

Trenco  
818 Soundside Rd  
Edenton, NC 27932

Re: 21437A  
140.1582.A

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: I37749890 thru I37749920

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

North Carolina COA: C-0844



July 11, 2019

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Johnson, Andrew

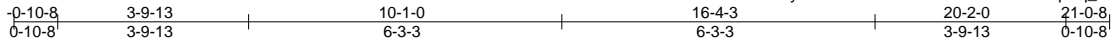
**IMPORTANT NOTE:** The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), 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 21437A	Truss B1	Truss Type COMMON	Qty 1	Ply 1	140.1582.A	137749890
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84 Components (Dunn),

Dunn, NC - 28334,

8.220 s Nov 16 2018 MiTek Industries, Inc. Thu Jul 11 11:03:33 2019 Page 1



4x6 ||

Scale = 1:46.1

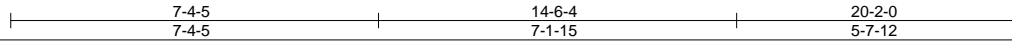
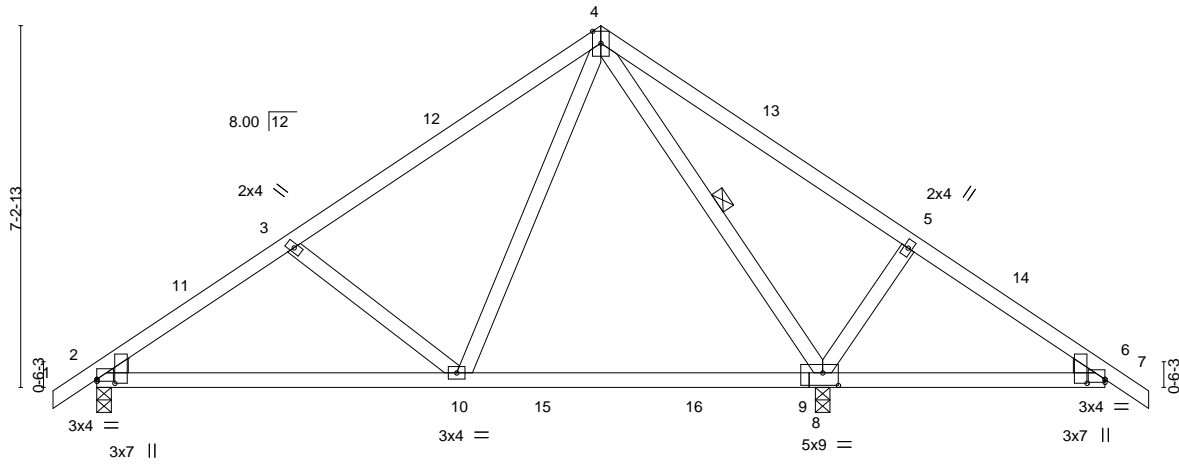


Plate Offsets (X,Y)-- [2:0-0-0,0-0-8], [2:0-0-15,0-4-5], [6:0-0-15,0-4-5], [6:0-0-0,0-0-12], [9:0-0-0,0-1-12], [9:0-3-12,0-3-0]

<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL	1.15	TC 0.54	Vert(LL)	0.11	2-10	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.46	Vert(CT)	-0.14	8-10	>999		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.43	Horz(CT)	0.01	8	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S						
								Weight: 104 lb	FT = 20%

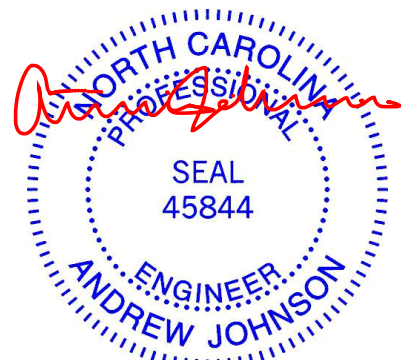
**LUMBER-**  
 TOP CHORD 2x4 SP No.2  
 BOT CHORD 2x4 SP No.2  
 WEBS 2x4 SP No.3  
 WEDGE  
 Left: 2x4 SP No.3, Right: 2x4 SP No.3

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.  
 WEBS 1 Row at midpt 4-8

**REACTIONS.** (lb/size) 2=528/0-3-8, 8=1188/0-3-8  
 Max Horz 2=181(LC 11)  
 Max Uplift 2=-89(LC 12), 8=-145(LC 13)  
 Max Grav 2=559(LC 23), 8=1188(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-653/367, 3-4=-451/362, 4-5=-224/575, 5-6=-253/377  
 BOT CHORD 2-10=-240/611, 6-8=-229/253  
 WEBS 4-10=-405/436, 4-8=-933/519, 5-8=-335/223, 3-10=-316/221

- 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; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 10-1-0, Exterior(2) 10-1-0 to 13-1-0, Interior(1) 13-1-0 to 21-0-8 zone; cantilever right exposed; porch right exposed; 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 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.
  - 5) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 8. This connection is for uplift only and does not consider lateral forces.



July 11, 2019

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



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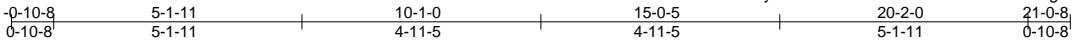
Job 21437A	Truss BE	Truss Type COMMON STRUCTURAL GA	Qty 1	Ply 1	140.1582.A	137749891
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84 Components (Dunn),

Dunn, NC - 28334,

8.220 s Nov 16 2018 MiTek Industries, Inc. Thu Jul 11 11:03:34 2019 Page 1

ID:RUSz4LGuFS2C1bODNZWBaZyX6cZ-74iGPN7MGA0d8xLVIEDAJ1OgROxufJ\_qJOpp6xyz9Ud



Scale: 1/4"=1'

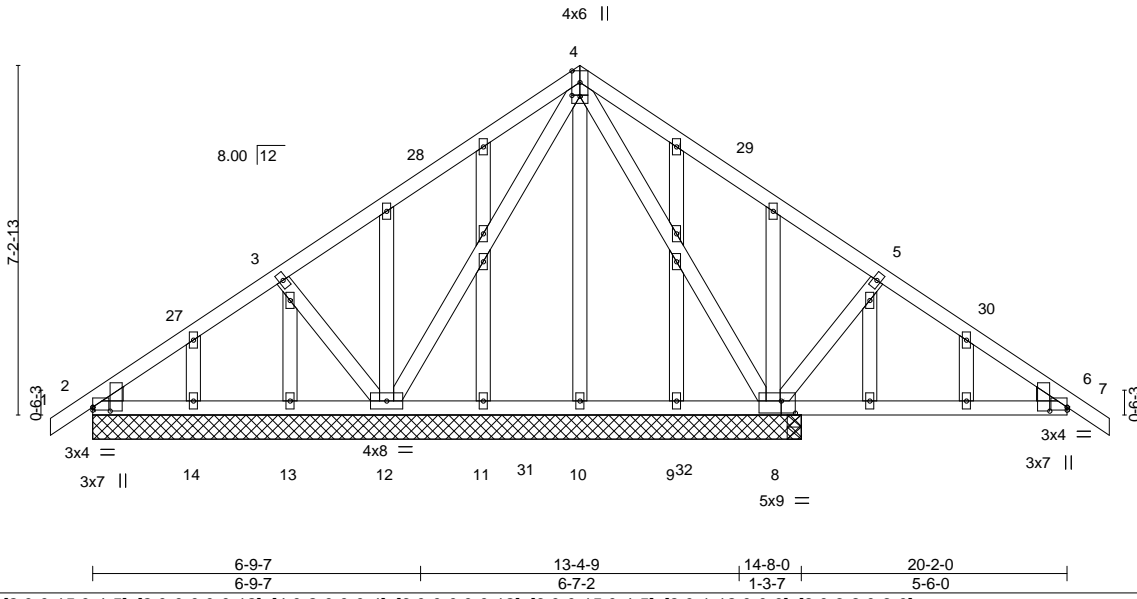


Plate Offsets (X,Y)--	[2:0-0-15,0-4-5], [2:0-0-0,0-0-12], [4:0-2-0,0-0-4], [6:0-0-0,0-0-12], [6:0-0-15,0-4-5], [8:0-1-12,0-0-0], [8:0-3-8,0-3-0]
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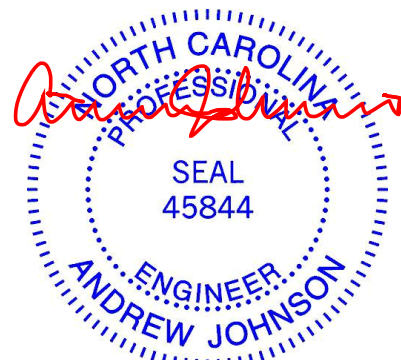
<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL	1.15	TC 0.55	Vert(LL)	-0.01	8-9	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.27	Vert(CT)	0.01	8-9	>999		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.84	Horz(CT)	0.00	8	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S						
								Weight: 151 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 2x4 SP No.3	
OTHERS 2x4 SP No.3	
WEDGE	
Left: 2x4 SP No.3, Right: 2x4 SP No.3	

**REACTIONS.** All bearings 14-8-0.  
 (lb) - Max Horz 2=181(LC 11)  
 Max Uplift All uplift 100 lb or less at joint(s) 2, 9 except 8=-172(LC 13), 12=-190(LC 12)  
 Max Grav All reactions 250 lb or less at joint(s) 2, 10, 11, 13, 14, 9 except 8=966(LC 1), 8=966(LC 1), 12=438(LC 19)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 3-4=-59/285, 4-5=-255/607, 5-6=-272/386  
 BOT CHORD 6-8=-236/267  
 WEBS 4-8=-687/324, 5-8=-340/222, 3-12=-330/225

- 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; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 10-1-0, Exterior(2) 10-1-0 to 13-1-0, Interior(1) 13-1-0 to 21-0-8 zone; cantilever right exposed; porch 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 studs spaced at 2-0-0 oc.
  - 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 7) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 9 except (jt=lb) 8=172, 12=190.

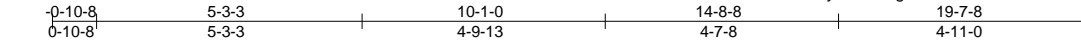


July 11, 2019

<p><b>WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.</b></p> <p>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 <b>ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information</b> available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.</p>	<p>818 Soundside Road Edenton, NC 27932</p>
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Job 21437A	Truss BG	Truss Type COMMON GIRDER	Qty 1	Ply 2	140.1582.A	137749892
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ID:RUSz4LGuFS2C1bODNZWBaZyX6cZ-UlqkmPPzV/LlealGYkT0EnMmy87pxeA\_RTaVVk3yz8oj  
8.220 s Jun 21 2019 MiTek Industries, Inc. Thu Jul 11 11:50:24 2019 Page 1



Scale = 1:45.7

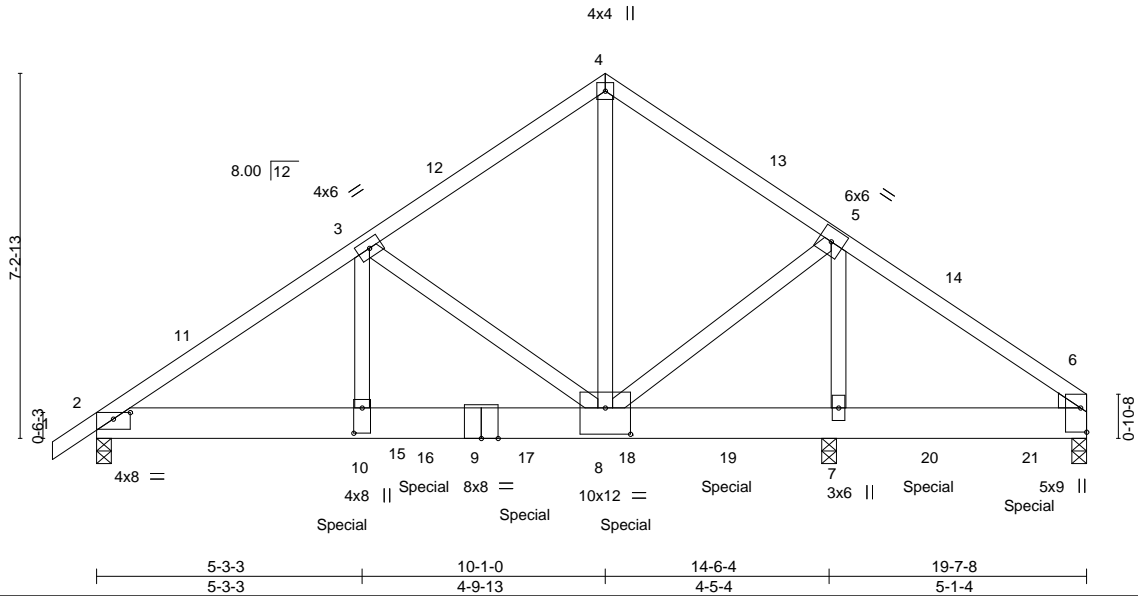


Plate Offsets (X,Y)-- [2:0-4-0,0-1-9], [6:Edge,0-1-7], [6:0-0-15,0-4-15], [6:0-0-8,0-0-12], [8:0-6-0,0-6-4], [10:0-6-0,0-2-0]

<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL 2-0-0	TC 0.30	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 1.00	Vert(LL) -0.07 8-10 >999 240		
BCLL 0.0 *	Rep Stress Incr NO	WB 0.95	Vert(CT) -0.14 8-10 >999 180		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-S	Horz(CT) 0.02 7 n/a n/a		
				Weight: 267 lb	FT = 20%

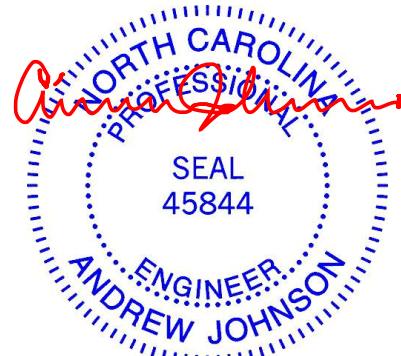
**LUMBER-**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x8 SP No.2  
WEBS 2x4 SP No.3  
WEDGE  
Right: 2x4 SP No.3

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 4-10-13 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

**REACTIONS.** (lb/size) 2=3654/0-3-8, 7=8136/0-3-8 (req. 0-4-13), 6=401/0-3-8  
Max Horz 2=176(LC 11)  
Max Uplift 2=535(LC 12), 7=992(LC 13), 6=119(LC 8)  
Max Grav 2=3654(LC 1), 7=8136(LC 1), 6=507(LC 26)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-11=-6187/844, 3-11=-6095/865, 3-12=-3549/424, 4-12=-3467/444, 4-13=-3467/452,  
5-13=-3554/425, 5-14=-137/973, 6-14=-161/920  
BOT CHORD 2-15=-743/5010, 10-15=-743/5010, 10-16=-743/5010, 9-16=-743/5010, 9-17=-743/5010,  
8-17=-743/5010, 8-18=-729/175, 18-19=-729/175, 7-19=-729/175, 7-20=-729/175,  
20-21=-729/175, 6-21=-729/175  
WEBS 3-10=-476/2817, 3-8=-2643/615, 4-8=-394/3602, 5-8=-506/4566, 5-7=-5619/708

- NOTES-**
- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.  
Bottom chords connected as follows: 2x8 - 2 rows staggered at 0-5-0 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; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 0-10-8 to 2-1-8, Interior(1) 2-1-8 to 10-1-0, Exterior(2) 10-1-0 to 13-1-0, Interior(1) 13-1-0 to 19-5-12 zone; porch 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) 7 greater than input bearing size.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 535 lb uplift at joint 2, 992 lb uplift at joint 7 and 119 lb uplift at joint 6.
  - This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



July 11, 2019

Continued on page 2

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



818 Soundside Road  
Edenton, NC 27932

Job 21437A	Truss BG	Truss Type COMMON GIRDER	Qty 1	Ply <b>2</b>	140.1582.A Job Reference (optional)	I37749892
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8.220 s Jun 21 2019 MiTek Industries, Inc. Thu Jul 11 11:50:24 2019 Page 2  
 ID:RUSz4LGuFS2C1bODNZWBaZyX6cZ-UlgkmPPzVLlealGYKt0EnMmy87pxeA\_RTaVVk3yz8oj

**NOTES-**

10) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 814 lb down and 325 lb up at 4-11-4, 1960 lb down and 240 lb up at 6-6-12, 1960 lb down and 192 lb up at 8-6-12, 1960 lb down and 162 lb up at 10-6-12, 1960 lb down and 189 lb up at 12-6-12, and 1007 lb down and 201 lb up at 16-6-12, and 1008 lb down and 201 lb up at 18-6-12 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, 2-6=-20

Concentrated Loads (lb)

Vert: 15=-814(B) 16=-1960(B) 17=-1960(B) 18=-1960(B) 19=-1960(B) 20=-964(B) 21=-965(B)

