

Trenco  
818 Soundside Rd  
Edenton, NC 27932

Re: 3769903  
Longleaf B - Lot 7 - Fairground Farms

The truss drawing(s) referenced below have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by Builders FristSource (Pooler, GA).

Pages or sheets covered by this seal: I62302440 thru I62302450

My license renewal date for the state of North Carolina is December 31, 2023.

North Carolina COA: C-0844



December 1, 2023

Gilbert, Eric

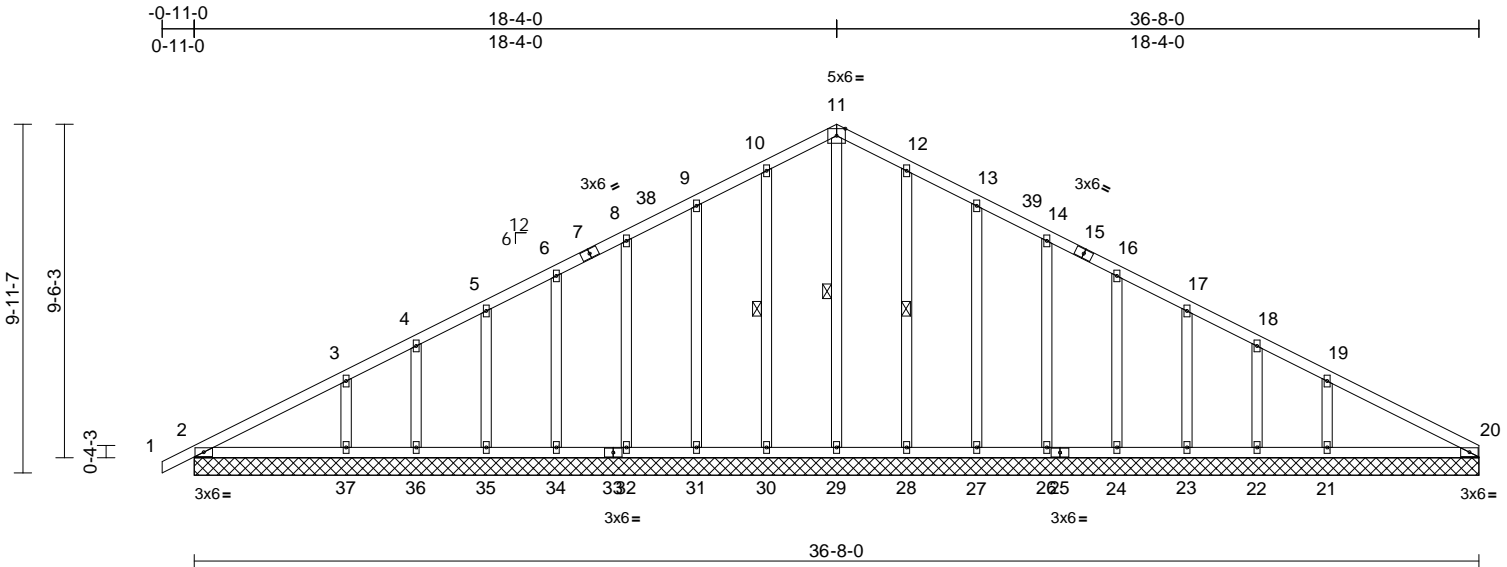
**IMPORTANT NOTE:** The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes),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

Job 3769903	Truss A01	Truss Type Common Supported Gable	Qty 1	Ply 1	Longleaf B - Lot 7 - Fairground Farms Job Reference (optional)	162302440
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Builders FirstSource (Savannah), Pooler, GA - 31322,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Thu Nov 30 14:14:46  
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Page: 1



Scale = 1:65.8

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	0.24	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	23.1/30.0	Lumber DOL	1.15	BC	0.14	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.20	Horz(CT)	0.01	20	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-S								
BCDL	10.0											
											Weight: 234 lb	FT = 20%

LUMBER	TOP CHORD	2x4 SP No.2
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	11-29, 10-30, 12-28
REACTIONS	(size)	2=36-8-0, 20=36-8-0, 21=36-8-0, 22=36-8-0, 23=36-8-0, 24=36-8-0, 26=36-8-0, 27=36-8-0, 28=36-8-0, 29=36-8-0, 30=36-8-0, 31=36-8-0, 32=36-8-0, 34=36-8-0, 35=36-8-0, 36=36-8-0, 37=36-8-0
Max Horiz	2=143 (LC 12)	
Max Uplift	2=-6 (LC 13), 21=-77 (LC 13), 22=-16 (LC 13), 23=-38 (LC 13), 24=-34 (LC 13), 26=-34 (LC 13), 27=-38 (LC 13), 28=-29 (LC 13), 30=-32 (LC 12), 31=-37 (LC 12), 32=-34 (LC 12), 34=-34 (LC 12), 35=-38 (LC 12), 36=-18 (LC 12), 37=-73 (LC 12)	
Max Grav	2=228 (LC 19), 20=158 (LC 20), 21=384 (LC 20), 22=77 (LC 1), 23=200 (LC 6), 24=209 (LC 4), 26=219 (LC 6), 27=260 (LC 6), 28=273 (LC 6), 29=250 (LC 25), 30=272 (LC 5), 31=256 (LC 5), 32=216 (LC 5), 34=209 (LC 4), 35=198 (LC 5), 36=85 (LC 1), 37=369 (LC 19)	
FORCES	(lb) - Maximum Compression/Maximum Tension	

TOP CHORD	1-2=0/43, 2-3=-165/89, 3-4=-111/74, 4-5=-73/92, 5-6=-64/113, 6-8=-54/134, 8-9=-47/155, 9-10=-58/176, 10-11=-64/194, 11-12=-65/188, 12-13=-59/153, 13-14=-49/115, 14-16=-43/79, 16-17=-45/58, 17-18=-33/38, 18-19=-71/20, 19-20=-111/61
BOT CHORD	2-37=-9/123, 36-37=-9/123, 35-36=-9/123, 34-35=-9/123, 32-34=-9/123, 31-32=-9/123, 30-31=-9/123, 29-30=-9/123, 28-29=-9/123, 27-28=-9/123, 26-27=-9/123, 24-26=-9/123, 23-24=-9/123, 22-23=-9/123, 21-22=-9/123, 20-21=-9/123
WEBS	11-29=-150/0, 10-30=-215/56, 9-31=-194/61, 8-32=-142/58, 6-34=-130/57, 5-35=-146/64, 4-36=-74/35, 3-37=-268/114, 12-28=-217/53, 13-27=-199/62, 14-26=-147/58, 16-24=-129/57, 17-23=-148/64, 18-22=-67/32, 19-21=-281/120

- NOTES**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCCL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - 4) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=30.0 psf (ground snow); Pf=23.1 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
  - 5) Unbalanced snow loads have been considered for this design.

- 6) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 23.1 psf on overhangs non-concurrent with other live loads.
- 7) All plates are 2x4 MT20 unless otherwise indicated.
- 8) Gable requires continuous bottom chord bearing.
- 9) Gable studs spaced at 2-0-0 oc.
- 10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 11) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 1-00-00 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 crushing capacity of 565 psi.
- 13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 6 lb uplift at joint 2, 32 lb uplift at joint 30, 37 lb uplift at joint 31, 34 lb uplift at joint 32, 34 lb uplift at joint 34, 38 lb uplift at joint 35, 18 lb uplift at joint 36, 73 lb uplift at joint 37, 29 lb uplift at joint 28, 38 lb uplift at joint 27, 34 lb uplift at joint 26, 34 lb uplift at joint 24, 38 lb uplift at joint 23, 16 lb uplift at joint 22 and 77 lb uplift at joint 21.



