEBS	2-13=-130/0, 3-12=-134/0, 4-11=-133/0, 5-10=-132/0, 6-9=-140/0

NOTES

1) All plates are 1.5x3 MT20 unless otherwise indicated.
2) Gable requires continuous bottom chord bearing.
3) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
4) Gable studs spaced at 1-4-0 oc.
5) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
6) CAUTION, Do not erect truss backwards.

LOAD CASE(S) Standard



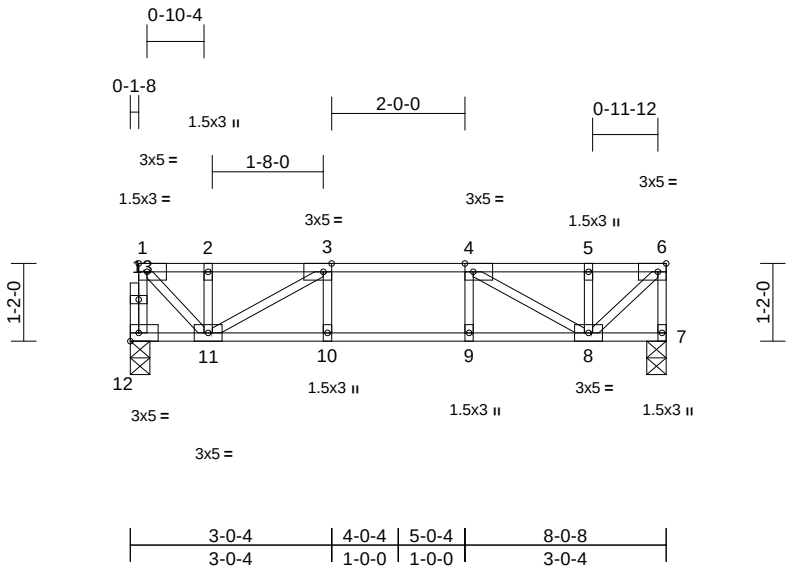
January 13,2025

ENGINEERING BY
TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	128 Hidden Lakes North-2nd Floor-Plan 2 GLH
25010025-A	F04	Floor	3	1	I70703590 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Dec 5 2024 Print: 8.730 S Dec 5 2024 MiTek Industries, Inc. Sun Jan 12 15:39:58
ID:FoZMJN?3SNum3KO_UrrJXSzw3Cd-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:34.6

Plate Offsets (X, Y): [3:0-1-8,Edge], [4:0-1-8,Edge], [6:0-1-8,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.30	Vert(LL)	-0.04	8-9	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.35	Vert(CT)	-0.04	8-9	>999	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.27	Horz(CT)	0.01	7	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-MSH							Weight: 43 lb	FT = 20%F, 11%E

LUMBER
TOP CHORD 2x4 SP No.2(flat)
BOT CHORD 2x4 SP No.2(flat)
WEBS 2x4 SP No.3(flat)
OTHERS 2x4 SP No.3(flat)

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 7=0-3-8, 12=0-3-8
Max Grav 7=432 (LC 1), 12=426 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-12=-422/0, 6-7=-427/0, 1-2=-392/0, 2-3=-392/0, 3-4=-786/0, 4-5=-413/0, 5-6=-413/0
BOT CHORD 11-12=0/25, 10-11=0/786, 9-10=0/786, 8-9=0/786, 7-8=0/0
WEBS 3-10=-21/64, 4-9=-25/60, 3-11=-477/0, 2-11=-170/15, 1-11=0/535, 4-8=-459/0, 5-8=-177/9, 6-8=0/568

NOTES
1) Unbalanced floor live loads have been considered for this design.
2) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
3) CAUTION, Do not erect truss backwards.

LOAD CASE(S) Standard

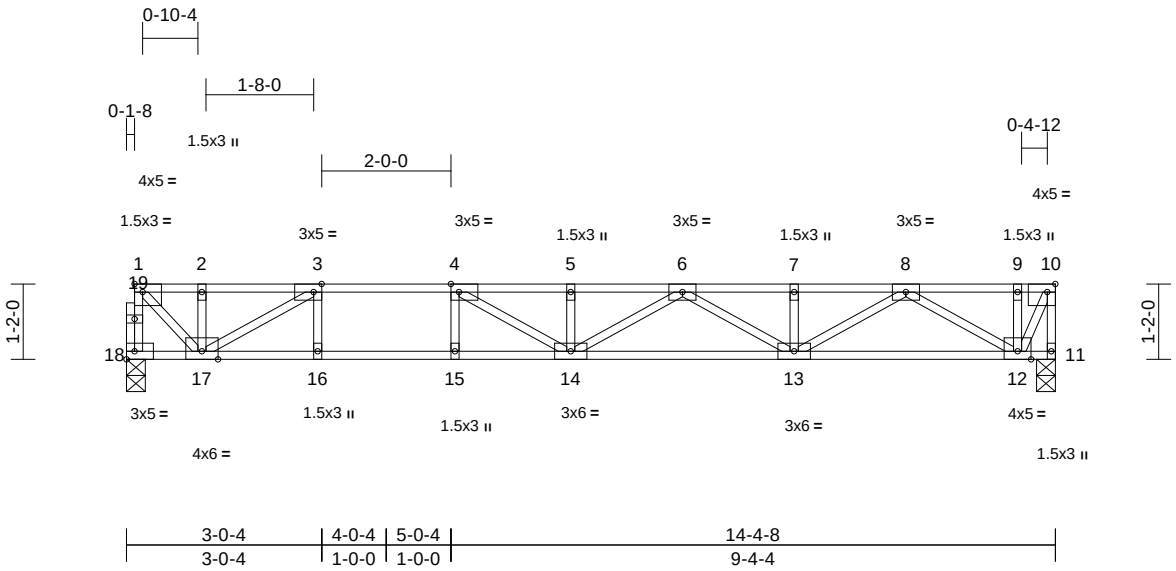
January 13,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	128 Hidden Lakes North-2nd Floor-Plan 2 GLH
25010025-A	F03	Floor	3	1	I70703591 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Dec 5 2024 Print: 8.730 S Dec 5 2024 MiTek Industries, Inc. Sun Jan 12 15:39:58
ID:3hOC?csA2?VKFe2tL18jb8zw3Co-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:35.7

Plate Offsets (X, Y): [1:Edge,0-1-8], [3:0-1-8,Edge], [4:0-1-8,Edge], [10:0-1-8,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.97	Vert(LL)	-0.29	14-15	>578	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.84	Vert(CT)	-0.40	14-15	>424	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.43	Horz(CT)	0.03	11	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-MSH							Weight: 75 lb	FT = 20%F, 11%E

LUMBER
TOP CHORD 2x4 SP No.1(flat)
BOT CHORD 2x4 SP 2400F 2.0E(flat)
WEBS 2x4 SP No.3(flat)
OTHERS 2x4 SP No.3(flat)

BRACING
TOP CHORD Structural wood sheathing directly applied, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 11=0-3-8, 18=0-3-8
Max Grav 11=780 (LC 1), 18=774 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-18=-712/0, 10-11=-797/0, 1-2=-634/0, 2-3=-634/0, 3-4=-2085/0, 4-5=-2738/0, 5-6=-2738/0, 6-7=-2158/0, 7-8=-2158/0, 8-9=-404/0, 9-10=-404/0
BOT CHORD 17-18=0/43, 16-17=0/2085, 15-16=0/2085, 14-15=0/2085, 13-14=0/2564, 12-13=0/1427, 11-12=0/0
WEBS 3-16=0/389, 4-15=-336/0, 3-17=-1678/0, 2-17=-94/173, 1-17=0/863, 4-14=0/838, 5-14=-322/0, 6-14=0/204, 6-13=-474/0, 7-13=-178/0, 8-13=0/853, 8-12=-1194/0, 9-12=-148/0, 10-12=0/904

NOTES
1) Unbalanced floor live loads have been considered for this design.
2) All plates are 1.5x3 MT20 unless otherwise indicated.
3) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
4) CAUTION, Do not erect truss backwards.

LOAD CASE(S) Standard

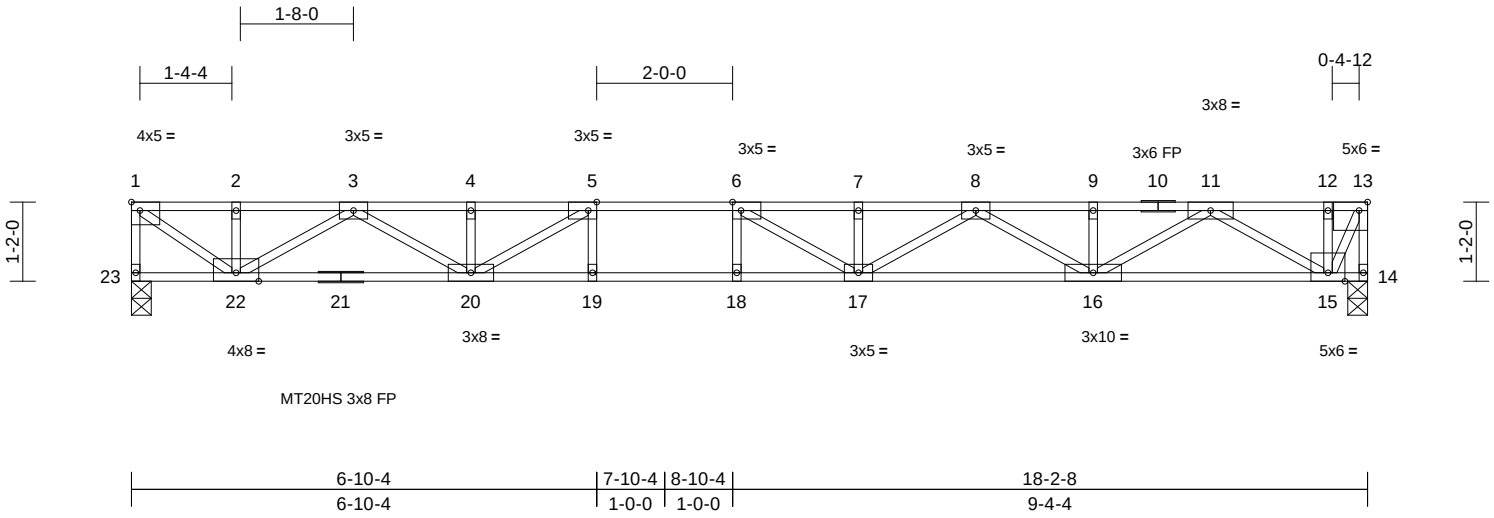
January 13,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	128 Hidden Lakes North-2nd Floor-Plan 2 GLH
25010025-A	F02	Floor	3	1	I70703592 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Dec 5 2024 Print: 8.730 S Dec 5 2024 MiTek Industries, Inc. Sun Jan 12 15:39:58
ID:QNgfUVjetJ_1po7ZeWxv6czw3D_-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:33.9

Plate Offsets (X, Y): [1:Edge,0-1-8], [5:0-1-8,Edge], [6:0-1-8,Edge], [13:0-1-8,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.74	Vert(LL)	-0.35	17-18	>621	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.78	Vert(CT)	-0.48	17-18	>452	360	MT20HS	187/143
BCLL	0.0	Rep Stress Incr	YES	WB	0.77	Horz(CT)	0.06	14	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-MSH							Weight: 93 lb	FT = 20%F, 11%E

LUMBER
TOP CHORD 2x4 SP No.1(flat) *Except* 10-13:2x4 SP No.2(flat)
BOT CHORD 2x4 SP No.2(flat) *Except* 21-14:2x4 SP 2400F 2.0E(flat)
WEBS 2x4 SP No.3(flat)

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-3-13 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 14=0-3-8, 23=0-3-8
Max Grav 14=995 (LC 1), 23=995 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-23=-993/0, 13-14=-1006/0, 1-2=-1325/0, 2-3=-1325/0, 3-4=-3407/0, 4-5=-3407/0, 5-6=-4189/0, 6-7=-4214/0, 7-8=-4214/0, 8-9=-2975/0, 9-11=-2975/0, 11-12=-509/0, 12-13=-509/0
BOT CHORD 22-23=0/0, 20-22=0/2523, 19-20=0/4189, 18-19=0/4189, 17-18=0/4189, 16-17=0/3732, 15-16=0/1890, 14-15=0/0
WEBS 5-19=-36/242, 6-18=-209/70, 5-20=-1124/0, 4-20=-189/86, 3-20=0/1031, 3-22=-1399/0, 2-22=-178/0, 1-22=0/1621, 6-17=-490/376, 7-17=-265/8, 8-17=0/563, 8-16=-883/0, 9-16=-173/0, 11-16=0/1267, 11-15=-1613/0, 12-15=-149/0, 13-15=0/1138

LOAD CASE(S) Standard

NOTES
1) Unbalanced floor live loads have been considered for this design.
2) All plates are MT20 plates unless otherwise indicated.
3) All plates are 1.5x3 MT20 unless otherwise indicated.
4) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.

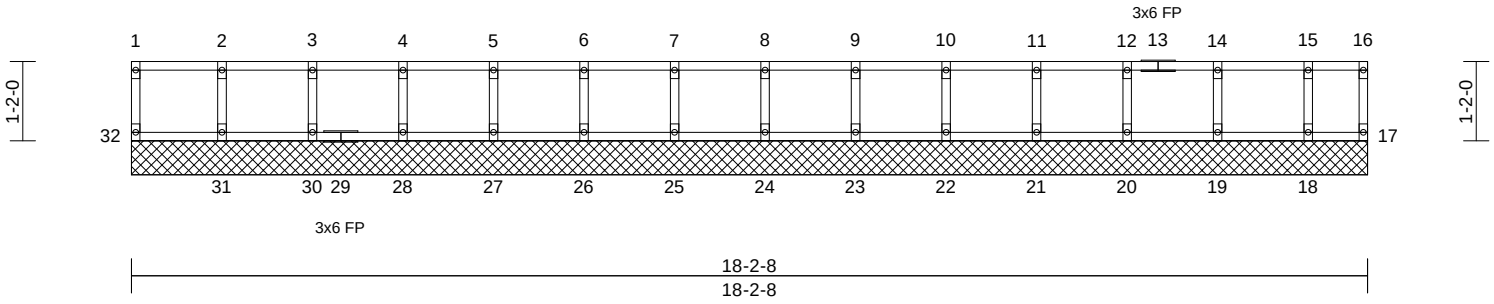
January 13,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	128 Hidden Lakes North-2nd Floor-Plan 2 GLH
25010025-A	F01	Floor Supported Gable	1	1	I70703593 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Dec 5 2024 Print: 8.730 S Dec 5 2024 MiTek Industries, Inc. Sun Jan 12 15:39:57 Page: 1
ID:I3oT2dxVxfw67yEGu4nvW6zw3E_-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:33.9

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.01	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.03	Horiz(TL)	0.00	17	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-MR							Weight: 75 lb	FT = 20%F, 11%E

LUMBER
TOP CHORD 2x4 SP No.2(flat)
BOT CHORD 2x4 SP No.2(flat)
WEBS 2x4 SP No.3(flat)
OTHERS 2x4 SP No.3(flat)

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 17=18-2-8, 18=18-2-8, 19=18-2-8, 20=18-2-8, 21=18-2-8, 22=18-2-8, 23=18-2-8, 24=18-2-8, 25=18-2-8, 26=18-2-8, 27=18-2-8, 28=18-2-8, 30=18-2-8, 31=18-2-8, 32=18-2-8
Max Grav 17=37 (LC 1), 18=121 (LC 1), 19=152 (LC 1), 20=145 (LC 1), 21=147 (LC 1), 22=147 (LC 1), 23=147 (LC 1), 24=147 (LC 1), 25=147 (LC 1), 26=147 (LC 1), 27=147 (LC 1), 28=147 (LC 1), 30=145 (LC 1), 31=154 (LC 1), 32=61 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-32=-55/0, 16-17=-31/0, 1-2=-6/0, 2-3=-6/0, 3-4=-6/0, 4-5=-6/0, 5-6=-6/0, 6-7=-6/0, 7-8=-6/0, 8-9=-6/0, 9-10=-6/0, 10-11=-6/0, 11-12=-6/0, 12-14=-6/0, 14-15=-6/0, 15-16=-6/0
BOT CHORD 31-32=0/6, 30-31=0/6, 28-30=0/6, 27-28=0/6, 26-27=0/6, 25-26=0/6, 24-25=0/6, 23-24=0/6, 22-23=0/6, 21-22=0/6, 20-21=0/6, 19-20=0/6, 18-19=0/6, 17-18=0/6
WEBS 2-31=-140/0, 3-30=-132/0, 4-28=-134/0, 5-27=-133/0, 6-26=-133/0, 7-25=-133/0, 8-24=-133/0, 9-23=-133/0, 10-22=-133/0, 11-21=-134/0, 12-20=-132/0, 14-19=-138/0, 15-18=-114/0

NOTES
1) All plates are 1.5x3 MT20 unless otherwise indicated.
2) Gable requires continuous bottom chord bearing.
3) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
4) Gable studs spaced at 1-4-0 oc.
5) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.

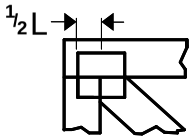
LOAD CASE(S) Standard

January 13,2025

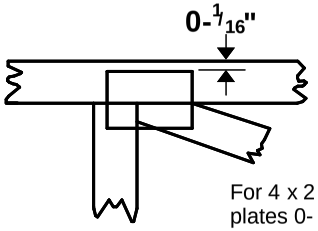
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

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.

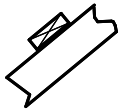
* Plate location details available in MiTek software or upon request.

PLATE SIZE

4 x 4

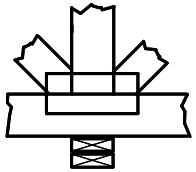
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

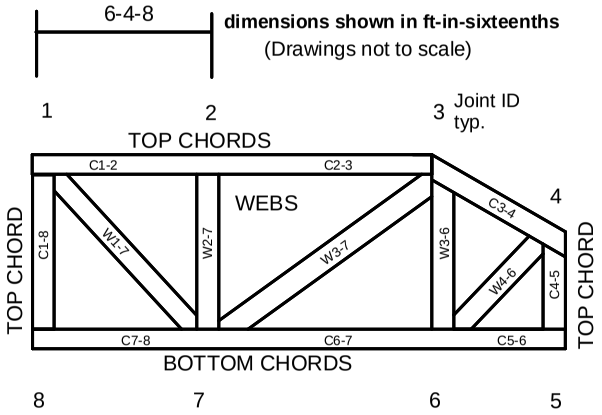


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

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.

MiTek®

ENGINEERING BY TRENCO
A MiTek Affiliate

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

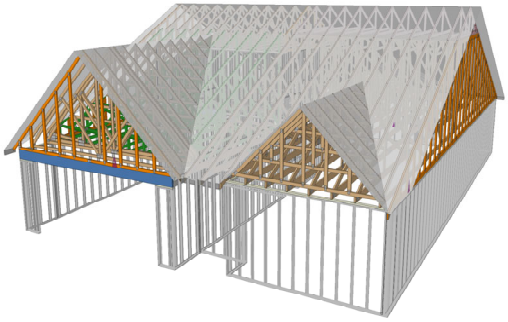
General Safety Notes

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.

Carter Sanford Component Plant
298 Harvey Faulk Rd
Sanford, NC 27332

Phone #:919-775-1450



Builder: **Wellco Contractor**

Model: **128 Hidden Lakes - Plan 2 GLH**

THE PLACEMENT PLAN NOTES:

1. The Placement Plan is a diagram for truss installation. It is not an engineered drawing and has not been reviewed by an engineer. The Owner/Building Designer is responsible for obtaining an engineer's review if one is required by the local jurisdiction.
2. The responsibilities of the Owner, Contractor, Building Designer, Component Designer and Component Manufacturer shall be as set forth in ANSI/TPI 1. Capitalized terms shall be as defined in ANSI/TP 1 unless otherwise indicated.
3. Each Component is designed as an individual component utilizing information provided by others. The Owner/Building Designer is responsible for reviewing all Component Submittal Packages and individual Component Design Drawings for compliance with the Construction Documents and compatibility with the overall Building design.
4. Contractor will not proceed with component installation until the Owner/Building Designer has reviewed the Component Submittal Package. Questions on the suitability of any Component will be resolved by the Building Designer.
5. The Building Designer and Contractor are responsible for all temporary and permanent bracing.
6. The Placement Plan assumes the building is dimensionally correct, structurally sound, and in a suitable condition to support each Component during installation and thereafter, including but not limited to installation of all bearing points. Proper design and construction of all structural components, including foundations, headers, beams, walls and columns are the responsibility of the Owner, Building Designer and Contractor.
7. Do not cut, drill, or modify any Component without first consulting the Component Manufacturer or Building Designer. Damaged Components shall not be installed unless directed by the Building Designer or approved by the Component Manufacturer.
8. Components must be handled and installed following all applicable safety standards and best practices, including but not limited to BCSI, OSHA, TPI and local codes. Failure to properly handle, brace or otherwise install Component can result in serious injury or death.
9. All uplift connectors shown within these documents are recommendations only. Per ANSI/TPI 1, all uplift connectors are the responsibility of the building designer and or contractor.

Approved By: _____ **Date:** _____

General Notes:

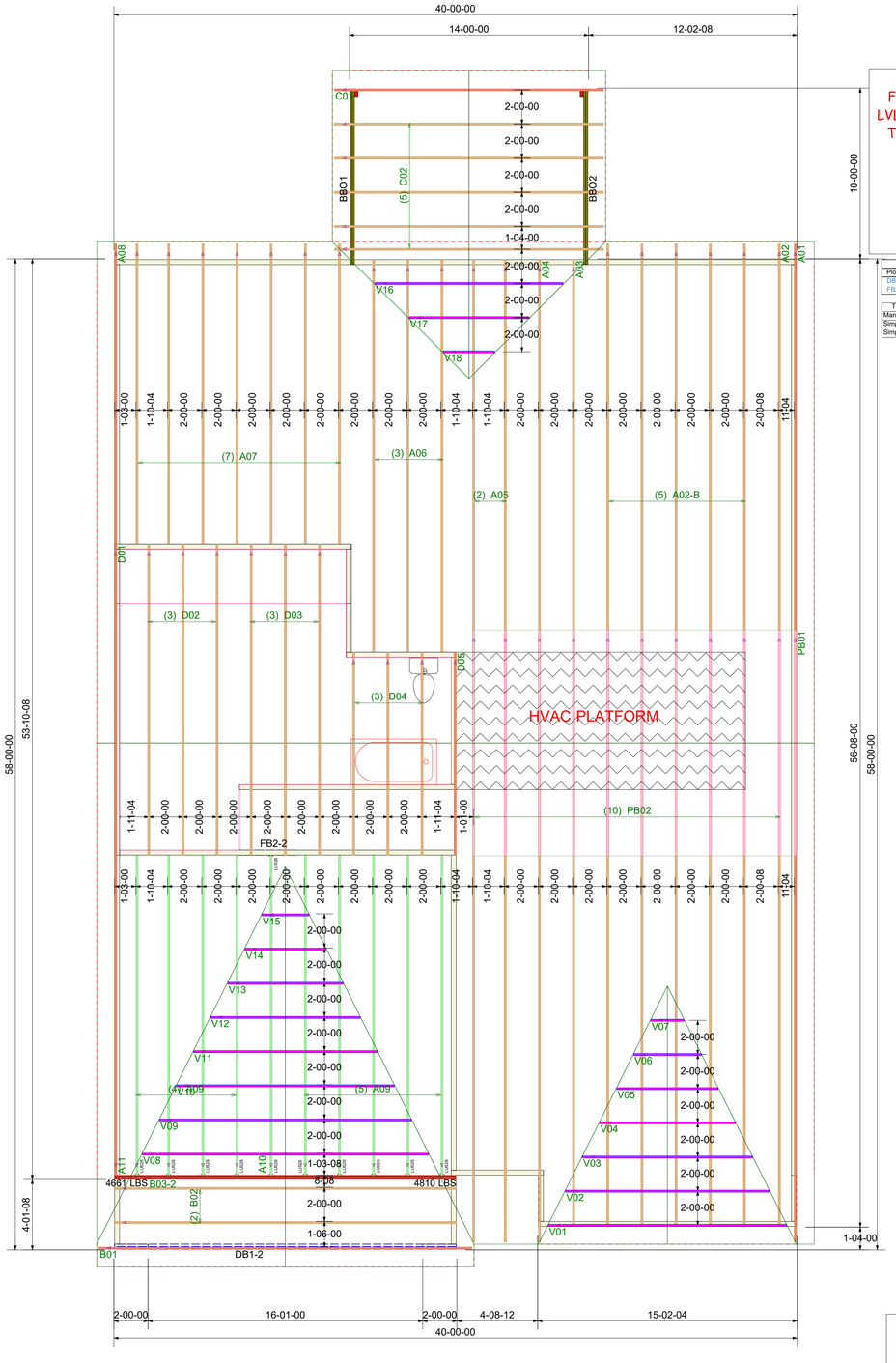
** CUTTING OR DRILLING OF COMPONENTS SHOULD NOT BE DONE WITHOUT CONTACTING COMPONENT SUPPLIER FIRST. CUSTOMER TAKES FULL RESPONSIBILITY FOR COMPONENTS IF CUT BEFORE AUTHORIZATION.

