

Trenco
818 Soundside Rd
Edenton, NC 27932

Re: P-6525-1
Bentley 2020-Roof

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

Pages or sheets covered by this seal: E13984172 thru E13984178

My license renewal date for the state of North Carolina is December 31, 2020.

North Carolina COA: C-0844



January 22, 2020

Gilbert, Eric

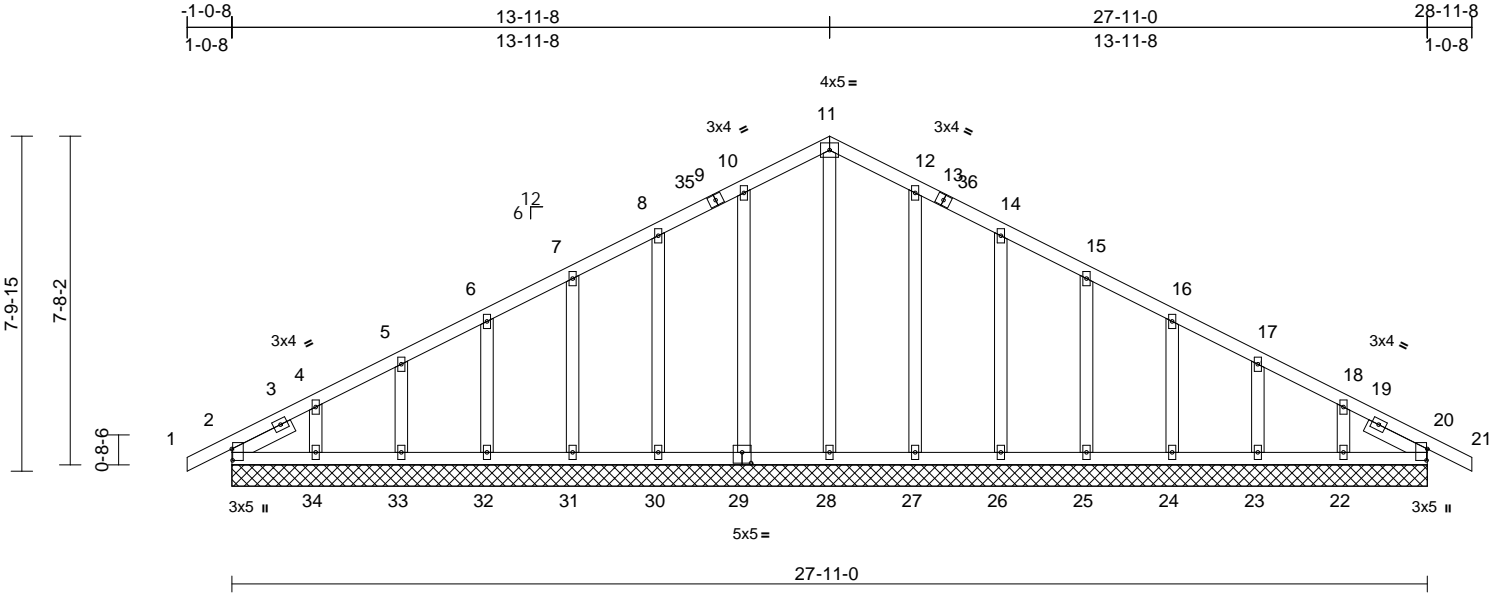
IMPORTANT NOTE: The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), which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

Job P-6525-1	Truss T1GE	Truss Type Common Supported Gable	Qty 2	Ply 1	Bentley 2020-Roof Job Reference (optional)	E13984172
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Peak Truss Builders, LLC, New Hill, NC - 27562,

Run: 8.33 S Jan 8 2020 Print: 8.330 S Jan 8 2020 MiTek Industries, Inc. Wed Jan 22 06:28:28
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Page: 1



Scale = 1:53.8

Plate Offsets (X, Y): [2:0-3-3,0-0-4], [20:0-3-3,0-0-4], [29:0-2-8,0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.05	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.02	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.14	Horz(CT)	0.00	20	n/a	n/a		
BCDL	10.0	Code	IBC2015/TPI2014	Matrix-S							Weight: 172 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.1
BOT CHORD 2x4 SP No.1
OTHERS 2x4 SP No.3
SLIDER Left 2x4 SP No.3 -- 1-6-12, Right 2x4 SP No.3 -- 1-6-12

