

RE: 0519-2534 Kent A&B Trenco 818 Soundside Rd Edenton, NC 27932

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

Design Code: IRC2015/TPI2014 Design Program: MiTek 20/20 8.1

Wind Code: ASCE 7-10 Wind Speed: 130 mph Roof Load: 40.0 psf Floor Load: N/A psf

This package includes 15 individual, dated Truss Design Drawings and 0 Additional Drawings.

No.	Seal#	Truss Name	Date
1	E12697036	a01	2/13/2019
2	E12697037	a02	2/13/2019
3	E12697038	a03	2/13/2019
4	E12697039	a04	2/13/2019
5	E12697040	a05	2/13/2019
6	E12697041	b01	2/13/2019
7	E12697042	b02	2/13/2019
8	E12697043	b03	2/13/2019
9	E12697044	c01	2/13/2019
10	E12697045	m01	2/13/2019
11	E12697046	m02	2/13/2019
12	E12697047	m03	2/13/2019
13	E12697048	m04	2/13/2019
14	E12697049	p01	2/13/2019
15	E12697050	p02	2/13/2019

The truss drawing(s) referenced above have been prepared by Truss Engineering Co. under my direct supervision

based on the parameters provided by Comtech, Inc - Fayetteville.

Truss Design Engineer's Name: Gilbert, Eric

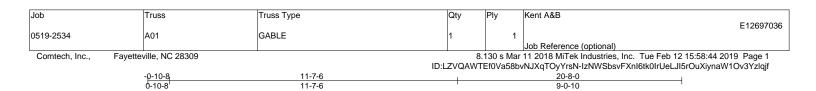
My license renewal date for the state of North Carolina is December 31, 2019

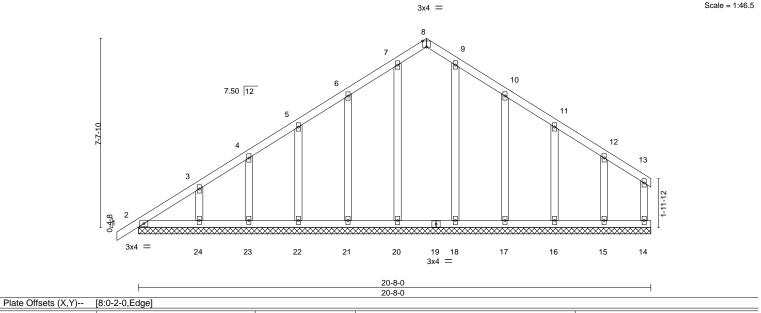
North Carolina COA: C-0844

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 TRENCO. Any project specific information included is for TRENCO customers file reference purpose only, and was not taken into account in the preparation of these designs. 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.



February 13, 2019





LOADING (psf) SPACING-CSI. DEFL. **PLATES** GRIP 2-0-0 in (loc) I/defI I/d TCLL 20.0 Plate Grip DOL TC 0.12 Vert(LL) 0.00 120 244/190 1.15 n/r MT20 BC TCDL 10.0 Lumber DOL 1.15 0.04 Vert(CT) 0.00 n/r 120 **BCLL** 0.0 Rep Stress Incr YES WB 0.14 Horz(CT) 0.00 14 n/a n/a BCDL 10.0 Code IRC2015/TPI2014 Matrix-S Weight: 127 lb FT = 20%

LUMBER-2x4 SP No.1 TOP CHORD

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

Structural wood sheathing directly applied or 6-0-0 oc purlins,

except end verticals.

**BOT CHORD** Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. All bearings 20-8-0.

Max Horz 2=223(LC 7) (lb) -

Max Uplift All uplift 100 lb or less at joint(s) 2, 20, 22, 23, 16 except 21=-112(LC 10), 24=-106(LC 10),

17=-134(LC 11), 15=-141(LC 11)

Max Grav All reactions 250 lb or less at joint(s) 14, 2, 21, 22, 23, 24, 18, 17, 16, 15 except 20=286(LC 17)

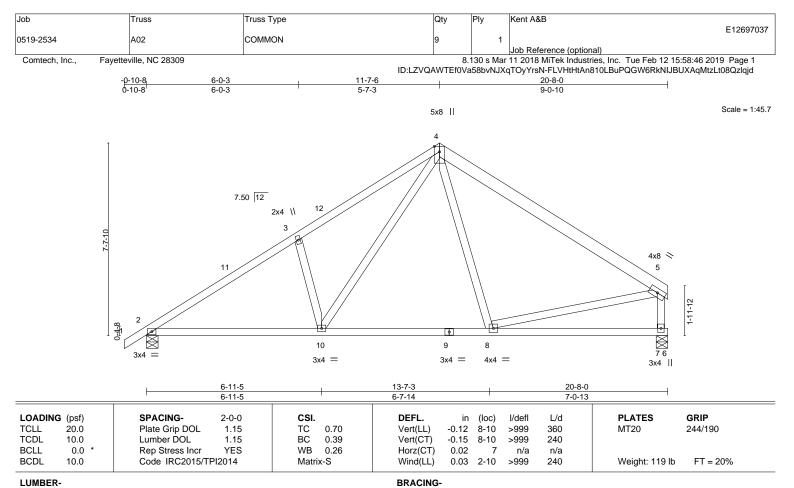
FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

## NOTES-

- 1) Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=5.0psf; h=15ft; Cat. II; Exp C; enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) -0-10-8 to 3-6-5, Exterior(2) 3-6-5 to 7-2-10, Corner(3) 7-2-10 to 11-7-6 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) All plates are 2x4 MT20 unless otherwise indicated.
- 5) Gable requires continuous bottom chord bearing.
- 6) Gable studs spaced at 2-0-0 oc.
- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 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) 2, 20, 22, 23, 16 except (jt=lb) 21=112, 24=106, 17=134, 15=141.







TOP CHORD

**BOT CHORD** 

LUMBER-

TOP CHORD 2x4 SP No.1 \*Except\*

4-5: 2x6 SP No.1 **BOT CHORD** 2x4 SP No.1 2x4 SP No.3 **WEBS** 

REACTIONS.

(lb/size) 2=875/0-5-8, 7=810/0-5-8

Max Horz 2=180(LC 7)

Max Uplift 2=-83(LC 10), 7=-52(LC 11) Max Grav 2=923(LC 17), 7=840(LC 18)

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

TOP CHORD 2-3=-1284/304, 3-4=-1228/410, 4-5=-906/229, 5-7=-781/244

**BOT CHORD** 2-10=-219/1114, 8-10=-66/660

**WEBS** 3-10=-365/224, 4-10=-181/691, 5-8=0/614

## NOTES-

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=5.0psf; h=15ft; Cat. II; Exp C; enclosed; MWFRS (envelope) and C-C Exterior(2) -0-10-8 to 3-6-5, Interior(1) 3-6-5 to 7-2-10, Exterior(2) 7-2-10 to 11-7-6 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 4) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members, with BCDL = 10.0psf.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 7.



Structural wood sheathing directly applied or 5-3-9 oc purlins,

Rigid ceiling directly applied or 10-0-0 oc bracing.

except end verticals.