** ALL BEARING POINTS MUST BE INSTALLED PRIOR TO SETTING ANY COMPONENTS.

** TRUSS TO TRUSS CONNECTIONS ARE TOE-NAILED, UNLESS NOTED OTHERWISE.

** DAMAGED COMPONENTS SHOULD NOT BE INSTALLED UNLESS TOLD TO BY THE COMPONENT PLANT.

** FRAMER MUST REFER TO PLANS WHILE SETTING COMPONENTS.



KEMPSVILLE BUILDING MATERIALS IS NOT RESPONSIBLE FOR THE DESIGN OR CALCULATION OF ANY AND ALL I-JOIST AND LVL/PSL BEAM MATERIAL. ALL ENGINEERING AND INFORMATION FOR THIS MATERIAL IS TO BE PROVIDED BY THE ENGINEER OF RECORD MARKED ON APPROVED SET OF PLANS. ALL BEAM PLACEMENTS ARE PER THE ENGINEERING RECEIVED. ALL CONNECTION DETAILS TO BE PROVIDED BY ENGINEER OF RECORD. REFER TO ENGINEER OR RECORD FOR ALL MULTI-PLY LVL/ I-JOIST CONNECTION PATTERNS. BUILDER TO VERIFY ALL MATERIAL LENGTHS, QUANTITIES, AND SIZES PRIOR TO ORDERING.

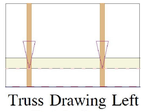
Products

PlotID	Length	Product	Plies	Net Qty	Fab Type
DB1-2	20-00-00	2.1 RigidLam SP LVL 1-3/4 x 11-7/8	2	2	FF
FB2-2	4-00-00	2.1 RigidLam SP LVL 1-3/4 x 14	2	2	FF

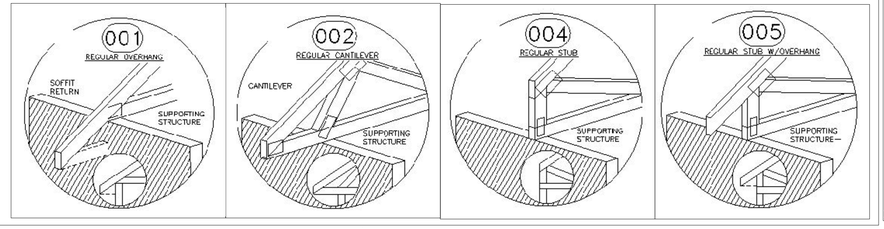
Truss Connector Total List

Manuf	Product	Qty
Simpson	LUS26	11
Simpson	One H2.5A	160

FB# - Flush Beam
DB# - Dropped Beam
BBO - Beam that is not supplied by the component plant



Truss Drawing Left End Indicator



** TRIANGULAR SYMBOL NEAR END OF TRUSS INDICATES LEFT END OF TRUSS AS SHOWN ON INDIVIDUAL TRUSS DRAWINGS.

** PLUMBING DROPS NOTED ARE IN THE APPROXIMATE LOCATIONS PER PLAN. BUILDER TO VERIFY LOCATIONS BEFORE SETTING TRUSSES.

** REFER TO FINAL TRUSS ENGINEERING SHEETS FOR PLY TO PLY CONNECTIONS.

** All uplift connectors shown within these documents are recommendations only. Per ANSI/TPI 1, all uplift connectors are the responsibilty of the bldg designer and or contractor.

** DIMENSIONS ARE READ AS: FOOT-INCH-SIXTEENTH.

** GIRDERS MUST BE FULLY CONNECTED TOGETHER PRIOR TO ADDING ANY LOADS.

Revisions	
00/00/00	Name
00/00/00	Name
00/00/00	Name
00/00/00	Name
00/00/00	Name

THIS IS A TRUSS PLACEMENT DIAGRAM ONLY. These trusses are designed as individual components to be incorporated into the building design at the specification of the building designer. See Individual design sheets for each truss design identified on the placement drawing. The building designer is responsible for temporary and permanent bracing of the roof and floor systems and for the overall structure. The design of the truss supported structure including headers, beams, walls, and foundations is the responsibility of the building designer. For general guidance regarding the bracing consult "Bracing of Wood Trusses" available from the Truss Plate Institute, 583 D'Onofrio Drive; Madison, WI 53179

CARTER Lumber

Wellco Contractor

128 Hidden Lakes
North-Roof-Plan 2 GLH

ROOF PLACEMENT PLAN

Scale: ***NTS***

Date: 1/12/2025

Designer: Aaron Rogers

Project Number: **25010025-01**

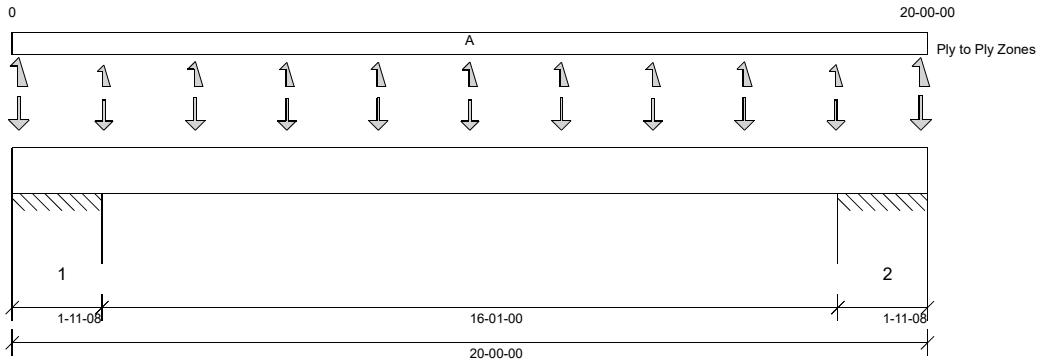
Sheet Number: **1/1**

MiTek	Customer: Street 1: City: Customer Ph...	Job Name: **01** Level: **1st FLOOR** Label: **DB1-2 - i30** Type: **Beam**	**2 Ply Member** **2.1 RigidLam SP LVL 1-3/4 x 11-7/8**	Status: **Design Passed**

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.7.3.303.Update13.26

Report Version: 2023.09.18 01/12/2025 16:28



DESIGN INFORMATION a

Building Code:	IRC 2021
Design Methodology:	ASD
Risk Category:	II (General Construction) Residential
Service Condition:	Dry
System Spacing:	-
LL Deflection Limit:	L/360, 0.75" (absolute)
TL Deflection Limit:	L/240, 1.00" (absolute)

Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 20' Bottom: 20'

Bearing Stress of Support Material:

- 725 psi Wall @ 0'- 1 1/2"
- 725 psi Wall @ 1'- 10"
- 725 psi Wall @ 18'- 2"
- 725 psi Wall @ 19'- 10 1/2"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	10'	D + Lr	1.15	1164 lb ft	17913 lb ft	Passed - 6%
Max Neg. Moment:	18'- 2"	D + Lr	1.15	1878 lb ft	17913 lb ft	Passed - 10%
Max Shear:	17'- 5/8"	D + Lr	1.15	646 lb	9241 lb	Passed - 7%
Live Load (LL) Pos. Defl.:	10'	Lr		0.020"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	10'	D + Lr		0.039"	L/240	Passed - L/999

SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Downward Reaction	Uplift Reaction	Resistance of Member	Resistance of Support	Result
1	8-00	0.6D + 0.6W	1.60	170 lb		29217 lb	20300 lb	Passed - 1%
1	8-00	D + Lr	1.15		-1025 lb	-	-	
1	1-03-08	D + 0.75(L + Lr + 0.6W)	1.60	1941 lb		40688 lb	39331 lb	Passed - 5%
1	1-03-08	0.6D + 0.6W	1.60		-445 lb	-	-	
2	1-03-08	D + 0.75(L + Lr + 0.6W)	1.60	1943 lb		40688 lb	39331 lb	Passed - 5%
2	1-03-08	0.6D + 0.6W	1.60		-448 lb	-	-	
2	8-00	0.6D + 0.6W	1.60	171 lb		29217 lb	20300 lb	Passed - 1%
2	8-00	D + Lr	1.15		-1025 lb	-	-	

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	20'	Self Weight	Top	11 lb/ft	-	-	-	-
Point	0'- 1 3/4"	0'- 1 3/4"	B01(c01)	Top	64 lb	-	50 lb	100 lb	52/-207 lb
Point	2'	2'	B01(c01)	Top	70 lb	-	32 lb	83 lb	34/-111 lb
Point	4'	4'	B01(c01)	Top	77 lb	-	41 lb	88 lb	44/-155 lb
Point	6'	6'	B01(c01)	Top	76 lb	-	39 lb	83 lb	41/-144 lb
Point	8'	8'	B01(c01)	Top	76 lb	-	40 lb	83 lb	44/-148 lb
Point	10'	10'	B01(c01)	Top	71 lb	-	38 lb	88 lb	22/-149 lb
Point	12'	12'	B01(c01)	Top	76 lb	-	40 lb	83 lb	44/-148 lb
Point	14'	14'	B01(c01)	Top	76 lb	-	39 lb	83 lb	41/-144 lb
Point	16'	16'	B01(c01)	Top	77 lb	-	41 lb	88 lb	44/-154 lb
Point	18'	18'	B01(c01)	Top	71 lb	-	32 lb	84 lb	34/-117 lb
Point	19'- 10 1/4"	19'- 10 1/4"	B01(c01)	Top	64 lb	-	51 lb	102 lb	53/-205 lb

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	1'- 11 1/2"	E10(i29)	1009/-501 lb	-	402/-181 lb	993/-512 lb	328 lb/ -968 lb
==>	0'- 1 1/2"	0'- 1 1/2"	E10(i29)	-501 lb	-	-181 lb	108/-504 lb	-
==>	1'- 10"	1'- 10"	E10(i29)	1009 lb	-	402 lb	885/-8 lb	-
2	18'- 1/2"	20'	E8(i6)	1016/-506 lb	-	406/-184 lb	989/-504 lb	328 lb/ -968 lb
==>	18'- 2"	18'- 2"	E8(i6)	1016 lb	-	406 lb	887 lb	-
==>	19'- 10 1/2"	19'- 10 1/2"	E8(i6)	-506 lb	-	-184 lb	102/-504 lb	-

DESIGN NOTES

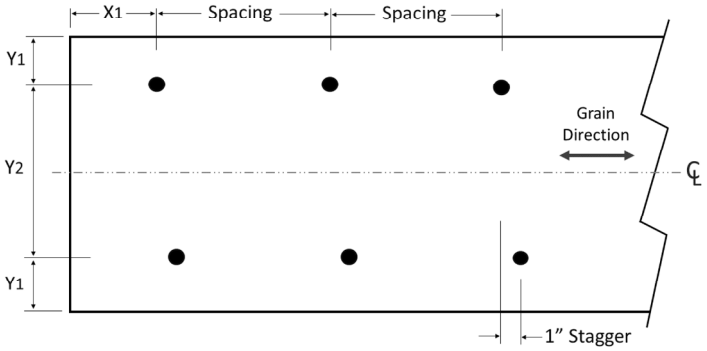
- The dead loads used in the design of this member were applied to the structure as projected dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- Beam Stability Factor used in the calculation for Allowable Max Pos Moment (CL) = 0.56

MiTek	Customer: Street 1: City: Customer Ph...	Job Name: **01** Level: **1st FLOOR** Label: **DB1-2 - i30** Type: **Beam**	**2 Ply Member** **2.1 RigidLam SP LVL 1-3/4 x 11-7/8**	Status: **Design Passed**

PLY TO PLY CONNECTION

- Zone A: Factored load = 0 plf. Use 12d (0.148"x3.25") nails. LDF = 1.00. Qty = 42. Row = 2, Spacing = 12"
  12d (0.148"x3.25") nails properties: D = 0.148" , L = 3.25". Fastener capacity = 128 lbs. X1 = 2.25" , Y1 = 0.75", Y2 = 1.5"
  Install fasteners from one face.
  X1 = Minimum end distance, X2 = Minimum edge distance, Y2 = Minimum row spacing.

FASTENER INSTALLATION – 2 ROWS (FROM ONE FACE)

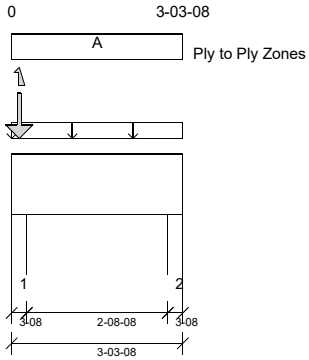


Customer: Street 1: City: Customer Ph...	Job Name: **01** Level: **1st FLOOR** Label: **FB2-2 - i49** Type: **Beam**	**2 Ply Member** **2.1 RigidLam SP LVL 1-3/4 x 14**	Status: **Design Passed**

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.7.3.303.Update13.26

Report Version: 2023.09.18 01/12/2025 16:28



DESIGN INFORMATION a

Building Code:	IRC 2021
Design Methodology:	ASD
Risk Category:	II (General Construction) Residential
Service Condition:	Dry
System Spacing:	-
LL Deflection Limit:	L/360, 0.75" (absolute)
TL Deflection Limit:	L/240, 1.00" (absolute)

Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 3' Bottom: 0'

Bearing Stress of Support Material:

- 425 psi Wall @ 0'- 2 1/2"
- 425 psi Wall @ 3'- 1"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	1'- 10 7/8"	D	0.90	93 lb ft	25776 lb ft	Passed - 0%
Max Neg. Moment:	0'- 2 1/2"	D + Lr	1.15	179 lb ft	32936 lb ft	Passed - 1%
Max Shear:	1'- 5 1/2"	D + Lr	1.15	87 lb	10894 lb	Passed - 1%

SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Downward Reaction	Uplift Reaction	Resistance of Member	Resistance of Support	Result
1	3-08	D + Lr	1.15	3127 lb		9188 lb	5206 lb	Passed - 60%
2	3-08	D	0.90	191 lb		9188 lb	5206 lb	Passed - 4%

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	3'- 3 1/2"	Self Weight	Top	13 lb/ft	-	-	-	-
Uniform	0'	3'- 3 1/2"	User Load	Top	125 lb/ft	-	-	-	-
Point	0'- 1 3/4"	0'- 1 3/4"	11(i21)	Top	1652 lb	-	564 lb	1187/-1 lb	1062/-877 lb

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	0'- 3 1/2"	1(i13)	1998 lb	-	605 lb	1273/-1 lb	621 lb/ -911 lb
2	3'	3'- 3 1/2"	5(i12)	108 lb	-	-41 lb	-86 lb	621 lb/ -911 lb

DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as projected dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- Beam Stability Factor used in the calculation for Allowable Max Pos Moment (CL) = 0.98

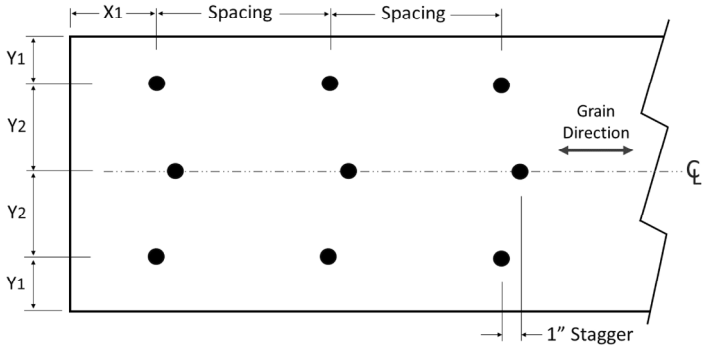
PLY TO PLY CONNECTION

- Zone A: Factored load = 0 plf. Use 12d (0.148"x3.25") nails. LDF = 1.00. Qty = 12. Row = 3, Spacing = 12"
  12d (0.148"x3.25") nails properties: D = 0.148" , L = 3.25". Fastener capacity = 128 lbs. X1 = 2.25" , Y1 = 0.75", Y2 = 1.5"
  Install fasteners from one face.
  X1 = Minimum end distance, X2 = Minimum edge distance, Y2 = Minimum row spacing.

MiTek	Customer: Street 1: City: Customer Ph...	Job Name: **01** Level: **1st FLOOR** Label: **FB2-2 - i49** Type: **Beam**	**2 Ply Member** **2.1 RigidLam SP LVL 1-3/4 x 14**	Status: **Design Passed**

PLY TO PLY CONNECTION

FASTENER INSTALLATION – 3 ROWS (FROM ONE FACE)



ENGINEERING BY
TRENCO
A MiTek Affiliate

Trenco
818 Soundside Rd
Edenton, NC 27932

Re: 25010025-01
128 Hidden Lakes North-Roof-Plan 2 GLH

The truss drawing(s) referenced below have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by Carter Components (Sanford, NC)).

Pages or sheets covered by this seal: I70703545 thru I70703586

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

North Carolina COA: C-0844

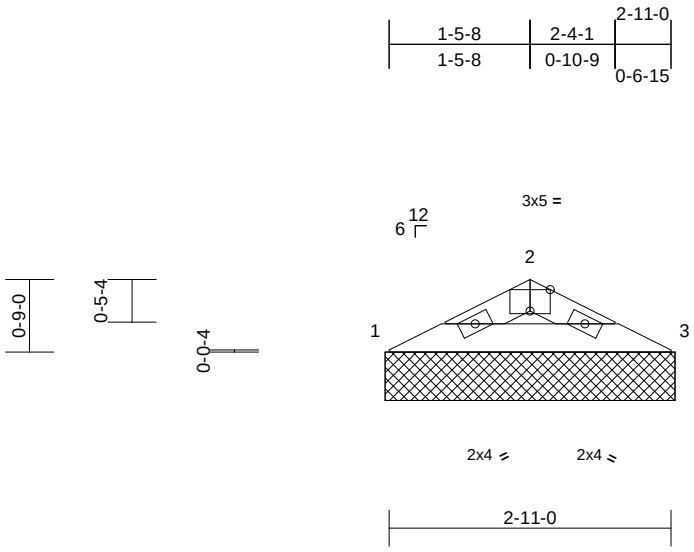
January 14,2025

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	128 Hidden Lakes North-Roof-Plan 2 GLH
25010025-01	V18	Valley	1	1	I70703545 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Dec 5 2024 Print: 8.730 S Dec 5 2024 MiTek Industries, Inc. Sun Jan 12 15:39:13 Page: 1
ID:iGm2ANq2MH8VNkUeZZoOmJzw3SL-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:23.8

Plate Offsets (X, Y): [2:0-2-8,Edge]

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	0.05	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.08	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 7 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-11-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=3-0-0, 3=3-0-0
Max Horiz 1=9 (LC 14)
Max Uplift 1=-12 (LC 14), 3=-12 (LC 15)
Max Grav 1=132 (LC 20), 3=132 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-216/96, 2-3=-216/96
BOT CHORD 1-3=-73/187

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * 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.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 12 lb uplift at joint 1 and 12 lb uplift at joint 3.
11) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 3.

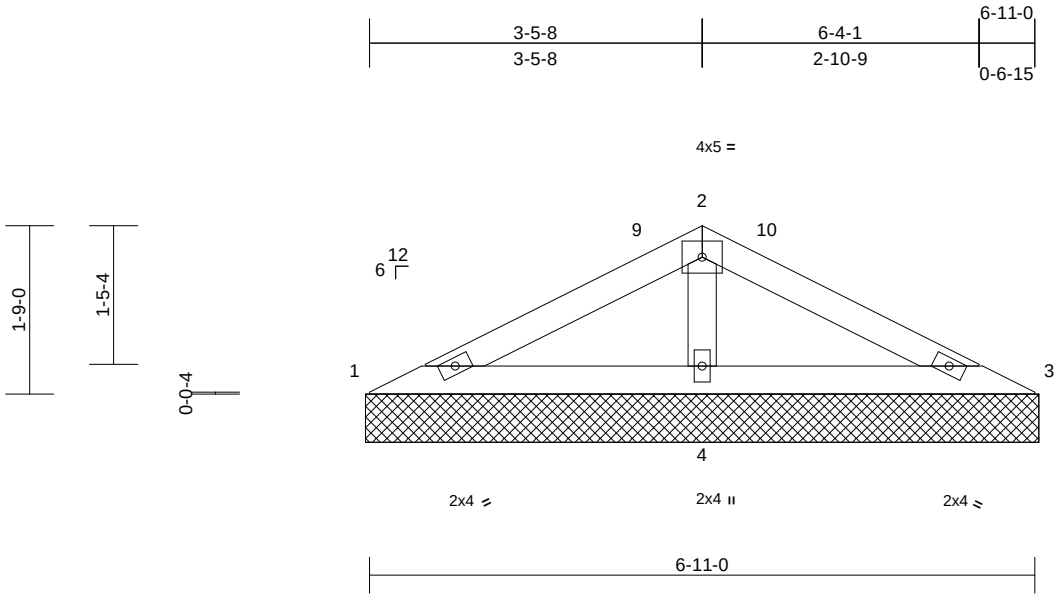
LOAD CASE(S) Standard

January 14,2025

ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	128 Hidden Lakes North-Roof-Plan 2 GLH
25010025-01	V17	Valley	1	1	I70703546 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Dec 5 2024 Print: 8.730 S Dec 5 2024 MiTek Industries, Inc. Sun Jan 12 15:39:13 ID:E3Cgz2pPc_0elavS?sH9D6zw3SM-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f Page: 1



Scale = 1:24

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	0.19	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.21	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.06	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 22 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-11-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 1=7-0-0, 3=7-0-0, 4=7-0-0
Max Horiz 1=25 (LC 14)
Max Uplift 1=-10 (LC 14), 3=-16 (LC 15), 4=-35 (LC 14)
Max Grav 1=108 (LC 20), 3=108 (LC 21), 4=452 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-122/221, 2-3=-122/221
BOT CHORD 1-4=-193/132, 3-4=-193/132
WEBS 2-4=-329/178

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-0 to 3-0-0, Exterior(2R) 3-0-0 to 4-0-0, Exterior(2E) 4-0-0 to 7-0-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * 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.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 10 lb uplift at joint 1, 16 lb uplift at joint 3 and 35 lb uplift at joint 4.
11) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 3.

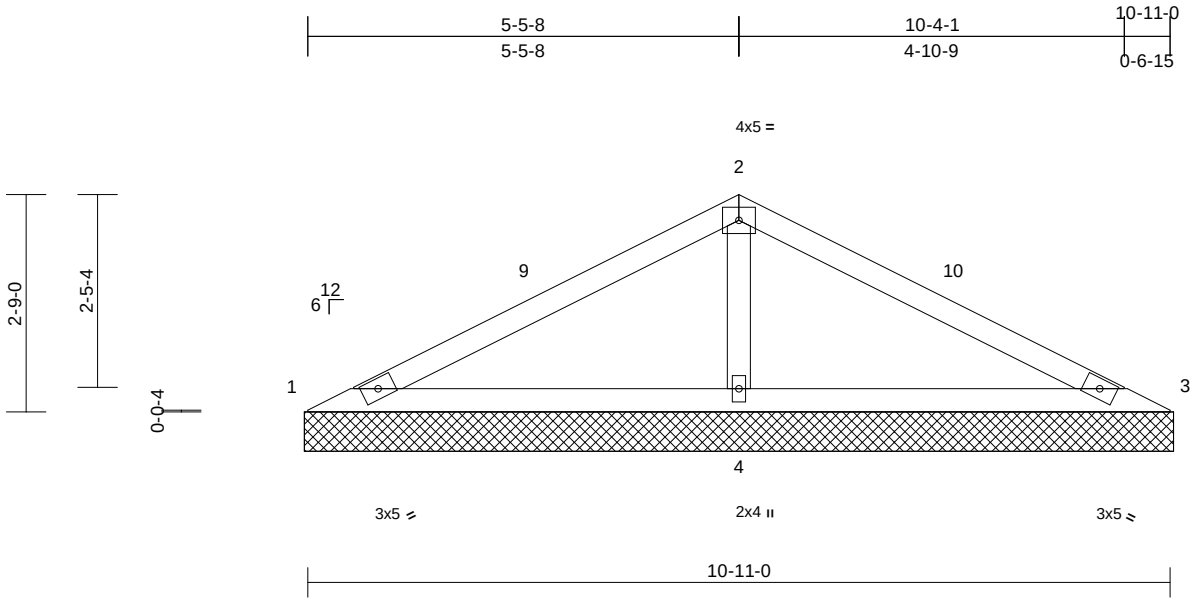
LOAD CASE(S) Standard

January 14,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	128 Hidden Lakes North-Roof-Plan 2 GLH
25010025-01	V16	Valley	1	1	I70703547 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Dec 5 2024 Print: 8.730 S Dec 5 2024 MiTek Industries, Inc. Sun Jan 12 15:39:13 Page: 1
ID:O09QkII?2aGNGMrQA6XrfIzw3UJ-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:29.2

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	0.52	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.49	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.15	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 36 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 10-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 1=11-0-0, 3=11-0-0, 4=11-0-0
Max Horiz 1=41 (LC 14)
Max Uplift 1=-51 (LC 21), 3=-51 (LC 20), 4=-71 (LC 14)
Max Grav 1=124 (LC 20), 3=124 (LC 21), 4=848 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-167/492, 2-3=-167/492
BOT CHORD 1-4=-377/217, 3-4=-377/217
WEBS 2-4=-664/341

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-0 to 3-0-0, Exterior(2R) 3-0-0 to 8-0-0, Exterior(2E) 8-0-0 to 11-0-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * 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.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 51 lb uplift at joint 1, 51 lb uplift at joint 3 and 71 lb uplift at joint 4.
11) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 3.

