ENGINEERING BY TRENCO
A MiTek Affiliate

Trenco
818 Soundside Rd
Edenton, NC 27932

RE: P20-04027 - RICHARDSON

Site Information:

Project Customer: Project Name:
Lot/Block: Subdivision:
Model:
Address:
City: State:

General Truss Engineering Criteria & Design Loads (Individual Truss Design Drawings Show Special Loading Conditions):

Design Code: IRC2018/TPI2014 Design Program: MiTek 20/20 8.3
Wind Code: N/A Wind Speed: 130 mph Design Method: User defined
Roof Load: 40.0 psf Floor Load: N/A psf

Mean Roof Height (feet): 12 Exposure Category: B

No.	Seal#	Truss Name	Date
1	E14419867	G01	5/19/20
2	E14419868	PB01	5/19/20
3	E14419869	PB02	5/19/20
4	E14419870	PB03	5/19/20
5	E14419871	PB04	5/19/20
6	E14419872	PB05	5/19/20
7	E14419873	PB06	5/19/20
8	E14419874	PB07	5/19/20
9	E14419875	PB08	5/19/20
10	E14419876	PB09	5/19/20
11	E14419877	T01	5/19/20
12	E14419878	T01GE	5/19/20
13	E14419879	T01SGE	5/19/20
14	E14419880	T02	5/19/20
	E14419881	T03	5/19/20
16	E14419882	T04	5/19/20
17	E14419883	T05	5/19/20
18	E14419884	T06	5/19/20
19	E14419885	T07	5/19/20
20	E14419886	T08	5/19/20
21	E14419887	T09	5/19/20
22	E14419888	T10	5/19/20
23	E14419889	T11	5/19/20
	E14419890	T12	5/19/20
25	E14419891	T13	5/19/20
26	E14419892	T14	5/19/20
27	E14419893	T15	5/19/20
28	E14419894	T17	5/19/20

The truss drawing(s) referenced above have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by Longleaf Truss Company.

Truss Design Engineer's Name: Gilbert, Eric
My license renewal date for the state of North Carolina is December 31, 2020.

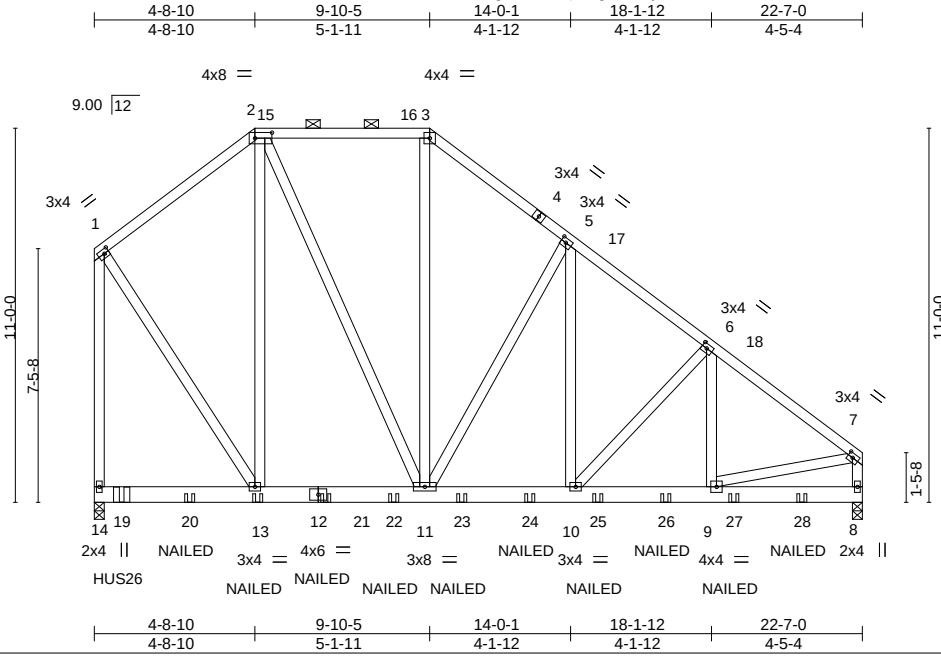
IMPORTANT NOTE: The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), which 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.

May 19,2020

Gilbert, Eric

Job	Truss	Truss Type	Qty	Ply	RICHARDSON
P20-04027	G01	Piggyback Base Girder	1	2	E14419867
					Job Reference (optional)

Longleaf Truss Company, West End, NC - 27376, 8.330 s Mar 23 2020 MiTek Industries, Inc. Tue May 19 07:20:33 2020 Page 1
ID:gkUVx24QO5glBKvEjRcThWzFI?4-tOcX8xu2wazwHzOB6EBSfHf8wkR0cpwmHmaF4HzF?pi



Scale = 1:67.7

Plate Offsets (X,Y)-- [1:0-1-12,0-1-8], [2:0-6-0,0-2-0], [5:0-1-12,0-1-8], [6:0-1-12,0-1-8], [7:0-1-12,0-1-8]

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	0.35	Vert(LL)	-0.03	10-11	>999	240	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.29	Vert(CT)	-0.04	10-11	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.31	Horz(CT)	0.01	8	n/a	n/a		
BCLL	0.0 *	Code	IRC2018/TPI2014	Matrix-S							Weight: 415 lb	FT = 20%
BCDL	10.0											

LUMBER-
TOP CHORD 2x4 SP No.1
BOT CHORD 2x6 SP No.1
WEBS 2x4 SP No.3

BRACING-
TOP CHORD Sheathed or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 2-3.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS. (size) 14=0-3-8, 8=0-3-8
Max Horz 14=-282(LC 10)
Max Uplift 14=-212(LC 12), 8=-190(LC 12)
Max Grav 14=2757(LC 34), 8=1794(LC 34)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-987/212, 2-3=-968/229, 3-5=-1320/256, 5-6=-1799/261, 6-7=-1983/239, 1-14=-1748/212, 7-8=-1631/186
BOT CHORD 11-13=-57/722, 10-11=-59/1363, 9-10=-120/1545
WEBS 2-13=-348/129, 2-11=-117/641, 3-11=-180/510, 5-11=-809/163, 5-10=-151/620, 6-10=-270/88, 1-13=-147/1239, 7-9=-113/1484

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 0-8-0 oc.
Webs connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=12ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
5) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=16.5 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0 Rain surcharge applied to all exposed surfaces with slopes less than 0.500/12 in accordance with IBC 1608.3.4.
6) Unbalanced snow loads have been considered for this design.
7) Provide adequate drainage to prevent water ponding.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 14=212, 8=190.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

May 19,2020

Continued on page 2

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 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, DSB-89 and BCSI Building Component Safety Information*** available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

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NOTES-

13) Use Simpson Strong-Tie HUS26 (14-10d Girder, 4-10d Truss) or equivalent at 0-9-10 from the left end to connect truss(es) to back face of bottom chord.
14) Fill all nail holes where hanger is in contact with lumber.
15) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidlines.

LOAD CASE(S) Standard

1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
   Uniform Loads (plf)
   Vert: 1-2=-43, 2-3=-53, 3-7=-43, 8-14=-20
   Concentrated Loads (lb)
   Vert: 12=-152(B) 13=-152(B) 19=-1106(B) 20=-152(B) 22=-152(B) 23=-152(B) 24=-164(B) 25=-164(B) 26=-164(B) 27=-164(B) 28=-164(B)

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Job	Truss	Truss Type	Qty	Ply	RICHARDSON
P20-04027	PB01	Piggyback	21	1	E14419868
					Job Reference (optional)

Longleaf Truss Company, West End, NC - 27376, 8.330 s Mar 23 2020 MiTek Industries, Inc. Tue May 19 07:20:34 2020 Page 1
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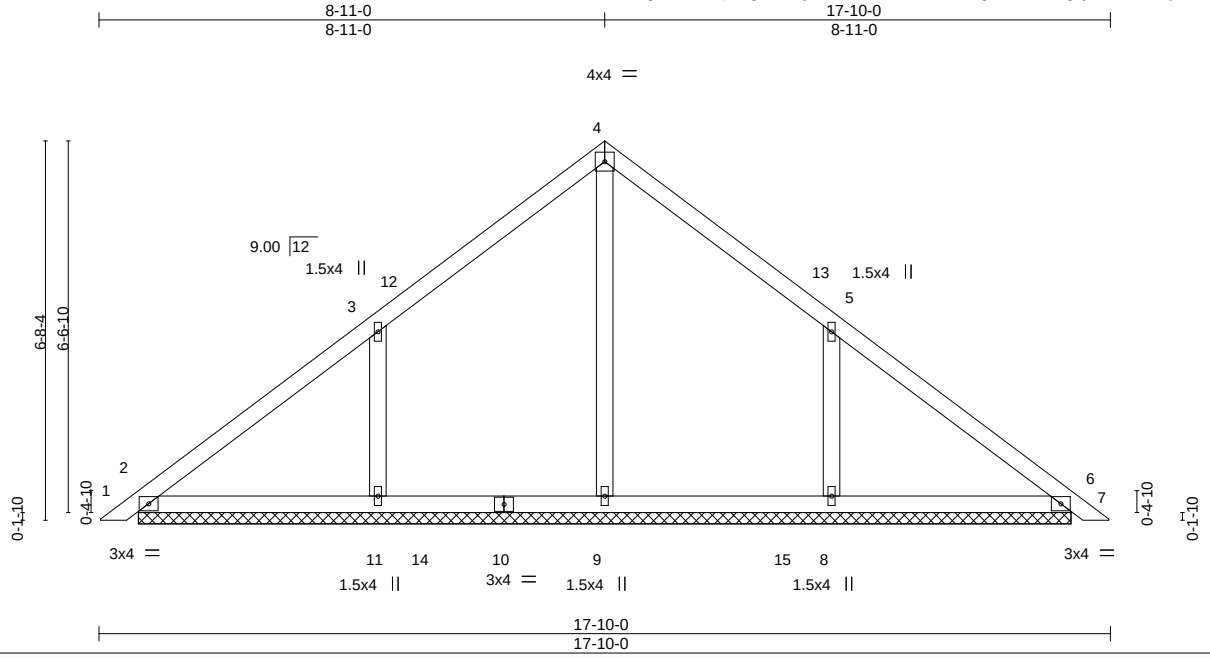

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.18	Vert(LL)	0.00	7	n/r	120	MT20	244/190
Snow (Pf/Pg)	11.6/15.0	Lumber DOL	1.15	BC	0.12	Vert(CT)	0.01	7	n/r	120		
TCDL	10.0	Rep Stress Incr	YES	WB	0.11	Horz(CT)	0.00	6	n/a	n/a		
BCLL	0.0 *	Code	IRC2018/TPI2014	Matrix-S							Weight: 75 lb	FT = 20%
BCDL	10.0											

LUMBER-
TOP CHORD 2x4 SP No.1
BOT CHORD 2x4 SP No.1
OTHERS 2x4 SP No.3

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

REACTIONS. All bearings 16-5-6.
(lb) - Max Horz 2=-129(LC 10)
Max Uplift All uplift 100 lb or less at joint(s) 11, 8
Max Grav All reactions 250 lb or less at joint(s) 2, 6 except 9=330(LC 24), 11=496(LC 24), 8=495(LC 25)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 3-11=-306/117, 5-8=-305/117

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=12ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.6 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.6 psf on overhangs non-concurrent with other live loads.
6) Gable requires continuous bottom chord bearing.
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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 11, 8.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

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Job	Truss	Truss Type	Qty	Ply	RICHARDSON
P20-04027	PB02	Piggyback	7	1	E14419869
					Job Reference (optional)

Longleaf Truss Company, West End, NC - 27376, 8.330 s Mar 23 2020 MiTek Industries, Inc. Tue May 19 07:20:35 2020 Page 1
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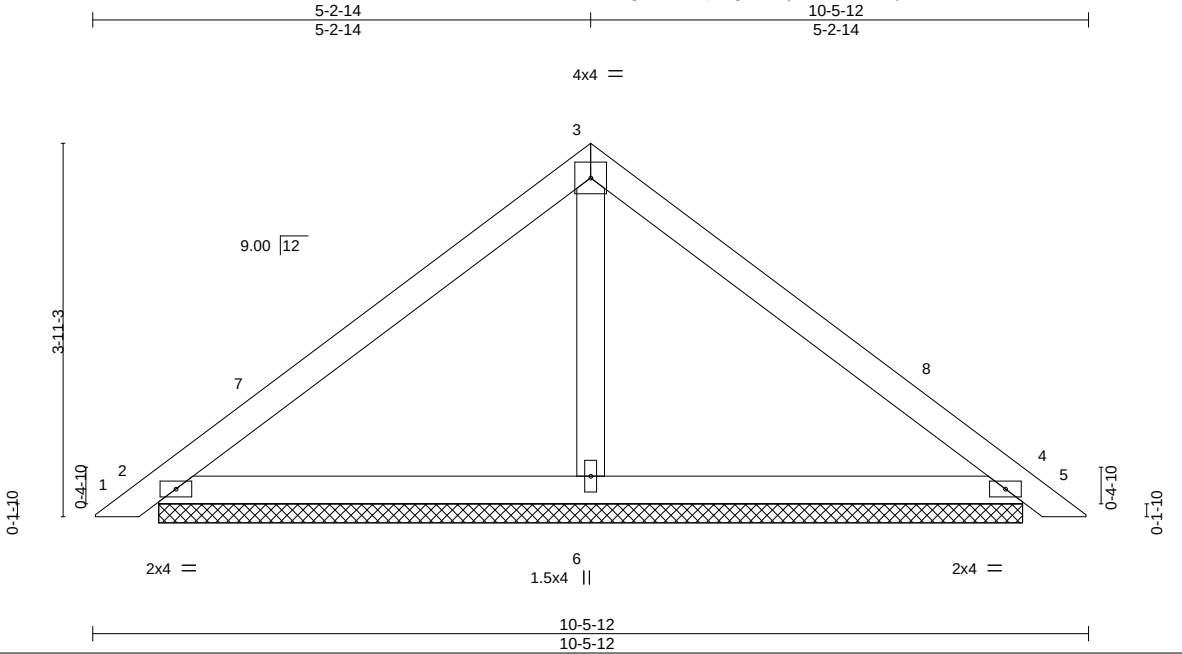

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.24	Vert(LL)	0.01	5	n/r	120	MT20	244/190
Snow (Pf/Pg)	11.6/15.0	Lumber DOL	1.15	BC	0.15	Vert(CT)	0.01	5	n/r	120		
TCDL	10.0	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00	4	n/a	n/a		
BCLL	0.0 *	Code	IRC2018/TPI2014	Matrix-S							Weight: 38 lb	FT = 20%
BCDL	10.0											

LUMBER-
TOP CHORD 2x4 SP No.1
BOT CHORD 2x4 SP No.1
OTHERS 2x4 SP No.3

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

REACTIONS. (size) 2=9-1-2, 4=9-1-2, 6=9-1-2
Max Horz 2=74(LC 11)
Max Uplift 2=-26(LC 12), 4=-26(LC 12)
Max Grav 2=216(LC 2), 4=216(LC 2), 6=348(LC 2)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

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=12ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.6 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.6 psf on overhangs non-concurrent with other live loads.
6) Gable requires continuous bottom chord bearing.
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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 4.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

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Job	Truss	Truss Type	Qty	Ply	RICHARDSON
P20-04027	PB03	Piggyback	1	1	E14419870
					Job Reference (optional)

Longleaf Truss Company, West End, NC - 27376, 8.330 s Mar 23 2020 MiTek Industries, Inc. Tue May 19 07:20:36 2020 Page 1
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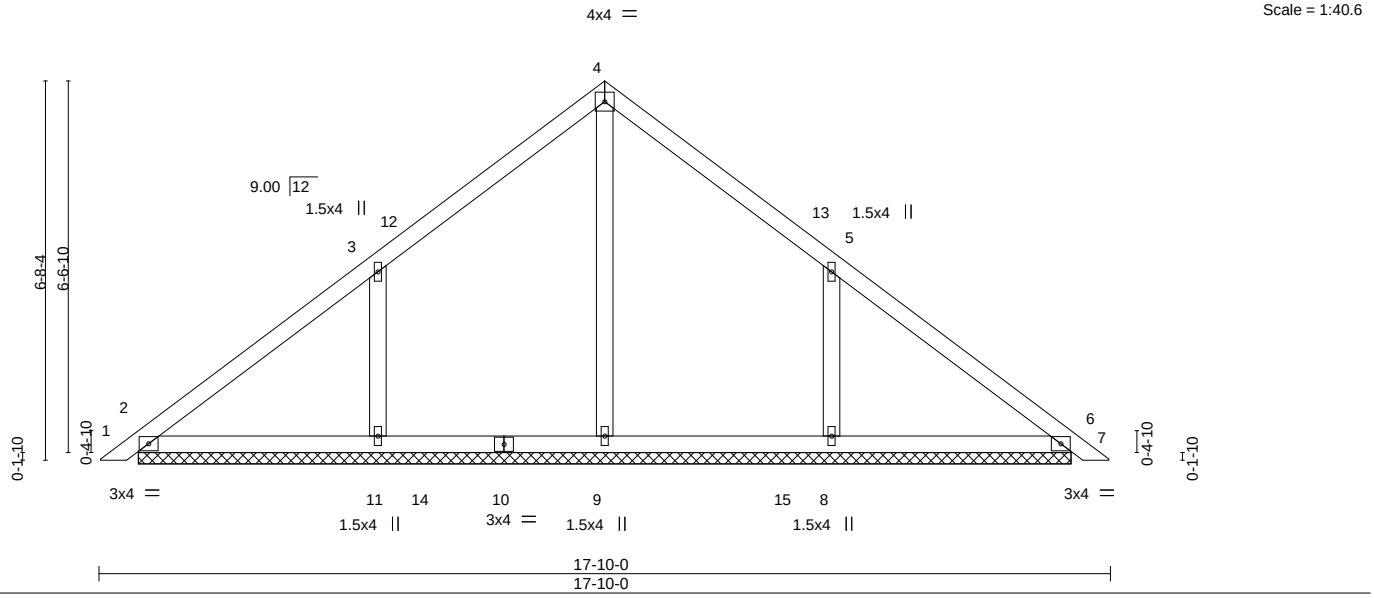