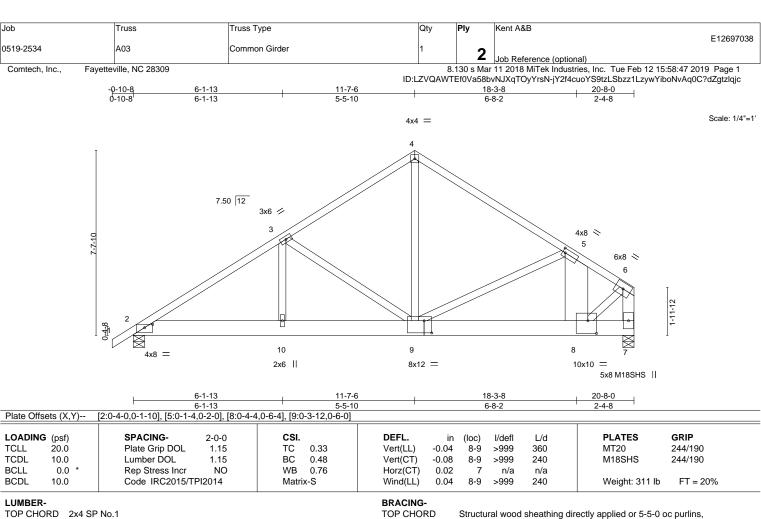


MARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.

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 permanent. 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.





**BOT CHORD** 

except end verticals.

Rigid ceiling directly applied or 10-0-0 oc bracing.

**WEBS** 

2x4 SP No.1 TOP CHORD BOT CHORD 2x8 SP No.1

2x4 SP No.3 \*Except\* 5-8: 2x12 SP No.1, 6-7: 2x6 SP No.1, 6-8: 2x4 SP No.2

REACTIONS. (lb/size) 2=1650/0-5-8, 7=7321/0-5-8 Max Horz 2=180(LC 24)

Max Uplift 2=-247(LC 8), 7=-1434(LC 9)

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

TOP CHORD 2-3=-2613/403, 3-4=-2271/437, 4-5=-2290/437, 5-6=-5866/1154, 6-7=-6729/1305

**BOT CHORD** 2-10=-385/2129, 9-10=-385/2129, 8-9=-977/4970, 7-8=-58/274

WEBS 3-9=-484/206, 4-9=-359/1958, 5-9=-3498/840, 5-8=-863/3215, 6-8=-1175/5931

## 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, 2x6 2 rows staggered at 0-9-0 oc.

Bottom chords connected as follows: 2x8 - 3 rows staggered at 0-2-0 oc.

- Webs connected as follows: 2x4 1 row at 0-9-0 oc, 2x12 2 rows staggered 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 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=5.0psf; h=15ft; Cat. II; Exp C; enclosed; MWFRS (envelope); Lumber DOL=1.60 plate grip DOL=1.60
- 5) All plates are MT20 plates unless otherwise indicated.
- 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 with a clearance greater than 6-0-0 between the bottom chord and any other members.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=247, 7=1434.
- 9) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 101 lb down and 13 lb up at 18-3-8, and 7189 lb down and 1540 lb up at 18-3-8 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

## LOAD CASE(S) Standard

1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15 Uniform Loads (plf)

Vert: 1-4=-60, 4-6=-60, 2-7=-20

## 036322

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## Continued on page 2

MARNING - 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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ANSI/TP11 Quality Criteria, DSB-89 and BCSI Building Component fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANSI/TPI1 Qua Safety Information available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



Job Truss Truss Type Qty Ply Kent A&B E12697038 0519-2534 A03 Common Girder Job Reference (optional)

Comtech, Inc.,

Fayetteville, NC 28309

8.130 s Mar 11 2018 MiTek Industries, Inc. Tue Feb 12 15:58:47 2019 Page 2 ID:LZVQAWTEf0Va58bvNJXqTOyYrsN-jY2f4cuoYS9tzLSbzz1LzywYiboNvAq0C?dZgtzlqjc

LOAD CASE(S) Standard Concentrated Loads (lb) Vert: 8=-7289(F=-7189, B=-100)



Job Truss Truss Type Qty Kent A&B E12697039 0519-2534 A04 COMMON Job Reference (optional)

Comtech. Inc., Fayetteville, NC 28309 8.130 s Mar 11 2018 MiTek Industries, Inc. Tue Feb 12 15:58:48 2019 Page 1 ID:LZVQAWTEf0Va58bvNJXqTOyYrsN-Bkc1lyvQJmHkaV1nXgZaW9Tfr?6LekgARfM6CJzlqjb

-<u>0-10-8</u> 0-10-8 6-0-3 11-7-6 18-2-0 6-0-3 5-7-3

> Scale = 1:45.7 5x8 =

> > **PLATES**

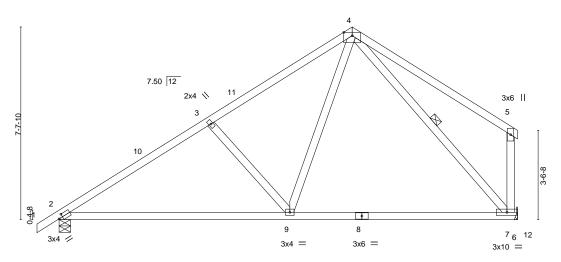
Weight: 97 lb

MT20

GRIP

244/190

FT = 20%



9-1-12 18-2-0 9-1-12 9-0-4

> in (loc)

> > 7-9

7-9

2-9

-0.30

-0.39

0.02

-0.03

Plate Offsets	s (X,Y)	[2:0-1-14,0-1-8]				
LOADING (	(psf)	SPACING-	2-0-0	CSI.		
,	20.0	Plate Grip DOL	1.15	TC	0.63	
TCDL 1	10.0	Lumber DOL	1.15	BC	0.63	
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.28	
BCDL 1	10.0	Code IRC2015/TF	PI2014	Matri	x-S	

Wind(LL) **BRACING-**

DEFL.

Vert(LL)

Vert(CT)

Horz(CT)

TOP CHORD Structural wood sheathing directly applied or 5-10-13 oc purlins,

I/d

360

240

n/a

240

except end verticals.

I/defI

>700

>538

>999

n/a

**BOT CHORD** Rigid ceiling directly applied or 10-0-0 oc bracing.

WEBS 1 Row at midpt

LUMBER-TOP CHORD **BOT CHORD** 

REACTIONS.

**WEBS** 

2x4 SP No.1 2x4 SP No.1 2x4 SP No.3 \*Except\*

5-7: 2x4 SP No.2

(lb/size) 7=710/Mechanical, 2=775/0-5-8

Max Horz 2=180(LC 7)

Max Uplift 7=-53(LC 10), 2=-71(LC 10) Max Grav 7=838(LC 17), 2=799(LC 17)

