

Trenco  
818 Soundside Rd  
Edenton, NC 27932

Re: 2000411-2000411A  
JOHNSON RESIDENCE

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: I41573855 thru I41573913

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

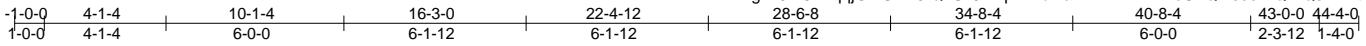
North Carolina COA: C-0844



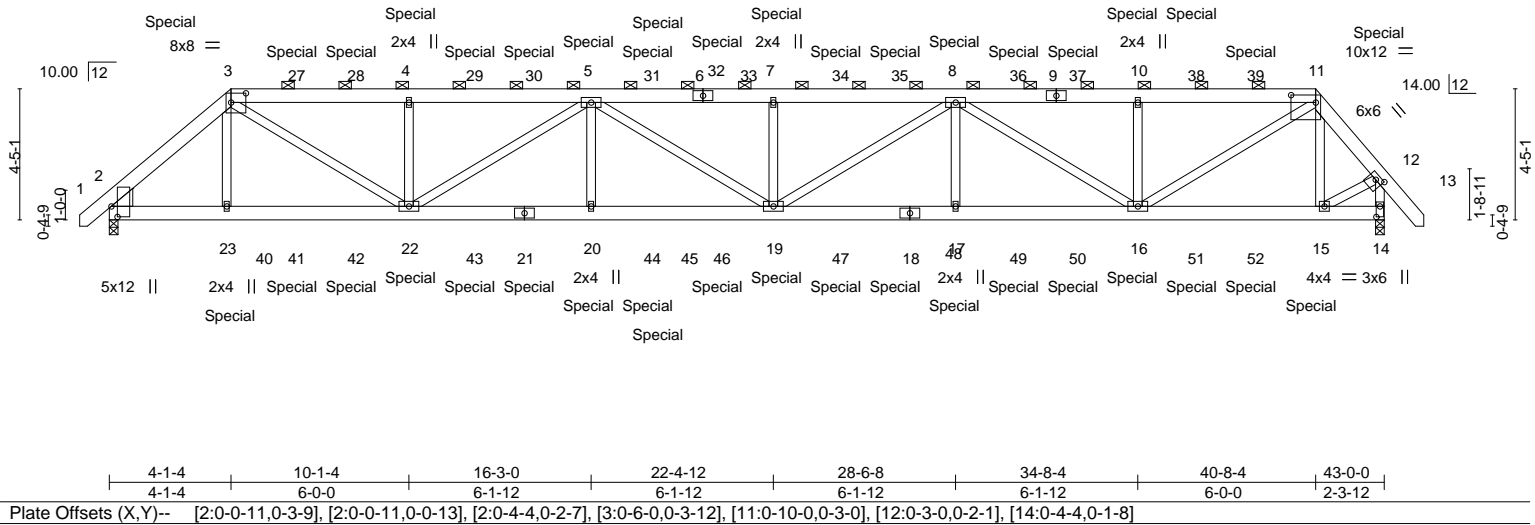
June 9, 2020

Sevier, Scott

**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.



Scale = 1:77.7



<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 0.39	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.45	Vert(LL) 0.38 19-20 >999 240		
BCLL 0.0 *	Rep Stress Incr NO	WB 0.50	Vert(CT) -0.31 19-20 >999 180		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-MS	Horz(CT) -0.08 14 n/a n/a		
				Weight: 638 lb	FT = 20%

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

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 3-11.  
 BOT CHORD Rigid ceiling directly applied or 7-8-15 oc bracing.

**REACTIONS.** (size) 2=0-3-8, 14=0-3-8  
 Max Horz 2=140(LC 34)  
 Max Uplift 2=-1458(LC 9), 14=-1543(LC 8)  
 Max Grav 2=2055(LC 44), 14=2079(LC 43)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-2675/2072, 3-4=-4107/3330, 4-5=-4107/3330, 5-7=-5646/4586, 7-8=-5646/4586,  
 8-10=-3472/2827, 10-11=-3472/2827, 11-12=-1724/1404, 12-14=-2102/1655  
 BOT CHORD 2-23=-1554/2003, 22-23=-1558/2004, 20-22=-4300/5418, 19-20=-4300/5418,  
 17-19=-3978/5069, 16-17=-3978/5069, 15-16=-879/1145  
 WEBS 3-22=-2102/2618, 4-22=-426/426, 5-22=-1486/1229, 5-20=-64/258, 5-19=-283/362,  
 7-19=-417/431, 8-19=-644/769, 8-17=-45/260, 8-16=-1829/1458, 10-16=-414/421,  
 11-16=-2256/2859, 11-15=-536/459, 12-15=-999/1323

- NOTES-**
- 2-ply truss to be connected together with 10d (0.120"x3") nails as follows:  
 Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.  
 Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 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) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - Provide adequate drainage to prevent water ponding.
  - All plates are 4x8 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.
  - All bearings are assumed to be User Defined crushing capacity of 425 psi.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 1458 lb uplift at joint 2 and 1543 lb uplift at joint 14.
  - 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.