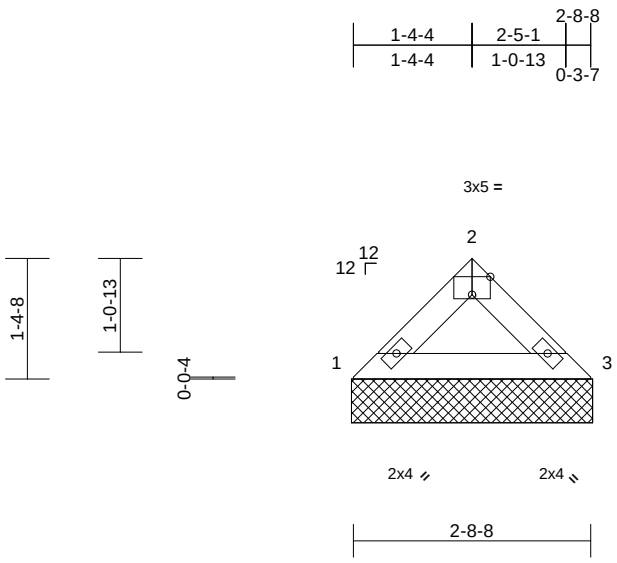
LOAD CASE(S) Standard

January 14,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	128 Hidden Lakes North-Roof-Plan 2 GLH
25010025-01	V15	Valley	1	1	I70703548 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Dec 5 2024 Print: 8.730 S Dec 5 2024 MiTek Industries, Inc. Sun Jan 12 15:39:13 Page: 1
ID:yDDayjwBg8e_rB0V4QraBbzw3KT-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:26.3

Plate Offsets (X, Y): [2:0-2-8,Edge]

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	0.06	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.05	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 9 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-8-8 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=2-9-0, 3=2-9-0
Max Horiz 1=27 (LC 11)
Max Uplift 1=-8 (LC 14), 3=-8 (LC 15)
Max Grav 1=128 (LC 20), 3=128 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-151/71, 2-3=-151/71
BOT CHORD 1-3=-35/101

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * 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.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 8 lb uplift at joint 1 and 8 lb uplift at joint 3.
11) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 3.

LOAD CASE(S) Standard

January 14,2025

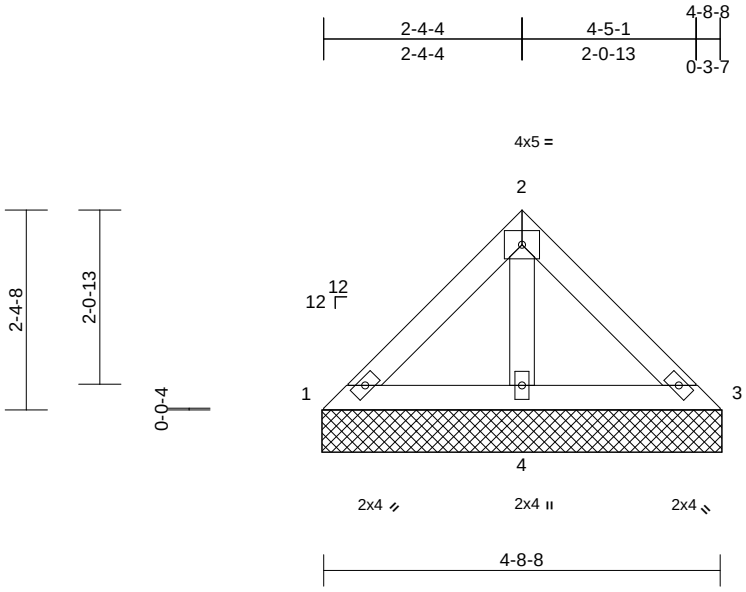
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	128 Hidden Lakes North-Roof-Plan 2 GLH
25010025-01	V14	Valley	1	1	I70703549 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Dec 5 2024 Print: 8.730 S Dec 5 2024 MiTek Industries, Inc. Sun Jan 12 15:39:13
ID:yDDayjwBg8e_rB0V4QraBbzw3KT-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:27.4

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	0.09	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.11	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.04	Horiz(TL)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 18 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-8-8 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 1=4-9-0, 3=4-9-0, 4=4-9-0
Max Horiz 1=-51 (LC 10)
Max Uplift 3=-1 (LC 15), 4=-42 (LC 14)
Max Grav 1=90 (LC 20), 3=90 (LC 21), 4=291 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-78/98, 2-3=-78/98
BOT CHORD 1-4=-79/103, 3-4=-79/103
WEBS 2-4=-205/108

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * 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.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 1 lb uplift at joint 3 and 42 lb uplift at joint 4.
11) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 3.

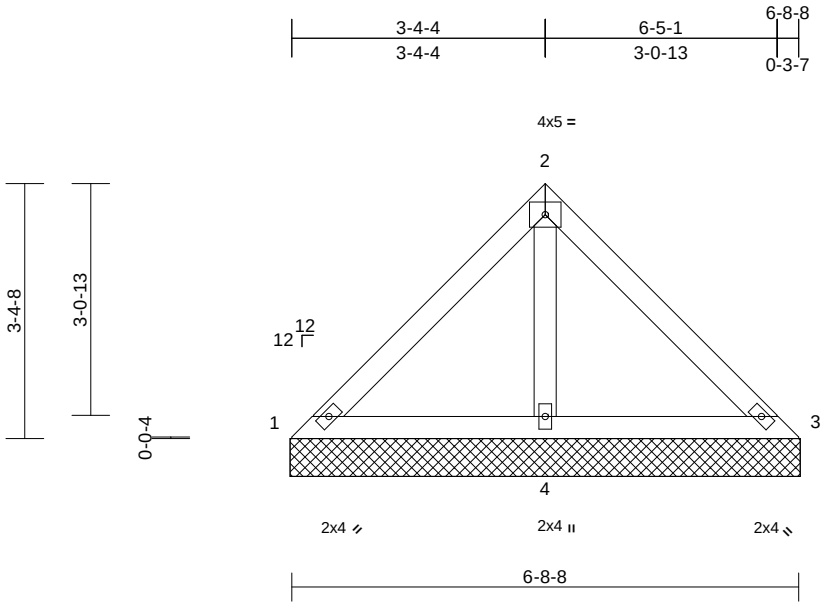
LOAD CASE(S) Standard

January 14,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	128 Hidden Lakes North-Roof-Plan 2 GLH
25010025-01	V13	Valley	1	1	I70703550 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Dec 5 2024 Print: 8.730 S Dec 5 2024 MiTek Industries, Inc. Sun Jan 12 15:39:13 ID:yDDayjwBg8e_rB0V4QraBbzw3KT-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f Page: 1



Scale = 1:30.5

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	0.22	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.24	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.09	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 27 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-8-8 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 1=6-9-0, 3=6-9-0, 4=6-9-0
Max Horiz 1=74 (LC 13)
Max Uplift 1=-11 (LC 21), 3=-11 (LC 20), 4=-86 (LC 14)
Max Grav 1=107 (LC 20), 3=107 (LC 21), 4=490 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-81/198, 2-3=-81/198
BOT CHORD 1-4=-161/104, 3-4=-161/104
WEBS 2-4=-404/116

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-0 to 3-0-0, Exterior(2R) 3-0-0 to 3-9-0, Exterior(2E) 3-9-0 to 6-9-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * 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.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 11 lb uplift at joint 1, 11 lb uplift at joint 3 and 86 lb uplift at joint 4.
11) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 3.

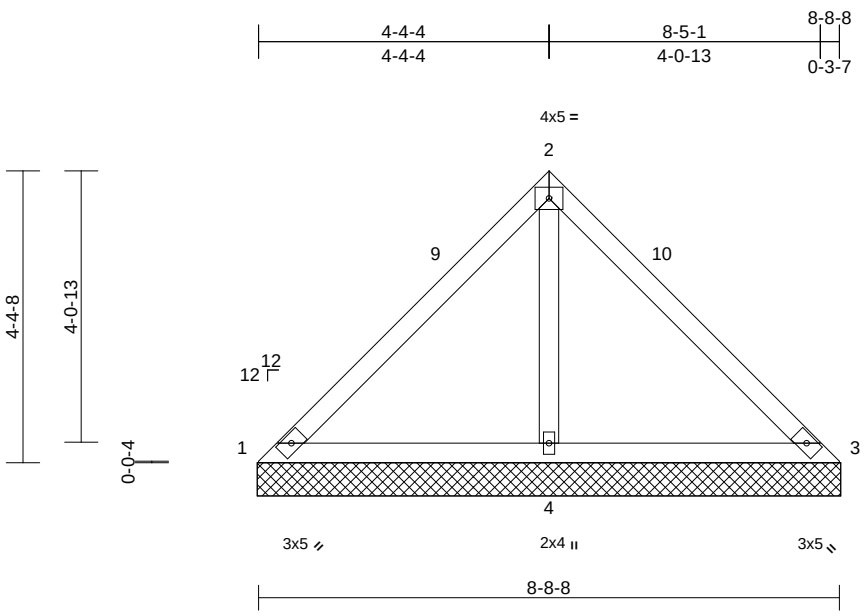
LOAD CASE(S) Standard

January 14,2025

ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	128 Hidden Lakes North-Roof-Plan 2 GLH
25010025-01	V12	Valley	1	1	I70703551 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Dec 5 2024 Print: 8.730 S Dec 5 2024 MiTek Industries, Inc. Sun Jan 12 15:39:13 Page: 1
ID:yDDayjwBg8e_rB0V4QraBbzw3KT-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:34.5

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	0.44	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.41	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.19	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 36 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 8-8-8 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 1=8-9-0, 3=8-9-0, 4=8-9-0
Max Horiz 1=-98 (LC 12)
Max Uplift 1=-56 (LC 21), 3=-56 (LC 20), 4=-147 (LC 14)
Max Grav 1=78 (LC 20), 3=78 (LC 21), 4=729 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-160/325, 2-3=-160/325
BOT CHORD 1-4=-240/225, 3-4=-240/225
WEBS 2-4=-605/331

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-0 to 3-0-0, Exterior(2R) 3-0-0 to 5-9-0, Exterior(2E) 5-9-0 to 8-9-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * 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.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 56 lb uplift at joint 1, 56 lb uplift at joint 3 and 147 lb uplift at joint 4.
11) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 3.

LOAD CASE(S) Standard

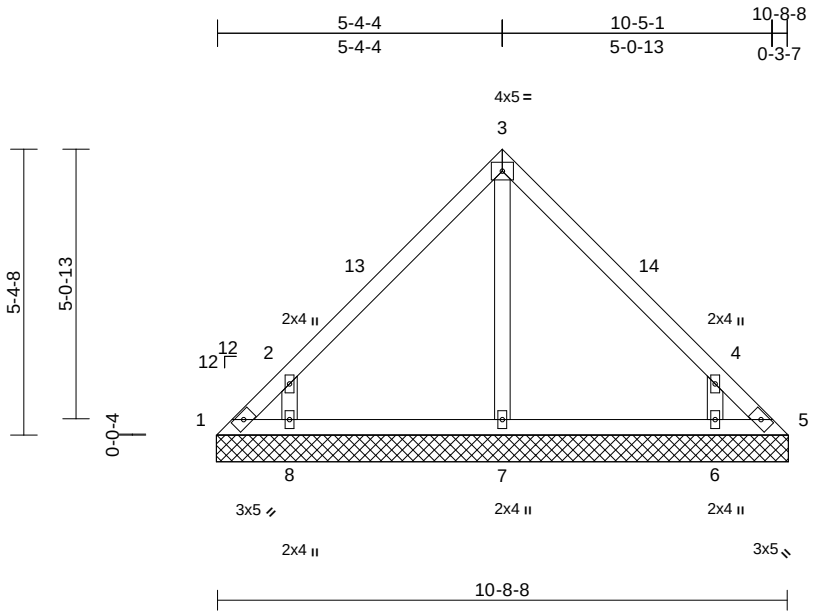
January 14,2025

ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	128 Hidden Lakes North-Roof-Plan 2 GLH
25010025-01	V11	Valley	1	1	I70703552 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Dec 5 2024 Print: 8.730 S Dec 5 2024 MiTek Industries, Inc. Sun Jan 12 15:39:13 Page: 1
ID:yDDayjwBg8e_rB0V4QraBbzw3KT-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:43.3

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	0.35	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.13	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.10	Horiz(TL)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 47 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=10-9-0, 5=10-9-0, 6=10-9-0, 7=10-9-0, 8=10-9-0
Max Horiz 1=-121 (LC 10)
Max Uplift 1=-73 (LC 12), 5=-43 (LC 13), 6=-169 (LC 15), 8=-175 (LC 14)
Max Grav 1=103 (LC 14), 5=83 (LC 15), 6=475 (LC 21), 7=231 (LC 20), 8=475 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-187/134, 2-3=-260/127, 3-4=-260/127, 4-5=-165/100
BOT CHORD 1-8=-52/90, 7-8=-34/86, 6-7=-34/86, 5-6=-59/97
WEBS 3-7=-143/0, 2-8=-499/344, 4-6=-499/344

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-0 to 3-0-0, Exterior(2R) 3-0-0 to 7-9-0, Exterior(2E) 7-9-0 to 10-9-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * 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.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 73 lb uplift at joint 1, 43 lb uplift at joint 5, 175 lb uplift at joint 8 and 169 lb uplift at joint 6.
11) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 5.

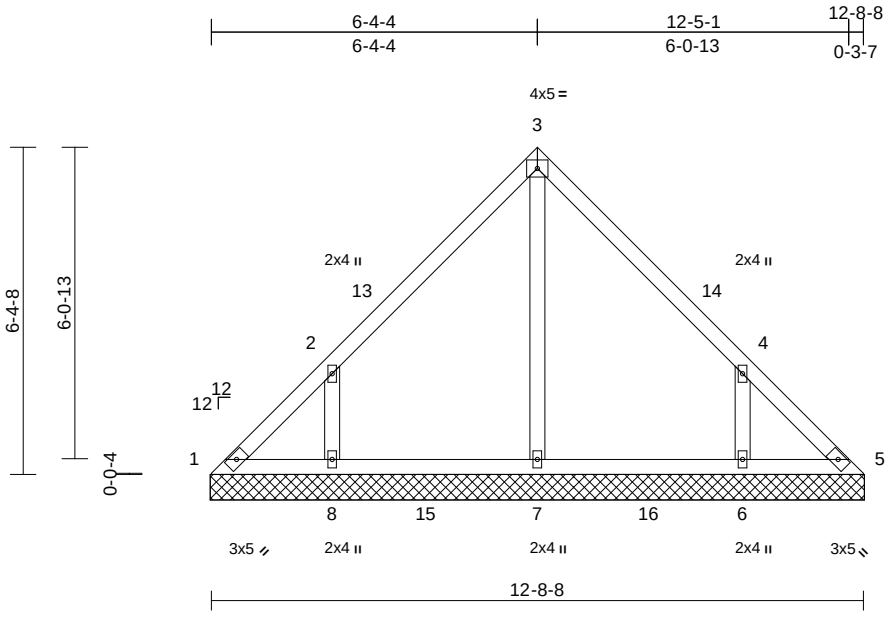
LOAD CASE(S) Standard

January 14,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	128 Hidden Lakes North-Roof-Plan 2 GLH
25010025-01	V10	Valley	1	1	I70703553 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Dec 5 2024 Print: 8.730 S Dec 5 2024 MiTek Industries, Inc. Sun Jan 12 15:39:13 Page: 1
ID:T1fClNvYvqW7D1RJWiJLfOzw3KU-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:44.9

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	0.34	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.16	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.12	Horiz(TL)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 58 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=12-9-0, 5=12-9-0, 6=12-9-0, 7=12-9-0, 8=12-9-0
Max Horiz 1=-145 (LC 10)
Max Uplift 1=-43 (LC 10), 5=-10 (LC 11), 6=-176 (LC 15), 8=-181 (LC 14)
Max Grav 1=126 (LC 25), 5=101 (LC 29), 6=448 (LC 21), 7=347 (LC 27), 8=448 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-150/129, 2-3=-242/136, 3-4=-242/136, 4-5=-127/88
BOT CHORD 1-8=-51/107, 7-8=-51/107, 6-7=-51/107, 5-6=-51/107
WEBS 3-7=-169/0, 2-8=-395/255, 4-6=-395/255

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-0 to 3-0-0, Interior (1) 3-0-0 to 3-4-8, Exterior(2R) 3-4-8 to 9-4-8, Interior (1) 9-4-8 to 9-9-0, Exterior(2E) 9-9-0 to 12-9-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * 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.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 43 lb uplift at joint 1, 10 lb uplift at joint 5, 181 lb uplift at joint 8 and 176 lb uplift at joint 6.
11) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 5.

LOAD CASE(S) Standard

January 14,2025

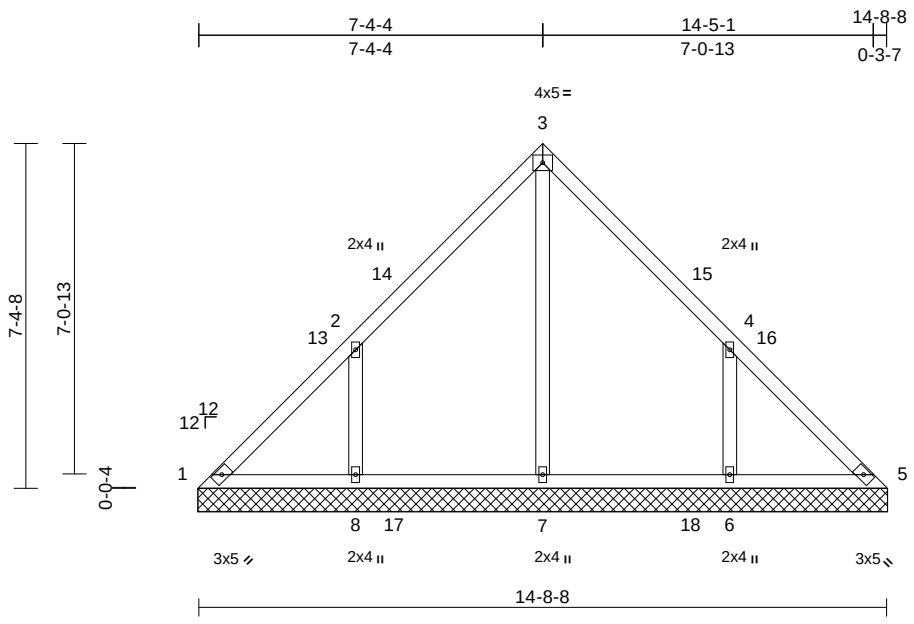
ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	128 Hidden Lakes North-Roof-Plan 2 GLH
25010025-01	V09	Valley	1	1	I70703554 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Dec 5 2024 Print: 8.730 S Dec 5 2024 MiTek Industries, Inc. Sun Jan 12 15:39:13
ID:T1fClNvYvqW7D1RJWiJLfOzw3KU-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:49.3

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	0.33	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.17	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.21	Horiz(TL)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 70 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 1=14-9-0, 5=14-9-0, 6=14-9-0, 7=14-9-0, 8=14-9-0
Max Horiz 1=-168 (LC 10)
Max Uplift 1=-39 (LC 10), 6=-200 (LC 15), 8=-204 (LC 14)
Max Grav 1=146 (LC 25), 5=118 (LC 27), 6=473 (LC 6), 7=411 (LC 24), 8=473 (LC 5)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-169/168, 2-3=-204/134, 3-4=-204/128, 4-5=-148/131
BOT CHORD 1-8=-77/138, 7-8=-77/138, 6-7=-77/138, 5-6=-77/138
WEBS 3-7=-221/0, 2-8=-387/242, 4-6=-387/240

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-0 to 3-0-0, Interior (1) 3-0-0 to 4-4-8, Exterior(2R) 4-4-8 to 10-4-8, Interior (1) 10-4-8 to 11-9-0, Exterior(2E) 11-9-0 to 14-9-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * 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.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 39 lb uplift at joint 1, 204 lb uplift at joint 8 and 200 lb uplift at joint 6.
11) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 5.

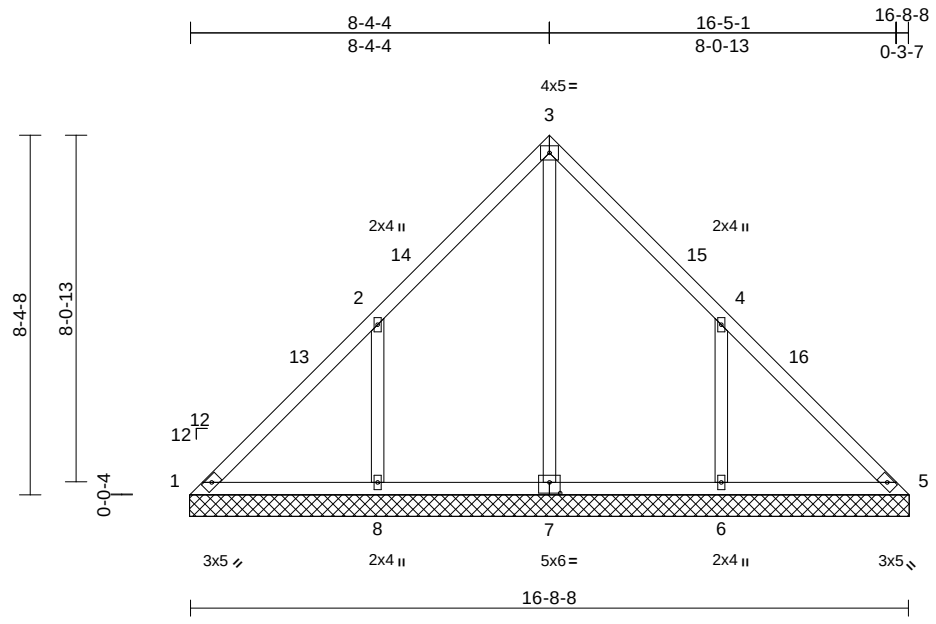
LOAD CASE(S) Standard

January 14,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	128 Hidden Lakes North-Roof-Plan 2 GLH
25010025-01	V08	Valley	1	1	I70703555 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Dec 5 2024 Print: 8.730 S Dec 5 2024 MiTek Industries, Inc. Sun Jan 12 15:39:12 Page: 1
ID:T1fClNvYvqW7D1RJWiJLfOzw3KU-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:53.6

Plate Offsets (X, Y): [7:0-3-0,0-3-0]

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	0.35	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.18	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.37	Horiz(TL)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 82 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 1=16-9-0, 5=16-9-0, 6=16-9-0, 7=16-9-0, 8=16-9-0
Max Horiz 1=-192 (LC 10)
Max Uplift 1=-38 (LC 10), 6=-230 (LC 15), 8=-234 (LC 14)
Max Grav 1=144 (LC 25), 5=121 (LC 32), 6=537 (LC 25), 7=488 (LC 24), 8=542 (LC 24)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-193/260, 2-3=-151/187, 3-4=-151/161, 4-5=-154/219
BOT CHORD 1-8=-128/176, 6-8=-128/176, 5-6=-128/176
WEBS 3-7=-301/0, 2-8=-404/267, 4-6=-404/265

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-0 to 3-0-0, Interior (1) 3-0-0 to 5-4-8, Exterior(2R) 5-4-8 to 11-4-8, Interior (1) 11-4-8 to 13-9-0, Exterior(2E) 13-9-0 to 16-9-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * 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.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 38 lb uplift at joint 1, 234 lb uplift at joint 8 and 230 lb uplift at joint 6.
11) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 5.

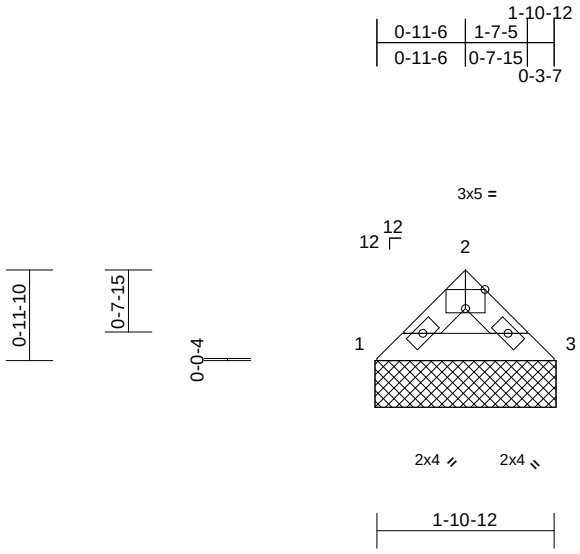
LOAD CASE(S) Standard

January 14,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	128 Hidden Lakes North-Roof-Plan 2 GLH
25010025-01	V07	Valley	1	1	I70703556 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Dec 5 2024 Print: 8.730 S Dec 5 2024 MiTek Industries, Inc. Sun Jan 12 15:39:12 Page: 1
ID:08dfiYj4ZWKOeOPKSkP8Qvzw3Bi-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:24.7

Plate Offsets (X, Y): [2:0-2-8,Edge]

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	0.02	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.03	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 6 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 1-10-12 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=1-11-4, 3=1-11-4
Max Horiz 1=18 (LC 11)
Max Uplift 1=-6 (LC 14), 3=-6 (LC 15)
Max Grav 1=87 (LC 20), 3=87 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-99/53, 2-3=-99/53
BOT CHORD 1-3=-22/64

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * 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.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 6 lb uplift at joint 1 and 6 lb uplift at joint 3.
11) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 3.

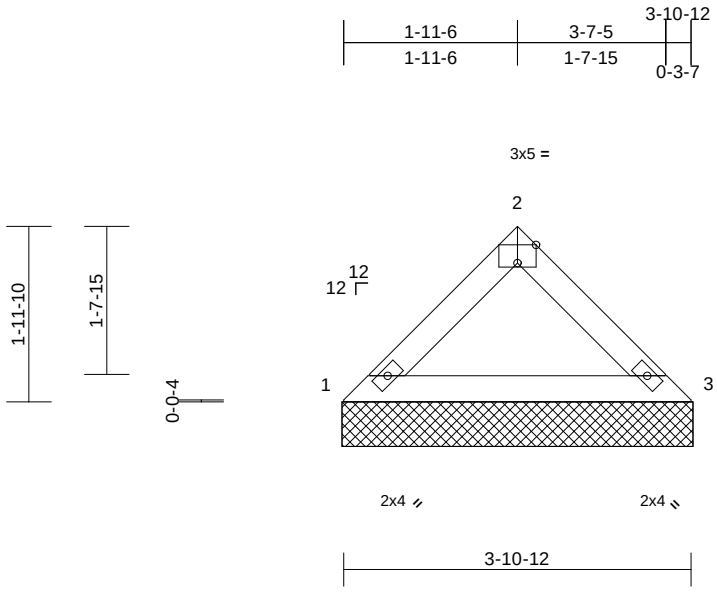
LOAD CASE(S) Standard

January 14,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	128 Hidden Lakes North-Roof-Plan 2 GLH
25010025-01	V06	Valley	1	1	I70703557 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Dec 5 2024 Print: 8.730 S Dec 5 2024 MiTek Industries, Inc. Sun Jan 12 15:39:12 Page: 1
ID:caxX3WgBGbxpnxglmcrRpGzw3Bl-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:25.8

Plate Offsets (X, Y): [2:0-2-8,Edge]

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	0.12	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.10	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 13 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-10-12 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=3-11-4, 3=3-11-4
Max Horiz 1=-41 (LC 12)
Max Uplift 1=-11 (LC 14), 3=-11 (LC 15)
Max Grav 1=191 (LC 20), 3=191 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-234/90, 2-3=-234/90
BOT CHORD 1-3=-50/160

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * 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.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 11 lb uplift at joint 1 and 11 lb uplift at joint 3.
11) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 3.