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

TOP CHORD 2-3=-1038/250, 3-4=-834/255, 5-7=-269/160

**BOT CHORD** 2-9=-248/902, 7-9=-77/475

**WEBS** 3-9=-382/225, 4-9=-76/642, 4-7=-600/97

## NOTES-

- 1) Unbalanced roof live loads have been considered for this design.
- $2) \ \ Wind: ASCE\ 7-10; \ Vult=130mph\ (3-second\ gust)\ \ Vasd=103mph; \ TCDL=6.0psf; \ BCDL=5.0psf; \ h=15ft; \ Cat.\ II; \ Exp\ C; \ enclosed; \ ASCE\ 7-10; \ Vult=130mph\ (3-second\ gust)\ \ Vasd=103mph; \ TCDL=6.0psf; \ BCDL=5.0psf; \ h=15ft; \ Cat.\ II; \ Exp\ C; \ enclosed; \ ASCE\ 7-10; \ Vult=130mph\ (3-second\ gust)\ \ Vasd=103mph; \ TCDL=6.0psf; \ BCDL=5.0psf; \ h=15ft; \ Cat.\ II; \ Exp\ C; \ enclosed; \ ASCE\ 7-10; \ Vult=130mph\ (3-second\ gust)\ \ Vasd=103mph; \ TCDL=6.0psf; \ BCDL=5.0psf; \ h=15ft; \ Cat.\ II; \ Exp\ C; \ enclosed; \ ASCE\ 7-10; \ Vult=130mph\ (3-second\ gust)\ \ Vasd=103mph; \ TCDL=6.0psf; \ BCDL=5.0psf; \ h=15ft; \ Cat.\ II; \ Exp\ C; \ enclosed; \ ASCE\ 7-10; \ Vult=130mph\ (3-second\ gust)\ \ Vasd=103mph; \ \ Vasd=103mph;$ MWFRS (envelope) and C-C Exterior(2) -0-10-8 to 3-6-5, Interior(1) 3-6-5 to 7-2-10, Exterior(2) 7-2-10 to 11-7-6 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 4) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members, with BCDL = 10.0psf.
- 5) Refer to girder(s) for truss to truss connections.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 7, 2.





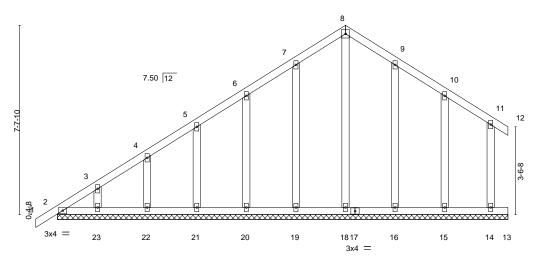
Job Truss Truss Type Qty Kent A&B E12697040 0519-2534 A05 COMMON SUPPORTED GAB Job Reference (optional)

Comtech. Inc., Fayetteville, NC 28309

8.130 s Mar 11 2018 MiTek Industries, Inc. Tue Feb 12 15:58:49 2019 Page 1 ID:LZVQAWTEf0Va58bvNJXqTOyYrsN-fwAPVIw243PbCfc\_5O4p2N?ylPbpNCcJgJ6gklzlqja

-0-10-8 0-10-8 11-7-6 18-2-0 11-7-6

Scale = 1:46.5



18-2-0 18-2-0

LOADIN	G (psf)	SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	I/defI	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.04	Vert(LL)	-0.00	1	n/r	120	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	-0.00	1	n/r	120		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.17	Horz(CT)	0.01	12	n/a	n/a		
BCDL	10.0	Code IRC2015/TF	PI2014	Matri	x-S	, ,					Weight: 117 lb	FT = 20%

LUMBER-**BRACING-**

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

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins,

except end verticals.

4x4 =

**BOT CHORD** Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. All bearings 18-2-0.

(lb) - Max Horz 2=253(LC 10)

Max Uplift All uplift 100 lb or less at joint(s) 12, 14, 13, 18, 19, 20, 21, 22, 23, 16, 15, 2

Max Grav All reactions 250 lb or less at joint(s) 12, 14, 13, 19, 20, 21, 22, 23, 16, 15, 2 except 18=273(LC

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

TOP CHORD

## NOTES-

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=5.0psf; h=15ft; Cat. II; Exp C; enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) -0-10-8 to 3-7-6, Exterior(2) 3-7-6 to 7-2-10, Corner(3) 7-2-10 to 11-7-6, Exterior(2) 16-0-3 to 18-2-0 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) All plates are 2x4 MT20 unless otherwise indicated.
- 5) Gable requires continuous bottom chord bearing.
- 6) Gable studs spaced at 2-0-0 oc.
- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 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) 12, 14, 13, 18, 19, 20, 21, 22, 23, 16, 15, 2.





Job Truss Truss Type Qty Kent A&B E12697041 0519-2534 B01 GABLE Job Reference (optional)

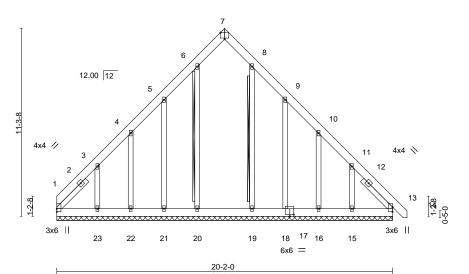
Comtech. Inc., Fayetteville, NC 28309

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20-2-0 21-0-8 10-1-0 10-1-0

4x6 =

Scale = 1:69.2



20-2-0 Plate Offsets (X,Y)--[7:0-3-0,Edge], [17:0-0-0,0-2-12], [17:0-2-12,0-1-4], [18:0-1-12,0-0-0]

LOADIN	G (psf)	SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.07	Vert(LL)	0.00	13	n/r	120	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	0.00	13	n/r	120		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.19	Horz(CT)	0.01	13	n/a	n/a		
BCDL	10.0	Code IRC2015/TF	PI2014	Matri	x-S						Weight: 193 lb	FT = 20%

LUMBER-

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

**SLIDER** Left 2x4 SP No.1 2-6-0, Right 2x4 SP No.1 2-6-0 **BRACING-**

TOP CHORD **BOT CHORD** WEBS

Structural wood sheathing directly applied or 6-0-0 oc purlins. Rigid ceiling directly applied or 10-0-0 oc bracing. T-Brace: 2x4 SPF No.2 - 6-20, 8-19

Fasten (2X) T and I braces to narrow edge of web with 10d (0.131"x3") nails, 6in o.c., with 3in minimum end distance. Brace must cover 90% of web length.

REACTIONS. All bearings 20-2-0.

> (lb) -Max Horz 1=-324(LC 6)

Max Uplift All uplift 100 lb or less at joint(s) 20, 19, 13 except 1=-130(LC 8), 21=-173(LC 10), 22=-120(LC 10),

23=-305(LC 10), 18=-178(LC 11), 16=-120(LC 11), 15=-296(LC 11)

Max Grav All reactions 250 lb or less at joint(s) 21, 22, 18, 16, 15 except 1=405(LC 10), 20=287(LC 17), 23=264(LC 17), 19=268(LC 18), 13=363(LC 11)

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

1-3=-534/333, 3-4=-289/156, 10-11=-272/156, 11-13=-507/332 TOP CHORD

**BOT CHORD** 1-23=-251/387, 22-23=-252/388, 21-22=-253/388, 20-21=-253/389, 19-20=-254/388,

18-19=-253/388, 16-18=-253/388, 15-16=-252/387, 13-15=-251/386

WFBS 3-23=-292/303, 11-15=-290/291

## NOTES-

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=5.0psf; h=15ft; Cat. II; Exp C; enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) 0-0-0 to 4-5-1, Exterior(2) 4-5-1 to 5-8-3, Corner(3) 5-8-3 to 10-1-0, Exterior(2) 14-5-13 to 16-6-5 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) All plates are 2x4 MT20 unless otherwise indicated.
- 5) Gable requires continuous bottom chord bearing.
- 6) Gable studs spaced at 2-0-0 oc.
- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 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, 19, 13 except (jt=lb) 1=130, 21=173, 22=120, 23=305, 18=178, 16=120, 15=296.
- 10) Warning: Additional permanent and stability bracing for truss system (not part of this component design) is always required.