General 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	Truss	Truss Type	Qty	Ply	JOHNSON RESIDENCE	I41573855
2000411-2000411A	AH	ROOF SPECIAL GIRDER	1	2	Job Reference (optional)	

84 Components, Dunn, NC 28334

8.330 s Apr 21 2020 MiTek Industries, Inc. Mon Jun 8 16:29:41 2020 Page 2  
 ID:grH97r8Y2qqjGmUPA5IQnSz8NKp-ZKbvIaAXARYMn1weU4QFisocrZQHlQsvfX1tI3z8Huu

**NOTES-**

13) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 226 lb down and 285 lb up at 4-1-4, 100 lb down and 129 lb up at 6-3-6, 100 lb down and 129 lb up at 8-3-6, 100 lb down and 129 lb up at 10-3-6, 100 lb down and 129 lb up at 12-3-6, 100 lb down and 129 lb up at 14-3-6, 100 lb down and 129 lb up at 16-3-6, 100 lb down and 129 lb up at 18-3-6, 100 lb down and 129 lb up at 18-7-8, 100 lb down and 129 lb up at 20-7-8, 100 lb down and 129 lb up at 22-7-8, 100 lb down and 129 lb up at 24-7-8, 100 lb down and 129 lb up at 26-7-8, 100 lb down and 129 lb up at 28-7-8, 100 lb down and 129 lb up at 30-7-8, 100 lb down and 129 lb up at 32-7-8, 100 lb down and 129 lb up at 34-7-8, 100 lb down and 129 lb up at 36-7-8, and 100 lb down and 129 lb up at 38-7-8, and 95 lb down and 136 lb up at 40-8-4 on top chord, and 31 lb down and 24 lb up at 4-1-4, 32 lb down and 41 lb up at 4-3-6, 32 lb down and 41 lb up at 6-3-6, 32 lb down and 41 lb up at 8-3-6, 32 lb down and 41 lb up at 10-3-6, 32 lb down and 41 lb up at 12-3-6, 32 lb down and 41 lb up at 14-3-6, 32 lb down and 41 lb up at 16-3-6, 32 lb down and 41 lb up at 18-3-6, 32 lb down and 41 lb up at 18-7-8, 32 lb down and 41 lb up at 20-7-8, 32 lb down and 41 lb up at 22-7-8, 32 lb down and 41 lb up at 24-7-8, 32 lb down and 41 lb up at 26-7-8, 32 lb down and 41 lb up at 28-7-8, 32 lb down and 41 lb up at 30-7-8, 32 lb down and 41 lb up at 32-7-8, 32 lb down and 41 lb up at 34-7-8, 32 lb down and 41 lb up at 36-7-8, and 55 lb down and 73 lb up at 40-7-8 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

**LOAD CASE(S)** Standard

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

Uniform Loads (plf)

Vert: 1-3=-60, 3-11=-60, 11-12=-60, 12-13=-60, 14-24=-20

Concentrated Loads (lb)

Vert: 11=-0(F) 21=-4(F) 23=-6(F) 22=-4(F) 3=-2(F) 4=-0(F) 5=-0(F) 20=-4(F) 7=-0(F) 19=-4(F) 17=-4(F) 8=-0(F) 10=-0(F) 16=-4(F) 15=-0(F) 27=-0(F) 28=-0(F) 29=-0(F) 30=-0(F) 31=-0(F) 32=-0(F) 33=-0(F) 34=-0(F) 35=-0(F) 36=-0(F) 37=-0(F) 38=-0(F) 39=-0(F) 40=-4(F) 41=-4(F) 42=-4(F) 43=-4(F) 44=-4(F) 45=-4(F) 46=-4(F) 47=-4(F) 48=-4(F) 49=-4(F) 50=-4(F) 51=-4(F) 52=-4(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.



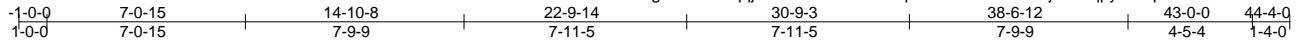
818 Soundside Road  
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	JOHNSON RESIDENCE	I41573856
2000411-2000411A	AH1	ROOF SPECIAL	1	1	Job Reference (optional)	

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

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 8 12:54:40 2020 Page 1

ID:grH97r8Y2qjGmUPA5lQnSz8NKp-9wwQtsmZO4TQjKFrKqpyL2zsp5C?Ted?3uQi?Kz8L2T



Scale = 1:82.2

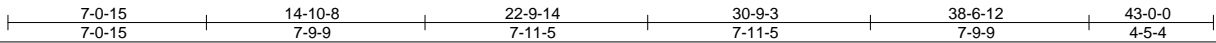
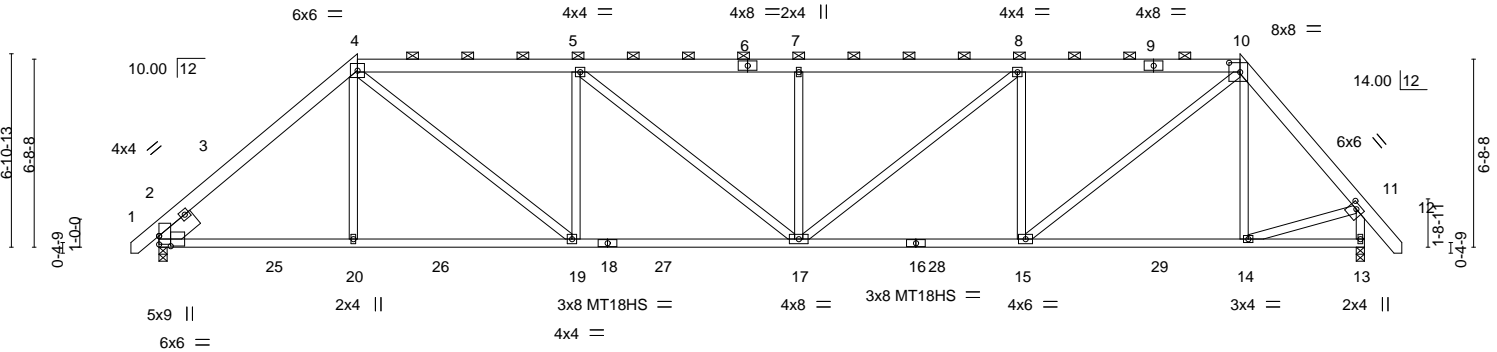


