

Trenco
818 Soundside Rd
Edenton, NC 27932

Re: 23473-23473A
Penwell B

The truss drawing(s) referenced below have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by 84 Components - #2383.

Pages or sheets covered by this seal: I40382882 thru I40382889

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

North Carolina COA: C-0844



February 26, 2020

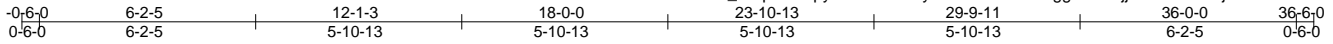
Johnson, Andrew

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 23473-23473A	Truss A	Truss Type Common	Qty 7	Ply 1	Penwell B	140382882
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84 Components (Dunn), Dunn, NC - 28334,

8.330 s Feb 13 2020 MiTek Industries, Inc. Tue Feb 25 12:39:58 2020 Page 1
 ID: zSrp?Lle3pySuth3rN9?KyKa8l-8UQNRfT7ggfzTblmij?S0ovmQhuj419OalFLfQzhhbQ?



Scale = 1:66.0

Plate Offsets (X, Y)--	[2:0-1-12,0-0-14], [2:Edge,0-2-8], [10:0-1-12,0-0-14], [12:Edge,0-2-8]
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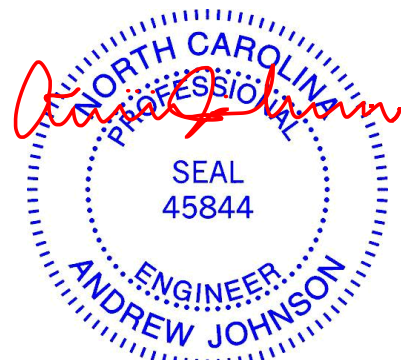
LOADING (psf)	SPACING- 2-0-0	CSI.	DEFL. in (loc) l/defl L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL 1.15	TC 0.76	Vert(LL) -0.23 15-17 >999 240	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.95	Vert(CT) -0.40 15-17 >999 180	MT18HS	244/190
BCLL 0.0 *	Rep Stress Incr YES	WB 0.53	Horz(CT) 0.11 12 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-MS		Weight: 209 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 3-7-5 oc purlins, except end verticals.
BOT CHORD 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS 2x4 SP No.3	WEBS 1 Row at midpt 7-15, 5-15, 3-18, 9-12

REACTIONS. (size) 18=0-3-8, 12=0-3-8
 Max Horz 18=-204(LC 10)
 Max Uplift 18=-179(LC 12), 12=-179(LC 12)
 Max Grav 18=1467(LC 1), 12=1467(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD 2-3=-651/239, 3-5=-2189/592, 5-6=-1608/526, 6-7=-1608/526, 7-9=-2189/592, 9-10=-651/239, 2-18=-483/220, 10-12=-483/220
 BOT CHORD 17-18=-441/2106, 15-17=-298/1829, 13-15=-298/1749, 12-13=-439/2002
 WEBS 6-15=-294/1085, 7-15=-622/265, 7-13=-36/412, 5-15=-621/265, 5-17=-36/412, 3-18=-1746/382, 9-12=-1746/382

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
 - 2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCCL=6.0psf; BCDL=6.0psf; h=30ft; B=45ft; L=45ft; eave=6ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2) 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
 - 3) All plates are MT20 plates unless otherwise indicated.
 - 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 where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
 - 6) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 18 and 12. This connection is for uplift only and does not consider lateral forces.



February 26, 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.

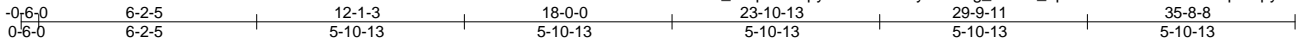
TRENCO
 ENGINEERING BY
 A MiTek Affiliate
 818 Soundside Road
 Edenton, NC 27932

