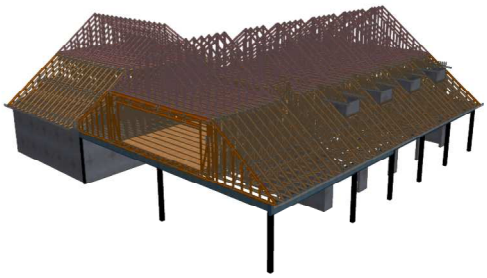
Carter Sanford Component Plant
298 Harvey Faulk Rd
Sanford, NC 27332

Phone #:919-775-1450



Builder: Johnny Faircloth
Model: Garage

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.

Apprved by: _____ **Date:** _____

General Notes:

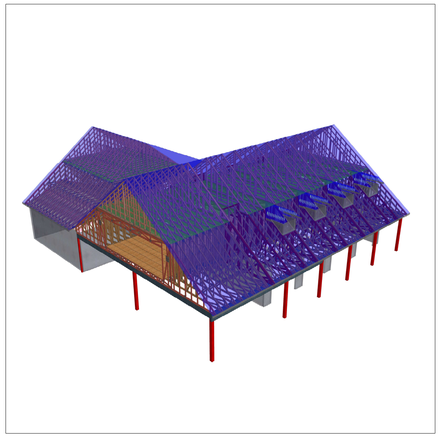
** CUTTING OR DRILLING OF COMPONENTS SHOULD NOT BE DONE WITHOUT CONTACTING COMPONENT SUPPLIER FIRST. CUSTOMER TAKES FULL RESPONSIBILITY FOR COMPONENTS IF CUT BEFORE AUTHORIZATION.

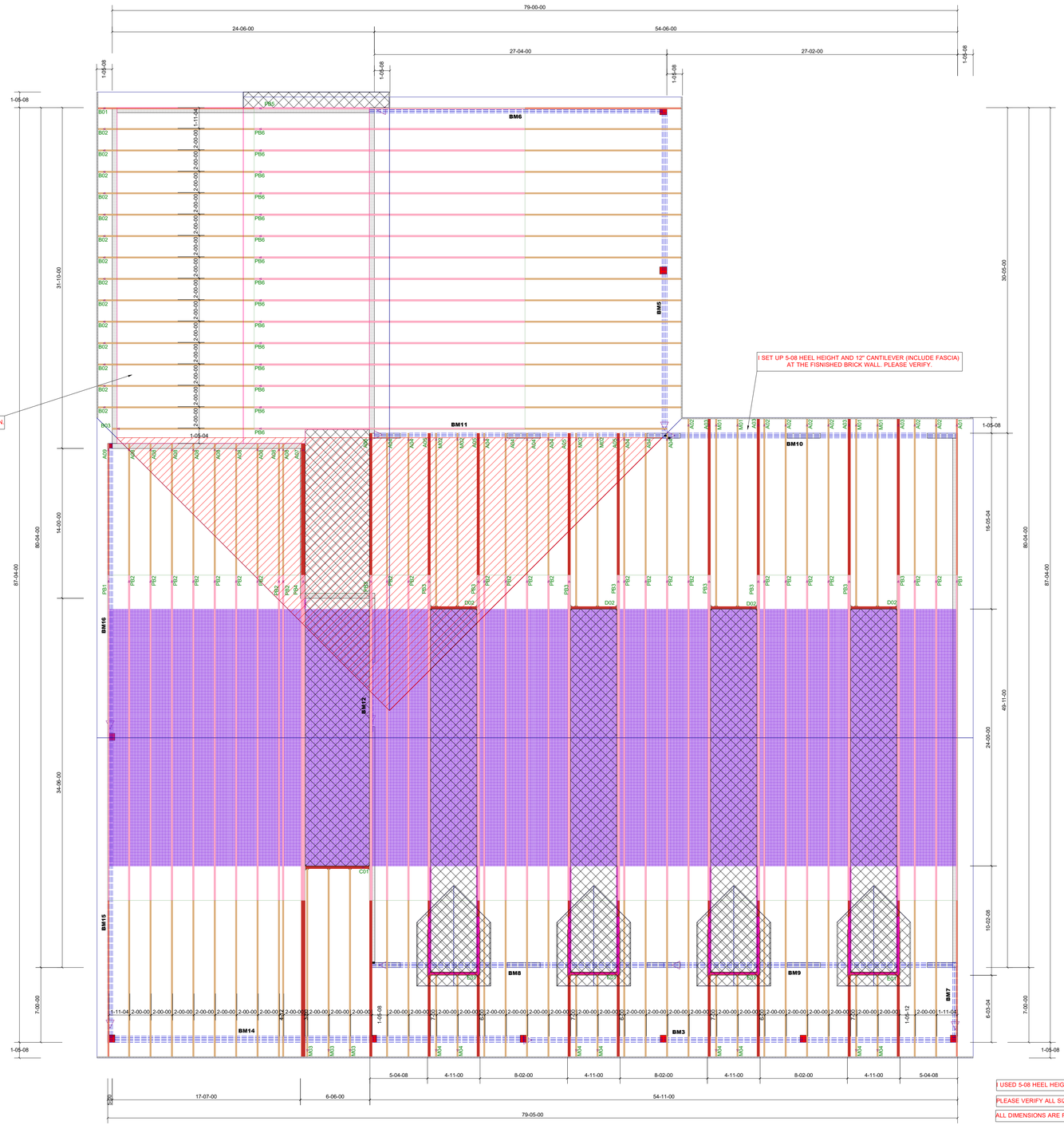
** ALL BEARING POINTS MUST BE INSTALLED PRIOR TO SETTING ANY COMPONENTS.

** 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.





Products						
PlotID	Length	Product	Plies	Net Qty	Fab Type
BM3	32-00-00	2.1 RigidLam SP LVL 1-3/4 x 11-7/8	3	3	FF
BM11	28-00-00	2.1 RigidLam SP LVL 1-3/4 x 11-7/8	2	2	FF
BM10	28-00-00	2.1 RigidLam SP LVL 1-3/4 x 11-7/8	3	3	FF
BM6	28-00-00	2.1 RigidLam SP LVL 1-3/4 x 11-7/8	3	3	FF
BM9	28-00-00	2.1 RigidLam SP LVL 1-3/4 x 11-7/8	3	3	FF
BM5	28-00-00	2.1 RigidLam SP LVL 1-3/4 x 11-7/8	3	3	FF
BM12	8-00-00	2.1 RigidLam SP LVL 1-3/4 x 11-7/8	2	2	FF
BM3	42-00-00	2.1 RigidLam SP LVL 1-3/4 x 16	3	3	FF
BM15	28-00-00	2.1 RigidLam SP LVL 1-3/4 x 16	3	3	FF
BM16	28-00-00	2.1 RigidLam SP LVL 1-3/4 x 16	3	3	FF
BM7	8-00-00	2.1 RigidLam SP LVL 1-3/4 x 16	3	3	FF
BM14	40-00-00	2.1 RigidLam SP LVL 1-3/4 x 24	4	4	FF

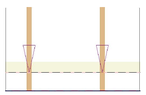
Hatch Legend
VALLEY FRAMED BY OTHERS
FRAMED BY OTHERS

Truss Connector Total List		
Manuf	Product	Qty
Simpson	HTU26-2	18
Simpson	LUS26	19
Simpson	One H2.5A	167

I USED 5-08 HEEL HEIGHT AND 1-04-00 CANTILEVER FOR ROOF TRUSS SYSTEM. PLEASE VERIFY.

PLEASE VERIFY ALL SIZE BEAM LVL AT PORCH AND HEADER GARAGE DOOR FOR THIS JOB.

ALL DIMENSIONS ARE FROM OUT FACE OF STUD TO OUT FACE OF STUD.



Truss Drawing Left End Indicator

PRELIMINARY - NOT FOR CONSTRUCTION

** 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.

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

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

** 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.

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 support structure including header beams, girders, walls, 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

Johnny Faircloth	Garage	ROOF PLACEMENT PLAN

Scale: NTS

Date: 9/4/2025

Designer: NP

Project Number: 25080105

Sheet Number: 1/1

Job	Truss	Truss Type	Qty	Ply	Garage-Johnny Faircloth-Roof-Garage
25080105-01	E01	Flat Girder	4	**2**	I76149032 Job Reference (optional)

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

Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Fri Sep 05 12:04:34 Page: 1
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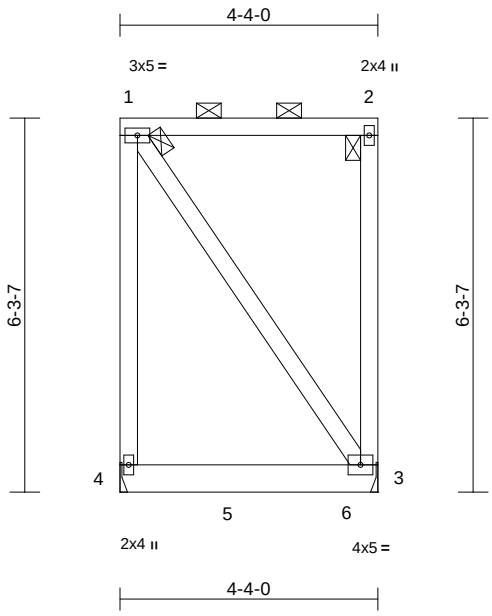

Scale = 1:38.7

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	0.29	Vert(LL)	0.01	3-4	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.18	Vert(CT)	-0.01	3-4	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.03	Horz(CT)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 86 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3

BRACING
TOP CHORD 2-0-0 oc purlins: 1-2, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 3= Mechanical, 4= Mechanical
Max Horiz 4=-161 (LC 7)
Max Uplift 3=-145 (LC 8), 4=-97 (LC 7)
Max Grav 3=603 (LC 24), 4=446 (LC 25)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-4=-244/69, 1-2=-64/48, 2-3=-198/0
BOT CHORD 3-4=-145/128
WEBS 1-3=-143/143

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) 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); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.33
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=18.9 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, Lu=50-0-0
5) Unbalanced snow loads have been considered for this design.
6) Provide adequate drainage to prevent water ponding.
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) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 97 lb uplift at joint 4 and 145 lb uplift at joint 3.
10) Load case(s) 1 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
12) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 237 lb down and 79 lb up at 1-9-12, and 243 lb down and 75 lb up at 3-9-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-96, 3-4=-20
Concentrated Loads (lb)
Vert: 5=-168 (B), 6=-174 (B)

September 5,2025

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

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

Job	Truss	Truss Type	Qty	Ply	Garage-Johnny Faircloth-Roof-Garage
25080105-01	D02	Flat Girder	4	**2**	I76149033 Job Reference (optional)

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

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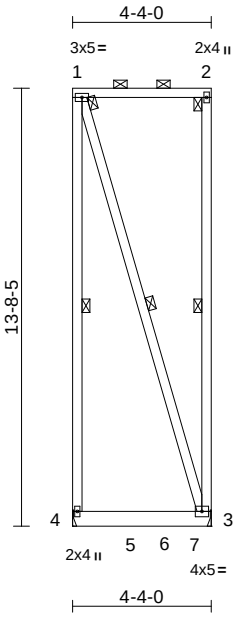

Scale = 1:72

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	0.29	Vert(LL)	-0.02	3-4	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.51	Vert(CT)	-0.04	3-4	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.20	Horz(CT)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 150 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP 2400F 2.0E *Except* 3-1:2x4 SP No.2

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

REACTIONS (size) 3= Mechanical, 4= Mechanical
Max Horiz 4=-363 (LC 7)
Max Uplift 3=-762 (LC 8), 4=-686 (LC 7)
Max Grav 3=1701 (LC 24), 4=1177 (LC 25)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-4=-609/626, 1-2=-145/107, 2-3=-121/27
BOT CHORD 3-4=-326/289
WEBS 1-3=-626/626

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) 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); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.33
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=18.9 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, Lu=50-0-0
5) Unbalanced snow loads have been considered for this design.
6) Provide adequate drainage to prevent water ponding.
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, with BCDL = 10.0psf.
8) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 686 lb uplift at joint 4 and 762 lb uplift at joint 3.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
11) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 807 lb down and 124 lb up at 1-9-12, and 833 lb down and 120 lb up at 3-9-12 on bottom chord. The design/ selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-58, 3-4=-20
Concentrated Loads (lb)
Vert: 5=-515 (F), 7=-522 (F)

September 5,2025

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.
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ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Garage-Johnny Faircloth-Roof-Garage
25080105-01	C01	Flat Girder	1	**2**	I76149034 Job Reference (optional)

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

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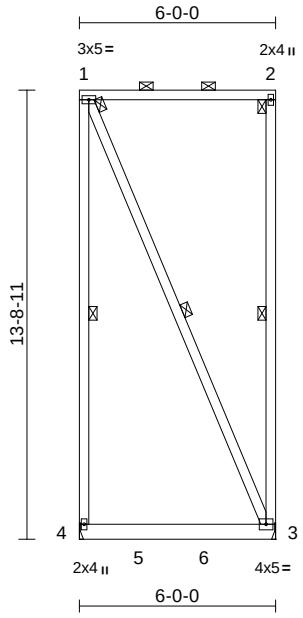