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

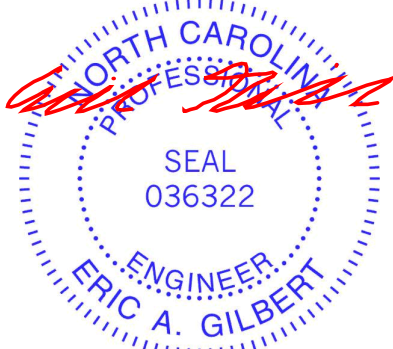
REACTIONS (lb/size)
2=155/27-11-0, 20=156/27-11-0, 22=148/27-11-0, 23=163/27-11-0, 24=159/27-11-0, 25=160/27-11-0, 26=159/27-11-0, 27=166/27-11-0, 28=136/27-11-0, 29=166/27-11-0, 30=158/27-11-0, 31=160/27-11-0, 32=159/27-11-0, 33=163/27-11-0, 34=149/27-11-0
Max Horiz 2=-169 (LC 9)
Max Uplift 2=-19 (LC 7), 22=-16 (LC 7), 23=-2 (LC 7), 24=-3 (LC 7), 25=-2 (LC 7), 26=-4 (LC 7), 27=-1 (LC 7), 29=-2 (LC 8), 30=-4 (LC 8), 31=-2 (LC 8), 32=-3 (LC 8), 33=-1 (LC 8), 34=-22 (LC 8)
Max Grav 2=167 (LC 17), 20=156 (LC 1), 22=165 (LC 17), 23=165 (LC 17), 24=164 (LC 17), 25=164 (LC 17), 26=164 (LC 17), 27=170 (LC 17), 28=139 (LC 16), 29=172 (LC 16), 30=162 (LC 16), 31=164 (LC 16), 32=164 (LC 16), 33=164 (LC 16), 34=176 (LC 16)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD
1-2=0/8, 2-3=-143/129, 3-4=-126/132, 4-5=-114/108, 5-6=-106/95, 6-7=-96/115, 7-8=-88/170, 8-35=-81/222, 9-35=-71/222, 9-10=-69/227, 10-11=-100/279, 11-12=-100/280, 12-13=-69/229, 13-36=-72/224, 14-36=-81/224, 14-15=-61/172, 15-16=-45/117, 16-17=-53/61, 17-18=-60/39, 18-19=-112/57, 19-20=-127/51, 20-21=0/8
BOT CHORD
2-34=-52/144, 33-34=-52/144, 32-33=-52/144, 31-32=-52/144, 30-31=-52/144, 29-30=-52/144, 28-29=-52/143, 27-28=-52/143, 26-27=-52/143, 25-26=-52/143, 24-25=-52/143, 23-24=-52/143, 22-23=-52/143, 20-22=-52/143
WEBS
11-28=-131/9, 10-29=-132/163, 8-30=-123/111, 7-31=-124/99, 6-32=-124/101, 5-33=-125/98, 4-34=-133/146, 12-27=-130/163, 14-26=-123/110, 15-25=-124/99, 16-24=-124/101, 17-23=-126/98, 18-22=-122/146

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=140mph (3-second gust) Vasd=111mph; TCDL=6.0psf; BCDL=6.0psf; h=0ft; B=45ft; L=28ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Corner (3) -1-0-8 to 1-11-8, Exterior (2) 1-11-8 to 13-11-8, Corner (3) 13-11-8 to 16-11-8, Exterior (2) 16-11-8 to 28-11-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- All plates are 2x4 MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2-0-0 oc.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 19 lb uplift at joint 2, 2 lb uplift at joint 29, 4 lb uplift at joint 30, 2 lb uplift at joint 31, 3 lb uplift at joint 32, 1 lb uplift at joint 33, 22 lb uplift at joint 34, 1 lb uplift at joint 27, 4 lb uplift at joint 26, 2 lb uplift at joint 25, 3 lb uplift at joint 24, 2 lb uplift at joint 23 and 16 lb uplift at joint 22.
- Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 2.



January 22, 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.



818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Bentley 2020-Roof	E13984172
P-6525-1	T1GE	Common Supported Gable	2	1	Job Reference (optional)	

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Page: 2

11) This truss is designed in accordance with the 2015 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.

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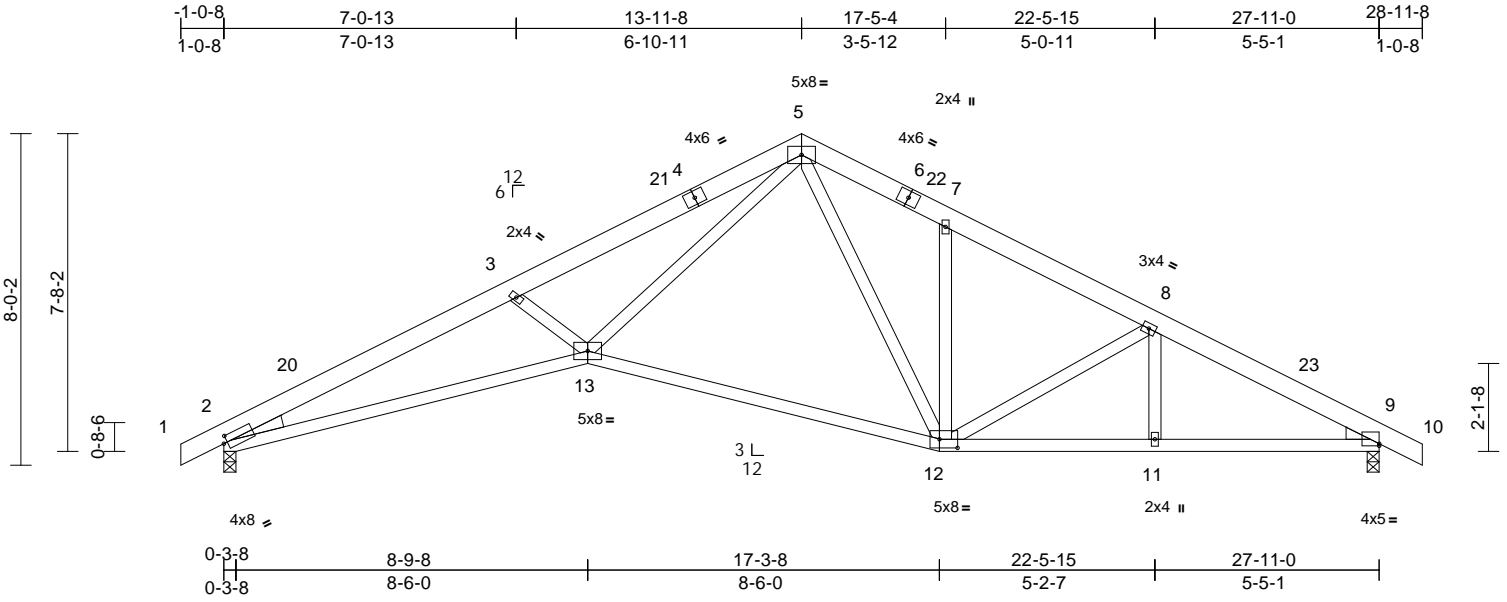
818 Soundside Road
 Edenton, NC 27932