Plate Offsets (X,Y)-- [2:0-5-0,0-4-5], [10:0-4-12,0-4-0], [11:0-3-0,0-2-1]

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 0.69	Vert(LL)	-0.20	17-19	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.97	Vert(CT)	-0.40	17-19	>999	MT18HS	244/190
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.72	Horz(CT)	0.12	13	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-MS						
								Weight: 298 lb	FT = 20%

**LUMBER-**  
 TOP CHORD 2x6 SP No.2  
 BOT CHORD 2x4 SP No.2  
 WEBS 2x4 SP No.3  
 SLIDER Left 2x8 SP No.2 -x 1-6-0

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

**REACTIONS.** (size) 2=0-3-8, 13=0-3-8  
 Max Horz 2=201(LC 11)  
 Max Uplift 2=-188(LC 9), 13=-215(LC 8)  
 Max Grav 2=1790(LC 2), 13=1795(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-4=-2306/439, 4-5=-2727/620, 5-7=-2939/665, 7-8=-2939/665, 8-10=-2420/560, 10-11=-1717/350, 11-13=-1770/369  
 BOT CHORD 2-20=-310/1670, 19-20=-312/1664, 17-19=-499/2726, 15-17=-420/2420, 14-15=-151/1081  
 WEBS 4-20=0/322, 4-19=-335/1459, 5-19=-751/305, 5-17=-101/344, 7-17=-460/214, 8-17=-138/686, 8-15=-937/317, 10-15=-347/1746, 11-14=-165/1118

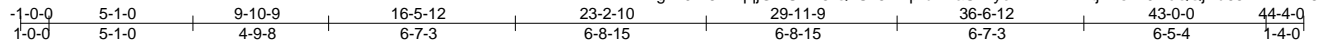
- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TC DL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - Provide adequate drainage to prevent water ponding.
  - All plates are MT20 plates unless otherwise indicated.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - One H2.5A Simpson Strong-Tie 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.



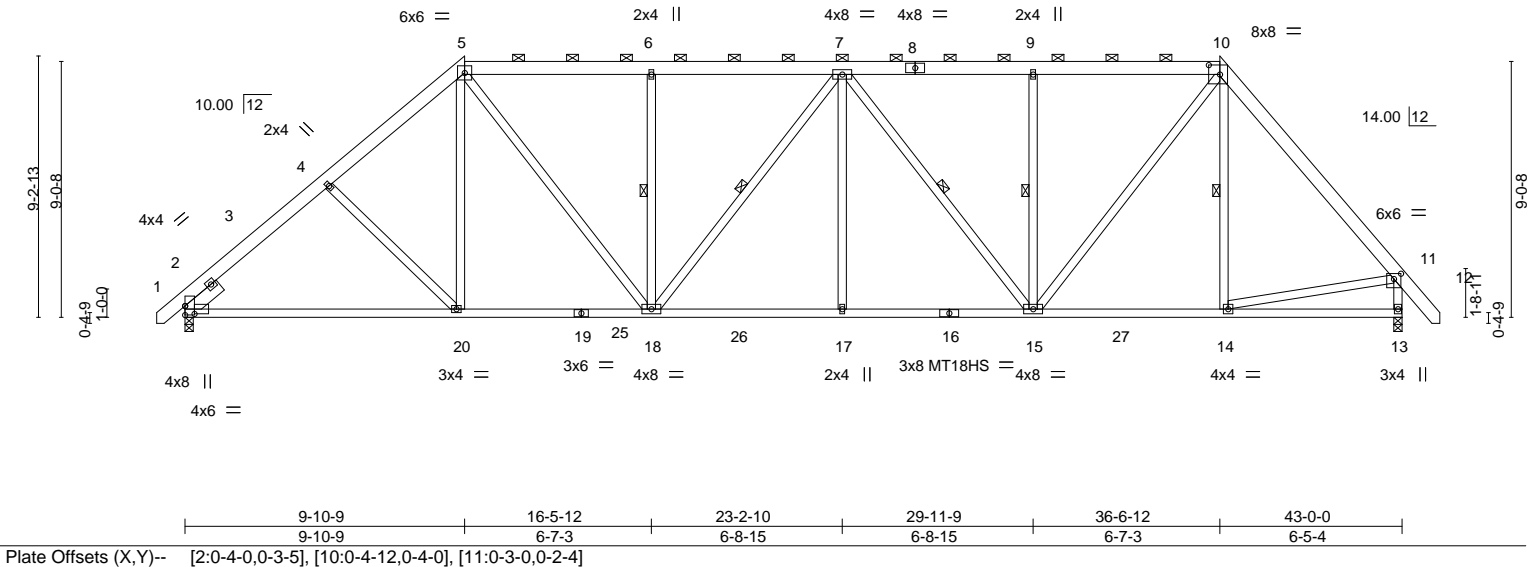
Job	Truss	Truss Type	Qty	Ply	JOHNSON RESIDENCE	I41573857
2000411-2000411A	AH2	ROOF SPECIAL	1	1	Job Reference (optional)	