Job 23473-23473A	Truss A1	Truss Type Common	Qty 4	Ply 1	Penwell B	140382883
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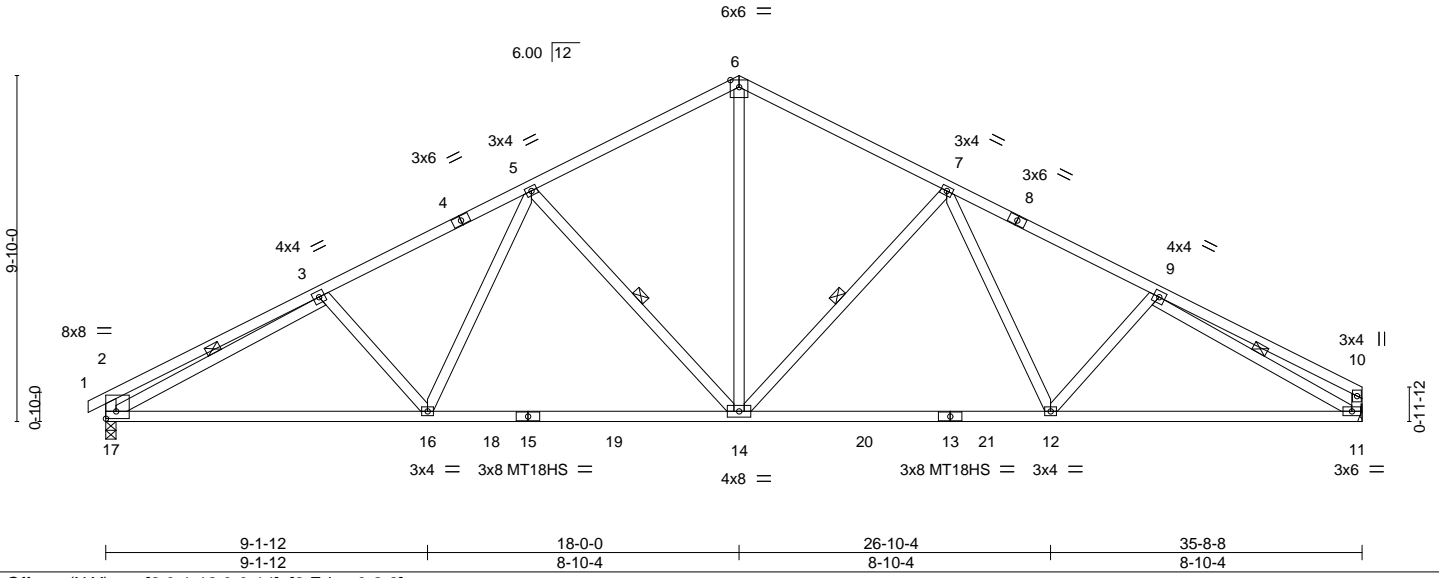
84 Components (Dunn), Dunn, NC - 28334,

8.330 s Feb 13 2020 MiTek Industries, Inc. Tue Feb 25 12:39:59 2020 Page 1

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Scale = 1:65.5



LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.76	Vert(LL)	-0.22 14-16	>999	240	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.94	Vert(CT)	-0.40 12-14	>999	180	MT18HS	244/190
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.56	Horz(CT)	0.11 11	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-MS						
								Weight: 207 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 3-7-9 oc purlins, except end verticals.
BOT CHORD 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS 2x4 SP No.3	WEBS 1 Row at midpt 5-14, 7-14, 3-17, 9-11

REACTIONS. (size) 17=0-3-8, 11=Mechanical
 Max Horz 17=205(LC 11)
 Max Uplift 17=-178(LC 12), 11=-154(LC 12)
 Max Grav 17=1456(LC 1), 11=1416(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD 2-3=-649/239, 3-5=-2167/586, 5-6=-1585/520, 6-7=-1585/520, 7-9=-2124/577, 9-10=-383/134, 2-17=-481/220, 10-11=-301/130
 BOT CHORD 16-17=-467/2084, 14-16=-324/1806, 12-14=-318/1707, 11-12=-447/1912
 WEBS 5-16=-36/413, 5-14=-622/265, 6-14=-288/1064, 7-14=-591/258, 7-12=-27/377, 3-17=-1727/377, 9-11=-1933/474

NOTES-

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCCL=6.0psf; BCDL=6.0psf; h=30ft; B=45ft; L=45ft; eave=6ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2) 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
- 3) All plates are MT20 plates unless otherwise indicated.
- 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 where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 6) Refer to girder(s) for truss to truss connections.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 11=154.
- 8) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 17. This connection is for uplift only and does not consider lateral forces.



February 26, 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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TRENCO
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818 Soundside Road
 Edenton, NC 27932

Job 23473-23473A	Truss A1E	Truss Type GABLE	Qty 1	Ply 1	Penwell B	140382884
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84 Components (Dunn), Dunn, NC - 28334,

8.330 s Feb 13 2020 MiTek Industries, Inc. Tue Feb 25 12:40:01 2020 Page 1

ID: _zSrp?Lle3pySuth3rN9?KyKa8l-Z36W3gW?zb1XK3ULOrZ9eQXQjv8FHI8qGGU?EkzhpPy



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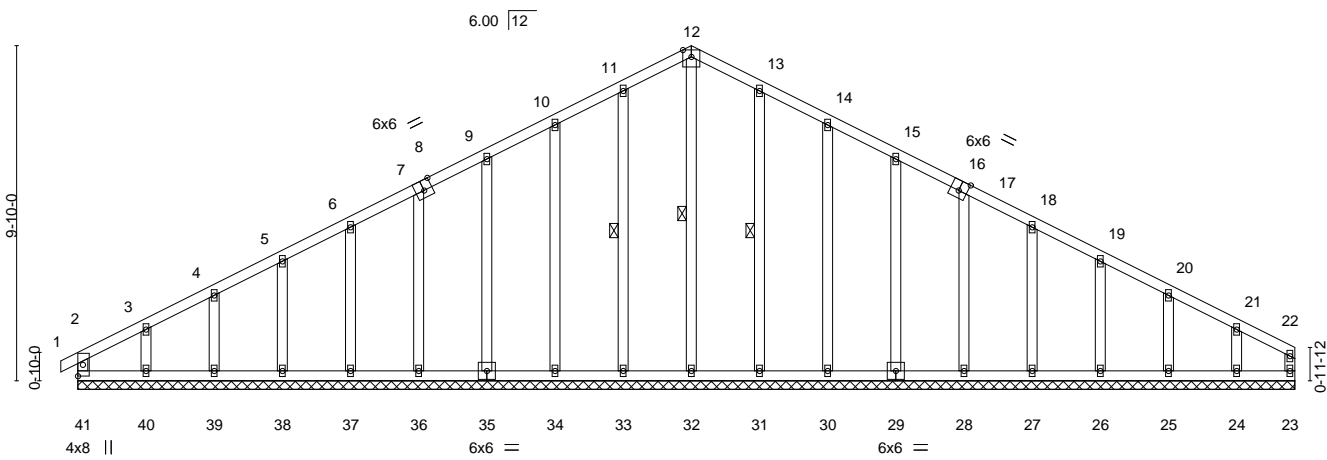