Scale = 1:70.4

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	0.37	Vert(LL)	-0.08	3-4	>840	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.90	Vert(CT)	-0.15	3-4	>471	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.16	Horz(CT)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 165 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP 2400F 2.0E *Except* 3-1:2x4 SP No.2

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

REACTIONS (size) 3= Mechanical, 4= Mechanical
Max Horiz 4=-364 (LC 7)
Max Uplift 3=-669 (LC 8), 4=-565 (LC 7)
Max Grav 3=2125 (LC 24), 4=1419 (LC 25)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-4=-440/465, 1-2=-145/108, 2-3=-171/39
BOT CHORD 3-4=-327/290
WEBS 1-3=-463/463

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) 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); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.33
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=18.9 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, Lu=50-0-0
5) Unbalanced snow loads have been considered for this design.
6) Provide adequate drainage to prevent water ponding.
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, with BCDL = 10.0psf.
8) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 565 lb uplift at joint 4 and 669 lb uplift at joint 3.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
11) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 797 lb down and 126 lb up at 1-9-12, and 802 lb down and 126 lb up at 3-9-12, and 829 lb down and 121 lb up at 5-10-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-58, 3-4=-20
Concentrated Loads (lb)
Vert: 3=-516 (B), 5=-506 (B), 6=-506 (B)

September 5,2025

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.
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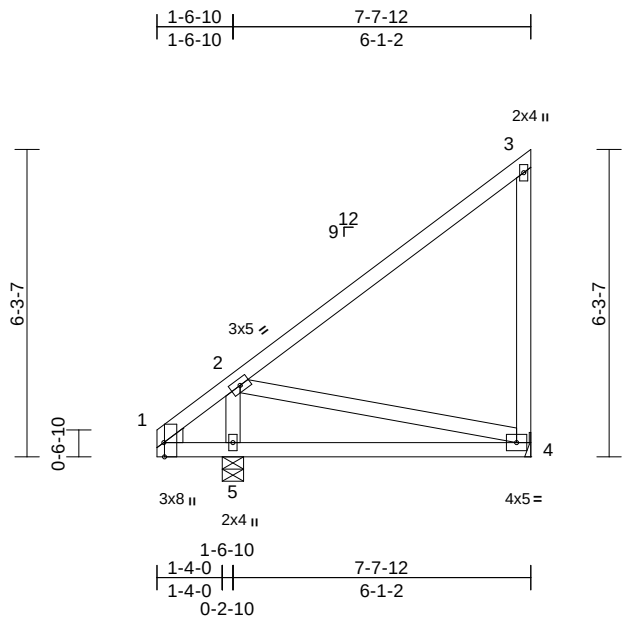
ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Garage-Johnny Faircloth-Roof-Garage
25080105-01	M04	Monopitch	8	1	I76149035 Job Reference (optional)



Scale = 1:47.1

Plate Offsets (X, Y): [1:0-3-8,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	0.49	Vert(LL)	0.01	4-5	>999	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.23	Vert(CT)	-0.05	4-5	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.28	Horz(CT)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 45 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3 *Except* 3-4:2x4 SP No.2
WEDGE Left: 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 8-6-2 oc bracing.

REACTIONS (size) 4= Mechanical, 5=0-5-4
Max Horiz 5=168 (LC 12)
Max Uplift 4=-67 (LC 10)
Max Grav 4=257 (LC 28), 5=378 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-99/64, 2-3=-222/182, 3-4=-241/207
BOT CHORD 1-5=-60/181, 4-5=-469/462
WEBS 2-5=-405/314, 2-4=-395/411

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) and C-C Exterior(2E) 0-0-0 to 3-0-0, Interior (1) 3-0-0 to 7-6-0 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=1.33
2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 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) * 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.
4) Bearings are assumed to be: Joint 5 SP No.2 .
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 67 lb uplift at joint 4.

LOAD CASE(S) Standard

September 5,2025

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

Job	Truss	Truss Type	Qty	Ply	Garage-Johnny Faircloth-Roof-Garage
25080105-01	M02	Monopitch	4	1	I76149036 Job Reference (optional)

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

Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Fri Sep 05 12:04:34 Page: 1
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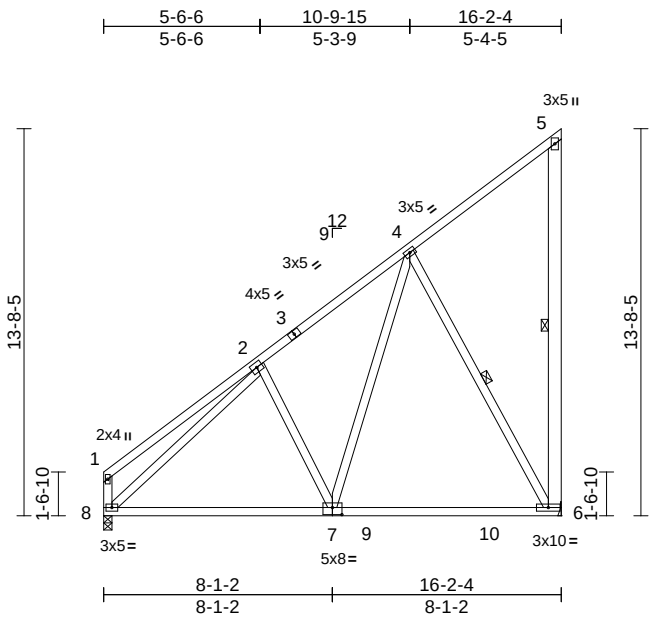


Scale = 1:81.5

Plate Offsets (X, Y): [7:0-4-0,0-3-0]

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	0.68	Vert(LL)	-0.18	6-7	>999	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.71	Vert(CT)	-0.26	6-7	>721	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.72	Horz(CT)	0.01	6	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 135 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3 *Except* 5-6:2x6 SP No.2, 8-1,4-6:2x4 SP No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 9-6-6 oc bracing.
WEBS 1 Row at midpt 5-6, 4-6

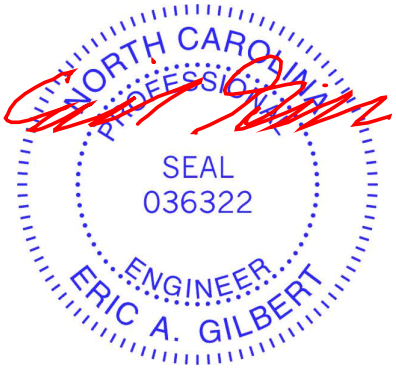
REACTIONS (size) 6= Mechanical, 8=0-3-8
Max Horiz 8=381 (LC 10)
Max Uplift 6=-112 (LC 10)
Max Grav 6=857 (LC 28), 8=767 (LC 29)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-277/120, 2-4=-805/200, 4-5=-247/232, 5-6=-224/157, 1-8=-278/102
BOT CHORD 6-8=-364/785
WEBS 2-8=-694/69, 2-7=-284/220, 4-7=-75/626, 4-6=-735/229

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) and C-C Exterior(2E) 0-1-12 to 3-1-12, Interior (1) 3-1-12 to 15-11-8 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=1.33
2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 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) * 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.
4) Bearings are assumed to be: Joint 8 SP No.2 .
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 112 lb uplift at joint 6.

LOAD CASE(S) Standard



September 5,2025

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

Job	Truss	Truss Type	Qty	Ply	Garage-Johnny Faircloth-Roof-Garage
25080105-01	M01	Monopitch	4	1	I76149037 Job Reference (optional)

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

Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Fri Sep 05 12:04:34 Page: 1
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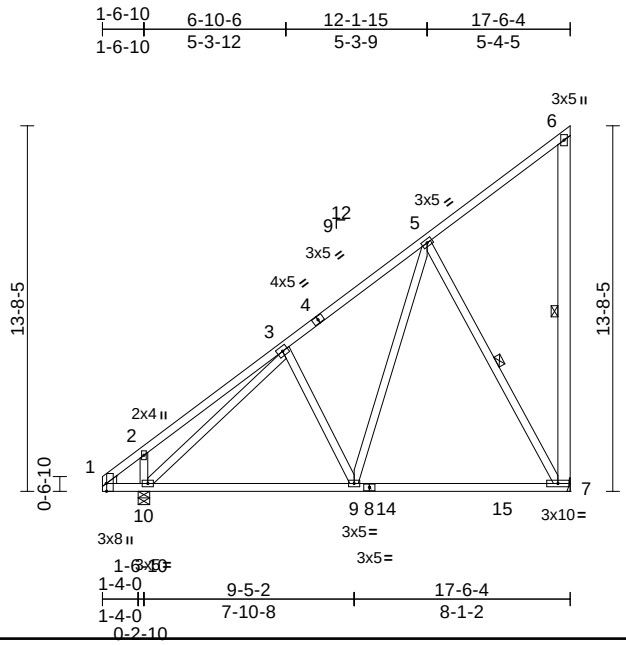


Scale = 1:86.3

Plate Offsets (X, Y): [1:0-3-8,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	0.68	Vert(LL)	-0.18	7-9	>999	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.69	Vert(CT)	-0.28	7-9	>684	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.71	Horz(CT)	0.01	7	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 140 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3 *Except* 6-7:2x6 SP No.2, 5-7:2x4 SP No.2
WEDGE Left: 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 9-10-14 oc bracing.
WEBS 1 Row at midpt 6-7, 5-7

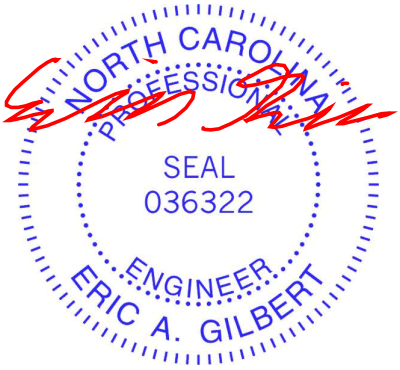
REACTIONS (size) 7= Mechanical, 10=0-5-4
Max Horiz 10=382 (LC 12)
Max Uplift 7=-113 (LC 10)
Max Grav 7=848 (LC 29), 10=894 (LC 30)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-110/14, 2-3=-267/87, 3-5=-788/196, 5-6=-248/230, 6-7=-221/151
BOT CHORD 1-10=0/109, 9-10=-338/758, 7-9=-232/470
WEBS 2-10=-317/183, 5-9=-58/595, 5-7=-717/208, 3-9=-264/196, 3-10=-687/72

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) and C-C Exterior(2E) 0-0-0 to 3-0-0, Interior (1) 3-0-0 to 17-3-8 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=1.33
2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 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) * 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.
4) Bearings are assumed to be: Joint 10 SP No.2 .
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 113 lb uplift at joint 7.
7) Attic room checked for L/360 deflection.

LOAD CASE(S) Standard



September 5,2025

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

Job	Truss	Truss Type	Qty	Ply	Garage-Johnny Faircloth-Roof-Garage
25080105-01	M03	Monopitch	3	1	I76149038 Job Reference (optional)

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

Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Fri Sep 05 12:04:34 Page: 1
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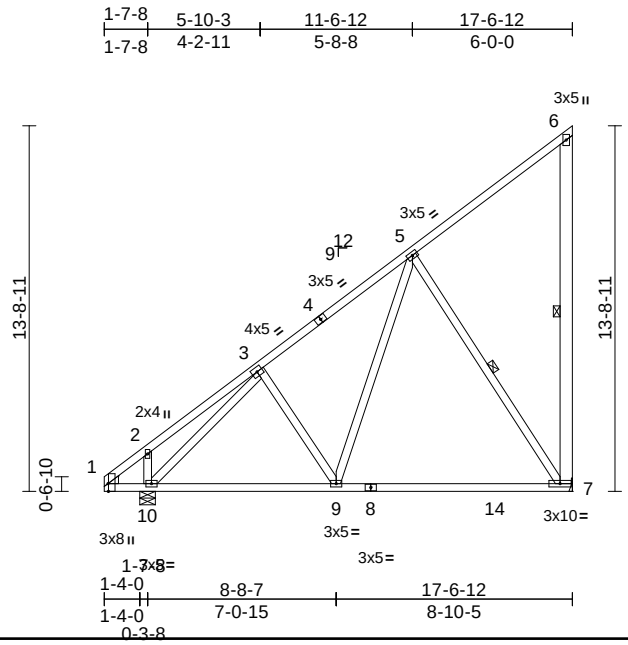

Scale = 1:86.5

Plate Offsets (X, Y): [1:0-3-8,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	0.68	Vert(LL)	-0.27	7-9	>701	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.82	Vert(CT)	-0.41	7-9	>457	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.58	Horz(CT)	0.01	7	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 137 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3 *Except* 6-7:2x6 SP No.2, 5-7:2x4 SP No.2
WEDGE Left: 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 9-5-7 oc bracing.
WEBS 1 Row at midpt 6-7, 5-7

REACTIONS (size) 7= Mechanical, 10=0-7-0
Max Horiz 10=383 (LC 12)
Max Uplift 7=-114 (LC 10)
Max Grav 7=847 (LC 28), 10=904 (LC 29)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-71/34, 2-3=-127/79, 3-5=-818/178, 5-6=-262/238, 6-7=-242/163
BOT CHORD 1-10=-2/55, 9-10=-368/785, 7-9=-248/513
WEBS 2-10=-223/119, 3-10=-828/93, 3-9=-194/194, 5-9=-42/538, 5-7=-705/212

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) and C-C Exterior(2E) 0-0-0 to 3-0-0, Interior (1) 3-0-0 to 17-4-0 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=1.33
2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 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) * 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.
4) Bearings are assumed to be: Joint 10 SP No.2 .
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 114 lb uplift at joint 7.