Job P-6525-1	Truss T6A	Truss Type Roof Special	Qty 8	Ply 1	Bentley 2020-Roof Job Reference (optional)	E13984173
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Peak Truss Builders, LLC, New Hill, NC - 27562,

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Page: 1



Scale = 1:55.7

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.69	Vert(LL)	-0.18	12-13	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.81	Vert(CT)	-0.48	12-13	>694	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.76	Horz(CT)	0.19	9	n/a	n/a		
BCDL	10.0	Code	IBC2015/TPI2014	Matrix-MS							Weight: 170 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.2
BOT CHORD 2x4 SP No.1
WEBS 2x4 SP No.3
WEDGE Left: 2x4 SP No.3
Right: 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-3-1 oc purlins.
BOT CHORD Rigid ceiling directly applied or 9-11-7 oc bracing.

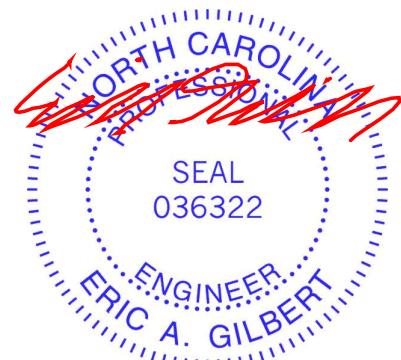
REACTIONS (lb/size) 2=1179/0-3-8, 9=1179/0-3-8
Max Horiz 2=-169 (LC 9)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/28, 2-20=-3180/504, 3-20=-3132/536, 3-21=-2873/473, 4-21=-2783/475, 4-5=-2771/491, 5-6=-1440/401, 6-22=-1511/385, 7-22=-1524/385, 7-8=-1544/331, 8-23=-1812/338, 9-23=-1907/313, 9-10=0/28
BOT CHORD 2-13=-383/2818, 12-13=-81/1270, 11-12=-211/1620, 9-11=-211/1620
WEBS 3-13=-307/217, 5-13=-190/1835, 5-12=-113/403, 7-12=-264/148, 8-12=-357/113, 8-11=0/84

- Wind: ASCE 7-10; Vult=140mph (3-second gust)
Vasd=111mph; TC DL=6.0psf; BCDL=6.0psf; h=0ft;
B=45ft; L=28ft; eave=4ft; Cat. II; Exp B; Enclosed;
MWFRS (directional) and C-C Exterior (2) -1-0-8 to 1-11-8, Interior (1) 1-11-8 to 13-11-8, Exterior (2) 13-11-8 to 16-11-8, Interior (1) 16-11-8 to 28-11-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
- Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- This truss is designed in accordance with the 2015 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

NOTES
1) Unbalanced roof live loads have been considered for this design.



January 22, 2020

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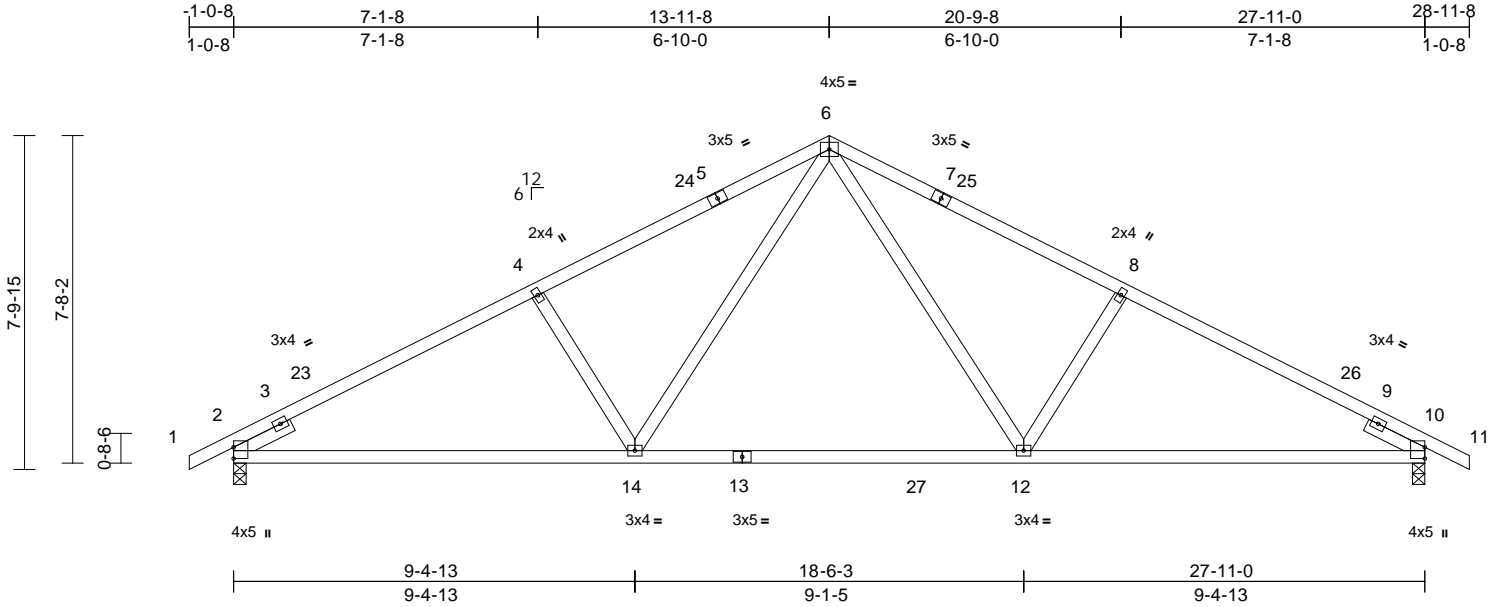
818 Soundside Road
Edenton, NC 27932