LOAD CASE(S) Standard

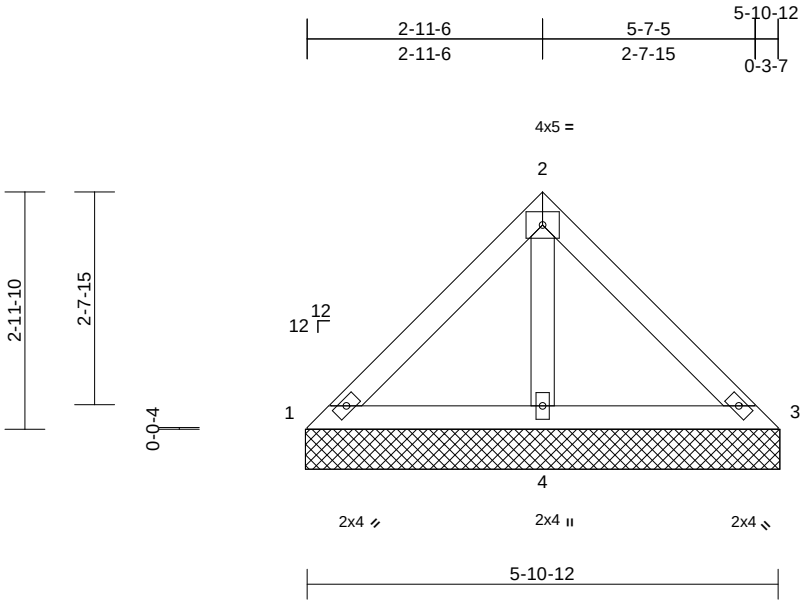
January 14,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	128 Hidden Lakes North-Roof-Plan 2 GLH
25010025-01	V05	Valley	1	1	I70703558 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Dec 5 2024 Print: 8.730 S Dec 5 2024 MiTek Industries, Inc. Sun Jan 12 15:39:12 Page: 1
ID:gBpmeqfxkzh5YdWMfBpzjrzw3Bn-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



Scale = 1:28.8

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	0.16	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.18	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.06	Horiz(TL)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 23 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-10-12 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 1=5-11-4, 3=5-11-4, 4=5-11-4
Max Horiz 1=-65 (LC 12)
Max Uplift 4=-66 (LC 14)
Max Grav 1=102 (LC 20), 3=102 (LC 21), 4=403 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-83/153, 2-3=-83/153
BOT CHORD 1-4=-119/139, 3-4=-119/139
WEBS 2-4=-309/166

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * 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.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 66 lb uplift at joint 4.
11) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 3.

LOAD CASE(S) Standard

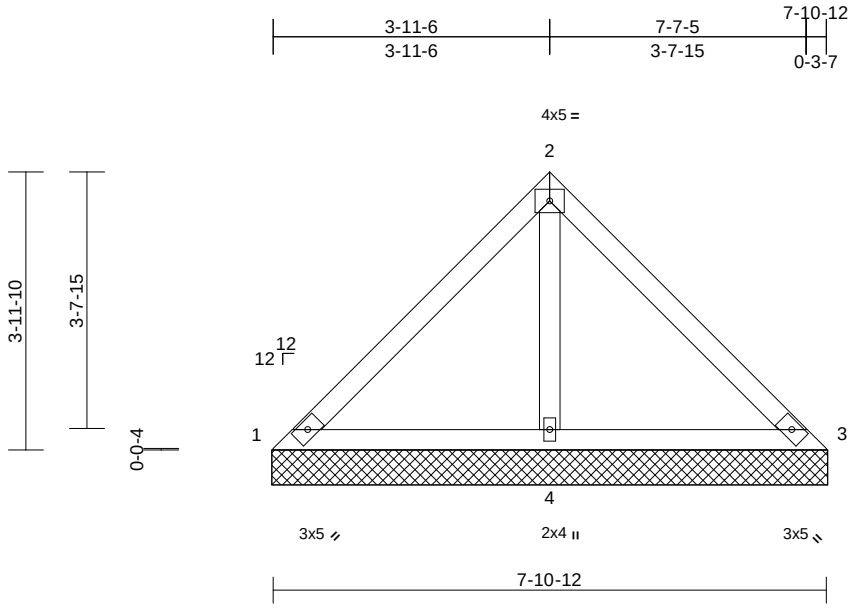
January 14,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	128 Hidden Lakes North-Roof-Plan 2 GLH
25010025-01	V04	Valley	1	1	I70703559 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Dec 5 2024 Print: 8.730 S Dec 5 2024 MiTek Industries, Inc. Sun Jan 12 15:39:12 Page: 1
ID:C?GORUeJzgZEwTxA5UIkBezw3Bo-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:32.9

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	0.34	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.33	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.14	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 32 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 7-10-12 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 1=7-11-4, 3=7-11-4, 4=7-11-4
Max Horiz 1=-88 (LC 10)
Max Uplift 1=-33 (LC 21), 3=-33 (LC 20), 4=-120 (LC 14)
Max Grav 1=83 (LC 20), 3=83 (LC 21), 4=622 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-88/269, 2-3=-88/269
BOT CHORD 1-4=-219/134, 3-4=-219/134
WEBS 2-4=-540/163

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-0 to 3-0-0, Exterior(2R) 3-0-0 to 4-11-4, Exterior(2E) 4-11-4 to 7-11-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * 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.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 33 lb uplift at joint 1, 33 lb uplift at joint 3 and 120 lb uplift at joint 4.
11) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 3.

LOAD CASE(S) Standard

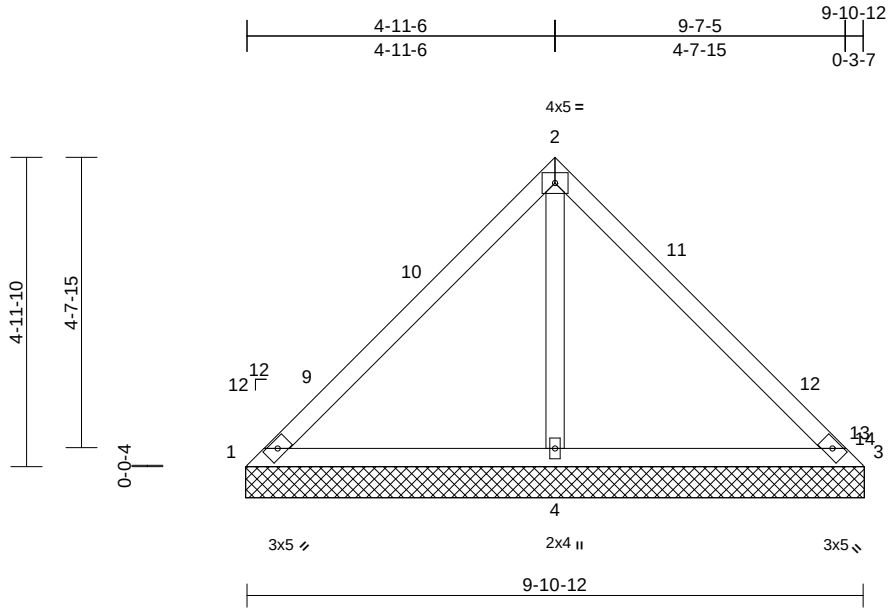
January 14,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	128 Hidden Lakes North-Roof-Plan 2 GLH
25010025-01	V03	Valley	1	1	I70703560 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Dec 5 2024 Print: 8.730 S Dec 5 2024 MiTek Industries, Inc. Sun Jan 12 15:39:12 Page: 1
ID:BO8i2zUUgI2IQj6raNNRFqzw3Xx-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:37

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	0.50	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.46	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.28	Horiz(TL)	0.01	4	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 41 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 9-10-12 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 1=9-11-4, 3=9-11-4, 4=9-11-4
Max Horiz 1=111 (LC 11)
Max Uplift 1=-54 (LC 21), 3=-62 (LC 20), 4=-157 (LC 14)
Max Grav 1=84 (LC 20), 3=67 (LC 21), 4=810 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-163/379, 2-3=-164/385
BOT CHORD 1-4=-235/199, 3-4=-235/199
WEBS 2-4=-689/348

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-0 to 3-0-0, Exterior(2R) 3-0-0 to 6-7-0, Exterior(2E) 6-7-0 to 9-7-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * 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.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 54 lb uplift at joint 1, 62 lb uplift at joint 3 and 157 lb uplift at joint 4.
11) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 3.

LOAD CASE(S) Standard

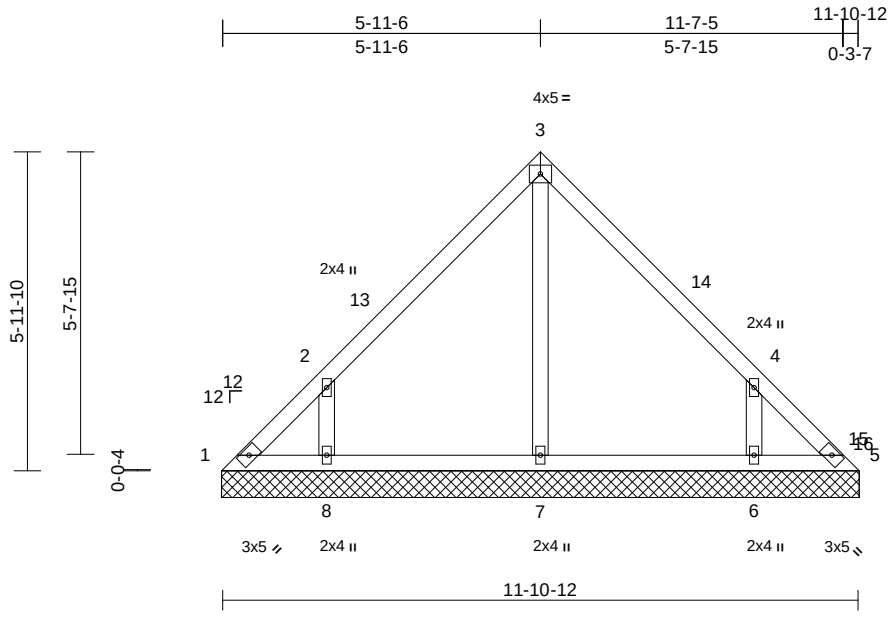
January 14,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	128 Hidden Lakes North-Roof-Plan 2 GLH
25010025-01	V02	Valley	1	1	I70703561 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Dec 5 2024 Print: 8.730 S Dec 5 2024 MiTek Industries, Inc. Sun Jan 12 15:39:12 Page: 1
ID:BO8i2zUUgI2IQj6raNNRFqzw3Xx-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:43.1

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	0.33	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.12	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.09	Horiz(TL)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 54 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=11-11-4, 5=11-11-4, 6=11-11-4, 7=11-11-4, 8=11-11-4
Max Horiz 1=135 (LC 11)
Max Uplift 1=-47 (LC 10), 5=-24 (LC 13), 6=-169 (LC 15), 8=-175 (LC 14)
Max Grav 1=110 (LC 25), 5=80 (LC 27), 6=447 (LC 21), 7=242 (LC 20), 8=449 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-156/123, 2-3=-252/132, 3-4=-252/133, 4-5=-131/86
BOT CHORD 1-8=-40/89, 7-8=-40/89, 6-7=-40/89, 5-6=-40/89
WEBS 3-7=-155/0, 2-8=-416/279, 4-6=-415/271

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-0 to 3-0-0, Exterior(2R) 3-0-0 to 8-7-0, Exterior(2E) 8-7-0 to 11-7-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * 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.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 47 lb uplift at joint 1, 24 lb uplift at joint 5, 175 lb uplift at joint 8 and 169 lb uplift at joint 6.
11) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 5.

LOAD CASE(S) Standard

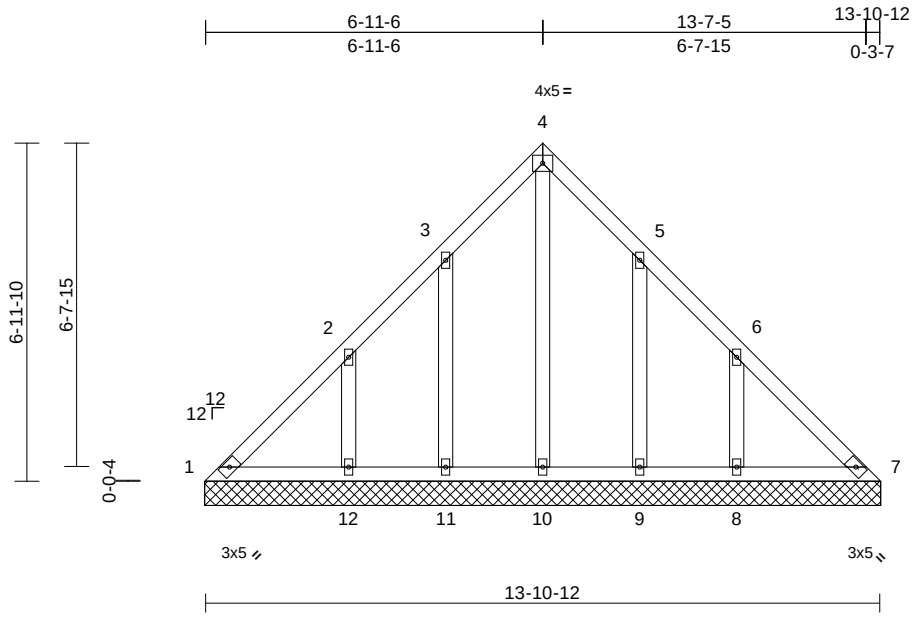
January 14,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	128 Hidden Lakes North-Roof-Plan 2 GLH
25010025-01	V01	Valley	1	1	I70703562 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Dec 5 2024 Print: 8.730 S Dec 5 2024 MiTek Industries, Inc. Sun Jan 12 15:39:12 Page: 1
ID:NieaZnUsdbLGDrJDhMxqL0zw3d6-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:47.5

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	0.11	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.09	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.13	Horiz(TL)	0.00	7	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 78 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 1=13-11-4, 7=13-11-4, 8=13-11-4, 9=13-11-4, 10=13-11-4, 11=13-11-4, 12=13-11-4
Max Horiz 1=159 (LC 13)
Max Uplift 1=-32 (LC 10), 8=-119 (LC 15), 9=-95 (LC 15), 11=-95 (LC 14), 12=-123 (LC 14)
Max Grav 1=121 (LC 25), 7=101 (LC 27), 8=286 (LC 21), 9=256 (LC 21), 10=209 (LC 27), 11=256 (LC 20), 12=286 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-164/156, 2-3=-75/102, 3-4=-81/147, 4-5=-81/147, 5-6=-73/83, 6-7=-158/123
BOT CHORD 1-12=-94/190, 11-12=-94/190, 10-11=-94/190, 9-10=-94/190, 8-9=-94/190, 7-8=-94/190

WEBS 4-10=-163/0, 3-11=-232/149, 2-12=-208/206, 5-9=-232/149, 6-8=-208/206

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) 0-0-0 to 2-11-10, Exterior(2N) 2-11-10 to 3-11-10, Corner(3R) 3-11-10 to 9-11-10, Exterior(2N) 9-11-10 to 10-11-4, Corner(3E) 10-11-4 to 13-11-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) All plates are 2x4 MT20 unless otherwise indicated.
7) Gable requires continuous bottom chord bearing.
8) Gable studs spaced at 2-0-0 oc.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * 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.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 32 lb uplift at joint 1, 95 lb uplift at joint 11, 123 lb uplift at joint 12, 95 lb uplift at joint 9 and 119 lb uplift at joint 8.
12) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 7.

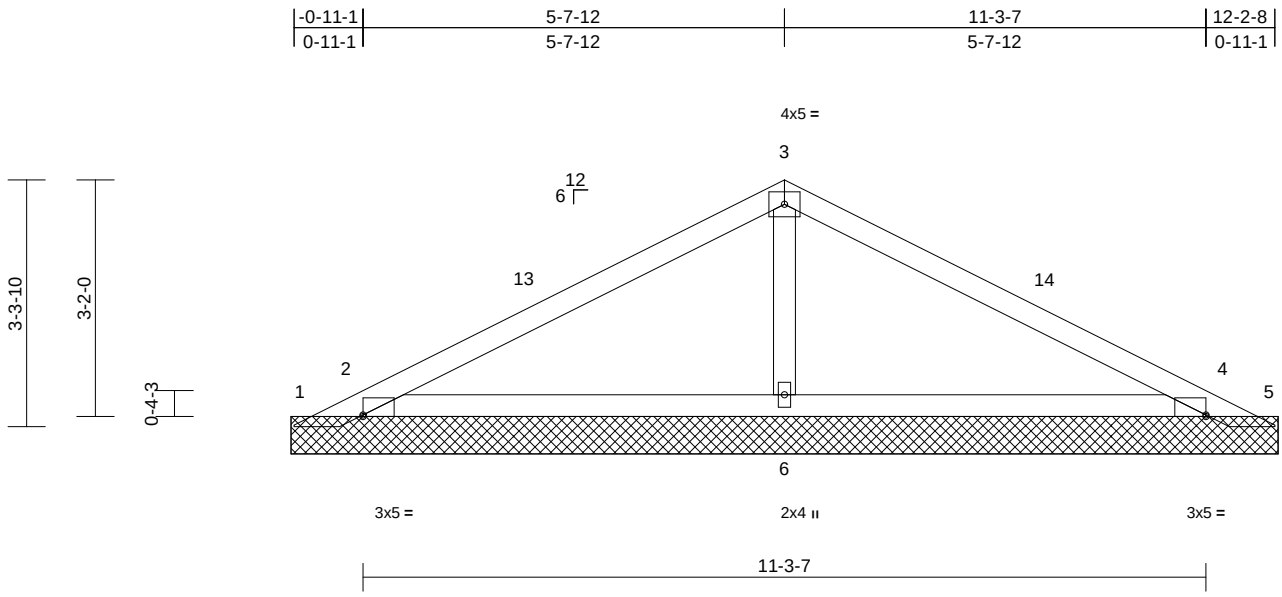
LOAD CASE(S) Standard

January 14,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	128 Hidden Lakes North-Roof-Plan 2 GLH
25010025-01	PB02	Piggyback	10	1	I70703563 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Dec 5 2024 Print: 8.730 S Dec 5 2024 MiTek Industries, Inc. Sun Jan 12 15:39:12 Page: 1
ID:vW4CMSTDsHCPbhk18fQbopzw3d7-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:30.8

Plate Offsets (X, Y): [2:Edge,0-0-4], [4:Edge,0-0-4]

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	0.75	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.23	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.06	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 42 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3

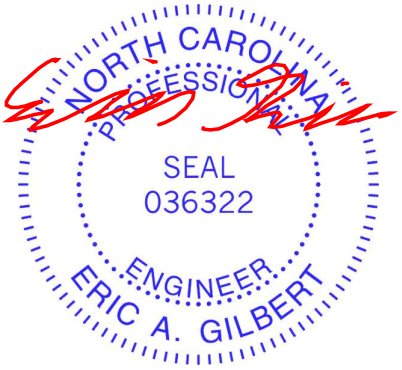
BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=13-2-10, 2=13-2-10, 4=13-2-10, 5=13-2-10, 6=13-2-10
Max Horiz 1=50 (LC 14)
Max Uplift 1=-515 (LC 21), 2=-187 (LC 14), 4=-182 (LC 15), 5=-511 (LC 22)
Max Grav 1=135 (LC 14), 2=950 (LC 21), 4=934 (LC 22), 5=114 (LC 15), 6=382 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-104/253, 2-3=-195/287, 3-4=-195/286, 4-5=-86/251
BOT CHORD 2-6=-282/119, 4-6=-282/119
WEBS 3-6=-243/133

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-4-3 to 3-4-3, Exterior(2R) 3-4-3 to 9-10-7, Exterior(2E) 9-10-7 to 12-10-7 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * 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.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 515 lb uplift at joint 1 and 511 lb uplift at joint 5.
11) N/A
12) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard

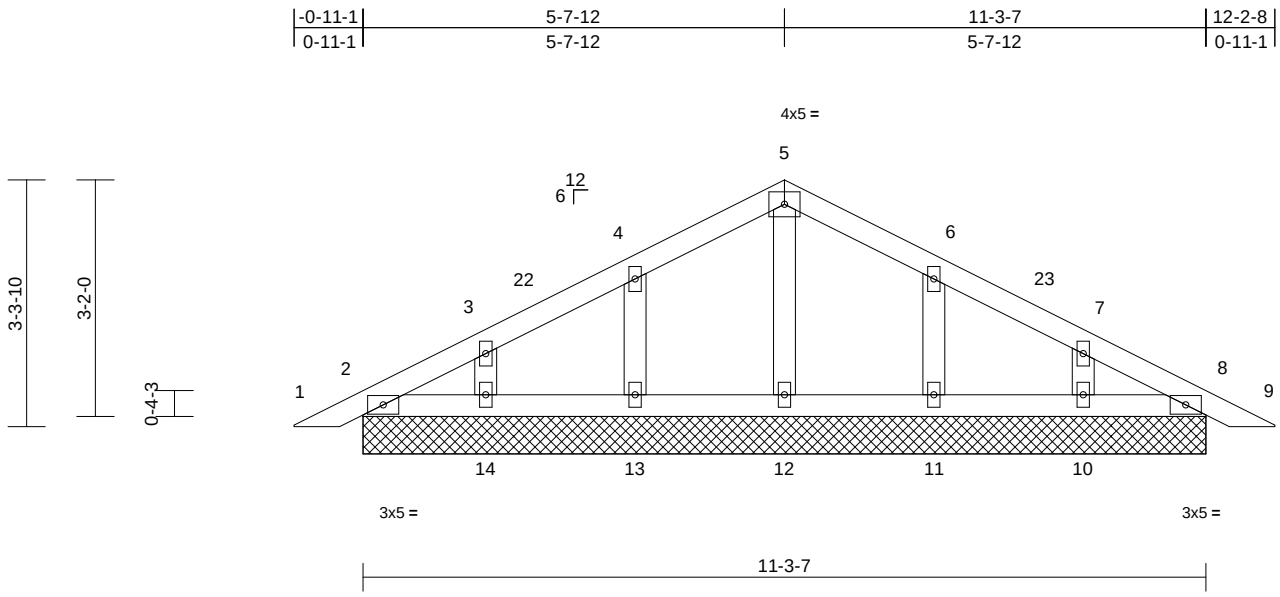


January 14,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	128 Hidden Lakes North-Roof-Plan 2 GLH
25010025-01	PB01	Piggyback	1	1	I70703564 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Dec 5 2024 Print: 8.730 S Dec 5 2024 MiTek Industries, Inc. Sun Jan 12 15:39:12 Page: 1
ID:yJN9EKq_L?XwkYBrX1z99dzw3dy-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:30.8

Loading	(psf)	Spacing	1-11-4	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.04	Horz(CT)	0.00	8	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 49 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=11-3-7, 8=11-3-7, 10=11-3-7, 11=11-3-7, 12=11-3-7, 13=11-3-7, 14=11-3-7
Max Horiz 2=48 (LC 18)
Max Uplift 2=-8 (LC 15), 8=-10 (LC 15), 10=-39 (LC 15), 11=-47 (LC 15), 13=-47 (LC 14), 14=-40 (LC 14)
Max Grav 2=106 (LC 21), 8=106 (LC 22), 10=208 (LC 22), 11=242 (LC 22), 12=137 (LC 22), 13=242 (LC 21), 14=208 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/16, 2-3=-44/29, 3-4=-53/44, 4-5=-61/102, 5-6=-61/102, 6-7=-53/36, 7-8=-26/20, 8-9=0/16
BOT CHORD 2-14=-8/56, 13-14=-8/56, 12-13=-8/56, 11-12=-8/56, 10-11=-8/56, 8-10=-8/56
WEBS 5-12=-98/0, 4-13=-204/125, 3-14=-163/87, 6-11=-204/125, 7-10=-163/87

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-4-3 to 3-4-3, Exterior(2R) 3-4-3 to 9-10-7, Exterior(2E) 9-10-7 to 12-10-7 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
7) All plates are 2x4 MT20 unless otherwise indicated.
8) Gable requires continuous bottom chord bearing.
9) Gable studs spaced at 2-0-0 oc.
10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
11) * 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.
12) N/A
13) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard

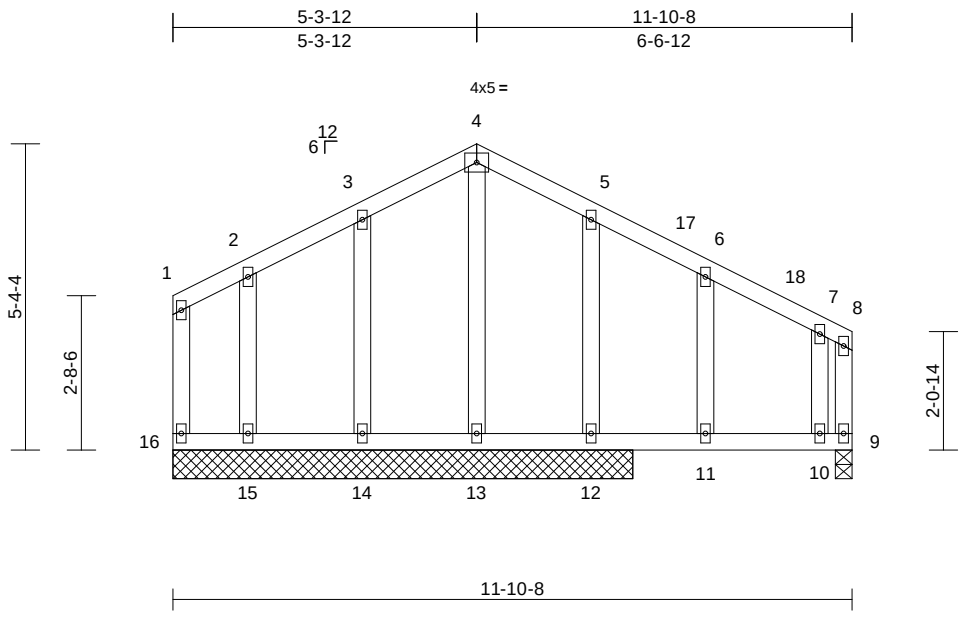
January 14,2025

ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	128 Hidden Lakes North-Roof-Plan 2 GLH
25010025-01	D05	Common Supported Gable	1	1	I70703565 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Dec 5 2024 Print: 8.730 S Dec 5 2024 MiTek Industries, Inc. Sun Jan 12 15:39:11 Page: 1
ID:TvRCoZtkMpAyP1n6YpgVGrzw3E4-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:40.3

Loading	(psf)	Spacing	1-11-4	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.26	Vert(LL)	0.02	10-11	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.21	Vert(CT)	-0.03	10-11	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.11	Horz(CT)	0.00	9	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MR								
BCDL	10.0										Weight: 73 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3
OTHERS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 9=0-3-8, 12=8-0-8, 13=8-0-8, 14=8-0-8, 15=8-0-8, 16=8-0-8
Max Horiz 16=-113 (LC 10)
Max Uplift 9=-18 (LC 15), 12=-110 (LC 15), 14=-48 (LC 14), 15=-83 (LC 11), 16=-85 (LC 10)
Max Grav 9=195 (LC 21), 12=483 (LC 21), 13=97 (LC 15), 14=259 (LC 20), 15=156 (LC 20), 16=124 (LC 30)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-55/69, 2-3=-70/99, 3-4=-91/169, 4-5=-99/178, 5-6=-46/83, 6-7=-70/36, 7-8=-70/21, 8-9=-83/22, 1-16=-68/92
BOT CHORD 15-16=-50/92, 14-15=-50/92, 13-14=-50/92, 12-13=-50/92, 11-12=-50/92, 10-11=-50/92, 9-10=-50/92
WEBS 4-13=-92/15, 3-14=-208/132, 2-15=-142/58, 5-12=-306/190, 6-11=-83/80, 7-10=-52/51

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) 4-5-12 to 7-7-12, Corner(3R) 7-7-12 to 12-7-12, Exterior(2N) 12-7-12 to 13-0-12, Corner(3E) 13-0-12 to 16-0-12 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) All plates are 2x4 MT20 unless otherwise indicated.
7) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
8) Gable studs spaced at 2-0-0 oc.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * 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.