LOAD CASE(S) Standard

September 5,2025

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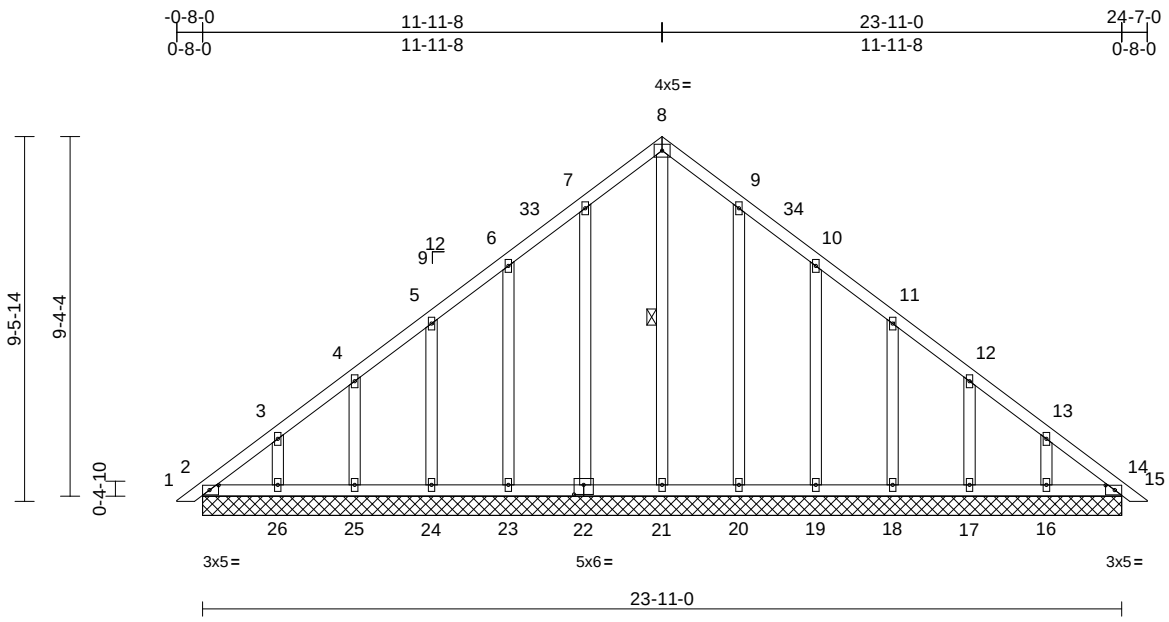
ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Garage-Johnny Faircloth-Roof-Garage
25080105-01	PB5	Piggyback	1	1	I76149039 Job Reference (optional)



Scale = 1:60

Plate Offsets (X, Y): [2:0-2-13,0-1-8], [14:0-2-13,0-1-8], [22:0-3-0,0-3-0]

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	0.05	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.16	Horz(CT)	0.00	14	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 159 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.
WEBS 1 Row at midpt 8-21

REACTIONS (size) 2=23-11-0, 14=23-11-0, 16=23-11-0, 17=23-11-0, 18=23-11-0, 19=23-11-0, 20=23-11-0, 21=23-11-0, 22=23-11-0, 23=23-11-0, 24=23-11-0, 25=23-11-0, 26=23-11-0
Max Horiz 2=-175 (LC 11)
Max Uplift 2=-36 (LC 9), 14=-1 (LC 10), 16=-39 (LC 14), 17=-30 (LC 14), 18=-32 (LC 14), 19=-34 (LC 14), 20=-28 (LC 14), 22=-29 (LC 13), 23=-34 (LC 13), 24=-32 (LC 13), 25=-30 (LC 13), 26=-40 (LC 13)
Max Grav 2=138 (LC 30), 14=111 (LC 29), 16=184 (LC 30), 17=163 (LC 30), 18=168 (LC 30), 19=166 (LC 30), 20=172 (LC 30), 21=156 (LC 32), 22=175 (LC 29), 23=165 (LC 29), 24=168 (LC 29), 25=162 (LC 29), 26=185 (LC 29)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/20, 2-3=-165/140, 3-4=-135/116, 4-5=-116/95, 5-6=-106/89, 6-7=-104/118, 7-8=-134/168, 8-9=-134/166, 9-10=-105/117, 10-11=-76/60, 11-12=-74/38, 12-13=-85/59, 13-14=-126/87, 14-15=0/20
BOT CHORD 2-26=-75/127, 25-26=-75/127, 24-25=-75/127, 23-24=-75/127, 21-23=-75/127, 20-21=-75/127, 19-20=-75/127, 18-19=-75/127, 17-18=-75/127, 16-17=-75/127, 14-16=-75/127
WEBS 8-21=-146/61, 7-22=-149/77, 6-23=-148/71, 5-24=-147/65, 4-25=-146/66, 3-26=-150/65, 9-20=-149/77, 10-19=-148/71, 11-18=-147/65, 12-17=-146/66, 13-16=-150/65

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) and C-C Exterior(2E) 0-3-1 to 3-3-1, Interior (1) 3-3-1 to 12-7-13, Exterior(2R) 12-7-13 to 15-7-13, Interior (1) 15-7-13 to 25-0-9 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=1.33
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); Pg=20.0 psf; Pf=13.9 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) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 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 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) All bearings are assumed to be SP No.2 .
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 36 lb uplift at joint 2, 1 lb uplift at joint 14, 29 lb uplift at joint 22, 34 lb uplift at joint 23, 32 lb uplift at joint 24, 30 lb uplift at joint 25, 40 lb uplift at joint 26, 28 lb uplift at joint 20, 34 lb uplift at joint 19, 32 lb uplift at joint 18, 30 lb uplift at joint 17, 39 lb uplift at joint 16, 36 lb uplift at joint 2 and 1 lb uplift at joint 14.
12) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

September 5,2025

Continued on page 2

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

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

LOAD CASE(S) Standard

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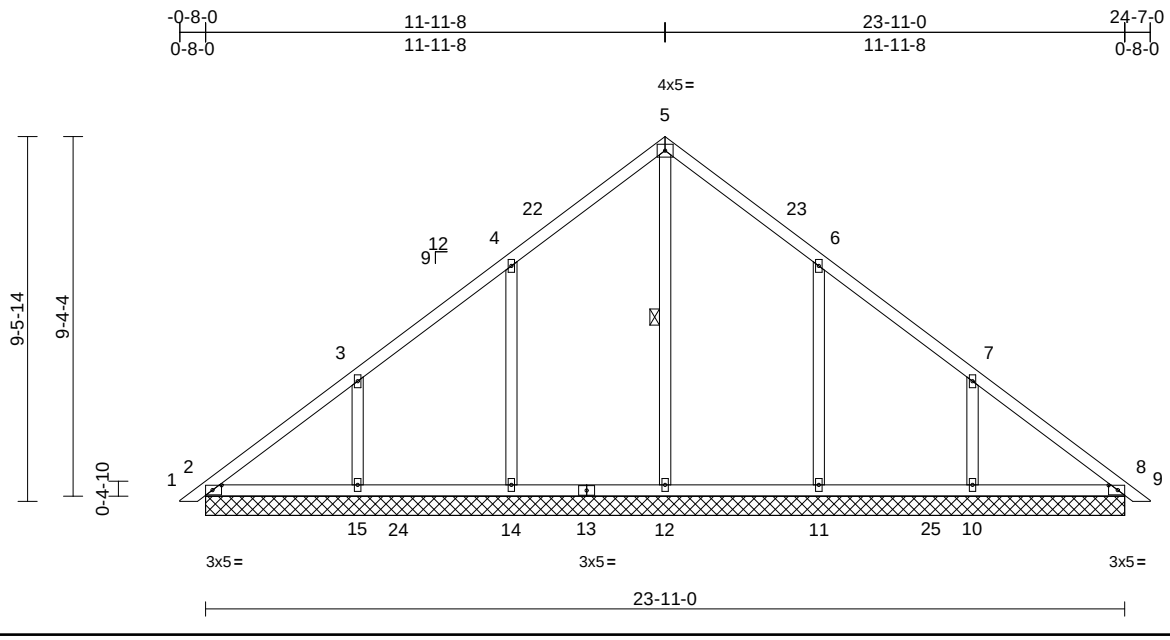
ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Garage-Johnny Faircloth-Roof-Garage
25080105-01	PB6	Piggyback	15	1	Job Reference (optional) I76149040



Scale = 1:60

Plate Offsets (X, Y): [2:0-2-13,0-1-8], [8:0-2-13,0-1-8]

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	0.19	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.16	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.21	Horz(CT)	0.00	8	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 121 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.
WEBS 1 Row at midpt 5-12

REACTIONS (size) 2=23-11-0, 8=23-11-0, 10=23-11-0, 11=23-11-0, 12=23-11-0, 14=23-11-0, 15=23-11-0
Max Horiz 2=175 (LC 12)
Max Uplift 2=-12 (LC 9), 10=-72 (LC 14), 11=-69 (LC 14), 14=-69 (LC 13), 15=-72 (LC 13)
Max Grav 2=225 (LC 30), 8=199 (LC 29), 10=451 (LC 30), 11=461 (LC 30), 12=359 (LC 32), 14=461 (LC 29), 15=452 (LC 29)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/20, 2-3=-165/128, 3-4=-174/95, 4-5=-197/168, 5-6=-198/166, 6-7=-134/55, 7-8=-123/72, 8-9=0/20
BOT CHORD 2-15=-54/115, 14-15=-54/115, 12-14=-54/115, 11-12=-54/115, 10-11=-54/115, 8-10=-54/115
WEBS 5-12=-157/19, 4-14=-306/151, 3-15=-308/132, 6-11=-306/151, 7-10=-308/132

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) and C-C Exterior(2E) 0-3-1 to 3-3-1, Interior (1) 3-3-1 to 12-7-13, Exterior(2R) 12-7-13 to 15-7-13, Interior (1) 15-7-13 to 25-0-9 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=1.33
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); Pg=20.0 psf; Pf=13.9 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) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 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 4-0-0 oc.
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) All bearings are assumed to be SP No.2 .
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 12 lb uplift at joint 2, 69 lb uplift at joint 14, 72 lb uplift at joint 15, 69 lb uplift at joint 11, 72 lb uplift at joint 10 and 12 lb uplift at joint 2.
12) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard

September 5,2025

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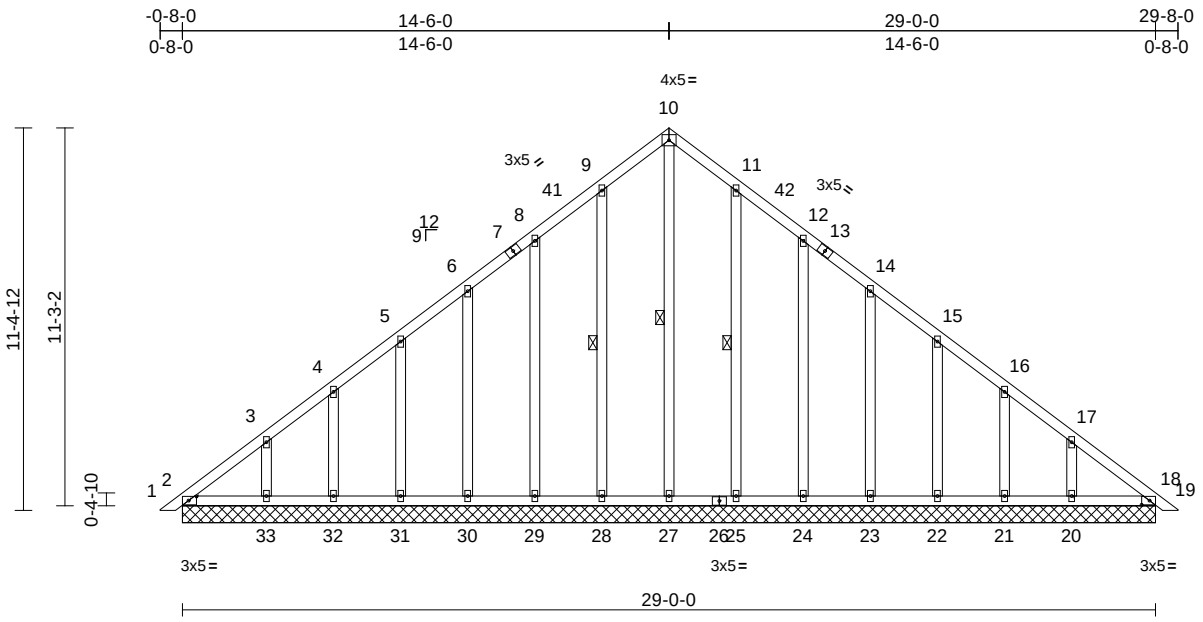
ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Garage-Johnny Faircloth-Roof-Garage
25080105-01	PB1	Piggyback	2	1	I76149041 Job Reference (optional)