Job P-6525-1	Truss T1	Truss Type Common	Qty 2	Ply 1	Bentley 2020-Roof Job Reference (optional)	E13984174
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Peak Truss Builders, LLC, New Hill, NC - 27562,

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Page: 1



Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.50	Vert(LL)	-0.29	12-14	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.65	Vert(CT)	-0.45	12-14	>751	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.25	Horz(CT)	0.06	10	n/a	n/a		
BCDL	10.0	Code	IBC2015/TPI2014	Matrix-MS								
											Weight: 134 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.1
BOT CHORD 2x4 SP No.1
WEBS 2x4 SP No.3
SLIDER Left 2x4 SP No.3 -- 1-6-0, Right 2x4 SP No.3 -- 1-6-0

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-0-8 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 2=1179/0-3-8, 10=1179/0-3-8
Max Horiz 2=-169 (LC 9)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/28, 2-3=-721/0, 3-23=-1804/321, 4-23=-1708/353, 4-24=-1619/357, 5-24=-1532/359, 5-6=-1523/375, 6-7=-1524/375, 7-25=-1533/359, 8-25=-1620/357, 8-26=-1709/353, 9-26=-1804/321, 9-10=-570/0, 10-11=0/28
BOT CHORD 2-14=-198/1639, 13-14=-58/1095, 13-27=-58/1095, 12-27=-58/1095, 10-12=-211/1544
WEBS 6-12=-83/672, 8-12=-381/213, 6-14=-83/670, 4-14=-381/213

- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
- This truss is designed in accordance with the 2015 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=140mph (3-second gust) Vasd=111mph; TCDL=6.0psf; BCDL=6.0psf; h=0ft; B=45ft; L=28ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) -1-0-8 to 1-11-8, Interior (1) 1-11-8 to 13-11-8, Exterior (2) 13-11-8 to 16-11-8, Interior (1) 16-11-8 to 28-11-8 zone; cantilever left and right exposed ; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60



January 22, 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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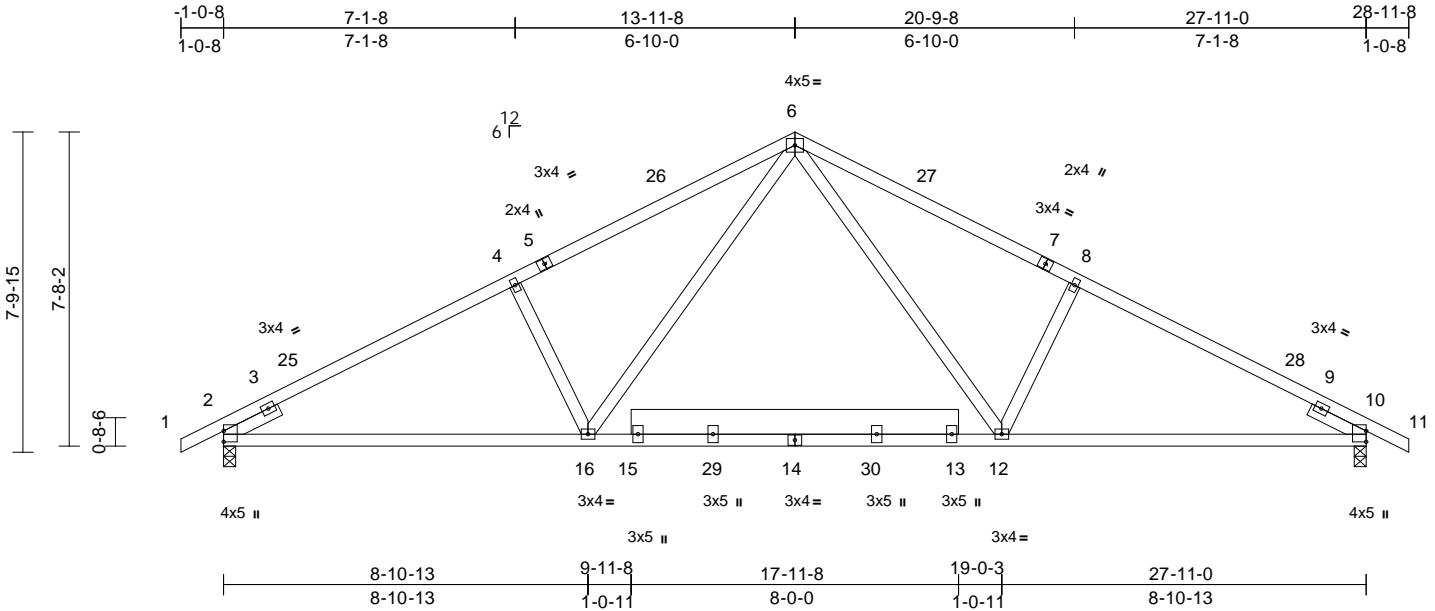
818 Soundside Road
Edenton, NC 27932

Job P-6525-1	Truss T1A	Truss Type Common	Qty 3	Ply 1	Bentley 2020-Roof Job Reference (optional)	E13984175
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Peak Truss Builders, LLC, New Hill, NC - 27562,