84 Components, Dunn, NC 28334

ID:grH97r8Y2qqjGmUPA5IQnSz8NKp-dD?aSiMye2RD4KZWtjBns1v9RcQJAU65MAAKhz8Huf  
8.330 s Apr 21 2020 Mitek Industries, Inc. Mon Jun 8 16:29:56 2020 Page 1



Scale = 1:81.4



LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	Plate Grip DOL 1.15	TC 0.55	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.93	Vert(LL) -0.15 18-20 >999 240	MT18HS	244/190
BCLL 0.0 *	Rep Stress Incr YES	WB 0.61	Horz(CT) 0.10 13 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-MS			
				Weight: 336 lb	FT = 20%

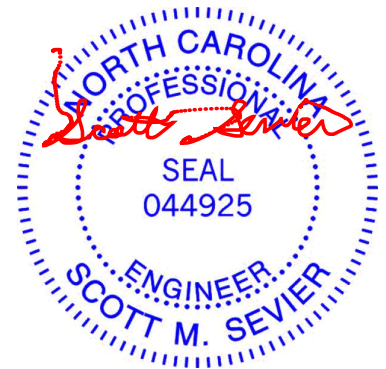
**LUMBER-**  
 TOP CHORD 2x6 SP No.2  
 BOT CHORD 2x4 SP No.2  
 WEBS 2x4 SP No.3  
 SLIDER Left 2x6 SP No.2 -X 1-6-0

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 3-10-11 oc purlins, except end verticals, and 2-0-0 oc purlins (4-11-1 max.): 5-10.  
 BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.  
 WEBS 1 Row at midpt 6-18, 7-18, 7-15, 9-15, 10-14

**REACTIONS.** (size) 2=0-3-8, 13=0-3-8  
 Max Horz 2=262(LC 11)  
 Max Uplift 2=-129(LC 9), 13=-152(LC 8)  
 Max Grav 2=1766(LC 1), 13=1809(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-4=-2211/451, 4-5=-2060/471, 5-6=-2113/527, 6-7=-2112/526, 7-9=-1889/472, 9-10=-1889/472, 10-11=-1839/365, 11-13=-1762/372  
 BOT CHORD 2-20=-328/1581, 18-20=-284/1566, 17-18=-366/2248, 15-17=-366/2248, 14-15=-129/1123  
 WEBS 5-20=-47/330, 5-18=-252/950, 6-18=-430/193, 7-18=-263/104, 7-17=0/360, 7-15=-600/120, 9-15=-429/201, 10-15=-270/1289, 11-14=-169/1074

- 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; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - Provide adequate drainage to prevent water ponding.
  - All plates are MT20 plates unless otherwise indicated.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - All bearings are assumed to be User Defined crushing capacity of 425 psi.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 129 lb uplift at joint 2 and 152 lb uplift at joint 13.
  - 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.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



June 9, 2020

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

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



818 Soundside Road  
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	JOHNSON RESIDENCE	141573858
2000411-2000411A	AH3	ROOF SPECIAL	1	1		

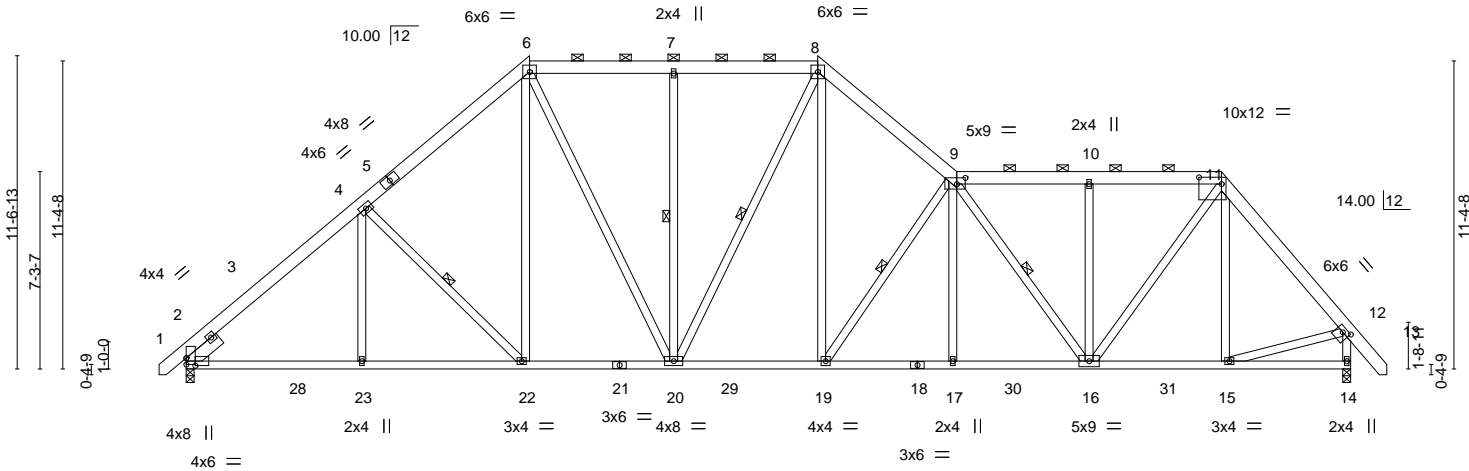
84 Components (Dunn), Dunn, NC - 28334,

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 8 12:54:43 2020 Page 1

ID:grH97r8Y2qqjGmUPA5lQnSz8NKp-aVbYWuoSh?s\_an\_Q?zNfzhbOpIFpg1SRmrfMcez8L2Q

1-0-0	6-5-13	12-8-2	18-0-0	23-3-14	28-5-7	33-4-2	38-2-12	43-0-0	44-4-0
1-0-0	6-5-13	6-2-5	5-3-14	5-3-14	5-1-10	4-10-10	4-10-10	4-9-4	1-4-0