December 1, 2023

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/TPI 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)



818 Soundside Road  
Edenton, NC 27932

Job 3769903	Truss A01	Truss Type Common Supported Gable	Qty 1	Ply 1	Lingleaf B - Lot 7 - Fairground Farms I62302440 Job Reference (optional)
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Builders FirstSource (Savannah), Pooler, GA - 31322,

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Page: 2

14) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**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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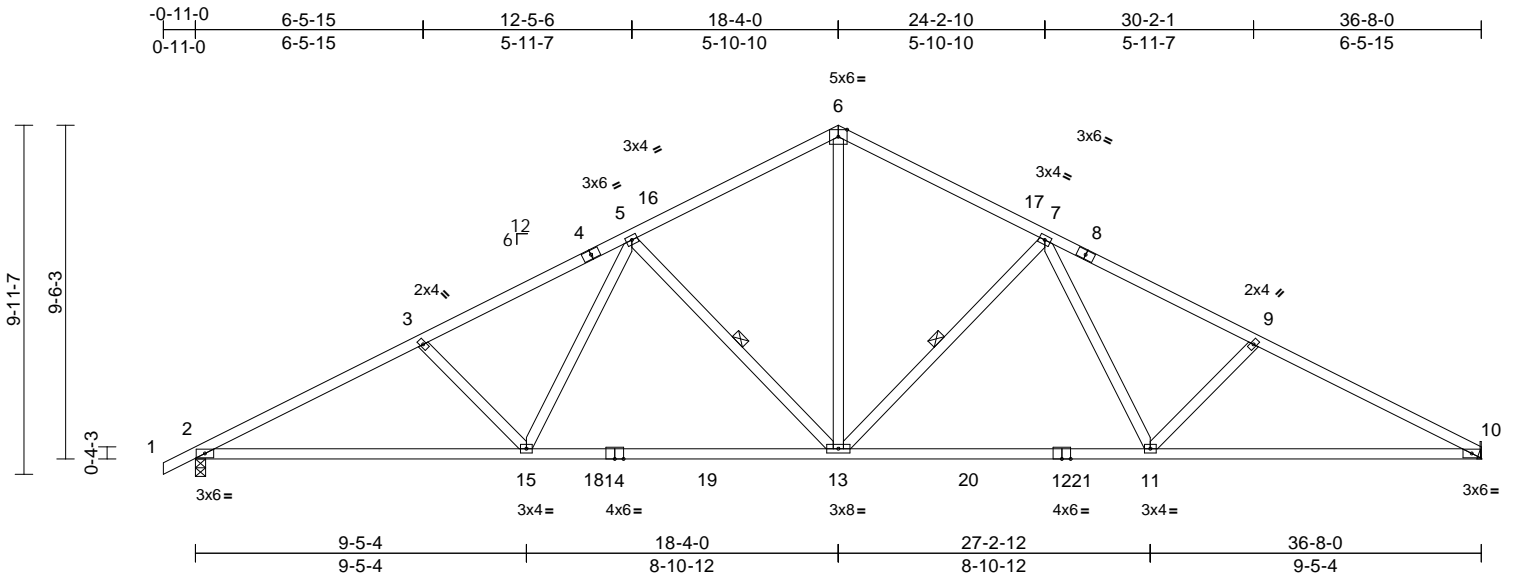
818 Soundside Road  
Edenton, NC 27932

Job 3769903	Truss A02	Truss Type Common	Qty 5	Ply 1	Longleaf B - Lot 7 - Fairground Farms Job Reference (optional)	162302441
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Builders FirstSource (Savannah), Pooler, GA - 31322,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Thu Nov 30 14:14:49  
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Page: 1



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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	0.87	Vert(LL)	-0.25	11-13	>999	240	MT20	244/190
Snow (Pf/Pg)	23.1/30.0	Lumber DOL	1.15	BC	0.96	Vert(CT)	-0.46	10-11	>948	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.50	Horz(CT)	0.13	10	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-S								
BCDL	10.0											
											Weight: 188 lb	FT = 20%

**LUMBER**

TOP CHORD 2x4 SP No.2 \*Except\* 8-10:2x4 SP No.1  
 BOT CHORD 2x4 SP No.1 \*Except\* 14-12:2x4 SP No.2  
 WEBS 2x4 SP No.3

**BRACING**

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

WEBS 1 Row at midpt 5-13, 7-13

**REACTIONS** (size) 2=0-3-8, 10= Mechanical  
 Max Horiz 2=143 (LC 16)  
 Max Uplift 2=-99 (LC 12), 10=-82 (LC 13)  
 Max Grav 2=1643 (LC 1), 10=1570 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/44, 2-3=-2934/172, 3-5=-2659/157,  
 5-6=-1858/150, 6-7=-1858/149,  
 7-9=-2681/161, 9-10=-2966/178

BOT CHORD 2-15=-217/2550, 13-15=-97/2068,  
 11-13=0/2076, 10-11=-94/2588

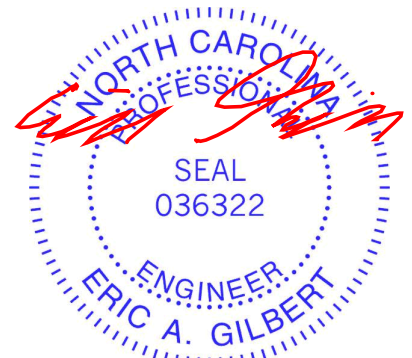
WEBS 6-13=-39/1218, 3-15=-370/169, 5-15=-8/536,  
 5-13=-802/179, 7-13=-822/179,  
 7-11=-12/555, 9-11=-398/177

**NOTES**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=120mph (3-second gust)  
 Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=30.0 psf (ground snow); Pf=23.1 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
- Unbalanced snow loads have been considered for this design.

- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 23.1 psf on overhangs non-concurrent with other live loads.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 1-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Bearings are assumed to be: Joint 2 SP No.1 crushing capacity of 565 psi.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 99 lb uplift at joint 2 and 82 lb uplift at joint 10.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