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818 Soundside Road  
Edenton, NC 27932

Job 21437A	Truss H2	Truss Type HIP	Qty 1	Ply 1	140.1582.A	137749893
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84 Components (Dunn), Dunn, NC - 28334,

8.220 s Nov 16 2018 MiTek Industries, Inc. Thu Jul 11 11:03:47 2019 Page 1

ID:RUSz4LGuFS2C1bODNZWBaZyX6cZ-7a\_A8qHWCAfnBxr?ZTyDlmQvpeC\_oCclwS?3hyz9UQ



Scale = 1:88.0

Plate Offsets (X,Y)--	[5:0-4-0,0-4-8], [7:0-4-0,0-4-8], [17:0-3-4,0-0-0]
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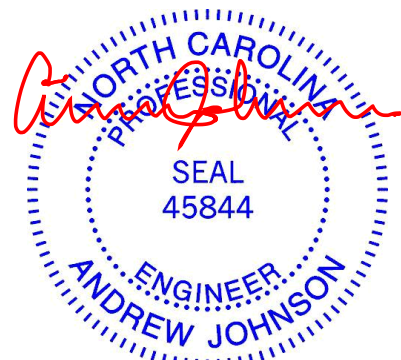
<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>	
TCLL 20.0	Plate Grip DOL	1.15	TC 0.51	Vert(LL)	-0.45	14	>999	240	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.97	Vert(CT)	-0.89	14	>665	180	MT18H	244/190
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.81	Horz(CT)	0.21	10	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S							
									Weight: 316 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x6 SP No.2 *Except* 1-4,8-10: 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 2-6-12 oc purlins, except
BOT CHORD 2x6 SP No.2 *Except* 12-15,15-17: 2x6 SP DSS	BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS 2x4 SP No.3	WEBS 1 Row at midpt 6-16, 6-13 2 Rows at 1/3 pts 5-18, 7-11

**REACTIONS.** (lb/size) 10=1980/Mechanical, 2=2043/0-3-8  
Max Horz 2=89(LC 16)  
Max Uplift 10=220(LC 8), 2=225(LC 9)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-3995/661, 3-4=-3777/578, 4-5=-3324/550, 5-6=-5277/837, 6-7=-5250/832,  
7-8=-3275/539, 8-9=-3721/571, 9-10=-3893/644  
BOT CHORD 2-18=-551/3510, 16-18=-792/5274, 14-16=-870/5853, 13-14=-870/5853, 11-13=-746/5247,  
10-11=-522/3392  
WEBS 4-18=-110/1288, 5-18=-2267/456, 5-16=0/539, 6-16=-716/138, 6-14=0/324,  
6-13=-744/141, 7-13=0/551, 7-11=-2291/457, 8-11=-112/1264

- 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=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) -0-10-8 to 4-1-3, Interior(1) 4-1-3 to 9-0-0, Exterior(2) 9-0-0 to 16-0-6, Interior(1) 16-0-6 to 41-0-0, Exterior(2) 41-0-0 to 48-0-6, Interior(1) 48-0-6 to 49-8-0 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) Provide adequate drainage to prevent water ponding.
  - 4) All plates are MT20 plates unless otherwise indicated.
  - 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 where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 7) Refer to girder(s) for truss to truss connections.
  - 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 10=220.
  - 9) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
  - 10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



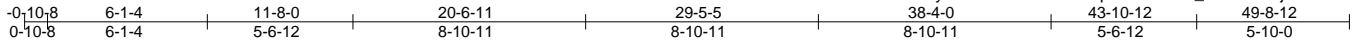
July 11, 2019

<p><b>WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.</b></p> <p>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 <b>ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information</b> available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.</p>	<p>ENGINEERING BY <b>TRENCO</b> A MiTek Affiliate</p> <p>818 Soundside Road Edenton, NC 27932</p>
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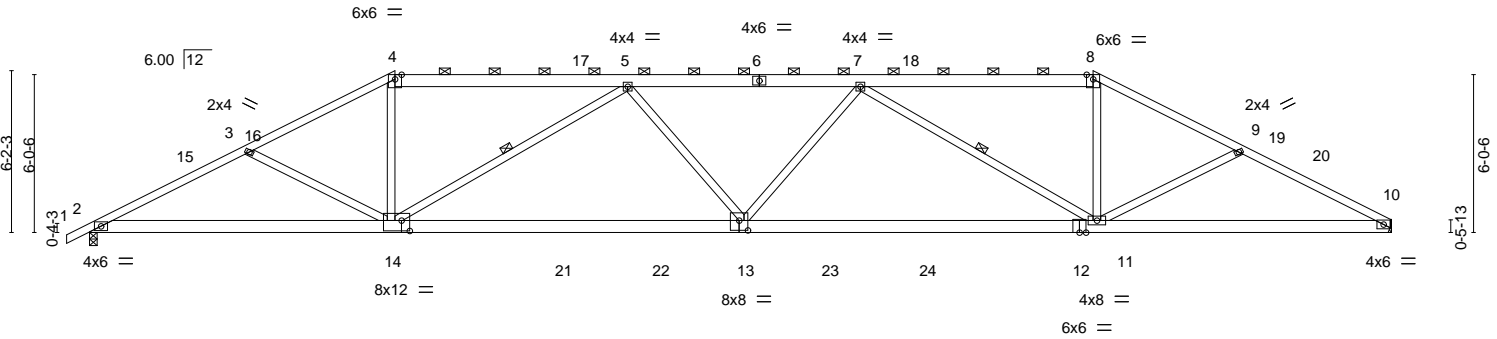
Job 21437A	Truss H3	Truss Type HIP	Qty 1	Ply 1	140.1582.A	137749894
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84 Components (Dunn), Dunn, NC - 28334,

8.220 s Nov 16 2018 MiTek Industries, Inc. Thu Jul 11 11:03:48 2019 Page 1



Scale = 1:88.0



6-1-4	11-8-0	25-0-0	38-4-0	43-10-12	49-8-12
6-1-4	5-6-12	13-4-0	13-4-0	5-6-12	5-10-0

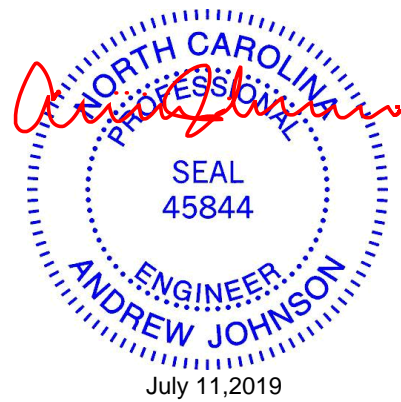
Plate Offsets (X,Y)-- [13:0-4-0,0-4-8], [14:0-3-12,0-4-12]					
<b>LOADING</b> (psf)	<b>SPACING-</b> 2-0-0	<b>CSI.</b>	<b>DEFL.</b> in (loc) l/defl L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL 1.15	TC 0.80	Vert(LL) -0.34 13-14 >999 240	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.98	Vert(CT) -0.70 11-13 >845 180		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.89	Horz(CT) 0.17 10 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-S			
				Weight: 303 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.2 *Except* 4-6,6-8: 2x6 SP No.2	TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except 2-0-0 oc purlins (3-2-8 max.): 4-8.
BOT CHORD 2x6 SP No.2 *Except* 12-13,13-14: 2x6 SP DSS	BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS 2x4 SP No.3	WEBS 1 Row at midpt 5-14, 7-11

**REACTIONS.** (lb/size) 10=1980/Mechanical, 2=2043/0-3-8  
Max Horz 2=111(LC 12)  
Max Uplift 10=-172(LC 8), 2=-177(LC 9)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-3927/661, 3-4=-3580/555, 4-5=-3131/540, 5-7=-4411/673, 7-8=-3096/532,  
8-9=-3542/546, 9-10=-3851/649  
BOT CHORD 2-14=-544/3442, 13-14=-579/4310, 11-13=-548/4298, 10-11=-521/3355  
WEBS 3-14=-325/244, 4-14=-72/1157, 5-14=-1495/376, 5-13=0/339, 7-13=0/354,  
7-11=-1519/376, 8-11=-81/1140, 9-11=-269/247

- NOTES-**
- 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=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) -0-10-8 to 4-1-3, Interior(1) 4-1-3 to 11-8-0, Exterior(2) 11-8-0 to 18-8-6, Interior(1) 18-8-6 to 38-4-0, Exterior(2) 38-4-0 to 45-4-6, Interior(1) 45-4-6 to 49-8-0 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - Provide adequate drainage to prevent water ponding.
  - 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=lb) 10=172.
  - One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



<p><b>WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.</b></p> <p>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 <b>ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information</b> available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.</p>	<p>ENGINEERING BY <b>TRENCO</b> A MiTek Affiliate</p> <p>818 Soundside Road Edenton, NC 27932</p>
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Job 21437A	Truss H5	Truss Type HIP	Qty 1	Ply 1	140.1582.A	137749896
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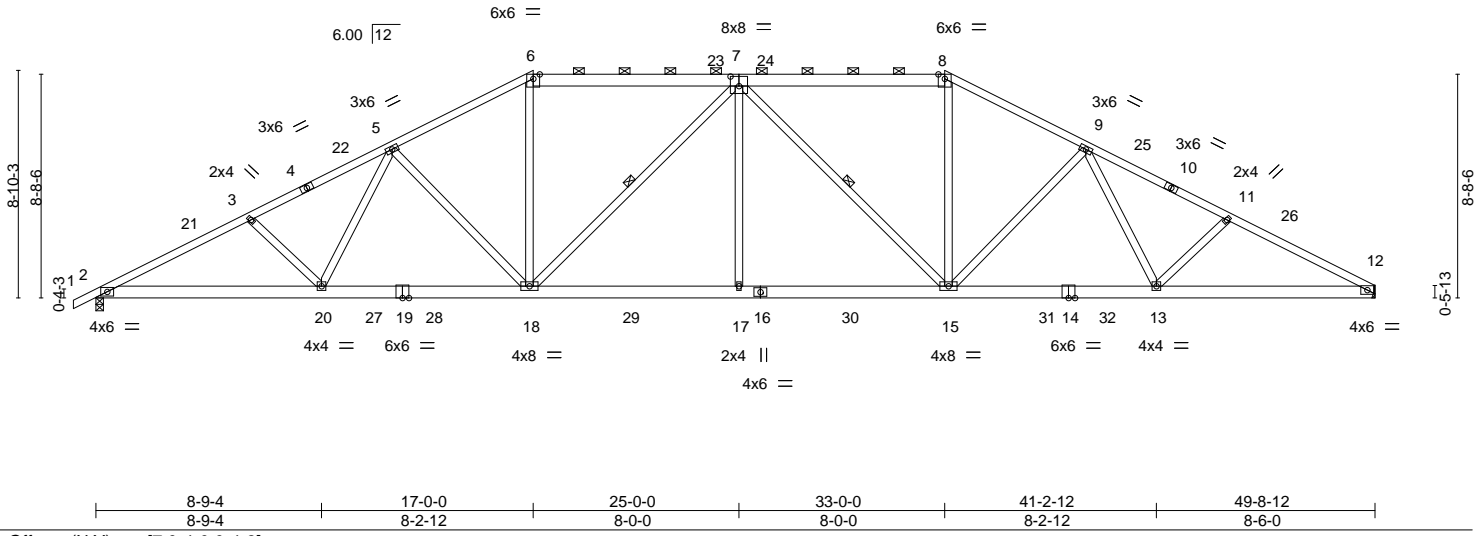
84 Components (Dunn), Dunn, NC - 28334,

8.220 s Nov 16 2018 MiTek Industries, Inc. Thu Jul 11 11:03:51 2019 Page 1

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Scale = 1:89.6



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 0.81	Vert(LL)	-0.26	17-18	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.79	Vert(CT)	-0.52	17-18	>999		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.65	Horz(CT)	0.16	12	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S						
								Weight: 331 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.2 *Except* 7-8,6-7: 2x6 SP No.2	TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except 2-0-0 oc purlins (4-1-8 max.): 6-8.
BOT CHORD 2x6 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 7-18, 7-15

<b>REACTIONS.</b> (lb/size)	2=2043/0-3-8, 12=1980/Mechanical
	Max Horz 2=155(LC 16)
	Max Uplift 2=-193(LC 12), 12=-169(LC 13)

<b>FORCES.</b> (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-3949/581, 3-5=-3698/571, 5-6=-3062/556, 6-7=-2689/539, 7-8=-2676/533, 8-9=-3047/549, 9-11=-3639/560, 11-12=-3873/579
BOT CHORD 2-20=-471/3459, 18-20=-385/3049, 17-18=-303/3114, 15-17=-303/3114, 13-15=-366/3016, 12-13=-448/3372
WEBS 3-20=-313/194, 5-20=-39/480, 5-18=-560/219, 6-18=-92/1031, 7-18=-730/174, 7-17=0/422, 7-15=-747/174, 8-15=-89/1025, 9-15=-532/217, 9-13=-38/444, 11-13=-268/195

- NOTES-**
- 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=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) -0-10-8 to 4-1-3, Interior(1) 4-1-3 to 17-0-0, Exterior(2) 17-0-0 to 24-0-6, Interior(1) 24-0-6 to 33-0-0, Exterior(2) 33-0-0 to 40-0-6, Interior(1) 40-0-6 to 49-8-0 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - Provide adequate drainage to prevent water ponding.
  - 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=lb) 12=169.
  - One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



Job 21437A	Truss H6	Truss Type HIP	Qty 1	Ply 1	140.1582.A	137749897
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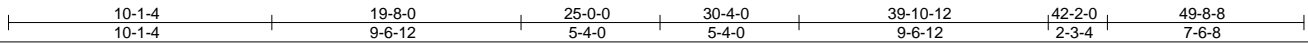
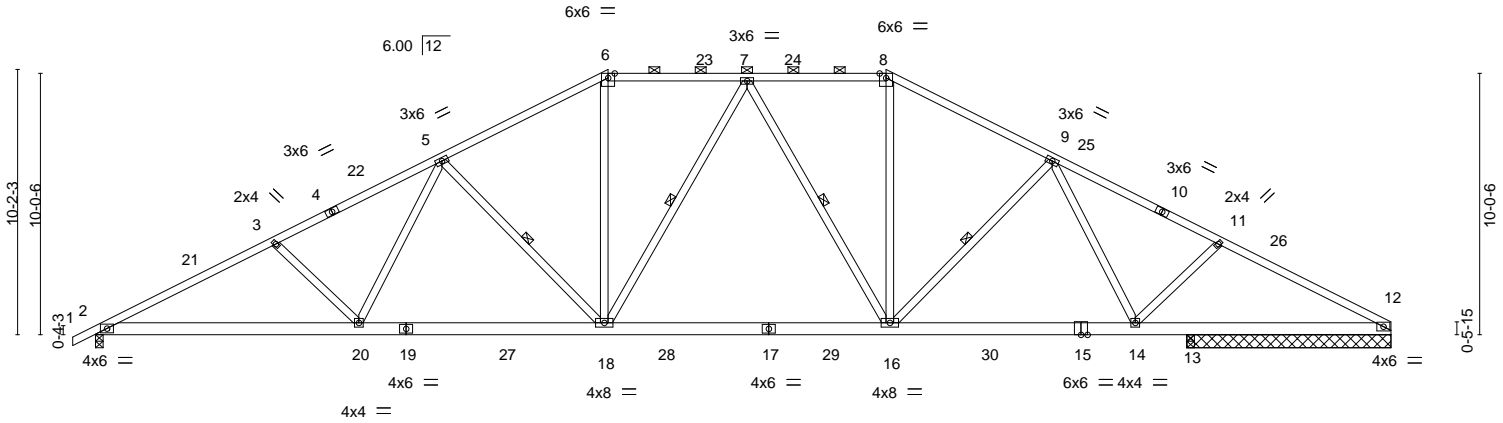
84 Components (Dunn), Dunn, NC - 28334,

8.220 s Nov 16 2018 MiTek Industries, Inc. Thu Jul 11 11:03:52 2019 Page 1

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Scale = 1:88.4



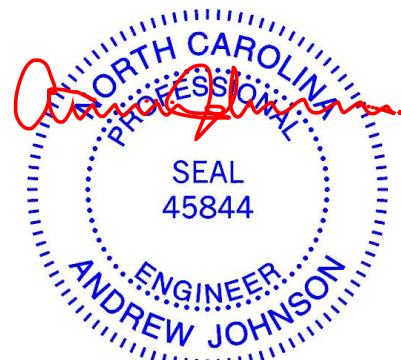
<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL	1.15	TC 0.71	Vert(LL)	-0.24	16-18	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.72	Vert(CT)	-0.46	14-16	>999		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.60	Horz(CT)	0.10	12	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S						
								Weight: 318 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except 2-0-0 oc purlins (3-8-14 max.): 6-8.
BOT CHORD 2x6 SP DSS *Except* 17-19: 2x6 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 5-18, 7-18, 7-16, 9-16