LOAD CASE(S) Standard

NORTH CAROLINA PROFESSIONAL SEAL 036322 ENGINEER ERIC A. GILBERT

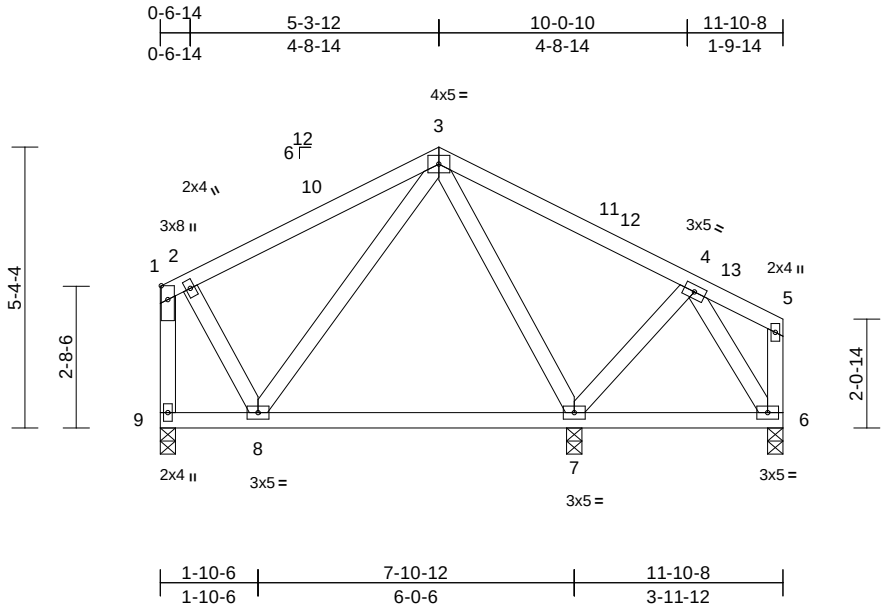
January 14,2025

ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	128 Hidden Lakes North-Roof-Plan 2 GLH
25010025-01	D04	Common	3	1	I70703566 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Dec 5 2024 Print: 8.730 S Dec 5 2024 MiTek Industries, Inc. Sun Jan 12 15:39:11 Page: 1
ID:6xeJlspbXGYgJGu9lG4KZozw3E9-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:43.9

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	0.71	Vert(LL)	-0.03	7-8	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.23	Vert(CT)	-0.06	7-8	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.33	Horz(CT)	0.00	6	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 73 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 6=0-3-8, 7=0-3-8, 9=0-3-8
Max Horiz 9=-116 (LC 10)
Max Uplift 6=-122 (LC 20), 7=-83 (LC 14), 9=-13 (LC 14)
Max Grav 6=111 (LC 21), 7=742 (LC 20), 9=310 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-198/31, 2-3=-183/56, 3-4=-54/280, 4-5=-33/95, 5-6=-29/83, 1-9=-271/48
BOT CHORD 8-9=-79/118, 7-8=-39/115, 6-7=-83/94
WEBS 2-8=-32/116, 3-8=-21/110, 3-7=-520/204, 4-7=-300/234, 4-6=-200/156

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 4-5-12 to 7-5-12, Exterior(2R) 7-5-12 to 12-7-12, Interior (1) 12-7-12 to 13-0-12, Exterior(2E) 13-0-12 to 16-0-12 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
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.
7) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 9, 7, and 6. This connection is for uplift only and does not consider lateral forces.

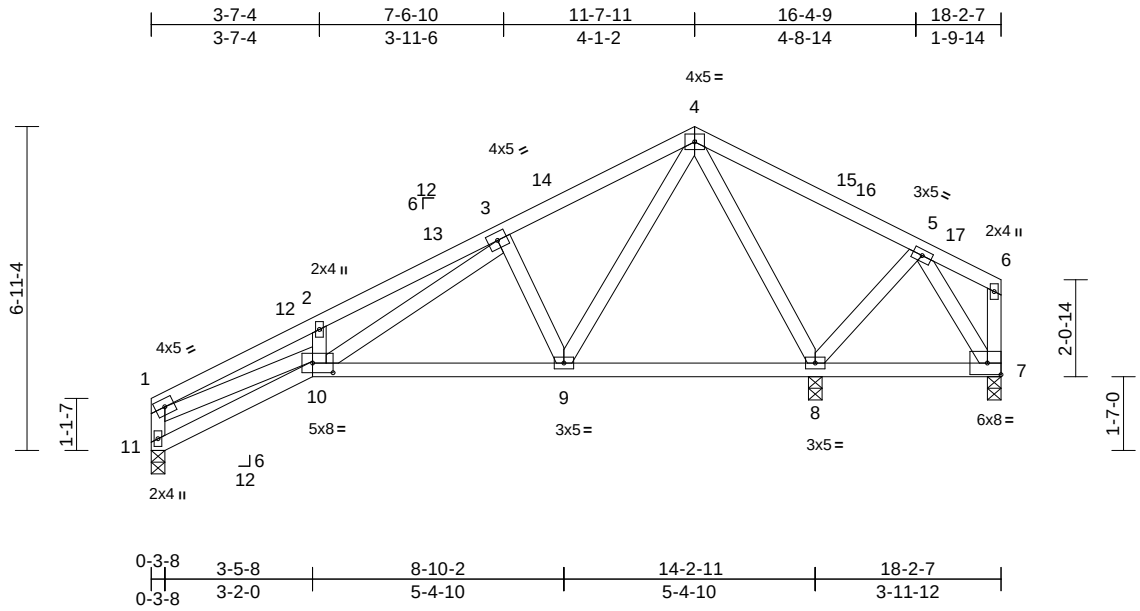
LOAD CASE(S) Standard

January 14,2025

ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	128 Hidden Lakes North-Roof-Plan 2 GLH
25010025-01	D03	Roof Special	3	1	I70703567 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Dec 5 2024 Print: 8.730 S Dec 5 2024 MiTek Industries, Inc. Sun Jan 12 15:39:11 Page: 1
ID:HFDBLBKVy_VLW7rTPsNxxMzw3En-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:49.4

Plate Offsets (X, Y): [10:0-5-4,0-2-8]

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	0.86	Vert(LL)	-0.05	9-10	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.27	Vert(CT)	-0.11	9-10	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.80	Horz(CT)	0.05	8	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 105 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 4-6:2x4 SP No.3
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-1-10 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 7=0-3-8, 8=0-3-8, 11=0-3-8
Max Horiz 11=140 (LC 11)
Max Uplift 7=-610 (LC 20), 8=-244 (LC 14), 11=-22 (LC 14)
Max Grav 7=141 (LC 14), 8=1619 (LC 20), 11=434 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-11=-429/102, 1-2=-1196/193, 2-3=-1198/286, 3-4=-292/114, 4-5=-133/836, 5-6=-29/104, 6-7=-30/97
BOT CHORD 10-11=-154/178, 9-10=-50/392, 8-9=-162/117, 7-8=-370/93
WEBS 1-10=-127/964, 2-10=-212/133, 3-10=-265/889, 3-9=-512/183, 4-9=-109/665, 4-8=-1243/239, 5-8=-599/219, 5-7=-139/702

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-1-12 to 3-1-12, Interior (1) 3-1-12 to 8-7-11, Exterior(2R) 8-7-11 to 14-7-11, Interior (1) 14-7-11 to 15-0-11, Exterior(2E) 15-0-11 to 18-0-11 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
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.
7) Bearing at joint(s) 11 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
8) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 11 and 8. This connection is for uplift only and does not consider lateral forces.
9) H10A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 7. This connection is for uplift only and does not consider lateral forces.

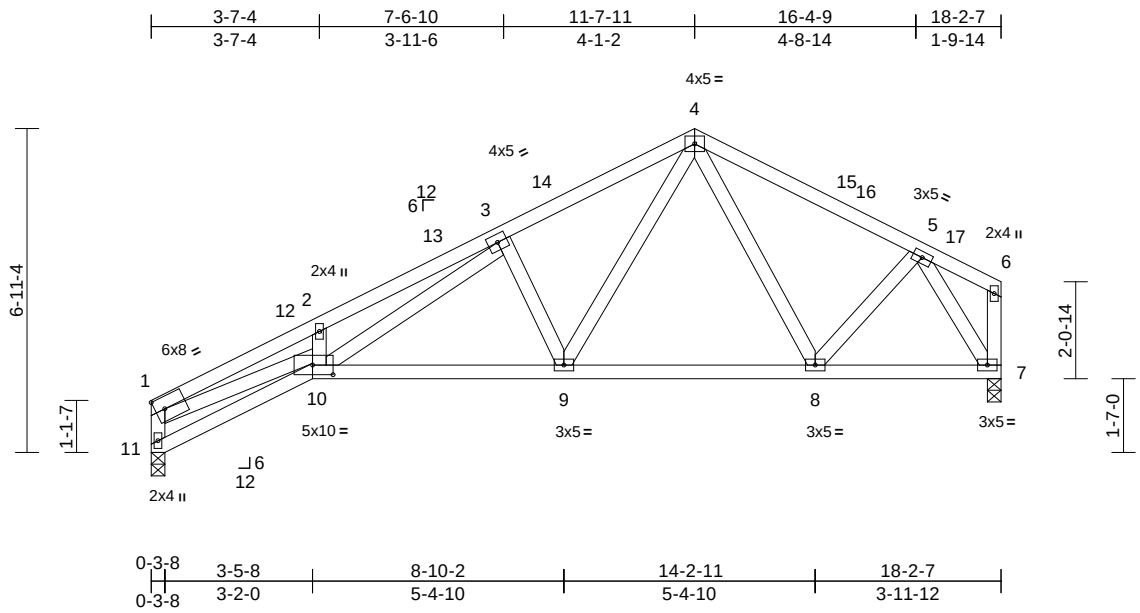
LOAD CASE(S) Standard

January 14,2025

ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	128 Hidden Lakes North-Roof-Plan 2 GLH
25010025-01	D02	Roof Special	3	1	I70703568 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Dec 5 2024 Print: 8.730 S Dec 5 2024 MiTek Industries, Inc. Sun Jan 12 15:39:11 Page: 1
ID:h0J2HmlOFES9llAEbnVh?Ezw3FX-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:49.4

Plate Offsets (X, Y): [10:0-5-4,0-2-8]

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	0.72	Vert(LL)	-0.10	9-10	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.47	Vert(CT)	-0.21	9-10	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.85	Horz(CT)	0.11	7	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 105 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 4-6:2x4 SP No.3
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-4-15 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 7=0-3-8, 11=0-3-8
Max Horiz 11=140 (LC 11)
Max Uplift 7=-51 (LC 14), 11=-75 (LC 14)
Max Grav 7=763 (LC 21), 11=780 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-11=-782/173, 1-2=-2455/440, 2-3=-2433/531, 3-4=-1222/300, 4-5=-734/221, 5-6=-39/78, 6-7=-28/67
BOT CHORD 10-11=-154/215, 9-10=-180/1254, 8-9=-41/637, 7-8=-67/481
WEBS 1-10=-339/2064, 2-10=-172/125, 3-9=-582/194, 3-10=-312/1193, 4-9=-122/753, 4-8=-143/55, 5-8=0/288, 5-7=-930/206

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-1-12 to 3-1-12, Interior (1) 3-1-12 to 8-7-11, Exterior(2R) 8-7-11 to 14-7-11, Interior (1) 14-7-11 to 15-0-11, Exterior(2E) 15-0-11 to 18-0-11 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
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.
7) Bearing at joint(s) 11 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
8) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 11 and 7. This connection is for uplift only and does not consider lateral forces.

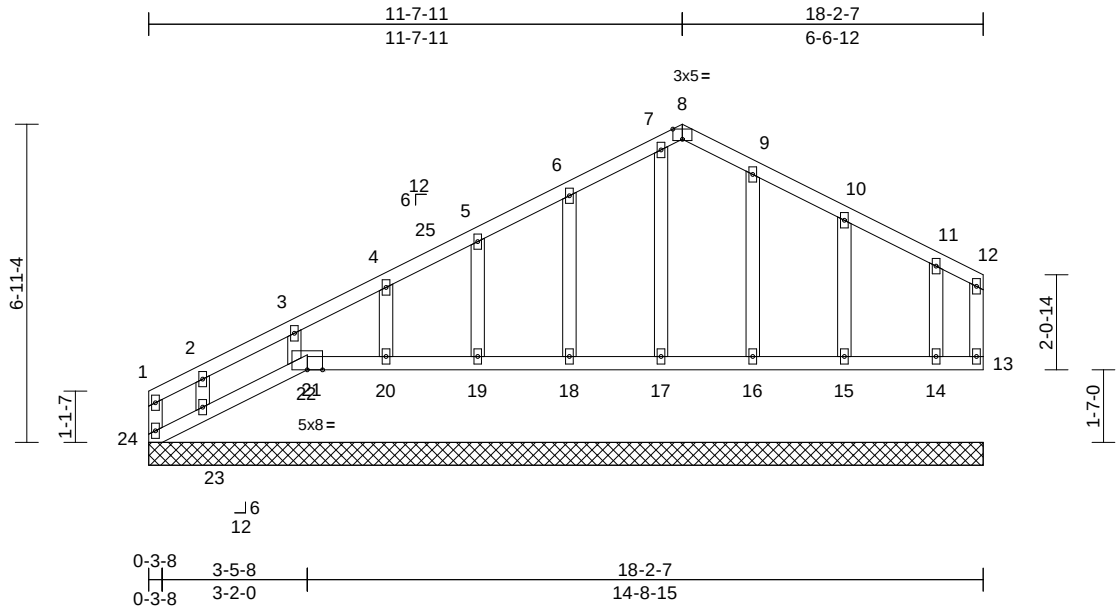
LOAD CASE(S) Standard

January 14,2025

ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	128 Hidden Lakes North-Roof-Plan 2 GLH
25010025-01	D01	Roof Special Supported Gable	1	1	I70703569 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Dec 5 2024 Print: 8.730 S Dec 5 2024 MiTek Industries, Inc. Sun Jan 12 15:39:11 Page: 1
ID:tsyn0jgegOi?1qj5EWPHlzzw3Fd-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:50.3

Plate Offsets (X, Y): [8:0-2-8,Edge]

Loading	(psf)	Spacing	1-11-4	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.13	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.08	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.07	Horiz(TL)	0.00	13	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MR								
BCDL	10.0										Weight: 96 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3
OTHERS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 21-22.

REACTIONS (size) 13=18-2-7, 14=18-2-7, 15=18-2-7, 16=18-2-7, 17=18-2-7, 18=18-2-7, 19=18-2-7, 20=18-2-7, 21=18-2-7, 22=18-2-7, 23=18-2-7, 24=18-2-7
Max Horiz 24=135 (LC 11)
Max Uplift 13=-54 (LC 14), 14=-37 (LC 15), 15=-51 (LC 15), 16=-18 (LC 15), 18=-56 (LC 14), 19=-39 (LC 14), 20=-44 (LC 14), 21=-27 (LC 11), 22=-17 (LC 14), 23=-156 (LC 14), 24=-61 (LC 12)
Max Grav 13=35 (LC 24), 14=161 (LC 21), 15=233 (LC 21), 16=223 (LC 21), 17=186 (LC 20), 18=233 (LC 20), 19=214 (LC 20), 20=157 (LC 20), 21=16 (LC 12), 22=159 (LC 1), 23=153 (LC 24), 24=160 (LC 11)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-24=-98/51, 1-2=-140/80, 2-3=-84/54, 3-4=-65/48, 4-5=-55/96, 5-6=-45/143, 6-7=-46/201, 7-8=-44/161, 8-9=-47/196, 9-10=-45/172, 10-11=-42/109, 11-12=-29/60, 12-13=-21/40
BOT CHORD 23-24=-64/75, 22-23=-47/57, 21-22=-54/48, 20-21=-38/45, 19-20=-38/45, 18-19=-38/45, 17-18=-38/45, 16-17=-38/45, 15-16=-38/45, 14-15=-38/45, 13-14=-38/45
WEBS 7-17=-147/0, 6-18=-194/109, 5-19=-175/81, 4-20=-122/84, 3-22=-124/102, 2-23=-132/136, 9-16=-185/41, 10-15=-193/120, 11-14=-132/87

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) 0-1-12 to 3-2-2, Exterior(2N) 3-2-2 to 8-7-11, Corner(3R) 8-7-11 to 14-7-11, Exterior(2N) 14-7-11 to 15-0-11, Corner(3E) 15-0-11 to 18-0-11 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) All plates are 2x4 MT20 unless otherwise indicated.
7) Gable requires continuous bottom chord bearing.
8) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
9) Gable studs spaced at 2-0-0 oc.
10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
11) * 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.
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 27 lb uplift at joint 21, 17 lb uplift at joint 22 and 156 lb uplift at joint 23.
13) N/A
14) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 21, 13, 17, 18, 19, 20, 22, 23, 16, 15, 14.

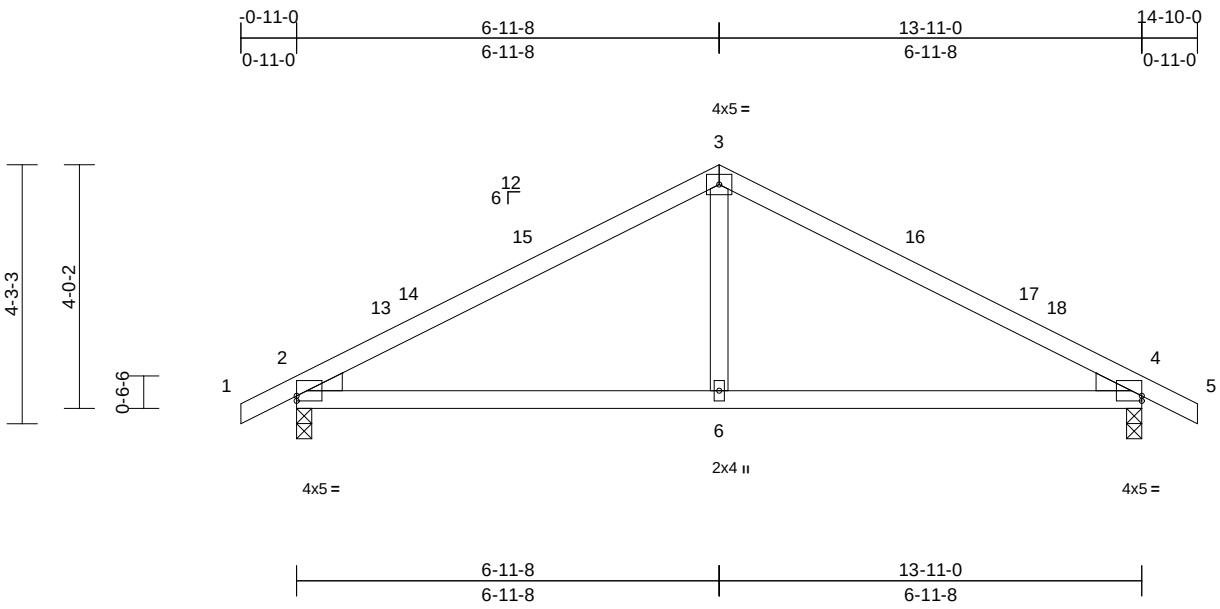
LOAD CASE(S) Standard

January 14,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	128 Hidden Lakes North-Roof-Plan 2 GLH
25010025-01	C02	Common	5	1	I70703570 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Dec 5 2024 Print: 8.730 S Dec 5 2024 MiTek Industries, Inc. Sun Jan 12 15:39:11 Page: 1
ID:wCJb1DRj8YJiFvmRd1ZqUzzw3Fw-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:37.9

Plate Offsets (X, Y): [2:Edge,0-1-0], [4:Edge,0-1-0]

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	0.76	Vert(LL)	-0.09	6-12	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.58	Vert(CT)	-0.14	6-12	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.12	Horz(CT)	0.02	2	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 54 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.1
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3
WEDGE Left: 2x4 SP No.3
Right: 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-2-11 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-3-0, 4=0-3-0
Max Horiz 2=-62 (LC 15)
Max Uplift 2=-71 (LC 14), 4=-71 (LC 15)
Max Grav 2=695 (LC 21), 4=695 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/25, 2-3=-819/235, 3-4=-819/236, 4-5=0/25
BOT CHORD 2-6=-182/616, 4-6=-172/616
WEBS 3-6=0/311

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-11-0 to 2-1-0, Interior (1) 2-1-0 to 3-11-8, Exterior(2R) 3-11-8 to 9-11-8, Interior (1) 9-11-8 to 11-10-0, Exterior(2E) 11-10-0 to 14-10-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * 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.
8) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 4. This connection is for uplift only and does not consider lateral forces.