December 1, 2023

**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/TPI 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)



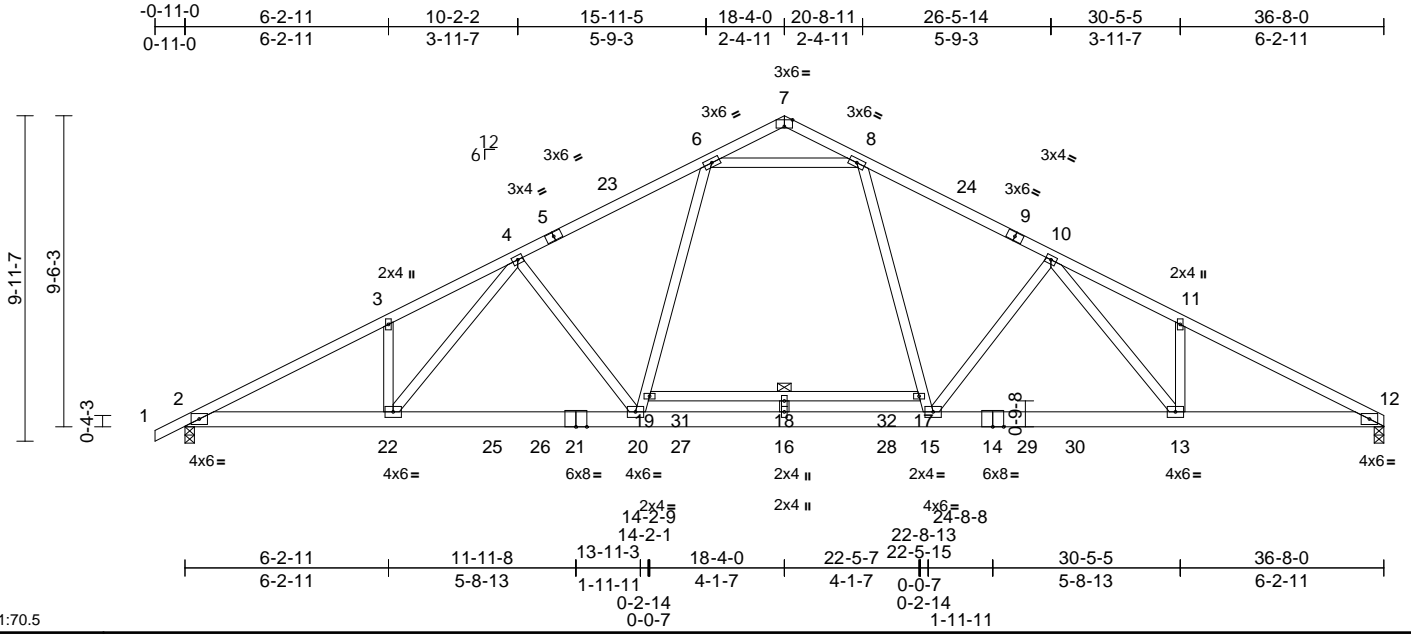
818 Soundside Road  
 Edenton, NC 27932

Job 3769903	Truss A03	Truss Type Common	Qty 5	Ply 1	Longleaf B - Lot 7 - Fairground Farms Job Reference (optional)	162302442
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Builders FirstSource (Savannah), Pooler, GA - 31322,

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Page: 1



Scale = 1:70.5

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

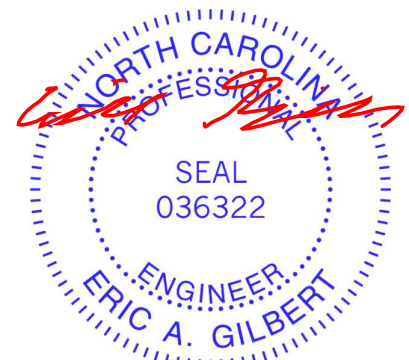
Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.99	Vert(LL)	-0.41	13-15	>999	240	MT20	244/190
Snow (Pf/Pg)	23.1/30.0	Lumber DOL	1.15	BC	0.45	Vert(CT)	-0.54	13-15	>811	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.95	Horz(CT)	0.07	12	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-S								
BCDL	10.0											
											Weight: 235 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x6 SP 2400F 2.0E or 2x6 SP DSS \*Except\*  
19-17:2x4 SP No.2  
WEBS 2x4 SP No.3  
**BRACING**  
TOP CHORD Structural wood sheathing directly applied.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing. Except:  
6-0-0 oc bracing: 17-19  
**REACTIONS**  
(size) 2=0-3-8, 12=0-3-8  
Max Horiz 2=144 (LC 16)  
Max Uplift 2=-48 (LC 12), 12=-30 (LC 13)  
Max Grav 2=1735 (LC 4), 12=1675 (LC 4)  
**FORCES**  
(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/51, 2-3=-3290/50, 3-4=-3252/130,  
4-6=-2685/18, 6-7=-121/18, 7-8=-122/18,  
8-10=-2685/17, 10-11=-3266/138,  
11-12=-3296/52  
BOT CHORD 2-22=-106/2867, 20-22=-23/2597,  
16-20=0/2105, 15-16=0/2105, 13-15=0/2598,  
12-13=0/2878, 18-19=-8/8, 17-18=-8/8  
WEBS 8-17=0/912, 15-17=0/840, 19-20=0/840,  
6-19=0/911, 6-8=-2076/84, 3-22=-304/131,  
11-13=-328/143, 4-20=-661/213,  
10-15=-669/213, 4-22=-136/630,  
10-13=-144/651, 16-18=-252/0

- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=30.0 psf (ground snow); Pf=23.1 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 23.1 psf on overhangs non-concurrent with other live loads.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 1-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- All bearings are assumed to be SP 2400F 2.0E or DSS crushing capacity of 660 psi.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 30 lb uplift at joint 12 and 48 lb uplift at joint 2.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard

- NOTES**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; Lumber DOL=1.60 plate grip DOL=1.60



December 1, 2023

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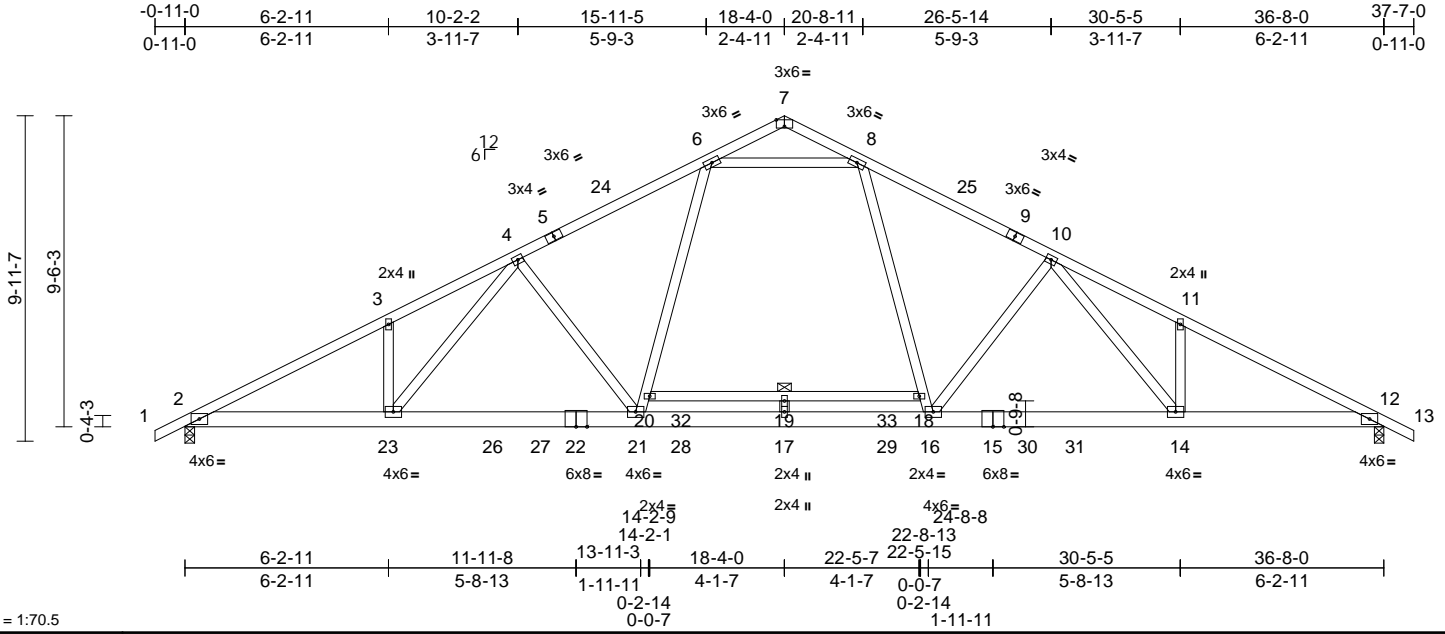
818 Soundside Road  
Edenton, NC 27932

Job 3769903	Truss A04	Truss Type Common	Qty 1	Ply 1	Longleaf B - Lot 7 - Fairground Farms Job Reference (optional)	162302443
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Builders FirstSource (Savannah), Pooler, GA - 31322,

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Page: 1



Scale = 1:70.5

Plate Offsets (X, Y): [7:0-3-0,Edge], [10:0-0-0,0-0-0]

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	0.98	Vert(LL)	-0.40	14-16	>999	240	MT20	244/190
Snow (Pf/Pg)	23.1/30.0	Lumber DOL	1.15	BC	0.45	Vert(CT)	-0.53	14-16	>816	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.95	Horz(CT)	0.07	12	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-S								
BCDL	10.0											
											Weight: 237 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x6 SP 2400F 2.0E or 2x6 SP DSS \*Except\*  
20-18:2x4 SP No.2  
WEBS 2x4 SP No.3