**REACTIONS.** All bearings 0-3-8 except (jt=length) 12=7-10-0.  
 (lb) - Max Horz 2=178(LC 12)  
 Max Uplift All uplift 100 lb or less at joint(s) 13 except 2=-217(LC 12), 12=-158(LC 13)  
 Max Grav All reactions 250 lb or less at joint(s) except 2=1885(LC 1), 12=1111(LC 1), 13=1030(LC 1), 13=1030(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-3550/522, 3-5=-3287/512, 5-6=-2519/493, 6-7=-2182/487, 7-8=-2024/469,  
 8-9=-2342/472, 9-11=-2029/390, 11-12=-2266/407  
 BOT CHORD 2-20=-431/3094, 18-20=-312/2637, 16-18=-182/2197, 14-16=-236/1994, 13-14=-290/1946,  
 12-13=-290/1946  
 WEBS 3-20=-367/223, 5-20=-48/569, 5-18=-706/262, 6-18=-85/832, 7-18=-261/168,  
 7-16=-531/155, 8-16=-77/754, 9-14=-585/118, 11-14=-347/228

- NOTES-**
- 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=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) -0-10-8 to 4-1-3, Interior(1) 4-1-3 to 19-8-0, Exterior(2) 19-8-0 to 26-8-6, Interior(1) 26-8-6 to 30-4-0, Exterior(2) 30-4-0 to 37-4-6, Interior(1) 37-4-6 to 49-8-8 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - Provide adequate drainage to prevent water ponding.
  - 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.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 12=158.
  - One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 13. This connection is for uplift only and does not consider lateral forces.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



July 11, 2019

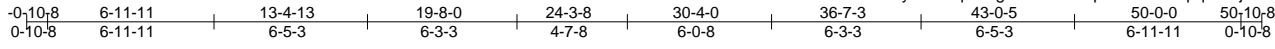
<p><b>WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.</b></p> <p>Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss 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 <b>ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information</b> available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.</p>	<p>ENGINEERING BY</p> <p><b>TRENCO</b></p> <p>A MiTek Affiliate</p> <p>818 Soundside Road Edenton, NC 27932</p>
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Job	Truss	Truss Type	Qty	Ply	140.1582.A	137749898
21437A	H10	HIP	1	1		

84 Components (Dunn), Dunn, NC - 28334,

8.220 s Nov 16 2018 MiTek Industries, Inc. Thu Jul 11 11:03:40 2019 Page 1

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Scale: 1/8"=1'

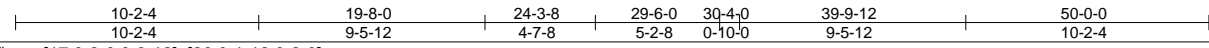
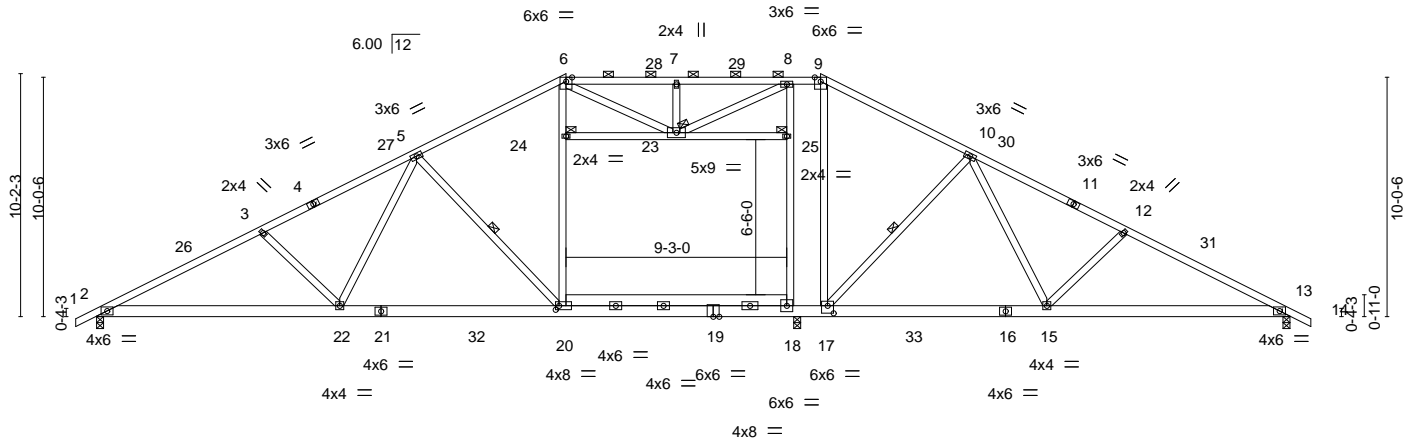


Plate Offsets (X,Y)-- [17:0-3-0,0-3-12], [20:0-1-12,0-2-0]

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.86	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.91	Vert(LL) -0.65 20-22 >536 240		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.95	Vert(CT) -1.15 20-22 >302 180		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.12 13 n/a n/a		
	Code IRC2015/TPI2014		Attic -0.61 18-20 375 360	Weight: 356 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied, except
BOT CHORD 2x6 SP No.2 *Except* 16-19,19-21: 2x6 SP DSS	2-0-0 oc purlins (3-2-5 max.): 6-9.
WEBS 2x4 SP No.3 *Except* 6-20,9-17,8-18: 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
	WEBS 1 Row at midpt 5-20, 10-17
	JOINTS 1 Brace at Jt(s): 23, 24, 25

**REACTIONS.** (lb/size) 2=1843/0-3-8, 18=612/0-3-8, 13=1740/0-3-8  
 Max Horz 2=170(LC 16)  
 Max Uplift 2=-255(LC 12), 18=-227(LC 13), 13=-100(LC 12)  
 Max Grav 2=2023(LC 26), 18=897(LC 25), 13=1863(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-3971/480, 3-5=-3728/466, 5-6=-2829/431, 6-7=-2781/518, 7-8=-2779/516,  
 8-9=-2394/422, 9-10=-2702/441, 10-12=-3305/436, 12-13=-3555/456  
 BOT CHORD 2-22=-503/3480, 20-22=-317/2973, 18-20=-131/2434, 17-18=-127/2398, 15-17=-170/2697,  
 13-15=-288/3113  
 WEBS 3-22=-367/225, 5-22=-63/691, 5-20=-802/271, 20-24=-67/875, 6-24=-57/894,  
 7-23=-362/147, 9-17=-118/1010, 10-17=-675/280, 10-15=-70/534, 12-15=-387/227,  
 18-25=-456/134, 8-25=-434/144, 6-23=-117/360, 8-23=-132/568

**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; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) -0-10-8 to 4-1-8, Interior(1) 4-1-8 to 19-8-0, Exterior(2) 19-8-0 to 26-8-14, Interior(1) 26-8-14 to 30-4-0, Exterior(2) 30-4-0 to 37-4-14, Interior(1) 37-4-14 to 50-10-8 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Provide adequate drainage to prevent water ponding.
- 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.
- Ceiling dead load (5.0 psf) on member(s). 23-24, 23-25
- Bottom chord live load (40.0 psf) and additional bottom chord dead load (0.0 psf) applied only to room. 18-20
- One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2, 18, and 13. This connection is for uplift only and does not consider lateral forces.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- ATTIC SPACE SHOWN IS DESIGNED AS UNINHABITABLE.



July 11, 2019

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



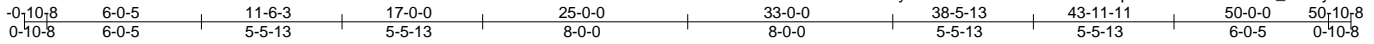
818 Soundside Road  
Edenton, NC 27932

Job 21437A	Truss H11	Truss Type HIP	Qty 1	Ply 1	140.1582.A	137749899
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84 Components (Dunn), Dunn, NC - 28334,

8.220 s Nov 16 2018 MiTek Industries, Inc. Thu Jul 11 11:03:41 2019 Page 1

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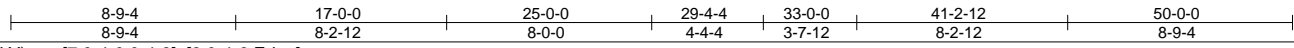
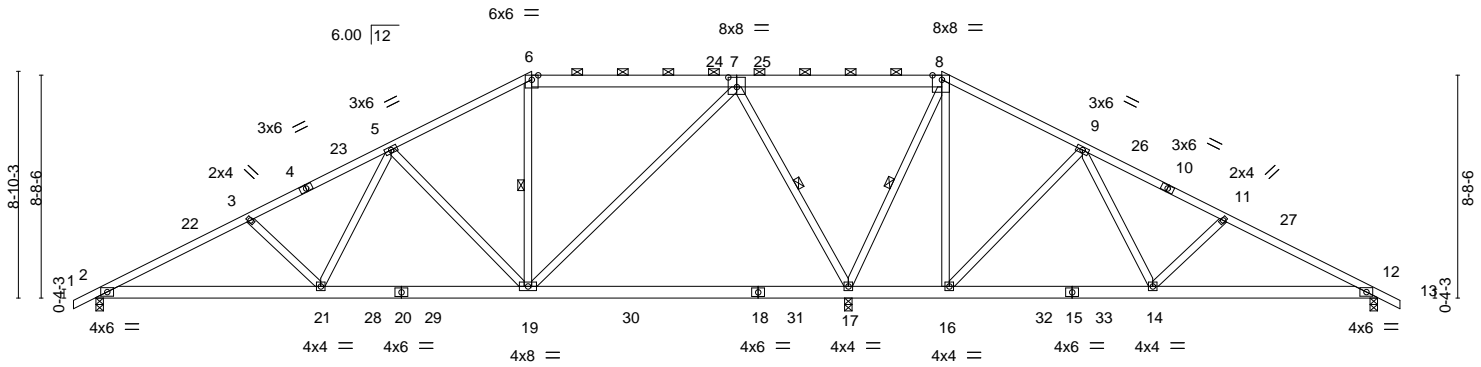


Plate Offsets (X,Y)-- [7:0-4-0,0-4-8], [8:0-4-6,Edge]

<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL	1.15	TC 0.58	Vert(LL)	-0.20 17-19	>999	240	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.57	Vert(CT)	-0.34 17-19	>999	180		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.75	Horz(CT)	0.02 17	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S						
								Weight: 332 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.2 *Except* 7-8,6-7: 2x6 SP No.2	TOP CHORD Structural wood sheathing directly applied or 4-1-5 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 6-8.
BOT CHORD 2x6 SP No.2	BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 2x4 SP No.3	WEBS 1 Row at midpt 6-19, 7-17, 8-17

**REACTIONS.** (lb/size) 2=955/0-3-8, 17=2655/0-3-8, 12=489/0-3-8  
 Max Horz 2=147(LC 16)  
 Max Uplift 2=-154(LC 12), 17=-94(LC 12), 12=-143(LC 13)  
 Max Grav 2=1010(LC 23), 17=2655(LC 1), 12=571(LC 24)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-1671/259, 3-5=-1415/245, 5-6=-735/211, 6-7=-598/230, 7-8=-6/967, 8-9=-11/598,  
 9-11=-461/201, 11-12=-718/230  
 BOT CHORD 2-21=-293/1427, 19-21=-135/1002, 17-19=-300/231, 16-17=-488/235, 12-14=-120/577  
 WEBS 3-21=-328/194, 5-21=-53/462, 5-19=-602/230, 7-19=-109/1081, 7-17=-1492/340,  
 8-17=-1191/247, 8-16=-120/497, 9-16=-649/217, 9-14=-33/543, 11-14=-334/195

**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; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) -0-10-8 to 4-1-8, Interior(1) 4-1-8 to 17-0-0, Exterior(2) 17-0-0 to 24-0-14, Interior(1) 24-0-14 to 33-0-0, Exterior(2) 33-0-0 to 40-0-14, Interior(1) 40-0-14 to 50-10-8 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Provide adequate drainage to prevent water ponding.
- 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.
- One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2, 17, and 12. This connection is for uplift only and does not consider lateral forces.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



July 11, 2019

<p><b>WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.</b></p> <p>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 <b>ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information</b> available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.</p>	<p>ENGINEERING BY  <b>TRENCO</b>          A MiTek Affiliate</p> <p>818 Soundside Road          Edenton, NC 27932</p>
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Job 21437A	Truss H13	Truss Type HIP	Qty 1	Ply 1	140.1582.A	137749901
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84 Components (Dunn), Dunn, NC - 28334,

8.220 s Nov 16 2018 MiTek Industries, Inc. Thu Jul 11 11:03:44 2019 Page 1

ID:RUSz4LGuFS2C1bODNZWBaZyX6cZ-j?J2VoFdvFHCKT6QuKOWj8oJ5QHxbt\_lcyELTMyz9UT

-0-10-8	6-1-4	11-8-0	16-0-10	24-9-14	29-4-4	31-8-0	38-4-0	43-10-12	50-0-0	50-10-8
0-10-8	6-1-4	5-6-12	4-4-10	8-9-4	4-6-6	2-3-12	6-8-0	5-6-12	6-1-4	0-10-8

Scale = 1:88.3

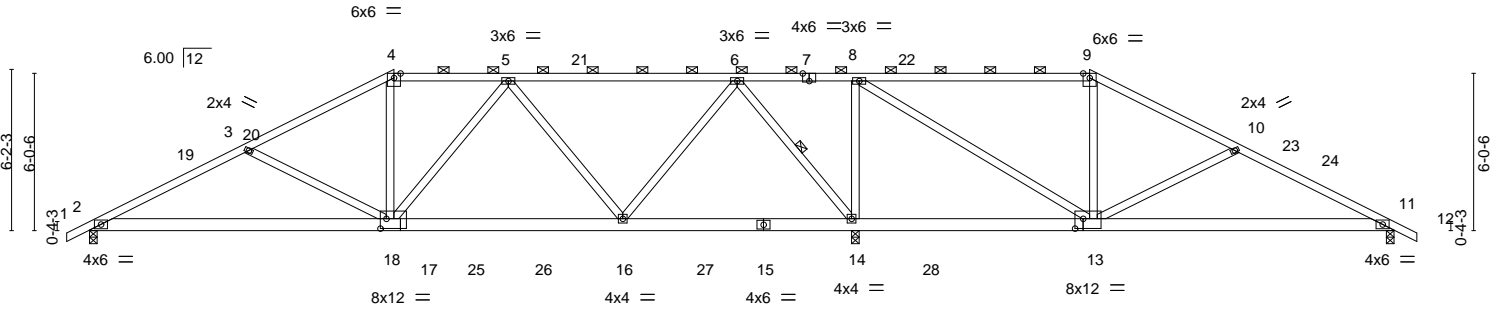


Plate Offsets (X,Y)--	[7:0-3-0,Edge], [13:0-3-12,0-4-8], [17:0-2-12,0-4-8], [17:0-0-0,0-2-12], [18:0-1-12,0-0-0]
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<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL	1.15	TC 0.86	Vert(LL)	-0.14	2-18	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.61	Vert(CT)	-0.30	2-18	>999		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.74	Horz(CT)	0.03	14	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S						
								Weight: 296 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.2 *Except* 7-9: 2x4 SP No.1	TOP CHORD Structural wood sheathing directly applied or 4-0-6 oc purlins, except 2-0-0 oc purlins (4-3-6 max.): 4-9.
BOT CHORD 2x6 SP No.2	BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 2x4 SP No.3	WEBS 1 Row at midpt 6-14

**REACTIONS.** (lb/size) 2=1030/0-3-8, 14=2473/0-3-8, 11=597/0-3-8  
 Max Horz 2=104(LC 12)  
 Max Uplift 2=-128(LC 12), 14=-285(LC 9), 11=-134(LC 13)  
 Max Grav 2=1049(LC 23), 14=2473(LC 1), 11=635(LC 24)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-1729/353, 3-4=-1324/235, 4-5=-1104/252, 5-6=-593/143, 6-8=-46/944,  
 8-9=-307/153, 9-10=-408/129, 10-11=-801/242  
 BOT CHORD 2-18=-244/1485, 16-18=-152/1034, 13-14=-944/272, 11-13=-131/655  
 WEBS 3-18=-424/252, 4-18=-11/366, 5-16=-745/193, 6-16=-66/940, 6-14=-1426/237,  
 8-14=-1176/272, 8-13=-213/1379, 9-13=-307/145, 10-13=-405/244

- 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; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) -0-10-8 to 4-1-8, Interior(1) 4-1-8 to 11-8-0, Exterior(2) 11-8-0 to 18-8-14, Interior(1) 18-8-14 to 38-4-0, Exterior(2) 38-4-0 to 45-4-14, Interior(1) 45-4-14 to 50-10-8 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - Provide adequate drainage to prevent water ponding.
  - 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.
  - One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2, 14, and 11. This connection is for uplift only and does not consider lateral forces.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