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.18	Vert(LL)	0.00	7	n/r	120	MT20	244/190
Snow (Pf/Pg)	11.6/15.0	Lumber DOL	1.15	BC	0.12	Vert(CT)	0.01	7	n/r	120		
TCDL	10.0	Rep Stress Incr	YES	WB	0.11	Horz(CT)	0.00	6	n/a	n/a		
BCLL	0.0 *	Code	IRC2018/TPI2014	Matrix-S							Weight: 75 lb	FT = 20%
BCDL	10.0											

LUMBER-
TOP CHORD 2x4 SP No.1
BOT CHORD 2x4 SP No.1
OTHERS 2x4 SP No.3

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

REACTIONS. All bearings 16-5-6.
(lb) - Max Horz 2=-129(LC 10)
Max Uplift All uplift 100 lb or less at joint(s) 11, 8
Max Grav All reactions 250 lb or less at joint(s) 2, 6 except 9=330(LC 24), 11=496(LC 24), 8=495(LC 25)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 3-11=-306/117, 5-8=-305/117

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=12ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.6 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.6 psf on overhangs non-concurrent with other live loads.
6) Gable requires continuous bottom chord bearing.
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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 11, 8.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

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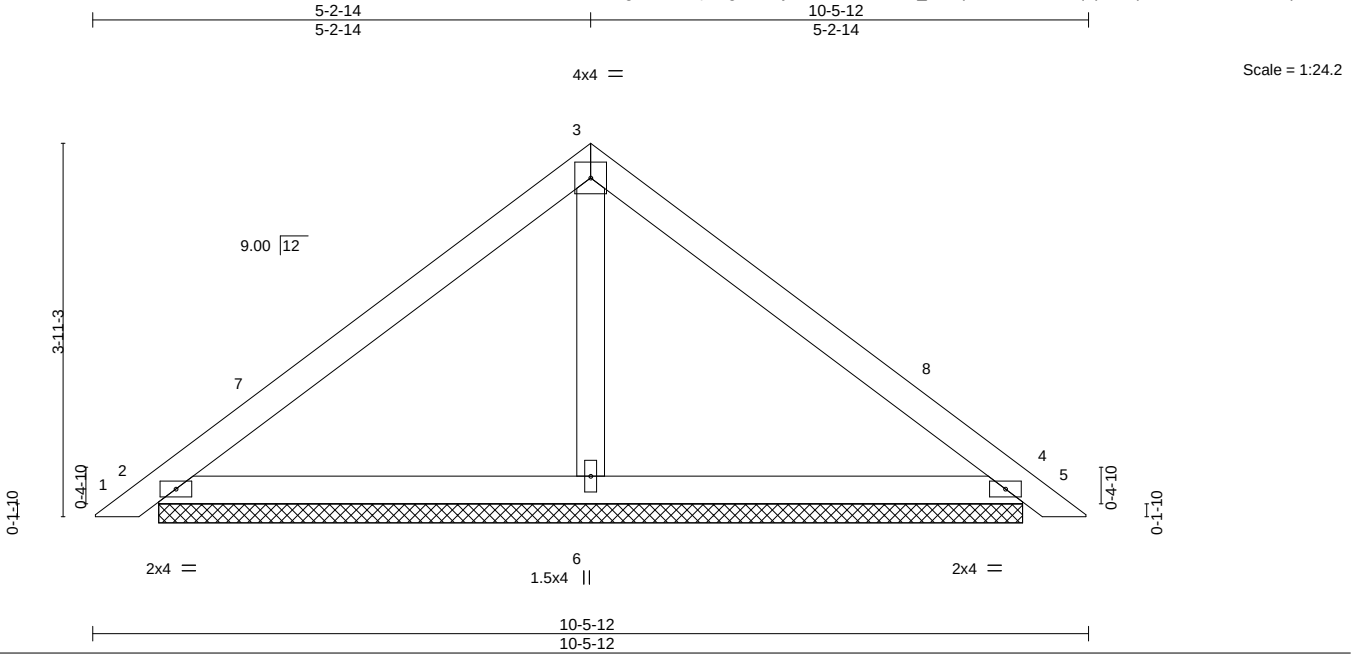
Job	Truss	Truss Type	Qty	Ply	RICHARDSON
P20-04027	PB04	Piggyback	1	1	E14419871
					Job Reference (optional)

Longleaf Truss Company, West End, NC - 27376, 8.330 s Mar 23 2020 MiTek Industries, Inc. Tue May 19 07:20:37 2020 Page 1
ID:gkUVx24QO5glBKvEjRcThWzFI?4-l9r2_JxZzpTMmaizL4GOq7psaLq8YhoMCOYSD2zF?pe



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)	0.01	5	n/r	120	MT20	244/190
Snow (Pf/Pg)	11.6/15.0	Lumber DOL	1.15	BC	0.15	Vert(CT)	0.01	5	n/r	120		
TCDL	10.0	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00	4	n/a	n/a		
BCLL	0.0 *	Code	IRC2018/TPI2014	Matrix-S							Weight: 38 lb	FT = 20%
BCDL	10.0											

LUMBER-
TOP CHORD 2x4 SP No.1
BOT CHORD 2x4 SP No.1
OTHERS 2x4 SP No.3

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

REACTIONS. (size) 2=9-1-2, 4=9-1-2, 6=9-1-2
Max Horz 2=74(LC 11)
Max Uplift 2=-26(LC 12), 4=-26(LC 12)
Max Grav 2=216(LC 2), 4=216(LC 2), 6=348(LC 2)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

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=12ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.6 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.6 psf on overhangs non-concurrent with other live loads.
6) Gable requires continuous bottom chord bearing.
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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 4.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

May 19,2020

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

Job	Truss	Truss Type	Qty	Ply	RICHARDSON
P20-04027	PB05	Piggyback	1	1	E14419872
					Job Reference (optional)

Longleaf Truss Company, West End, NC - 27376, 8.330 s Mar 23 2020 MiTek Industries, Inc. Tue May 19 07:20:38 2020 Page 1
ID:gkUVx24QO5glBKvEjRcThWzFI?4-DLPQBfyBk7cDNkH9vnndMKM4plBkH8yVQ2H0lUzF?pd

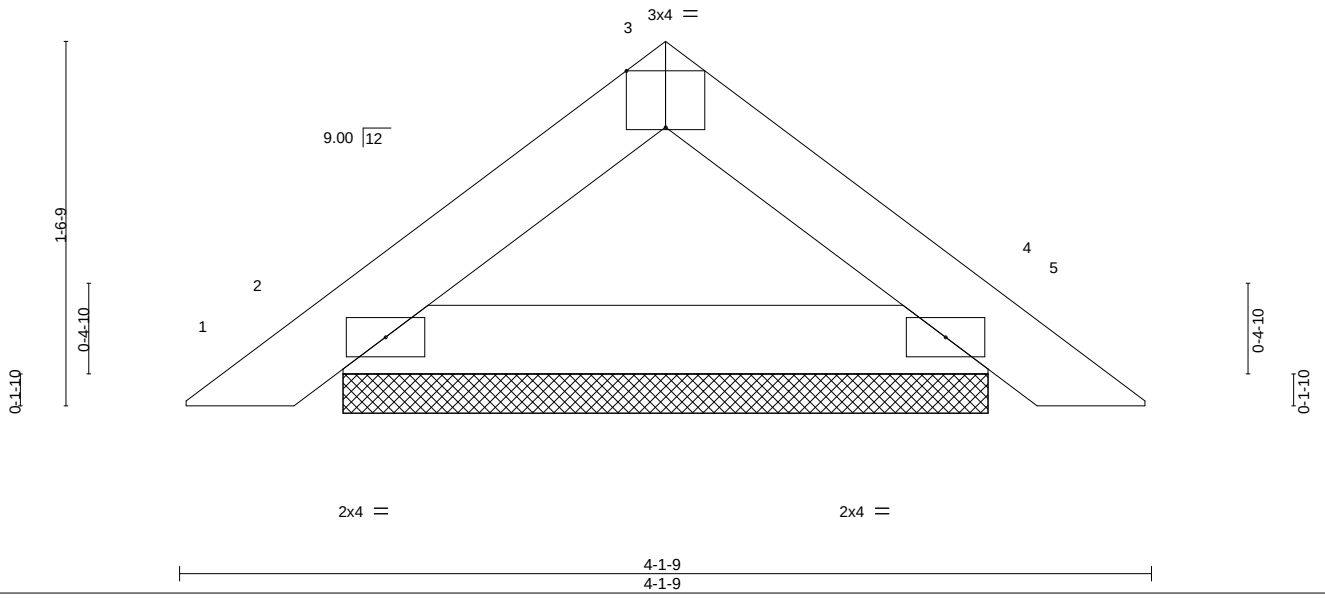

Plate Offsets (X,Y)-- [3:0-2-0,Edge]

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	0.02	Vert(LL)	0.00	4	n/r	120	MT20	244/190
Snow (Pf/Pg)	11.6/15.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	0.00	4	n/r	120		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	4	n/a	n/a		
BCLL	0.0 *	Code	IRC2018/TPI2014	Matrix-P							Weight: 12 lb	FT = 20%
BCDL	10.0											

LUMBER-
TOP CHORD 2x4 SP No.1
BOT CHORD 2x4 SP No.1

BRACING-
TOP CHORD Sheathed or 4-1-9 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 2=2-8-14, 4=2-8-14
Max Horz 2=-27(LC 10)
Max Uplift 2=-11(LC 12), 4=-11(LC 12)
Max Grav 2=136(LC 2), 4=136(LC 2)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

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=12ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.6 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.6 psf on overhangs non-concurrent with other live loads.
6) Gable requires continuous bottom chord bearing.
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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 4.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

May 19,2020

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

Job	Truss	Truss Type	Qty	Ply	RICHARDSON
P20-04027	PB06	Piggyback	1	1	E14419873
					Job Reference (optional)

Longleaf Truss Company, West End, NC - 27376, 8.330 s Mar 23 2020 MiTek Industries, Inc. Tue May 19 07:20:39 2020 Page 1
ID:gkUVx24QO5gIBKvEjRcThWzFI?4-hYzoP?ypVQk3?usLTUIsvYvFZ8Xz0bCffi1ZHwzF?pc

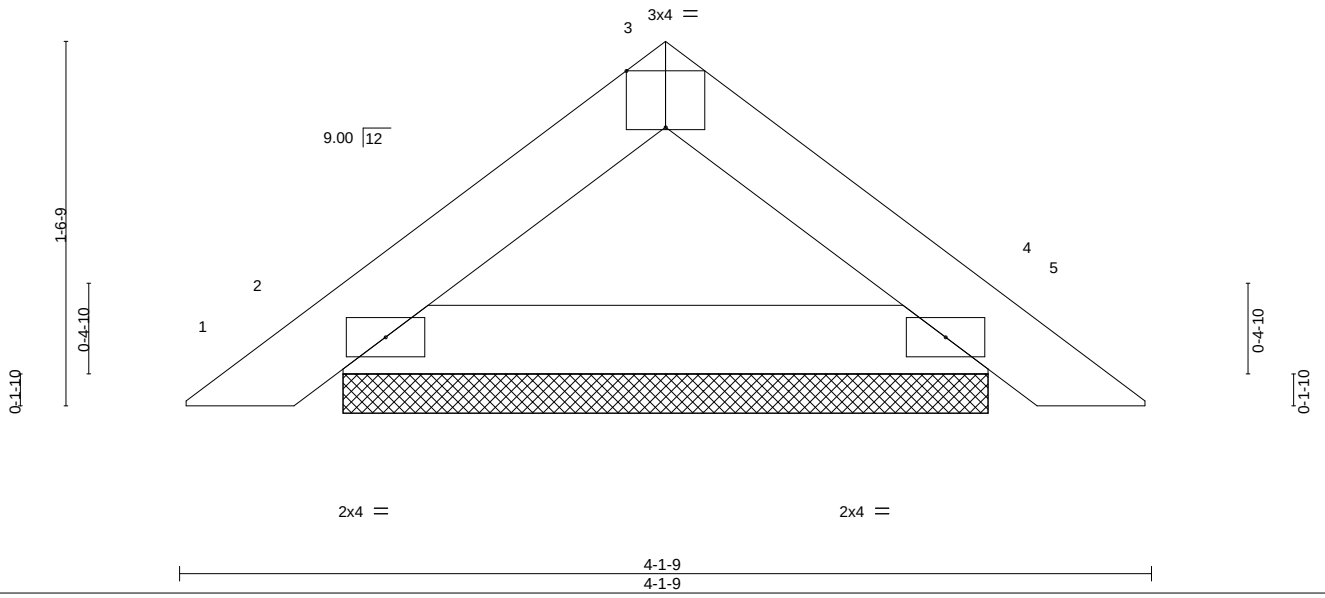

Plate Offsets (X,Y)-- [3:0-2-0,Edge]

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	0.02	Vert(LL)	0.00	4	n/r	120	MT20	244/190
Snow (Pf/Pg)	11.6/15.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	0.00	4	n/r	120		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	4	n/a	n/a		
BCLL	0.0 *	Code	IRC2018/TPI2014	Matrix-P							Weight: 12 lb	FT = 20%
BCDL	10.0											

LUMBER-
TOP CHORD 2x4 SP No.1
BOT CHORD 2x4 SP No.1

BRACING-
TOP CHORD Sheathed or 4-1-9 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 2=2-8-14, 4=2-8-14
Max Horz 2=-27(LC 10)
Max Uplift 2=-11(LC 12), 4=-11(LC 12)
Max Grav 2=136(LC 2), 4=136(LC 2)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

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=12ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.6 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.6 psf on overhangs non-concurrent with other live loads.
6) Gable requires continuous bottom chord bearing.
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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 4.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

May 19,2020

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

Job	Truss	Truss Type	Qty	Ply	RICHARDSON
P20-04027	PB07	Piggyback	1	1	E14419874
					Job Reference (optional)

Longleaf Truss Company, West End, NC - 27376, 8.330 s Mar 23 2020 MiTek Industries, Inc. Tue May 19 07:20:40 2020 Page 1
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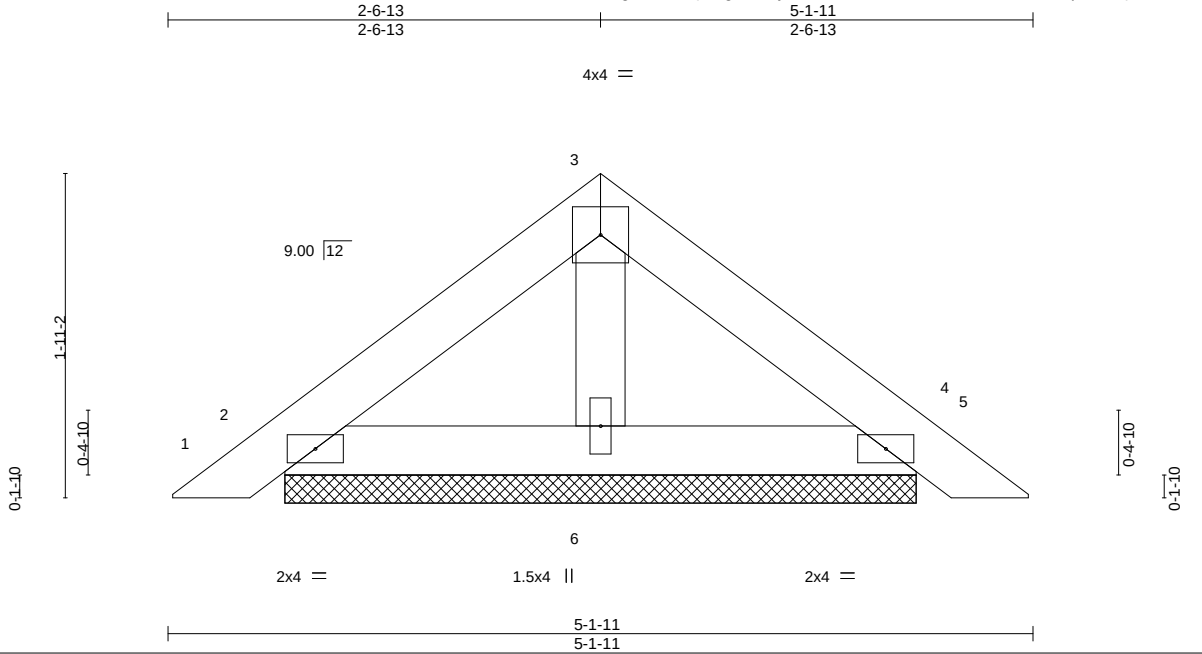

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.04	Vert(LL)	0.00	4	n/r	120	MT20	244/190
Snow (Pf/Pg)	11.6/15.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	0.00	5	n/r	120		
TCDL	10.0	Rep Stress Incr	YES	WB	0.02	Horz(CT)	0.00	4	n/a	n/a		
BCLL	0.0 *	Code	IRC2018/TPI2014	Matrix-P							Weight: 17 lb	FT = 20%
BCDL	10.0											

LUMBER-
TOP CHORD 2x4 SP No.1
BOT CHORD 2x4 SP No.1
OTHERS 2x4 SP No.3

BRACING-
TOP CHORD Sheathed or 5-1-11 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 2=3-9-0, 4=3-9-0, 6=3-9-0
Max Horz 2=-34(LC 10)
Max Uplift 2=-23(LC 12), 4=-23(LC 12)
Max Grav 2=115(LC 17), 4=115(LC 18), 6=125(LC 2)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

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=12ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.6 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.6 psf on overhangs non-concurrent with other live loads.
6) Gable requires continuous bottom chord bearing.
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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 4.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

May 19,2020

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

Job	Truss	Truss Type	Qty	Ply	RICHARDSON
P20-04027	PB08	Piggyback	4	1	E14419875
					Job Reference (optional)

Longleaf Truss Company, West End, N.C. 8.330 s Apr 21 2020 MiTek Industries, Inc. Tue May 19 08:53:19 2020 Page 1