**BRACING**  
TOP CHORD Structural wood sheathing directly applied.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing. Except:  
6-0-0 oc bracing: 18-20

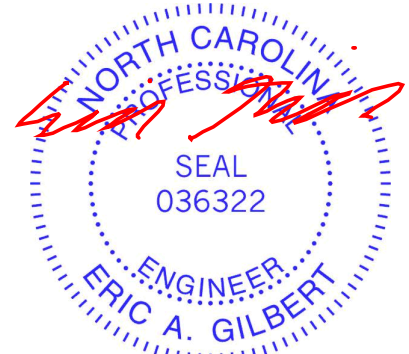
**REACTIONS**  
(size) 2=0-3-8, 12=0-3-8  
Max Horiz 2=-137 (LC 13)  
Max Uplift 2=-48 (LC 12), 12=-48 (LC 13)  
Max Grav 2=1734 (LC 4), 12=1734 (LC 4)

**FORCES**  
(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/51, 2-3=-3289/50, 3-4=-3250/130,  
4-6=-2683/17, 6-7=-122/18, 7-8=-122/18,  
8-10=-2683/17, 10-11=-3250/130,  
11-12=-3289/50, 12-13=0/51  
BOT CHORD 2-23=-99/2866, 21-23=-15/2595,  
17-21=0/2102, 16-17=0/2102, 14-16=0/2595,  
12-14=0/2866, 19-20=-8/8, 18-19=-8/8  
WEBS 20-21=0/839, 6-20=0/911, 8-18=0/911,  
16-18=0/839, 6-8=-2073/83, 17-19=-252/0,  
4-21=-669/213, 4-23=-136/631,  
3-23=-304/131, 11-14=-304/131,  
10-16=-669/214, 10-14=-136/631

- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load; Lumber DOL=1.15 Plate DOL=1.15); Pg=30.0 psf (ground snow); Pf=23.1 psf (flat roof snow; Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 23.1 psf on overhangs non-concurrent with other live loads.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 1-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- All bearings are assumed to be SP 2400F 2.0E or DSS crushing capacity of 660 psi.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 48 lb uplift at joint 2 and 48 lb uplift at joint 12.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard

- NOTES**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; Lumber DOL=1.60 plate grip DOL=1.60



December 1, 2023

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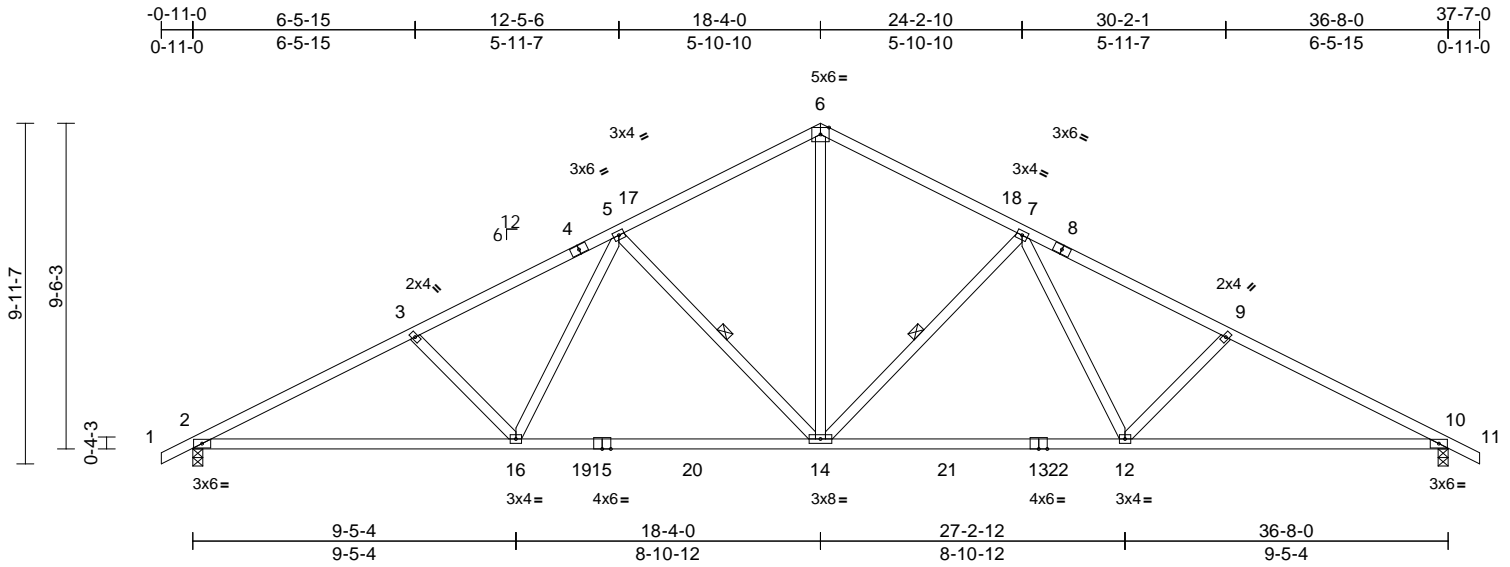
818 Soundside Road  
Edenton, NC 27932

Job 3769903	Truss A05	Truss Type Common	Qty 5	Ply 1	Longleaf B - Lot 7 - Fairground Farms Job Reference (optional)	162302444
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Builders FirstSource (Savannah), Pooler, GA - 31322,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Thu Nov 30 14:14:50  
ID:?immNtpsViXDia22OfkbA?z45X7-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWRCDoi7J4zJC?f

Page: 1



Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.87	Vert(LL)	-0.25	14-16	>999	240	MT20	244/190
Snow (Pf/Pg)	23.1/30.0	Lumber DOL	1.15	BC	0.95	Vert(CT)	-0.45	14-16	>963	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.50	Horz(CT)	0.13	10	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-S								
BCDL	10.0											
											Weight: 189 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.1 \*Except\* 15-13:2x4 SP No.2  
WEBS 2x4 SP No.3

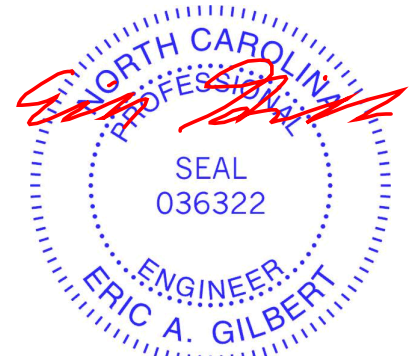
**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 1-7-8 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.  
WEBS 1 Row at midpt 5-14, 7-14

**REACTIONS** (size) 2=0-3-8, 10=0-3-8  
Max Horiz 2=-137 (LC 13)  
Max Uplift 2=-99 (LC 12), 10=-99 (LC 13)  
Max Grav 2=1638 (LC 1), 10=1638 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/44, 2-3=-2924/172, 3-5=-2649/157, 5-6=-1848/149, 6-7=-1848/149, 7-9=-2649/157, 9-10=-2924/172, 10-11=0/44  
BOT CHORD 2-16=-211/2541, 14-16=-91/2059, 12-14=0/2059, 10-12=-74/2541  
WEBS 6-14=-39/1211, 3-16=-370/169, 5-16=-9/536, 5-14=-810/179, 7-14=-810/179, 7-12=-9/536, 9-12=-370/169

- Unbalanced snow loads have been considered for this design.
  - This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 23.1 psf on overhangs non-concurrent with other live loads.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 1-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - All bearings are assumed to be SP No.1 crushing capacity of 565 psi.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 99 lb uplift at joint 2 and 99 lb uplift at joint 10.
  - This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- LOAD CASE(S)** Standard