Scale = 1:68.7

Plate Offsets (X, Y): [2:0-2-13,0-1-8], [18:0-2-13,0-1-8]

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	0.07	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.18	Horz(CT)	0.01	18	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 213 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3 *Except* 27-10:2x4 SP No.2

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.
WEBS 1 Row at midpt 10-27, 9-28, 11-25

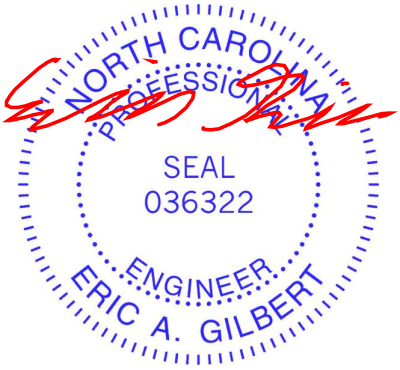
REACTIONS (size) 2=29-0-0, 18=29-0-0, 20=29-0-0, 21=29-0-0, 22=29-0-0, 23=29-0-0, 24=29-0-0, 25=29-0-0, 27=29-0-0, 28=29-0-0, 29=29-0-0, 30=29-0-0, 31=29-0-0, 32=29-0-0, 33=29-0-0
Max Horiz 2=210 (LC 12)
Max Uplift 2=-41 (LC 9), 20=-46 (LC 14), 21=-27 (LC 14), 22=-33 (LC 14), 23=-31 (LC 14), 24=-36 (LC 14), 25=-25 (LC 14), 28=-27 (LC 13), 29=-35 (LC 13), 30=-31 (LC 13), 31=-33 (LC 13), 32=-27 (LC 13), 33=-47 (LC 13)
Max Grav 2=164 (LC 30), 18=132 (LC 29), 20=219 (LC 30), 21=151 (LC 30), 22=171 (LC 30), 23=166 (LC 30), 24=167 (LC 30), 25=171 (LC 30), 27=183 (LC 14), 28=174 (LC 29), 29=166 (LC 29), 30=166 (LC 29), 31=171 (LC 29), 32=150 (LC 29), 33=221 (LC 29)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/20, 2-3=-201/171, 3-4=-163/138, 4-5=-134/120, 5-6=-124/109, 6-8=-113/107, 8-9=-125/158, 9-10=-156/205, 10-11=-156/204, 11-12=-125/156, 12-14=-96/99, 14-15=-71/46, 15-16=-81/50, 16-17=-95/69, 17-18=-150/105, 18-19=0/20
BOT CHORD 2-33=-91/150, 32-33=-91/150, 31-32=-91/150, 30-31=-91/150, 29-30=-91/150, 28-29=-91/150, 27-28=-91/150, 25-27=-91/150, 24-25=-91/150, 23-24=-91/150, 22-23=-91/150, 21-22=-91/150, 20-21=-91/150, 18-20=-91/150
WEBS 10-27=-188/90, 9-28=-146/73, 8-29=-149/73, 6-30=-146/65, 5-31=-149/67, 4-32=-139/63, 3-33=-175/75, 11-25=-146/73, 12-24=-149/73, 14-23=-146/65, 15-22=-149/67, 16-21=-139/63, 17-20=-175/75

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) and C-C Exterior(2E) 0-3-1 to 3-2-5, Interior (1) 3-2-5 to 15-2-5, Exterior(2R) 15-2-5 to 18-2-5, Interior (1) 18-2-5 to 30-1-9 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=1.33
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); Pg=20.0 psf; Pf=13.9 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) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 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 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) All bearings are assumed to be SP No.2 .



September 5,2025

Continued on page 2

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11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 41 lb uplift at joint 2, 27 lb uplift at joint 28, 35 lb uplift at joint 29, 31 lb uplift at joint 30, 33 lb uplift at joint 31, 27 lb uplift at joint 32, 47 lb uplift at joint 33, 25 lb uplift at joint 25, 36 lb uplift at joint 24, 31 lb uplift at joint 23, 33 lb uplift at joint 22, 27 lb uplift at joint 21, 46 lb uplift at joint 20 and 41 lb uplift at joint 2.
12) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard

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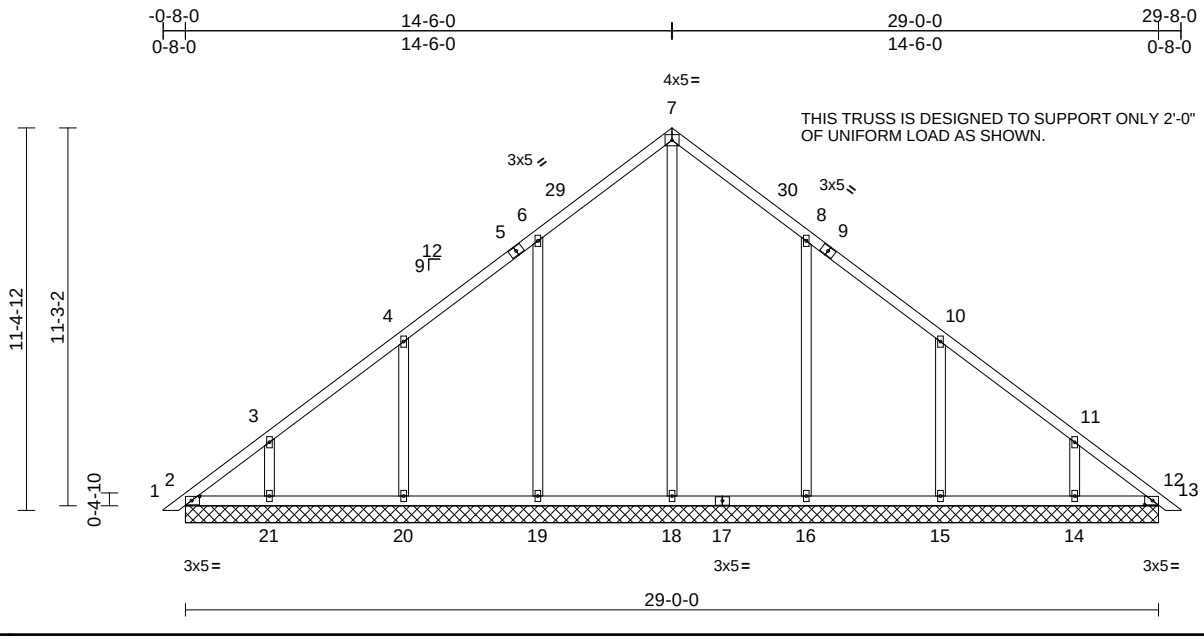
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Garage-Johnny Faircloth-Roof-Garage
25080105-01	PB3	Piggyback	9	2	Job Reference (optional) I76149042



Scale = 1:68.7

Plate Offsets (X, Y): [2:0-2-13,0-1-8], [12:0-2-13,0-1-8]

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	0.10	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.08	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.08	Horz(CT)	0.00	12	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 315 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3 *Except* 18-7:2x4 SP No.2

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=29-0-0, 12=29-0-0, 14=29-0-0, 15=29-0-0, 16=29-0-0, 18=29-0-0, 19=29-0-0, 20=29-0-0, 21=29-0-0
Max Horiz 2=210 (LC 12)
Max Uplift 2=-46 (LC 9), 12=-5 (LC 10), 14=-61 (LC 14), 15=-63 (LC 14), 16=-70 (LC 14), 19=-71 (LC 13), 20=-63 (LC 13), 21=-62 (LC 13)
Max Grav 2=175 (LC 30), 12=143 (LC 29), 14=351 (LC 30), 15=429 (LC 30), 16=473 (LC 30), 18=385 (LC 32), 19=474 (LC 29), 20=428 (LC 29), 21=352 (LC 29)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/20, 2-3=-203/170, 3-4=-184/136, 4-6=-165/116, 6-7=-199/202, 7-8=-199/200, 8-10=-134/90, 10-11=-132/69, 11-12=-148/101, 12-13=0/20
BOT CHORD 2-21=-79/142, 20-21=-79/142, 19-20=-79/142, 18-19=-79/142, 16-18=-79/142, 15-16=-79/142, 14-15=-79/142, 12-14=-79/142
WEBS 7-18=-186/34, 6-19=-308/150, 4-20=-297/135, 3-21=-262/117, 8-16=-308/150, 10-15=-297/135, 11-14=-262/117

NOTES

1) 2-ply truss to be connected together as follows:
Top chords connected with 10d (0.131"x3") nails as follows: 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected with 10d (0.131"x3") nails 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) and C-C Exterior(2E) 0-3-1 to 3-2-5, Interior (1) 3-2-5 to 15-2-5, Exterior(2R) 15-2-5 to 18-2-5, Interior (1) 18-2-5 to 30-1-9 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=1.33
5) 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.
6) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 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
7) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
8) All plates are 2x4 MT20 unless otherwise indicated.
9) Gable requires continuous bottom chord bearing.
10) Gable studs spaced at 4-0-0 oc.
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, with BCDL = 10.0psf.
12) All bearings are assumed to be SP No.2 .
13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 46 lb uplift at joint 2, 71 lb uplift at joint 19, 63 lb uplift at joint 20, 62 lb uplift at joint 21, 70 lb uplift at joint 16, 63 lb uplift at joint 15, 61 lb uplift at joint 14, 5 lb uplift at joint 12, 46 lb uplift at joint 2 and 5 lb uplift at joint 12.
14) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard

September 5,2025

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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Garage-Johnny Faircloth-Roof-Garage
25080105-01	PB2	Piggyback	25	1	I76149043 Job Reference (optional)

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

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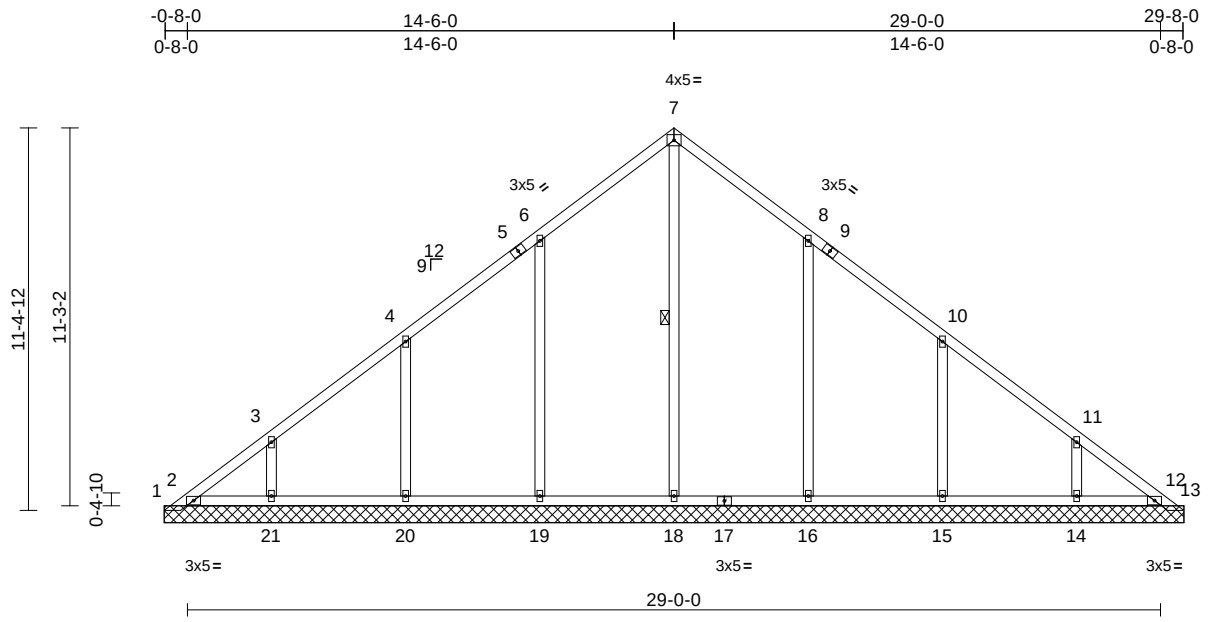

Scale = 1:68.7

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	0.20	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.17	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.37	Horiz(TL)	0.01	12	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 157 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3 *Except* 18-7:2x4 SP No.2