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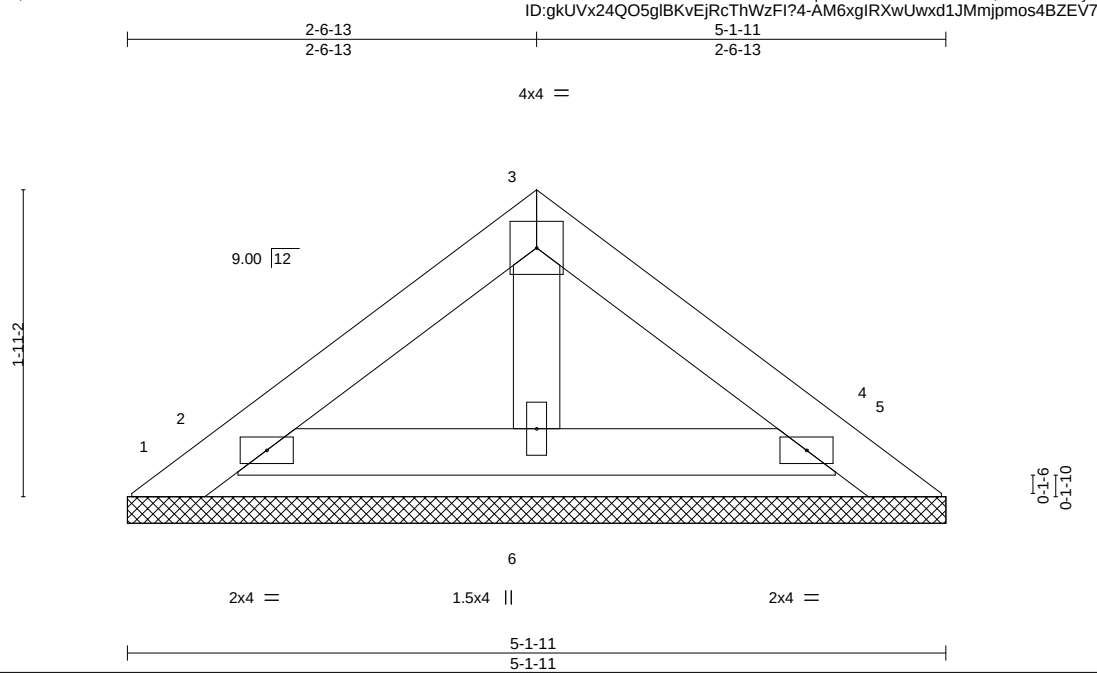

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.04	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	11.6/15.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.01	Horz(CT)	0.00	5	n/a	n/a		
BCLL	0.0 *	Code	IRC2018/TPI2014	Matrix-P								
BCDL	10.0										Weight: 17 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.1
BOT CHORD 2x4 SP No.1
OTHERS 2x4 SP No.3

BRACING-
TOP CHORD Sheathed or 5-1-11 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 1=5-1-11, 5=5-1-11, 2=5-1-11, 4=5-1-11, 6=5-1-11
Max Horz 1=-34(LC 10)
Max Uplift 1=-51(LC 24), 5=-35(LC 25), 2=-32(LC 12), 4=-32(LC 12)
Max Grav 1=24(LC 9), 5=20(LC 12), 2=171(LC 24), 4=166(LC 18), 6=117(LC 7)

FORCES. (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-40/66, 2-3=-59/17, 3-4=-58/17, 4-5=-10/38
BOT CHORD 2-6=-10/20, 4-6=-10/20
WEBS 3-6=-68/2

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=12ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.6 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) Gable requires continuous bottom chord bearing.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 51 lb uplift at joint 1, 35 lb uplift at joint 5 , 32 lb uplift at joint 2 and 32 lb uplift at joint 4.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

May 19,2020

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

Job	Truss	Truss Type	Qty	Ply	RICHARDSON
P20-04027	PB09	Piggyback	1	2	E14419876
					Job Reference (optional)

Longleaf Truss Company, West End, N.C. 8.330 s Apr 21 2020 MiTek Industries, Inc. Tue May 19 08:53:31 2020 Page 1

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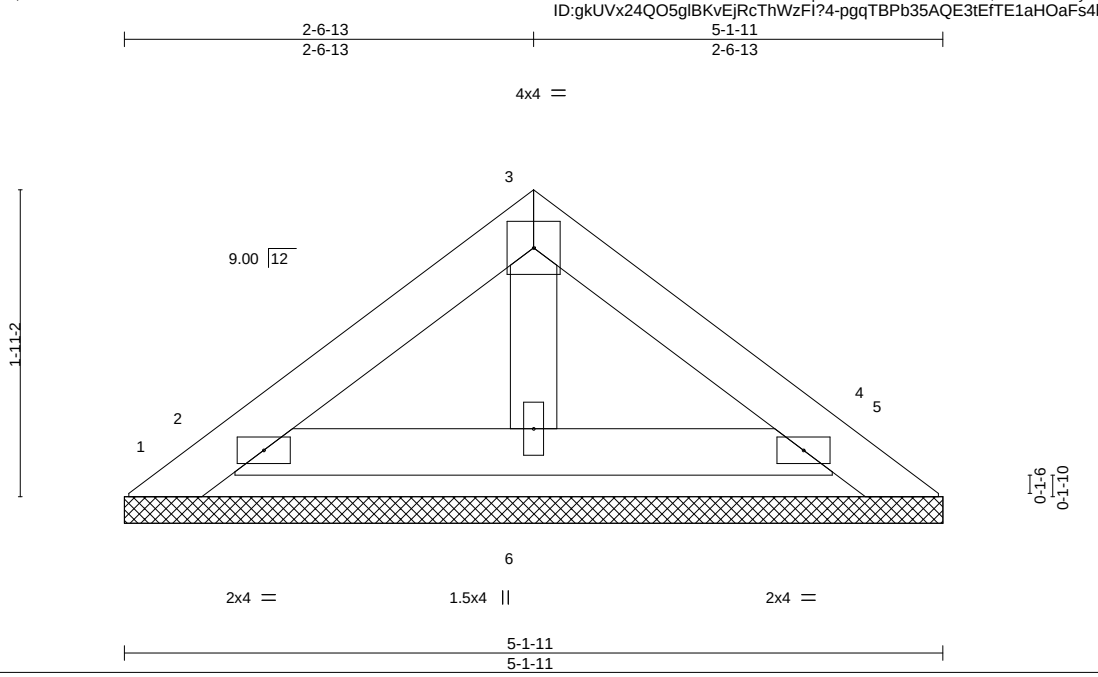

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.02	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	11.6/15.0	Lumber DOL	1.15	BC	0.01	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.01	Horz(CT)	0.00	5	n/a	n/a		
BCLL	0.0 *	Code	IRC2018/TPI2014	Matrix-P								
BCDL	10.0										Weight: 34 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.1
BOT CHORD 2x4 SP No.1
OTHERS 2x4 SP No.3

BRACING-
TOP CHORD Sheathed or 5-1-11 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 1=5-1-11, 5=5-1-11, 2=5-1-11, 4=5-1-11, 6=5-1-11
Max Horz 1=-34(LC 10)
Max Uplift 1=-51(LC 24), 5=-35(LC 25), 2=-32(LC 12), 4=-32(LC 12)
Max Grav 1=24(LC 9), 5=20(LC 12), 2=171(LC 24), 4=166(LC 18), 6=117(LC 7)

FORCES. (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-40/66, 2-3=-59/17, 3-4=-58/17, 4-5=-10/38
BOT CHORD 2-6=-10/20, 4-6=-10/20
WEBS 3-6=-68/2

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: 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=12ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
5) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.6 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
6) Unbalanced snow loads have been considered for this design.
7) Gable requires continuous bottom chord bearing.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 51 lb uplift at joint 1, 35 lb uplift at joint 5, 32 lb uplift at joint 2 and 32 lb uplift at joint 4.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

May 19,2020

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

Job	Truss	Truss Type	Qty	Ply	RICHARDSON
P20-04027	T01	Piggyback Base Supported Gable	1	1	E14419877
					Job Reference (optional)

Longleaf Truss Company, West End, NC - 27376, 8.330 s Mar 23 2020 MiTek Industries, Inc. Tue May 19 07:20:44 2020 Page 1
ID:gkUVx24QO5gIBKvEjRcThWzFI?4-2VmhSi0yKzMM5fkJF2u1cbc2j9EdhoCOp_kKy8zF?pX

1-2-8 | 12-8-11 | 23-2-7 | 35-11-2 | 37-1-10
1-2-8 | 12-8-11 | 10-5-12 | 12-8-11 | 1-2-8

Scale = 1:70.6

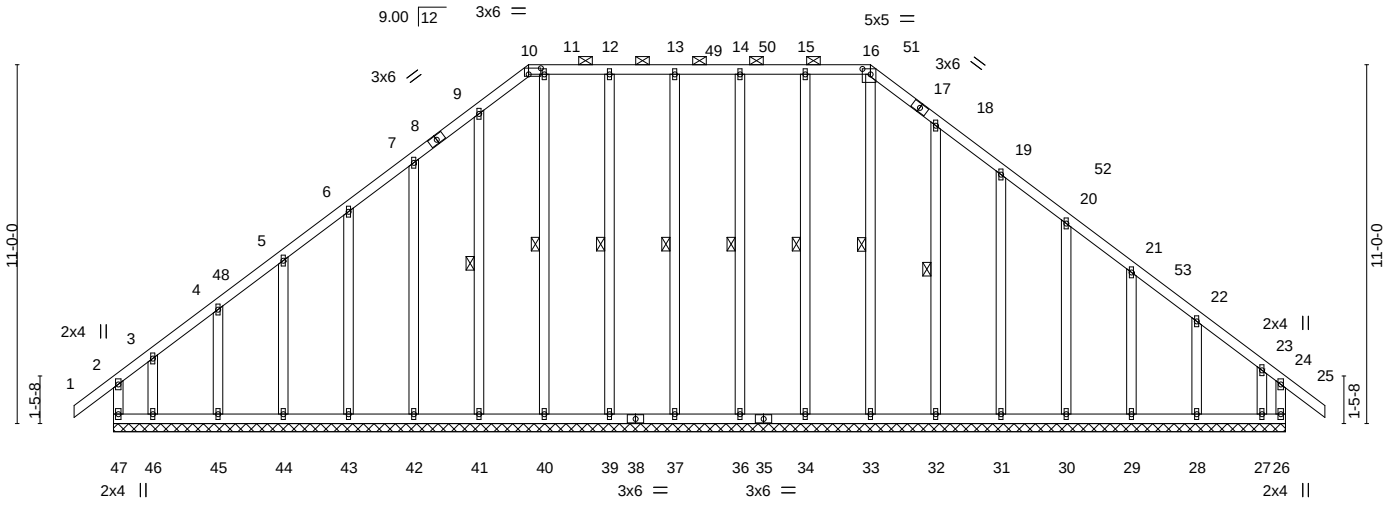

Plate Offsets (X,Y)-- [10:0-4-8,0-2-4], [16:0-3-0,0-2-0]

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	0.25	Vert(LL)	-0.01	25	n/r	120	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.10	Vert(CT)	-0.01	25	n/r	120		
TCDL	10.0	Rep Stress Incr	YES	WB	0.21	Horz(CT)	-0.01	26	n/a	n/a		
BCLL	0.0 *	Code	IRC2018/TPI2014	Matrix-R							Weight: 313 lb	FT = 20%
BCDL	10.0											

LUMBER-

TOP CHORD	2x4 SP No.1
BOT CHORD	2x4 SP No.1
WEBS	2x4 SP No.3
OTHERS	2x4 SP No.3

BRACING-

TOP CHORD	Sheathed or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 10-16.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS	1 Row at midpt 16-33, 15-34, 14-36, 13-37, 12-39, 11-40, 9-41, 18-32

REACTIONS. All bearings 35-11-2.
(lb) - Max Horz 47=-254(LC 10)
Max Uplift All uplift 100 lb or less at joint(s) 36, 39, 42, 43, 44, 45, 32, 31, 30, 29, 28 except 47=-168(LC 10), 26=-254(LC 11), 46=-134(LC 11), 27=-207(LC 10)
Max Grav All reactions 250 lb or less at joint(s) 33, 34, 36, 37, 39, 40, 41, 42, 43, 44, 45, 32, 31, 30, 29, 28 except 47=283(LC 25), 26=331(LC 24), 46=260(LC 10), 27=317(LC 11)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 9-10=-66/252, 16-18=-61/263

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=12ft; B=45ft; L=36ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional); cantilever left and right exposed ; end vertical 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 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=16.5 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; 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) Unbalanced snow loads have been considered for this design.
6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.6 psf on overhangs non-concurrent with other live loads.
7) Provide adequate drainage to prevent water ponding.
8) All plates are 1.5x4 MT20 unless otherwise indicated.
9) Gable requires continuous bottom chord bearing.
10) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
11) Gable studs spaced at 2-0-0 oc.
12) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
13) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
14) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 36, 39, 42, 43, 44, 45, 32, 31, 30, 29, 28 except (jt=lb) 47=168, 26=254, 46=134, 27=207.
15) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
16) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

May 19,2020

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ENGINEERING BY TRENCO
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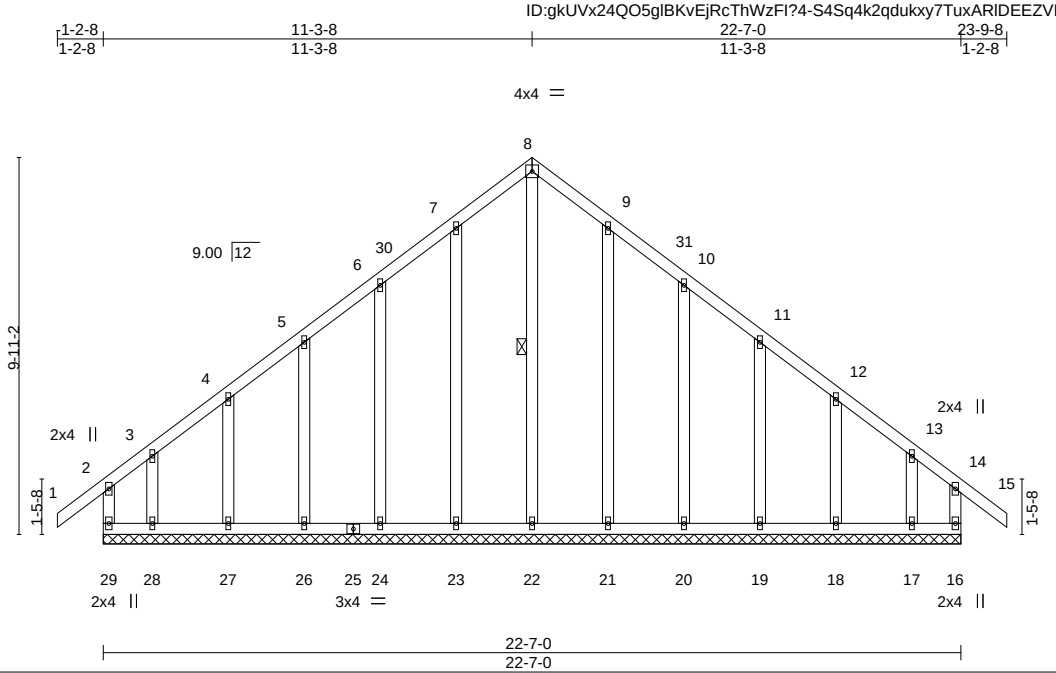
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	RICHARDSON
P20-04027	T01GE	Common Supported Gable	1	1	E14419878
					Job Reference (optional)

Longleaf Truss Company, West End, NC - 27376, 8.330 s Mar 23 2020 MiTek Industries, Inc. Tue May 19 07:20:47 2020 Page 1
ID:gkUVx24QO5gIBKvEjRcThWzFI?4-S4Sq4k2qdukxy7TuxARlDEEZVNGYu93qVxz_ZTzF?pU



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	0.21	Vert(LL)	-0.01	15	n/r	120	MT20	244/190
Snow (Pf/Pg)	11.6/15.0	Lumber DOL	1.15	BC	0.08	Vert(CT)	-0.01	15	n/r	120		
TCDL	10.0	Rep Stress Incr	YES	WB	0.20	Horz(CT)	-0.00	16	n/a	n/a		
BCLL	0.0 *	Code	IRC2018/TPI2014	Matrix-R							Weight: 170 lb	FT = 20%
BCDL	10.0											

LUMBER-

TOP CHORD	2x4 SP No.1
BOT CHORD	2x4 SP No.1
WEBS	2x4 SP No.3
OTHERS	2x4 SP No.3

BRACING-

TOP CHORD	Sheathed or 6-0-0 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS	1 Row at midpt 8-22

REACTIONS. All bearings 22-7-0.
(lb) - Max Horz 29=220(LC 11)
Max Uplift All uplift 100 lb or less at joint(s) 16, 23, 24, 26, 27, 21, 20, 19, 18, 17 except 29=-125(LC 10), 28=-101(LC 11)
Max Grav All reactions 250 lb or less at joint(s) 29, 16, 23, 24, 26, 27, 28, 21, 20, 19, 18, 17 except 22=265(LC 12)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

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=12ft; B=45ft; L=24ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional); cantilever left and right exposed ; end vertical 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 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.6 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.6 psf on overhangs non-concurrent with other live loads.
7) All plates are 1.5x4 MT20 unless otherwise indicated.
8) Gable requires continuous bottom chord bearing.
9) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
10) Gable studs spaced at 2-0-0 oc.
11) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
12) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 16, 23, 24, 26, 27, 21, 20, 19, 18, 17 except (jt=lb) 29=125, 28=101.
14) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

May 19,2020

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Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	RICHARDSON
P20-04027	T01SGE	Piggyback Base Structural Gable COMMON	1	1	E14419879
					Job Reference (optional)

Longleaf Truss Company, West End, NC - 27376, 8.330 s Mar 23 2020 MiTek Industries, Inc. Tue May 19 07:20:49 2020 Page 1
ID:gkUVx24QO5glBKvEjRcThWzFI?4-PTaaVQ449V_fCRdG2bUDJfJqIAufMwz7yFS5eLzF?pS