Job 21437A	Truss H14	Truss Type HIP	Qty 1	Ply 1	140.1582.A	137749902
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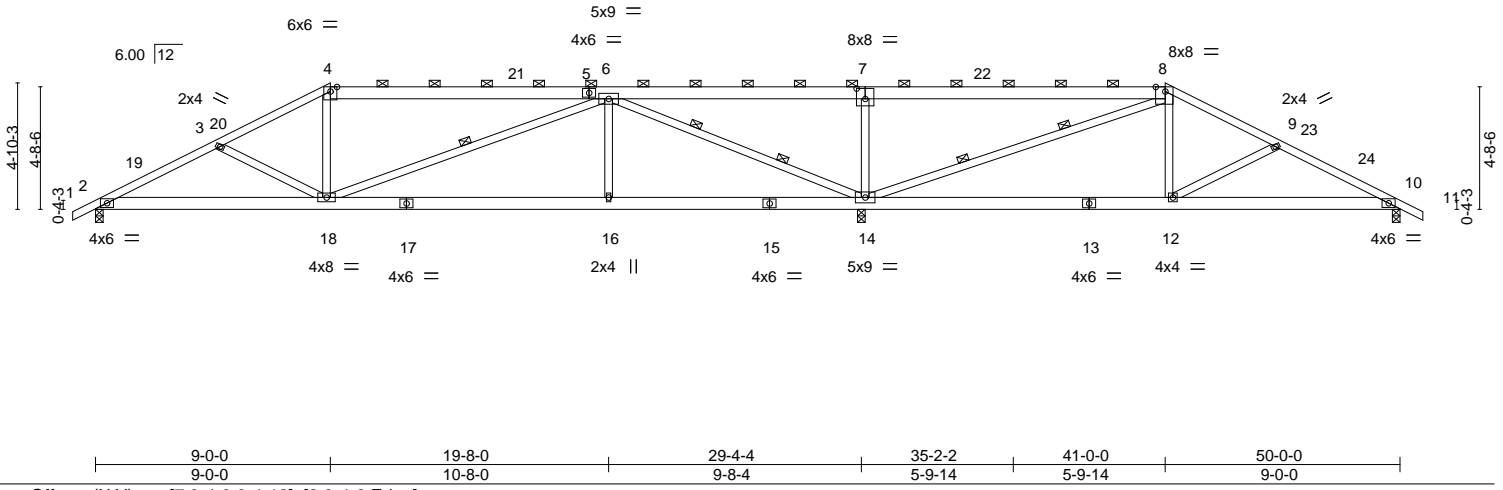
84 Components (Dunn), Dunn, NC - 28334,

8.220 s Nov 16 2018 MiTek Industries, Inc. Thu Jul 11 11:03:45 2019 Page 1

ID:RUSz4LGuFS2C1bODNZWBaZyX6cZ-BCtQj8GFgYP3ydhR2vIGMLTOqd3KFGSrczv?oyz9US

-0-10-8	4-9-4	9-0-0	19-8-0	29-4-4	30-4-0	41-0-0	45-2-12	50-0-0	50-10-8
0-10-8	4-9-4	4-2-12	10-8-0	9-8-4	0-11-12	10-8-0	4-2-12	4-9-4	0-10-8

Scale = 1:88.3



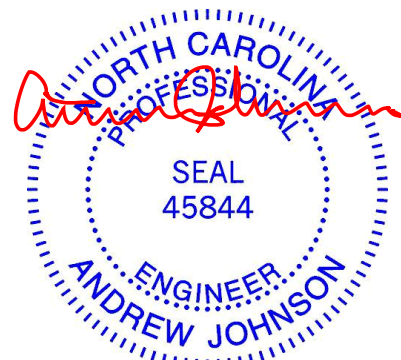
<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL	1.15	TC 0.89	Vert(LL)	-0.10	16-18	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.55	Vert(CT)	-0.25	16-18	>999		
BCLL 0.0 *	Rep Stress Incr	YES	WB 1.00	Horz(CT)	0.06	10	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S						
								Weight: 311 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x6 SP No.2 *Except* 1-4,8-11: 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 3-11-5 oc purlins, except 2-0-0 oc purlins (3-6-8 max.): 4-8.
BOT CHORD 2x6 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 6-18 2 Rows at 1/3 pts 6-14, 8-14

**REACTIONS.** (lb/size) 2=1102/0-3-8, 14=2315/0-3-8, 10=683/0-3-8  
 Max Horz 2=81(LC 12)  
 Max Uplift 2=-109(LC 12), 14=-342(LC 9), 10=-116(LC 13)  
 Max Grav 2=1107(LC 23), 14=2315(LC 1), 10=697(LC 24)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-1946/364, 3-4=-1695/277, 4-6=-1481/286, 6-7=-63/690, 7-8=-62/693,  
 8-9=-767/146, 9-10=-1037/234  
 BOT CHORD 2-18=-261/1683, 16-18=-203/1367, 14-16=-203/1367, 12-14=0/637, 10-12=-148/874  
 WEBS 4-18=0/415, 6-16=0/390, 6-14=-2213/353, 7-14=-709/311, 8-14=-1389/212, 8-12=0/484,  
 9-12=-257/189

- 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=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) -0-10-8 to 4-1-8, Interior(1) 4-1-8 to 9-0-0, Exterior(2) 9-0-0 to 16-0-14, Interior(1) 16-0-14 to 41-0-0, Exterior(2) 41-0-0 to 48-0-14, Interior(1) 48-0-14 to 50-10-8 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) Provide adequate drainage to prevent water ponding.
  - 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.
  - 6) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2, 14, and 10. This connection is for uplift only and does not consider lateral forces.
  - 7) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

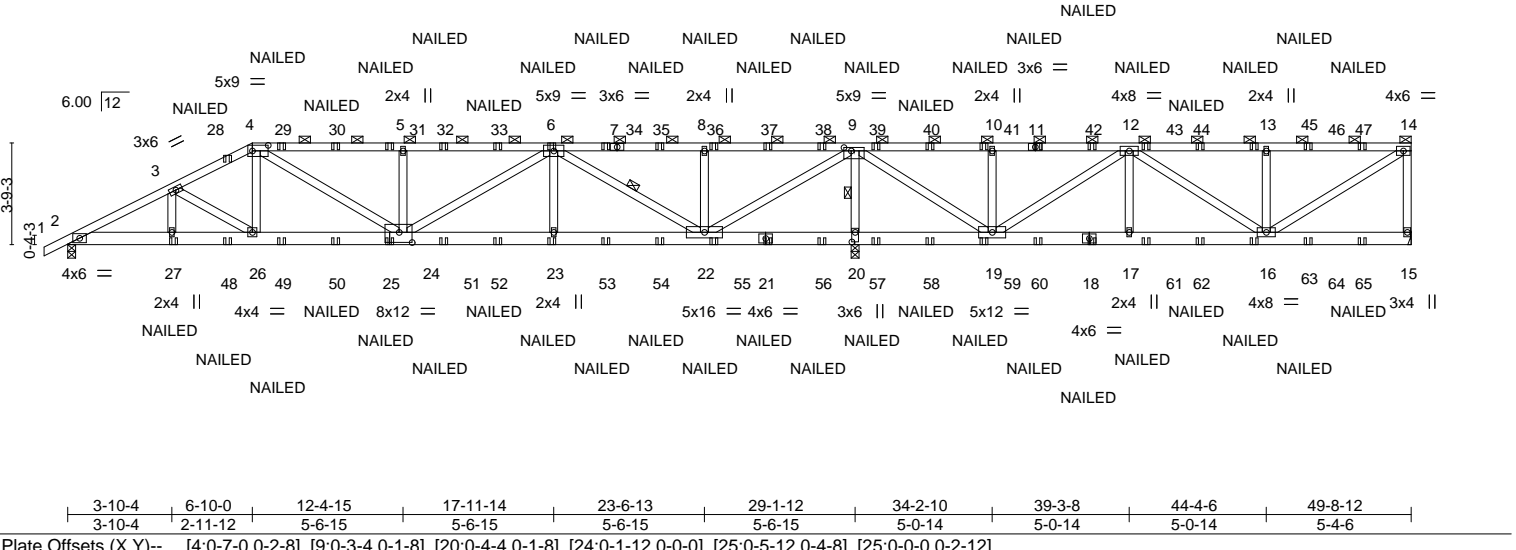


July 11, 2019

<p><b>WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.</b></p> <p>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 <b>ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information</b> available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.</p>	<p>ENGINEERING BY  <b>TRENCO</b>  <small>A MiTek Affiliate</small></p> <p>818 Soundside Road        Edenton, NC 27932</p>
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Job	Truss	Truss Type	Qty	Ply	140.1582.A	137749903
21437A	HG1	HALF HIP GIRDER	1	1		

84 Components (Dunn), Dunn, NC - 28334, 8.220 s Nov 16 2018 MiTek Industries, Inc. Thu Jul 11 11:03:56 2019 Page 1  
 ID:RUSz4LGuFS2C1bODNZWBaZyX6cZ-MJ1a1vO94xoVnJ1kbscLcGllmGONPFJ4Mp8\_ufyz9UH  
 -0-10-8 3-10-4 6-10-0 12-4-15 17-11-14 23-6-13 29-1-12 34-2-10 39-3-8 44-4-6 49-8-12  
 0-10-8 3-10-4 2-11-12 5-6-15 5-6-15 5-6-15 5-6-15 5-0-14 5-0-14 5-0-14 5-4-6  
 Scale = 1:85.3



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 0.94	Vert(LL)	0.18 23-24	>999	240	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.57	Vert(CT)	-0.30 23-24	>999	180		
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.91	Horz(CT)	0.04 20	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S					Weight: 310 lb	FT = 20%

**LUMBER-**  
 TOP CHORD 2x4 SP No.2  
 BOT CHORD 2x6 SP No.2  
 WEBS 2x4 SP No.3 \*Except\*  
 6-24,6-22,9-22,9-19,12-19,12-16: 2x4 SP No.2

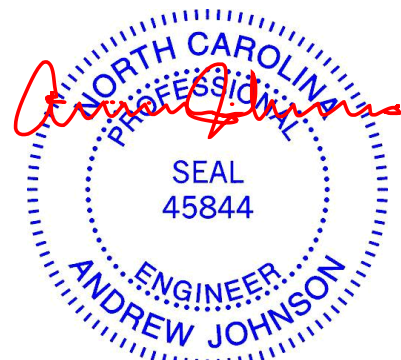
**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 3-4-5 oc purlins, except end verticals, and 2-0-0 oc purlins (2-5-1 max.): 4-14.  
 BOT CHORD Rigid ceiling directly applied or 4-3-1 oc bracing.  
 WEBS 1 Row at midpt 6-22, 9-20

**REACTIONS.** (lb/size) 15=834/Mechanical, 2=1453/0-3-8, 20=3986/0-3-8 (req. 0-4-11)  
 Max Horz 2=147(LC 12)  
 Max Uplift 15=305(LC 8), 2=334(LC 12), 20=1398(LC 9)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-2720/730, 3-4=-2482/742, 4-5=-2774/930, 5-6=-2774/931, 6-8=-308/125, 8-9=-308/125, 9-10=-166/541, 10-12=-166/541, 12-13=-893/341, 13-14=-893/341, 14-15=-755/336  
 BOT CHORD 2-27=-745/2378, 26-27=-745/2378, 24-26=-700/2200, 23-24=-742/2156, 22-23=-742/2156, 20-22=-2609/878, 19-20=-2609/878, 17-19=-288/678, 16-17=-288/678  
 WEBS 4-26=0/455, 4-24=-341/685, 5-24=-570/400, 6-24=-233/722, 6-23=0/389, 6-22=-2162/723, 8-22=-534/375, 9-22=-1172/3413, 9-20=-3691/1460, 9-19=-876/2486, 10-19=-474/333, 12-19=-1467/513, 12-17=0/343, 12-16=-83/258, 13-16=-536/374, 14-16=-387/1024

- NOTES-**
- 1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) -0-10-8 to 3-10-4, Interior(1) 3-10-4 to 6-10-0, Exterior(2) 6-10-0 to 13-10-6, Interior(1) 13-10-6 to 49-7-0 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) Provide adequate drainage to prevent water ponding.
  - 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 where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 5) WARNING: Required bearing size at joint(s) 20 greater than input bearing size.
  - 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) 15=305, 20=1398.
  - 8) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
  - 9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
  - 10) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidelines.
  - 11) 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  
 Continued on page 2



**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.**  
 Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANS/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.

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



Job 21437A	Truss HG1	Truss Type HALF HIP GIRDER	Qty 1	Ply 1	140.1582.A  Job Reference (optional)	I37749903
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84 Components (Dunn), Dunn, NC - 28334,

8.220 s Nov 16 2018 MiTek Industries, Inc. Thu Jul 11 11:03:57 2019 Page 2  
ID:RUSz4LGuFS2C1bODNZWbaZyX6cZ-qWbyEFPnrEwMOTcw8Z7altrWWgkb8iZDbTtXQ6yz9UG

**LOAD CASE(S)** Standard

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

Uniform Loads (plf)

Vert: 1-4=-60, 4-14=-60, 2-15=-20

Concentrated Loads (lb)

Vert: 25=-27(F) 27=-58(F) 6=-73(F) 23=-27(F) 11=-73(F) 18=-27(F) 21=-27(F) 28=-63(F) 29=-73(F) 30=-73(F) 31=-73(F) 32=-73(F) 33=-73(F) 34=-73(F) 35=-73(F) 36=-73(F) 37=-73(F) 38=-73(F) 39=-73(F) 40=-73(F) 41=-73(F) 42=-73(F) 43=-73(F) 44=-73(F) 45=-73(F) 46=-73(F) 47=-73(F) 48=-37(F) 49=-27(F) 50=-27(F) 51=-27(F) 52=-27(F) 53=-27(F) 54=-27(F) 55=-27(F) 56=-27(F) 57=-27(F) 58=-27(F) 59=-27(F) 60=-27(F) 61=-27(F) 62=-27(F) 63=-27(F) 64=-27(F) 65=-27(F)

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



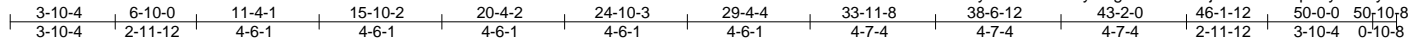
818 Soundside Road  
Edenton, NC 27932

Job 21437A	Truss HG15	Truss Type HIP GIRDER	Qty 1	Ply 1	140.1582.A	137749904
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84 Components (Dunn), Dunn, NC - 28334,

8.220 s Nov 16 2018 MiTek Industries, Inc. Thu Jul 11 11:04:02 2019 Page 1

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Scale = 1:84.6

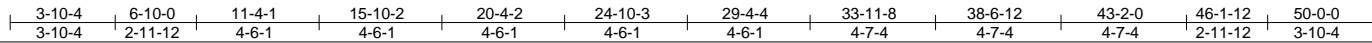
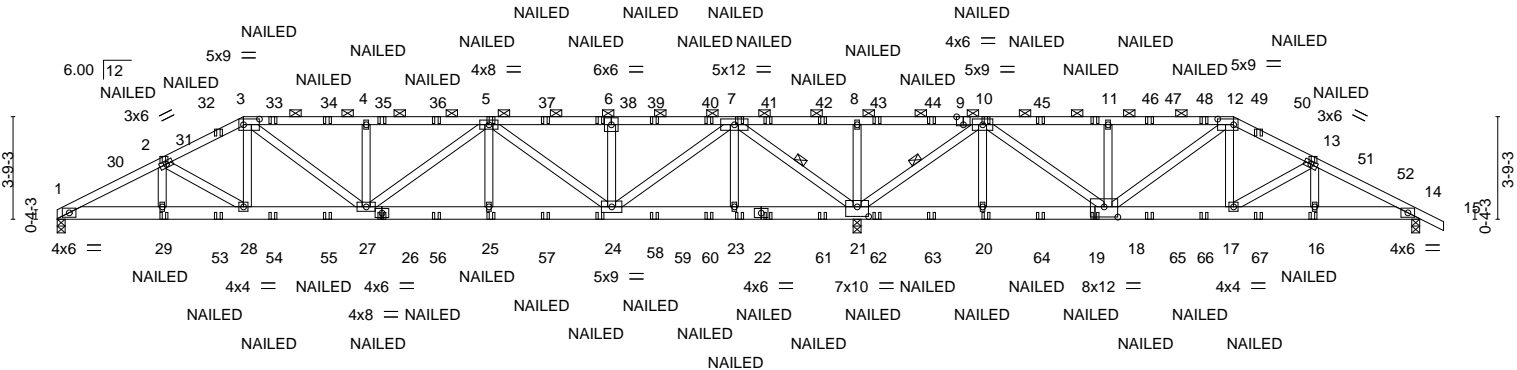