Plate Offsets (X,Y)--	[2:0-0-14,0-1-12], [7:0-1-15,0-0-0], [8:0-3-0,Edge], [8:0-0-0,0-1-12], [16:0-0-0,0-1-12], [16:0-3-0,Edge], [17:0-1-15,0-0-0], [41:0-0-0,0-1-12]
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LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.12	Vert(LL)	-0.00	1	n/r	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.06	Vert(CT)	-0.00	1	n/r		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.13	Horz(CT)	-0.00	23	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-R						
								Weight: 243 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.3	WEBS 1 Row at midpt 12-32, 11-33, 13-31
OTHERS 2x4 SP No.3	

REACTIONS. All bearings 35-8-8.
 (lb) - Max Horz 41=205(LC 11)
 Max Uplift All uplift 100 lb or less at joint(s) 41, 23, 33, 34, 35, 36, 37, 38, 39, 40, 31, 30, 29, 28, 27, 26, 25, 24
 Max Grav All reactions 250 lb or less at joint(s) 41, 23, 32, 33, 34, 35, 36, 37, 38, 39, 40, 31, 30, 29, 28, 27, 26, 25, 24

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD 10-11=-117/289, 11-12=-133/331, 12-13=-133/331, 13-14=-117/289

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
 - 2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCCL=6.0psf; BCDL=6.0psf; h=30ft; B=45ft; L=45ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2) 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
 - 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) Truss to be fully sheathed on one face or securely braced against lateral movement (i.e. diagonal web).
 - 7) Gable studs spaced at 2-0-0 oc.
 - 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - 9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.



February 26, 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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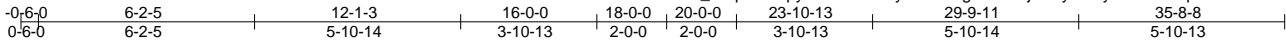
818 Soundside Road
 Edenton, NC 27932

Job 23473-23473A	Truss A2	Truss Type ROOF TRUSS	Qty 6	Ply 1	Penwell B	140382885
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84 Components (Dunn), Dunn, NC - 28334,

8.330 s Feb 13 2020 MiTek Industries, Inc. Tue Feb 25 12:40:02 2020 Page 1

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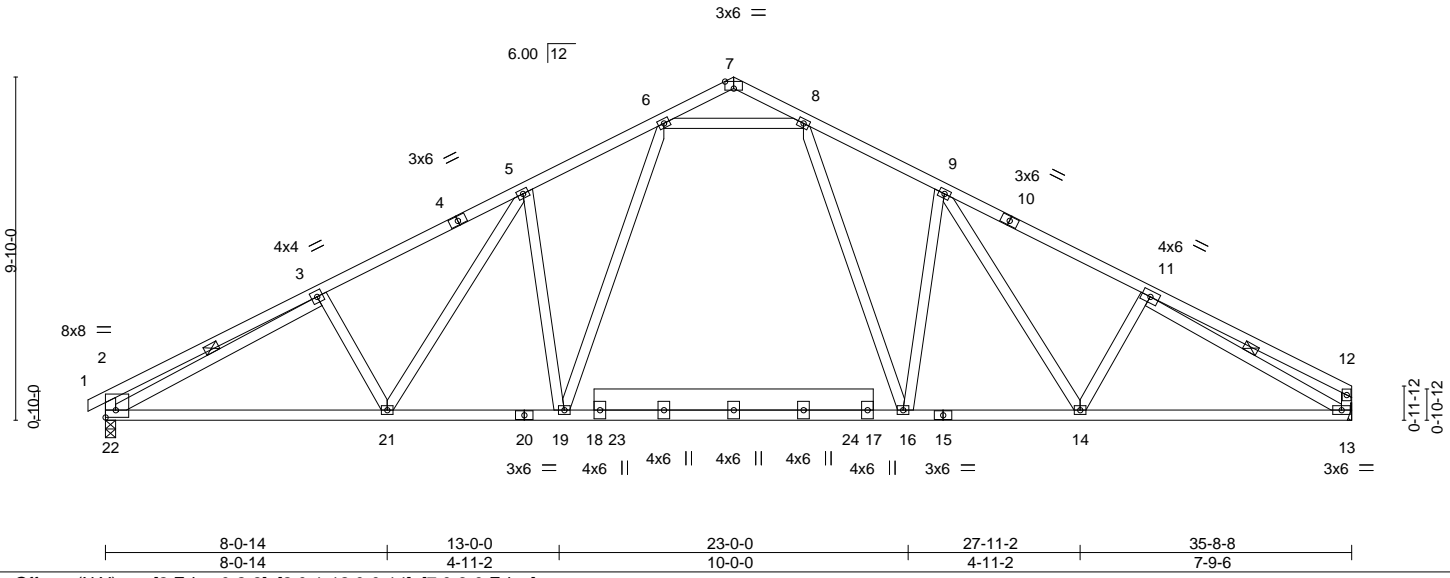