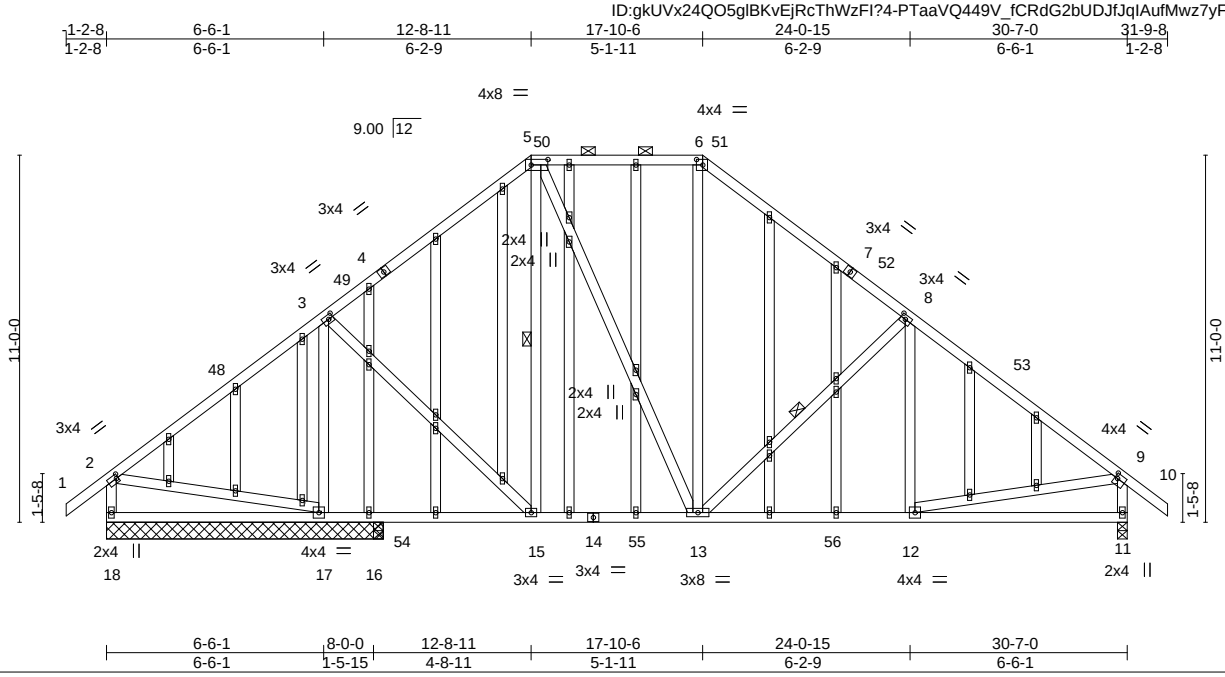

Plate Offsets (X,Y)-- [2:0-0-12,0-1-8], [3:0-1-12,0-1-8], [5:0-6-0,0-2-0], [6:0-2-4,0-2-0], [8:0-1-12,0-1-8], [9:0-1-0,0-1-12]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.51	Vert(LL)	-0.05	12-13	>999	240	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.36	Vert(CT)	-0.09	12-13	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.81	Horz(CT)	0.01	11	n/a	n/a		
BCLL	0.0 *	Code	IRC2018/TPI2014	Matrix-S								
BCDL	10.0										Weight: 330 lb	FT = 20%

LUMBER-

TOP CHORD	2x4 SP No.1
BOT CHORD	2x4 SP No.1
WEBS	2x4 SP No.3
OTHERS	2x4 SP No.3

BRACING-

TOP CHORD	Sheathed or 5-4-7 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 5-6.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	1 Row at midpt 5-15, 8-13

REACTIONS. All bearings 8-3-8 except (jt=length) 11=0-3-8.
(lb) - Max Horz 18=250(LC 11)
Max Uplift All uplift 100 lb or less at joint(s) 18, 17, 11
Max Grav All reactions 250 lb or less at joint(s) 16, 16 except 18=396(LC 50), 17=1403(LC 43), 11=1199(LC 45)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

TOP CHORD	3-5=-789/125, 5-6=-674/131, 6-8=-957/122, 8-9=-1302/52, 2-18=-336/73, 9-11=-1099/69
BOT CHORD	17-18=-199/314, 13-15=0/570, 12-13=0/959
WEBS	3-17=-1186/63, 3-15=0/588, 5-13=-6/406, 8-13=-525/89, 9-12=0/870

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=12ft; B=45ft; L=31ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional); cantilever left and right exposed ; end vertical 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 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=16.5 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; 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) Unbalanced snow loads have been considered for this design.
6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.6 psf on overhangs non-concurrent with other live loads.
7) Provide adequate drainage to prevent water ponding.
8) All plates are 1.5x4 MT20 unless otherwise indicated.
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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 18, 17, 11.
13) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
14) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

May 19,2020

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Job	Truss	Truss Type	Qty	Ply	RICHARDSON
P20-04027	T02	Piggyback Base	6	1	E14419880
					Job Reference (optional)

Longleaf Truss Company, West End, NC - 27376, 8.330 s Mar 23 2020 MiTek Industries, Inc. Tue May 19 07:20:52 2020 Page 1
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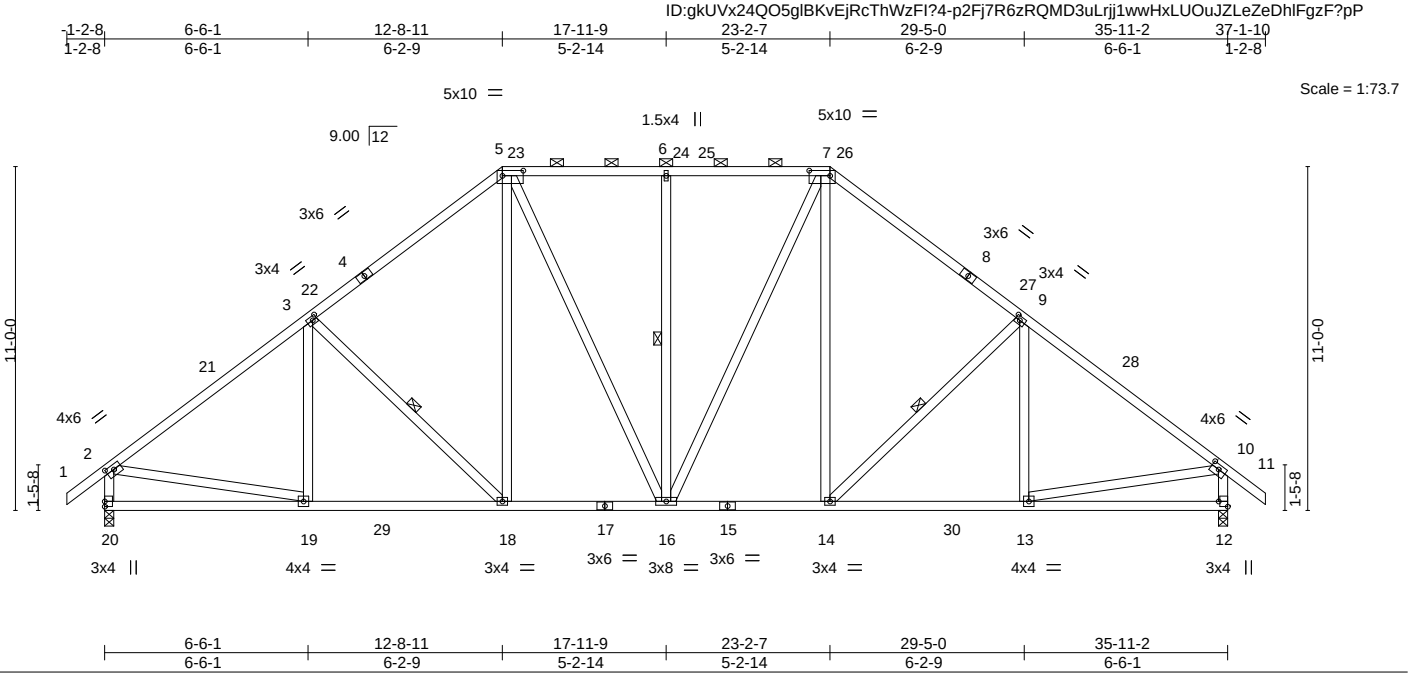

Plate Offsets (X,Y)-- [2:0-3-0,0-1-12], [3:0-1-12,0-1-8], [5:0-8-0,0-2-0], [7:0-8-0,0-2-0], [9:0-1-12,0-1-8], [10:0-3-0,0-1-12], [12:Edge,0-3-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.52	Vert(LL)	-0.08	13-14	>999	240	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.43	Vert(CT)	-0.15	13-14	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.56	Horz(CT)	0.05	12	n/a	n/a		
BCLL	0.0 *	Code	IRC2018/TPI2014	Matrix-S							Weight: 265 lb	FT = 20%
BCDL	10.0											

LUMBER-
TOP CHORD 2x4 SP No.1
BOT CHORD 2x4 SP No.1
WEBS 2x4 SP No.3

BRACING-
TOP CHORD Sheathed or 4-3-13 oc purlins, except end verticals, and 2-0-0 oc purlins (5-2-5 max.): 5-7.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 3-18, 6-16, 9-14

REACTIONS. (size) 20=0-3-8, 12=0-3-8
Max Horz 20=254(LC 11)
Max Uplift 20=-33(LC 12), 12=-33(LC 12)
Max Grav 20=1734(LC 24), 12=1734(LC 25)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1962/49, 3-5=-1702/118, 5-6=-1387/128, 6-7=-1387/128, 7-9=-1702/118, 9-10=-1962/49, 2-20=-1632/66, 10-12=-1632/66
BOT CHORD 19-20=-193/342, 18-19=0/1649, 16-18=0/1378, 14-16=0/1317, 13-14=0/1483
WEBS 3-18=-442/90, 5-18=0/545, 5-16=-30/396, 6-16=-491/59, 7-16=-30/396, 7-14=0/546, 9-14=-442/90, 2-19=0/1387, 10-13=0/1390

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=12ft; B=45ft; L=36ft; eave=5ft; Cat. II; Exp B; Enclosed; MWFRS (directional); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=16.5 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; 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.
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.6 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 20, 12.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

May 19,2020

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

Job	Truss	Truss Type	Qty	Ply	RICHARDSON
P20-04027	T03	Piggyback Base	5	1	E14419881
					Job Reference (optional)

Longleaf Truss Company, West End, NC - 27376, 8.330 s Mar 23 2020 MiTek Industries, Inc. Tue May 19 07:20:56 2020 Page 1
ID:gkUVx24QO5glBKvEjRcThWzFI?4-ipVEzp9TVftfYVfcyZ6s5766??ATV4z9ZrfzORzF?pL

-1-2-8 | 6-7-8 | 12-1-12 | 16-4-12 | 20-6-11 | 24-8-11 | 31-1-5 | 36-10-0 | 42-6-11 | 47-9-14 | 51-4-14 | 55-3-6 | 56-5-14
1-2-8 | 6-7-8 | 5-6-4 | 4-3-0 | 4-2-0 | 4-2-0 | 6-4-10 | 5-8-11 | 5-8-11 | 5-3-2 | 3-7-0 | 3-10-8 | 1-2-8

Scale = 1:100.4

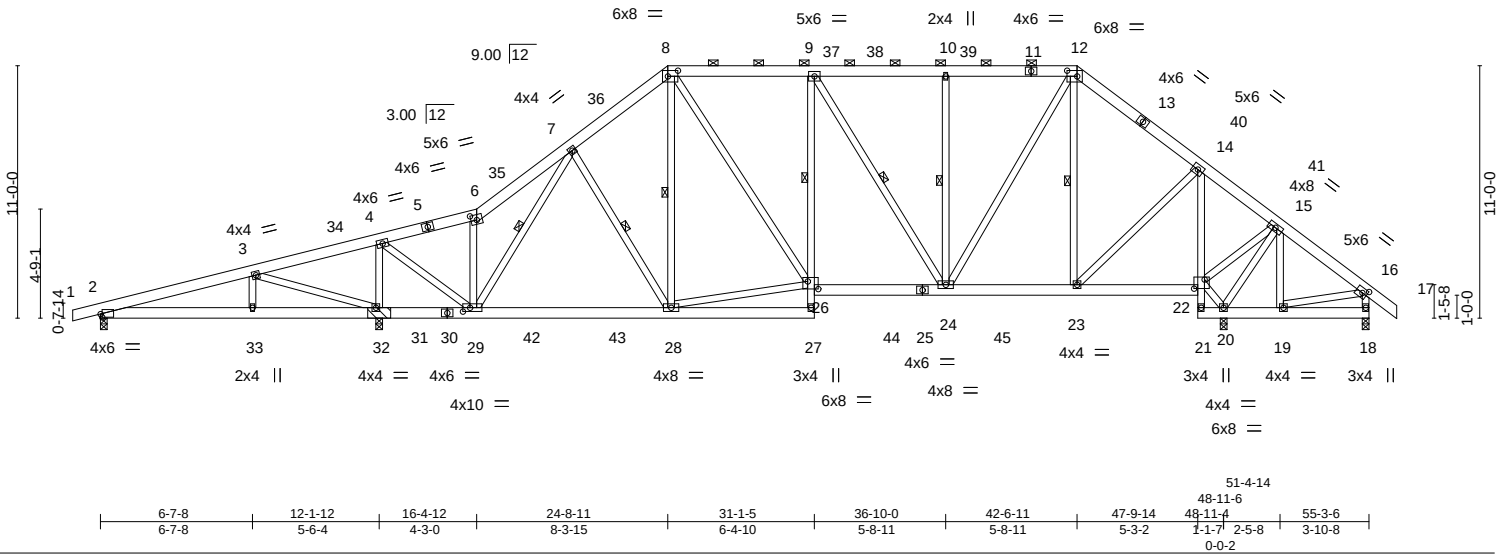

Plate Offsets (X,Y)-- [2:0-0-14,0-1-11], [6:0-3-0,0-2-12], [8:0-5-4,0-3-0], [12:0-5-4,0-3-0], [16:0-2-8,0-2-8], [22:0-5-8,0-4-12], [26:0-5-8,0-4-0], [29:0-3-12,0-2-0]

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	0.23	Vert(LL)	-0.08	28-29	>999	240	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.74	Vert(CT)	-0.14	28-29	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.86	Horz(CT)	0.04	20	n/a	n/a		
BCLL	0.0 *	Code	IRC2018/TPI2014	Matrix-S							Weight: 492 lb	FT = 20%
BCDL	10.0											

LUMBER-
TOP CHORD 2x6 SP No.1
BOT CHORD 2x6 SP No.1 *Except*
9-27,14-21: 2x4 SP No.3
WEBS 2x4 SP No.3

BRACING-
TOP CHORD Sheathed or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 8-12.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing. Except:
1 Row at midpt 9-26
WEBS 1 Row at midpt 7-29, 7-28, 8-28, 9-24, 10-24, 12-23

REACTIONS. All bearings 0-3-8 except (jt=length) 32=0-4-0 (input: 0-3-8 + bearing block).
(lb) - Max Horz 2=233(LC 11)
Max Uplift All uplift 100 lb or less at joint(s) 2, 18, 32
Max Grav All reactions 250 lb or less at joint(s) 18 except 2=345(LC 54), 32=2566(LC 24), 20=2054(LC 25)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-258/183, 3-4=0/1005, 4-6=-913/33, 6-7=-1114/107, 7-8=-1509/126, 8-9=-1604/114, 9-10=-1417/116, 10-12=-1420/116, 12-14=-1170/109, 14-15=-255/66
BOT CHORD 29-32=-894/73, 28-29=0/1232, 9-26=-252/148, 24-26=0/1685, 23-24=0/920, 21-22=-259/0, 14-22=-1436/28
WEBS 3-33=0/256, 3-32=-988/8, 4-32=-2072/40, 4-29=0/2176, 6-29=-587/90, 7-29=-601/0, 26-28=0/1227, 8-26=0/755, 9-24=-404/0, 10-24=-487/66, 12-24=0/1062, 12-23=-516/5, 14-23=0/1048, 20-22=-957/66, 15-22=0/868, 15-20=-967/0

NOTES-
1) 2x6 SP No.1 bearing block 12" long at jt. 32 attached to front face with 3 rows of 10d (0.131"x3") nails spaced 3" o.c. 12 Total fasteners. User Defined Bearing crushing capacity= 425psi.
2) Unbalanced roof live loads have been considered for this design.
3) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=12ft; B=45ft; L=55ft; eave=7ft; Cat. II; Exp B; Enclosed; MWFRS (directional); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=16.5 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; 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) Unbalanced snow loads have been considered for this design.
6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.6 psf on overhangs non-concurrent with other live loads.
7) Provide adequate drainage to prevent water ponding.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 18, 32.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