Plate Offsets (X, Y)-- [3:0-7-0,0-2-8], [9:0-3-0,Edge], [12:0-7-0,0-2-8], [18:0-6-0,0-4-8], [18:0-1-12,0-0-0], [19:0-0-0,0-2-12], [21:0-5-0,0-4-4]

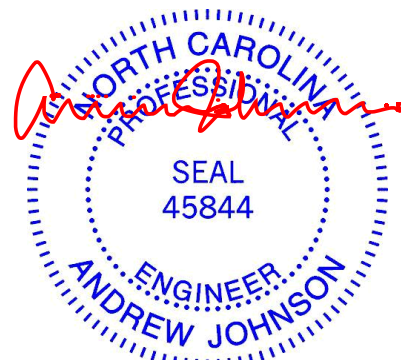
<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL	1.15	TC 0.87	Vert(LL)	0.18 25-27	>999	240	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.61	Vert(CT)	-0.28 25-27	>999	180		
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.94	Horz(CT)	0.05 14	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S					Weight: 312 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.2 *Except* 9-12,6-9: 2x4 SP No.1	TOP CHORD Structural wood sheathing directly applied or 3-2-5 oc purlins, except 2-0-0 oc purlins (3-0-13 max.): 3-12.
BOT CHORD 2x6 SP No.2	BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 2x4 SP No.3	WEBS 1 Row at midpt 7-21, 10-21

**REACTIONS.** (lb/size) 1=1470/0-3-8, 21=4144/0-3-8 (req. 0-4-14), 14=804/0-3-8  
 Max Horz 1=-72(LC 40)  
 Max Uplift 1=-363(LC 12), 21=-1425(LC 9), 14=-174(LC 13)  
 Max Grav 1=1474(LC 23), 21=4144(LC 1), 14=812(LC 24)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-2=-2916/825, 2-3=-2578/815, 3-4=-2819/980, 4-5=-2818/980, 5-6=-1582/618,  
 6-7=-1581/616, 7-8=-905/2844, 8-10=-905/2844, 10-11=-433/169, 11-12=-433/169,  
 12-13=-958/264, 13-14=-1363/294  
 BOT CHORD 1-29=-688/2557, 28-29=-688/2557, 27-28=-667/2281, 25-27=-886/2593, 24-25=-886/2593,  
 20-21=-879/374, 18-20=-879/374, 17-18=-133/831, 16-17=-212/1170, 14-16=-212/1170  
 WEBS 2-28=-342/86, 3-28=0/443, 3-27=-334/705, 4-27=-457/323, 5-27=-60/289, 5-25=0/302,  
 5-24=-1271/400, 6-24=-436/301, 7-24=-748/2261, 7-23=0/294, 7-21=-3247/1156,  
 8-21=-474/317, 10-21=-2448/801, 10-20=0/253, 10-18=-494/1589, 11-18=-479/332,  
 12-18=-507/117, 12-17=0/431, 13-17=-415/107

- 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; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 0-1-12 to 3-1-12, Interior(1) 3-1-12 to 6-10-0, Exterior(2) 6-10-0 to 11-4-1, Interior(1) 11-4-1 to 43-2-0, Exterior(2) 43-2-0 to 47-4-15, Interior(1) 47-4-15 to 50-10-8 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - Provide adequate drainage to prevent water ponding.
  - All plates are 2x4 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.
  - WARNING: Required bearing size at joint(s) 21 greater than input bearing size.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 21=1425.
  - One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1 and 14. This connection is for uplift only and does not consider lateral forces.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
  - "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidelines.
  - In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).



Continued on page 2

**LOAD CASE(S)** Standard

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	140.1582.A	I37749904
21437A	HG15	HIP GIRDER	1	1		
						Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334,

8.220 s Nov 16 2018 MiTek Industries, Inc. Thu Jul 11 11:04:02 2019 Page 2  
 ID:RUSz4LGuFS2C1bODNZWBaZyX6cZ-BTOrHyTwgnYfVEUux6jISxYNJhQ7pzPylb15Jyz9UB

**LOAD CASE(S)** Standard

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

Uniform Loads (plf)

Vert: 1-3=-60, 3-12=-60, 12-15=-60, 1-14=-20

Concentrated Loads (lb)

Vert: 26=-27(B) 2=-83(B) 29=-58(B) 5=-73(B) 25=-27(B) 7=-73(B) 23=-27(B) 20=-27(B) 10=-73(B) 13=-83(B) 16=-58(B) 19=-27(B) 22=-27(B) 32=-63(B) 33=-73(B) 34=-73(B) 35=-73(B) 36=-73(B) 37=-73(B) 38=-73(B) 39=-73(B) 40=-73(B) 41=-73(B) 42=-73(B) 43=-73(B) 44=-73(B) 45=-73(B) 46=-73(B) 48=-73(B) 49=-73(B) 50=-63(B) 53=-37(B) 54=-27(B) 55=-27(B) 56=-27(B) 57=-27(B) 58=-27(B) 59=-27(B) 60=-27(B) 61=-27(B) 62=-27(B) 63=-27(B) 64=-27(B) 65=-27(B) 66=-27(B) 67=-37(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/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



818 Soundside Road  
 Edenton, NC 27932

Job 21437A	Truss J1	Truss Type JACK-OPEN	Qty 40	Ply 1	140.1582.A	137749905
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84 Components (Dunn), Dunn, NC - 28334,

8.220 s Nov 16 2018 MiTek Industries, Inc. Thu Jul 11 11:04:03 2019 Page 1

ID:RUSz4LGuFS2C1bODNZWBaZyX6cZ-fyEVIUYR4gV6O34VqE\_?85fb4rkYdH5zPKsemyz9UA

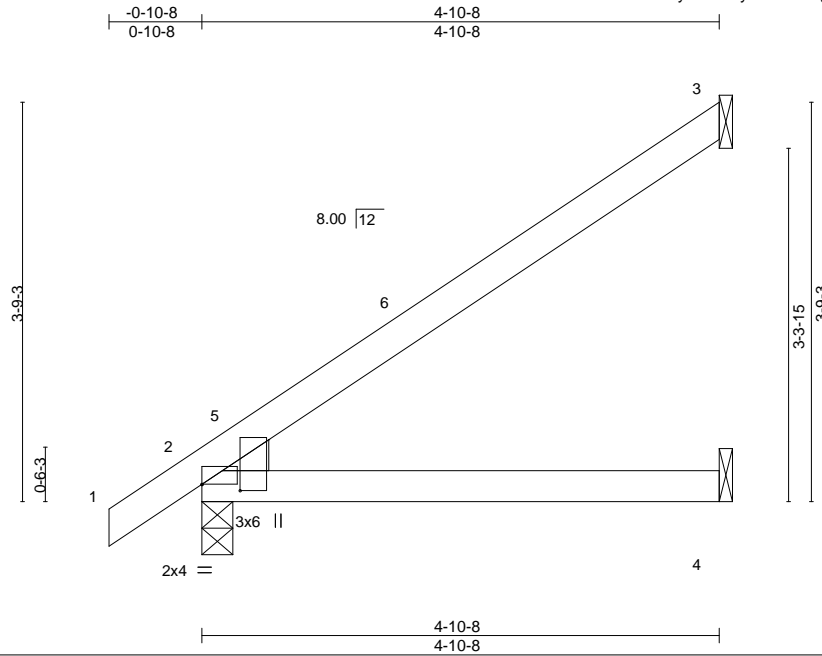


Plate Offsets (X,Y)--	[2:0-0-0,0-0-0], [2:0-0-11,0-4-5]				
<b>LOADING</b> (psf)	<b>SPACING-</b> 2-0-0	<b>CSI.</b>	<b>DEFL.</b> in (loc) l/defl L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL 1.15	TC 0.39	Vert(LL) -0.03 2-4 >999 240	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.27	Vert(CT) -0.06 2-4 >984 180		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.00	Horz(CT) -0.00 3 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-P		Weight: 18 lb	FT = 20%

**LUMBER-**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEDGE  
Left: 2x4 SP No.3

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

**REACTIONS.** (lb/size) 3=133/Mechanical, 2=255/0-3-8, 4=47/Mechanical  
Max Horz 2=144(LC 12)  
Max Uplift 3=107(LC 12), 2=11(LC 12)  
Max Grav 3=148(LC 19), 2=255(LC 1), 4=93(LC 3)

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

**NOTES-**

- 1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TC DL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 4-9-12 zone; 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 where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 4) Refer to girder(s) for truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 3=107.
- 6) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.



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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



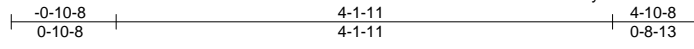
818 Soundside Road  
Edenton, NC 27932

Job 21437A	Truss J2	Truss Type JACK-OPEN	Qty 3	Ply 1	140.1582.A	137749906
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84 Components (Dunn), Dunn, NC - 28334,

8.220 s Nov 16 2018 MiTek Industries, Inc. Thu Jul 11 11:04:04 2019 Page 1

ID:RUSz4LGuFS2C1bODNZWBaZyX6cZ-7sWcieUACooMkYeG3XIDXMdrOUBQH4XFC34PACyz9U9



Scale = 1:19.2

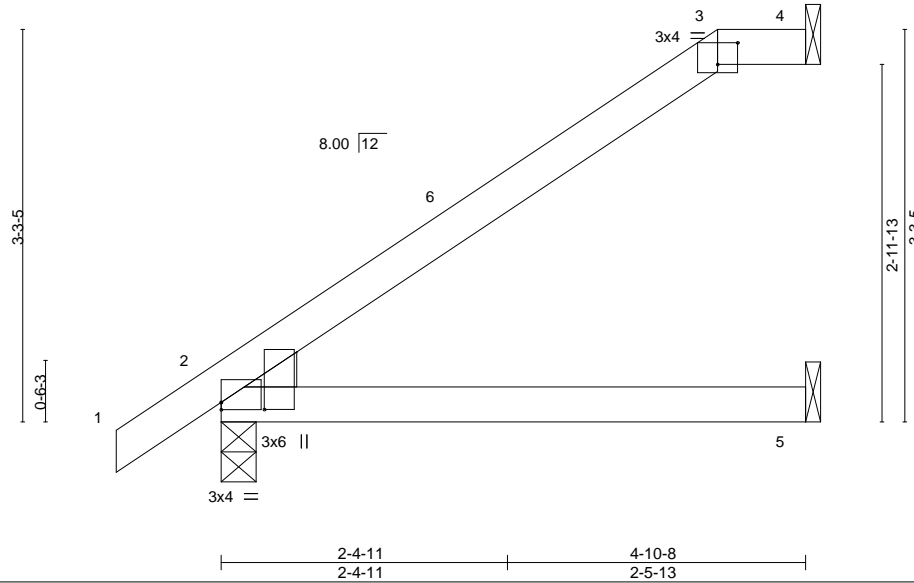


Plate Offsets (X,Y)--	[2:0-0-11,0-4-5], [2:0-0-0,0-0-12], [3:0-2-0,0-2-3]
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LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.33	Vert(LL)	-0.02	2-5	>999	240	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.24	Vert(CT)	-0.05	2-5	>999	180		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.00	Horz(CT)	0.03	4	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-P						Weight: 18 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 4-10-8 oc purlins, except
BOT CHORD 2x4 SP No.2	2-0-0 oc purlins: 3-4.
WEDGE	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
Left: 2x4 SP No.3	

**REACTIONS.** (lb/size) 4=123/Mechanical, 2=255/0-3-8, 5=57/Mechanical  
 Max Horz 2=128(LC 12)  
 Max Uplift 4=69(LC 12), 2=-21(LC 12)  
 Max Grav 4=123(LC 1), 2=255(LC 1), 5=88(LC 3)

**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; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 4-1-11, Exterior(2) 4-1-11 to 4-9-12 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) Provide adequate drainage to prevent water ponding.
  - 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.
  - 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) 4.
  - 8) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
  - 9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



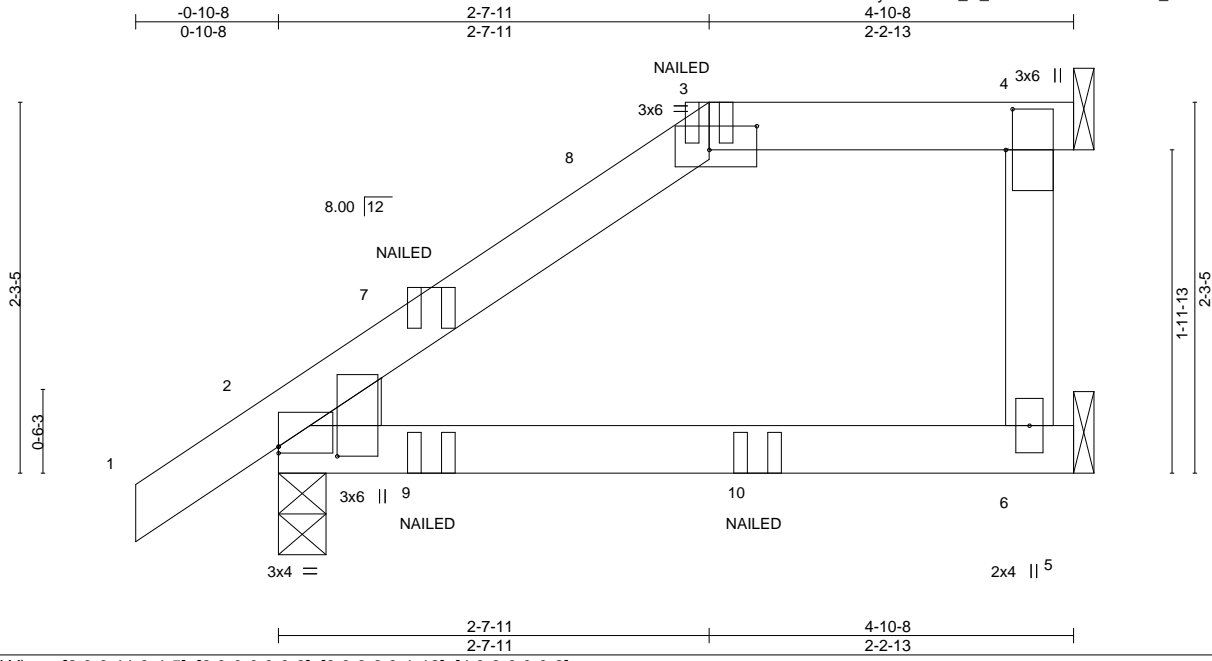
July 11, 2019

Job 21437A	Truss J3	Truss Type JACK-OPEN GIRDER	Qty 3	Ply 1	140.1582.A	137749907
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84 Components (Dunn), Dunn, NC - 28334,

8.220 s Nov 16 2018 MiTek Industries, Inc. Thu Jul 11 11:04:05 2019 Page 1

ID:RUSz4LGuFS2C1bODNZWBaZyX6cZ-b24\_w\_VoziwDMiDTcFGS4ZA\_6uV60XnORjpyiez9U8



Scale = 1:14.1

Plate Offsets (X,Y)--	[2:0-0-11,0-4-5], [2:0-0-0,0-0-8], [3:0-3-8,0-1-12], [4:0-3-0,0-0-8]
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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 0.46	Vert(LL)	0.03	2-6	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.34	Vert(CT)	-0.06	2-6	>920		
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.00	Horz(CT)	0.06	4	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-P					Weight: 20 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 4-10-8 oc purlins, except
BOT CHORD 2x4 SP No.2	2-0-0 oc purlins: 3-4.
WEBS 2x4 SP No.3	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEDGE	
Left: 2x4 SP No.3	

**REACTIONS.** (lb/size) 2=319/0-3-8, 4=143/Mechanical, 6=78/Mechanical  
 Max Horz 2=90(LC 12)  
 Max Uplift 2=-52(LC 12), 4=-69(LC 9)  
 Max Grav 2=319(LC 1), 4=143(LC 1), 6=120(LC 3)

**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; TCCL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 2-7-11, Exterior(2) 2-7-11 to 4-7-4 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Provide adequate drainage to prevent water ponding.
- 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.
- 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) 4.
- 8) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
- 9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- 10) Gap between inside of top chord bearing and first diagonal or vertical web shall not exceed 0.500in.
- 11) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidelines.
- 12) 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, 3-4=-60, 2-5=-20  
 Concentrated Loads (lb)  
 Vert: 3=-41(B) 7=-36(B) 9=-24(B) 10=-16(B)