Plate Offsets (X,Y)--	[2:Edge,0-2-8], [2:0-1-12,0-0-14], [7:0-3-0,Edge]
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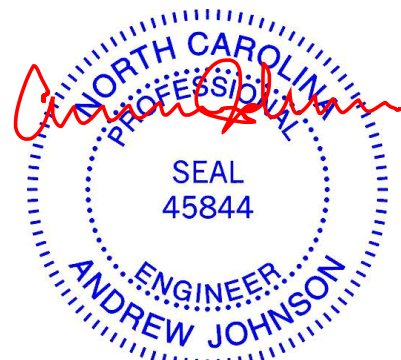
LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.80	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.78	Vert(LL) -0.27 19-21 >999 240		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.56	Vert(CT) -0.38 19-21 >999 180		
BCDL 10.0	Rep Stress Incr YES	Matrix-MS	Horz(CT) 0.09 13 n/a n/a		
	Code IRC2015/TPI2014			Weight: 243 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 2-11-10 oc purlins, except end verticals.
BOT CHORD 2x4 SP No.2 *Except* 17-18: 2x8 SP No.2	BOT CHORD Rigid ceiling directly applied or 8-5-11 oc bracing.
WEBS 2x4 SP No.3	WEBS 1 Row at midpt 3-22, 11-13

REACTIONS.	(size) 22=0-3-8, 13=Mechanical
	Max Horz 22=205(LC 11)
	Max Uplift 22=-178(LC 12), 13=-154(LC 12)
	Max Grav 22=1456(LC 1), 13=1416(LC 1)

FORCES.	(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD	2-3=-635/242, 3-5=-2210/621, 5-6=-1929/640, 8-9=-1907/635, 9-11=-2157/609, 11-12=-377/138, 2-22=-472/219, 12-13=-295/130
BOT CHORD	21-22=-465/2076, 19-21=-315/1819, 16-19=-215/1476, 14-16=-309/1709, 13-14=-445/1919
WEBS	5-21=-100/384, 5-19=-618/263, 6-19=-189/806, 8-16=-179/765, 9-16=-577/252, 9-14=-89/336, 3-22=-1749/371, 11-13=-1950/466, 6-8=-1331/511

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TC DL=6.0psf; BCDL=6.0psf; h=30ft; B=45ft; L=45ft; eave=6ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2) 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
 - All plates are 3x4 MT20 unless otherwise indicated.
 - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
 - Refer to girder(s) for truss to truss connections.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=1b) 13=154.
 - One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 22. This connection is for uplift only and does not consider lateral forces.
 - ATTIC SPACE SHOWN IS DESIGNED AS UNINHABITABLE.



February 26, 2020

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

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ENGINEERING BY
TRENCO
 A MiTek Affiliate

818 Soundside Road
 Edenton, NC 27932

Job 23473-23473A	Truss AE	Truss Type GABLE	Qty 1	Ply 1	Penwell B	140382886
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84 Components (Dunn), Dunn, NC - 28334,

8.330 s Feb 13 2020 MiTek Industries, Inc. Tue Feb 25 12:40:03 2020 Page 1

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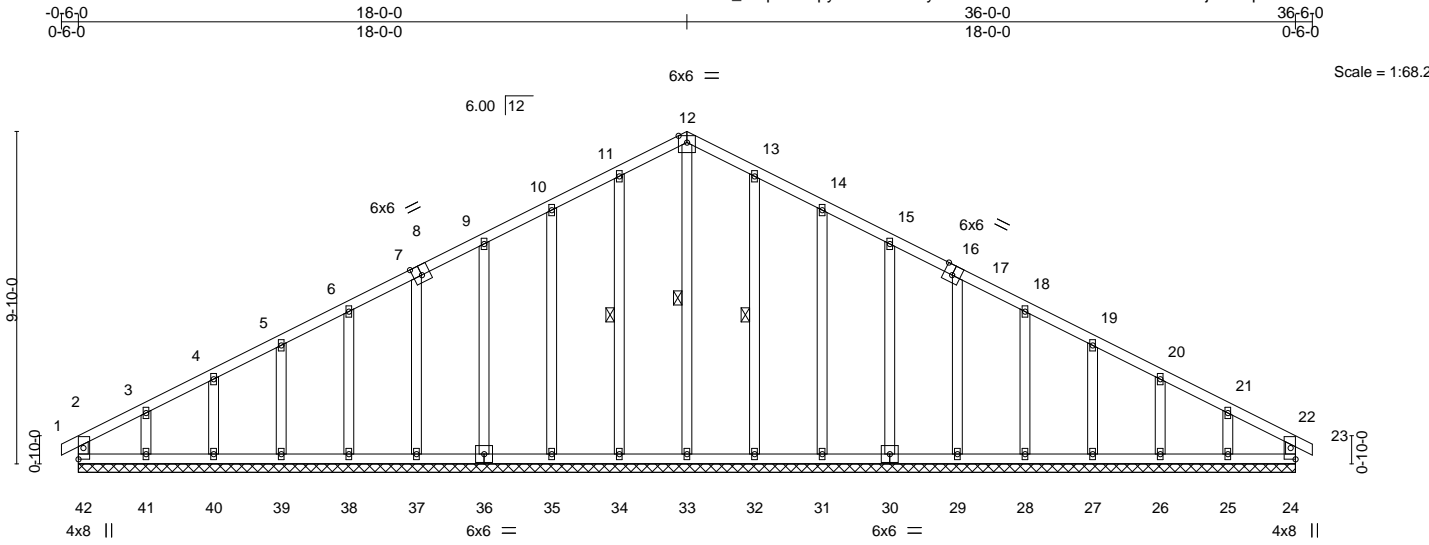