MARNING - 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 in-jury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see 

ANSI/TP11 Quality Criteria, DSB-89 and BCSI Building Component fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANSI/TPI1 Qua Safety Information available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



Job Truss Truss Type Qty Kent A&B E12697042 0519-2534 B02 COMMON Job Reference (optional)

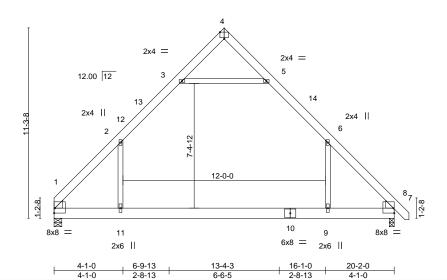
Comtech. Inc., Fayetteville, NC 28309 8.130 s Mar 11 2018 MiTek Industries, Inc. Tue Feb 12 15:58:52 2019 Page 1 ID:LZVQAWTEf0Va58bvNJXqTOyYrsN-3VsY7KywN\_n936LZmWdWg?dMBcXYaV5IMGKKL4zlqjX

10-1-0 14-11-12 16-1-0 20-2-0 21-0-8 0-10-8 4-1-0 4-1-0 4-10-12 4-10-12

> Scale = 1:68.3 4x6 =

> > Structural wood sheathing directly applied or 6-0-0 oc purlins.

Rigid ceiling directly applied or 10-0-0 oc bracing.



4-1-0 6-6-5 2-8-13 Plate Offsets (X,Y)-- [1:Edge,0-3-8], [1:0-4-3,0-0-8], [1:0-0-4,0-0-4], [4:0-3-0,Edge], [7:0-0-4,0-0-4], [7:0-4-3,0-0-8], [7:Edge,0-3-8]

LOADING TCLL	<b>G</b> (psf) 20.0	SPACING- 2-0-0 Plate Grip DOL 1.15	<b>CSI.</b> TC 0.48	<b>DEFL.</b> Vert(LL) -0.	in (loc) 23 9-11	l/defl L/d >999 360	PLATES MT20	<b>GRIP</b> 244/190
TCDL	10.0	Lumber DOL 1.15	BC 0.42	Vert(CT) -0.	38 9-11	>631 240		
BCLL	0.0 *	Rep Stress Incr YES	WB 0.44	Horz(CT) 0.	01 7	n/a n/a		
BCDL	10.0	Code IRC2015/TPI2014	Matrix-S	Wind(LL) 0.	10 9-11	>999 240	Weight: 155 lb	FT = 20%

**BRACING-**

TOP CHORD

**BOT CHORD** 

LUMBER-

TOP CHORD 2x6 SP No.1 **BOT CHORD** 2x8 SP No.1 2x4 SP No.3 WEBS

WEDGE

Left: 2x6 SP No.1, Right: 2x6 SP No.1

REACTIONS. (lb/size) 1=790/0-5-8, 7=847/0-3-8

Max Horz 1=-259(LC 6)

Max Uplift 1=-50(LC 11), 7=-54(LC 11) Max Grav 1=904(LC 18), 7=941(LC 18)

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

TOP CHORD 1-2=-1236/167, 2-3=-673/284, 5-6=-670/284, 6-7=-1245/185

**BOT CHORD** 1-11=-23/660, 9-11=-22/662, 7-9=-22/660 2-11=-32/578, 6-9=-29/591, 3-5=-818/413 WEBS

## NOTES-

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=5.0psf; h=15ft; Cat. II; Exp C; enclosed; MWFRS (envelope) and C-C Exterior(2) 0-2-12 to 4-7-9, Interior(1) 4-7-9 to 5-8-3, Exterior(2) 5-8-3 to 10-1-0, Interior(1) 14-5-13 to 16-2-15 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 4) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members, with BCDL = 10.0psf.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 7.





Job Truss Truss Type Qty Kent A&B E12697043 0519-2534 B03 COMMON Job Reference (optional)

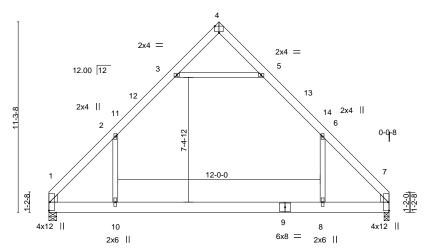
Comtech. Inc., Fayetteville, NC 28309 8.130 s Mar 11 2018 MiTek Industries, Inc. Tue Feb 12 15:58:53 2019 Page 1 ID:LZVQAWTEf0Va58bvNJXqTOyYrsN-XhQwLgzZ8lw0hGwlKE8IDDAX30sjJyKvaw4tuWzlqjW

10-1-0 14-11-12 16-1-0 20-2-0 4-1-0 4-1-0 4-10-12 4-10-12

> Scale = 1:68.3 4x6 =

> > Structural wood sheathing directly applied or 6-0-0 oc purlins.

Rigid ceiling directly applied or 10-0-0 oc bracing.



6-9-13 16-1-0 20-2-0 4-1-0 2-8-13 4-1-0 6-6-5 2-8-13 [1.0 0 9 0 4 2] [1.0 0 4 0 0 4] [4.0 2 0 Edo

**BRACING-**

TOP CHORD

**BOT CHORD** 

Plate Offsets (X,Y)	[1:0-0-8,0-4-3], [1:0-0-4,0-0-4], [4:0-3-0]	:0-0-8,0-4-3]		
LOADING (psf) TCLL 20.0	SPACING- 2-0-0 Plate Grip DOL 1.15	<b>CSI.</b> TC 0.47	DEFL.         in (loc)         l/defl         L/d         PLATES         GRIP           Vert(LL)         -0.23         8-10         >999         360         MT20         244/19	90
TCDL 10.0	Lumber DOL 1.15	BC 0.42	Vert(CT) -0.38 8-10 >623 240	
BCLL 0.0 * BCDL 10.0	Rep Stress Incr YES Code IRC2015/TPI2014	WB 0.44 Matrix-S	Horz(CT)	= 20%

LUMBER-

TOP CHORD 2x6 SP No.1 **BOT CHORD** 2x8 SP No.1 2x4 SP No.3 WEBS

WEDGE

Left: 2x6 SP No.1, Right: 2x6 SP No.1

REACTIONS. (lb/size) 1=792/0-5-8, 7=792/0-3-8

Max Horz 1=-256(LC 6)

Max Uplift 1=-51(LC 11), 7=-50(LC 10) Max Grav 1=905(LC 18), 7=903(LC 17)

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

TOP CHORD 1-2=-1240/175, 2-3=-673/287, 5-6=-671/287, 6-7=-1224/174

**BOT CHORD** 1-10=-25/659, 8-10=-25/660, 7-8=-25/658 2-10=-32/583, 6-8=-32/563, 3-5=-819/422 WEBS

## NOTES-

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=5.0psf; h=15ft; Cat. II; Exp C; enclosed; MWFRS (envelope) and C-C Exterior(2) 0-2-12 to 4-7-9, Interior(1) 4-7-9 to 5-8-3, Exterior(2) 5-8-3 to 10-1-0, Interior(1) 14-5-13 to 15-7-7 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 4) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members, with BCDL = 10.0psf.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 7.