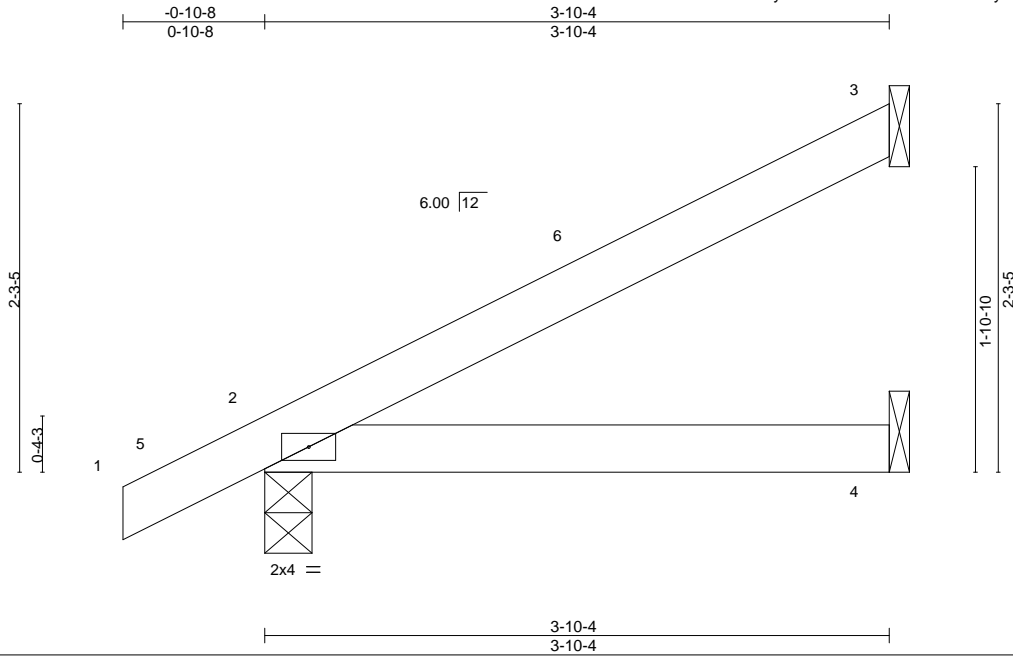


Job 21437A	Truss J4	Truss Type JACK-OPEN	Qty 3	Ply 1	140.1582.A	137749908
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84 Components (Dunn), Dunn, NC - 28334,

8.220 s Nov 16 2018 MiTek Industries, Inc. Thu Jul 11 11:04:06 2019 Page 1

ID:RUSz4LGuFS2C1bODNZWBaZyX6cZ-3EeM7KWRk?24zrofAynhcnidfluAI\_1YgNZWE4yz9U7



<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>	
TCLL 20.0	Plate Grip DOL	1.15	TC 0.21	Vert(LL)	-0.01	2-4	>999	240	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.16	Vert(CT)	-0.02	2-4	>999	180		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.00	Horz(CT)	-0.00	3	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-P						Weight: 14 lb	FT = 20%

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

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

**REACTIONS.** (lb/size) 3=101/Mechanical, 2=216/0-3-8, 4=36/Mechanical  
Max Horz 2=88(LC 12)  
Max Uplift 3=65(LC 12), 2=32(LC 12)  
Max Grav 3=101(LC 1), 2=216(LC 1), 4=73(LC 3)

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

- NOTES-**
- 1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 3-9-8 zone;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 where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 4) Refer to girder(s) for truss connections.
  - 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3.
  - 6) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.

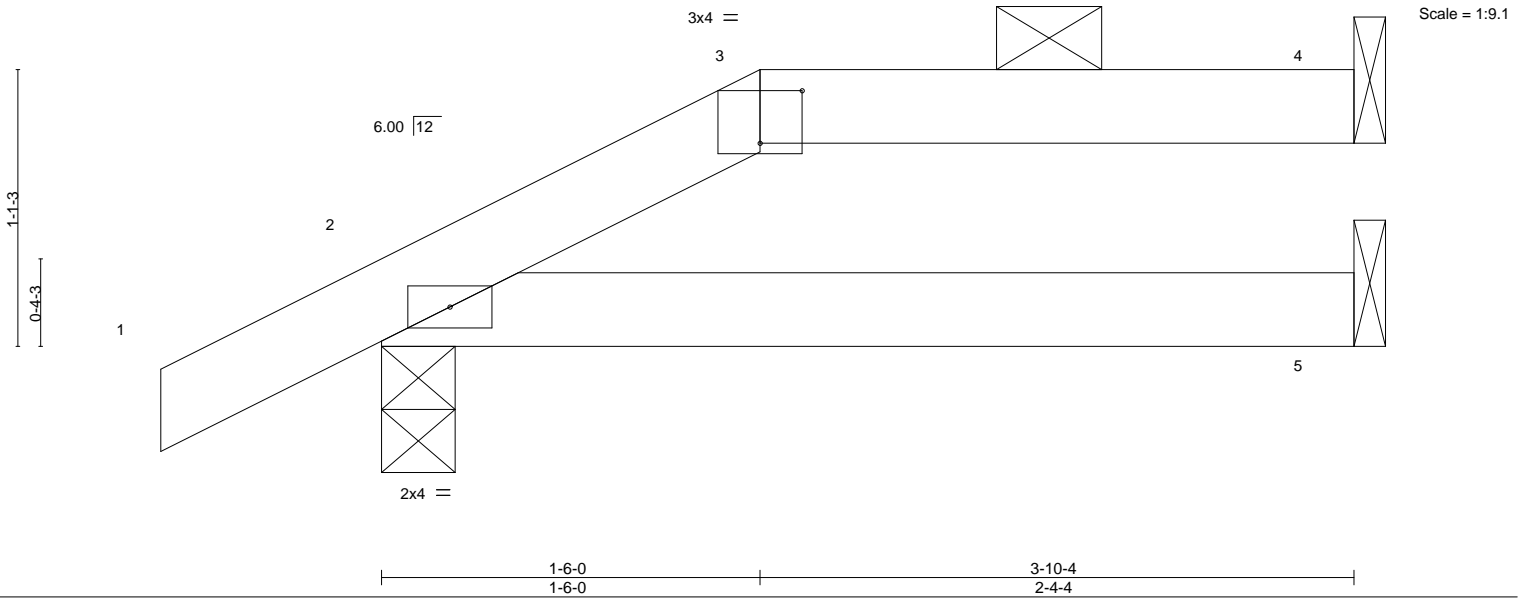


Job 21437A	Truss J5	Truss Type JACK-OPEN	Qty 3	Ply 1	140.1582.A	137749909
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84 Components (Dunn), Dunn, NC - 28334,

8.220 s Nov 16 2018 MiTek Industries, Inc. Thu Jul 11 11:04:07 2019 Page 1

ID:RUSz4LGuFS2C1bODNZWBaZyX6cZ-YRCkKgX3VJBxb?NrkfJw9\_FPriEmURHhu113nXyz9U6



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 0.18	Vert(LL)	-0.01	2-5	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.13	Vert(CT)	-0.02	2-5	>999		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.00	Horz(CT)	0.01	4	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-P					Weight: 13 lb	FT = 20%

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

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

**REACTIONS.** (lb/size) 4=96/Mechanical, 2=216/0-3-8, 5=42/Mechanical  
 Max Horz 2=44(LC 12)  
 Max Uplift 4=-38(LC 9), 2=-36(LC 12)  
 Max Grav 4=96(LC 1), 2=216(LC 1), 5=67(LC 3)

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

**NOTES-**

- 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=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Provide adequate drainage to prevent water ponding.
- 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.
- 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) 4.
- One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



818 Soundside Road  
 Edenton, NC 27932

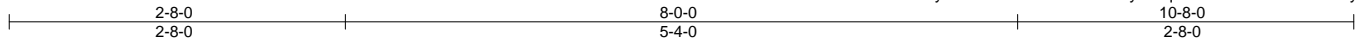


Job 21437A	Truss PB1	Truss Type PIGGYBACK	Qty 2	Ply 1	140.1582.A	137749910
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84 Components (Dunn), Dunn, NC - 28334,

8.220 s Nov 16 2018 MiTek Industries, Inc. Thu Jul 11 11:04:08 2019 Page 1

ID:RUSz4LGuFS2C1bODNZWBaZyX6cZ-0dm7Y?YhFdJoD9y2INq9iCoWt5R?DuXr7h2cJzyz9U5



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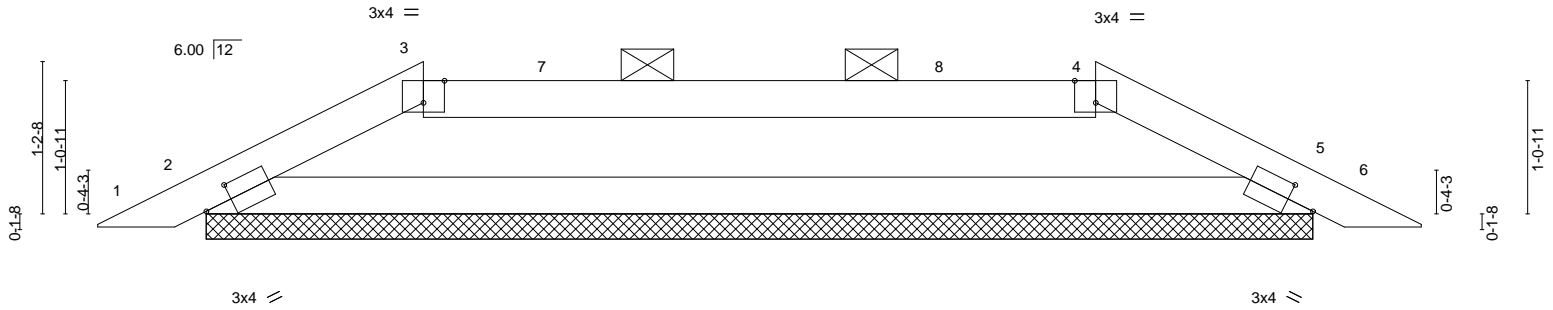


Plate Offsets (X,Y)--	[2:0-2-10,0-1-8], [3:0-2-0,Edge], [4:0-2-0,Edge], [5:0-2-10,0-1-8]
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LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/def	L/d	PLATES	GRIP	
TCLL 20.0	Plate Grip DOL	1.15	TC 0.42	Vert(LL)	0.00	6	n/r	120	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.71	Vert(CT)	0.01	6	n/r	120		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.00	Horz(CT)	0.01	5	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-R						Weight: 30 lb	FT = 20%

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

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except 2-0-0 oc purlins (6-0-0 max.); 3-4.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (lb/size) 2=384/8-9-6, 5=384/8-9-6  
 Max Horz 2=-18(LC 17)  
 Max Uplift 2=-39(LC 9), 5=-39(LC 8)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-662/298, 3-4=-608/281, 4-5=-662/298  
 BOT CHORD 2-5=-227/608

- NOTES-**
- 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=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 0-4-11 to 6-10-15, Interior(1) 6-10-15 to 8-0-0, Exterior(2) 8-0-0 to 10-3-5 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - Provide adequate drainage to prevent water ponding.
  - Gable requires continuous bottom chord bearing.
  - 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.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 5.
  - See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



**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.

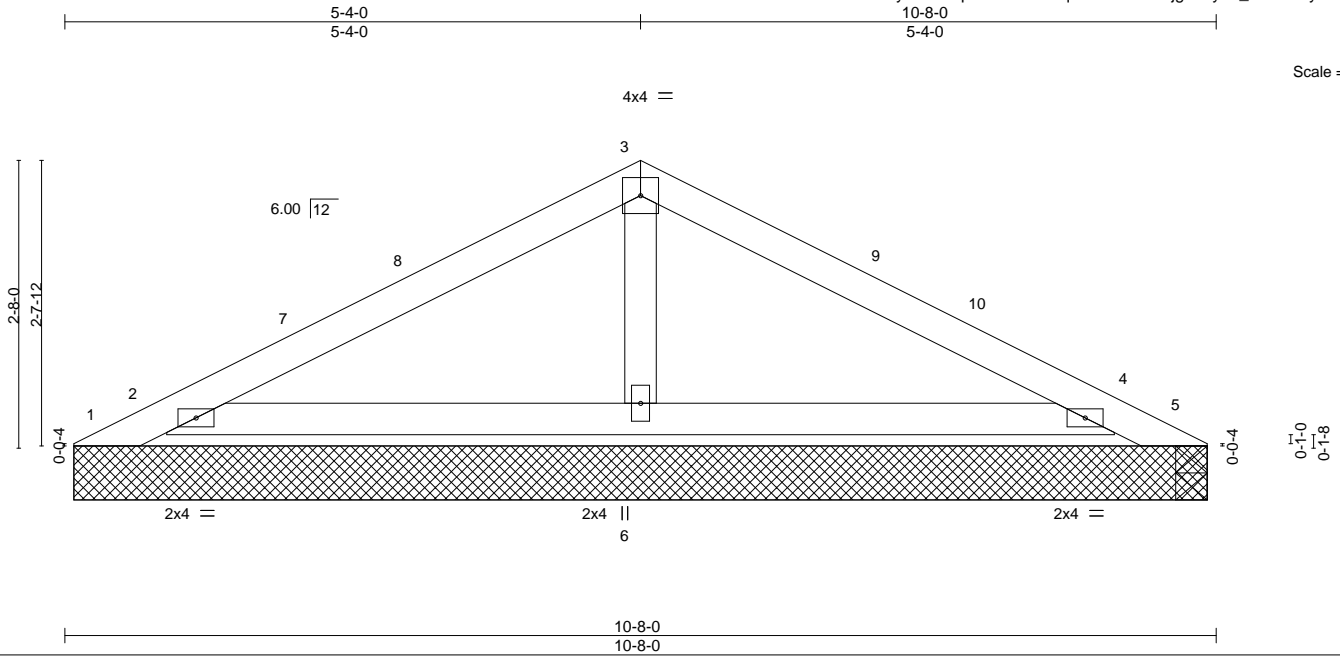
ENGINEERING BY  
**TRENCO**  
 A MiTek Affiliate  
 818 Soundside Road  
 Edenton, NC 27932

Job 21437A	Truss PB2	Truss Type PIGGYBACK	Qty 3	Ply 1	140.1582.A	137749911
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84 Components (Dunn), Dunn, NC - 28334,

8.220 s Nov 16 2018 MiTek Industries, Inc. Thu Jul 11 11:04:09 2019 Page 1

ID:RUSz4LGuFS2C1bODNZWBaZyX6cZ-UpJVILYJ0wRfqJXEr4LOEPKjgVvJyL8\_MLnArPyz9U4



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 0.29	Vert(LL)	-0.01	4-6	>999	240	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.19	Vert(CT)	-0.02	4-6	>999	180		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.04	Horz(CT)	0.00	4	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-P						Weight: 33 lb	FT = 20%

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

**REACTIONS.** All bearings 10-6-0 except (jt=length) 5=0-3-8, 5=0-3-8.  
 (lb) - Max Horz 1=44(LC 13)  
 Max Uplift All uplift 100 lb or less at joint(s) except 1=-210(LC 1), 2=-218(LC 12), 4=-174(LC 13), 5=-146(LC 1), 5=-146(LC 1)  
 Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 2=457(LC 1), 4=406(LC 1), 6=300(LC 1)

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

- 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; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 0-4-11 to 3-4-11, Interior(1) 3-4-11 to 5-4-0, Exterior(2) 5-4-0 to 8-4-0, Interior(1) 8-4-0 to 10-5-4 zone; 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.
  - Bearing at joint(s) 5 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 210 lb uplift at joint 1, 218 lb uplift at joint 2, 174 lb uplift at joint 4 and 146 lb uplift at joint 5.
  - See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.