LOAD CASE(S) Standard

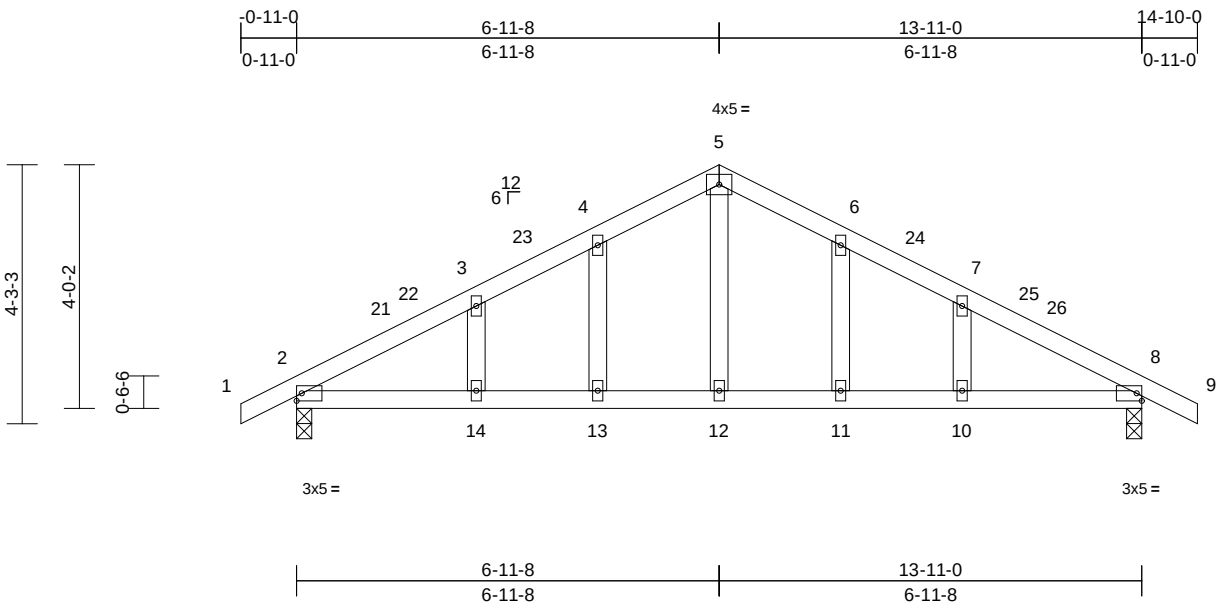
January 14,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	128 Hidden Lakes North-Roof-Plan 2 GLH
25010025-01	C01	Common Structural Gable	1	1	I70703571 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Dec 5 2024 Print: 8.730 S Dec 5 2024 MiTek Industries, Inc. Sun Jan 12 15:39:11 ID:w7Culzd39fkL5SZMelLtkdzw3H_-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:37.9

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	0.47	Vert(LL)	-0.16	13-14	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.73	Vert(CT)	-0.22	13-14	>761	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.15	Horz(CT)	0.02	2	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 64 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.3
OTHERS	2x4 SP No.3

BRACING

TOP CHORD	Structural wood sheathing directly applied or 5-8-12 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-3-0, 8=0-3-0
Max Horiz 2=62 (LC 14)
Max Uplift 2=-71 (LC 14), 8=-71 (LC 15)
Max Grav 2=695 (LC 21), 8=695 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/25, 2-3=-795/200, 3-4=-729/240, 4-5=-721/288, 5-6=-721/288, 6-7=-729/240, 7-8=-795/201, 8-9=0/25
BOT CHORD	2-14=-99/638, 13-14=-99/638, 12-13=-99/638, 11-12=-99/638, 10-11=-99/638, 8-10=-99/638
WEBS	5-12=-116/367, 4-13=-121/82, 3-14=-85/63, 6-11=-121/82, 7-10=-85/63

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-11-0 to 2-1-0, Interior (1) 2-1-0 to 3-11-8, Exterior(2R) 3-11-8 to 9-11-8, Interior (1) 9-11-8 to 11-10-0, Exterior(2E) 11-10-0 to 14-10-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
7) All plates are 2x4 MT20 unless otherwise indicated.
8) Gable studs spaced at 2-0-0 oc.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * 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.
11) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 8. This connection is for uplift only and does not consider lateral forces.

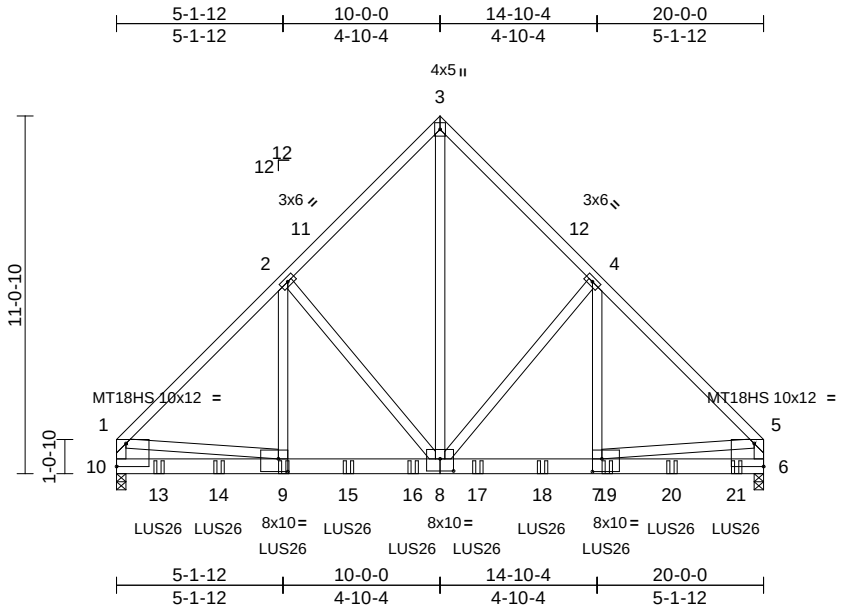
LOAD CASE(S) Standard

January 14,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	128 Hidden Lakes North-Roof-Plan 2 GLH
25010025-01	B03-2	Common Girder	1	2	I70703572 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Dec 5 2024 Print: 8.730 S Dec 5 2024 MiTek Industries, Inc. Sun Jan 12 15:39:11 Page: 1
ID:8E4jEAVj340YR9yUijA3S0zw3IR-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:71.2

Plate Offsets (X, Y): [1:Edge,0-8-9], [5:Edge,0-8-9], [7:0-3-8,0-4-12], [8:0-5-0,0-4-8], [9:0-3-8,0-4-12]

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	0.60	Vert(LL)	-0.07	7-8	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.72	Vert(CT)	-0.12	7-8	>999	180	MT18HS	244/190
TCDL	10.0	Rep Stress Incr	NO	WB	0.53	Horz(CT)	0.02	6	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 316 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3 *Except* 8-3,10-1,6-5:2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-7-15 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 6=0-3-8, 10=0-3-8
Max Horiz 10=-258 (LC 10)
Max Grav 6=4810 (LC 6), 10=4661 (LC 5)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-4644/0, 2-3=-3309/0, 3-4=-3309/0, 4-5=-4623/0, 1-10=-3727/0, 5-6=-3713/0
BOT CHORD 9-10=-97/917, 7-9=0/3341, 6-7=0/711
WEBS 3-8=0/4261, 4-8=-1531/0, 4-7=0/1802, 2-8=-1558/0, 2-9=0/1838, 1-9=0/2554, 5-7=0/2564

NOTES
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
5) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
6) Unbalanced snow loads have been considered for this design.
7) All plates are MT20 plates unless otherwise indicated.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * 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.
10) Use Simpson Strong-Tie LUS26 (4-10d Girder, 3-10d Truss, Single Ply Girder) or equivalent spaced at 2-0-0 oc max. starting at 1-3-12 from the left end to 19-2-0 to connect truss(es) to back face of bottom chord.
11) Fill all nail holes where hanger is in contact with lumber.

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-3=-60, 3-5=-60, 6-10=-20
Concentrated Loads (lb)
Vert: 9=-747 (B), 13=-747 (B), 14=-747 (B), 15=-747 (B), 16=-740 (B), 17=-747 (B), 18=-747 (B), 19=-747 (B), 20=-747 (B), 21=-751 (B)

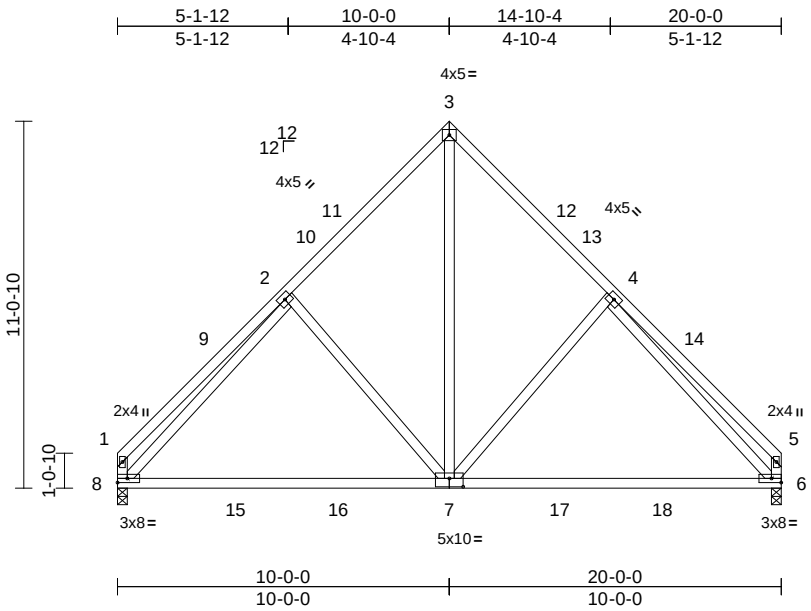
January 14,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	128 Hidden Lakes North-Roof-Plan 2 GLH
25010025-01	B02	Common	2	1	I70703573 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Dec 5 2024 Print: 8.730 S Dec 5 2024 MiTek Industries, Inc. Sun Jan 12 15:39:10
ID:nSiZU0pbFtzUjYgkQyAxBCzw3JJ-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:69.4

Plate Offsets (X, Y): [7:0-5-0,0-3-0]

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	0.60	Vert(LL)	-0.25	6-7	>957	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.83	Vert(CT)	-0.41	6-7	>573	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.68	Horz(CT)	0.02	6	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 133 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.1
WEBS 2x4 SP No.3 *Except* 7-3:2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-11-6 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 6=0-3-8, 8=0-3-8
Max Horiz 8=-260 (LC 10)
Max Uplift 6=-53 (LC 14), 8=-53 (LC 15)
Max Grav 6=917 (LC 6), 8=917 (LC 5)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-525/123, 2-3=-903/192, 3-4=-902/192, 4-5=-501/123, 1-8=-456/120, 5-6=-439/120
BOT CHORD 6-8=-112/706
WEBS 3-7=-145/846, 4-7=-265/250, 2-7=-268/250, 2-8=-627/70, 4-6=-627/70

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-1-12 to 3-1-12, Interior (1) 3-1-12 to 7-0-0, Exterior(2R) 7-0-0 to 13-0-0, Interior (1) 13-0-0 to 16-10-4, Exterior(2E) 16-10-4 to 19-10-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
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) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 8 and 6. This connection is for uplift only and does not consider lateral forces.

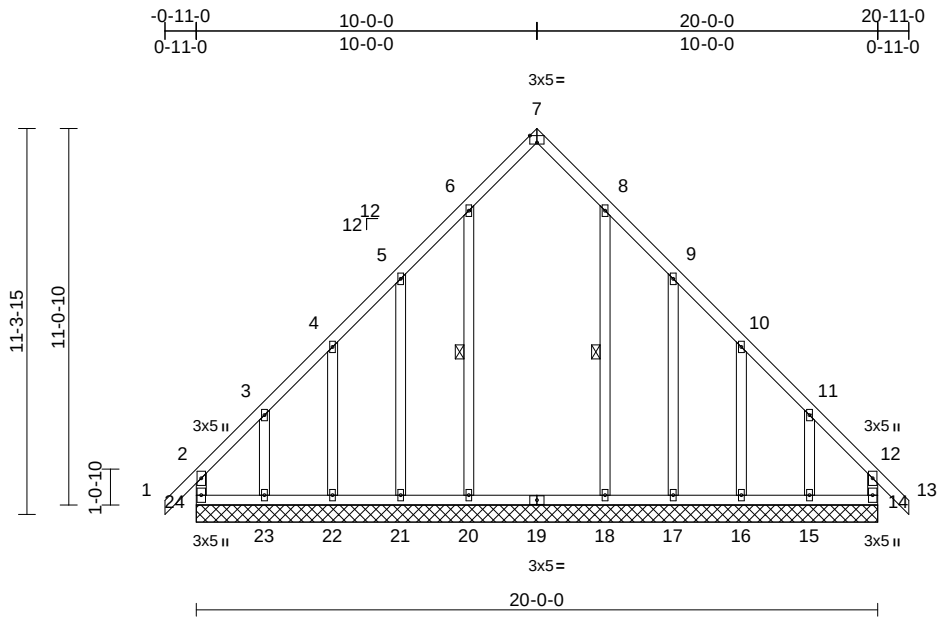
LOAD CASE(S) Standard

January 14,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	128 Hidden Lakes North-Roof-Plan 2 GLH
25010025-01	B01	Common Supported Gable	1	1	I70703574 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Dec 5 2024 Print: 8.730 S Dec 5 2024 MiTek Industries, Inc. Sun Jan 12 15:39:10 Page: 1
ID:uhS2efm5BfT3ExMyB75?1Mzw3JN-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:67.6

Plate Offsets (X, Y): [7:0-2-8,Edge]

Loading	(psf)	Spacing	1-11-4	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.42	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.26	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.14	Horz(CT)	0.01	14	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MR								
BCDL	10.0										Weight: 144 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3
OTHERS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 6-20, 8-18

REACTIONS (size) 14=20-0-0, 15=20-0-0, 16=20-0-0, 17=20-0-0, 18=20-0-0, 20=20-0-0, 21=20-0-0, 22=20-0-0, 23=20-0-0, 24=20-0-0
Max Horiz 24=-276 (LC 12)
Max Uplift 14=-85 (LC 13), 15=-283 (LC 15), 16=-44 (LC 15), 17=-146 (LC 15), 18=-6 (LC 15), 20=-11 (LC 14), 21=-144 (LC 14), 22=-44 (LC 14), 23=-285 (LC 14), 24=-94 (LC 12)
Max Grav 14=351 (LC 15), 15=236 (LC 31), 16=205 (LC 26), 17=179 (LC 22), 18=357 (LC 6), 20=357 (LC 5), 21=179 (LC 21), 22=204 (LC 25), 23=239 (LC 30), 24=356 (LC 14)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-24=-272/96, 1-2=0/44, 2-3=-391/176, 3-4=-225/112, 4-5=-160/81, 5-6=-138/69, 6-7=-165/89, 7-8=-165/89, 8-9=-138/64, 9-10=-157/73, 10-11=-221/104, 11-12=-387/170, 12-13=0/44, 12-14=-269/92
BOT CHORD 23-24=-133/357, 22-23=-133/357, 21-22=-133/357, 20-21=-133/357, 18-20=-133/357, 17-18=-133/357, 16-17=-133/357, 15-16=-133/357, 14-15=-133/357
WEBS 6-20=-252/52, 5-21=-164/177, 4-22=-149/98, 3-23=-175/222, 8-18=-252/48, 9-17=-163/177, 10-16=-151/96, 11-15=-168/232

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-11-0 to 2-0-0, Exterior(2N) 2-0-0 to 7-0-0, Corner(3R) 7-0-0 to 13-0-0, Exterior(2N) 13-0-0 to 17-11-0, Corner(3E) 17-11-0 to 20-11-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
7) All plates are 2x4 MT20 unless otherwise indicated.
8) Gable requires continuous bottom chord bearing.
9) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
10) Gable studs spaced at 2-0-0 oc.
11) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
12) * 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.
13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 94 lb uplift at joint 24, 85 lb uplift at joint 14, 11 lb uplift at joint 20, 144 lb uplift at joint 21, 44 lb uplift at joint 22, 285 lb uplift at joint 23, 6 lb uplift at joint 18, 146 lb uplift at joint 17, 44 lb uplift at joint 16 and 283 lb uplift at joint 15.

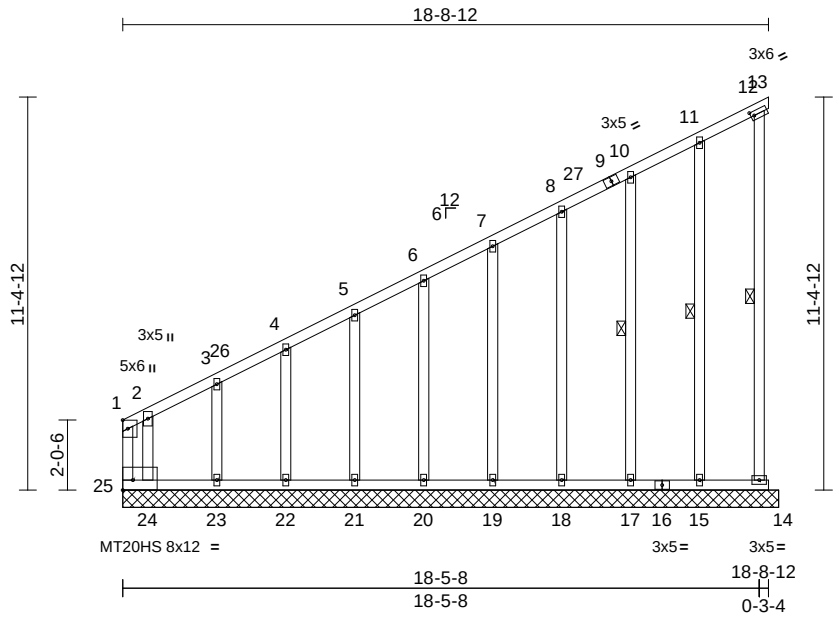
LOAD CASE(S) Standard

January 14,2025

ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	128 Hidden Lakes North-Roof-Plan 2 GLH
25010025-01	A11	Monopitch Supported Gable	1	1	I70703575 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Dec 5 2024 Print: 8.730 S Dec 5 2024 MiTek Industries, Inc. Sun Jan 12 15:39:10 Page: 1
ID:F6C4ZkQv0kpAGUeO_X4CMFzw3Jq-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



Scale = 1:66.8

Plate Offsets (X, Y): [12:0-1-3,0-1-8], [25:Edge,0-3-8]

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	0.60	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.51	Vert(TL)	n/a	-	n/a	999	MT20HS	187/143
TCDL	10.0	Rep Stress Incr	YES	WB	0.17	Horiz(TL)	-0.14	13	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MR								
BCDL	10.0										Weight: 156 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP 2400F 2.0E *Except* 25-1:2x4 SP No.2
OTHERS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 12-14, 11-15, 10-17

REACTIONS (size) 13=19-0-4, 14=19-0-4, 15=19-0-4, 17=19-0-4, 18=19-0-4, 19=19-0-4, 20=19-0-4, 21=19-0-4, 22=19-0-4, 23=19-0-4, 24=19-0-4, 25=19-0-4
Max Horiz 25=407 (LC 11)
Max Uplift 13=-188 (LC 14), 14=-311 (LC 13), 15=-54 (LC 14), 17=-39 (LC 14), 18=-47 (LC 14), 19=-43 (LC 14), 20=-44 (LC 14), 21=-43 (LC 14), 22=-47 (LC 14), 23=-28 (LC 14), 24=-1030 (LC 11), 25=-252 (LC 12)
Max Grav 13=217 (LC 13), 14=262 (LC 10), 15=230 (LC 20), 17=232 (LC 20), 18=175 (LC 20), 19=160 (LC 1), 20=160 (LC 20), 21=160 (LC 1), 22=159 (LC 20), 23=166 (LC 20), 24=295 (LC 12), 25=1148 (LC 11)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-522/540, 2-3=-310/325, 3-4=-283/306, 4-5=-259/292, 5-6=-238/276, 6-7=-225/260, 7-8=-212/244, 8-10=-198/228, 10-11=-191/219, 11-12=-142/178, 12-13=-177/97, 12-14=-343/214, 1-25=-589/613
BOT CHORD 24-25=-140/214, 23-24=-140/214, 22-23=-140/214, 21-22=-140/214, 20-21=-140/214, 19-20=-140/214, 18-19=-140/214, 17-18=-140/214, 15-17=-140/214, 14-15=-140/214
WEBS 11-15=-194/75, 10-17=-192/112, 8-18=-135/83, 7-19=-126/86, 6-20=-126/86, 5-21=-127/87, 4-22=-124/82, 3-23=-135/118, 2-24=-522/467

NOTES
1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) 3-1-12 to 6-1-12, Exterior(2N) 6-1-12 to 21-8-12 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) All plates are MT20 plates unless otherwise indicated.
6) All plates are 2x4 MT20 unless otherwise indicated.
7) Gable requires continuous bottom chord bearing.
8) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
9) Gable studs spaced at 2-0-0 oc.
10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
11) * 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.
12) Bearing at joint(s) 13 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 188 lb uplift at joint 13 and 1030 lb uplift at joint 24.

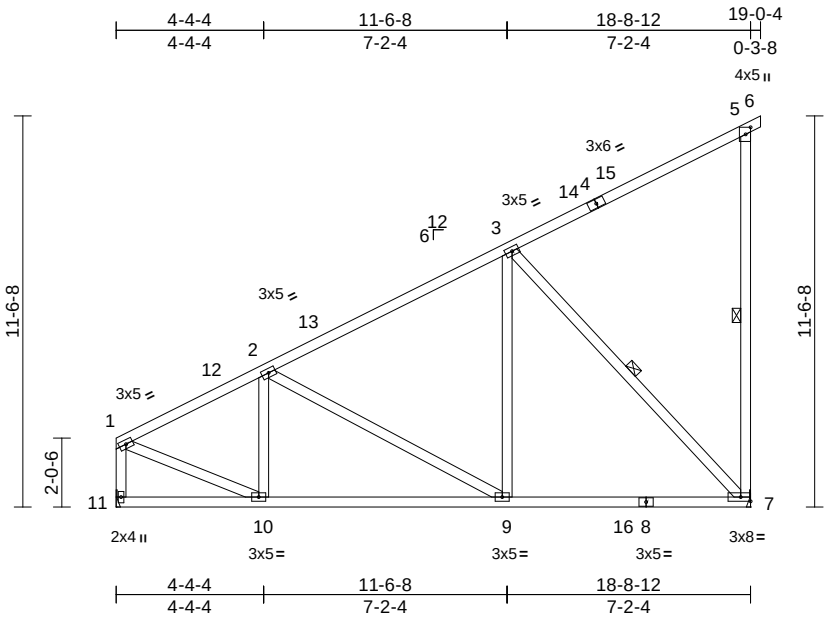
LOAD CASE(S) Standard

January 14,2025

ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	128 Hidden Lakes North-Roof-Plan 2 GLH
25010025-01	A10	Jack-Closed	1	1	I70703576 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Dec 5 2024 Print: 8.730 S Dec 5 2024 MiTek Industries, Inc. Sun Jan 12 15:39:10 Page: 1
ID:QPnyA3xpRSmrSKbie7Mpkpzw3KS-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:68

Plate Offsets (X, Y): [5:0-2-8,0-1-12]

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	0.90	Vert(LL)	-0.11	7-9	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.61	Vert(CT)	-0.17	7-9	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.49	Horz(CT)	0.02	7	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 127 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3 *Except* 5-7:2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 9-4-1 oc bracing.
WEBS 1 Row at midpt 5-7, 3-7

REACTIONS (size) 7= Mechanical, 11= Mechanical
Max Horiz 11=414 (LC 11)
Max Uplift 7=-123 (LC 11), 11=-25 (LC 14)
Max Grav 7=967 (LC 5), 11=816 (LC 28)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-876/83, 2-3=-759/126, 3-5=-230/173, 5-6=-19/0, 5-7=-322/88, 1-11=-760/92
BOT CHORD 10-11=-394/432, 9-10=-228/1018, 7-9=-136/738
WEBS 2-10=-168/104, 2-9=-319/118, 3-9=0/459, 3-7=-920/128, 1-10=-48/808

NOTES
1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 3-1-12 to 6-1-12, Interior (1) 6-1-12 to 17-9-5, Exterior(2R) 17-9-5 to 22-0-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
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 123 lb uplift at joint 7 and 25 lb uplift at joint 11.

LOAD CASE(S) Standard

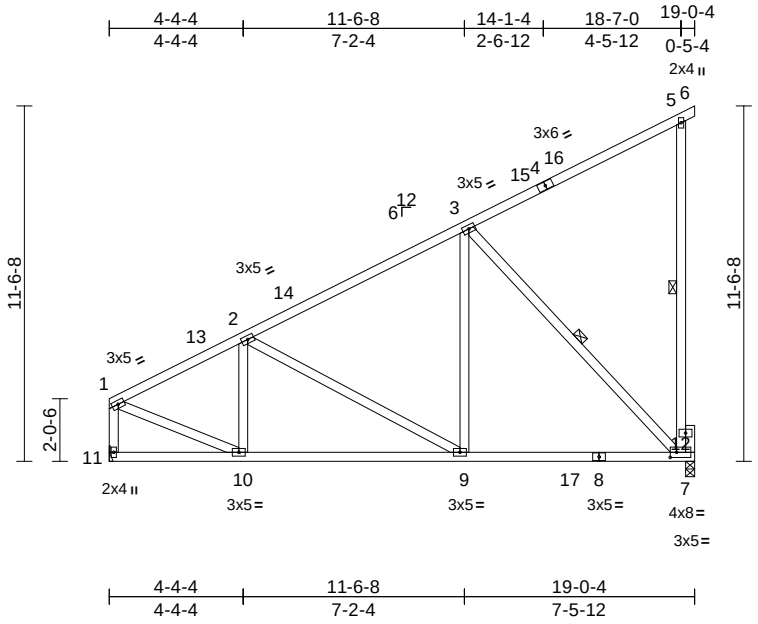
January 14,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	128 Hidden Lakes North-Roof-Plan 2 GLH
25010025-01	A09	Jack-Closed	9	1	I70703577 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Dec 5 2024 Print: 8.730 S Dec 5 2024 MiTek Industries, Inc. Sun Jan 12 15:39:10 Page: 1

ID:A8hi8MQqZELyokoRdb4kUlzw3L7-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:74.9

Plate Offsets (X, Y): [7:0-2-8,0-2-0]

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	0.85	Vert(LL)	-0.13	7-9	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.65	Vert(CT)	-0.21	7-9	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.50	Horz(CT)	0.02	7	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 129 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2 *Except* 1-4:2x4 SP No.1
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.3
OTHERS	2x4 SP No.3

BRACING

TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	1 Row at midpt 5-7, 3-7

REACTIONS (size) 7=0-3-8, 11= Mechanical
Max Horiz 11=250 (LC 14)
Max Uplift 7=-115 (LC 14)
Max Grav 7=965 (LC 5), 11=823 (LC 5)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=-930/0, 2-3=-733/0, 3-5=-153/84, 5-6=-19/0, 1-11=-811/0
BOT CHORD	10-11=-300/172, 9-10=-224/889, 7-9=-116/648
WEBS	5-7=-304/128, 2-10=-172/48, 2-9=-274/139, 3-9=0/472, 1-10=0/810, 3-7=-933/165

NOTES

1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 3-1-12 to 6-1-12, Interior (1) 6-1-12 to 17-9-5, Exterior(2R) 17-9-5 to 22-0-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * 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.
6) Refer to girder(s) for truss to truss connections.
7) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 7. This connection is for uplift only and does not consider lateral forces.