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Page: 1



Scale = 1:56.3

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.50	Vert(LL)	-0.10	12-16	>999	240	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.50	Vert(CT)	-0.18	12-16	>999	180	
BCLL	0.0*	Rep Stress Incr	YES	WB	0.26	Horz(CT)	0.05	10	n/a	n/a	
BCDL	10.0	Code	IBC2015/TPI2014	Matrix-MS							Weight: 159 lb FT = 20%

LUMBER

TOP CHORD 2x4 SP No.1
 BOT CHORD 2x4 SP No.1
 WEBS 2x4 SP No.3 *Except* 15-13:2x8 SP No.2
 SLIDER Left 2x4 SP No.3 -- 1-6-0, Right 2x4 SP No.3 -- 1-6-0

BRACING

TOP CHORD Structural wood sheathing directly applied or 4-2-1 oc purlins.
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 2=1179/0-3-8, 10=1179/0-3-8
 Max Horiz 2=-169 (LC 9)

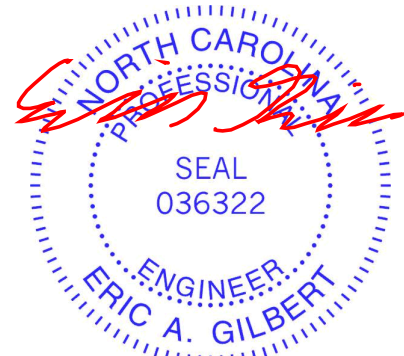
FORCES (lb) - Maximum Compression/Maximum Tension
 TOP CHORD 1-2=0/28, 2-3=-730/0, 3-25=-1801/319, 4-25=-1659/351, 4-5=-1650/360, 5-26=-1553/375, 6-26=-1547/393, 6-27=-1547/393, 7-27=-1553/375, 7-8=-1650/360, 8-28=-1659/351, 9-28=-1801/319, 9-10=-580/0, 10-11=0/28
 BOT CHORD 2-16=-196/1621, 15-16=-64/1063, 15-29=-64/1063, 14-29=-64/1063, 14-30=-64/1063, 13-30=-64/1063, 12-13=-64/1063, 10-12=-209/1542
 WEBS 6-12=-97/702, 8-12=-380/213, 6-16=-97/702, 4-16=-380/213

NOTES

1) Unbalanced roof live loads have been considered for this design.

- Wind: ASCE 7-10; Vult=140mph (3-second gust)
 Vasd=111mph; TCDL=6.0psf; BCDL=6.0psf; h=0ft;
 B=45ft; L=28ft; eave=4ft; Cat. II; Exp B; Enclosed;
 MWFRS (directional) and C-C Exterior (2) -1-0-8 to 1-11-8, Interior (1) 1-11-8 to 13-11-8, Exterior (2) 13-11-8 to 16-11-8, Interior (1) 16-11-8 to 28-11-8 zone;
 cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- All bearings are assumed to be SP No.1 crushing capacity of 565 psi.
- This truss is designed in accordance with the 2015 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



January 22, 2020

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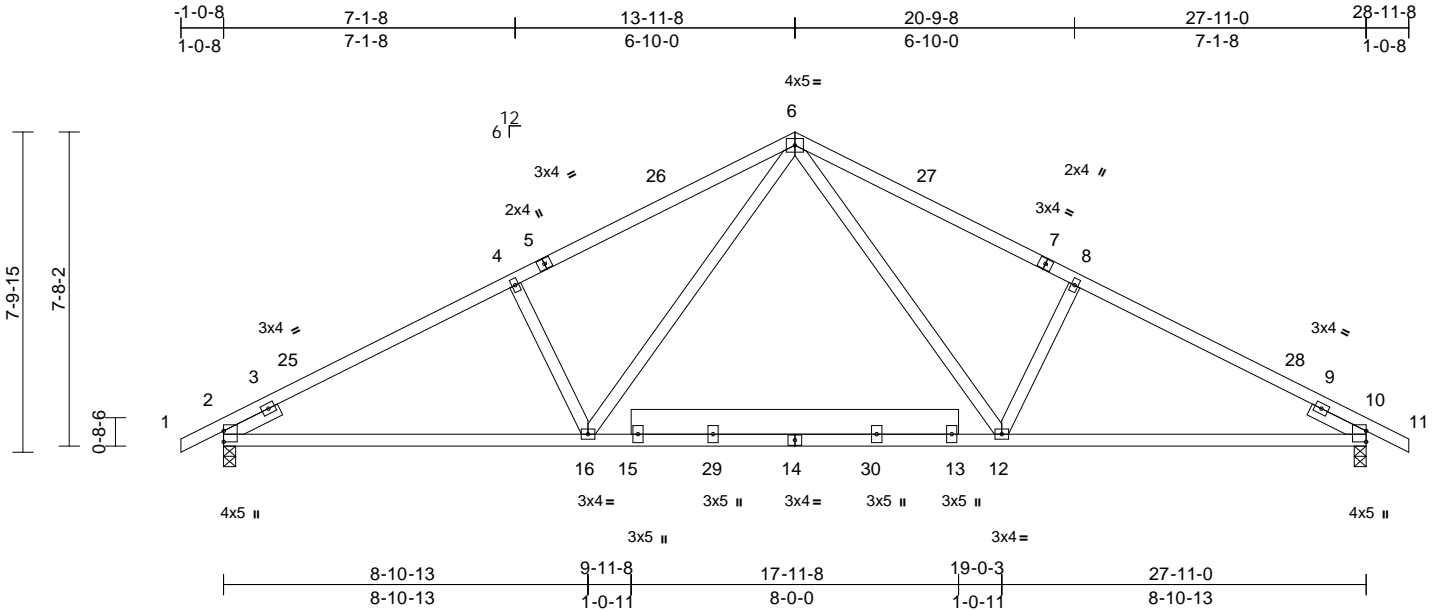
818 Soundside Road
 Edenton, NC 27932