May 19,2020

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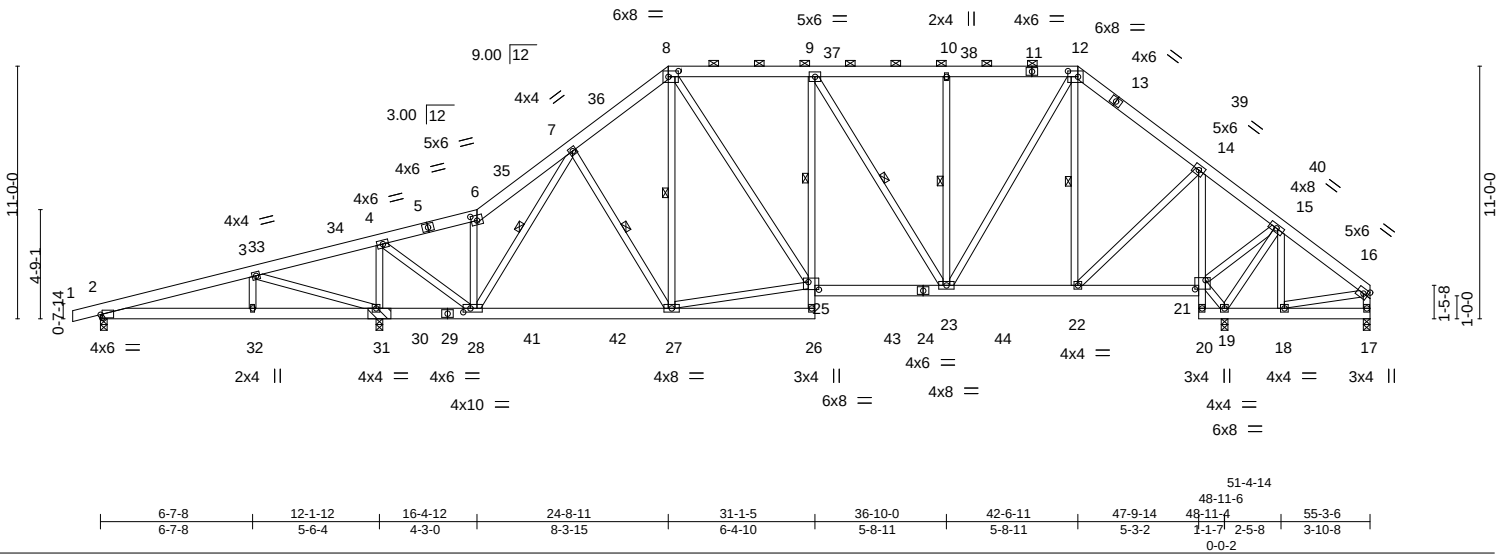
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	RICHARDSON
P20-04027	T04	PIGGYBACK BASE	4	1	E14419882
					Job Reference (optional)

Longleaf Truss Company, West End, NC - 27376, 8.330 s Mar 23 2020 MiTek Industries, Inc. Tue May 19 07:21:01 2020 Page 1
ID:gkUVx24QO5glBKvEjRcThWzFI?4-2nI70WDcKBVyeHXal6i1oBpym0ugAKCuj7Mj3fzF?pG

-1-2-8 | 6-7-8 | 12-1-12 | 16-4-12 | 20-6-11 | 24-8-11 | 31-1-5 | 36-10-0 | 42-6-11 | 47-9-14 | 51-4-14 | 55-3-6
1-2-8 | 6-7-8 | 5-6-4 | 4-3-0 | 4-2-0 | 4-2-0 | 6-4-10 | 5-8-11 | 5-8-11 | 5-3-2 | 3-7-0 | 3-10-8

Scale = 1:100.3



6-7-8 | 12-1-12 | 16-4-12 | 24-8-11 | 31-1-5 | 36-10-0 | 42-6-11 | 47-9-14 | 48-11-4 | 51-4-14 / 48-11-6 | 55-3-6
6-7-8 | 5-6-4 | 4-3-0 | 8-3-15 | 6-4-10 | 5-8-11 | 5-8-11 | 5-3-2 | 1-1-7 | 2-5-8 | 3-10-8
0-0-2

Plate Offsets (X,Y)-- [2:0-0-14,0-1-11], [6:0-3-0,0-2-12], [8:0-5-4,0-3-0], [12:0-5-4,0-3-0], [21:0-5-8,0-4-12], [25:0-5-8,0-4-0], [28:0-3-12,0-2-0]

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	0.23	Vert(LL)	-0.08	27-28	>999	240	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.73	Vert(CT)	-0.14	27-28	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.86	Horz(CT)	0.04	19	n/a	n/a		
BCLL	0.0 *	Code	IRC2018/TPI2014	Matrix-S							Weight: 488 lb	FT = 20%
BCDL	10.0											

LUMBER-
TOP CHORD 2x6 SP No.1
BOT CHORD 2x6 SP No.1 *Except*
9-26,14-20: 2x4 SP No.3
WEBS 2x4 SP No.3

BRACING-
TOP CHORD Sheathed or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 8-12.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing. Except:
1 Row at midpt 9-25
WEBS 1 Row at midpt 7-28, 7-27, 8-27, 9-23, 10-23, 12-22

REACTIONS. All bearings 0-3-8 except (jt=length) 31=0-4-0 (input: 0-3-8 + bearing block).
(lb) - Max Horz 2=224(LC 11)
Max Uplift All uplift 100 lb or less at joint(s) 2, 31
Max Grav All reactions 250 lb or less at joint(s) 17 except 2=345(LC 54), 31=2565(LC 24), 19=2065(LC 25)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 3-4=-3/1001, 4-6=-911/18, 6-7=-1111/89, 7-8=-1511/117, 8-9=-1605/110, 9-10=-1416/110, 10-12=-1419/110, 12-14=-1168/100, 14-15=-254/51
BOT CHORD 28-31=-890/52, 27-28=0/1225, 9-25=-252/147, 23-25=0/1676, 22-23=0/912, 20-21=-261/0, 14-21=-1434/35
WEBS 3-32=0/256, 3-31=-988/8, 4-31=-2072/43, 4-28=0/2175, 6-28=-589/83, 7-28=-599/0, 25-27=0/1220, 8-25=0/756, 9-23=-403/0, 10-23=-486/67, 12-23=0/1061, 12-22=-516/12, 14-22=0/1045, 19-21=-952/57, 15-21=0/860, 15-19=-981/0

NOTES-
1) 2x6 SP No.1 bearing block 12" long at jt. 31 attached to front face with 3 rows of 10d (0.131"x3") nails spaced 3" o.c. 12 Total fasteners. User Defined Bearing crushing capacity= 425psi.
2) Unbalanced roof live loads have been considered for this design.
3) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=12ft; B=45ft; L=55ft; eave=7ft; Cat. II; Exp B; Enclosed; MWFRS (directional); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=16.5 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; 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) Unbalanced snow loads have been considered for this design.
6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.6 psf on overhangs non-concurrent with other live loads.
7) Provide adequate drainage to prevent water ponding.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 31.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

May 19,2020

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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	RICHARDSON
P20-04027	T05	Piggyback Base	1	1	E14419883
					Job Reference (optional)

Longleaf Truss Company, West End, NC - 27376, 8.330 s Mar 23 2020 MiTek Industries, Inc. Tue May 19 07:21:04 2020 Page 1
ID:gkUVx24QO5glBKvEjRcThWzFI?4-TL_FeYGVc6tWVkG9QEFkQpRJ3Dw2Nj3KP5bOg_zF?pD

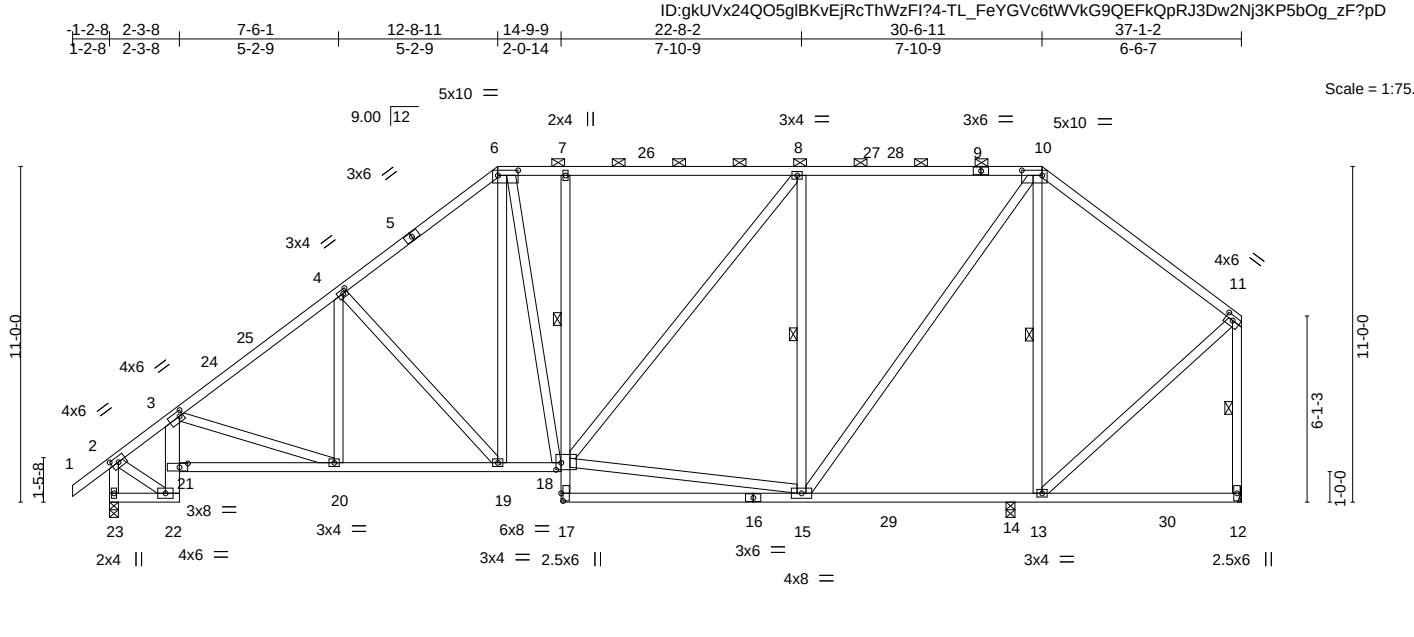

Plate Offsets (X,Y)-- [2:0-2-14,0-2-0], [3:0-1-8,0-2-0], [4:0-1-12,0-1-8], [6:0-8-0,0-2-0], [10:0-8-0,0-2-0], [11:0-3-0,0-1-12], [17:0-3-0,0-0-12], [18:0-2-0,0-2-12], [21:0-3-4,0-1-8]

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	0.86	Vert(LL)	-0.13	15-17	>999	240	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.69	Vert(CT)	-0.27	15-17	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.73	Horz(CT)	0.11	12	n/a	n/a		
BCLL	0.0 *	Code	IRC2018/TPI2014	Matrix-S							Weight: 301 lb	FT = 20%
BCDL	10.0											

LUMBER-
TOP CHORD 2x4 SP No.1
BOT CHORD 2x4 SP No.1 *Except*
3-22: 2x6 SP No.1, 7-17: 2x4 SP No.3
WEBS 2x4 SP No.3

BRACING-
TOP CHORD Sheathed or 4-3-9 oc purlins, except end verticals, and 2-0-0 oc purlins (3-11-2 max.): 6-10.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 21-22.
1 Row at midpt 7-18
WEBS 1 Row at midpt 8-15, 10-13, 11-12

REACTIONS. (size) 23=0-3-8, 12=Mechanical, 14=0-3-8
Max Horz 23=289(LC 11)
Max Uplift 23=-36(LC 12), 12=-21(LC 12)
Max Grav 23=1622(LC 24), 12=1255(LC 25), 14=563(LC 42)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1384/36, 3-4=-2086/58, 4-6=-1694/117, 6-7=-1415/126, 7-8=-1416/127, 8-10=-1261/134, 10-11=-859/119, 2-23=-1653/48, 11-12=-1108/58
BOT CHORD 22-23=-263/232, 21-22=-539/0, 3-21=-471/22, 20-21=-181/1940, 19-20=-47/1723, 18-19=-12/1377, 7-18=-484/63, 14-15=-7/628, 13-14=-7/628
WEBS 4-20=0/288, 4-19=-620/81, 6-19=-5/620, 6-18=-32/549, 15-18=-19/1119, 8-18=-22/390, 8-15=-850/90, 10-15=0/1136, 10-13=-770/39, 2-22=0/1161, 11-13=0/822

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=12ft; B=45ft; L=37ft; eave=5ft; Cat. II; Exp B; Enclosed; MWFRS (directional); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=16.5 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; 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.
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.6 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
9) Refer to girder(s) for truss to truss connections.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 23, 12.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

May 19,2020

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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	RICHARDSON
P20-04027	T06	Piggyback Base	5	1	E14419884
					Job Reference (optional)

Longleaf Truss Company, West End, NC - 27376, 8.330 s Mar 23 2020 MiTek Industries, Inc. Tue May 19 07:21:07 2020 Page 1
ID:gkUVx24QO5glBKvEjRcThWzFI?4-twfOHaINv1F5MC?k6NoR1S3tTR1ha3Ln53p2HJzF?pA

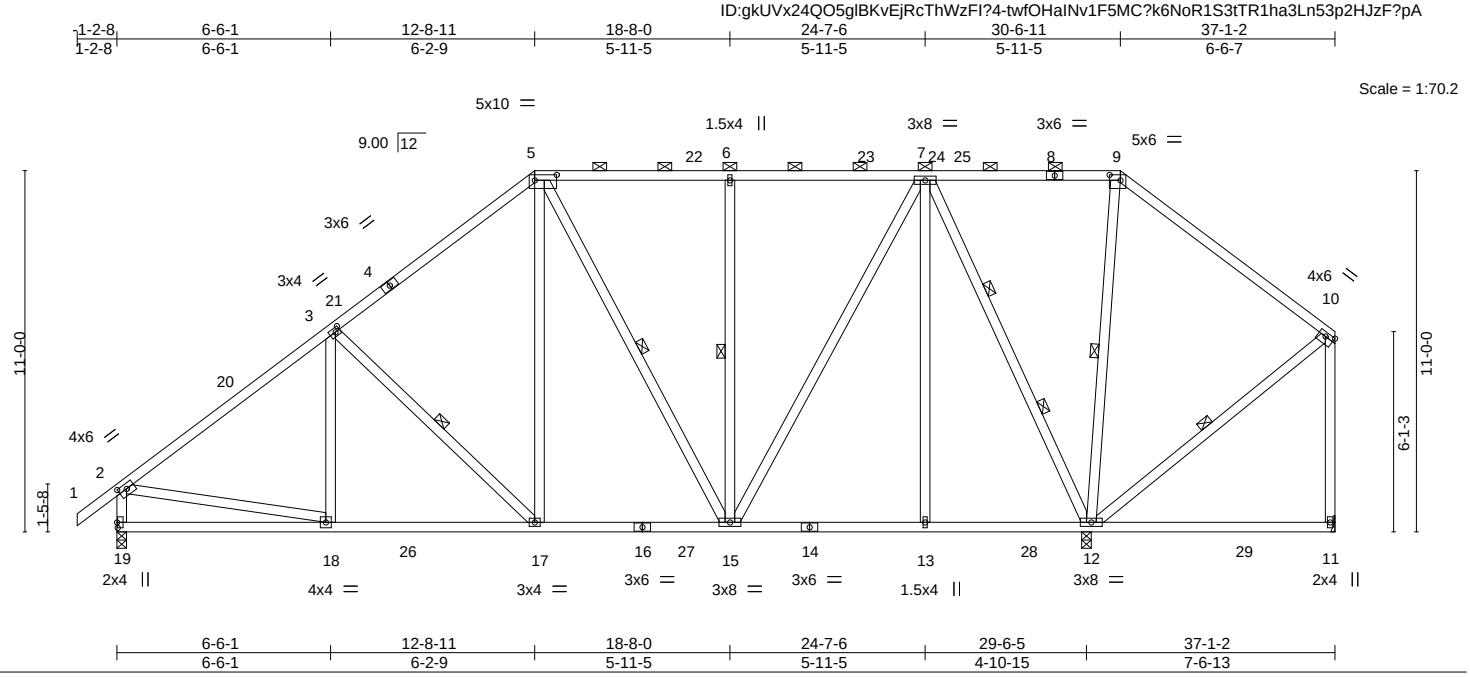

Plate Offsets (X,Y)-- [2:0-3-0,0-1-12], [3:0-1-12,0-1-8], [5:0-8-0,0-2-0], [9:0-4-0,0-2-0], [10:Edge,0-1-8], [19:0-2-0,0-0-4]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.66	Vert(LL)	-0.09	11-12	>976	240	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.37	Vert(CT)	-0.16	11-12	>558	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.82	Horz(CT)	0.02	11	n/a	n/a		
BCLL	0.0 *	Code	IRC2018/TPI2014	Matrix-S								
BCDL	10.0										Weight: 288 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.1
BOT CHORD 2x4 SP No.1
WEBS 2x4 SP No.3

BRACING-
TOP CHORD Sheathed or 4-11-4 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 5-9.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 3-17, 5-15, 6-15, 9-12, 10-12
2 Rows at 1/3 pts 7-12

REACTIONS. (size) 19=0-3-8, 11=Mechanical, 12=0-3-8
Max Horz 19=289(LC 11)
Max Uplift 19=-29(LC 12), 11=-120(LC 50), 12=-9(LC 12)
Max Grav 19=1387(LC 24), 11=153(LC 39), 12=2213(LC 42)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1504/44, 3-5=-1192/112, 5-6=-850/121, 6-7=-850/121, 9-10=-39/360, 2-19=-1287/62
BOT CHORD 18-19=-238/318, 17-18=-71/1256, 15-17=-36/954, 13-15=-43/492, 12-13=-43/492
WEBS 3-17=-505/91, 5-17=0/599, 5-15=-339/38, 6-15=-519/72, 7-15=-2/859, 7-13=0/285, 7-12=-1567/13, 9-12=-477/30, 2-18=0/980, 10-12=-291/77

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=12ft; B=45ft; L=37ft; eave=5ft; Cat. II; Exp B; Enclosed; MWFRS (directional); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=16.5 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; 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.
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.6 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
9) Refer to girder(s) for truss to truss connections.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 19, 12 except (jt=lb) 11=120.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

May 19,2020

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

Job	Truss	Truss Type	Qty	Ply	RICHARDSON
P20-04027	T07	Piggyback Base	5	1	E14419885
					Job Reference (optional)

Longleaf Truss Company, West End, NC - 27376, 8.330 s Mar 23 2020 MiTek Industries, Inc. Tue May 19 07:21:09 2020 Page 1
ID:gkUVx24QO5gIBKvEjRcThWzFI?4-pJn8hFKdReVpbV86Dorv7t88iEev2wS3ZMI9LBzF?p8