Scale = 1:85.1



	6-5-13	12-8-2	18-0-0	23-3-14	28-5-7	33-4-2	38-2-12	43-0-0
	6-5-13	6-2-5	5-3-14	5-3-14	5-1-10	4-10-10	4-10-10	4-9-4
Plate Offsets (X, Y)--	[2:0-4-0,0-3-5],	[9:0-3-12,0-2-12],	[11:0-10-0,0-3-0],	[12:0-3-0,0-2-1]				

<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 0.58	Vert(LL)	-0.14 19-20	>999	240	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.83	Vert(CT)	-0.26 19-20	>999	180		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.59	Horz(CT)	0.11 14	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-MS					Weight: 372 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x6 SP No.2	TOP CHORD Structural wood sheathing directly applied or 3-9-10 oc purlins, except end verticals, and 2-0-0 oc purlins (5-3-11 max.): 6-8, 9-11.
BOT CHORD 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.3	WEBS 1 Row at midpt 4-22, 7-20, 8-20, 9-19, 9-16
SLIDER Left 2x6 SP No.2 -x 1-6-0	

**REACTIONS.** (size) 2=0-3-8, 14=0-3-8  
 Max Horz 2=319(LC 11)  
 Max Uplift 2=-132(LC 12), 14=-213(LC 13)  
 Max Grav 2=1766(LC 1), 14=1795(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-4=-2230/417, 4-6=-1915/491, 6-7=-1669/487, 7-8=-1669/487, 8-9=-2236/553, 9-10=-1859/438, 10-11=-1859/438, 11-12=-1709/344, 12-14=-1754/363  
 BOT CHORD 2-23=-240/1690, 22-23=-240/1690, 20-22=-182/1425, 19-20=-132/1688, 17-19=-299/2396, 16-17=-300/2393, 15-16=-58/1036  
 WEBS 4-22=-379/246, 6-22=-101/447, 6-20=-157/639, 7-20=-349/165, 8-19=-203/1135, 9-19=-1191/327, 9-16=-926/170, 10-16=-322/164, 11-16=-261/1425, 12-15=-74/1035

- 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; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 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 H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 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.



June 9, 2020

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TP1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



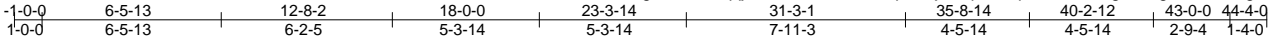
818 Soundside Road  
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	JOHNSON RESIDENCE	141573859
2000411-2000411A	AH4	PIGGYBACK BASE	1	1	Job Reference (optional)	

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

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 8 12:54:45 2020 Page 1

ID:grH97r8Y2qqjGmUPA5lQnSz8NKp-WujJxaqiDd6iq57o7OP726gkJ6wg8u7kD98TgXz8L2O



Scale = 1:83.4

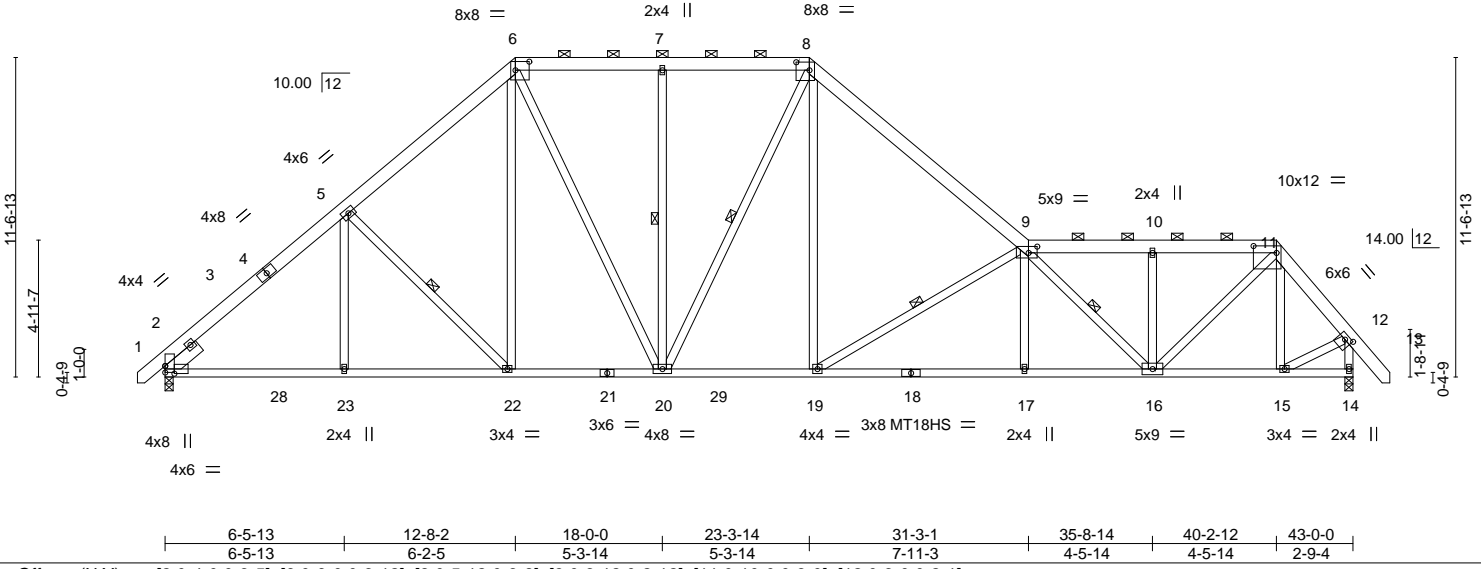


Plate Offsets (X, Y)--	[2:0-4-0,0-3-5], [6:0-6-0,0-3-12], [8:0-5-12,0-3-8], [9:0-3-12,0-2-12], [11:0-10-0,0-3-0], [12:0-3-0,0-2-1]
------------------------	---