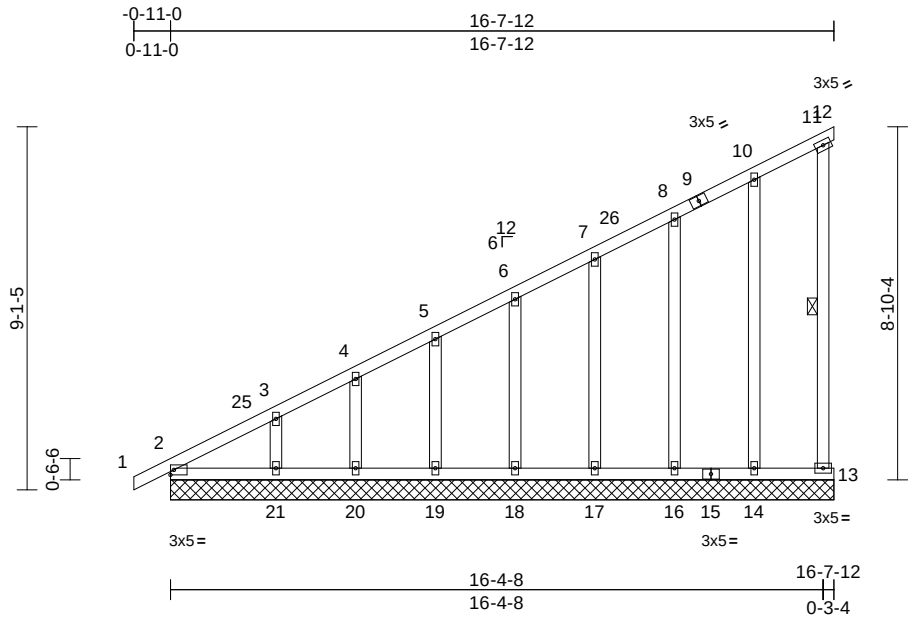
LOAD CASE(S) Standard

January 14,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	128 Hidden Lakes North-Roof-Plan 2 GLH
25010025-01	A08	Monopitch Supported Gable	1	1	I70703578 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Dec 5 2024 Print: 8.730 S Dec 5 2024 MiTek Industries, Inc. Sun Jan 12 15:39:10 Page: 1
ID:SKOx3Fswxc5FqvReZ?GUmXzw3N8-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



Scale = 1:57.8

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	0.93	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.26	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.21	Horz(CT)	-0.01	12	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 111 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3
OTHERS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 11-13

REACTIONS (size) 2=16-7-12, 12=16-7-12, 13=16-7-12, 14=16-7-12, 16=16-7-12, 17=16-7-12, 18=16-7-12, 19=16-7-12, 20=16-7-12, 21=16-7-12
Max Horiz 2=322 (LC 13)
Max Uplift 12=-93 (LC 14), 13=-172 (LC 13), 14=-56 (LC 14), 16=-40 (LC 14), 17=-46 (LC 14), 18=-42 (LC 14), 19=-48 (LC 14), 20=-28 (LC 14), 21=-90 (LC 14)
Max Grav 2=200 (LC 26), 12=121 (LC 13), 13=151 (LC 10), 14=234 (LC 21), 16=231 (LC 21), 17=175 (LC 21), 18=159 (LC 1), 19=164 (LC 21), 20=146 (LC 1), 21=205 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/25, 2-3=-273/295, 3-4=-237/261, 4-5=-215/251, 5-6=-190/233, 6-7=-177/217, 7-8=-163/200, 8-10=-155/190, 10-11=-116/146, 11-12=-96/54, 11-13=-186/123
BOT CHORD 2-21=-217/268, 20-21=-106/176, 19-20=-106/176, 18-19=-106/176, 17-18=-106/176, 16-17=-106/176, 14-16=-106/176, 13-14=-106/176
WEBS 10-14=-194/66, 8-16=-192/114, 7-17=-135/91, 6-18=-126/94, 5-19=-130/97, 4-20=-113/82, 3-21=-171/136

NOTES
1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-11-0 to 2-1-0, Exterior(2N) 2-1-0 to 16-7-12 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
6) All plates are 2x4 MT20 unless otherwise indicated.
7) Gable requires continuous bottom chord bearing.
8) Gable studs spaced at 2-0-0 oc.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * 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.
11) Bearing at joint(s) 12 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 93 lb uplift at joint 12, 172 lb uplift at joint 13, 56 lb uplift at joint 14, 40 lb uplift at joint 16, 46 lb uplift at joint 17, 42 lb uplift at joint 18, 48 lb uplift at joint 19, 28 lb uplift at joint 20 and 90 lb uplift at joint 21.

LOAD CASE(S) Standard

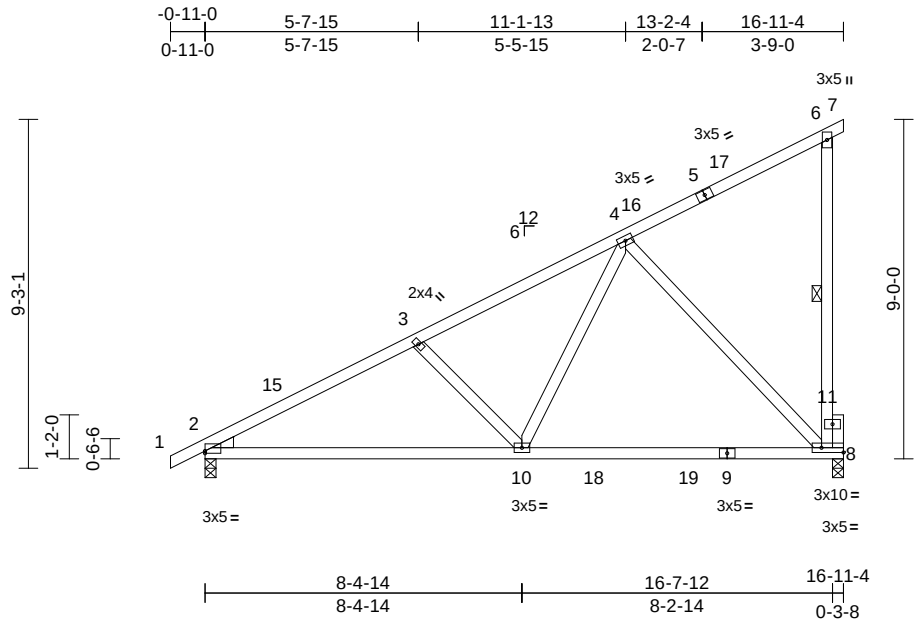
January 14,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	128 Hidden Lakes North-Roof-Plan 2 GLH
25010025-01	A07	Monopitch	7	1	I70703579 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Dec 5 2024 Print: 8.730 S Dec 5 2024 MiTek Industries, Inc. Sun Jan 12 15:39:10 Page: 1
ID:OR_Gw6gWU?CNXbomBMVzfNzw3NN-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:61.1

Plate Offsets (X, Y): [2:Edge,0-0-12], [8:Edge,0-1-8]

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	0.80	Vert(LL)	-0.18	8-10	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.79	Vert(CT)	-0.29	8-10	>692	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.93	Horz(CT)	0.02	8	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 96 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.3
OTHERS	2x4 SP No.3
WEDGE	Left: 2x4 SP No.3

BRACING

TOP CHORD	Structural wood sheathing directly applied or 5-3-7 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	1 Row at midpt 6-8

REACTIONS (size) 2=0-3-8, 8=0-3-8
Max Horiz 2=328 (LC 11)
Max Uplift 2=-80 (LC 14), 8=-157 (LC 14)
Max Grav 2=786 (LC 5), 8=869 (LC 5)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/25, 2-3=-1115/191, 3-4=-921/169, 4-6=-185/132, 6-7=-19/0, 6-8=-260/77
BOT CHORD	2-10=-281/1149, 8-10=-105/637
WEBS	3-10=-339/179, 4-10=-44/653, 4-8=-783/199

NOTES

1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-11-0 to 2-1-0, Interior (1) 2-1-0 to 13-11-4, Exterior(2E) 13-11-4 to 16-11-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 80 lb uplift at joint 2.
8) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 8. This connection is for uplift only and does not consider lateral forces.

LOAD CASE(S) Standard

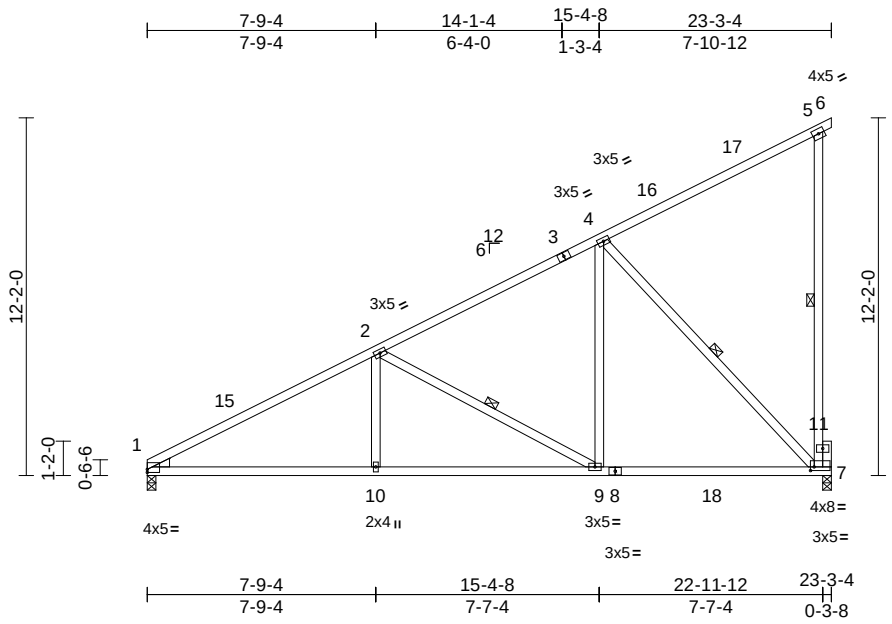
January 14,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	128 Hidden Lakes North-Roof-Plan 2 GLH
25010025-01	A06	Monopitch	3	1	I70703580 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Dec 5 2024 Print: 8.730 S Dec 5 2024 MiTek Industries, Inc. Sun Jan 12 15:39:10 Page: 1
ID:yc_0TLAgDO7lBnTzZNHQmjzw3Qc-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:78.4

Plate Offsets (X, Y): [1:Edge,0-1-4], [7:0-1-8,0-1-8]

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	0.77	Vert(LL)	-0.15	7-9	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.78	Vert(CT)	-0.25	7-9	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.62	Horz(CT)	0.04	7	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 138 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.1 *Except* 1-3:2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3 *Except* 5-7:2x4 SP No.1, 7-4:2x4 SP No.2
OTHERS 2x4 SP No.3
WEDGE Left: 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-9-5 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 5-7, 2-9, 4-7

REACTIONS (size) 1=0-3-8, 7=0-3-8
Max Horiz 1=438 (LC 11)
Max Uplift 1=-87 (LC 14), 7=-212 (LC 14)
Max Grav 1=1011 (LC 5), 7=1189 (LC 5)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-1626/183, 2-4=-969/176, 4-5=-244/176, 5-6=-19/0, 5-7=-356/102
BOT CHORD 1-10=-395/1669, 9-10=-252/1669, 7-9=-122/929
WEBS 2-10=0/308, 2-9=-841/202, 4-9=-15/710, 4-7=-1166/253

NOTES
1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-0 to 3-0-0, Interior (1) 3-0-0 to 20-3-4, Exterior(2E) 20-3-4 to 23-3-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * 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.
6) Bearings are assumed to be: Joint 7 SP No.2 .
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 87 lb uplift at joint 1.
8) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 7. This connection is for uplift only and does not consider lateral forces.

LOAD CASE(S) Standard

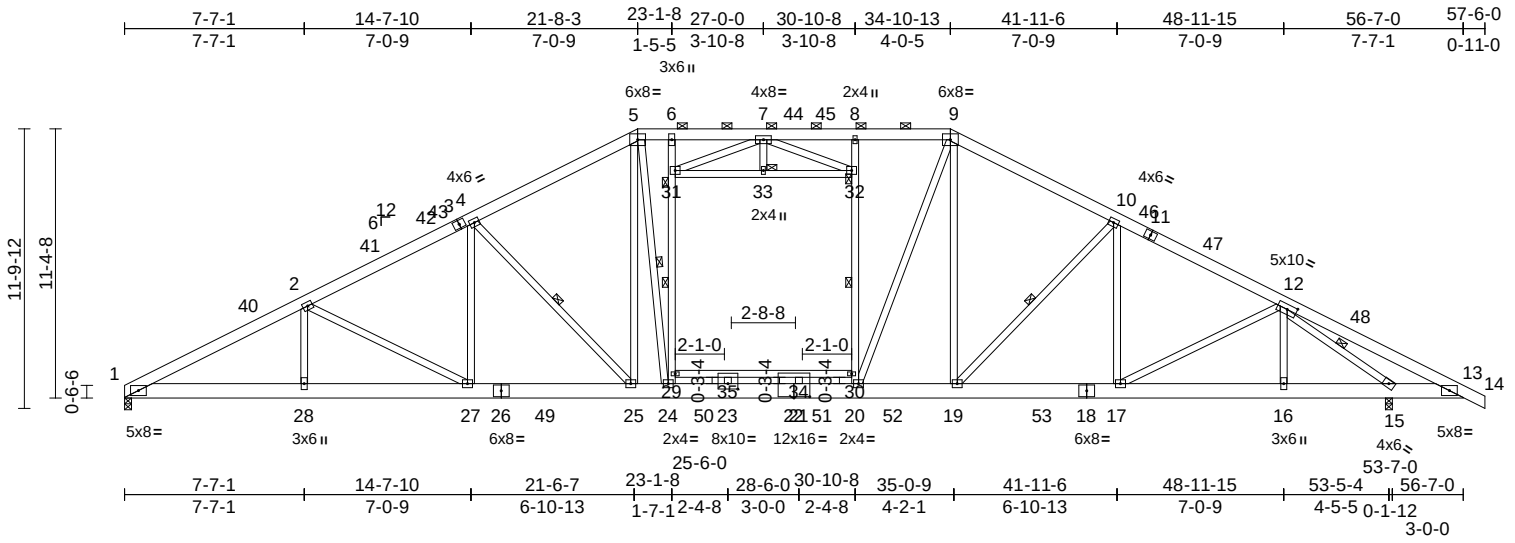
January 14,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	128 Hidden Lakes North-Roof-Plan 2 GLH
25010025-01	A05	Piggyback Base	2	1	I70703581 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Dec 5 2024 Print: 8.730 S Dec 5 2024 MiTek Industries, Inc. Sun Jan 12 15:39:09 Page: 1
ID:eeuob3rIuvODc1e1g_qsrkzw3SJ-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:97.4

Plate Offsets (X, Y): [12:0-4-13,0-2-8], [22:0-8-0,0-0-10], [35:0-5-0,0-2-12]

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	0.19	Vert(LL)	-0.22	25-27	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.32	Vert(CT)	-0.36	25-27	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.75	Horz(CT)	0.10	15	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 540 lb	FT = 20%

LUMBER

TOP CHORD 2x6 SP 2400F 2.0E
BOT CHORD 2x8 SP 2400F 2.0E
WEBS 2x4 SP 2400F 2.0E *Except* 15-12:2x4 SP No.3

BRACING

TOP CHORD Structural wood sheathing directly applied or 4-4-3 oc purlins, except 2-0-0 oc purlins (5-7-1 max.): 5-9.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 4-25, 10-19, 24-31, 20-32, 5-24, 12-15
JOINTS 1 Brace at Jt(s): 31, 32, 33

REACTIONS (size) 1=0-3-8, 15=0-3-8
Max Horiz 1=-187 (LC 15)
Max Uplift 1=-128 (LC 14), 15=-161 (LC 15)
Max Grav 1=2471 (LC 47), 15=2801 (LC 47)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-5499/262, 2-4=-4771/258, 4-5=-3946/256, 5-6=-3474/251, 6-7=-3459/250, 7-8=-3459/251, 8-9=-3475/252, 9-10=-3722/262, 10-12=-4117/219, 12-13=-556/154, 13-14=0/25
BOT CHORD 1-28=-283/4860, 27-28=-283/4860, 25-27=-119/4148, 24-25=0/3311, 23-24=0/3329, 21-23=0/3329, 20-21=0/3329, 19-20=0/3110, 17-19=0/3569, 16-17=0/3012, 15-16=0/3013, 13-15=-27/410
WEBS 2-28=0/310, 4-27=-19/685, 2-27=-820/186, 5-25=-305/1050, 4-25=-1200/258, 10-17=-62/190, 10-19=-655/200, 12-16=-166/111, 12-17=-9/630, 9-19=-184/742, 24-29=-373/339, 29-31=-379/348, 6-31=-228/412, 20-30=-534/174, 30-32=-530/181, 8-32=-367/135, 5-24=-471/947, 29-35=-4/70, 34-35=-4/70, 30-34=-4/70, 9-20=-101/980, 31-33=-100/411, 32-33=-100/411, 7-33=-6/1, 7-31=-492/123, 7-32=-459/127, 21-34=-36/36, 23-35=-24/42, 12-15=-3360/241

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-0 to 5-7-14, Interior (1) 5-7-14 to 13-8-3, Exterior(2R) 13-8-3 to 42-10-13, Interior (1) 42-10-13 to 51-10-2, Exterior(2E) 51-10-2 to 57-6-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
6) 200.0lb AC unit load placed on the bottom chord, 27-0-0 from left end, supported at two points, 5-0-0 apart.
7) Provide adequate drainage to prevent water ponding.
8) All plates are 4x5 MT20 unless otherwise indicated.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * 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.
11) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1 and 15. This connection is for uplift only and does not consider lateral forces.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

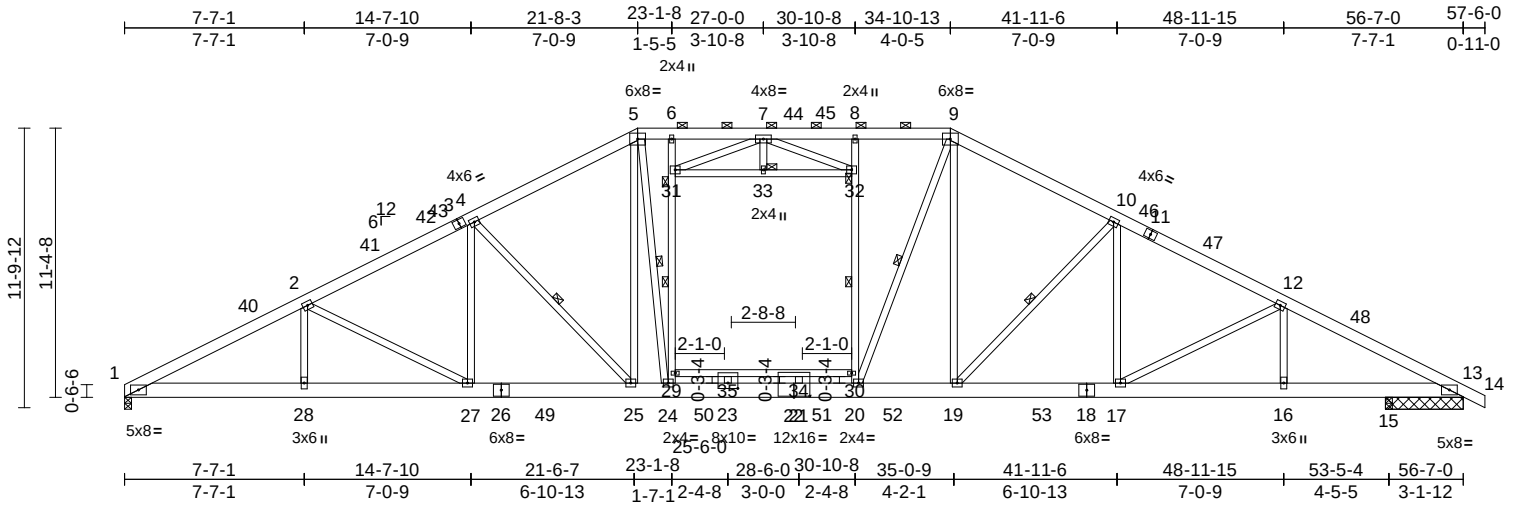
LOAD CASE(S) Standard

January 14,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	128 Hidden Lakes North-Roof-Plan 2 GLH
25010025-01	A04	Piggyback Base	1	1	I70703582 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Dec 5 2024 Print: 8.730 S Dec 5 2024 MiTek Industries, Inc. Sun Jan 12 15:39:09 Page: 1
ID:KPHA9_KGZBW5Vg?pIXZJkAzw3UH-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:97.4

Plate Offsets (X, Y): [22:0-8-0,0-0-10], [35:0-5-0,0-2-12]

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	0.26	Vert(LL)	-0.22	25-27	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.49	Vert(CT)	-0.37	19-20	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.44	Horz(CT)	0.12	13	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 532 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP 2400F 2.0E
BOT CHORD 2x8 SP 2400F 2.0E
WEBS 2x4 SP 2400F 2.0E

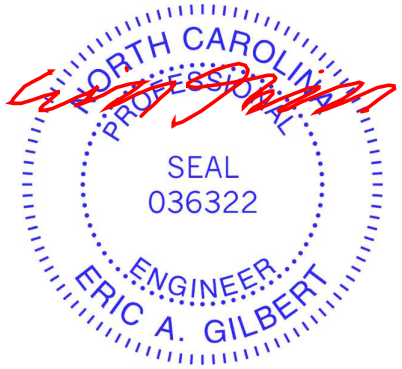
BRACING
TOP CHORD Structural wood sheathing directly applied or 4-3-6 oc purlins, except 2-0-0 oc purlins (5-5-4 max.): 5-9.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 4-25, 10-19, 24-31, 20-32, 5-24, 9-20
JOINTS 1 Brace at Jt(s): 31, 32, 33

REACTIONS (size) 1=0-3-8, 13=3-3-8, 15=0-3-8
Max Horiz 1=-187 (LC 19)
Max Uplift 1=-130 (LC 14), 13=-34 (LC 15), 15=-126 (LC 15)
Max Grav 1=2539 (LC 47), 13=1393 (LC 47), 15=1374 (LC 39)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-5665/281, 2-4=-4935/276, 4-5=-4117/276, 5-6=-3651/271, 6-7=-3623/269, 7-8=-3654/274, 8-9=-3658/273, 9-10=-3993/293, 10-12=-4587/273, 12-13=-4428/222, 13-14=0/25
BOT CHORD 1-28=-286/5008, 27-28=-286/5008, 25-27=-122/4295, 24-25=0/3465, 23-24=0/3514, 21-23=0/3514, 20-21=0/3514, 19-20=0/3348, 17-19=-29/4011, 16-17=-81/3836, 15-16=-81/3836, 13-15=-81/3836
WEBS 2-28=0/311, 4-27=-19/676, 2-27=-821/186, 5-25=-304/982, 4-25=-1191/258, 10-17=0/375, 10-19=-948/206, 12-16=-458/123, 12-17=0/297, 9-19=-187/944, 24-29=-441/280, 29-31=-450/286, 6-31=-289/353, 20-30=-503/176, 30-32=-495/182, 8-32=-338/136, 5-24=-306/1119, 29-35=-4/66, 34-35=-4/66, 30-34=-4/66, 9-20=-97/875, 31-33=-100/408, 32-33=-100/408, 7-33=-6/1, 7-31=-502/122, 7-32=-445/127, 21-34=-27/45, 23-35=-34/33

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-0 to 5-7-14, Interior (1) 5-7-14 to 13-8-3, Exterior(2R) 13-8-3 to 42-10-13, Interior (1) 42-10-13 to 51-10-2, Exterior(2E) 51-10-2 to 57-6-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
6) 200.0lb AC unit load placed on the bottom chord, 27-0-0 from left end, supported at two points, 5-0-0 apart.
7) Provide adequate drainage to prevent water ponding.
8) All plates are 4x5 MT20 unless otherwise indicated.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * 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.
11) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 13, 1, and 15. This connection is for uplift only and does not consider lateral forces.
12) 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