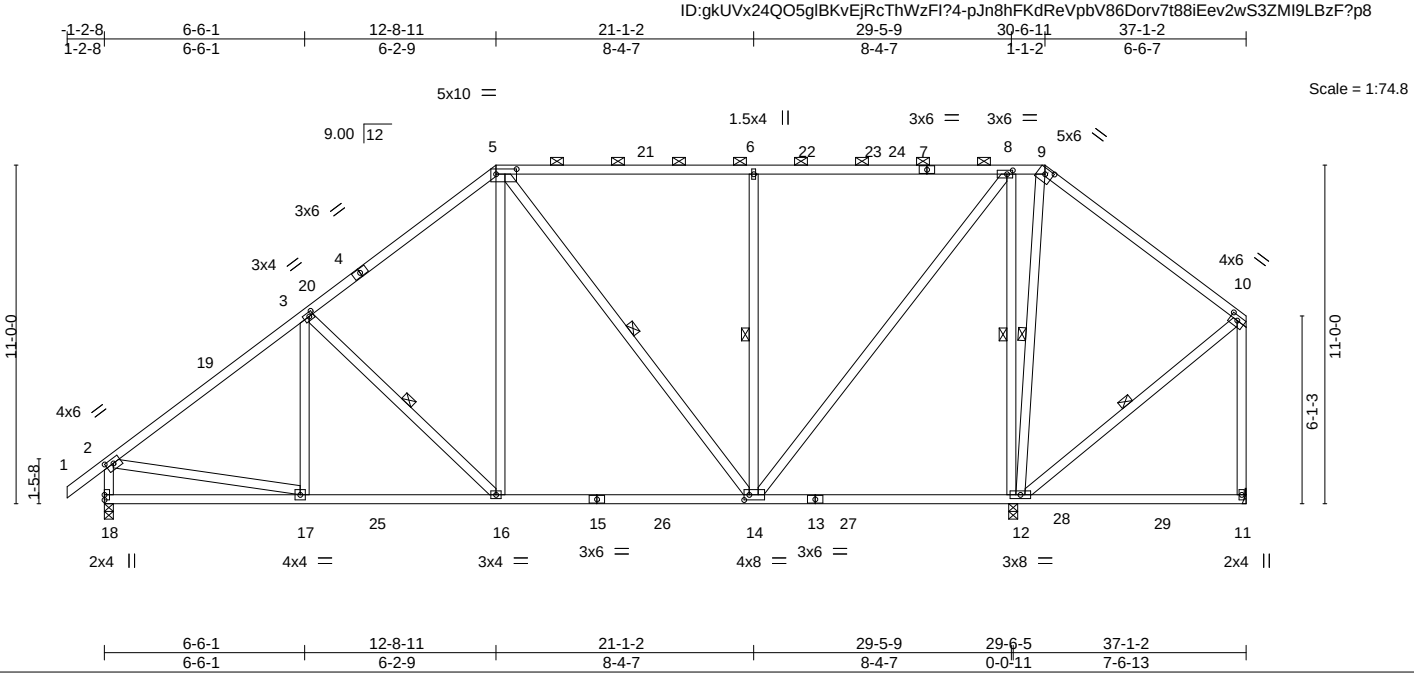

Plate Offsets (X,Y)-- [2:0-3-0,0-1-12], [3:0-1-12,0-1-8], [5:0-8-0,0-2-0], [8:0-2-4,0-1-8], [9:0-3-0,0-2-2], [10:0-3-0,0-1-12], [14:0-2-0,0-2-0]

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	1.00	Vert(LL)	-0.14	12-14	>999	240	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.58	Vert(CT)	-0.23	14-16	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.97	Horz(CT)	0.02	11	n/a	n/a		
BCLL	0.0 *	Code	IRC2018/TPI2014	Matrix-S							Weight: 275 lb	FT = 20%
BCDL	10.0											

LUMBER-
TOP CHORD 2x4 SP No.1
BOT CHORD 2x4 SP No.1
WEBS 2x4 SP No.3

BRACING-
TOP CHORD Sheathed or 4-10-13 oc purlins, except end verticals, and 2-0-0 oc purlins (2-2-0 max.): 5-9.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 12-14.
WEBS 1 Row at midpt 3-16, 5-14, 6-14, 8-12, 9-12, 10-12

REACTIONS. (size) 18=0-3-8, 11=Mechanical, 12=0-3-8
Max Horz 18=289(LC 11)
Max Uplift 18=-29(LC 12), 11=-86(LC 50), 12=-6(LC 12)
Max Grav 18=1406(LC 24), 11=184(LC 39), 12=2154(LC 42)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1523/45, 3-5=-1229/111, 5-6=-798/122, 6-8=-798/122, 9-10=-70/304, 2-18=-1301/64
BOT CHORD 17-18=-237/325, 16-17=-70/1271, 14-16=-31/987
WEBS 3-16=-485/93, 5-16=0/652, 5-14=-440/17, 6-14=-776/108, 8-14=-5/1479, 8-12=-1669/56, 9-12=-425/23, 2-17=0/989

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=12ft; B=45ft; L=37ft; eave=5ft; Cat. II; Exp B; Enclosed; MWFRS (directional); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=16.5 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; 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.
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.6 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
9) Refer to girder(s) for truss to truss connections.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 18, 11, 12.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

May 19,2020

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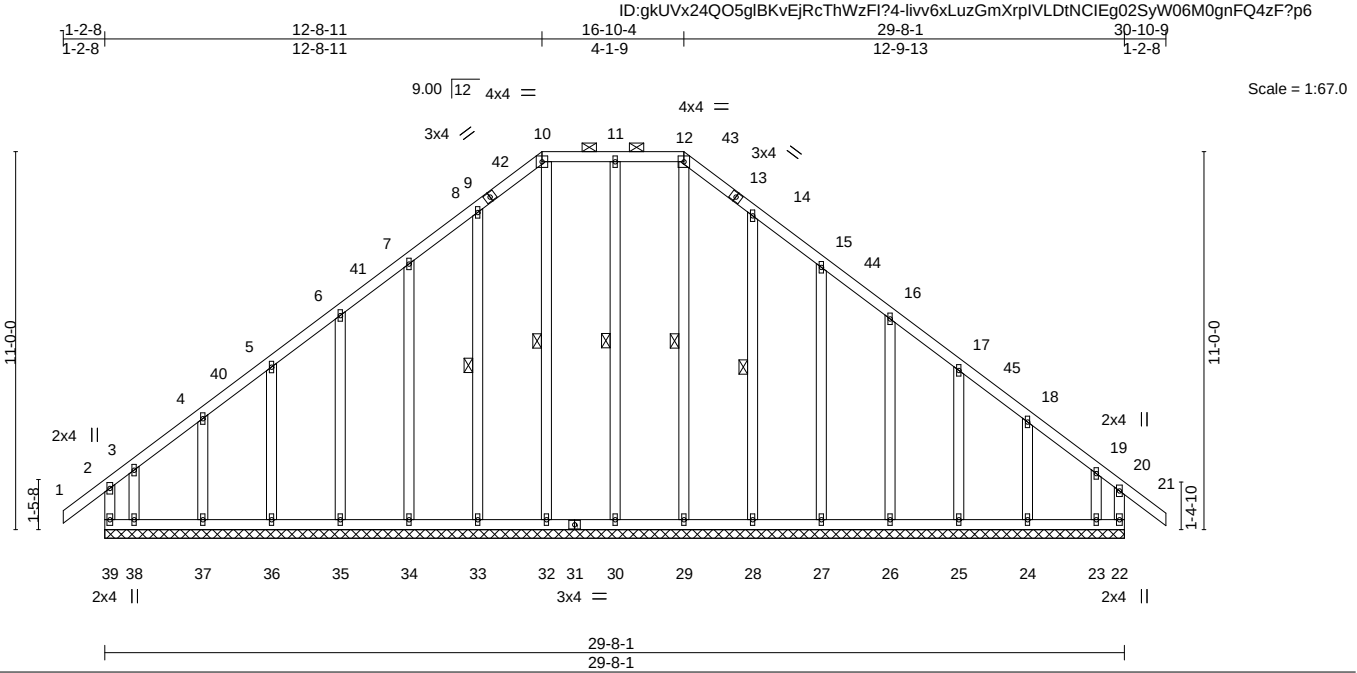
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	RICHARDSON
P20-04027	T08	Piggyback Base Supported Gable	1	1	E14419886
					Job Reference (optional)

Longleaf Truss Company, West End, NC - 27376, 8.330 s Mar 23 2020 MiTek Industries, Inc. Tue May 19 07:21:11 2020 Page 1
ID:gkUVx24QO5glBKvEjRcThWzFI?4-livv6xLuzGmXrpIVLDtNCIEg02SyW06M0gnFQ4zF?p6



Scale = 1:67.0

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	0.24	Vert(LL)	-0.01	21	n/r	120	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.10	Vert(CT)	-0.01	21	n/r	120		
TCDL	10.0	Rep Stress Incr	YES	WB	0.19	Horz(CT)	-0.01	22	n/a	n/a		
BCLL	0.0 *	Code	IRC2018/TPI2014	Matrix-R							Weight: 246 lb	FT = 20%
BCDL	10.0											

LUMBER-

TOP CHORD	2x4 SP No.1
BOT CHORD	2x4 SP No.1
WEBS	2x4 SP No.3
OTHERS	2x4 SP No.3

BRACING-

TOP CHORD	Sheathed or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 10-12.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS	1 Row at midpt 12-29, 11-30, 10-32, 8-33, 14-28

REACTIONS. All bearings 29-8-1.
(lb) - Max Horz 39=-249(LC 10)
Max Uplift All uplift 100 lb or less at joint(s) 33, 34, 35, 36, 37, 28, 27, 26, 25, 24 except 39=-237(LC 10), 22=-203(LC 11), 38=-193(LC 11), 23=-164(LC 10)
Max Grav All reactions 250 lb or less at joint(s) 29, 30, 32, 33, 34, 35, 36, 37, 28, 27, 26, 25, 24 except 39=324(LC 25), 22=296(LC 24), 38=302(LC 10), 23=273(LC 11)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 8-10=-67/268, 12-14=-58/269

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=12ft; B=45ft; L=30ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional); cantilever left and right exposed ; end vertical 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 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=16.5 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; 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) Unbalanced snow loads have been considered for this design.
6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.6 psf on overhangs non-concurrent with other live loads.
7) Provide adequate drainage to prevent water ponding.
8) All plates are 1.5x4 MT20 unless otherwise indicated.
9) Gable requires continuous bottom chord bearing.
10) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
11) Gable studs spaced at 2-0-0 oc.
12) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
13) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
14) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 33, 34, 35, 36, 37, 28, 27, 26, 25, 24 except (jt=lb) 39=237, 22=203, 38=193, 23=164.
15) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
16) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

May 19,2020

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Job	Truss	Truss Type	Qty	Ply	RICHARDSON
P20-04027	T09	Common	1	1	E14419887
					Job Reference (optional)

Longleaf Truss Company, West End, NC - 27376, 8.330 s Mar 23 2020 MiTek Industries, Inc. Tue May 19 07:21:13 2020 Page 1
ID:gkUVx24QO5glBKvEjRcThWzFI?4-i40fXdN8Vt0F47StSdvrHjJ_2r35_vqfU_GMUyzF?p4

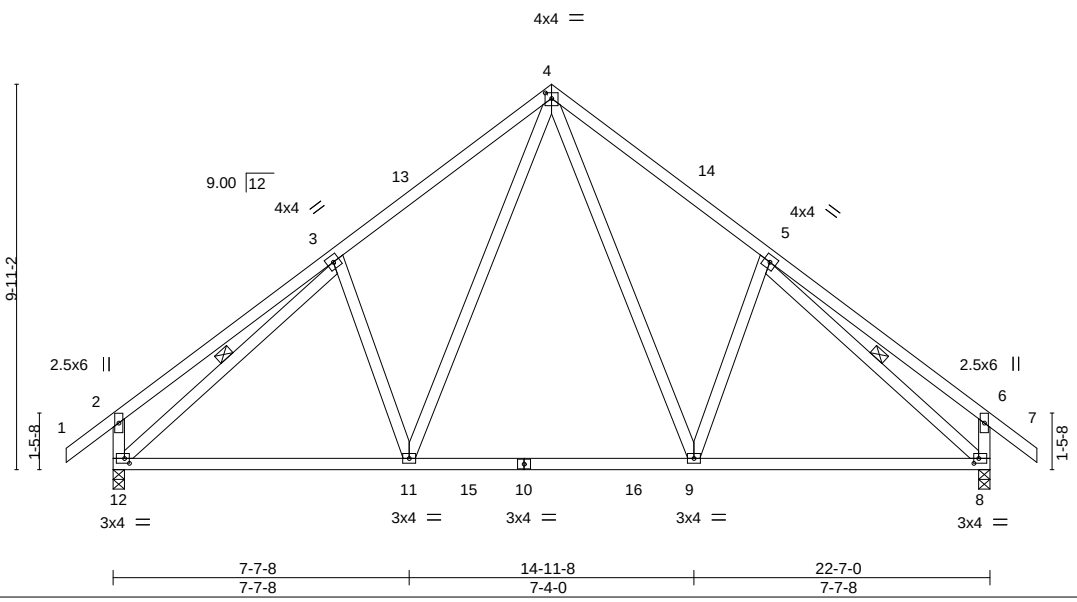

Plate Offsets (X,Y)-- [4:0-2-0,0-1-12], [8:0-1-8,0-1-8], [12:0-1-8,0-1-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.34	Vert(LL)	-0.09	9-11	>999	240	MT20	244/190
Snow (Pf/Pg)	11.6/15.0	Lumber DOL	1.15	BC	0.44	Vert(CT)	-0.14	11-12	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.31	Horz(CT)	0.02	8	n/a	n/a		
BCLL	0.0 *	Code	IRC2018/TPI2014	Matrix-S							Weight: 152 lb	FT = 20%
BCDL	10.0											

LUMBER-

TOP CHORD	2x4 SP No.1
BOT CHORD	2x4 SP No.1
WEBS	2x4 SP No.3

BRACING-

TOP CHORD	Sheathed or 5-11-13 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	1 Row at midpt 3-12, 5-8

REACTIONS. (size) 12=0-3-8, 8=0-3-8
Max Horz 12=220(LC 11)
Max Uplift 12=-33(LC 12), 8=-33(LC 12)
Max Grav 12=1077(LC 24), 8=1077(LC 25)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-305/122, 3-4=-1045/132, 4-5=-1045/132, 5-6=-304/122, 2-12=-368/125, 6-8=-368/125
BOT CHORD 11-12=0/913, 9-11=0/656, 8-9=0/816
WEBS 4-9=-41/533, 4-11=-41/533, 3-12=-950/0, 5-8=-950/0

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=12ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.6 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.6 psf on overhangs non-concurrent with other live loads.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 12, 8.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

May 19,2020

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

Job	Truss	Truss Type	Qty	Ply	RICHARDSON
P20-04027	T10	Common	2	1	E14419888
					Job Reference (optional)

Longleaf Truss Company, West End, NC - 27376, 8.330 s Mar 23 2020 MiTek Industries, Inc. Tue May 19 07:21:14 2020 Page 1
ID:gkUVx24QO5glBKvEjRcThWzFI?4-AHa1lzNmGB86iG140LQ4pwr8nFPKjM4oie0w0PzF?p3

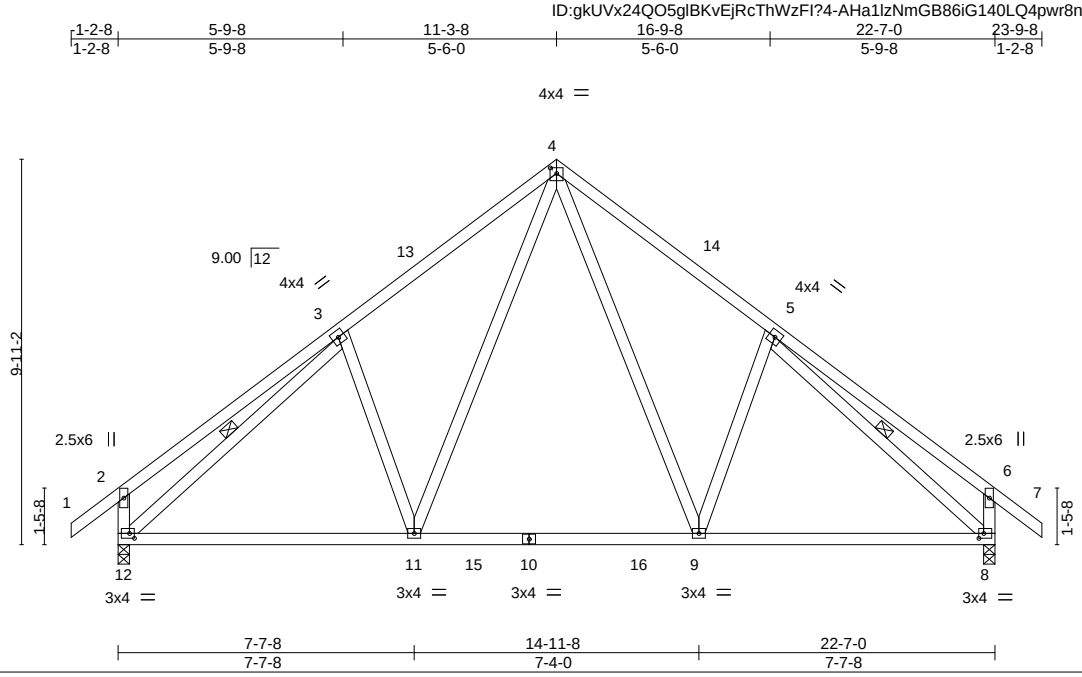

Plate Offsets (X,Y)-- [4:0-2-0,0-1-12], [8:0-1-8,0-1-8], [12:0-1-8,0-1-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.34	Vert(LL)	-0.09	9-11	>999	240	MT20	244/190
Snow (Pf/Pg)	11.6/15.0	Lumber DOL	1.15	BC	0.44	Vert(CT)	-0.14	11-12	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.31	Horz(CT)	0.02	8	n/a	n/a		
BCLL	0.0 *	Code	IRC2018/TPI2014	Matrix-S							Weight: 152 lb	FT = 20%
BCDL	10.0											

LUMBER-
TOP CHORD 2x4 SP No.1
BOT CHORD 2x4 SP No.1
WEBS 2x4 SP No.3

BRACING-
TOP CHORD Sheathed or 5-11-13 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 3-12, 5-8