MARNING - 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 permanent. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see 

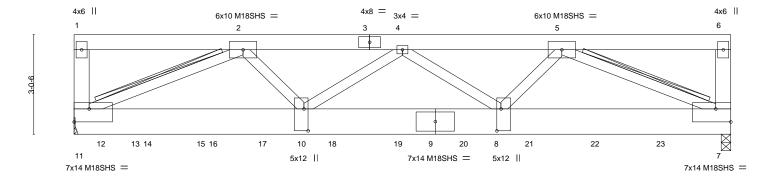
ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



Job Truss Truss Type Qty Kent A&B E12697044 0519-2534 C01 Flat Girder 2 Job Reference (optional) 8.130 s Mar 11 2018 MiTek Industries, Inc. Tue Feb 12 15:58:55 2019 Page 1 Comtech. Inc., Fayetteville, NC 28309

 $ID: LZVQAWTEf0Va58bvNJXqTOyYrsN-U4XgmM\_pgvAkwa47ReBDIeFtgqXBnnAC2EZ\_yPzIqjU$ 10-0-0 14-10-4 20-0-0 5-1-12 5-1-12 4-10-4

Scale = 1:35.1



		7-0-0				13-0-0		_			20-0-0	
	'	7-0-0		<u>'</u>		6-0-0		'			7-0-0	!
Plate Offs	ets (X,Y)	[7:Edge,0-4-12], [8:0-8-0	,0-1-8], [10:0-8	3-0,0-1-8], [11	:Edge,0-4-1	2]						
OADING	(psf)	SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	I/defl	L/d	PLATES	GRIP
CLL	20.0	Plate Grip DOL	1.15	TC	0.46	Vert(LL)	-0.13	8-10	>999	360	MT20	244/190
CDL	10.0	Lumber DOL	1.15	BC	0.48	Vert(CT)	-0.25	8-10	>944	240	M18SHS	244/190
CLL	0.0 *	Rep Stress Incr	NO	WB	0.74	Horz(CT)	0.05	7	n/a	n/a		
BCDL	10.0	Code IRC2015/TF	PI2014	Matri	k-S	Wind(LL)	0.11	10	>999	240	Weight: 334 lb	FT = 20%

LUMBER-TOP CHORD 2x6 SP 2400F 2.0E **BOT CHORD** 2x10 SP 2400F 2.0E

**WEBS** 2x4 SP No.2 \*Except\*

1-11,6-7: 2x6 SP No.1, 4-10,4-8: 2x4 SP No.3

**BRACING-**

TOP CHORD Structural wood sheathing directly applied or 5-11-6 oc purlins,

except end verticals.

**BOT CHORD** Rigid ceiling directly applied or 10-0-0 oc bracing. WEBS 2x6 SPF No.2 - 2-11, 5-7 T-Brace:

> Fasten (2X) T and I braces to narrow edge of web with 10d (0.131"x3") nails, 6in o.c., with 3in minimum end distance.

Brace must cover 90% of web length.

REACTIONS. (lb/size) 11=7209/Mechanical, 7=6604/0-3-8

Max Uplift 11=-1520(LC 4), 7=-1322(LC 4)

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

TOP CHORD 1-11=-316/81, 1-2=-664/143, 2-4=-13118/2555, 4-5=-12986/2505, 5-6=-623/130,

10-11=-1925/9700, 8-10=-2611/13303, 7-8=-1887/9597

**BOT CHORD** 2-11=-10078/1986, 2-10=-1035/5616, 4-10=-263/71, 4-8=-455/135, 5-8=-1016/5567, WEBS

5-7=-10004/1957

## NOTES-

1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows: Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc. Bottom chords connected as follows: 2x10 - 2 rows staggered at 0-6-0 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) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=5.0psf; h=15ft; Cat. II; Exp C; enclosed; MWFRS (envelope); Lumber DOL=1.60 plate grip DOL=1.60
- 4) Provide adequate drainage to prevent water ponding.
- 5) All plates are MT20 plates unless otherwise indicated.
- 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 with a clearance greater than 6-0-0 between the bottom chord and any other members.
- 8) Refer to girder(s) for truss to truss connections.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb)
- 10) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 587 lb down and 213 lb up at 0-10-12, 789 lb down and 73 lb up at 1-11-4, 583 lb down and 216 lb up at 2-3-12, 789 lb down and 73 lb up at 3-11-4, 583 lb down and 216 lb up at 4-3-12, 1560 lb down and 543 lb up at 5-9-12, 789 lb down and 73 lb up at 5-11-4, 789 lb down and 73 lb up at 7-11-4, 789 lb down and 73 lb up at 9-11-4, 789 lb down and 73 lb up at 11-11-4, 1560 lb down and 543 lb up at 13-11-4, 789 lb down and 73 lb up at 13-11-4, 583 lb down and 216 lb up at 15-11-4, 789 lb down and 73 lb up at 15-11-4, and 583 lb down and 216 lb up at 17-11-4, and 789 lb down and 73 lb up at 17-11-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others



Continued ថាNopage 🖟 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.



Job	Truss	Truss Type	Qty	Ply	Kent A&B	
						E12697044
0519-2534	C01	Flat Girder	1	2	Inh Reference (ontional)	

Comtech. Inc..

Fayetteville, NC 28309

8.130 s Mar 11 2018 MiTek Industries, Inc. Tue Feb 12 15:58:55 2019 Page 2 ID:LZVQAWTEf0Va58bvNJXqTOyYrsN-U4XgmM\_pgvAkwa47ReBDIeFtgqXBnnAC2EZ\_yPzlqjU

## NOTES-

11) Warning: Additional permanent and stability bracing for truss system (not part of this component design) is always required.

## LOAD CASE(S) Standard

1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15

Uniform Loads (plf)

Vert: 1-6=-60, 7-11=-20

Concentrated Loads (lb)

Vert: 12=-587(B) 13=-690(F) 14=-583(B) 15=-690(F) 16=-583(B) 17=-2250(F=-690, B=-1560) 18=-690(F) 19=-690(F) 20=-690(F) 21=-2250(F=-690, B=-1560)

22=-1273(F=-690, B=-583) 23=-1273(F=-690, B=-583)

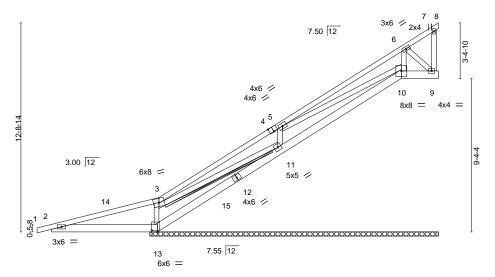


Job Truss Truss Type Qty Kent A&B E12697045 0519-2534 M01 COMMON Job Reference (optional)

Comtech. Inc., Fayetteville, NC 28309 8.130 s Mar 11 2018 MiTek Industries, Inc. Tue Feb 12 15:58:56 2019 Page 1 ID:LZVQAWTEf0Va58bvNJXqTOyYrsN-yG53zh?RRDIbYkeK?MiSqroyXDreWEELHuIXUrzlqjT

23-7-0 -0<sub>-</sub>10-8 0-10-8 21-3-15 6-6-10 13-11-4 6-6-10 7-4-10

Scale = 1:70.2



6-0-0 13-11-4 21-3-15 23-7-0 6-0-0 7-5-12 7-4-10 2-3-1

Plate Offsets (X,Y)	[4:0-3-0,Eage], [13:0-4-4,0-1-4]

LOADIN	G (psf)	SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.84	Vert(LL)	0.00	1-2	n/r	120	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.60	Vert(CT)	-0.00	1-2	n/r	120		
BCLL	0.0 *	Rep Stress Incr	NO	WB	0.75	Horz(CT)	-0.04	8	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI	12014	Matri	x-S						Weight: 141 lb	FT = 20%

LUMBER-

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

TOP CHORD

Structural wood sheathing directly applied or 4-7-2 oc purlins, except end verticals.