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.
WEBS 1 Row at midpt 7-18

REACTIONS (size) 1=30-4-11, 2=30-4-11, 12=30-4-11, 13=30-4-11, 14=30-4-11, 15=30-4-11, 16=30-4-11, 18=30-4-11, 19=30-4-11, 20=30-4-11, 21=30-4-11
Max Horiz 1=210 (LC 12)
Max Uplift 1=-159 (LC 11), 2=-12 (LC 10), 13=-29 (LC 30), 14=-58 (LC 14), 15=-63 (LC 14), 16=-70 (LC 14), 19=-71 (LC 13), 20=-63 (LC 13), 21=-58 (LC 13)
Max Grav 1=148 (LC 10), 2=215 (LC 29), 12=177 (LC 29), 13=14 (LC 14), 14=342 (LC 30), 15=430 (LC 30), 16=473 (LC 30), 18=384 (LC 32), 19=473 (LC 29), 20=430 (LC 29), 21=342 (LC 29)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-257/275, 2-3=-203/168, 3-4=-184/136, 4-6=-165/116, 6-7=-198/230, 7-8=-198/230, 8-10=-134/96, 10-11=-132/69, 11-12=-167/99, 12-13=-11/39
BOT CHORD 2-21=-81/168, 20-21=-81/168, 19-20=-81/168, 18-19=-81/168, 16-18=-81/168, 15-16=-81/168, 14-15=-81/168, 12-14=-81/168
WEBS 7-18=-186/34, 6-19=-308/175, 4-20=-298/172, 3-21=-257/148, 8-16=-308/175, 10-15=-298/172, 11-14=-257/148

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) and C-C Corner (3E) 0-3-1 to 3-2-5, Exterior(2N) 3-2-5 to 15-2-5, Corner (3R) 15-2-5 to 18-2-5, Exterior(2N) 18-2-5 to 30-1-9 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=1.33
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); Pg=20.0 psf; Pf=13.9 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) All plates are 2x4 MT20 unless otherwise indicated.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 oc.
8) * 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.
9) All bearings are assumed to be SP No.2 .
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 12 lb uplift at joint 2, 71 lb uplift at joint 19, 63 lb uplift at joint 20, 58 lb uplift at joint 21, 70 lb uplift at joint 16, 63 lb uplift at joint 15, 58 lb uplift at joint 14, 159 lb uplift at joint 1, 29 lb uplift at joint 13 and 12 lb uplift at joint 2.
11) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard

September 5,2025

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.
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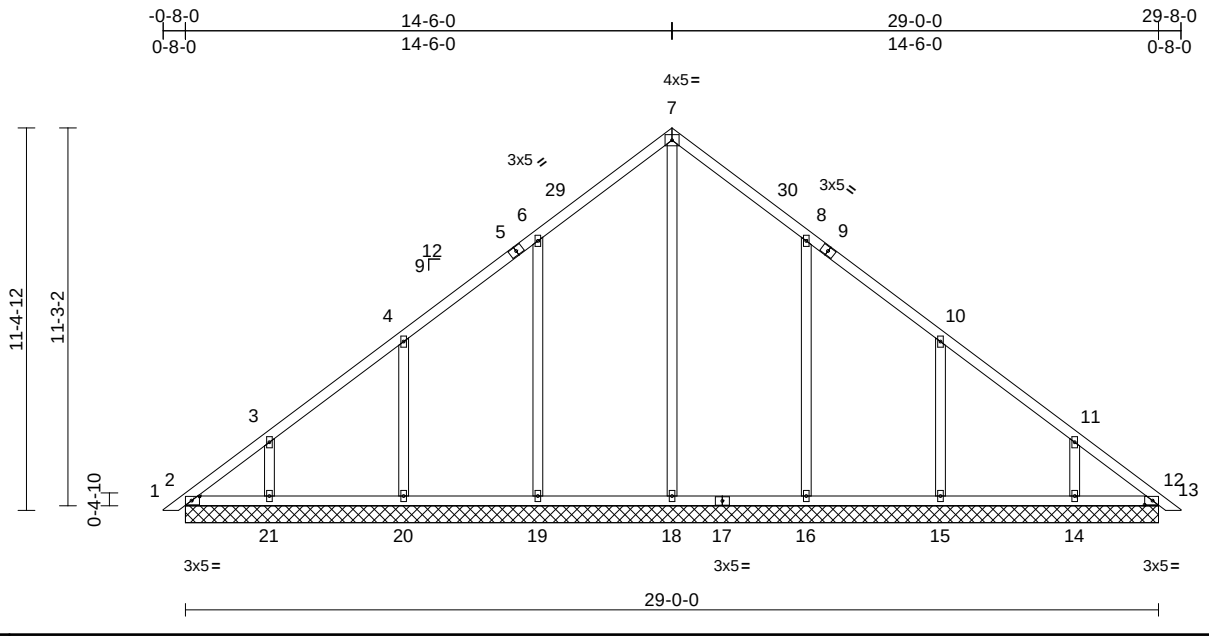
ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Garage-Johnny Faircloth-Roof-Garage
25080105-01	PB4	Piggyback	1	3	I76149044 Job Reference (optional)



Scale = 1:68.7

Plate Offsets (X, Y): [2:0-2-13,0-1-8], [12:0-2-13,0-1-8]

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	0.07	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.03	Horz(CT)	0.00	12	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 472 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3 *Except* 18-7:2x4 SP No.2

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=29-0-0, 12=29-0-0, 14=29-0-0, 15=29-0-0, 16=29-0-0, 18=29-0-0, 19=29-0-0, 20=29-0-0, 21=29-0-0
Max Horiz 2=-210 (LC 11)
Max Uplift 2=-46 (LC 9), 12=-5 (LC 10), 14=-61 (LC 14), 15=-63 (LC 14), 16=-70 (LC 14), 19=-71 (LC 13), 20=-63 (LC 13), 21=-62 (LC 13)
Max Grav 2=175 (LC 30), 12=143 (LC 29), 14=351 (LC 30), 15=429 (LC 30), 16=473 (LC 30), 18=385 (LC 32), 19=474 (LC 29), 20=428 (LC 29), 21=352 (LC 29)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/20, 2-3=-203/170, 3-4=-184/136, 4-6=-165/116, 6-7=-199/203, 7-8=-199/201, 8-10=-134/91, 10-11=-132/69, 11-12=-148/101, 12-13=0/20
BOT CHORD 2-21=-79/142, 20-21=-79/142, 19-20=-79/142, 18-19=-79/142, 16-18=-79/142, 15-16=-79/142, 14-15=-79/142, 12-14=-79/142
WEBS 7-18=-186/35, 6-19=-308/150, 4-20=-297/135, 3-21=-262/117, 8-16=-308/150, 10-15=-297/135, 11-14=-262/117

NOTES

1) 3-ply truss to be connected together as follows:
Top chords connected with 10d (0.131"x3") nails as follows: 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected with 10d (0.131"x3") nails 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) and C-C Exterior(2E) 0-3-1 to 3-2-5, Interior (1) 3-2-5 to 15-2-5, Exterior(2R) 15-2-5 to 18-2-5, Interior (1) 18-2-5 to 30-1-9 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=1.33
5) 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.
6) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 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
7) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
8) All plates are 2x4 MT20 unless otherwise indicated.
9) Gable requires continuous bottom chord bearing.
10) Gable studs spaced at 4-0-0 oc.
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, with BCDL = 10.0psf.
12) All bearings are assumed to be SP No.2 .
13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 46 lb uplift at joint 2, 71 lb uplift at joint 19, 63 lb uplift at joint 20, 62 lb uplift at joint 21, 70 lb uplift at joint 16, 63 lb uplift at joint 15, 61 lb uplift at joint 14, 5 lb uplift at joint 12, 46 lb uplift at joint 2 and 5 lb uplift at joint 12.
14) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard

September 5,2025

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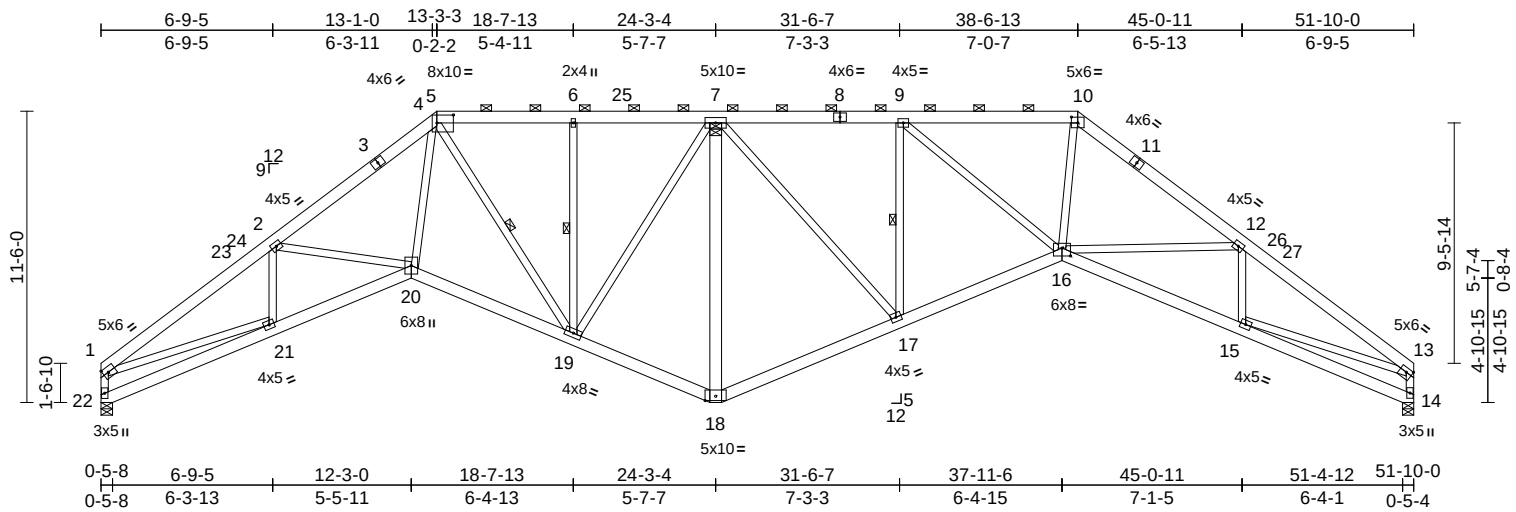
ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Garage-Johnny Faircloth-Roof-Garage
25080105-01	B03	Piggyback Base	1	1	I76149045 Job Reference (optional)



Scale = 1:91

Plate Offsets (X, Y): [5:0-7-12,0-3-12], [10:0-3-0,0-2-12], [13:0-2-12,0-2-0], [16:0-4-0,0-3-12]

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	0.35	Vert(LL)	-0.05	15-16	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.25	Vert(CT)	-0.10	15-16	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.58	Horz(CT)	0.07	14	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 442 lb	FT = 20%

LUMBER

TOP CHORD 2x6 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3 *Except* 17-7:2x4 SP No.2, 18-7:2x6 SP No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 5-10.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 6-19, 9-17, 5-19

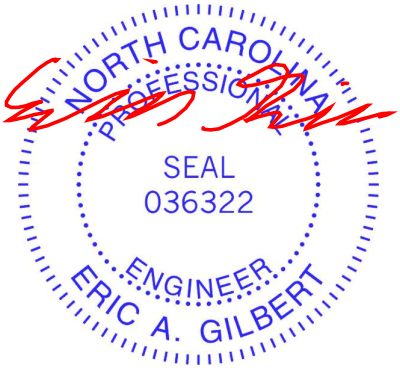
REACTIONS (size) 7=0-5-8, 14=0-5-4, 22=0-5-8
Max Horiz 22=-213 (LC 11)
Max Uplift 14=-36 (LC 14), 22=-16 (LC 13)
Max Grav 7=2922 (LC 2), 14=698 (LC 35), 22=514 (LC 34)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-824/108, 2-4=-248/266, 4-5=0/500, 5-6=0/556, 6-7=0/556, 7-9=0/392, 9-10=-427/169, 10-12=-664/179, 12-13=-1268/127, 1-22=-491/84, 13-14=-681/83
BOT CHORD 21-22=-231/312, 20-21=-229/686, 19-20=-298/233, 18-19=-1184/151, 17-18=-1189/155, 16-17=-445/176, 15-16=-19/1034, 14-15=-48/165
WEBS 2-21=0/124, 2-20=-579/182, 6-19=-309/107, 7-19=-38/906, 7-17=-7/1065, 9-17=-936/98, 9-16=0/771, 10-16=-159/85, 12-16=-598/197, 12-15=-13/111, 1-21=-5/490, 13-15=-8/837, 7-18=-38/1000, 5-19=-869/81, 4-20=-94/478

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) and C-C Exterior(2E) 0-1-12 to 5-3-15, Interior (1) 5-3-15 to 13-3-3, Exterior(2R) 13-3-3 to 20-7-2, Interior (1) 20-7-2 to 38-6-13, Exterior(2R) 38-6-13 to 45-10-13, Interior (1) 45-10-13 to 51-8-4 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=1.33
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=18.9 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, Lu=50-0-0
4) Provide adequate drainage to prevent water ponding.
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.
6) Bearings are assumed to be: Joint 22 SP No.2 , Joint 7 SP No.3 , Joint 14 SP No.2 .
7) Bearing at joint(s) 22, 14 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 16 lb uplift at joint 22 and 36 lb uplift at joint 14.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
10) Gap between inside of top chord bearing and first diagonal or vertical web shall not exceed 0.500in.