- NOTES**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; Lumber DOL=1.60 plate grip DOL=1.60
  - TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=30.0 psf (ground snow); Pf=23.1 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10



December 1, 2023

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ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

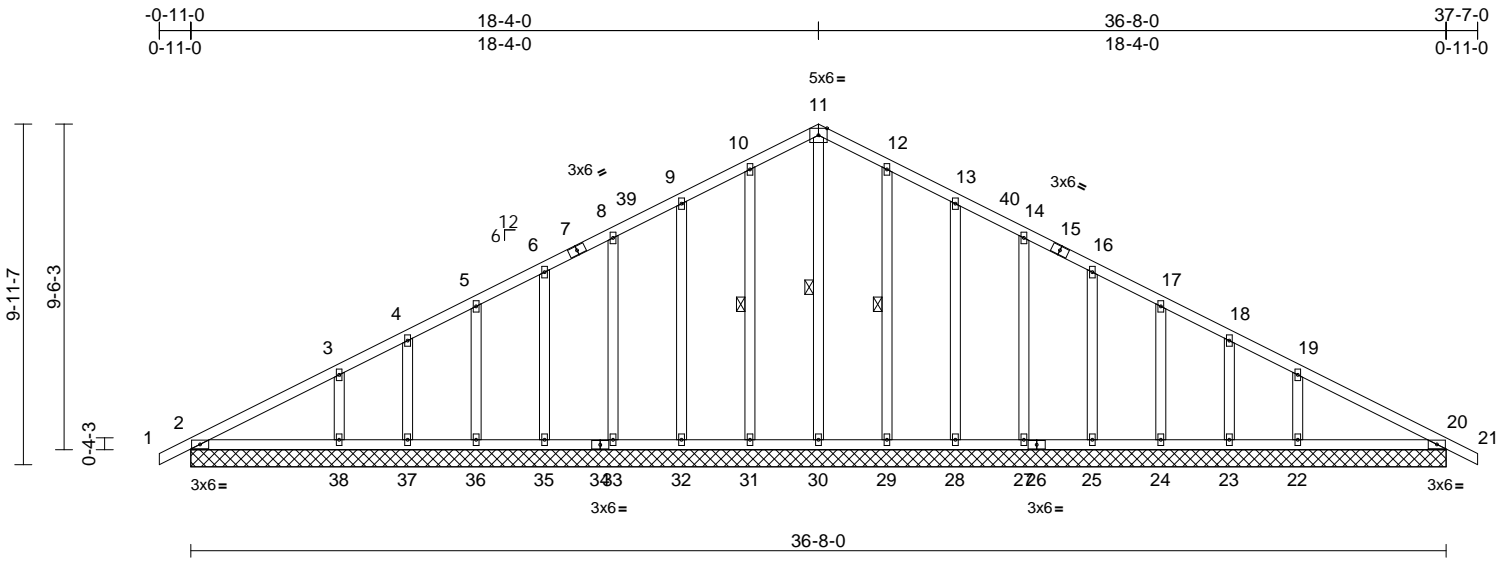
818 Soundside Road  
Edenton, NC 27932

Job 3769903	Truss A06	Truss Type Common Supported Gable	Qty 1	Ply 1	Longleaf B - Lot 7 - Fairground Farms Job Reference (optional)	162302445
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Builders FirstSource (Savannah), Pooler, GA - 31322,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Thu Nov 30 14:14:51  
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Page: 1



Scale = 1:67.3

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.22	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	23.1/30.0	Lumber DOL	1.15	BC	0.14	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.20	Horz(CT)	0.01	20	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-S								
BCDL	10.0											
											Weight: 236 lb	FT = 20%

LUMBER	TOP CHORD	2x4 SP No.2	BOT CHORD	2x4 SP No.2	OTHERS	2x4 SP No.3
<b>BRACING</b>	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.				
<b>WEBS</b>		1 Row at midpt 11-30, 10-31, 12-29				
<b>REACTIONS</b> (size)		2=36-8-0, 20=36-8-0, 22=36-8-0, 23=36-8-0, 24=36-8-0, 25=36-8-0, 27=36-8-0, 28=36-8-0, 29=36-8-0, 30=36-8-0, 31=36-8-0, 32=36-8-0, 33=36-8-0, 35=36-8-0, 36=36-8-0, 37=36-8-0, 38=36-8-0				
	Max Horiz	2=-137 (LC 13)				
	Max Uplift	2=-8 (LC 13), 22=-72 (LC 13), 23=-18 (LC 13), 24=-38 (LC 13), 25=-34 (LC 13), 27=-34 (LC 13), 28=-38 (LC 13), 29=-29 (LC 13), 31=-31 (LC 12), 32=-37 (LC 12), 33=-34 (LC 12), 35=-34 (LC 12), 36=-38 (LC 12), 37=-18 (LC 12), 38=-73 (LC 12)				
	Max Grav	2=228 (LC 19), 20=228 (LC 20), 22=369 (LC 20), 23=85 (LC 1), 24=198 (LC 6), 25=209 (LC 4), 27=219 (LC 6), 28=260 (LC 6), 29=273 (LC 6), 30=253 (LC 25), 31=273 (LC 5), 32=260 (LC 5), 33=219 (LC 5), 35=209 (LC 4), 36=198 (LC 5), 37=85 (LC 1), 38=369 (LC 19)				
<b>FORCES</b>		(lb) - Maximum Compression/Maximum Tension				
<b>TOP CHORD</b>		1-2=0/43, 2-3=-162/92, 3-4=-109/79, 4-5=-71/96, 5-6=-63/118, 6-8=-53/139, 8-9=-49/160, 9-10=-58/181, 10-11=-65/199, 11-12=-65/193, 12-13=-58/158, 13-14=-49/120, 14-16=-43/83, 16-17=-45/60, 17-18=-33/39, 18-19=-66/21, 19-20=-113/59, 20-21=0/43				
<b>BOT CHORD</b>		2-38=-8/130, 37-38=-8/130, 36-37=-8/130, 35-36=-8/130, 33-35=-8/130, 32-33=-8/130, 31-32=-8/130, 30-31=-8/130, 29-30=-8/130, 28-29=-8/130, 27-28=-8/130, 25-27=-8/130, 24-25=-8/130, 23-24=-8/130, 22-23=-8/130, 20-22=-8/130				
<b>WEBS</b>		11-30=-153/0, 10-31=-217/55, 9-32=-199/61, 8-33=-147/58, 6-35=-130/57, 5-36=-146/64, 4-37=-74/35, 3-38=-268/114, 12-29=-217/53, 13-28=-199/62, 14-27=-147/58, 16-25=-130/57, 17-24=-146/64, 18-23=-74/35, 19-22=-268/114				
<b>NOTES</b>		<p>1) Unbalanced roof live loads have been considered for this design.</p> <p>2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60</p> <p>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.</p> <p>4) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=30.0 psf (ground snow); Pf=23.1 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10</p> <p>5) Unbalanced snow loads have been considered for this design.</p> <p>6) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 23.1 psf on overhangs non-concurrent with other live loads.</p> <p>7) All plates are 2x4 MT20 unless otherwise indicated.</p> <p>8) Gable requires continuous bottom chord bearing.</p> <p>9) Gable studs spaced at 2-0-0 oc.</p> <p>10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.</p> <p>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 1-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.</p> <p>12) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.</p> <p>13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 8 lb uplift at joint 2, 31 lb uplift at joint 31, 37 lb uplift at joint 32, 34 lb uplift at joint 33, 34 lb uplift at joint 35, 38 lb uplift at joint 36, 18 lb uplift at joint 37, 73 lb uplift at joint 38, 29 lb uplift at joint 29, 38 lb uplift at joint 28, 34 lb uplift at joint 27, 34 lb uplift at joint 25, 38 lb uplift at joint 24, 18 lb uplift at joint 23 and 72 lb uplift at joint 22.</p>				