**BOT CHORD** 

Rigid ceiling directly applied or 4-1-9 oc bracing. WEBS 2x4 SPF No.2 - 3-11 T-Brace:

Fasten (2X) T and I braces to narrow edge of web with 10d (0.131"x3") nails, 6in o.c., with 3in minimum end distance. Brace must cover 90% of web length.

REACTIONS. All bearings 17-7-0.

(lb) -Max Horz 13=583(LC 10)

Max Uplift All uplift 100 lb or less at joint(s) except 8=-118(LC 10), 9=-318(LC 1),

10=-181(LC 10), 13=-842(LC 6), 11=-308(LC 10)

Max Grav All reactions 250 lb or less at joint(s) 8, 9 except 10=535(LC 1),

13=2368(LC 1), 11=608(LC 17)

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

2-3=-1676/2476, 3-5=-658/915, 5-6=-199/366 TOP CHORD

**BOT CHORD** 2-13=-2344/1663 11-13=-3010/1473 10-11=-839/422

**WEBS** 3-13=-159/258, 3-11=-1041/1814, 5-11=-628/436, 5-10=-233/491, 6-10=-679/270,

6-9=-163/292

## NOTES-

- 1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=5.0psf; h=15ft; Cat. II; Exp C; enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) -0-10-8 to 3-6-5, Interior(1) 3-6-5 to 23-7-0 zone; cantilever left exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members.
- 4) Bearing at joint(s) 8, 10, 11 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 118 lb uplift at joint 8, 318 lb uplift at joint 9, 181 lb uplift at joint 10, 842 lb uplift at joint 13 and 308 lb uplift at joint 11.
- 6) Non Standard bearing condition. Review required.
- 7) Warning: Additional permanent and stability bracing for truss system (not part of this component design) is always required.
- 8) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

## LOAD CASE(S) Standard

1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15 Uniform Loads (plf)

Vert: 1-3=-60, 3-7=-60, 7-8=-60, 2-13=-140(B=-120), 13-15=-140(B=-120), 10-15=-20, 9-10=-20



MARNING - 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 Design Valid to Use Only With New Connectors. This design is based only upon parameters shown, and is for an individual orbit middle of the property of 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.



Job Truss Truss Type Qty Kent A&B E12697046 0519-2534 M02 COMMON Job Reference (optional)

Comtech. Inc., Fayetteville, NC 28309 8.130 s Mar 11 2018 MiTek Industries, Inc. Tue Feb 12 15:58:57 2019 Page 1 ID:LZVQAWTEf0Va58bvNJXqTOyYrsN-QTfRA103CXQS9tDWZ3DhN3KBtdDsFdAUVY251lzlqjS

Structural wood sheathing directly applied or 3-5-15 oc purlins,

5-11

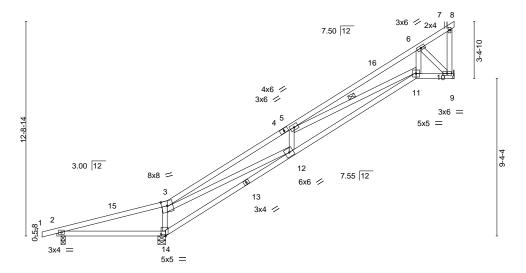
Rigid ceiling directly applied or 6-0-0 oc bracing.

except end verticals.

1 Row at midpt

6-6-10 13-11-4 21-3-15 -0<sub>-</sub>10-8 23-7-0 6-6-10 7-4-10 2-3-1

Scale = 1:68.4



$0-3_{T}0$	6-2-12	6-5 <sub>⊺</sub> 8	13-11-4	21-3-15	23-7-0
0-3-0	5-11-12	0-2-12	7-5-12	7-4-10	2-3-1

**BRACING-**

TOP CHORD

**BOT CHORD** 

WEBS

Flate Olis	ets (A, I )	[14.0-3-4,0-1-4]			
LOADING	(psf)	SPACING- 2-0-0	CSI.	DEFL. in (loc) I/defl L/d PLATES GRIP	
TCLL	20.0	Plate Grip DOL 1.15	TC 0.61	Vert(LL) -0.12 11-12 >999 360 MT20 244/190	
TCDL	10.0	Lumber DOL 1.15	BC 0.47	Vert(CT) -0.27 11-12 >762 240	
BCLL	0.0 *	Rep Stress Incr YES	WB 0.96	Horz(CT) 0.06 10 n/a n/a	
BCDL	10.0	Code IRC2015/TPI2014	Matrix-S	Wind(LL) 0.13 11-12 >999 240 Weight: 119 lb FT = 2	:0%
			1		

LUMBER-

Plata Offcate (V V)

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

REACTIONS. (lb/size) 10=603/Mechanical, 2=100/0-3-0, 14=1222/0-5-8

Max Horz 14=405(LC 10)

[14:0.2.4.0.4.4]

Max Uplift 10=-196(LC 10), 2=-130(LC 6), 14=-127(LC 10) Max Grav 10=651(LC 17), 2=100(LC 1), 14=1222(LC 1)

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

TOP CHORD 2-3=-480/994, 3-5=-1820/427, 5-6=-1023/276

**BOT CHORD** 2-14=-950/500, 12-14=-769/25, 11-12=-812/2103, 10-11=-338/823

**WEBS** 3-14=-673/249, 3-12=-718/2426, 5-12=-372/245, 5-11=-921/334, 6-11=-249/871,

6-10=-1147/472

## NOTES-

- 1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=5.0psf; h=15ft; Cat. II; Exp C; enclosed; MWFRS (envelope) and C-C Exterior(2) -0-10-8 to 3-6-5, Interior(1) 3-6-5 to 19-2-3, Exterior(2) 19-2-3 to 23-7-0 zone; cantilever left exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 196 lb uplift at joint 10, 130 lb uplift at joint 2 and 127 lb uplift at joint 14.



February 13,2019



 Job
 Truss
 Truss Type
 Qty
 Ply
 Kent A&B
 E12697047

 0519-2534
 M03
 COMMON
 2
 1
 Job Reference (optional)

Comtech, Inc., Fayetteville, NC 28309

8.130 s Mar 11 2018 MiTek Industries, Inc. Tue Feb 12 15:58:58 2019 Page 1 ID:LZVQAWTEf0Va58bvNJXqTOyYrsN-ufDpON1hyqYJn1oi7nkwwGtHJ1To\_6\_ekCneZkzlqjR

2-0-0 oc purlins (2-4-7 max.), except end verticals

Fasten (2X) T and I braces to narrow edge of web with 10d

(0.131"x3") nails, 6in o.c., with 3in minimum end distance.

2x4 SPF No.2 - 6-12, 6-15

Rigid ceiling directly applied or 3-2-6 oc bracing.

(Switched from sheeted: Spacing > 2-0-0).

Brace must cover 90% of web length.