Job P-6525-1	Truss T1B	Truss Type Common	Qty 6	Ply 1	Bentley 2020-Roof Job Reference (optional)	E13984176
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Peak Truss Builders, LLC, New Hill, NC - 27562,

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Page: 1



Scale = 1:56.3

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.50	Vert(LL)	-0.10	12-16	>999	240	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.50	Vert(CT)	-0.18	12-16	>999	180	
BCLL	0.0*	Rep Stress Incr	YES	WB	0.26	Horz(CT)	0.05	10	n/a	n/a	
BCDL	10.0	Code	IBC2015/TPI2014	Matrix-MS							Weight: 159 lb FT = 20%

LUMBER

TOP CHORD 2x4 SP No.1
 BOT CHORD 2x4 SP No.1
 WEBS 2x4 SP No.3 *Except* 15-13:2x8 SP No.2
 SLIDER Left 2x4 SP No.3 -- 1-6-0, Right 2x4 SP No.3 -- 1-6-0

BRACING

TOP CHORD Structural wood sheathing directly applied or 4-2-1 oc purlins.
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 2=1179/0-3-8, 10=1179/0-3-8
 Max Horiz 2=-169 (LC 9)

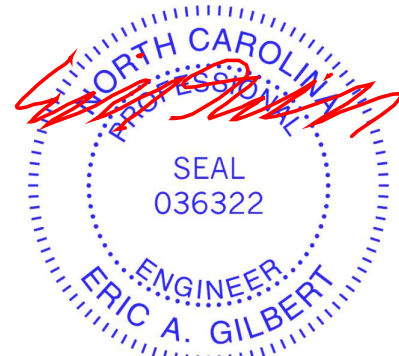
FORCES (lb) - Maximum Compression/Maximum Tension
 TOP CHORD 1-2=0/28, 2-3=-730/0, 3-25=-1801/319, 4-25=-1659/351, 4-5=-1650/360, 5-26=-1553/375, 6-26=-1547/393, 6-27=-1547/393, 7-27=-1553/375, 7-8=-1650/360, 8-28=-1659/351, 9-28=-1801/319, 9-10=-580/0, 10-11=0/28
 BOT CHORD 2-16=-196/1621, 15-16=-64/1063, 15-29=-64/1063, 14-29=-64/1063, 14-30=-64/1063, 13-30=-64/1063, 12-13=-64/1063, 10-12=-209/1542
 WEBS 6-12=-97/702, 8-12=-380/213, 6-16=-97/702, 4-16=-380/213

NOTES

1) Unbalanced roof live loads have been considered for this design.

- Wind: ASCE 7-10; Vult=140mph (3-second gust)
 Vasd=111mph; TCDL=6.0psf; BCDL=6.0psf; h=0ft;
 B=45ft; L=28ft; eave=4ft; Cat. II; Exp B; Enclosed;
 MWFRS (directional) and C-C Exterior (2) -1-0-8 to 1-11-8, Interior (1) 1-11-8 to 13-11-8, Exterior (2) 13-11-8 to 16-11-8, Interior (1) 16-11-8 to 28-11-8 zone;
 cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- All bearings are assumed to be SP No.1 crushing capacity of 565 psi.
- This truss is designed in accordance with the 2015 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



January 22, 2020

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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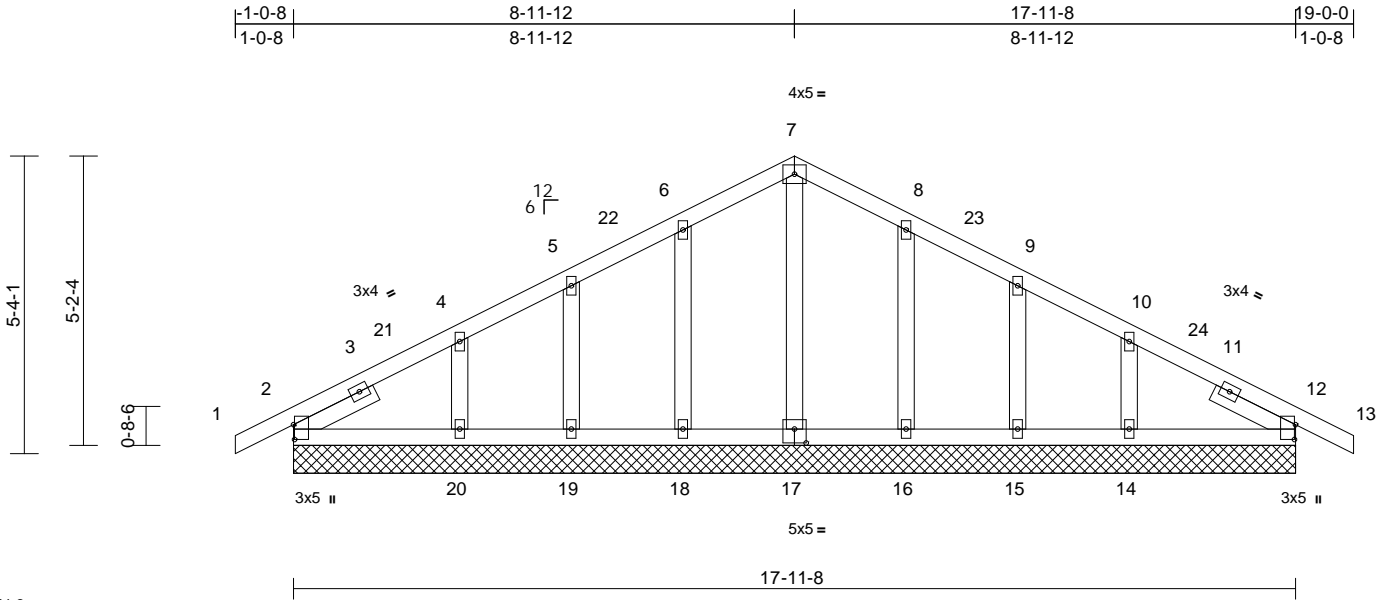
Job P-6525-1	Truss T2AGE	Truss Type Common Supported Gable	Qty 1	Ply 1	Bentley 2020-Roof Job Reference (optional)	E13984177
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Peak Truss Builders, LLC, New Hill, NC - 27562,