REACTIONS. (size) 12=0-3-8, 8=0-3-8
Max Horz 12=220(LC 11)
Max Uplift 12=-33(LC 12), 8=-33(LC 12)
Max Grav 12=1077(LC 24), 8=1077(LC 25)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-305/122, 3-4=-1045/132, 4-5=-1045/132, 5-6=-304/122, 2-12=-368/125, 6-8=-368/125
BOT CHORD 11-12=0/913, 9-11=0/656, 8-9=0/816
WEBS 4-9=-41/533, 4-11=-41/533, 3-12=-950/0, 5-8=-950/0

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=12ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.6 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.6 psf on overhangs non-concurrent with other live loads.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 12, 8.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

May 19,2020

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.
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ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	RICHARDSON
P20-04027	T11	Piggyback Base	1	1	E14419889
					Job Reference (optional)

Longleaf Truss Company, West End, NC - 27376, 8.330 s Mar 23 2020 MiTek Industries, Inc. Tue May 19 07:21:16 2020 Page 1
ID:gkUVx24QO5glBKvEjRcThWzFI?4-6finAeP0ooOpxaBS7mTYvLxRO34qB8d5AyV05HzF?p1

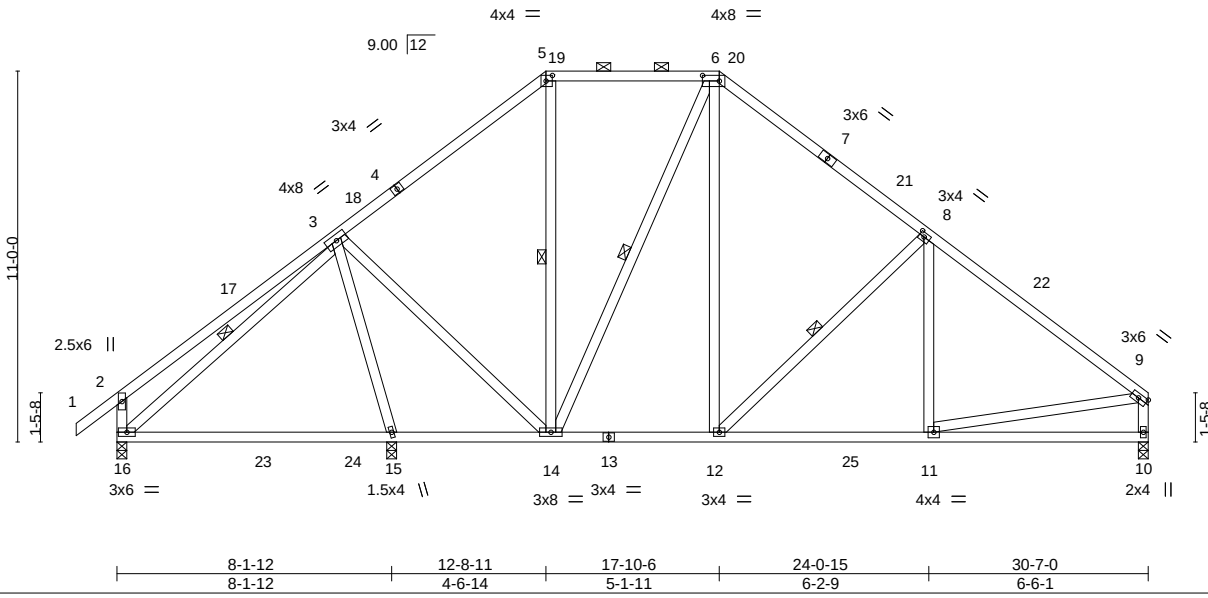

Plate Offsets (X,Y)-- [5:0-2-4,0-2-0], [6:0-6-0,0-2-0], [8:0-1-12,0-1-8], [9:Edge,0-1-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.52	Vert(LL)	-0.14	15-16	>710	240	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.44	Vert(CT)	-0.23	15-16	>426	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.82	Horz(CT)	0.02	10	n/a	n/a		
BCLL	0.0 *	Code	IRC2018/TPI2014	Matrix-S							Weight: 218 lb	FT = 20%
BCDL	10.0											

LUMBER-
TOP CHORD 2x4 SP No.1
BOT CHORD 2x4 SP No.1
WEBS 2x4 SP No.3

BRACING-
TOP CHORD Sheathed or 5-4-7 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 5-6.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 14-15.
WEBS 1 Row at midpt 5-14, 6-14, 8-12, 3-16

REACTIONS. (size) 15=0-3-8, 16=0-3-8, 10=0-3-8
Max Horz 16=242(LC 11)
Max Uplift 16=-48(LC 12), 10=-5(LC 12)
Max Grav 15=1364(LC 43), 16=539(LC 24), 10=1100(LC 45)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-345/137, 3-5=-695/132, 5-6=-436/138, 6-8=-903/127, 8-9=-1250/54, 2-16=-403/136, 9-10=-1000/38
BOT CHORD 15-16=-66/345, 12-14=0/632, 11-12=0/918
WEBS 3-15=-1102/72, 3-14=0/669, 6-14=-482/0, 6-12=0/619, 8-12=-537/91, 9-11=0/835

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=12ft; B=45ft; L=31ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=16.5 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; 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.
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.6 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 16, 10.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

May 19,2020

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ENGINEERING BY TRENCO
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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	RICHARDSON
P20-04027	T12	Piggyback Base	3	1	E14419890
					Job Reference (optional)

Longleaf Truss Company, West End, NC - 27376, 8.330 s Mar 23 2020 MiTek Industries, Inc. Tue May 19 07:21:18 2020 Page 1
ID:gkUVx24QO5glBKvEjRcThWzFI?4-22qYaKQHJPeXAuLrFBV0_m0nwsnZf8nOdG_79AzF?p?

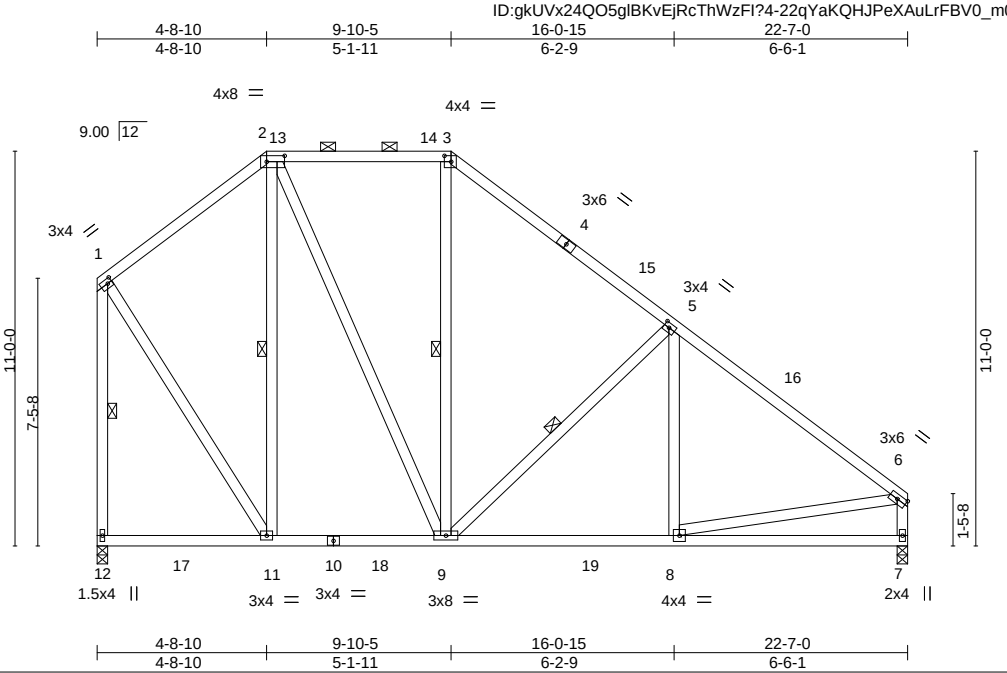

Plate Offsets (X,Y)-- [1:0-1-8,0-1-8], [2:0-6-0,0-2-0], [3:0-2-4,0-2-0], [5:0-1-12,0-1-8], [6:Edge,0-1-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.52	Vert(LL)	-0.05	8-9	>999	240	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.35	Vert(CT)	-0.09	8-9	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.33	Horz(CT)	0.01	7	n/a	n/a		
BCLL	0.0 *	Code	IRC2018/TPI2014	Matrix-S							Weight: 177 lb	FT = 20%
BCDL	10.0											

LUMBER-
TOP CHORD 2x4 SP No.1
BOT CHORD 2x4 SP No.1
WEBS 2x4 SP No.3

BRACING-
TOP CHORD Sheathed or 5-6-7 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 2-3.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 2-11, 3-9, 5-9, 1-12

REACTIONS. (size) 12=0-3-8, 7=0-3-8
Max Horz 12=-284(LC 10)
Max Uplift 12=-5(LC 12)
Max Grav 12=1102(LC 44), 7=1046(LC 44)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-583/118, 2-3=-565/121, 3-5=-834/112, 5-6=-1181/40, 1-12=-1006/39, 6-7=-947/28
BOT CHORD 9-11=0/469, 8-9=0/895
WEBS 2-11=-386/82, 2-9=-39/502, 5-9=-543/92, 1-11=-15/718, 6-8=0/820

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=12ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=16.5 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; 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.
4) Unbalanced snow loads have been considered for this design.
5) Provide adequate drainage to prevent water ponding.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 12.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

May 19,2020

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Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	RICHARDSON
P20-04027	T13	Piggyback Base Structural Gable COMMON l l Gable	1	1	E14419891
					Job Reference (optional)

Longleaf Truss Company, West End, NC - 27376, 8.330 s Mar 23 2020 MiTek Industries, Inc. Tue May 19 07:21:24 2020 Page 1
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1-2-8	6-8-2	5-6-14	4-1-13	4-2-0	4-2-0	5-11-5	5-11-5	5-11-5	6-6-7

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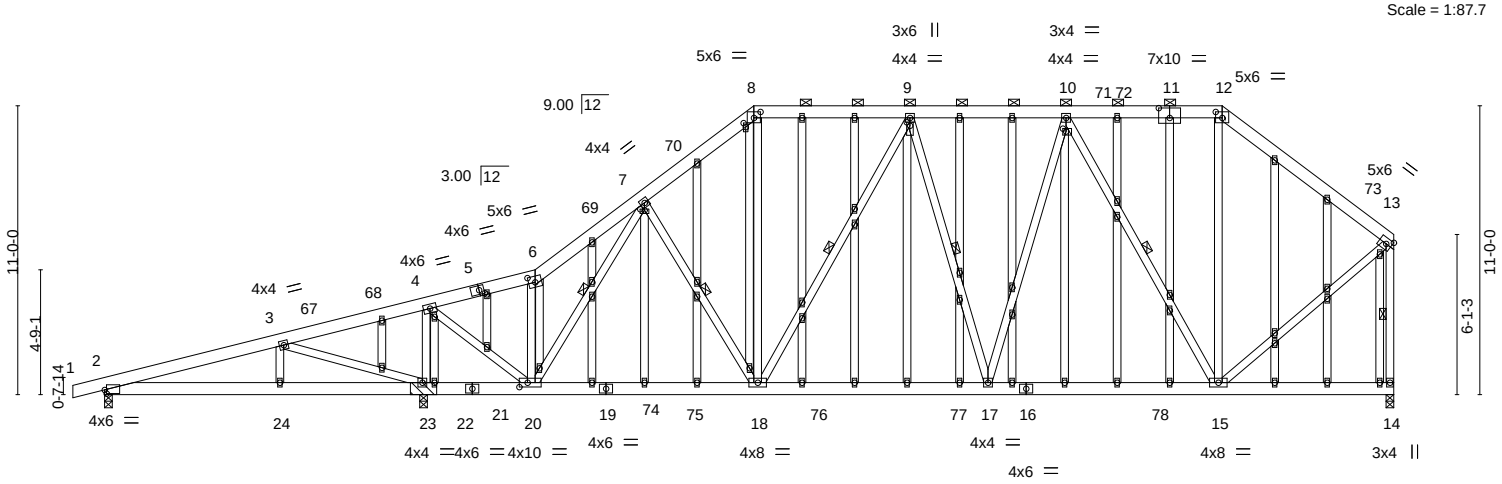


6-8-2	12-2-15	12-3-8	16-4-12	24-8-11	33-7-11	42-6-11	49-1-2
6-8-2	5-6-14	0-0-9	4-1-4	8-3-15	8-11-0	8-11-0	6-6-7

Plate Offsets (X,Y)-- [2:0-0-14,0-1-11], [5:0-2-3,0-2-0], [6:0-3-0,0-2-12], [6:0-2-0,0-0-14], [7:0-2-0,0-0-8], [8:0-3-0,0-2-12], [9:0-1-9,0-1-8], [10:0-1-8,0-1-5], [11:0-5-0,0-4-8], [12:0-3-0,0-2-12], [20:0-3-12,0-2-0], [45:0-1-13,0-1-0]

LOADING (psf)		**SPACING-**	2-0-0	**CSI.**		**DEFL.**	in	(loc)	l/defl	L/d	**PLATES**	**GRIP**
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.37	Vert(LL)	-0.08	15-17	>999	240	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.38	Vert(CT)	-0.14	15-17	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.87	Horz(CT)	0.03	14	n/a	n/a		
BCLL	0.0 *	Code	IRC2018/TPI2014	Matrix-S							Weight: 621 lb	FT = 20%
BCDL	10.0											

LUMBER-

TOP CHORD	2x6 SP No.1
BOT CHORD	2x6 SP No.1
WEBS	2x4 SP No.3
OTHERS	2x4 SP No.3

BRACING-

TOP CHORD	Sheathed or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 8-12.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS	1 Row at midpt 7-20, 7-18, 9-18, 9-17, 10-15, 13-14

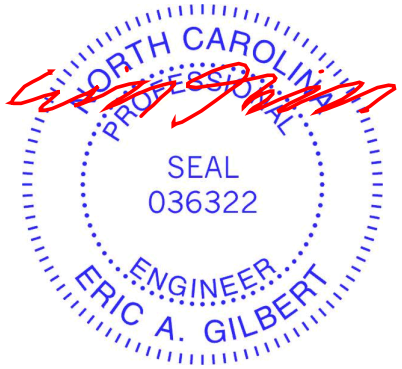
REACTIONS. (size) 2=0-3-8, 14=0-3-8, 23=(0-3-8 + bearing block) (req. 0-4-2)
Max Horz 2=264(LC 11)
Max Uplift 2=-25(LC 12), 23=-8(LC 12)
Max Grav 2=354(LC 54), 14=1616(LC 25), 23=2614(LC 24)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

TOP CHORD	3-4=-25/972, 4-6=-943/8, 6-7=-1157/76, 7-8=-1589/109, 8-9=-1275/110, 9-10=-1486/108, 10-12=-954/116, 12-13=-1198/96, 13-14=-1538/32
BOT CHORD	20-23=-892/46, 18-20=-19/1270, 17-18=0/1532, 15-17=0/1396
WEBS	3-24=0/256, 3-23=-994/10, 4-23=-2111/46, 4-20=0/2200, 6-20=-604/77, 7-20=-652/0, 8-18=-3/684, 9-18=-504/26, 10-17=0/460, 10-15=-983/15, 12-15=0/406, 13-15=0/1193

NOTES-

1) 2x6 SP No.1 bearing block 12" long at jt. 23 attached to front face with 3 rows of 10d (0.131"x3") nails spaced 3" o.c. 12 Total fasteners. User Defined Bearing crushing capacity= 425psi.
2) Unbalanced roof live loads have been considered for this design.
3) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=12ft; B=45ft; L=49ft; eave=6ft; Cat. II; Exp B; Enclosed; MWFRS (directional); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
4) 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.
5) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=16.5 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; 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.
6) Unbalanced snow loads have been considered for this design.
7) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.6 psf on overhangs non-concurrent with other live loads.
8) Provide adequate drainage to prevent water ponding.
9) All plates are 2x4 MT20 unless otherwise indicated.
10) Gable studs spaced at 2-0-0 oc.
11) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
12) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 23.