Plate Offsets (X,Y)--	[2:0-0-14,0-1-12], [7:0-1-15,0-0-0], [8:0-3-0,Edge], [8:0-0-0,0-1-12], [16:0-0-0,0-1-12], [16:0-3-0,Edge], [17:0-1-15,0-0-0], [22:0-0-14,0-1-12], [24:0-0-0,0-1-12], [42:0-0-0,0-1-12]
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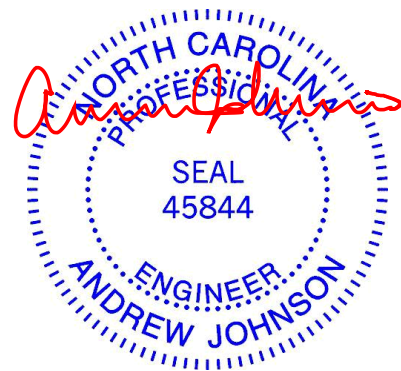
LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP	
TCLL 20.0	Plate Grip DOL	1.15	TC 0.11	Vert(LL)	-0.00	22	n/r	120	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.06	Vert(CT)	0.00	22	n/r	90		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.13	Horz(CT)	0.00	24	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-R						Weight: 244 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.3	WEBS 1 Row at midpt 12-33, 11-34, 13-32
OTHERS 2x4 SP No.3	

REACTIONS. All bearings 36-0-0.
 (lb) - Max Horz 42=204(LC 11)
 Max Uplift All uplift 100 lb or less at joint(s) 42, 34, 35, 36, 37, 38, 39, 40, 41, 32, 31, 30, 29, 28, 27, 26, 25
 Max Grav All reactions 250 lb or less at joint(s) 42, 24, 33, 34, 35, 36, 37, 38, 39, 40, 41, 32, 31, 30, 29, 28, 27, 26, 25

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD 10-11=-114/284, 11-12=-130/326, 12-13=-130/326, 13-14=-114/284

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
 - 2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCCL=6.0psf; BCCL=6.0psf; h=30ft; B=45ft; L=45ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2) 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
 - 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) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
 - 7) Gable studs spaced at 2-0-0 oc.
 - 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - 9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.



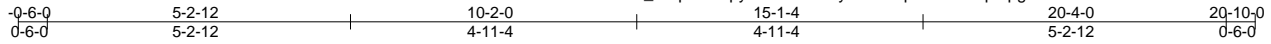
February 26, 2020

Job 23473-23473A	Truss BE	Truss Type Common Structural Gable	Qty 1	Ply 1	Penwell B	140382887
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84 Components (Dunn), Dunn, NC - 28334,