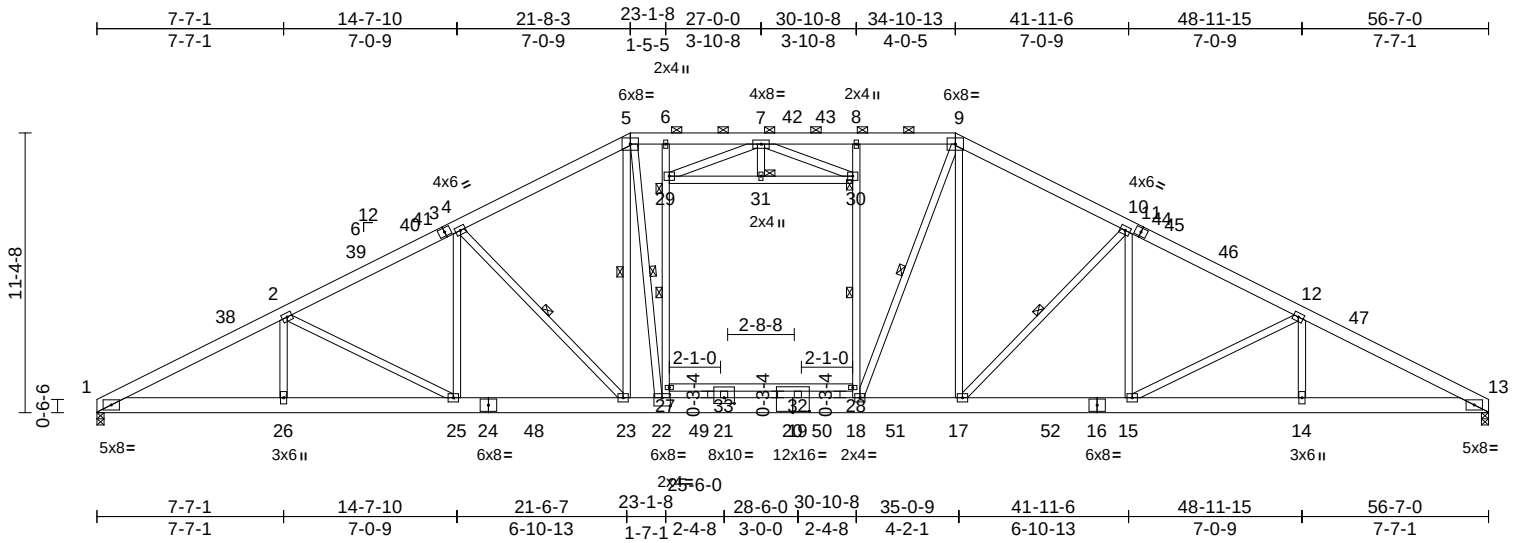


January 14,2025

ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	128 Hidden Lakes North-Roof-Plan 2 GLH
25010025-01	A03	Piggyback Base	1	1	I70703583 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Dec 5 2024 Print: 8.730 S Dec 5 2024 MiTek Industries, Inc. Sun Jan 12 15:39:09 Page: 1
ID:ZbGjvR0aSWNe?qb?KndSDuzw3Ug-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:93.7

Plate Offsets (X, Y): [20:0-8-0,0-0-10], [22:0-4-0,0-4-0], [33:0-5-0,0-2-12]

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	0.19	Vert(LL)	-0.25	17-18	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.33	Vert(CT)	-0.45	17-18	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.44	Horz(CT)	0.13	13	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 529 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP 2400F 2.0E
BOT CHORD 2x8 SP 2400F 2.0E
WEBS 2x4 SP 2400F 2.0E

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-2-8 oc purlins, except 2-0-0 oc purlins (5-3-3 max.): 5-9.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 5-23, 4-23, 10-17, 22-29, 18-30, 5-22, 9-18
JOINTS 1 Brace at Jt(s): 29, 30, 31

REACTIONS (size) 1=0-3-8, 13=0-3-8
Max Horiz 1=172 (LC 14)
Max Uplift 1=-126 (LC 14), 13=-135 (LC 15)
Max Grav 1=2614 (LC 46), 13=2613 (LC 46)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-5852/293, 2-4=-5121/288, 4-5=-4310/288, 5-6=-3855/285, 6-7=-3812/282, 7-8=-3877/288, 8-9=-3868/287, 9-10=-4305/314, 10-12=-5118/307, 12-13=-5848/314
BOT CHORD 1-26=-285/5172, 25-26=-285/5172, 23-25=-121/4458, 22-23=0/3636, 21-22=0/3724, 19-21=0/3724, 18-19=0/3724, 17-18=0/3623, 15-17=-83/4455, 14-15=-193/5168, 13-14=-193/5168
WEBS 2-26=0/312, 4-25=-19/666, 2-25=-822/186, 5-23=-309/915, 4-23=-1182/258, 10-15=0/667, 10-17=-1188/227, 12-14=0/310, 12-15=-820/196, 9-17=-212/1207, 22-27=-515/226, 27-29=-529/230, 6-29=-361/301, 18-28=-465/181, 28-30=-453/188, 8-30=-303/141, 5-22=-189/1325, 27-33=-9/62, 32-33=-9/62, 28-32=-9/62, 9-18=-204/764, 29-31=-100/405, 30-31=-100/405, 7-31=-6/2, 7-29=-514/122, 7-30=-431/128, 19-32=-19/57, 21-33=-45/25

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-0 to 5-7-14, Interior (1) 5-7-14 to 13-8-3, Exterior(2R) 13-8-3 to 42-10-13, Interior (1) 42-10-13 to 50-11-2, Exterior(2E) 50-11-2 to 56-7-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) 200.0lb AC unit load placed on the bottom chord, 27-0-0 from left end, supported at two points, 5-0-0 apart.
6) Provide adequate drainage to prevent water ponding.
7) All plates are 4x5 MT20 unless otherwise indicated.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * 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.
10) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 13 and 1. This connection is for uplift only and does not consider lateral forces.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

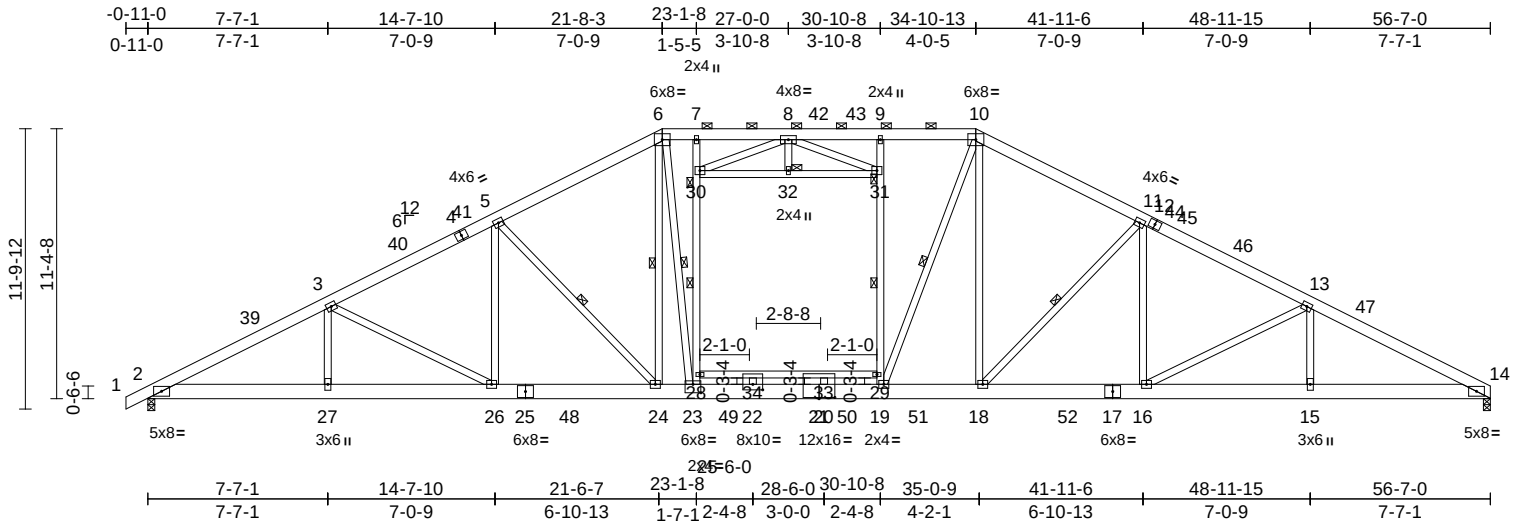
LOAD CASE(S) Standard

January 14,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	128 Hidden Lakes North-Roof-Plan 2 GLH
25010025-01	A02-B	Piggyback Base	5	1	I70703584 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Dec 5 2024 Print: 8.730 S Dec 5 2024 MiTek Industries, Inc. Sun Jan 12 15:39:08 Page: 1
ID:bzprg?XMzDQtHArPGWw8tSzw3Xu-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:97.1

Plate Offsets (X, Y): [23:0-4-0,0-4-4], [33:0-8-0,0-0-10], [34:0-5-0,0-2-12]

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	0.19	Vert(LL)	-0.26	18-19	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.34	Vert(CT)	-0.45	18-19	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.44	Horz(CT)	0.13	14	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 532 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP 2400F 2.0E
BOT CHORD 2x8 SP 2400F 2.0E
WEBS 2x4 SP 2400F 2.0E

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-2-9 oc purlins, except 2-0-0 oc purlins (5-3-4 max.): 6-10.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 5-24, 6-24, 11-18, 23-30, 19-31, 6-23, 10-19
JOINTS 1 Brace at Jt(s): 30, 31, 32

REACTIONS (size) 2=0-3-8, 14=0-3-8
Max Horiz 2=187 (LC 18)
Max Uplift 2=-144 (LC 14), 14=-135 (LC 15)
Max Grav 2=2660 (LC 47), 14=2612 (LC 47)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/25, 2-3=-5844/277, 3-5=-5117/282, 5-6=-4308/285, 6-7=-3854/282, 7-8=-3811/279, 8-9=-3876/286, 9-10=-3868/284, 10-11=-4304/311, 11-13=-5116/305, 13-14=-5846/312
BOT CHORD 2-27=-282/5165, 26-27=-282/5165, 24-26=-120/4455, 23-24=0/3634, 22-23=0/3724, 20-22=0/3724, 19-20=0/3724, 18-19=0/3622, 16-18=-81/4454, 15-16=-191/5167, 14-15=-191/5167
WEBS 3-27=0/311, 3-26=-818/184, 5-26=-18/664, 5-24=-1180/258, 6-24=-308/913, 11-18=-1188/227, 11-16=0/667, 13-16=-820/196, 13-15=0/310, 10-18=-212/1213, 23-28=-521/226, 28-30=-535/229, 7-30=-361/300, 19-29=-464/181, 29-31=-453/188, 9-31=-303/141, 6-23=-190/1325, 28-34=-9/62, 33-34=-9/62, 29-33=-9/62, 10-19=-210/764, 30-32=-100/408, 31-32=-100/408, 8-30=-520/122, 8-32=-6/2, 8-31=-436/128, 20-33=-19/58, 22-34=-46/25

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-11-0 to 4-8-14, Interior (1) 4-8-14 to 13-8-3, Exterior(2R) 13-8-3 to 42-10-13, Interior (1) 42-10-13 to 50-11-2, Exterior(2E) 50-11-2 to 56-7-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
6) 200.0lb AC unit load placed on the bottom chord, 27-0-0 from left end, supported at two points, 5-0-0 apart.
7) Provide adequate drainage to prevent water ponding.
8) All plates are 4x5 MT20 unless otherwise indicated.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * 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.
11) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 14 and 2. This connection is for uplift only and does not consider lateral forces.
12) 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

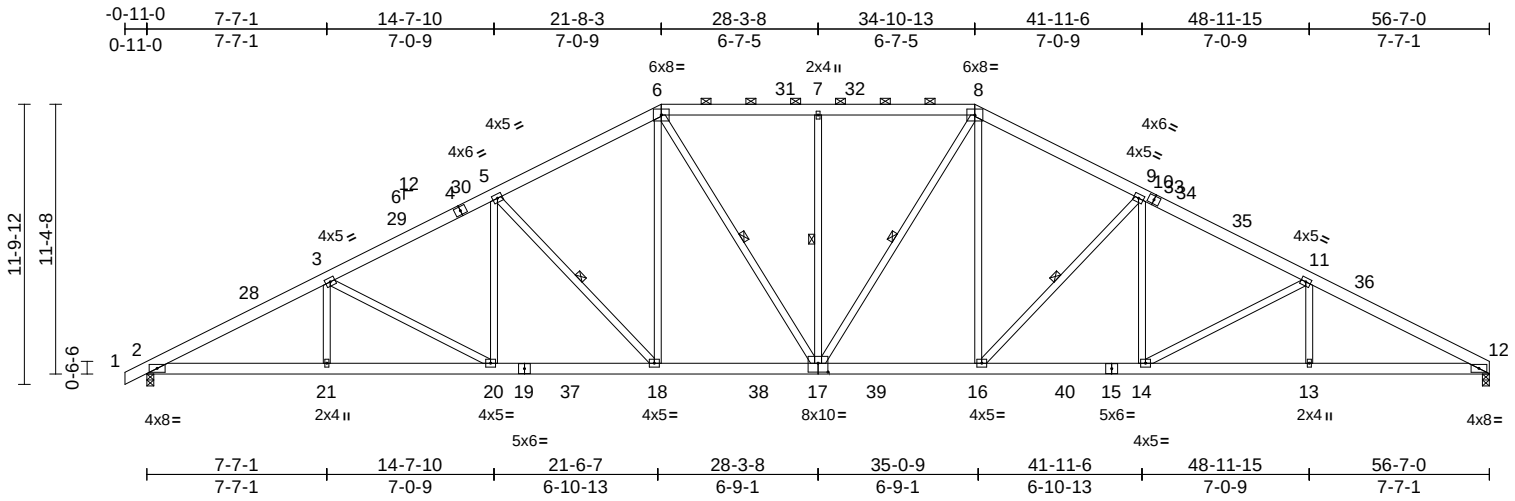
January 14,2025

ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	128 Hidden Lakes North-Roof-Plan 2 GLH
25010025-01	A02	Piggyback Base	1	1	I70703585 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Dec 5 2024 Print: 8.730 S Dec 5 2024 MiTek Industries, Inc. Sun Jan 12 15:39:08 Page: 1
ID:rvCyn7VUOvT7q?uPF4S3tEzw3d5-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:97.1

Plate Offsets (X, Y): [17:0-5-0,0-4-8]

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	0.45	Vert(LL)	-0.26	16-17	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.33	Vert(CT)	-0.47	16-17	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.92	Horz(CT)	0.16	12	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 445 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.2
BOT CHORD 2x6 SP 2400F 2.0E
WEBS 2x4 SP No.3 *Except*
18-6,17-6,7-17,17-8,16-8:2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-10-7 oc purlins, except
2-0-0 oc purlins (3-8-3 max.): 6-8.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 5-18, 6-17, 7-17, 8-17, 9-16

REACTIONS (size) 2=0-3-8, 12=0-3-8
Max Horiz 2=187 (LC 14)
Max Uplift 2=-248 (LC 14), 12=-230 (LC 15)
Max Grav 2=2605 (LC 47), 12=2559 (LC 47)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/25, 2-3=-5649/502, 3-5=-4951/513, 5-6=-4161/520, 6-7=-3806/527, 7-8=-3806/527, 8-9=-4162/521, 9-11=-4953/517, 11-12=-5654/515
BOT CHORD 2-21=-485/4970, 20-21=-485/4970, 18-20=-324/4306, 16-18=-160/3494, 14-16=-271/4308, 13-14=-374/4975, 12-13=-374/4975
WEBS 3-21=0/290, 3-20=-768/183, 5-20=0/648, 5-18=-1166/238, 6-18=-94/1152, 6-17=-144/529, 7-17=-660/187, 8-17=-143/529, 8-16=-95/1154, 9-16=-1168/239, 9-14=-1/649, 11-14=-772/187, 11-13=0/291

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-11-0 to 4-8-14, Interior (1) 4-8-14 to 13-8-3, Exterior(2R) 13-8-3 to 42-10-13, Interior (1) 42-10-13 to 50-11-2, Exterior(2E) 50-11-2 to 56-7-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) All plates are 4x5 MT20 unless otherwise indicated.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * 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.
10) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 12. This connection is for uplift only and does not consider lateral forces.
11) 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

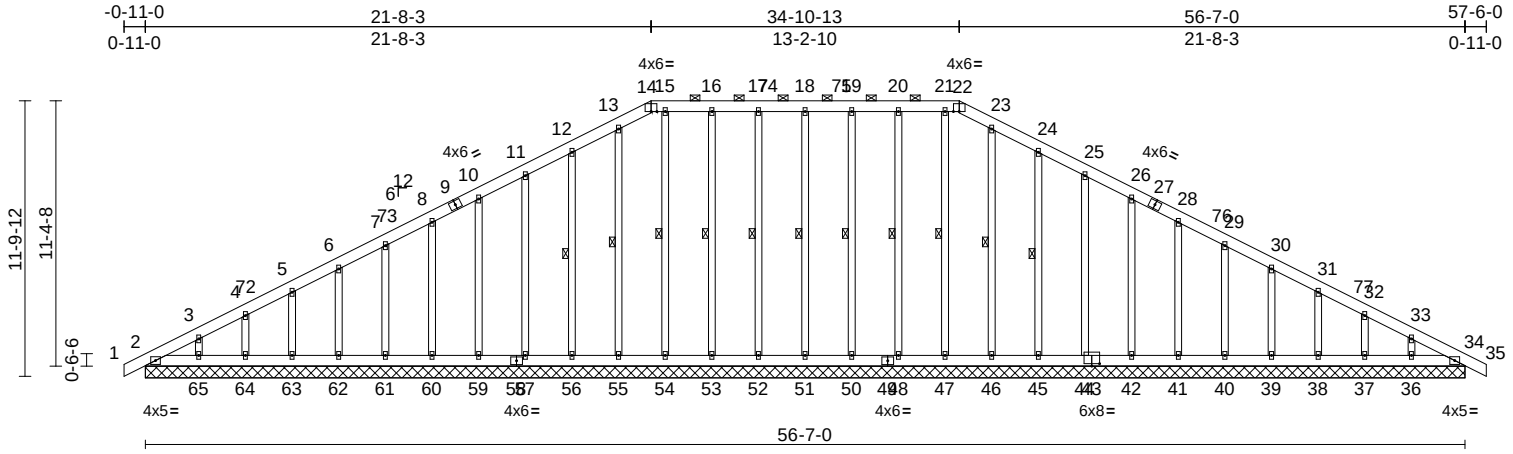
January 14,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	128 Hidden Lakes North-Roof-Plan 2 GLH
25010025-01	A01	Piggyback Base Supported Gable	1	1	I70703586 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Dec 5 2024 Print: 8.730 S Dec 5 2024 MiTek Industries, Inc. Sun Jan 12 15:39:07 Page: 1
ID:viVwf?sEtcne_sKEeR?dE2zw3dw-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:98.8

Plate Offsets (X, Y): [43:0-4-0,0-1-4]

Loading	(psf)	Spacing	1-11-4	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.07	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.23	Horz(CT)	0.01	66	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 548 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.2
BOT CHORD 2x6 SP No.2
OTHERS 2x4 SP No.3 *Except*
51-18,52-17,53-16,54-15,50-19,48-20,47-21:
2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except
2-0-0 oc purlins (6-0-0 max.): 14-22.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 18-51, 17-52, 16-53, 15-54, 13-55, 12-56, 19-50, 20-48, 21-47, 23-46, 24-45

REACTIONS (size) 2=56-7-0, 34=56-7-0, 36=56-7-0, 37=56-7-0, 38=56-7-0, 39=56-7-0, 40=56-7-0, 41=56-7-0, 42=56-7-0, 44=56-7-0, 45=56-7-0, 46=56-7-0, 47=56-7-0, 48=56-7-0, 50=56-7-0, 51=56-7-0, 52=56-7-0, 53=56-7-0, 54=56-7-0, 55=56-7-0, 56=56-7-0, 57=56-7-0, 59=56-7-0, 60=56-7-0, 61=56-7-0, 62=56-7-0, 63=56-7-0, 64=56-7-0, 65=56-7-0
Max Horiz 2=174 (LC 14)
Max Uplift 2=-17 (LC 10), 36=-49 (LC 15), 37=-41 (LC 15), 38=-43 (LC 15), 39=-42 (LC 15), 40=-42 (LC 15), 41=-42 (LC 15), 42=-42 (LC 15), 44=-44 (LC 15), 45=-50 (LC 15), 48=-26 (LC 11), 50=-27 (LC 10), 51=-24 (LC 11), 52=-27 (LC 10), 53=-26 (LC 10), 55=-10 (LC 14), 56=-48 (LC 14), 57=-43 (LC 14), 59=-42 (LC 14), 60=-42 (LC 14), 61=-42 (LC 14), 62=-42 (LC 14), 63=-43 (LC 14), 64=-40 (LC 14), 65=-51 (LC 14)
Max Grav 2=148 (LC 55), 34=147 (LC 41), 36=174 (LC 59), 37=150 (LC 45), 38=156 (LC 41), 39=155 (LC 41), 40=176 (LC 45), 41=223 (LC 45), 42=226 (LC 45), 44=225 (LC 45), 45=230 (LC 45), 46=212 (LC 45), 47=174 (LC 40), 48=213 (LC 40), 50=211 (LC 40), 51=210 (LC 40), 52=211 (LC 40), 53=213 (LC 40), 54=178 (LC 56), 55=212 (LC 43), 56=230 (LC 43), 57=225 (LC 43), 59=226 (LC 43), 60=223 (LC 43), 61=176 (LC 43), 62=155 (LC 41), 63=156 (LC 41), 64=150 (LC 43), 65=174 (LC 58)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/24, 2-3=-228/81, 3-4=-193/80, 4-5=-153/92, 5-6=-117/103, 6-7=-92/122, 7-8=-70/145, 8-10=-69/167, 10-11=-87/200, 11-12=-99/245, 12-13=-113/292, 13-14=-118/309, 14-15=-111/301, 15-16=-111/301, 16-17=-111/301, 17-18=-111/301, 18-19=-111/301, 19-20=-111/301, 20-21=-111/301, 21-22=-111/301, 22-23=-118/309, 23-24=-113/292, 24-25=-99/245, 25-26=-87/200, 26-28=-69/157, 28-29=-55/113, 29-30=-44/69, 30-31=-54/25, 31-32=-76/27, 32-33=-115/44, 33-34=-149/64, 34-35=0/24

January 14,2025

Continued on page 2

ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

BOT CHORD 2-65=-54/196, 64-65=-54/196, 63-64=-54/196, 62-63=-54/196, 61-62=-54/196, 60-61=-54/196, 59-60=-54/196, 57-59=-54/196, 56-57=-54/196, 55-56=-54/196, 54-55=-54/196, 53-54=-54/196, 52-53=-54/196, 51-52=-54/196, 50-51=-54/196, 48-50=-54/196, 47-48=-54/196, 46-47=-54/196, 45-46=-54/196, 44-45=-54/196, 42-44=-54/196, 41-42=-54/196, 40-41=-54/196, 39-40=-54/196, 38-39=-54/196, 37-38=-54/196, 36-37=-54/196, 34-36=-54/196

WEBS 18-51=-171/55, 17-52=-173/59, 16-53=-174/54, 15-54=-139/10, 13-55=-173/33, 12-56=-191/84, 11-57=-187/77, 10-59=-187/74, 8-60=-184/75, 7-61=-137/75, 6-62=-122/75, 5-63=-123/74, 4-64=-121/105, 3-65=-127/114, 19-50=-173/59, 20-48=-174/54, 21-47=-136/2, 23-46=-173/20, 24-45=-191/84, 25-44=-187/77, 26-42=-187/74, 28-41=-184/75, 29-40=-137/75, 30-39=-122/75, 31-38=-123/74, 32-37=-121/105, 33-36=-127/114

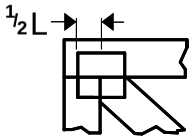
NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-11-0 to 4-8-14, Exterior(2N) 4-8-14 to 16-0-5, Corner(3R) 16-0-5 to 27-4-2, Exterior (2N) 27-4-2 to 29-2-14, Corner(3R) 29-2-14 to 40-3-8, Exterior(2N) 40-3-8 to 51-10-2, Corner(3E) 51-10-2 to 57-6-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
7) Provide adequate drainage to prevent water ponding.
8) All plates are 2x4 MT20 unless otherwise indicated.
9) Gable requires continuous bottom chord bearing.
10) Gable studs spaced at 2-0-0 oc.
11) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
12) * 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.
13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 17 lb uplift at joint 2, 24 lb uplift at joint 51, 27 lb uplift at joint 52, 26 lb uplift at joint 53, 10 lb uplift at joint 55, 48 lb uplift at joint 56, 43 lb uplift at joint 57, 42 lb uplift at joint 59, 42 lb uplift at joint 60, 42 lb uplift at joint 61, 42 lb uplift at joint 62, 43 lb uplift at joint 63, 40 lb uplift at joint 64, 51 lb uplift at joint 65, 27 lb uplift at joint 50, 26 lb uplift at joint 48, 50 lb uplift at joint 45, 44 lb uplift at joint 44, 42 lb uplift at joint 42, 42 lb uplift at joint 41, 42 lb uplift at joint 40, 42 lb uplift at joint 39, 43 lb uplift at joint 38, 41 lb uplift at joint 37, 49 lb uplift at joint 36 and 17 lb uplift at joint 2.
14) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

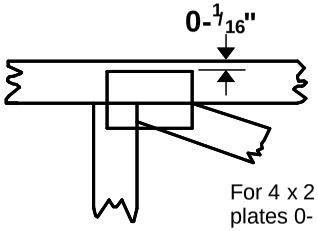
LOAD CASE(S) Standard

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.

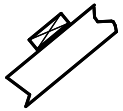
* Plate location details available in MiTek software or upon request.

PLATE SIZE

4 x 4

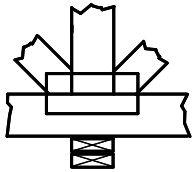
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

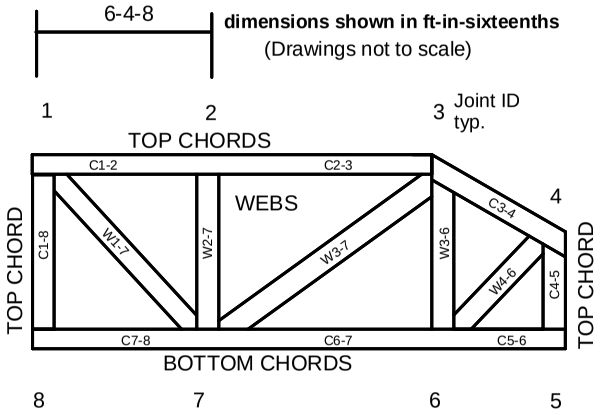


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

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.

MiTek®

ENGINEERING BY TRENCO
A MiTek Affiliate

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.