Run: 8.33 S Jan 8 2020 Print: 8.330 S Jan 8 2020 MiTek Industries, Inc. Wed Jan 22 06:28:29

Page: 1

ID:Si7wxh8Ua1SaUcplzj7VEtZs6hA-jfBwGHLzF2la2M0L0y7vXmyHSEtHkD9UGXAazsu2G



Scale = 1:41.3

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.06	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.05	Horz(CT)	0.00	12	n/a	n/a		
BCDL	10.0	Code	IBC2015/TPI2014	Matrix-S							Weight: 96 lb	FT = 20%

LUMBER		WEBS	
TOP CHORD	2x4 SP No.1	7-17=-94/9, 6-18=-135/172, 5-19=-109/95,	
BOT CHORD	2x4 SP No.1	4-20=-171/159, 8-16=-133/172,	
OTHERS	2x4 SP No.3	9-15=-111/95, 10-14=-165/159	
SLIDER	Left 2x4 SP No.3 -- 1-7-7, Right 2x4 SP No.3 -- 1-7-7		

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

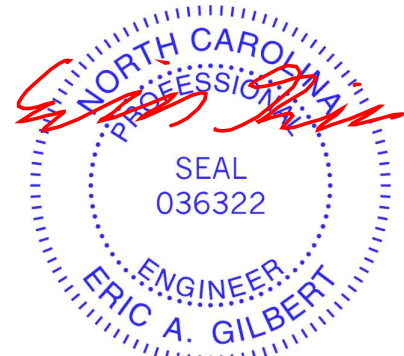
REACTIONS	(lb/size)
Max Horiz	2=202/17-11-8, 12=202/17-11-8, 14=213/17-11-8, 15=142/17-11-8, 16=170/17-11-8, 17=108/17-11-8, 18=170/17-11-8, 19=142/17-11-8, 20=213/17-11-8
Max Uplift	2=-113 (LC 10), 12=-1 (LC 8), 14=-10 (LC 7), 15=-2 (LC 7), 16=-3 (LC 7), 18=-4 (LC 8), 20=-13 (LC 8)
Max Grav	2=202 (LC 1), 12=202 (LC 1), 14=227 (LC 17), 15=143 (LC 17), 16=175 (LC 17), 17=108 (LC 1), 18=177 (LC 16), 19=142 (LC 1), 20=233 (LC 16)

FORCES	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=0/8, 2-3=-141/53, 3-21=-92/53, 4-21=-87/68, 4-5=-104/126, 5-22=-94/169, 6-22=-72/175, 6-7=-98/230, 7-8=-98/231, 8-23=-68/176, 9-23=-77/170, 9-10=-76/127, 10-24=-51/45, 11-24=-58/37, 11-12=-107/37, 12-13=0/8
BOT CHORD	2-20=-22/65, 19-20=-22/65, 18-19=-22/65, 17-18=-22/65, 16-17=-22/65, 15-16=-22/65, 14-15=-22/65, 12-14=-22/65

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=140mph (3-second gust) Vasd=111mph; TCDL=6.0psf; BCDL=6.0psf; h=0ft; B=45ft; L=24ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Corner (3) -1-0-8 to 1-11-8, Exterior (2) 1-11-8 to 8-11-12, Corner (3) 8-11-12 to 11-11-12, Exterior (2) 11-11-12 to 19-0-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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.
- All plates are 2x4 MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2-0-0 oc.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.1 crushing capacity of 565 psi.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 11 lb uplift at joint 2, 1 lb uplift at joint 12, 4 lb uplift at joint 18, 13 lb uplift at joint 20, 3 lb uplift at joint 16, 2 lb uplift at joint 15 and 10 lb uplift at joint 14.
- This truss is designed in accordance with the 2015 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



January 22, 2020

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.