LOAD CASE(S) Standard



September 5,2025

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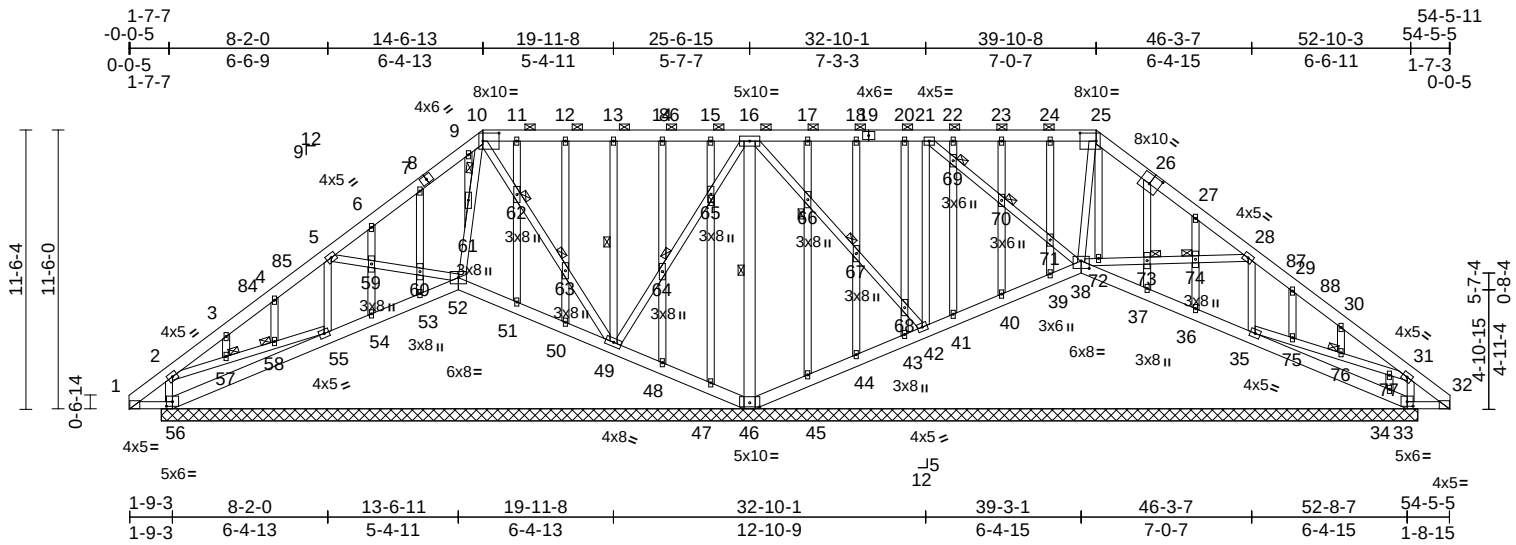
ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Garage-Johnny Faircloth-Roof-Garage
25080105-01	B01	Piggyback Base Supported Gable	1	1	I76149046 Job Reference (optional)



Scale = 1:95.1

Plate Offsets (X, Y): [10:0-8-0,0-4-0], [25:0-8-0,0-4-0], [26:0-5-0,0-4-8], [33:0-3-0,0-2-4], [38:0-4-0,0-3-12], [56:0-3-0,0-2-4]

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	0.18	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.10	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.27	Horiz(TL)	0.01	35	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 613 lb	FT = 20%

LUMBER

TOP CHORD 2x6 SP No.2
BOT CHORD 2x6 SP No.2 *Except* 1-56,33-32:2x4 SP No.2
WEBS 2x4 SP No.3 *Except* 42-16:2x4 SP No.2, 46-16:2x6 SP No.2
OTHERS 2x4 SP No.3

BRACING

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except 2-0-0 oc purlins (10-0-0 max.): 10-25.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing, Except: 10-0-0 oc bracing: 1-56,55-56,50-51,33-34,32-33.
WEBS 1 Row at midpt 13-49, 16-46
JOINTS 1 Brace at Jt(s): 57, 58, 61, 62, 63, 64, 65, 66, 67, 69, 70, 73, 74, 76

REACTIONS (lb/size) 33=89/51-10-0, 34=249/51-10-0, 35=356/51-10-0, 36=52/51-10-0, 37=173/51-10-0, 38=154/51-10-0, 39=150/51-10-0, 40=161/51-10-0, 41=115/51-10-0, 42=87/51-10-0, 43=108/51-10-0, 44=157/51-10-0, 45=164/51-10-0, 46=119/51-10-0, 47=118/51-10-0, 48=159/51-10-0, 49=262/51-10-0, 50=138/51-10-0, 51=187/51-10-0, 53=221/51-10-0, 54=-37/51-10-0, 55=445/51-10-0, 56=313/51-10-0
Max Horiz 56=-207 (LC 11)
Max Uplift 33=-26 (LC 14), 34=-5 (LC 14), 35=-29 (LC 14), 36=-30 (LC 14), 37=-17 (LC 14), 39=-9 (LC 10), 40=-4 (LC 9), 42=-19 (LC 10), 44=-5 (LC 9), 46=-55 (LC 14), 48=-5 (LC 9), 49=-32 (LC 10), 50=-30 (LC 9), 51=-10 (LC 10), 53=-25 (LC 10), 54=-55 (LC 18), 56=-56 (LC 14)
Max Grav 33=119 (LC 35), 34=301 (LC 29), 35=424 (LC 35), 36=71 (LC 29), 37=205 (LC 29), 38=182 (LC 31), 39=154 (LC 2), 40=166 (LC 34), 41=120 (LC 34), 42=97 (LC 35), 43=114 (LC 34), 44=162 (LC 2), 45=168 (LC 35), 46=126 (LC 2), 47=121 (LC 35), 48=164 (LC 35), 49=282 (LC 34), 50=149 (LC 35), 51=198 (LC 34), 53=290 (LC 28), 54=-10 (LC 10), 55=537 (LC 28), 56=385 (LC 29)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-56/28, 2-3=-131/84, 3-4=-75/98, 4-5=-50/154, 5-6=-98/65, 6-7=-53/76, 7-9=-88/120, 9-10=-77/132, 10-11=-80/165, 11-12=-80/165, 12-13=-80/165, 13-14=-80/165, 14-15=-80/165, 15-16=-80/165, 16-17=-83/166, 17-18=-83/166, 18-20=-83/166, 20-21=-83/166, 21-22=-52/131, 22-23=-52/131, 23-24=-52/131, 24-25=-52/131, 25-27=-58/128, 27-28=-35/55, 28-29=0/152, 29-30=-7/83, 30-31=-46/55, 31-32=-17/49
BOT CHORD 1-56=-28/90, 55-56=-244/286, 54-55=-167/129, 53-54=-146/155, 52-53=-145/131, 51-52=-121/205, 50-51=-122/214, 49-50=-121/208, 48-49=-90/152, 47-48=-89/151, 46-47=-88/149, 45-46=-90/152, 44-45=-90/151, 43-44=-90/151, 42-43=-89/147, 41-42=-105/169, 40-41=-109/171, 39-40=-109/170, 38-39=-107/168, 37-38=-102/116, 36-37=-93/117, 35-36=-107/110, 34-35=-42/58, 33-34=-9/79, 32-33=-25/52

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Continued on page 2

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

WEBS 2-56=-325/173, 5-55=-339/51, 5-59=-61/120, 59-60=-59/118, 52-60=-62/123, 52-61=-64/73, 10-61=-51/75, 13-49=-123/48, 49-64=-66/34, 64-65=-67/35, 16-65=-64/33, 21-42=-58/15, 16-66=-37/29, 66-67=-38/29, 67-68=-38/29, 42-68=-37/30, 25-38=-132/0, 28-35=-296/71, 31-33=-187/57, 35-75=-107/111, 75-76=-105/112, 76-77=-130/123, 31-77=-103/109, 16-46=-82/23, 2-57=-135/114, 57-58=-135/114, 55-58=-130/111, 21-69=-55/52, 69-70=-53/50, 70-71=-53/50, 38-71=-54/51, 38-72=-53/98, 72-73=-51/97, 73-74=-46/90, 28-74=-46/91, 10-62=-116/41, 62-63=-106/38, 49-63=-109/39, 3-57=-7/4, 4-58=-28/16, 6-59=-10/35, 54-59=-15/47, 7-60=-177/96, 53-60=-180/74, 9-61=-19/17, 11-62=-117/26, 51-62=-125/29, 12-63=-120/53, 50-63=-119/55, 14-64=-124/37, 48-64=-125/37, 15-65=-87/20, 47-65=-85/20, 17-66=-122/28, 45-66=-121/28, 18-67=-125/28, 44-67=-125/28, 20-68=-79/19, 43-68=-79/19, 22-69=-84/25, 41-69=-85/28, 23-70=-125/50, 40-70=-125/50, 24-71=-125/37, 39-71=-124/35, 25-72=-22/13, 26-73=-148/87, 37-73=-152/81, 27-74=-62/59, 36-74=-64/68, 29-75=-7/12, 30-76=-83/38, 34-77=-164/82

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) and C-C Exterior(2E) 0-0-5 to 5-5-12, Interior (1) 5-5-12 to 14-7-3, Exterior(2R) 14-7-3 to 22-3-10, Interior (1) 22-3-10 to 39-10-13, Exterior(2R) 39-10-13 to 47-7-5, Interior (1) 47-7-5 to 54-5-11 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=1.33
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); Pg=20.0 psf; Pf=18.9 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, Lu=50-0-0; Min. flat roof snow load governs. Rain surcharge applied to all exposed surfaces with slopes less than 0.500/12 in accordance with IBC 1608.3.4.
5) Provide adequate drainage to prevent water ponding.
6) All plates are 2x4 MT20 unless otherwise indicated.
7) Gable studs spaced at 2-0-0 oc.
8) * 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.
9) Bearing at joint(s) 46 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
10) One RT4 MiTek connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 56, 46, 33, 49, 42, 35, 54, 53, 51, 50, 48, 44, 40, 39, 37, 36, and 34. This connection is for uplift only and does not consider lateral forces.
11) Non Standard bearing condition. Review required.
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

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.
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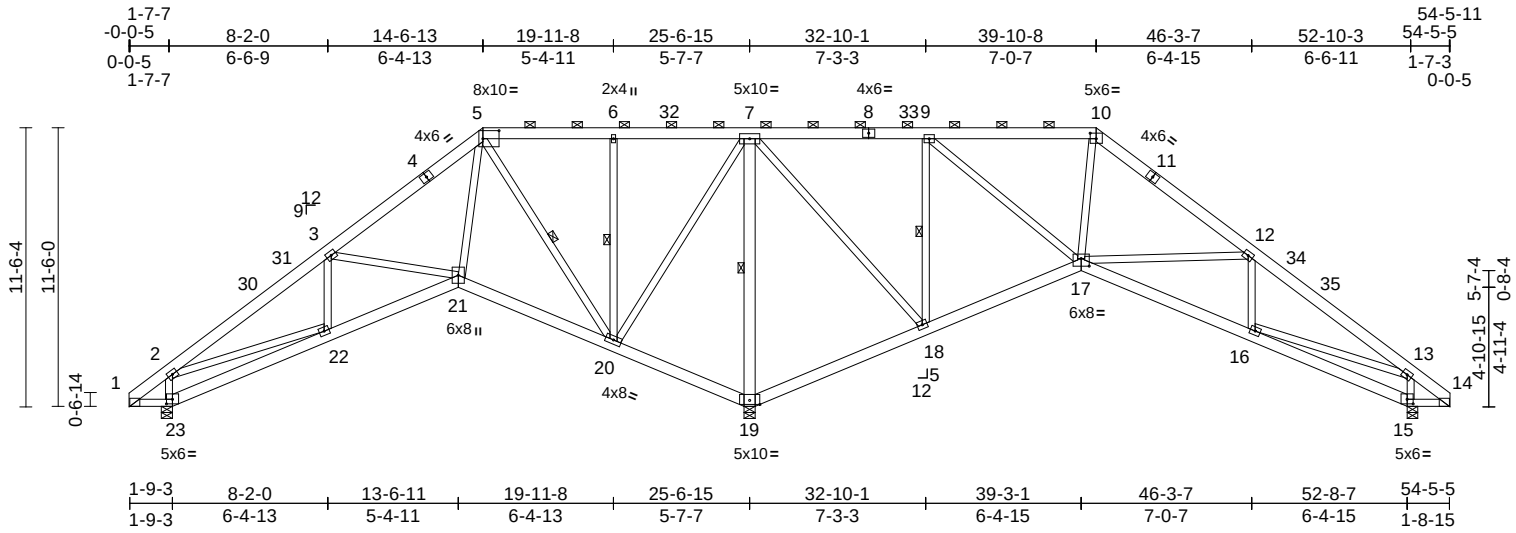
ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Garage-Johnny Faircloth-Roof-Garage
25080105-01	B02	Piggyback Base	14	1	I76149047 Job Reference (optional)

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

Run: 8.73 S Aug 13 2025 Print: 8.730 S Aug 13 2025 MiTek Industries, Inc. Fri Sep 05 12:04:33 Page: 1
ID:8Jj5xNYw2xnIhsshhJNOvayInhz-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:95.1

Plate Offsets (X, Y): [5:0-8-0,0-4-0], [10:0-3-0,0-2-12], [15:0-3-0,0-2-4], [17:0-4-0,0-3-12], [23:0-3-0,0-2-4]

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	0.34	Vert(LL)	-0.05	16-17	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.24	Vert(CT)	-0.10	16-17	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.72	Horz(CT)	0.09	15	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 453 lb	FT = 20%