July 11, 2019



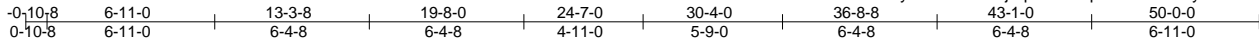
Job 21437A	Truss T8	Truss Type PIGGYBACK BASE	Qty 1	Ply 1	140.1582.A	137749913
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84 Components (Dunn), Dunn, NC - 28334,

8.220 s Nov 16 2018 MiTek Industries, Inc. Thu Jul 11 11:04:13 2019 Page 1

ID:RUSz4LGuFS2C1bODNZWBaZyX6cZ-MbZ?bjbq49x5Jwq?4wPKPFVGY6ACuz3aHyIN\_Ayz9U0

Job Reference (optional)



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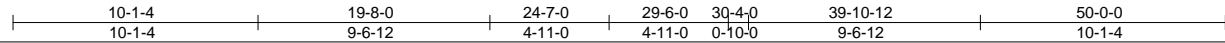
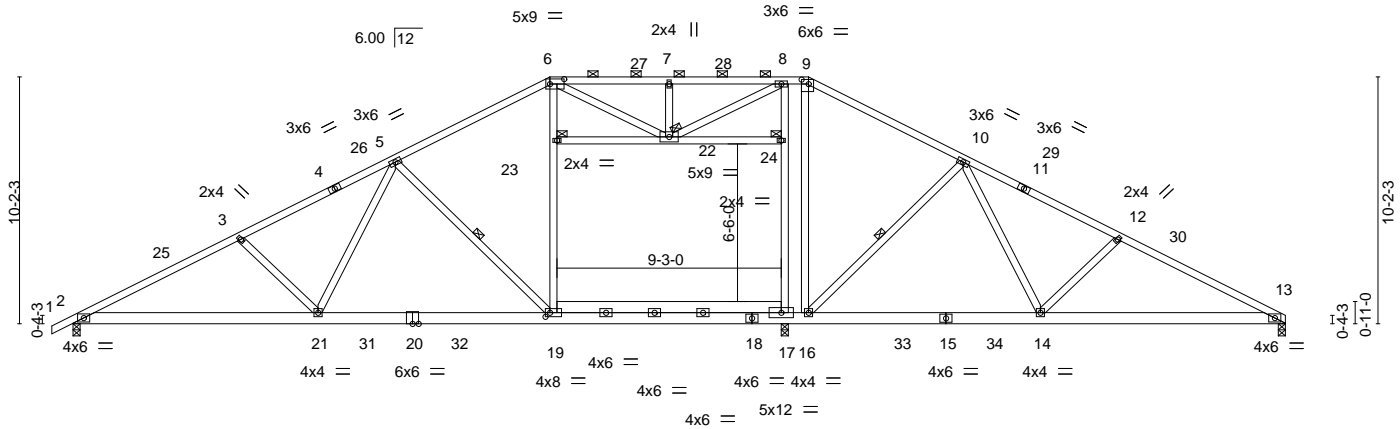


Plate Offsets (X,Y)--	[6:0-7-0,0-2-8], [9:0-3-8,0-2-4], [19:0-2-4,0-2-0]
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LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.85	Vert(LL)	-0.54	19-21	>655	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.58	Vert(CT)	-0.98	19-21	>358		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.81	Horz(CT)	0.10	13	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S	Attic	-0.25	17-19	466	Weight: 356 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2 *Except* 11-13: 2x4 SP No.1	TOP CHORD Structural wood sheathing directly applied, except 2-0-0 oc purlins (3-0-12 max.): 6-9.
BOT CHORD 2x6 SP DSS *Except* 17-19: 2x6 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.3 *Except* 6-19,9-16,8-17: 2x4 SP No.2	WEBS 1 Row at midpt 5-19, 10-16
	JOINTS 1 Brace at Jt(s): 22, 23, 24

**REACTIONS.** (lb/size) 2=1869/0-3-8, 17=556/0-3-8, 13=1708/0-3-8  
 Max Horz 2=180(LC 12)  
 Max Uplift 2=-254(LC 12), 17=-218(LC 13), 13=-95(LC 12)  
 Max Grav 2=2027(LC 26), 17=834(LC 25), 13=1831(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-3981/483, 3-5=-3743/473, 5-6=-2836/437, 6-7=-2757/517, 7-8=-2757/517,  
 8-9=-2406/431, 9-10=-2694/444, 10-12=-3355/459, 12-13=-3604/486  
 BOT CHORD 2-21=-507/3489, 19-21=-328/2999, 17-19=-133/2433, 16-17=-130/2405, 14-16=-210/2740,  
 13-14=-351/3160  
 WEBS 3-21=-357/221, 5-21=-55/666, 5-19=-820/274, 19-23=-61/888, 6-23=-52/918,  
 7-22=-310/144, 8-22=-119/516, 9-16=-107/993, 10-16=-692/272, 10-14=-61/537,  
 12-14=-390/235, 6-22=-132/315, 17-24=-383/124, 8-24=-360/134

**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; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) -0-10-8 to 4-1-8, Interior(1) 4-1-8 to 19-8-0, Exterior(2) 19-8-0 to 26-8-14, Interior(1) 26-8-14 to 30-4-0, Exterior(2) 30-4-0 to 37-4-14, Interior(1) 37-4-14 to 49-10-4 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Provide adequate drainage to prevent water ponding.
- 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.
- Ceiling dead load (5.0 psf) on member(s). 22-23, 22-24
- Bottom chord live load (40.0 psf) and additional bottom chord dead load (0.0 psf) applied only to room. 17-19
- One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2, 17, and 13. This connection is for uplift only and does not consider lateral forces.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- ATTIC SPACE SHOWN IS DESIGNED AS UNINHABITABLE.



July 11, 2019

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



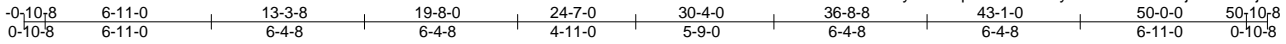
818 Soundside Road  
Edenton, NC 27932

Job 21437A	Truss T9	Truss Type PIGGYBACK BASE	Qty 2	Ply 1	140.1582.A	137749914
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84 Components (Dunn), Dunn, NC - 28334,

8.220 s Nov 16 2018 MiTek Industries, Inc. Thu Jul 11 11:04:14 2019 Page 1

ID:RUSz4LGuFS2C1bODNZWBaZyX6cZ-qn7Oo3cSrT3yx4PBeexZxT2RjWWPdPijVcVxXdyz9U?



Scale: 1/8"=1'

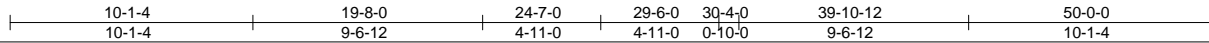
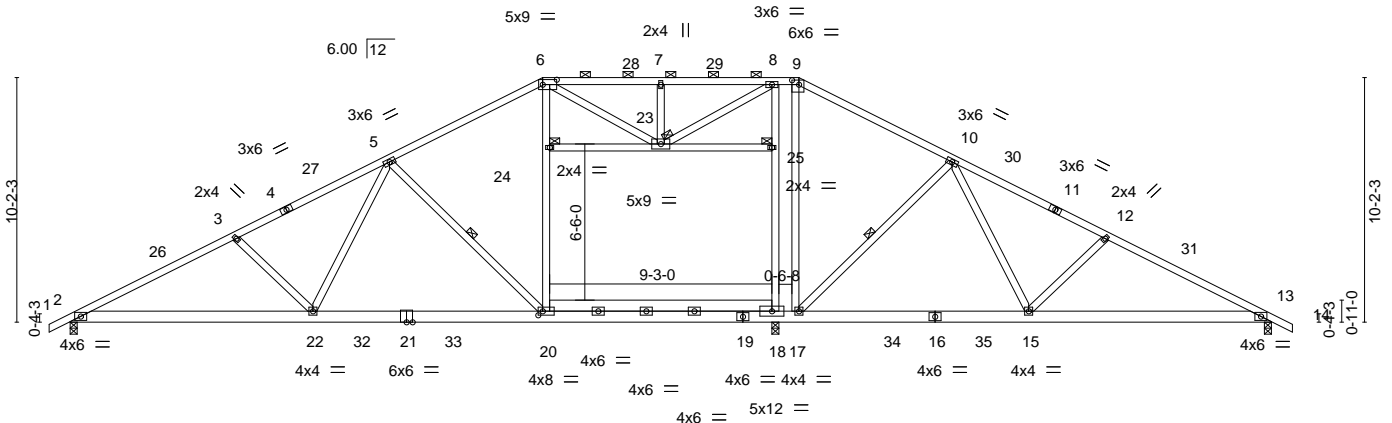


Plate Offsets (X,Y)-- [6:0-7-0,0-2-8], [9:0-3-8,0-2-4], [20:0-2-4,0-2-0]

<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL	1.15	TC 0.85	Vert(LL)	-0.54	20-22	>647	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.58	Vert(CT)	-0.99	20-22	>354		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.85	Horz(CT)	0.10	13	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S	Attic	-0.50	18-20	457	Weight: 358 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied, except
BOT CHORD 2x6 SP DSS *Except* 18-20: 2x6 SP No.2	2-0-0 oc purlins (3-1-8 max.): 6-9.
WEBS 2x4 SP No.3 *Except* 6-20,9-17,8-18: 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
	WEBS 1 Row at midpt 5-20, 10-17
	JOINTS 1 Brace at Jt(s): 23, 24, 25

**REACTIONS.** (lb/size) 2=1862/0-3-8, 18=574/0-3-8, 13=1759/0-3-8  
 Max Horz 2=172(LC 12)  
 Max Uplift 2=-253(LC 12), 18=-215(LC 13), 13=-99(LC 12)  
 Max Grav 2=2018(LC 26), 18=846(LC 25), 13=1870(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-3962/484, 3-5=-3724/474, 5-6=-2815/437, 6-7=-2705/509, 7-8=-2705/509,  
 8-9=-2381/431, 9-10=-2667/445, 10-12=-3321/445, 12-13=-3567/463  
 BOT CHORD 2-22=-498/3472, 20-22=-319/2981, 18-20=-124/2411, 17-18=-120/2380, 15-17=-180/2714,  
 13-15=-295/3123  
 WEBS 3-22=-357/221, 5-22=-55/668, 5-20=-822/274, 20-24=-61/885, 6-24=-52/912,  
 6-23=-122/285, 8-23=-110/487, 9-17=-108/979, 10-17=-691/273, 10-15=-58/533,  
 12-15=-376/224, 18-25=-385/123, 8-25=-363/133, 7-23=-313/144

**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; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) -0-10-8 to 4-1-8, Interior(1) 4-1-8 to 19-8-0, Exterior(2) 19-8-0 to 26-8-14, Interior(1) 26-8-14 to 30-4-0, Exterior(2) 30-4-0 to 37-4-14, Interior(1) 37-4-14 to 50-10-8 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Provide adequate drainage to prevent water ponding.
- 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.
- Ceiling dead load (5.0 psf) on member(s). 23-24, 23-25
- Bottom chord live load (40.0 psf) and additional bottom chord dead load (0.0 psf) applied only to room. 18-20
- One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2, 18, and 13. This connection is for uplift only and does not consider lateral forces.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- ATTIC SPACE SHOWN IS DESIGNED AS UNINHABITABLE.



July 11, 2019

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

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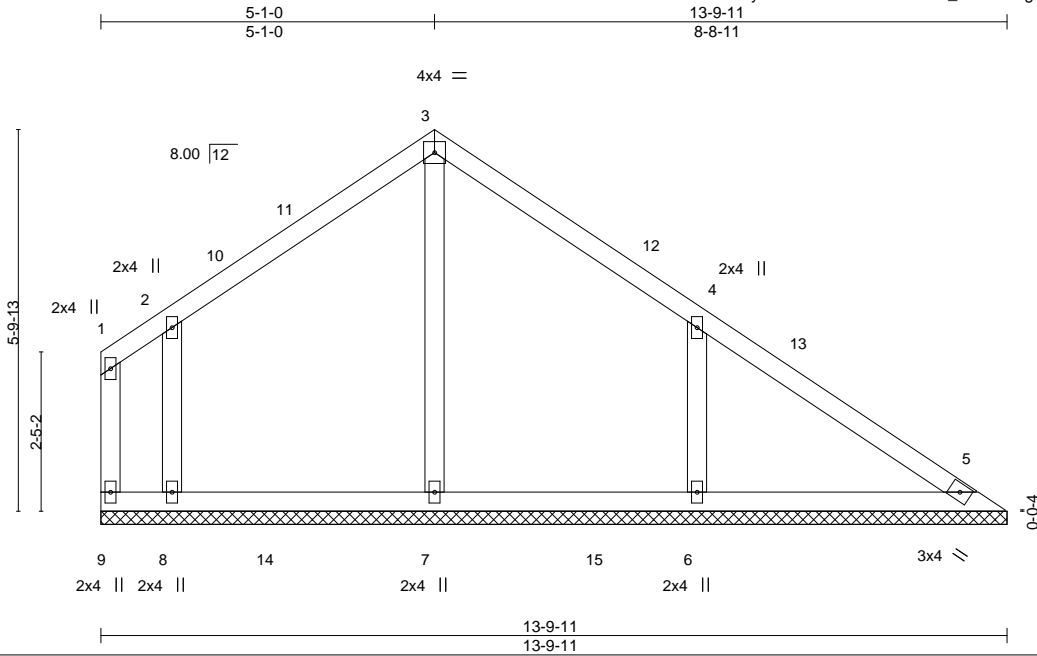


818 Soundside Road  
Edenton, NC 27932

Job 21437A	Truss V1	Truss Type GABLE	Qty 1	Ply 1	140.1582.A	137749915
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84 Components (Dunn), Dunn, NC - 28334,

8.220 s Nov 16 2018 MiTek Industries, Inc. Thu Jul 11 11:04:15 2019 Page 1  
ID:RUSz4LGuFS2C1bODNZWBaZyX6cZ-Jzhm0Pd4cmBoYE\_OCLSoUgalewzNM2ItkGEU33yz9U\_



Scale = 1:35.1

<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL	1.15	TC 0.26	Vert(LL)	n/a	-	n/a	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.15	Vert(CT)	n/a	-	n/a		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.13	Horz(CT)	0.00	5	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S					Weight: 63 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 6-0-0 oc bracing.

**REACTIONS.** All bearings 13-9-11.  
(lb) - Max Horz 9=-140(LC 13)  
Max Uplift All uplift 100 lb or less at joint(s) 5 except 9=-108(LC 19), 8=-147(LC 12), 6=-162(LC 13)  
Max Grav All reactions 250 lb or less at joint(s) 9, 5 except 7=403(LC 20), 8=386(LC 19), 6=436(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
WEBS 2-8=-273/186, 4-6=-315/209

- NOTES-**
- 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=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 0-1-12 to 3-1-12, Interior(1) 3-1-12 to 5-1-0, Exterior(2) 5-1-0 to 8-1-0, Interior(1) 8-1-0 to 13-3-15 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - Gable requires continuous bottom chord bearing.
  - 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.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 5 except (jt=lb) 9=108, 8=147, 6=162.



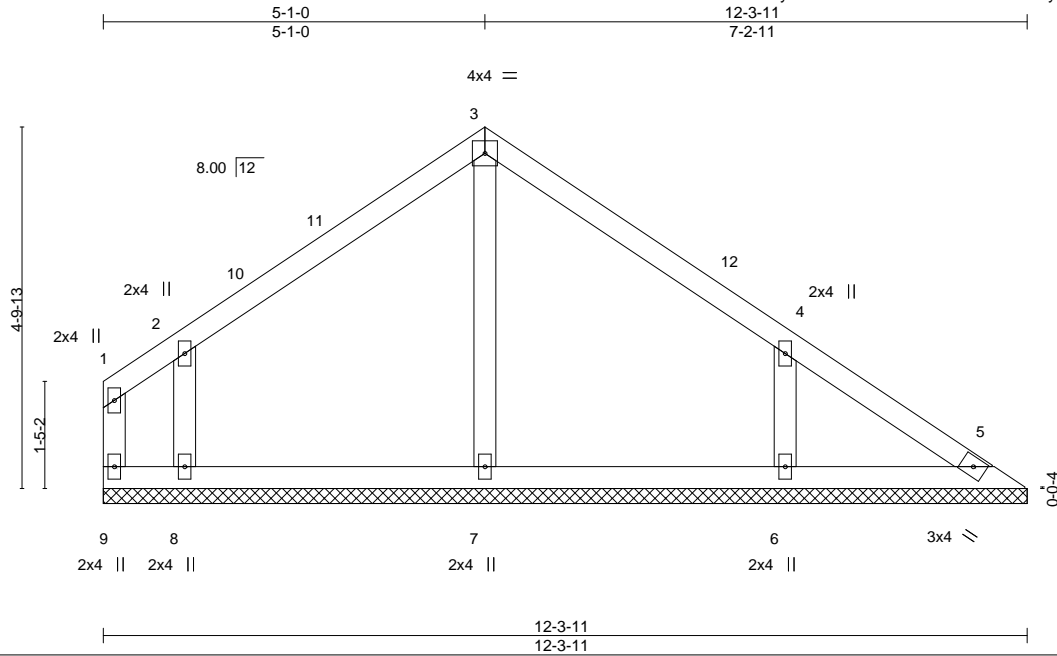
**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.**  
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before 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 21437A	Truss V2	Truss Type GABLE	Qty 1	Ply 1	140.1582.A	137749916
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84 Components (Dunn), Dunn, NC - 28334,

8.220 s Nov 16 2018 MiTek Industries, Inc. Thu Jul 11 11:04:16 2019 Page 1  
 ID:RUSz4LGuFS2C1bODNZWBaZyX6cZ-n9E8DleiN4JfAOZam2z10u7yUKKA5V50zw\_2aVyz9Tz



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 0.19	Vert(LL)	n/a	-	n/a	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.12	Vert(CT)	n/a	-	n/a		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.09	Horz(CT)	0.00	5	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S					Weight: 52 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 6-0-0 oc bracing.
WEBS 2x4 SP No.3	
OTHERS 2x4 SP No.3	

**REACTIONS.** All bearings 12-3-11.  
 (lb) - Max Horz 9=-108(LC 8)  
 Max Uplift All uplift 100 lb or less at joint(s) 9, 5 except 8=-160(LC 12), 6=-134(LC 13)  
 Max Grav All reactions 250 lb or less at joint(s) 9, 5 except 7=301(LC 1), 8=351(LC 19), 6=339(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 WEBS 2-8=-276/193, 4-6=-263/176

- 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=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 0-1-12 to 3-1-12, Interior(1) 3-1-12 to 5-1-0, Exterior(2) 5-1-0 to 8-1-0, Interior(1) 8-1-0 to 11-9-15 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) Gable requires continuous bottom chord bearing.
  - 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.
  - 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 9, 5 except (jt=lb) 8=160, 6=134.