December 1, 2023

Continued on page 2

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818 Soundside Road  
Edenton, NC 27932



Job 3769903	Truss A06	Truss Type Common Supported Gable	Qty 1	Ply 1	Lingleaf B - Lot 7 - Fairground Farms Job Reference (optional) I62302445
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Builders FirstSource (Savannah), Pooler, GA - 31322,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Thu Nov 30 14:14:51  
ID:f5b0ADn2fictt9Q4SAMQtz45Vt-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrcDoi7J4zJC?f

Page: 2

14) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard

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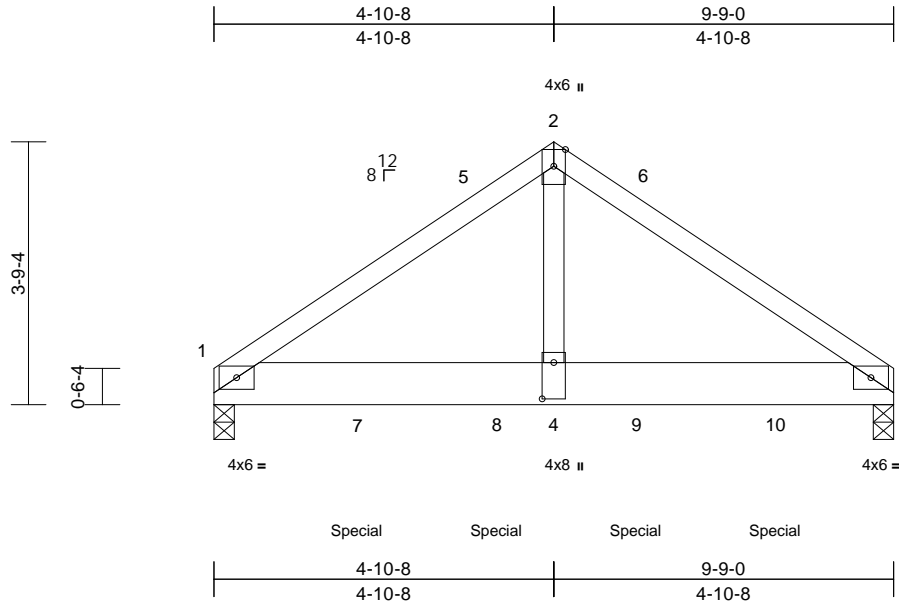
818 Soundside Road  
Edenton, NC 27932

Job 3769903	Truss B01G	Truss Type Common Girder	Qty 1	Ply 2	Longleaf B - Lot 7 - Fairground Farms Job Reference (optional)	162302446
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Builders FirstSource (Savannah), Pooler, GA - 31322,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Thu Nov 30 14:14:51  
ID:gSE80HMePjP?x9mZpCHMoz45UY-RFC?PsB70Hq3NSgPqnL8w3uITXbGKWRcDoi7J4zJC?f

Page: 1



Scale = 1:33.1

Plate Offsets (X, Y): [4:0-6-4,0-2-0]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.36	Vert(LL)	-0.03	3-4	>999	240	MT20	244/190
Snow (Pf/Pg)	23.1/30.0	Lumber DOL	1.15	BC	0.35	Vert(CT)	-0.06	3-4	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.90	Horz(CT)	0.01	3	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-S								
BCDL	10.0											
											Weight: 104 lb	FT = 20%

**LUMBER**

TOP CHORD 2x4 SP No.2  
BOT CHORD 2x8 SP 2400F 2.0E or 2x8 SP DSS  
WEBS 2x4 SP No.3

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 5-9-9 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS**

(size) 1=0-3-8, 3=0-3-8  
Max Horiz 1=-69 (LC 33)  
Max Uplift 1=-197 (LC 12), 3=-212 (LC 13)  
Max Grav 1=3385 (LC 1), 3=3631 (LC 1)

**FORCES**

(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-4158/265, 2-3=-4157/265  
BOT CHORD 1-4=-175/3361, 3-4=-175/3361  
WEBS 2-4=-203/4336

**NOTES**

- 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: 2x8 - 2 rows staggered at 0-6-0 oc.  
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
- 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.
- Unbalanced roof live loads have been considered for this design.

- Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=30.0 psf (ground snow); Pf=23.1 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 1-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP 2400F 2.0E or DSS crushing capacity of 660 psi.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 197 lb uplift at joint 1 and 212 lb uplift at joint 3.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1550 lb down and 94 lb up at 2-0-12, 1550 lb down and 94 lb up at 4-0-12, and 1550 lb down and 94 lb up at 6-0-12, and 1550 lb down and 94 lb up at 8-0-12 on bottom chord. The design/selection of such connection device (s) is the responsibility of others.

**Concentrated Loads (lb)**

Vert: 7=-1550 (B), 8=-1550 (B), 9=-1550 (B), 10=-1550 (B)

**LOAD CASE(S)** Standard

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 1-2=-66, 2-3=-66, 1-3=-20



December 1, 2023

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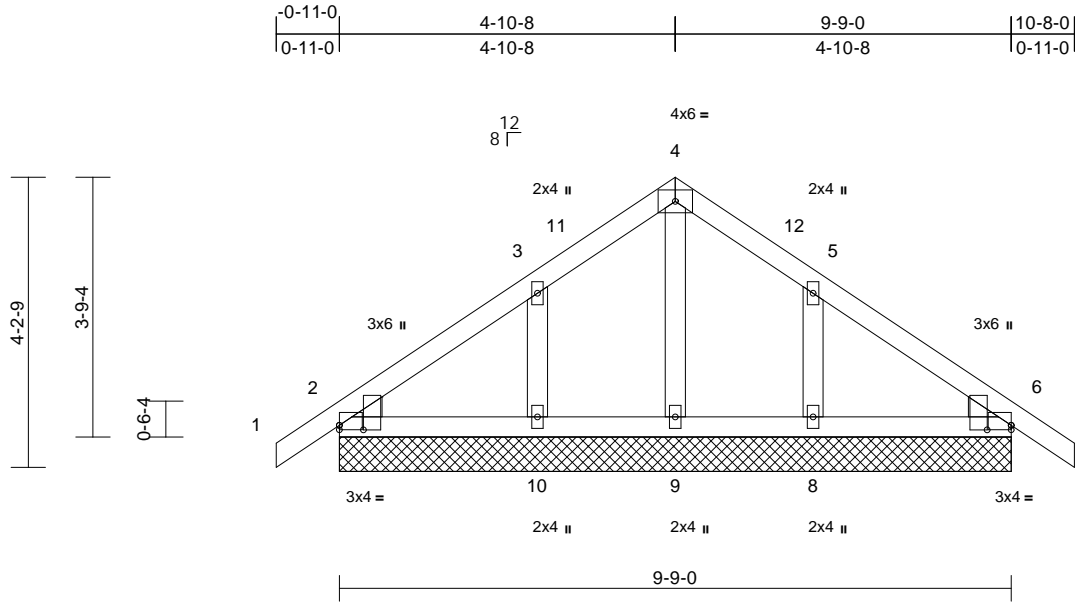
818 Soundside Road  
Edenton, NC 27932

Job 3769903	Truss B02	Truss Type Common Supported Gable	Qty 1	Ply 1	Longleaf B - Lot 7 - Fairground Farms Job Reference (optional)	I62302447
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Builders FirstSource (Savannah), Pooler, GA - 31322,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Thu Nov 30 14:14:52  
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Page: 1