8.330 s Feb 13 2020 MiTek Industries, Inc. Tue Feb 25 12:40:05 2020 Page 1

ID: _zSrp?Lle3pySuth3rN9?KyKa8l-RqL0v2ZW0qXzpgn6dhd5oGh2UWRnDaQQBuSDNWzhhPu



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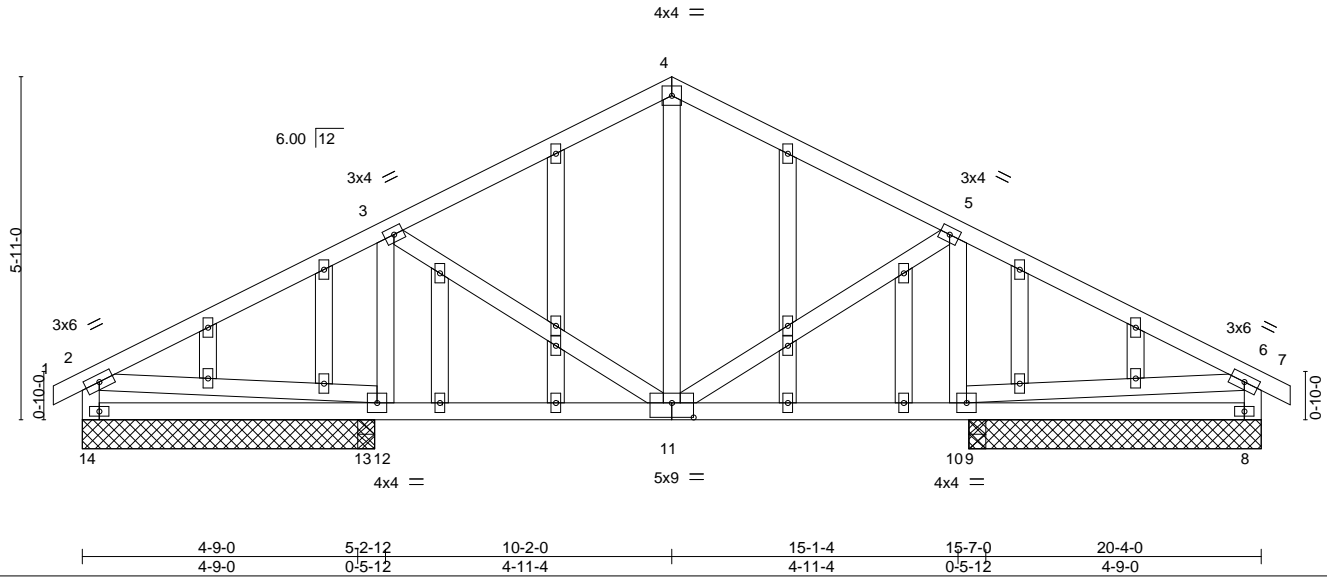


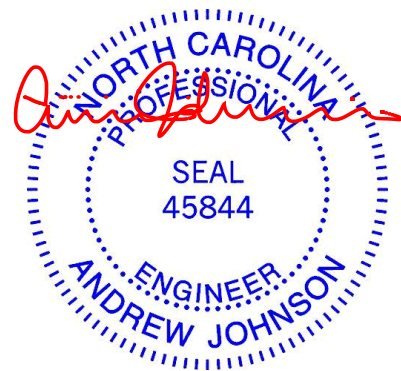
Plate Offsets (X,Y)--	[11:0-4-8,0-3-0]				
LOADING (psf)	SPACING- 2-0-0	CSI.	DEFL. in (loc) l/defl L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL 1.15	TC 0.33	Vert(LL) -0.01 11-12 >999 240	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.28	Vert(CT) -0.03 11-12 >999 180		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.11	Horz(CT) 0.01 8 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-MS		Weight: 143 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.3	
OTHERS 2x4 SP No.3	

REACTIONS. All bearings 5-0-8 except (it=length) 13=0-3-8, 9=0-3-8.
 (lb) - Max Horz 14=-126(LC 10)
 Max Uplift All uplift 100 lb or less at joint(s) 14, 8, 13, 9
 Max Grav All reactions 250 lb or less at joint(s) except 14=313(LC 1), 8=313(LC 1), 13=528(LC 1), 9=528(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD 2-3=-290/113, 3-4=-400/183, 4-5=-400/183, 5-6=-290/115, 2-14=-290/149, 6-8=-290/146
 WEBS 5-10=-429/170, 3-12=-429/168

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCCL=6.0psf; BCDL=6.0psf; h=30ft; B=45ft; L=45ft; eave=6ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2) 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 studs spaced at 2-0-0 oc.
 - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
 - Bearing at joint(s) 14, 8 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.



February 26, 2020

Job 23473-23473A	Truss BGR	Truss Type COMMON GIRDER	Qty 1	Ply 3	Penwell B	140382888
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84 Components (Dunn), Dunn, NC - 28334,

8.330 s Feb 13 2020 MiTek Industries, Inc. Tue Feb 25 12:40:06 2020 Page 1

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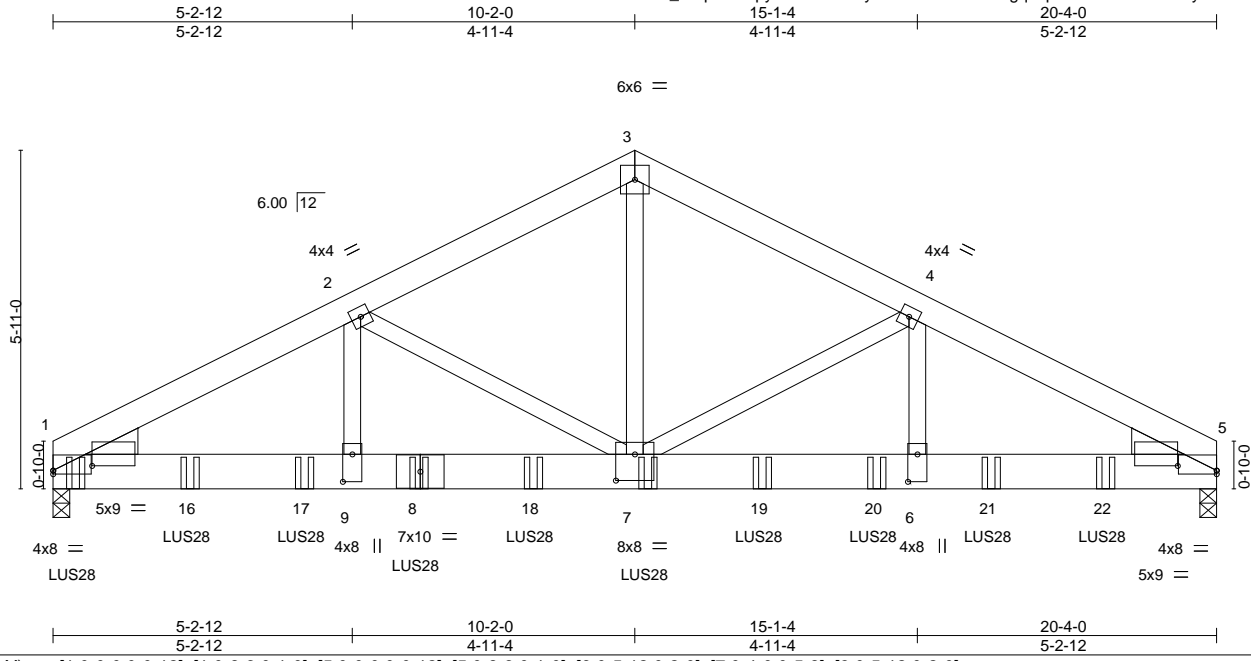