-0-10-8 6-5-8 6-6-10 10-0-0 15-7-15 21-3-15 23-7-0 10-8 6-5-8 0-1-2 3-5-6 5-7-15 5-7-15 2-3-1

Scale = 1:68.5

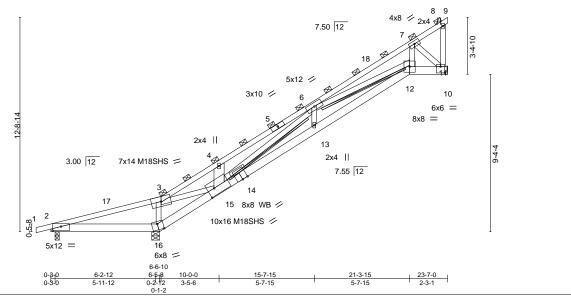


Plate Offsets (X,Y)	Plate Offsets (X,Y) [2:0-6-0,0-2-14], [11:0-3-0,0-4-8], [15:0-4-11,0-5-0], [16:0-4-0,0-4-4]						
LOADING (psf) TCLL 20.0	SPACING- 5-0-0 Plate Grip DOL 1.15	<b>CSI.</b> TC 0.95	<b>DEFL.</b> in (loc) I/defl L/d Vert(LL) -0.21 13 >955 360	PLATES         GRIP           MT20         244/190			
TCDL 10.0	Lumber DOL 1.15	BC 0.87	Vert(CT) -0.43 13-15 >476 240	M18SHS 244/190			
BCLL 0.0 *	Rep Stress Incr NO	WB 0.86	Horz(CT) 0.12 11 n/a n/a				
BCDL 10.0	Code IRC2015/TPI2014	Matrix-S	Wind(LL) 0.26 13-15 >768 240	Weight: 147 lb FT = 20%			

**BRACING-**

TOP CHORD

**BOT CHORD** 

T-Brace:

WEBS

LUMBER-

TOP CHORD 2x4 SP No.1 \*Except\*

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

2-16: 2x6 SP 2400F 2.0E

WEBS 2x4 SP No.3 \*Except\*

4-15: 2x8 SP No.1, 3-15: 2x4 SP 2400F 2.0E

OTHERS 2x4 SP No.3

**REACTIONS.** (lb/size) 11=1610/Mechanical, 16=5076/0-5-8, 2=-371/0-3-0

Max Horz 2=1012(LC 10)

Max Uplift 11=-493(LC 10), 16=-709(LC 7), 2=-893(LC 8) Max Grav 11=1728(LC 17), 16=5076(LC 1), 2=259(LC 10)

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

TOP CHORD 2-3=-3196/5030, 3-4=-2863/1316, 4-6=-2994/1621, 6-7=-2611/894

BOT CHORD 2-16=-4132/1973, 15-16=-4731/2297, 13-15=-2761/5678, 12-13=-2755/5767,

11-12=-958/2095

WEBS 4-15=-818/411, 6-13=0/518, 6-12=-2653/1330, 7-12=-915/2402, 7-11=-2832/1298,

6-15=-2567/568, 3-16=-2220/1193, 3-15=-3916/6620

## NOTES-

- 1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=5.0psf; h=15ft; Cat. II; Exp C; enclosed; MWFRS (envelope) and C-C Exterior(2) -0-10-8 to 3-6-5, Interior(1) 3-6-5 to 19-2-3, Exterior(2) 19-2-3 to 23-7-0 zone; porch left exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) All plates are MT20 plates unless otherwise indicated.
- 3) The Fabrication Tolerance at joint 15 = 5%
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members.
- 6) Refer to girder(s) for truss to truss connections.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 493 lb uplift at joint 11, 709 lb uplift at joint 16 and 893 lb uplift at joint 2.
- 8) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1518 lb down and 1547 lb up at 10-0-0 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
- 9) Warning: Additional permanent and stability bracing for truss system (not part of this component design) is always required.
- 10) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard

## SEAL 036322

February 13,2019

## Continued on page 2



Design Valid to Use Only With New Connectors. This design is based only upon parameters shown, and is for an individual orbit middle of the property of 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.



Job	Truss	Truss Type	Qty	Ply	Kent A&B	٦
					E12697047	
0519-2534	M03	COMMON	2	1		
					Inh Reference (ontional)	

Comtech, Inc.,

Fayetteville, NC 28309

8.130 s Mar 11 2018 MiTek Industries, Inc. Tue Feb 12 15:58:58 2019 Page 2 ID:LZVQAWTEf0Va58bvNJXqTOyYrsN-ufDpON1hyqYJn1oi7nkwwGtHJ1To\_6\_ekCneZkzlqjR

## LOAD CASE(S) Standard

1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15 Uniform Loads (plf)

Vert: 1-3=-150, 3-8=-150, 8-9=-50, 2-16=-50, 12-16=-50, 10-12=-50

Concentrated Loads (lb) Vert: 15=-1500(F)



Job Truss Truss Type Qty Kent A&B E12697048 0519-2534 M04 Roof Special Job Reference (optional) 8.130 s Mar 11 2018 MiTek Industries, Inc. Tue Feb 12 15:58:59 2019 Page 1 ID:LZVQAWTEf0Va58bvNJXqTOyYrsN-MrnBbj1Jj8gAPBNvgUF9SUQXURrkjlfnzsXC5AzlqjQ Comtech. Inc., Fayetteville, NC 28309 -0-10-8 6-6-10 10-0-0 0-10-8 6-6-10 Scale = 1:23.0 2x4 || 5 7.50 12 4x8 = 3 3.00 12 2x4 | 2-2-7.55 12 \_5x5 = 3x4 = 6-2-12 10-0-0 0-2-12 5-11-12 3-6-8 Plate Offsets (X,Y)--[7:0-3-4,0-1-4] LOADING (psf) SPACING-CSI. DEFL. I /d **PLATES** GRIP 2-0-0 in (loc) I/defI Vert(LL) TCLL 20.0 Plate Grip DOL 1.15 TC 0.60 0.14 >552 240 244/190 2-7 MT20 BC 240 TCDL 10.0 Lumber DOL 1.15 0.76 Vert(CT) -0.11 2-7 >664

Horz(CT)

**BRACING-**

TOP CHORD

**BOT CHORD** 

0.00

6

n/a

except end verticals.

n/a

Rigid ceiling directly applied or 6-0-0 oc bracing.

Structural wood sheathing directly applied or 6-0-0 oc purlins,

Weight: 38 lb

FT = 20%

LUMBER-

REACTIONS.

**BCLL** 

BCDL

**WEBS** 

TOP CHORD 2x4 SP No.1 **BOT CHORD** 2x4 SP No.1

0.0

10.0

2x4 SP No.3 (lb/size) 6=87/Mechanical, 2=292/0-3-0, 7=455/0-5-8

Rep Stress Incr

Code IRC2015/TPI2014

Max Horz 2=129(LC 10) Max Uplift 6=-38(LC 10), 2=-122(LC 6), 7=-116(LC 6) Max Grav 6=128(LC 17), 2=292(LC 1), 7=455(LC 1)

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

**WEBS** 

1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=5.0psf; h=15ft; Cat. II; Exp C; enclosed; MWFRS (envelope) and C-C Exterior(2) -0-10-8 to 3-6-5, Interior(1) 3-6-5 to 6-6-10, Exterior(2) 6-6-10 to 10-0-0 zone; porch left exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

WB

Matrix-S

0.07

2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

YES

- 3) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 38 lb uplift at joint 6, 122 lb uplift at joint 2 and 116 lb uplift at joint 7.