Scale = 1:33.4  
Plate Offsets (X, Y): [2:Edge,0-0-12], [2:0-0-13,0-4-3], [6:Edge,0-0-12], [6:0-0-13,0-4-3]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.11	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	23.1/30.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.04	Horz(CT)	0.00	6	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-S								
BCDL	10.0										Weight: 47 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
OTHERS 2x4 SP No.3  
WEDGE Left: 2x4 SP No.2  
Right: 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=9-9-0, 6=9-9-0, 8=9-9-0, 9=9-9-0, 10=9-9-0  
Max Horiz 2=-81 (LC 10)  
Max Uplift 2=-9 (LC 13), 6=-14 (LC 13), 8=-72 (LC 13), 10=-73 (LC 12)  
Max Grav 2=184 (LC 1), 6=184 (LC 1), 8=254 (LC 20), 9=109 (LC 25), 10=255 (LC 22)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/42, 2-3=-93/69, 3-4=-69/71, 4-5=-67/63, 5-6=-72/47, 6-7=0/42  
BOT CHORD 2-10=-25/61, 9-10=-25/61, 8-9=-25/61, 6-8=-25/61  
WEBS 4-9=-83/0, 3-10=-191/102, 5-8=-191/100

**NOTES**  
1) Unbalanced roof live loads have been considered for this design.  
2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; Lumber DOL=1.60 plate grip DOL=1.60

- 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.
- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=30.0 psf (ground snow); Pf=23.1 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 23.1 psf on overhangs non-concurrent with other live loads.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 1-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 9 lb uplift at joint 2, 14 lb uplift at joint 6, 73 lb uplift at joint 10 and 72 lb uplift at joint 8.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



December 1, 2023

**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/TPI 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)

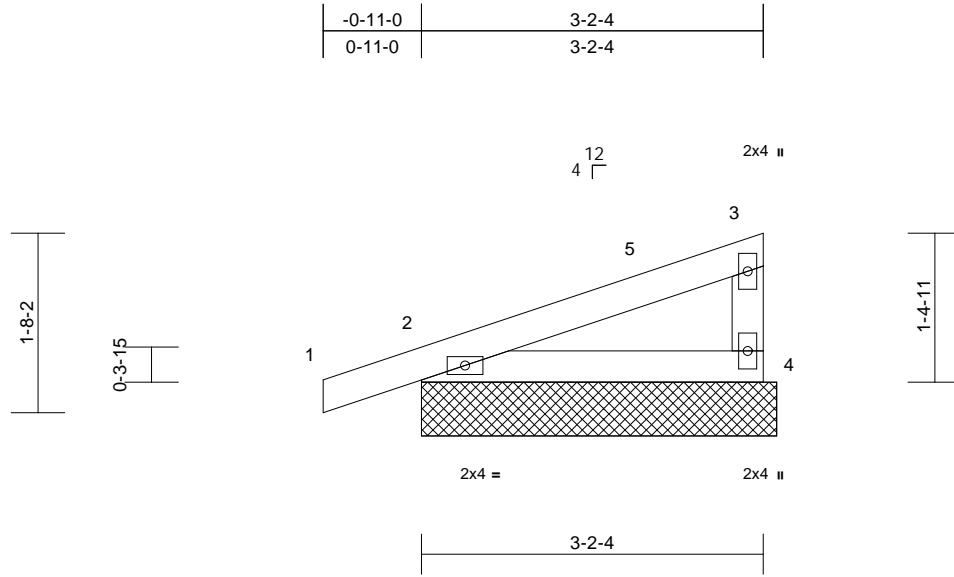
ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate  
818 Soundside Road  
Edenton, NC 27932

Job 3769903	Truss M01	Truss Type Monopitch Supported Gable	Qty 1	Ply 1	Longleaf B - Lot 7 - Fairground Farms Job Reference (optional)	162302448
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Builders FirstSource (Savannah), Pooler, GA - 31322,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Thu Nov 30 14:14:52  
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Page: 1



Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.15	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	23.1/30.0	Lumber DOL	1.15	BC	0.11	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	n/a	-	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-P								
BCDL	10.0											
										Weight: 12 lb	FT = 20%	

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

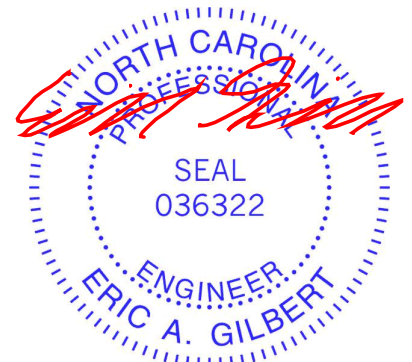
**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 3-2-4 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 2=3-3-12, 4=3-3-12  
Max Horiz 2=46 (LC 8)  
Max Uplift 2=-42 (LC 8), 4=-17 (LC 12)  
Max Grav 2=202 (LC 19), 4=126 (LC 19)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/30, 2-3=-38/24, 3-4=-95/35  
BOT CHORD 2-4=0/0

- Gable studs spaced at 2-0-0 oc.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 1-00-00 wide will fit between the bottom chord and any other members.
  - All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 17 lb uplift at joint 4 and 42 lb uplift at joint 2.
  - This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- LOAD CASE(S)** Standard

- NOTES**
- Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; Lumber DOL=1.60 plate grip DOL=1.60
  - 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.
  - TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=30.0 psf (ground snow); Pf=23.1 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
  - Unbalanced snow loads have been considered for this design.
  - This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 23.1 psf on overhangs non-concurrent with other live loads.
  - Gable requires continuous bottom chord bearing.



December 1, 2023

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ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

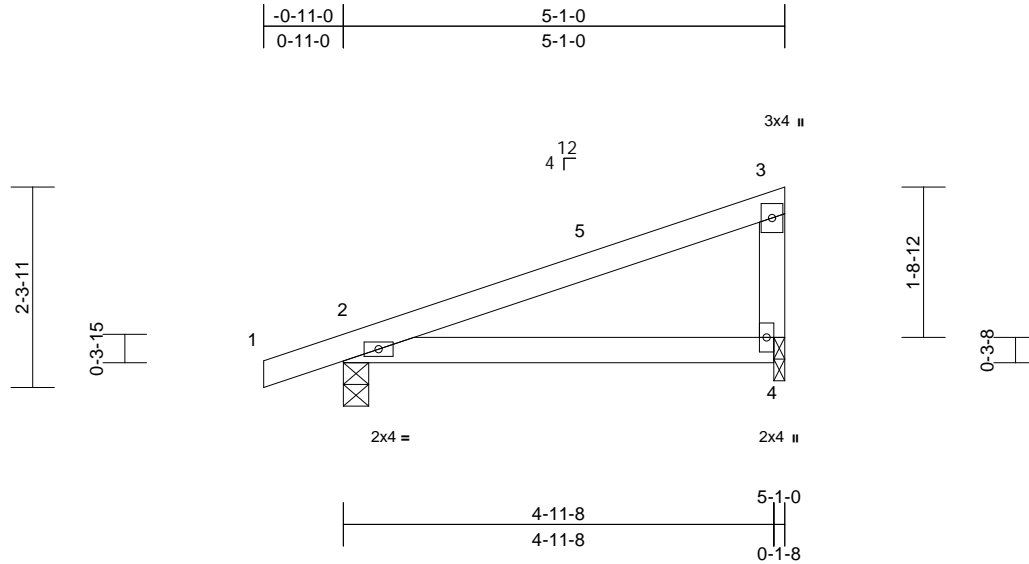
818 Soundside Road  
Edenton, NC 27932

Job 3769903	Truss M02	Truss Type Monopitch	Qty 12	Ply 1	Longleaf B - Lot 7 - Fairground Farms Job Reference (optional)	162302449
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Builders FirstSource (Savannah), Pooler, GA - 31322,

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Page: 1



Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.32	Vert(LL)	-0.01	2-4	>999	240	MT20	244/190
Snow (Pf/Pg)	23.1/30.0	Lumber DOL	1.15	BC	0.18	Vert(CT)	-0.03	2-4	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-R								
BCDL	10.0											
											Weight: 19 lb	FT = 20%