LUMBER

TOP CHORD 2x6 SP No.2
BOT CHORD 2x6 SP No.2 *Except* 1-23,15-14:2x4 SP No.2
WEBS 2x4 SP No.3 *Except* 18-7:2x4 SP No.2, 19-7:2x6 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.): 5-10.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 6-20, 9-18, 7-19, 5-20

REACTIONS (size) 15=0-5-4, 19=0-5-8, 23=0-5-8
Max Horiz 23=-206 (LC 11)
Max Uplift 15=-57 (LC 14), 23=-23 (LC 13)
Max Grav 15=837 (LC 35), 19=3007 (LC 2), 23=655 (LC 34)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-68/28, 2-3=-760/129, 3-5=-209/317, 5-6=0/592, 6-7=0/592, 7-9=0/426, 9-10=-382/173, 10-12=-613/183, 12-13=-1189/124, 13-14=-89/32
BOT CHORD 1-23=-26/96, 22-23=-243/276, 21-22=-236/634, 20-21=-324/233, 19-20=-1234/142, 18-19=-1247/147, 17-18=-486/174, 16-17=-18/952, 15-16=-31/75, 14-15=-30/119
WEBS 2-23=-572/153, 2-22=-20/506, 3-22=0/125, 3-21=-554/184, 5-21=-97/459, 6-20=-329/114, 7-20=-34/918, 7-18=0/1078, 9-18=-954/74, 9-17=0/774, 10-17=-189/84, 12-17=-567/196, 12-16=-20/107, 13-16=-25/853, 13-15=-752/148, 7-19=-1977/52, 5-20=-865/68

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) and C-C Exterior(2E) 0-0-5 to 5-5-12, Interior (1) 5-5-12 to 14-7-3, Exterior(2R) 14-7-3 to 22-3-10, Interior (1) 22-3-10 to 39-10-13, Exterior(2R) 39-10-13 to 47-7-5, Interior (1) 47-7-5 to 54-5-11 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=1.33
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=18.9 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, Lu=50-0-0
4) Provide adequate drainage to prevent water ponding.
5) All plates are 4x5 MT20 unless otherwise indicated.
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) Bearings are assumed to be: Joint 23 SP No.2 , Joint 19 SP No.2 , Joint 15 SP No.2 .
8) Bearing at joint(s) 19 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 23 lb uplift at joint 23 and 57 lb uplift at joint 15.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

September 5,2025

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

Job	Truss	Truss Type	Qty	Ply	Garage-Johnny Faircloth-Roof-Garage
25080105-01	A08	Attic	9	1	I76149048 Job Reference (optional)

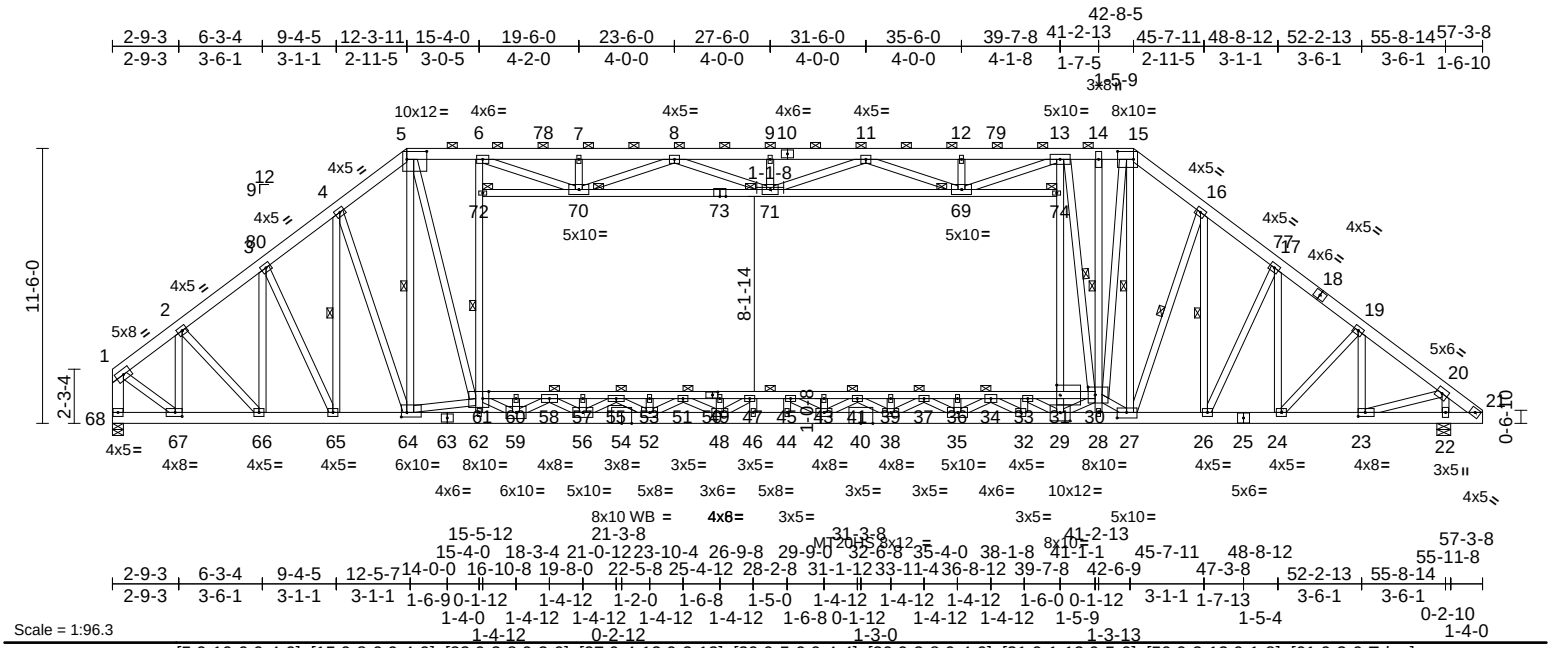

Plate Offsets (X, Y): [5:0-10-0,0-4-0], [15:0-8-0,0-4-0], [23:0-3-8,0-2-0], [27:0-4-12,0-2-12], [29:0-5-0,0-4-4], [30:0-3-8,0-4-0], [31:0-1-12,0-5-0], [50:0-2-12,0-1-8], [61:0-3-0,Edge], [64:0-2-12,0-2-4], [67:0-3-8,0-2-0], [73:0-3-0,Edge]

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	0.33	Vert(LL)	-0.53	45-47	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	1.00	Vert(CT)	-0.98	45-47	>677	180	MT20HS	187/143
TCDL	10.0	Rep Stress Incr	YES	WB	0.97	Horz(CT)	0.13	22	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH		Attic	-0.39	31-61	>751	360		
BCDL	10.0										Weight: 701 lb	FT = 20%

LUMBER

TOP CHORD 2x6 SP No.2 *Except* 15-10,10-5:2x6 SP 2400F 2.0E

BOT CHORD 2x4 SP No.2 *Except* 61-50,50-30:2x4 SP 2400F 2.0E, 25-40,63-68,25-21,63-54,54-40:2x6 SP 2400F 2.0E

WEBS 2x4 SP No.3 *Except* 68-1:2x6 SP No.2, 13-31,5-64,30-15,72-73,6-62,59-58,58-56,52-55,38-37,55-56,37-35,42-41,51-52,41-38,42-45,33-29,20-23,14-28,30-29,34-35,15-27,27-30,61-59,32-34,67-1,73-74:2x4 SP No.2, 13-30:2x4 SP 2400F 2.0E, 64-61,61-5:2x4 SP No.1

OTHERS 2x4 SP No.3

BRACING

TOP CHORD Structural wood sheathing directly applied or 3-3-6 oc purlins, except end verticals, and 2-0-0 oc purlins (3-6-9 max.): 5-15.

BOT CHORD Rigid ceiling directly applied or 3-9-13 oc bracing.

WEBS 1 Row at midpt 13-30, 5-64, 61-72, 14-28, 15-27, 4-65, 16-26, 16-27

JOINTS 1 Brace at Jt(s): 69, 70, 71, 72, 58, 55, 37, 51, 41, 34, 74

REACTIONS (size) 22=0-7-0, 68=0-5-8
Max Horiz 68=-227 (LC 9)
Max Grav 22=3382 (LC 3), 68=3300 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 15-16=-4849/0, 16-17=-4772/0, 17-19=-4673/0, 19-20=-4061/0, 20-21=-535/0, 1-68=-3632/0, 5-6=-4846/0, 6-7=-6499/0, 7-8=-6499/0, 8-9=-8205/0, 9-11=-8205/0, 11-12=-6460/0, 12-13=-6460/0, 13-14=-4359/0, 14-15=-4344/0, 1-2=-3064/0, 2-3=-4131/0, 3-4=-4435/0, 4-5=-4576/0

BOT CHORD 60-61=0/3660, 58-60=0/3660, 57-58=-259/981, 55-57=-259/981, 53-55=-2350/0, 51-53=-2350/0, 49-51=-3854/0, 47-49=-3854/0, 45-47=-4185/0, 43-45=-4079/0, 41-43=-4079/0, 39-41=-2925/0, 37-39=-2925/0, 36-37=-901/118, 34-36=-901/118, 33-34=0/2465, 31-33=0/3877, 30-31=0/3870, 67-68=-174/253, 66-67=0/2362, 65-66=0/3199, 64-65=0/3398, 62-64=-1396/1014, 59-62=-1594/919, 56-59=-94/2701, 52-56=0/5208, 48-52=0/7027, 46-48=0/8051, 44-46=0/8051, 42-44=0/8051, 38-42=0/7511, 35-38=0/6190, 32-35=0/3991, 29-32=-133/2757, 28-29=-155/1974, 27-28=-171/1942, 26-27=0/3659, 24-26=0/3636, 23-24=0/3148, 22-23=0/379, 21-22=0/379

September 5,2025

Continued on page 2

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ENGINEERING BY TRENCO A MiTek Affiliate
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WEBS 31-74=0/2381, 13-74=0/2407, 12-69=-56/106, 8-70=-1382/112, 11-69=-1412/112, 6-70=-102/1874, 13-69=-104/1789, 9-71=-201/87, 11-71=-45/517, 8-71=-42/507, 2-67=-1739/0, 13-30=-3457/0, 5-64=-1524/0, 15-30=0/3174, 61-64=0/4299, 5-61=0/4150, 7-70=-79/101, 70-72=-108/5, 70-71=-184/2917, 69-71=-182/2907, 69-74=-63/7, 61-62=0/447, 61-72=-1278/128, 6-72=-1249/142, 56-57=-264/0, 59-60=-319/0, 58-59=-2071/0, 32-33=0/838, 56-58=0/2048, 35-36=-232/0, 52-53=-220/0, 38-39=-215/0, 52-55=0/1424, 37-38=0/1199, 55-56=-1548/0, 35-37=-1348/0, 42-43=-196/0, 48-51=0/816, 41-42=0/606, 51-52=-984/0, 38-41=-794/0, 46-47=-19/100, 44-45=-116/34, 47-48=-427/8, 42-45=-127/231, 3-66=-825/0, 20-22=-3179/0, 17-24=-341/0, 29-31=0/2038, 29-33=-1675/0, 19-23=-1095/0, 20-23=0/2927, 19-24=0/723, 2-66=0/1254, 28-30=-868/0, 14-30=0/632, 29-30=-638/384, 34-35=0/1909, 15-27=-1031/14, 27-30=0/2929, 59-61=0/2383, 32-34=-2082/0, 4-65=-513/0, 16-26=-447/19, 17-26=-55/198, 3-65=0/538, 4-64=-42/322, 16-27=-84/320, 1-67=0/2857, 48-49=-174/0

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) and C-C Exterior(2E) 0-2-12 to 5-11-8, Interior (1) 5-11-8 to 12-3-11, Exterior(2R) 12-3-11 to 18-0-7, Interior (1) 18-0-7 to 42-8-5, Exterior(2R) 42-8-5 to 48-5-1, Interior (1) 48-5-1 to 57-3-8 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=1.33
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=18.9 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, Lu=50-0-0
4) Provide adequate drainage to prevent water ponding.
5) All plates are MT20 plates unless otherwise indicated.
6) All plates are 2x4 MT20 unless otherwise indicated.
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) Ceiling dead load (10.0 psf) on member(s). 70-72, 70-71, 69-71, 69-74
9) Bottom chord live load (40.0 psf) and additional bottom chord dead load (5.0 psf) applied only to room. 60-61, 58-60, 57-58, 55-57, 53-55, 51-53, 49-51, 47-49, 45-47, 43-45, 41-43, 39-41, 37-39, 36-37, 34-36, 33-34, 31-33
10) All bearings are assumed to be SP 2400F 2.0E .
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
12) Attic room checked for L/360 deflection.