Plate Offsets (X,Y)--	[1:0-0-0,0-0-12], [1:0-8-3,0-1-0], [5:0-0-0,0-0-12], [5:0-8-3,0-1-0], [6:0-5-12,0-2-0], [7:0-4-0,0-5-8], [9:0-5-12,0-2-0]
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LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.23	Vert(LL)	-0.09	7-9	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.80	Vert(CT)	-0.18	7-9	>999		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.60	Horz(CT)	0.05	5	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-MS						
								Weight: 453 lb	FT = 20%

LUMBER-
TOP CHORD 2x6 SP No.2
BOT CHORD 2x8 SP No.2
WEBS 2x4 SP No.3 *Except*
3-7: 2x4 SP No.2

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

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

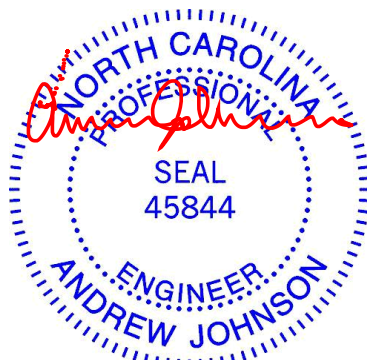
REACTIONS. (size) 1=0-3-8 (req. 0-4-6), 5=0-3-8 (req. 0-3-13)
Max Horz 1=-101(LC 31)
Max Uplift 1=-981(LC 12), 5=-857(LC 12)
Max Grav 1=8333(LC 1), 5=7263(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-12116/1612, 2-3=-8842/1233, 3-4=-8842/1233, 4-5=-11927/1591
BOT CHORD 1-9=-1366/10728, 7-9=-1366/10728, 6-7=-1346/10552, 5-6=-1346/10552
WEBS 3-7=-928/7368, 4-7=-3096/482, 4-6=-293/2871, 2-7=-3300/506, 2-9=-313/3038

- NOTES-**
- 3-ply truss to be connected together with 10d (0.120"x3") nails as follows:
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x8 - 2 rows staggered at 0-4-0 oc.
Webs connected as follows: 2x4 - 1 row at 0-9-0 oc.
 - All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
 - Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TC DL=6.0psf; BCDL=6.0psf; h=30ft; B=45ft; L=45ft; eave=6ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2) 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 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
 - WARNING: Required bearing size at joint(s) 1, 5 greater than input bearing size.
 - Two H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1 and 5. This connection is for uplift only and does not consider lateral forces.
 - Use Simpson Strong-Tie LUS28 (6-SD9112 Girder, 4-SD9212 Truss, Single Ply Girder) or equivalent spaced at 2-0-0 oc max. starting at 0-4-12 from the left end to 18-4-12 to connect truss(es) to back face of bottom chord.
 - Fill all nail holes where hanger is in contact with lumber.

LOAD CASE(S) Standard

Continued on page 2



February 26, 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.

ENGINEERING BY
TRENCO
A MiTek Affiliate

818 Soundside Road
Edenton, NC 27932

Job 23473-23473A	Truss BGR	Truss Type COMMON GIRDER	Qty 1	Ply 3	Penwell B Job Reference (optional)	140382888
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84 Components (Dunn), Dunn, NC - 28334,

8.330 s Feb 13 2020 MiTek Industries, Inc. Tue Feb 25 12:40:06 2020 Page 2
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LOAD CASE(S) Standard

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

Uniform Loads (plf)

Vert: 1-3=-60, 3-5=-60, 10-13=-20

Concentrated Loads (lb)

Vert: 8=-1396(B) 7=-1396(B) 12=-1402(B) 16=-1396(B) 17=-1396(B) 18=-1396(B) 19=-1396(B) 20=-1396(B) 21=-1396(B) 22=-1396(B)

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/TP1 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 23473-23473A	Truss CE	Truss Type Common Supported Gable	Qty 1	Ply 1	Penwell B	140382889
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84 Components (Dunn), Dunn, NC - 28334,