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

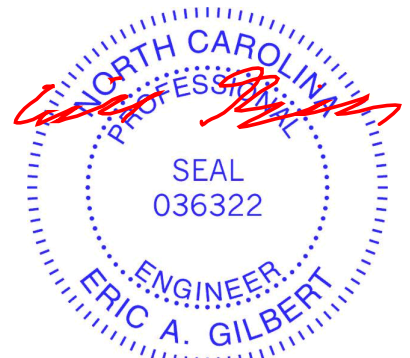
**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 5-1-0 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 2=0-3-8, 4=0-1-8  
Max Horiz 2=67 (LC 8)  
Max Uplift 2=-50 (LC 8), 4=-29 (LC 12)  
Max Grav 2=289 (LC 19), 4=214 (LC 19)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/30, 2-3=-178/0, 3-4=-143/51  
BOT CHORD 2-4=-17/120

- \* 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 1-00-00 wide will fit between the bottom chord and any other members.
  - All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
  - Bearing at joint(s) 4 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
  - Provide mechanical connection (by others) of truss to bearing plate at joint(s) 4.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 50 lb uplift at joint 2 and 29 lb uplift at joint 4.
  - This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- LOAD CASE(S)** Standard

- NOTES**
- Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
  - TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=30.0 psf (ground snow); Pf=23.1 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
  - Unbalanced snow loads have been considered for this design.
  - This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 23.1 psf on overhangs non-concurrent with other live loads.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.



December 1, 2023

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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/TPI 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)



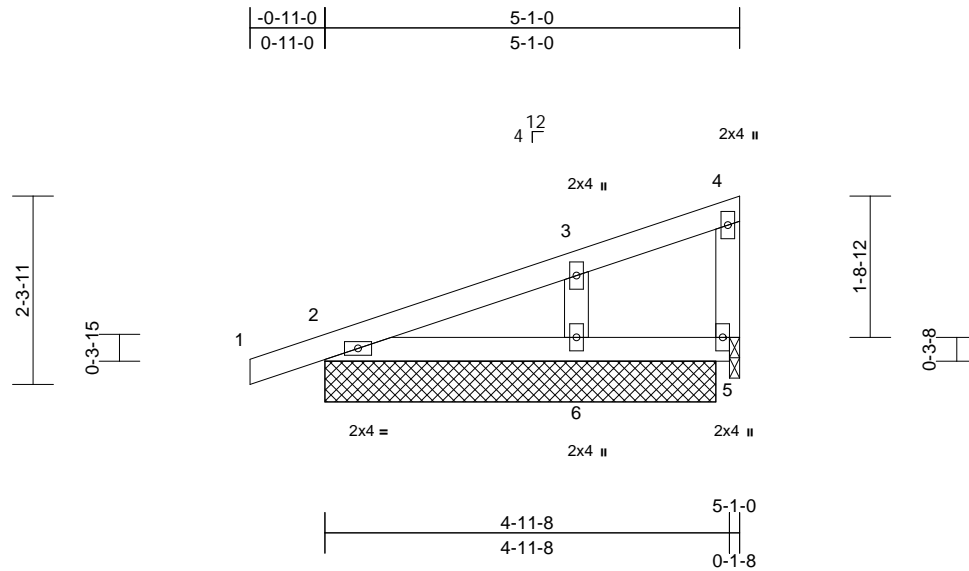
818 Soundside Road  
Edenton, NC 27932

Job 3769903	Truss M03	Truss Type Monopitch Supported Gable	Qty 1	Ply 1	Longleaf B - Lot 7 - Fairground Farms Job Reference (optional)	162302450
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Builders FirstSource (Savannah), Pooler, GA - 31322,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Thu Nov 30 14:14:53  
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Page: 1



Scale = 1:28.2

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.12	Vert(LL)	0.00	2-6	>999	240	244/190
Snow (Pf/Pg)	23.1/30.0	Lumber DOL	1.15	BC	0.07	Vert(CT)	-0.01	2-6	>999	180	
TCDL	10.0	Rep Stress Incr	YES	WB	0.04	Horz(CT)	n/a	-	n/a	n/a	
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-P							
BCDL	10.0										
										Weight: 20 lb	FT = 20%

**LUMBER**

TOP CHORD 2x4 SP No.2  
 BOT CHORD 2x4 SP No.2  
 OTHERS 2x4 SP No.2 \*Except\* 6-3:2x4 SP No.3

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 5-1-0 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS**

(size) 2=4-9-8, 5=0-1-8, 6=4-9-8  
 Max Horiz 2=67 (LC 8)  
 Max Uplift 2=-33 (LC 8), 5=-8 (LC 8), 6=-37 (LC 12)  
 Max Grav 2=180 (LC 1), 5=51 (LC 19), 6=273 (LC 19)

**FORCES**

(lb) - Maximum Compression/Maximum Tension  
 TOP CHORD 1-2=0/30, 2-3=-47/36, 3-4=-31/9, 4-5=-42/13  
 BOT CHORD 2-6=0/0, 5-6=0/0  
 WEBS 3-6=-208/76

**NOTES**

- 1) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=30.0 psf (ground snow); Pf=23.1 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.

- 5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 23.1 psf on overhangs non-concurrent with other live loads.
- 6) Gable studs spaced at 2-0-0 oc.
- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 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 1-00-00 wide will fit between the bottom chord and any other members.
- 9) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- 10) Bearing at joint(s) 5 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 11) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 5.
- 12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 33 lb uplift at joint 2, 37 lb uplift at joint 6 and 8 lb uplift at joint 5.
- 13) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



December 1, 2023

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

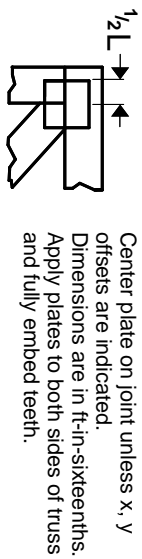
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall 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)



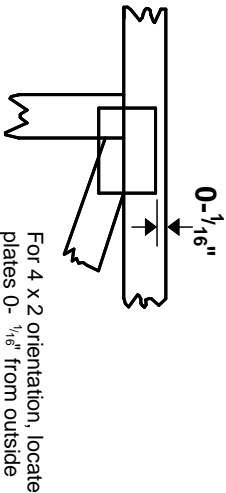
818 Soundside Road  
 Edenton, NC 27932

# Symbols

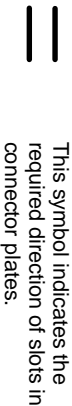
## PLATE LOCATION AND ORIENTATION



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



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



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

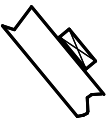
\* Plate location details available in MITek software or upon request.

## PLATE SIZE

**4 X 4**

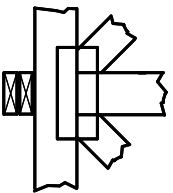
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

## LATERAL BRACING LOCATION



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

## BEARING

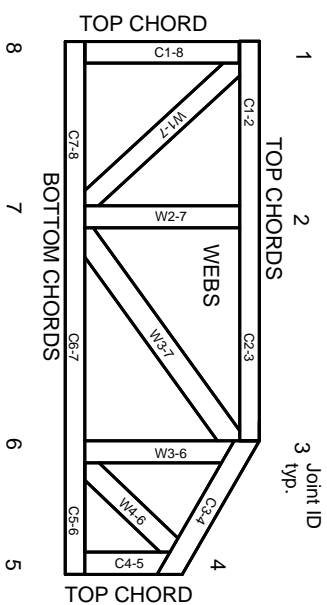


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

## Industry Standards:

ANSI/TP1: 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/TP1 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/TP1 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TP1 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/TP1 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.

**MITek**

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**TRENGO**  
A MITek Affiliate

MITek Engineering Reference Sheet: MIL-7473 rev. 1/2/2023