LOAD CASE(S) Standard

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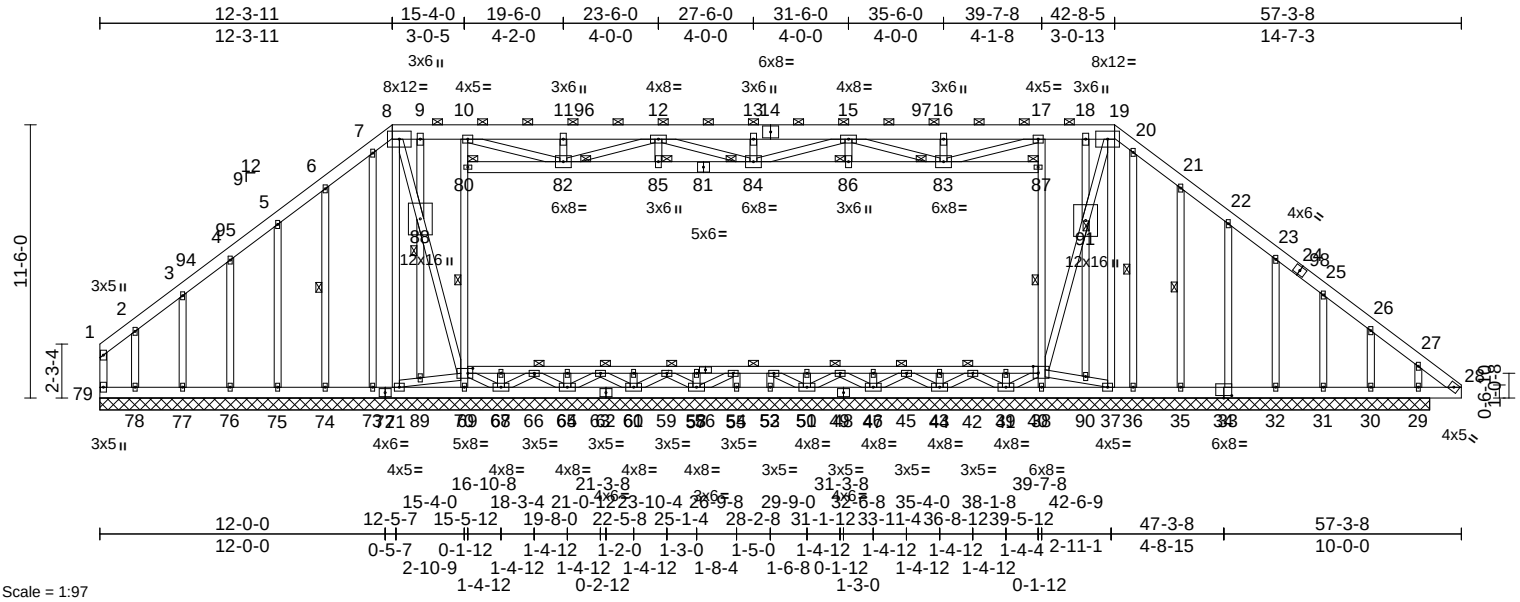
ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Garage-Johnny Faircloth-Roof-Garage
25080105-01	A09	Attic Supported Gable	1	1	I76149049 Job Reference (optional)



Scale = 1:97

Plate Offsets (X, Y): [34:0-4-0,0-1-4], [40:0-2-8,Edge], [69:0-2-8,0-2-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.17	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.04	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.22	Horiz(TL)	0.01	29	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 726 lb	FT = 20%

LUMBER

TOP CHORD 2x6 SP 2400F 2.0E *Except* 14-19,14-8:2x8 SP 2400F 2.0E

BOT CHORD 2x6 SP 2400F 2.0E *Except* 69-56,56-40:2x4 SP 2400F 2.0E

WEBS 2x4 SP 2400F 2.0E *Except* 80-81,81-87:2x6 SP 2400F 2.0E

OTHERS 2x4 SP 2400F 2.0E

BRACING

TOP CHORD Structural wood sheathing directly applied or 10-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 8-19.

BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing, Except:
10-0-0 oc bracing: 67-70,38-39.

WEBS 1 Row at midpt 69-80, 40-87, 6-74, 20-36, 21-35

JOINTS 1 Brace at Jt(s): 66, 42, 63, 45, 59, 49, 80, 82, 83, 84, 85, 86, 87, 88, 91

REACTIONS (size) 29=55-11-8, 30=55-11-8, 31=55-11-8, 32=55-11-8, 33=55-11-8, 35=55-11-8, 36=55-11-8, 37=55-11-8, 38=55-11-8, 39=55-11-8, 43=55-11-8, 46=55-11-8, 50=55-11-8, 53=55-11-8, 55=55-11-8, 57=55-11-8, 60=55-11-8, 64=55-11-8, 67=55-11-8, 70=55-11-8, 71=55-11-8, 73=55-11-8, 74=55-11-8, 75=55-11-8, 76=55-11-8, 77=55-11-8, 78=55-11-8, 79=55-11-8

Max Horiz 79=-225 (LC 9)

Max Uplift 29=-82 (LC 10), 30=-127 (LC 9), 31=-16 (LC 14), 32=-35 (LC 14), 33=-34 (LC 14), 35=-34 (LC 14), 37=-6 (LC 12), 38=-65 (LC 9), 70=-109 (LC 10), 71=-143 (LC 29), 73=-60 (LC 36), 74=-35 (LC 13), 75=-34 (LC 13), 76=-32 (LC 13), 77=-29 (LC 13), 78=-86 (LC 10), 79=-147 (LC 36)

Max Grav 29=187 (LC 11), 30=279 (LC 30), 31=148 (LC 36), 32=172 (LC 30), 33=168 (LC 30), 35=179 (LC 30), 36=69 (LC 29), 37=106 (LC 32), 38=1159 (LC 35), 39=422 (LC 3), 43=362 (LC 19), 46=366 (LC 19), 50=311 (LC 19), 53=155 (LC 19), 55=179 (LC 19), 57=306 (LC 19), 60=354 (LC 19), 64=364 (LC 19), 67=444 (LC 3), 70=1309 (LC 2), 71=163 (LC 10), 73=58 (LC 10), 74=182 (LC 29), 75=170 (LC 29), 76=169 (LC 29), 77=153 (LC 29), 78=302 (LC 29), 79=90 (LC 10)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-49/162, 2-3=-7/124, 3-4=-36/132, 4-5=-66/166, 5-6=-98/234, 6-7=-134/302, 7-8=-95/292, 8-9=-91/268, 9-10=-90/268, 10-11=-1672/228, 11-12=-1672/228, 12-13=-3406/301, 13-15=-3406/301, 15-16=-1646/264, 16-17=-1646/264, 17-18=-89/268, 18-19=-90/269, 19-20=-78/277, 20-21=-93/269, 21-22=-59/227, 22-23=-27/210, 23-25=-37/202, 25-26=-66/197, 26-27=-127/241, 27-28=-112/209, 1-79=-44/95

BOT CHORD 78-79=-185/181, 77-78=-185/181, 76-77=-185/181, 75-76=-185/181, 74-75=-185/181, 73-74=-185/181, 71-73=-185/181, 70-71=-99/96, 67-70=-97/187, 64-67=-101/104, 60-64=-89/99, 57-60=-94/100, 55-57=-104/75, 53-55=-104/75, 50-53=-104/75, 46-50=-90/101, 43-46=-89/98, 39-43=-103/107, 38-39=-58/133, 37-38=-99/91, 36-37=-169/116, 35-36=-169/116, 33-35=-169/116, 32-33=-169/116, 31-32=-169/116, 30-31=-169/116, 29-30=-169/116, 28-29=-169/116, 68-69=-37/48, 66-68=-37/48, 65-66=-53/59, 63-65=-53/59, 61-63=-55/58, 59-61=-55/58, 58-59=-52/54, 54-58=-52/54, 52-54=-104/70, 51-52=-53/54, 49-51=-53/54, 47-49=-55/60, 45-47=-55/60, 44-45=-53/59, 42-44=-53/59, 41-42=-32/44, 40-41=-32/44

September 5,2025

Continued on page 2

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WEBS 8-71=-116/185, 69-70=-1308/138, 69-80=-1258/77, 10-80=-1215/95, 38-40=-1150/94, 40-87=-1267/82, 17-87=-1225/99, 19-37=-72/69, 67-68=-184/0, 64-65=-169/0, 43-44=-168/0, 64-66=-115/0, 42-43=-116/0, 66-67=-123/0, 39-41=-181/0, 60-61=-169/0, 46-47=-168/0, 60-63=-120/0, 45-46=-122/0, 63-64=-126/0, 43-45=-124/0, 50-51=-171/0, 57-59=-108/0, 49-50=-118/0, 59-60=-109/0, 46-49=-128/0, 54-55=-150/0, 52-53=-132/0, 54-57=-63/19, 50-52=-65/19, 71-89=-100/96, 69-89=-96/88, 80-82=-25/3, 82-85=-156/2985, 84-85=-156/2985, 84-86=-155/2972, 83-86=-155/2972, 83-87=-30/3, 11-82=-50/66, 10-82=-85/1845, 16-83=-44/62, 17-83=-84/1826, 8-88=-263/110, 69-88=-267/111, 40-90=-103/25, 37-90=-111/24, 40-91=-113/106, 19-91=-112/104, 39-40=-329/33, 67-69=-370/25, 39-42=-124/0, 13-84=-248/52, 12-85=-1/68, 12-84=-17/497, 12-82=-1356/83, 15-86=0/68, 15-83=-1370/84, 15-84=-17/511, 57-58=-172/0, 9-88=-21/28, 88-89=-23/30, 7-73=-47/78, 6-74=-146/92, 5-75=-139/88, 4-76=-131/81, 3-77=-134/69, 2-78=-180/65, 18-91=-27/3, 90-91=-26/4, 20-36=-52/10, 21-35=-141/90, 22-33=-136/88, 23-32=-133/82, 25-31=-127/57, 26-30=-174/84, 27-29=-101/76

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) and C-C Exterior(2E) 0-1-12 to 5-10-8, Interior (1) 5-10-8 to 12-3-11, Exterior(2R) 12-3-11 to 20-4-14, Interior (1) 20-4-14 to 42-8-5, Exterior(2R) 42-8-5 to 50-9-9, Interior (1) 50-9-9 to 57-3-8 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=1.33
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); Pg=20.0 psf; Pf=18.9 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, Lu=50-0-0
5) Provide adequate drainage to prevent water ponding.
6) All plates are 2x4 MT20 unless otherwise indicated.
7) Gable studs spaced at 2-0-0 oc.
8) * 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.
9) Ceiling dead load (10.0 psf) on member(s). 80-82, 82-85, 84-85, 84-86, 83-86, 83-87
10) Bottom chord live load (40.0 psf) and additional bottom chord dead load (5.0 psf) applied only to room. 68-69, 66-68, 65-66, 63-65, 61-63, 59-61, 58-59, 54-58, 52-54, 51-52, 49-51, 47-49, 45-47, 44-45, 42-44, 41-42, 40-41
11) All bearings are assumed to be SP 2400F 2.0E .
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 147 lb uplift at joint 79, 143 lb uplift at joint 71, 109 lb uplift at joint 70, 65 lb uplift at joint 38, 6 lb uplift at joint 37, 60 lb uplift at joint 73, 35 lb uplift at joint 74, 34 lb uplift at joint 75, 32 lb uplift at joint 76, 29 lb uplift at joint 77, 86 lb uplift at joint 78, 34 lb uplift at joint 35, 34 lb uplift at joint 33, 35 lb uplift at joint 32, 16 lb uplift at joint 31, 127 lb uplift at joint 30 and 82 lb uplift at joint 29.
13) Non Standard bearing condition. Review required.
14) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
15) Attic room checked for L/360 deflection.

LOAD CASE(S) Standard

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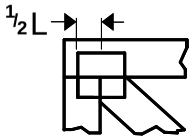
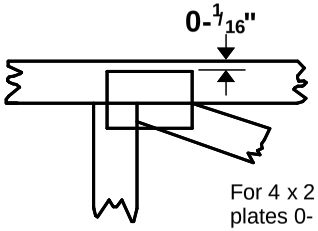
Symbols

PLATE LOCATION AND ORIENTATION



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



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

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

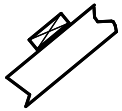
* Plate location details available in MiTek software or upon request.

PLATE SIZE

4 x 4

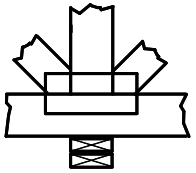
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



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

BEARING

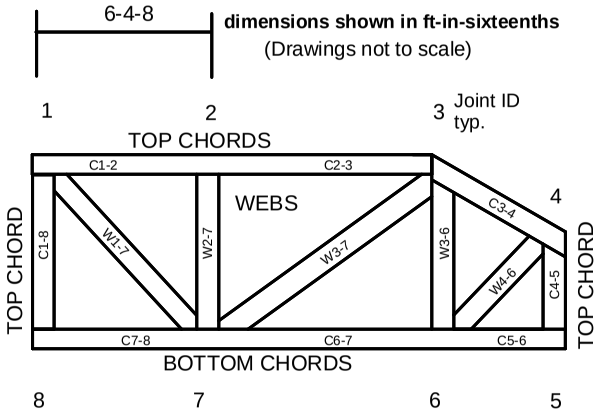


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

Industry Standards:

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

Numbering System



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

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

Product Code Approvals

ICC-ES Reports:

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

Design General Notes

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

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

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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.