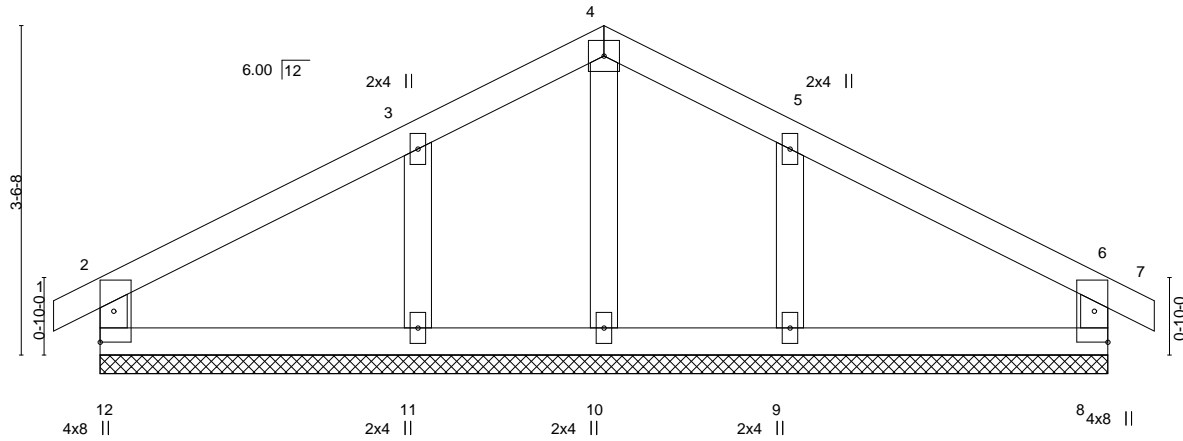
8.330 s Feb 13 2020 MiTek Industries, Inc. Tue Feb 25 12:40:07 2020 Page 1

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4x4 =

Scale = 1:24.8



10-10-0
10-10-0

Plate Offsets (X,Y)--	[2:0-0-14,0-1-12], [6:0-0-14,0-1-12], [8:0-0-0,0-1-12], [12:0-0-0,0-1-12]
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LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.11	Vert(LL)	0.00	7	n/r	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.08	Vert(CT)	0.00	7	n/r		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.04	Horz(CT)	0.00	8	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-R					Weight: 48 lb	FT = 20%

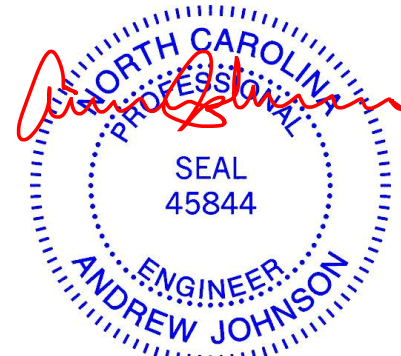
LUMBER-
 TOP CHORD 2x4 SP No.2
 BOT CHORD 2x4 SP No.2
 WEBS 2x4 SP No.3
 OTHERS 2x4 SP No.3

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 10-10-0.
 (lb) - Max Horz 12=79(LC 11)
 Max Uplift All uplift 100 lb or less at joint(s) 12, 8, 11, 9
 Max Grav All reactions 250 lb or less at joint(s) 12, 8, 10 except 11=255(LC 17), 9=253(LC 18)

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

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
 - 2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TC DL=6.0psf; BC DL=6.0psf; h=30ft; B=45ft; L=45ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2) 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
 - 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 requires continuous bottom chord bearing.
 - 5) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
 - 6) Gable studs spaced at 2-0-0 oc.
 - 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - 8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
 - 9) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 12, 8, 11, and 9. This connection is for uplift only and does not consider lateral forces.



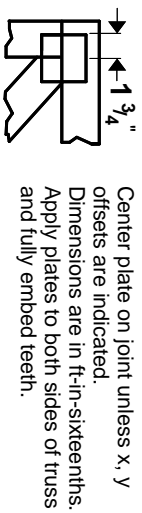
February 26, 2020

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.

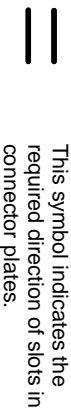
ENGINEERING BY
TRENCO
 A MiTek Affiliate
 818 Soundside Road
 Edenton, NC 27932

Symbols

PLATE LOCATION AND ORIENTATION



For 4 x 2 orientation, locate plates 0- $\frac{1}{16}$ " from outside edge of truss.



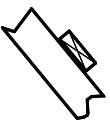
* Plate location details available in **MITrak 20/20 software or upon request.**

PLATE SIZE

4 X 4

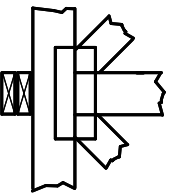
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

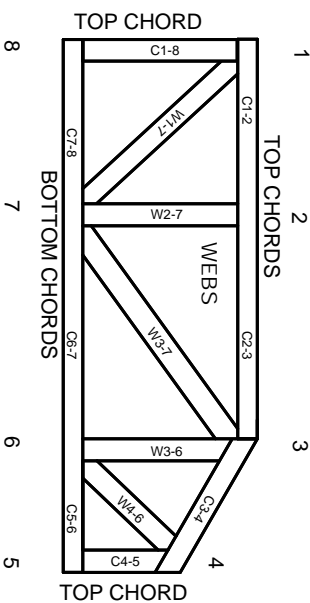


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

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



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.