July 11, 2019

**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

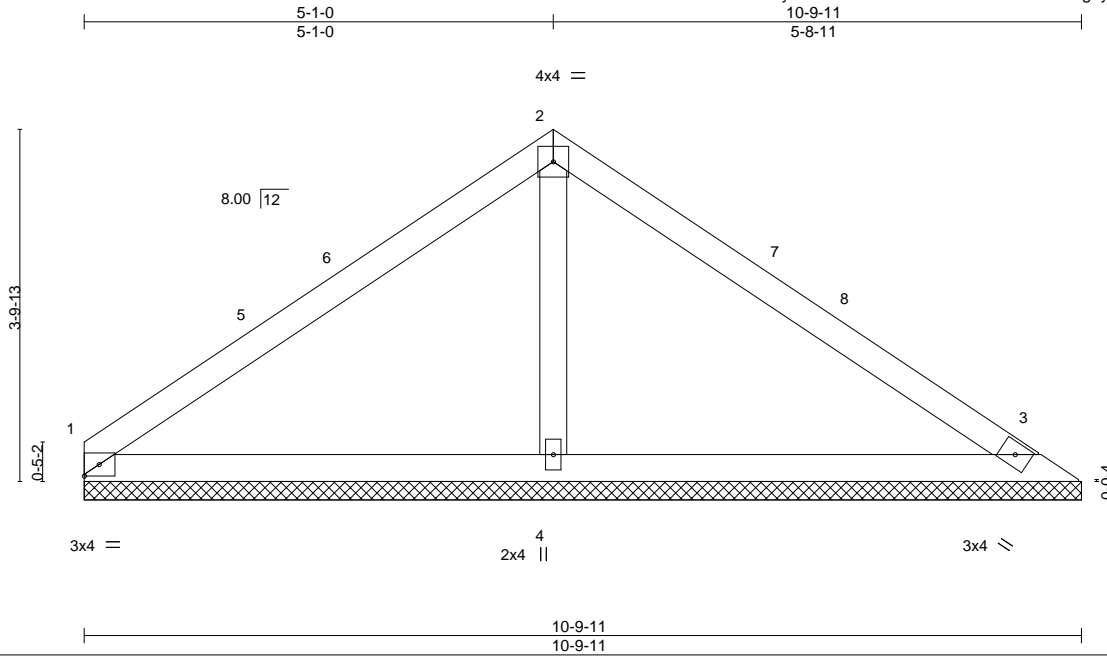
Job 21437A	Truss V3	Truss Type GABLE	Qty 1	Ply 1	140.1582.A	137749917
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84 Components (Dunn), Dunn, NC - 28334,

8.220 s Nov 16 2018 MiTek Industries, Inc. Thu Jul 11 11:04:17 2019 Page 1

ID:RUSz4LGuFS2C1bODNZWBaZyX6cZ-FMoWR4fK8ORWoY8mJmUGZ5g2ykc1qyZ9Bajb6yyz9Ty

10-9-11  
5-8-11



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 0.40	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.27	Vert(CT)	n/a	-	n/a	999		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.08	Horz(CT)	0.00	3	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S						Weight: 40 lb	FT = 20%

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

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

**REACTIONS.** (lb/size) 1=201/10-9-11, 3=207/10-9-11, 4=418/10-9-11  
Max Horz 1=-86(LC 10)  
Max Uplift 1=-37(LC 12), 3=-50(LC 13), 4=-13(LC 12)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
**WEBS** 2-4=-265/83

- 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; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 0-0-0 to 3-0-0, Interior(1) 3-0-0 to 5-1-0, Exterior(2) 5-1-0 to 8-1-0, Interior(1) 8-1-0 to 10-3-15 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) Gable requires continuous bottom chord bearing.
  - 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.
  - 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3, 4.





Job 21437A	Truss V4	Truss Type VALLEY	Qty 1	Ply 1	140.1582.A	137749918
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84 Components (Dunn), Dunn, NC - 28334,

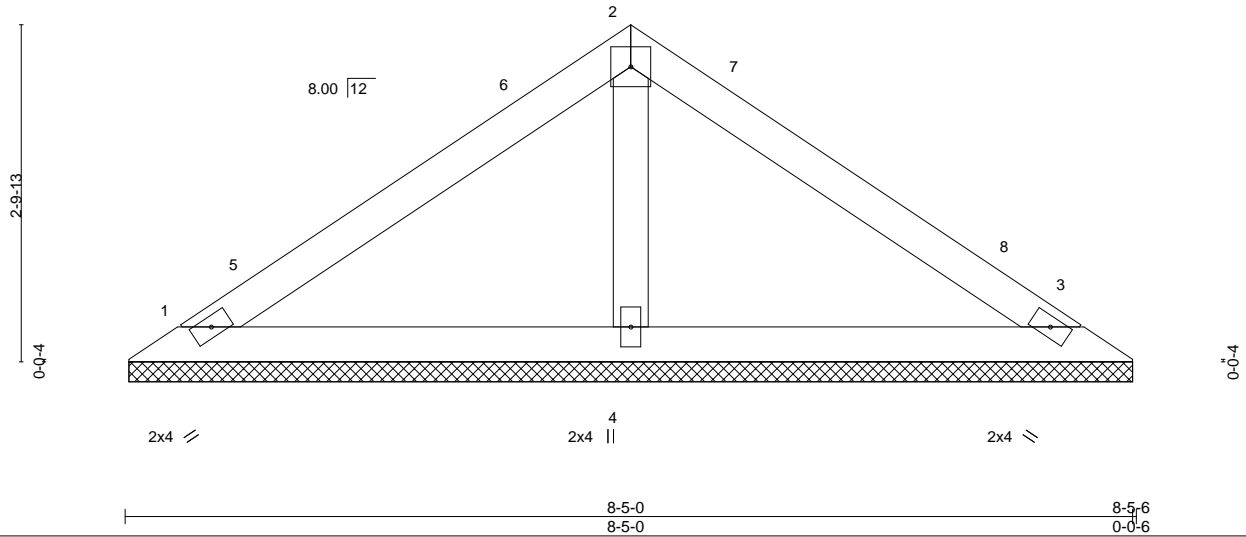
8.220 s Nov 16 2018 MiTek Industries, Inc. Thu Jul 11 11:04:18 2019 Page 1

ID:RUSz4LGuFS2C1bODNZWBaZyX6cZ-jYmUeQfyvhZNPjztT?V6JCFm7\_EZQNJQET8fOyz9Tx



4x4 =

Scale = 1:19.2



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 0.27	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.14	Vert(CT)	n/a	-	n/a	999		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.04	Horz(CT)	0.00	3	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-P						Weight: 29 lb	FT = 20%

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

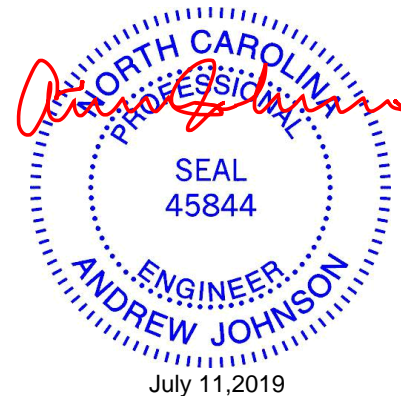
**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (lb/size) 1=162/8-4-10, 3=162/8-4-10, 4=276/8-4-10  
 Max Horz 1=-62(LC 8)  
 Max Uplift 1=-36(LC 12), 3=-44(LC 13)

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

**NOTES-**

- 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=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 0-5-12 to 3-5-12, Interior(1) 3-5-12 to 4-2-11, Exterior(2) 4-2-11 to 7-2-11, Interior(1) 7-2-11 to 7-11-10 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Gable requires continuous bottom chord bearing.
- 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.



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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

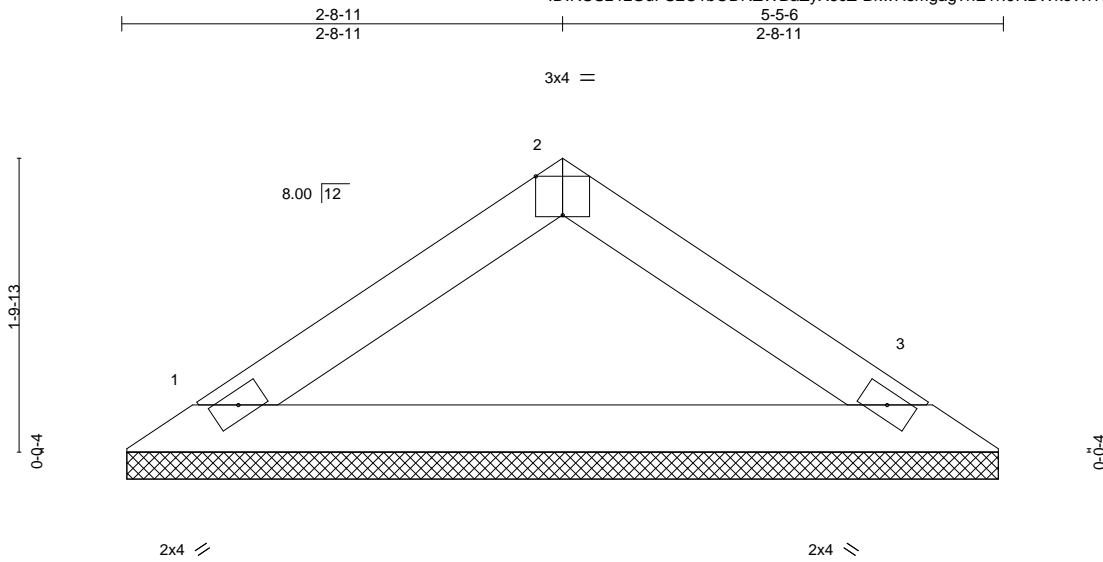


818 Soundside Road  
 Edenton, NC 27932

Job 21437A	Truss V5	Truss Type VALLEY	Qty 1	Ply 1	140.1582.A	137749919
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84 Components (Dunn), Dunn, NC - 28334,

8.220 s Nov 16 2018 MiTek Industries, Inc. Thu Jul 11 11:04:19 2019 Page 1  
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Scale = 1:14.2

Plate Offsets (X,Y)--	[2:0-2:0,Edge]	5-5-0	5-5-0	5-5-6	0-0-6
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<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL	1.15	TC 0.09	Vert(LL)	n/a	-	n/a	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.25	Vert(CT)	n/a	-	n/a		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.00	Horz(CT)	0.00	3	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-P					Weight: 16 lb	FT = 20%

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

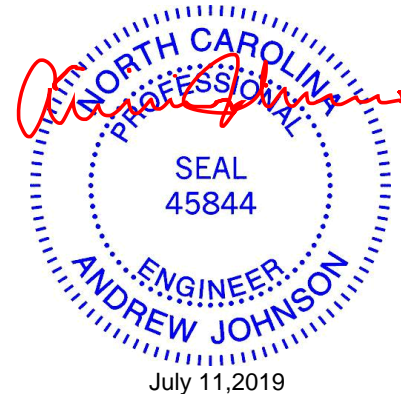
**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 5-5-6 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (lb/size) 1=179/5-4-10, 3=179/5-4-10  
Max Horz 1=-37(LC 8)  
Max Uplift 1=-19(LC 12), 3=-19(LC 13)

**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; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Gable requires continuous bottom chord bearing.
- 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.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.



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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



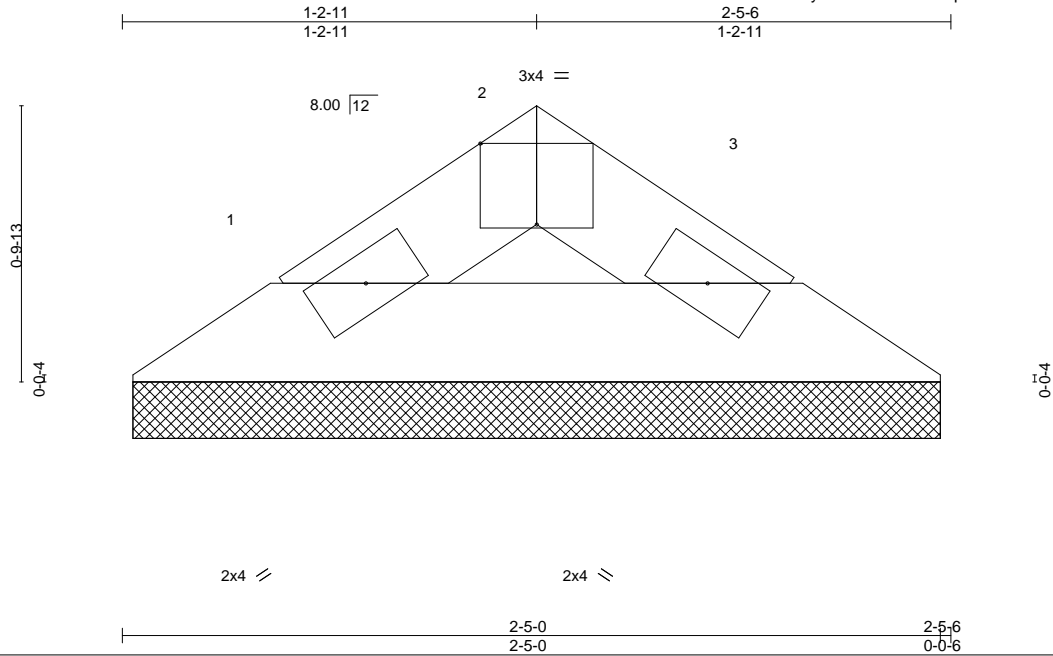
818 Soundside Road  
Edenton, NC 27932

Job 21437A	Truss V6	Truss Type VALLEY	Qty 1	Ply 1	140.1582.A	137749920
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84 Components (Dunn), Dunn, NC - 28334,

8.220 s Nov 16 2018 MiTek Industries, Inc. Thu Jul 11 11:04:20 2019 Page 1

ID:RUSz4LGuFS2C1bODNZWBaZyX6cZ-fxUf36hDRJp5f?l?u1zBkIfCxiG1K1VcuYyFjGyz9Tv



Scale = 1:6.8

Plate Offsets (X,Y)--	[2:0-2:0,Edge]									
<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in	(loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL	1.15	TC 0.01	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.04	Vert(CT)	n/a	-	n/a	999		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-P						Weight: 6 lb	FT = 20%

**LUMBER-**  
 TOP CHORD 2x4 SP No.3  
 BOT CHORD 2x4 SP No.3

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 2-5-6 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (lb/size) 1=59/2-4-10, 3=59/2-4-10  
 Max Horz 1=-12(LC 8)  
 Max Uplift 1=-6(LC 12), 3=-6(LC 13)

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

**NOTES-**

- 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=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Gable requires continuous bottom chord bearing.
- 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.



July 11, 2019

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

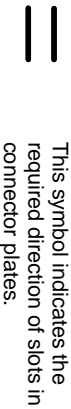
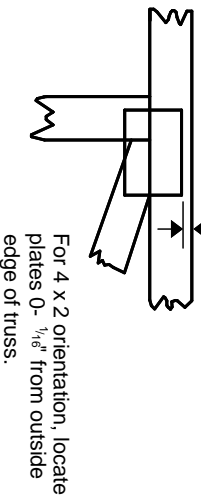
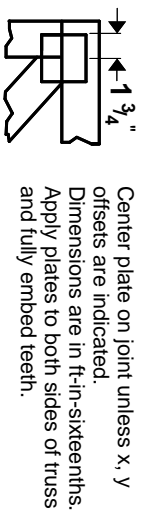
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



818 Soundside Road  
 Edenton, NC 27932

# Symbols

## PLATE LOCATION AND ORIENTATION



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

## PLATE SIZE

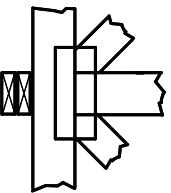
**4 X 4**

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

## LATERAL BRACING LOCATION



## BEARING

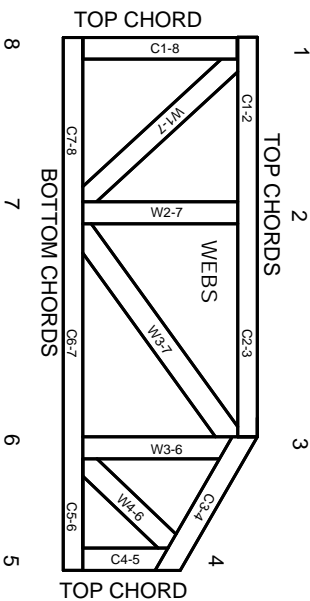


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

## 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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# 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.