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 0.58	Vert(LL)	-0.17 17-19	>999	240	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.94	Vert(CT)	-0.40 17-19	>999	180	MT18HS	244/190
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.77	Horz(CT)	0.13 14	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-MS						
								Weight: 354 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.2	TOP CHORD Structural wood sheathing directly applied or 3-9-10 oc purlins, except end verticals, and 2-0-0 oc purlins (4-10-1 max.): 6-8, 9-11.
BOT CHORD 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
WEBS 2x4 SP No.3	2-2-0 oc bracing: 17-19
SLIDER Left 2x6 SP No.2 -x 1-6-0	8-5-2 oc bracing: 16-17.
	WEBS 1 Row at midpt 5-22, 7-20, 8-20, 9-19, 9-16

REACTIONS.
(size) 2=0-3-8, 14=0-3-8
Max Horz 2=320(LC 11)
Max Uplift 2=-131(LC 12), 14=-213(LC 13)
Max Grav 2=1766(LC 1), 14=1795(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-5=-2225/419, 5-6=-1926/495, 6-7=-1608/485, 7-8=-1608/485, 8-9=-2310/521, 9-10=-2230/468, 10-11=-2230/468, 11-12=-1501/308, 12-14=-1779/357
BOT CHORD 2-23=-211/1664, 22-23=-211/1664, 20-22=-148/1382, 19-20=-92/1649, 17-19=-479/3194, 16-17=-481/3191, 15-16=-65/928
WEBS 5-22=-403/252, 6-22=-103/471, 6-20=-157/621, 7-20=-328/172, 8-19=-146/1046, 9-19=-1777/452, 9-17=0/260, 9-16=-1373/260, 10-16=-264/157, 11-16=-334/1860, 11-15=-425/92, 12-15=-86/1034

- 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) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - Provide adequate drainage to prevent water ponding.
  - All plates are MT20 plates unless otherwise indicated.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 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.



**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

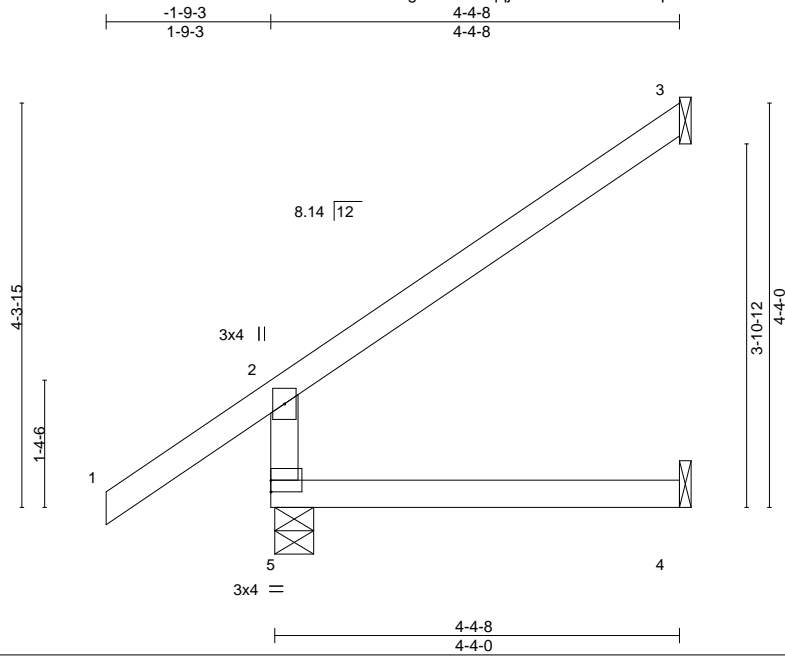
818 Soundside Road  
 Edenton, NC 27932

Job 2000411-2000411A	Truss J1	Truss Type Jack-Open Girder	Qty 1	Ply 1	JOHNSON RESIDENCE Job Reference (optional)	I41573860
-------------------------	-------------	--------------------------------	----------	----------	---	-----------

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

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 8 12:55:19 2020 Page 1

ID:grH97r8Y2qqjGmUPA5lQnSz8NKp-WQn93CE1C3OuvJKL6X05QH4bBphm6Sak1SNGsZz8L1s



Scale = 1:24.7

<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 0.42	Vert(LL)	0.03 4-5	>999	240	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.29	Vert(CT)	-0.03 4-5	>999	180		
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.00	Horz(CT)	-0.04 3	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-MR					Weight: 19 lb	FT = 20%

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

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

**REACTIONS.** (size) 5=0-5-0, 3=Mechanical, 4=Mechanical  
 Max Horz 5=137(LC 12)  
 Max Uplift 5=-10(LC 12), 3=-90(LC 12), 4=-1(LC 12)  
 Max Grav 5=308(LC 1), 3=116(LC 19), 4=77(LC 3)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-5=-264/127

**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) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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 to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 90 lb uplift at joint 3 and 1 lb uplift at joint 4.
- 6) One MTS12 Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 5. This connection is for uplift only and does not consider lateral forces.