May 19,2020

Continued on page 2

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Job	Truss	Truss Type	Qty	Ply	RICHARDSON
P20-04027	T13	Piggyback Base Structural Gable COMMON l l Gable	1	1	E14419891 Job Reference (optional)

NOTES-

14) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
15) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

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Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	RICHARDSON
P20-04027	T14	Piggyback Base	1	1	E14419892
					Job Reference (optional)

Longleaf Truss Company, West End, NC - 27376, 8.330 s Mar 23 2020 MiTek Industries, Inc. Tue May 19 07:21:27 2020 Page 1
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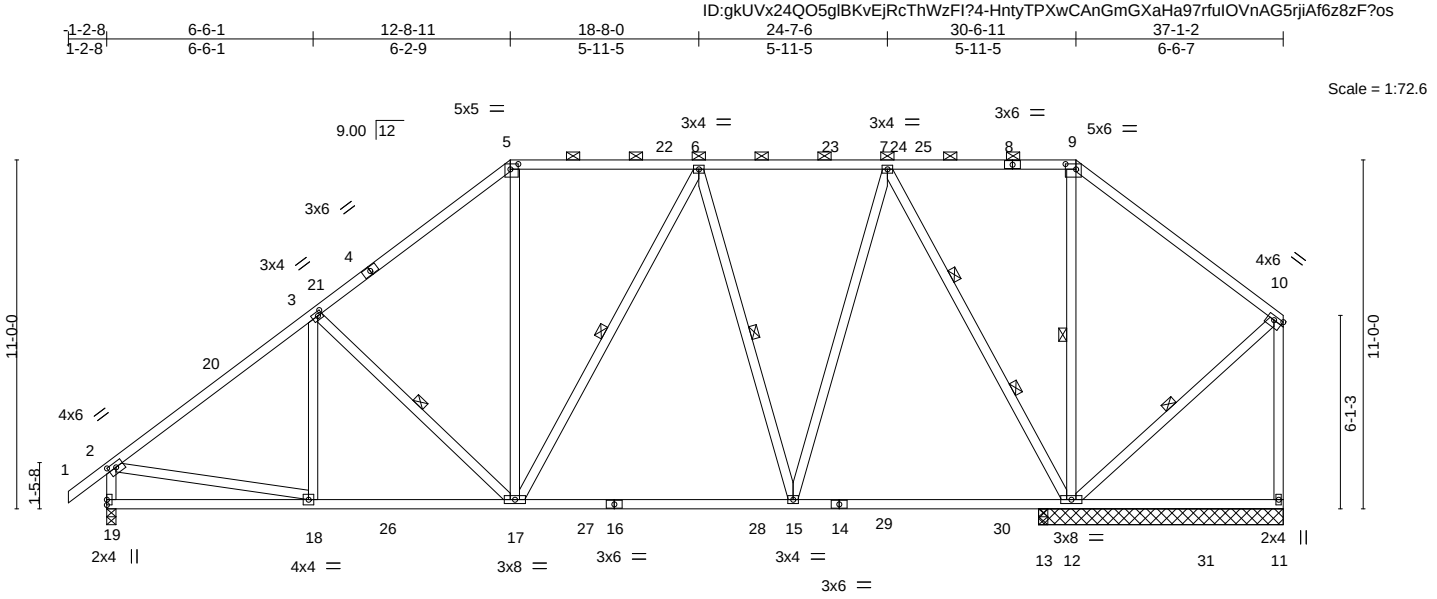

Plate Offsets (X,Y)-- [2:0-3-0,0-1-12], [3:0-1-12,0-1-8], [5:0-3-0,0-2-0], [9:0-4-0,0-2-0], [10:Edge,0-1-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.66	Vert(LL)	-0.19	15-17	>999	240	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.64	Vert(CT)	-0.32	15-17	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.85	Horz(CT)	0.03	11	n/a	n/a		
BCLL	0.0 *	Code	IRC2018/TPI2014	Matrix-S							Weight: 271 lb	FT = 20%
BCDL	10.0											

LUMBER-
TOP CHORD 2x4 SP No.1
BOT CHORD 2x4 SP No.1
WEBS 2x4 SP No.3

BRACING-
TOP CHORD Sheathed or 4-10-8 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 5-9.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 3-17, 6-17, 6-15, 9-12, 10-12
2 Rows at 1/3 pts 7-12

REACTIONS. All bearings 0-3-8 except (jt=length) 11=7-8-9, 12=7-8-9.
(lb) - Max Horz 19=289(LC 11)
Max Uplift All uplift 100 lb or less at joint(s) 19, 12 except 11=-150(LC 50)
Max Grav All reactions 250 lb or less at joint(s) 11 except 19=1422(LC 24), 12=1982(LC 42), 13=284(LC 19)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1544/48, 3-5=-1256/113, 5-6=-949/123, 6-7=-767/116, 9-10=-26/372, 2-19=-1316/66, 10-11=-61/262
BOT CHORD 18-19=-237/324, 17-18=-72/1288, 15-17=-28/956, 13-15=-46/563, 12-13=-46/563
WEBS 3-17=-480/96, 5-17=0/420, 6-17=-47/355, 6-15=-531/59, 7-15=0/945, 7-12=-1524/22, 9-12=-484/29, 2-18=0/1004, 10-12=-318/78

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=12ft; B=45ft; L=37ft; eave=5ft; Cat. II; Exp B; Enclosed; MWFRS (directional); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=16.5 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; 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.
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.6 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 19, 12 except (jt=lb) 11=150.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

May 19,2020

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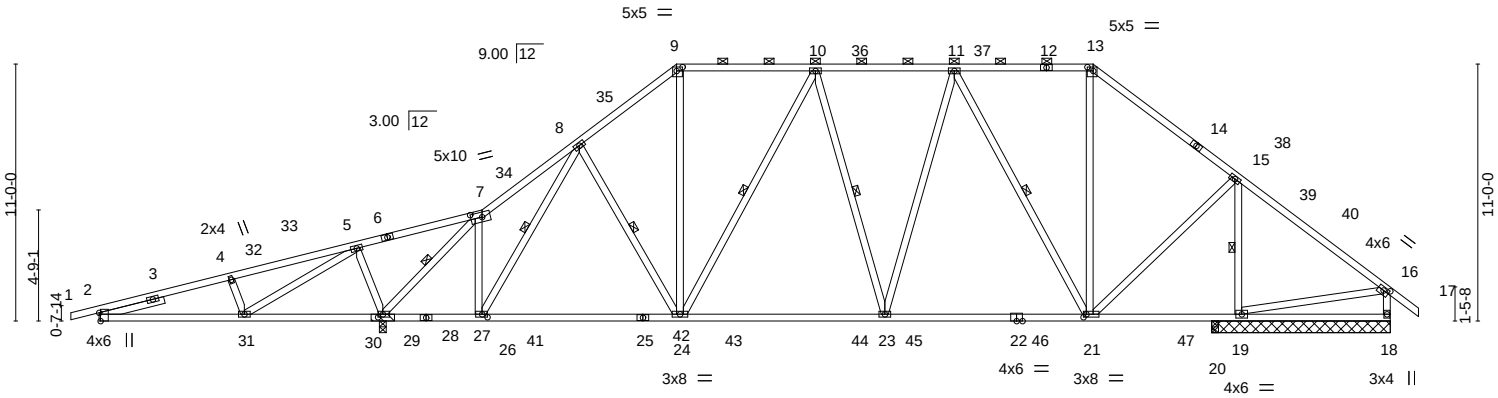
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	RICHARDSON
P20-04027	T15	Piggyback Base	1	1	E14419893
					Job Reference (optional)

Longleaf Truss Company, West End, NC - 27376, 8.330 s Mar 23 2020 MiTek Industries, Inc. Tue May 19 07:21:30 2020 Page 1
ID:gkUVx24QO5glBKvEjRcThWzFI?4-iMY46RaoV59qdkF8yijqTlWoxinvTTT9O8umaTzF?op

-1-2-8 | 5-7-15 | 11-0-5 | 16-4-12 | 20-6-11 | 24-8-11 | 30-8-0 | 36-7-6 | 42-6-11 | 48-9-5 | 55-3-6 | 56-5-14
1-2-8 | 5-7-15 | 5-4-7 | 5-4-7 | 4-2-0 | 4-2-0 | 5-11-5 | 5-11-5 | 5-11-5 | 6-2-9 | 6-6-1 | 1-2-8

Scale = 1:98.6



6-2-10 | 12-0-0 | 12-1-12 | 16-4-12 | 24-8-11 | 33-7-11 | 42-6-11 | 47-11-2 | 48-9-6 | 55-3-6
6-2-10 | 5-9-6 | 0-1-12 | 4-3-0 | 8-3-15 | 8-11-0 | 8-11-0 | 5-4-7 | 0-10-3 | 6-6-1

Plate Offsets (X,Y)-- [2:0-4-4,Edge], [7:0-5-12,0-2-8], [9:0-3-0,0-2-0], [13:0-3-0,0-2-0], [16:0-3-0,0-1-12], [21:0-1-8,0-1-8], [26:0-2-12,0-1-8], [29:0-2-8,0-1-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.64	Vert(LL)	-0.20	21-23	>999	240	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.70	Vert(CT)	-0.32	21-23	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.79	Horz(CT)	0.04	18	n/a	n/a		
BCLL	0.0 *	Code	IRC2018/TPI2014	Matrix-S							Weight: 368 lb	FT = 20%
BCDL	10.0											

LUMBER-

TOP CHORD	2x4 SP No.1
BOT CHORD	2x4 SP No.1
WEBS	2x4 SP No.3
SLIDER	Left 2x4 SP No.3 -x 2-10-5

BRACING-

TOP CHORD	Sheathed or 5-3-8 oc purlins, except end verticals, and 2-0-0 oc purlins (5-3-6 max.): 9-13.
BOT CHORD	Rigid ceiling directly applied or 4-5-5 oc bracing.
WEBS	1 Row at midpt 7-29, 8-26, 8-24, 10-24, 10-23, 11-21, 15-19

REACTIONS. All bearings 0-3-8 except (jt=length) 29=0-4-10 (input: 0-3-8 + bearing block), 19=7-7-12, 18=7-7-12.
(lb) - Max Horz 29=236(LC 11)
Max Uplift All uplift 100 lb or less at joint(s) 18, 20 except 29=-286(LC 12)
Max Grav All reactions 250 lb or less at joint(s) 18, 20 except 29=2937(LC 27), 19=2005(LC 25)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

TOP CHORD	2-4=-242/906, 4-5=-230/1021, 5-7=-452/2136, 7-8=-785/457, 8-9=-1429/2, 9-10=-1143/24, 10-11=-1329/60, 11-13=-788/105, 13-15=-1004/90, 15-16=-65/283
BOT CHORD	2-31=-820/241, 29-31=-1835/470, 26-29=-310/732, 24-26=0/1112, 23-24=0/1417, 21-23=0/1274
WEBS	4-31=-407/95, 5-31=-236/1075, 5-29=-686/149, 7-29=-3048/193, 7-26=-171/1467, 8-26=-1385/301, 8-24=-97/402, 9-24=0/581, 10-24=-539/79, 11-23=0/481, 11-21=-1014/0, 13-21=0/311, 15-21=0/1291, 15-19=-1719/0, 16-19=-280/75

NOTES-

1) 2x4 SP No.1 bearing block 12" long at jt. 29 attached to front face with 2 rows of 10d (0.131"x3") nails spaced 3" o.c. 8 Total fasteners. User Defined Bearing crushing capacity= 425psi.
2) Unbalanced roof live loads have been considered for this design.
3) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=12ft; B=45ft; L=55ft; eave=7ft; Cat. II; Exp B; Enclosed; MWFRS (directional); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=16.5 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; 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) Unbalanced snow loads have been considered for this design.
6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.6 psf on overhangs non-concurrent with other live loads.
7) Provide adequate drainage to prevent water ponding.
8) All plates are 3x6 MT20 unless otherwise indicated.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 18, 20 except (jt=lb) 29=286.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and Continued on page 2

May 19,2020

Continued from page 1

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Job	Truss	Truss Type	Qty	Ply	RICHARDSON
P20-04027	T15	Piggyback Base	1	1	E14419893 Job Reference (optional)

NOTES-

13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

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Job	Truss	Truss Type	Qty	Ply	RICHARDSON
P20-04027	T17	Piggyback Base Girder	1	1	E14419894
					Job Reference (optional)

Longleaf Truss Company, West End, NC - 27376, 8.330 s Mar 23 2020 MiTek Industries, Inc. Tue May 19 07:21:33 2020 Page 1
ID:gkUVx24QO5glBKvEjRcThWzFI?4-6xEDkTchn0XPUB_jdqGX5w8M7vyGgxHb456QAozF?om

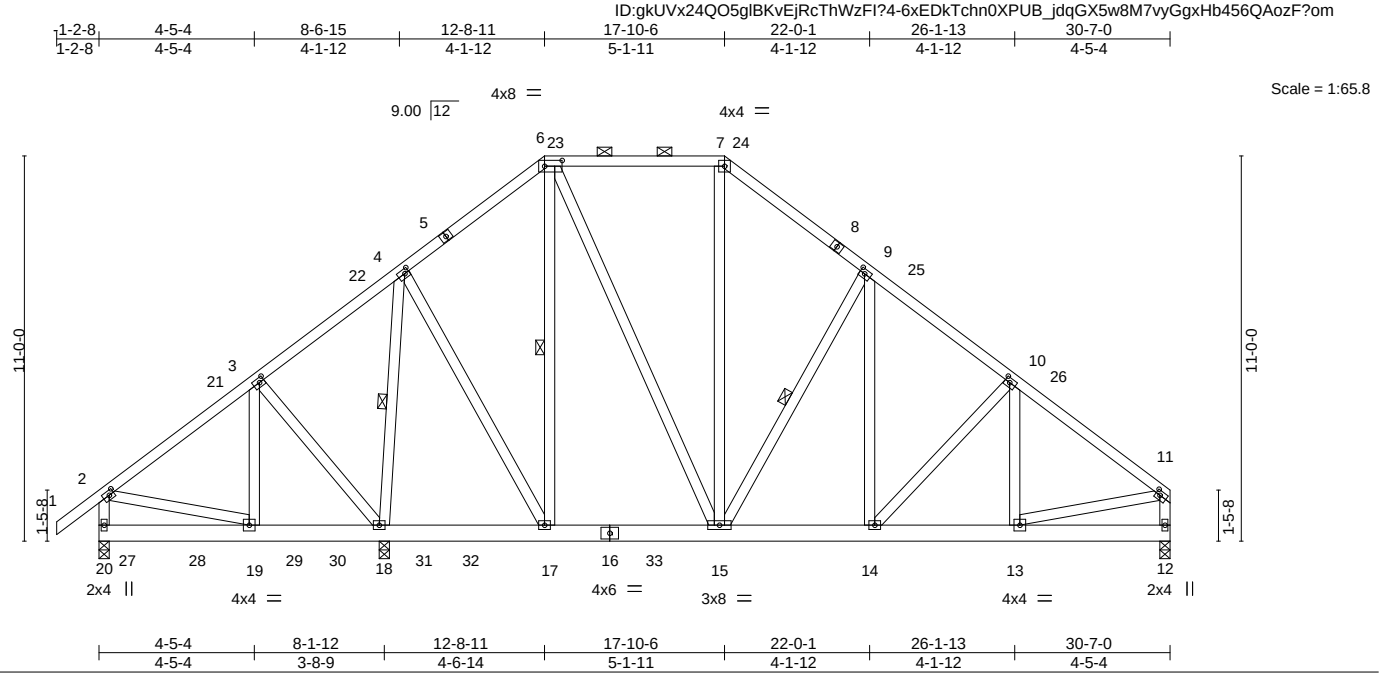

Plate Offsets (X,Y)-- [2:0-1-12,0-1-8], [3:0-1-12,0-1-8], [4:0-1-8,0-1-8], [6:0-6-0,0-2-0], [9:0-1-12,0-1-8], [10:0-1-12,0-1-8], [11:0-1-8,0-1-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.45	Vert(LL)	-0.03	14	>999	240	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.15	Vert(CT)	-0.05	14	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.34	Horz(CT)	0.01	12	n/a	n/a		
BCLL	0.0 *	Code	IRC2018/TPI2014	Matrix-S							Weight: 265 lb	FT = 20%
BCDL	10.0											

LUMBER-
TOP CHORD 2x4 SP No.1
BOT CHORD 2x6 SP No.1
WEBS 2x4 SP No.3

BRACING-
TOP CHORD Sheathed or 5-9-5 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 6-7.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 4-18, 6-17, 9-15

REACTIONS. (size) 20=0-3-8, 18=0-3-8, 12=0-3-8
Max Horz 20=240(LC 11)
Max Uplift 20=-32(LC 12), 18=-58(LC 12)
Max Grav 20=732(LC 2), 18=1628(LC 98), 12=1064(LC 45)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-511/23, 4-6=-625/123, 6-7=-599/123, 7-9=-824/124, 9-10=-1089/80, 10-11=-1172/31, 2-20=-544/43, 11-12=-984/18
BOT CHORD 19-20=-215/264, 18-19=-81/443, 15-17=0/462, 14-15=0/779, 13-14=0/871
WEBS 3-19=-12/301, 3-18=-455/83, 4-18=-1010/35, 4-17=0/550, 6-17=-313/5, 6-15=-11/450, 9-15=-515/83, 9-14=0/270, 2-19=-1/329, 11-13=0/835

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=12ft; B=45ft; L=31ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=16.5 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0 Rain surcharge applied to all exposed surfaces with slopes less than 0.500/12 in accordance with IBC 1608.3.4.
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.6 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) All plates are 3x4 MT20 unless otherwise indicated.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 20, 18.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
13) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 129 lb down and 17 lb up at 0-9-11, 125 lb down and 20 lb up at 2-9-11, and 125 lb down and 20 lb up at 4-9-11, and 125 lb down and 20 lb up at 6-9-11 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

NORTH CAROLINA PROFESSIONAL SEAL 036322 ENGINEER ERIC A. GILBERT

May 19,2020

LOAD CASE(S) Standard

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LOAD CASE(S) Standard

1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
   Uniform Loads (plf)
   Vert: 1-2=-43, 2-6=-43, 6-7=-53, 7-11=-43, 12-20=-20
   Concentrated Loads (lb)
   Vert: 27=-107 28=-104 29=-104 30=-104

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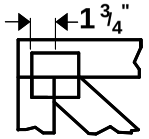
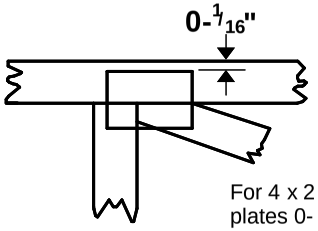
Symbols

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.

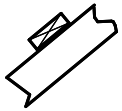
*** Plate location details available in MiTek 20/20 software or upon request.**

PLATE SIZE

4 x 4

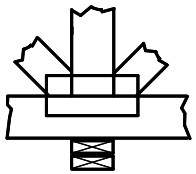
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

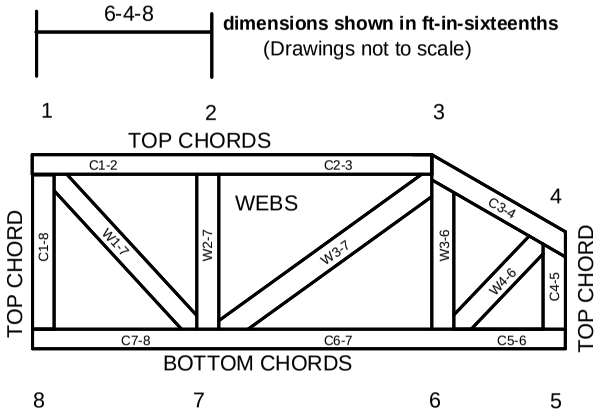


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-89: Design Standard for Bracing.
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing & 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-1311, ESR-1352, ESR1988
ER-3907, ESR-2362, ESR-1397, ESR-3282

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

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

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MiTek Engineering Reference Sheet: MII-7473 rev. 10/03/2015

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.