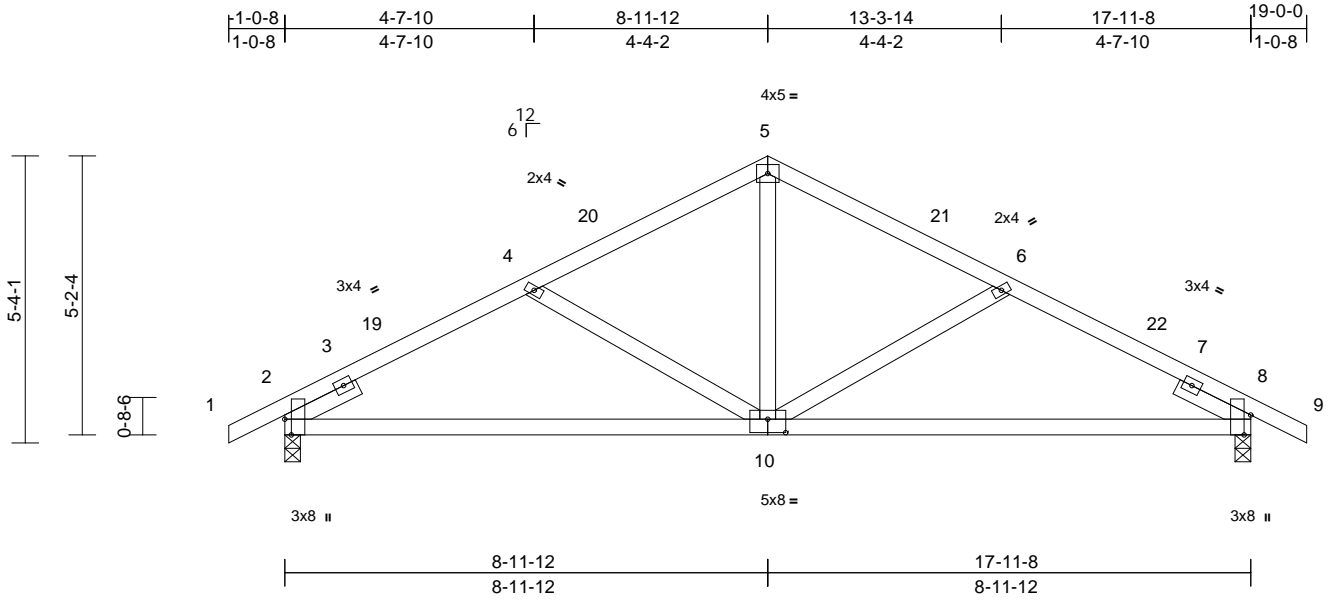
818 Soundside Road
Edenton, NC 27932

Job P-6525-1	Truss T2	Truss Type Common	Qty 2	Ply 1	Bentley 2020-Roof Job Reference (optional)	E13984178
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Peak Truss Builders, LLC, New Hill, NC - 27562,

Run: 8.33 S Jan 8 2020 Print: 8.330 S Jan 8 2020 MiTek Industries, Inc. Wed Jan 22 06:28:29
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Page: 1



Scale = 1:42.8

Plate Offsets (X, Y): [2:0-3-8,Edge], [8:0-4-7,Edge], [10:0-4-0,0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.17	Vert(LL)	-0.03	10	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.34	Vert(CT)	-0.09	10-13	>999	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.17	Horz(CT)	0.02	8	n/a	n/a		
BCDL	10.0	Code	IBC2015/TPI2014	Matrix-MS							Weight: 86 lb	FT = 20%

LUMBER

- TOP CHORD 2x4 SP No.1
- BOT CHORD 2x4 SP No.1
- WEBS 2x4 SP No.3
- SLIDER Left 2x4 SP No.3 -- 1-6-0, Right 2x4 SP No.3 -- 1-6-0

BRACING

- TOP CHORD Structural wood sheathing directly applied or 5-11-11 oc purlins.
- BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS

(lb/size) 2=781/0-3-8, 8=781/0-3-8
Max Horiz 2=113 (LC 10)

FORCES

(lb) - Maximum Compression/Maximum Tension

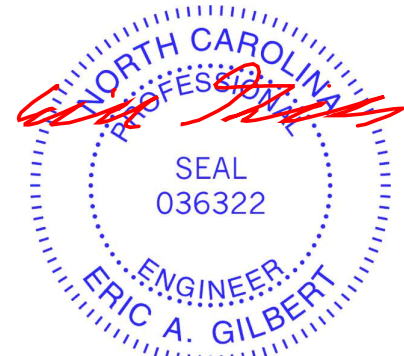
- TOP CHORD 1-2=0/28, 2-3=-543/0, 3-19=-1062/230, 4-19=-982/248, 4-20=-832/186, 5-20=-772/202, 5-21=-772/202, 6-21=-832/186, 6-22=-982/248, 7-22=-1062/230, 7-8=-459/0, 8-9=0/28
- BOT CHORD 2-10=-128/910, 8-10=-147/910
- WEBS 5-10=-29/422, 6-10=-281/151, 4-10=-281/151

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=140mph (3-second gust) Vasd=111mph; TCDL=6.0psf; BCDL=6.0psf; h=0ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) -1-0-8 to 1-11-8, Interior (1) 1-11-8 to 8-11-12, Exterior (2) 8-11-12 to 11-11-12, Interior (1) 11-11-12 to 19-0-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.1 crushing capacity of 565 psi.
- This truss is designed in accordance with the 2015 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



January 22, 2020

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.

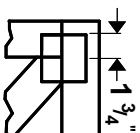
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall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



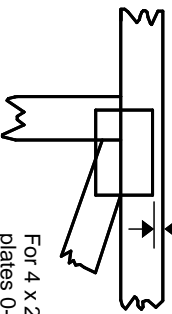
818 Soundside Road
Edenton, NC 27932

Symbols

PLATE LOCATION AND ORIENTATION



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



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



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

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

PLATE SIZE

4 X 4

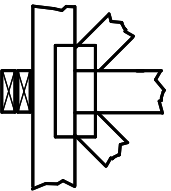
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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



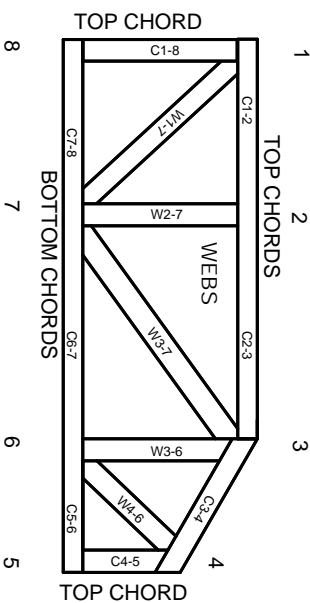
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TPI 1: 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

6-4-8
dimensions shown in ft-in-sixteenths
(Drawings not to scale)



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.