June 9, 2020

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.**  
 Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

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

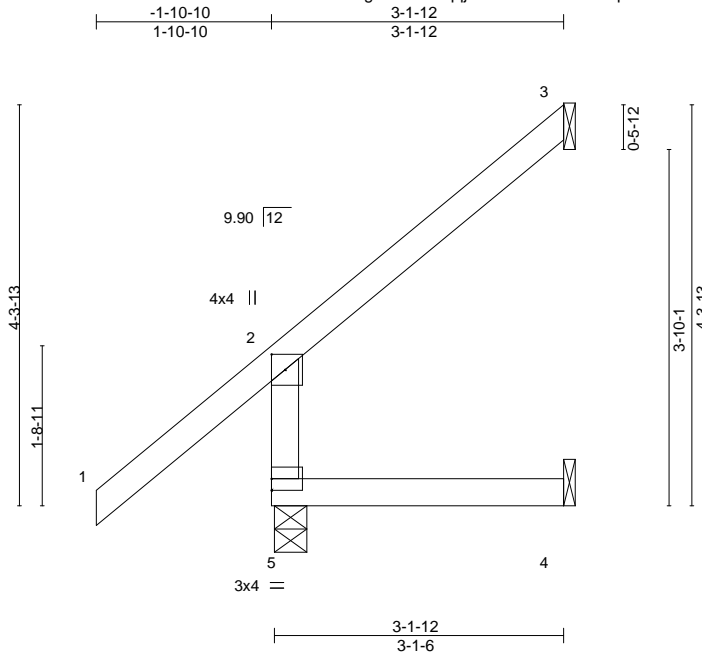


Job 2000411-2000411A	Truss CJ1	Truss Type Diagonal Hip Girder	Qty 1	Ply 1	JOHNSON RESIDENCE Job Reference (optional)	141573861
-------------------------	--------------	-----------------------------------	----------	----------	---	-----------

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

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 8 12:55:10 2020 Page 1

ID:grH97r8Y2qqjGmUPA5lQnSz8NKp-HhkmA77OKlF9KxYc58M\_ZND0vBcpVNLpzYhI3az8L2?



Scale = 1:24.8

Plate Offsets (X,Y)--	[2:0-2-0,0-1-12]				
<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 0.52	Vert(LL) 0.01 4-5 >999 240	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.28	Vert(CT) -0.01 4-5 >999 180		
BCLL 0.0 *	Rep Stress Incr NO	WB 0.00	Horz(CT) -0.04 3 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-MR		Weight: 17 lb	FT = 20%

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

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 3-1-12 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 5=0-4-3, 3=Mechanical, 4=Mechanical  
Max Horz 5=121(LC 12)  
Max Uplift 3=-82(LC 12), 4=-17(LC 12)  
Max Grav 5=282(LC 1), 3=74(LC 19), 4=53(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) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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 to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 82 lb uplift at joint 3 and 17 lb uplift at joint 4.



June 9,2020

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.**  
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

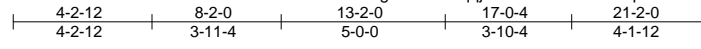
ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate  
818 Soundside Road  
Edenton, NC 27932

Job 2000411-2000411A	Truss CGR	Truss Type PIGGYBACK BASE GIRDE	Qty 1	Ply 3	JOHNSON RESIDENCE Job Reference (optional)	I41573862
-------------------------	--------------	------------------------------------	----------	----------	---	-----------

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

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 8 12:55:04 2020 Page 1

ID:grH97r8Y2qqjGmUPA5lQnSz8NKp-SYNUw43dkSV0c04SktFaj6z4ymbt5T0XbdE\_rwz8L25



8x16 MT18HS // 8x8 =

Scale = 1:70.2

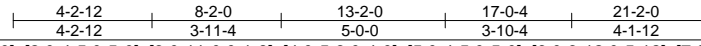
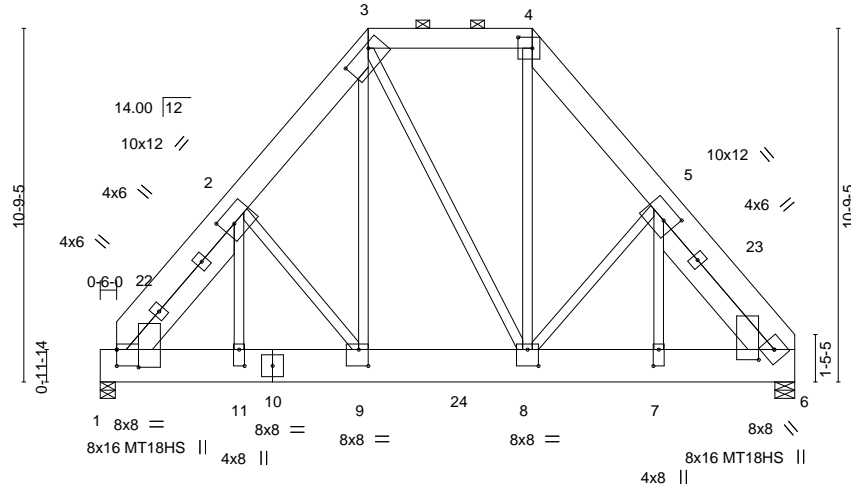