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\*\*

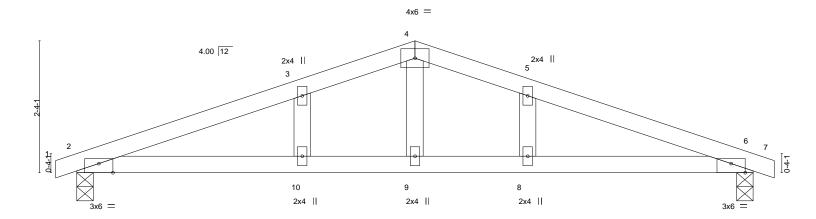
available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



Job Truss Truss Type Qty Kent A&B E12697049 0519-2534 P01 Common Supported Gable Job Reference (optional) 8.130 s Mar 11 2018 MiTek Industries, Inc. Tue Feb 12 15:59:00 2019 Page 1 Comtech. Inc., Fayetteville, NC 28309 ID:LZVQAWTEf0Va58bvNJXqTOyYrsN-q2LZp32yUSo10Ly5ECmO?hymrrFUSC2xBWGldczlqjP

6-0-0 12-0-0 12-4-8 6-0-0

Scale = 1:20.4



12-0-0 Plate Offsets (X,Y)--[2:0-3-0,Edge], [6:0-3-0,Edge] LOADING (psf) SPACING-CSI. DEFL. **PLATES** GRIP 2-0-0 in (loc) I/defI I/d 20.0 Plate Grip DOL 1.15 TC 0.37 Vert(LL) -0.05 6-8 360 244/190 >999 MT20

12-0-0

TOP CHORD

**BOT CHORD** 

TCLL TCDL 10.0 Lumber DOL 1.15 BC 0.41 Vert(CT) -0.096-8 >999 240 **BCLL** 0.0 Rep Stress Incr YES WB 0.12 Horz(CT) -0.026 n/a n/a BCDL 10.0 Code IRC2015/TPI2014 Matrix-S Wind(LL) 0.10 6-8 >999 240 Weight: 44 lb FT = 20% **BRACING-**

LUMBER-

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

REACTIONS. (lb/size) 2=500/0-3-8, 6=500/0-3-8

Max Horz 2=43(LC 14)

Max Uplift 2=-278(LC 6), 6=-278(LC 7)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown. TOP CHORD 2-3=-889/1280, 3-4=-841/1325, 4-5=-841/1325, 5-6=-889/1280 **BOT CHORD** 2-10=-1123/797, 9-10=-1123/797, 8-9=-1123/797, 6-8=-1123/797

**WEBS** 

## NOTES-

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=5.0psf; h=15ft; Cat. II; Exp C; enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) zone; porch left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) Gable studs spaced at 2-0-0 oc.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 278 lb uplift at joint 2 and 278 lb uplift at ioint 6.



Structural wood sheathing directly applied or 6-0-0 oc purlins.

Rigid ceiling directly applied or 5-5-1 oc bracing.

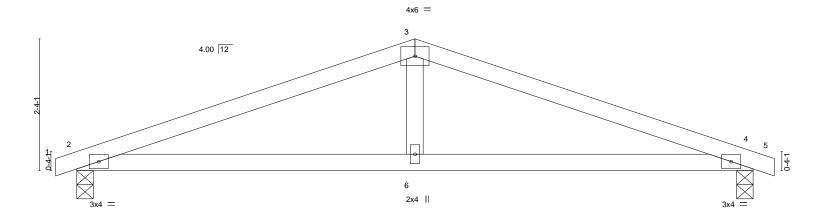


Job Truss Truss Type Qty Kent A&B E12697050 0519-2534 P02 Common Job Reference (optional) Comtech. Inc.,

8.130 s Mar 11 2018 MiTek Industries, Inc. Tue Feb 12 15:59:01 2019 Page 1 ID:LZVQAWTEf0Va58bvNJXqTOyYrsN-IEvy0P3aFlwueVXHovHdXvVxOEdOBfX4QA0IA3zlqjO Fayetteville, NC 28309 6-0-0 12-0-0

Scale = 1:20.4

12-4-8



6-0-0	6-0-0
0-0-0	
LOADING (psf)         SPACING-         2-0-0         CSI.         DEFL.         in (loc)           TCLL         20.0         Plate Grip DOL         1.15         TC         0.38         Vert(LL)         -0.03         2-6           TCDL         10.0         Lumber DOL         1.15         BC         0.30         Vert(CT)         -0.07         2-6           BCLL         0.0 *         Rep Stress Incr         YES         WB         0.11         Horz(CT)         0.01         4           BCDL         10.0         Code IRC2015/TPI2014         Matrix-S         Wind(LL)         0.03         2-6	/def  L/d

**BRACING-**

TOP CHORD

**BOT CHORD** 

LUMBER-

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

REACTIONS. (lb/size) 2=500/0-3-8, 4=500/0-3-8

Max Horz 2=25(LC 10)

Max Uplift 2=-68(LC 6), 4=-68(LC 7)

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

TOP CHORD 2-3=-874/369, 3-4=-874/369 **BOT CHORD** 2-6=-273/774, 4-6=-273/774

**WEBS** 3-6=0/282

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=5.0psf; h=15ft; Cat. II; Exp C; enclosed; MWFRS (envelope) and C-C Exterior(2) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate arip DOL=1.60
- 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

6-0-0

- 4) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 68 lb uplift at joint 2 and 68 lb uplift at joint 4.



Structural wood sheathing directly applied or 5-10-12 oc purlins.

Rigid ceiling directly applied or 10-0-0 oc bracing.

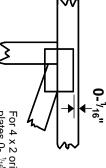


## **Symbols**

## PLATE LOCATION AND ORIENTATION



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



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

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

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

## PLATE SIZE



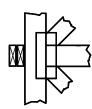
to slots. Second dimension is the length parallel to slots. width measured perpendicular The first dimension is the plate

## LATERAL BRACING LOCATION



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

## **BEARING**



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

## Industry Standards:

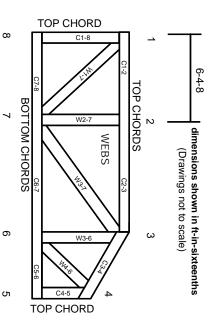
National Design Specification for Metal

DSB-89: ANSI/TPI1:

Guide to Good Practice for Handling **Building Component Safety Information** Design Standard for Bracing. Connected Wood Trusses. Installing & Bracing of Metal Plate Plate Connected Wood Truss Construction.

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

## 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

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

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

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# General Safety Notes

## Damage or Personal Injury Failure to Follow Could Cause Property

- Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI
- Ņ Truss bracing must be designed by an engineer. For bracing should be considered may require bracing, or alternative Tor I wide truss spacing, individual lateral braces themselves
- Never exceed the design loading shown and never stack materials on inadequately braced trusses.
- designer, erection supervisor, property owner and all other interested parties. Provide copies of this truss design to the building
- Cut members to bear tightly against each other

Ģ

- 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.
- Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.

œ

- 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 camber for dead load deflection responsibility of truss fabricator. General practice is to
- 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
- 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
- Do not cut or alter truss member or plate without prior

15. Connections not shown are the responsibility of others.

- approval of an engineer
- 17. Install and load vertically unless indicated otherwise
- Use of green or treated lumber may pose unacceptable project engineer before use. environmental, health or performance risks. Consult with
- 19. Review all portions of this design (front, back, words is not sufficient. and pictures) before use. Reviewing pictures alone
- 20. Design assumes manufacture in accordance with ANSI/TPI 1 Quality Criteria.