Plate Offsets (X,Y)-- [1:0-0-0,0-6-0], [1:0-6-8,0-8-0], [2:0-4-5,0-5-0], [3:0-11-0,0-1-8], [4:0-5-3,0-4-0], [5:0-4-5,0-5-0], [6:0-3-12,0-5-12], [7:0-6-0,0-2-0], [8:0-4-0,0-6-0], [9:0-3-8,0-6-0], [11:0-6-0,0-2-0]

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.23	Vert(LL)	-0.05	9	>999	240	MT20	137/130
TCDL 10.0 +	Lumber DOL	1.15	BC 0.18	Vert(CT)	-0.10	9	>999	180	MT18HS	137/130
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.89	Horz(CT)	0.02	6	n/a	n/a		
BCDL 10.0 +	Code IRC2015/TPI2014		Matrix-MS						Weight: 1026 lb	FT = 20%

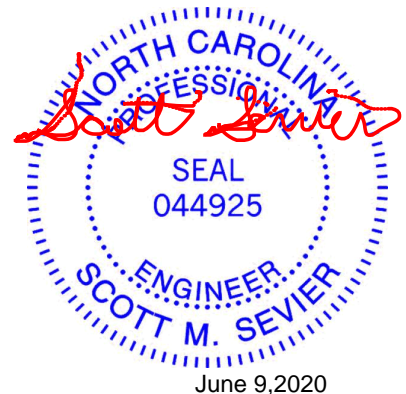
LUMBER-	BRACING-
TOP CHORD 2x10 SP No.2 *Except* 3-4: 2x8 SP No.2	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except 2-0-0 oc purlins (6-0-0 max.); 3-4.
BOT CHORD 1-1/2X11-7/8 LP-LSL TC 1.75E	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.3	
SLIDER Left 2x8 SP No.2 -x 5-0-11, Right 2x8 SP No.2 -x 5-2-4	

**REACTIONS.** (size) 1=0-5-8, 6=0-7-4  
 Max Horz 1=246(LC 9)  
 Max Uplift 1=-2082(LC 12), 6=-2054(LC 12)  
 Max Grav 1=12369(LC 19), 6=12211(LC 19)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-2=-9316/1777, 2-3=-9362/1862, 3-4=-6128/1320, 4-5=-9518/1894, 5-6=-8270/1587  
 BOT CHORD 1-11=-1300/7165, 9-11=-1296/7139, 8-9=-1034/5856, 7-8=-1151/6514, 6-7=-1154/6528  
 WEBS 2-11=-479/2731, 2-9=-2032/539, 3-9=-1178/6086, 3-8=-227/866, 4-8=-1282/6590,  
 5-8=-884/340, 5-7=-279/1598

**NOTES-**

- 3-ply truss to be connected together with 10d (0.120"x3") nails as follows:  
 Top chords connected as follows: 2x10 - 2 rows staggered at 0-9-0 oc, 2x8 - 2 rows staggered at 0-9-0 oc.  
 Bottom chords connected as follows: 1-1/2x11-7/8 - 3 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; 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) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 17.1psf.
- Solid blocking is required on both sides of the truss at joint(s), 1, 6.
- LGT3-SDS2.5 Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1. This connection is for uplift only and does not consider lateral forces.
- MGT Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 6. This connection is for uplift only and does not consider lateral forces.
- A + following a basic load indicates that the load has been modified in one or more load cases.



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.



Job	Truss	Truss Type	Qty	Ply	JOHNSON RESIDENCE	I41573862
2000411-2000411A	CGR	PIGGYBACK BASE GIRDE	1	3	Job Reference (optional)	

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

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 8 12:55:04 2020 Page 2

ID:grH97r8Y2qqjGmUPA5lQnSz8NKp-SYNUw43dkSV0c04SktFaj6z4ymbt5T0XbdE\_rwz8L25

**NOTES-**

- 13) Load case(s) 1, 2, 3, 6, 7, 10, 11, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 29, 30, 33, 34, 39, 40, 41, 42, 43, 44 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.
- 14) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- 15) LGT3 Hurricane ties must have three studs in line below the truss.
- 16) MGT Hurricane tie must have a 5/8" anchor bolt to adequate anchorage below.

**LOAD CASE(S)** Standard Except:

- 1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (plf)  
Vert: 14-22=-74, 3-4=-74, 19-23=-74, 1-6=-999(F=-965)  
Trapezoidal Loads (plf)  
Vert: 22=-314(F=-240)-to-3=-94(F=-20), 4=-94(F=-20)-to-23=-314(F=-240)
- 2) Dead + 0.75 Roof Live (balanced) + 0.75 Uninhab. Attic Storage: Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (plf)  
Vert: 14-22=-64, 3-4=-64, 19-23=-64, 1-9=-879(F=-844), 9-24=-909(F=-844), 6-24=-879(F=-844)  
Trapezoidal Loads (plf)  
Vert: 22=-274(F=-210)-to-3=-82(F=-18), 4=-82(F=-17)-to-23=-274(F=-210)
- 3) Dead + Uninhabitable Attic Without Storage: Lumber Increase=1.25, Plate Increase=1.25  
Uniform Loads (plf)  
Vert: 14-22=-34, 3-4=-34, 19-23=-34, 1-6=-778(F=-724)  
Trapezoidal Loads (plf)  
Vert: 22=-214(F=-180)-to-3=-49(F=-15), 4=-49(F=-15)-to-23=-214(F=-180)
- 6) Dead + 0.6 C-C Wind (Neg. Internal) Case 1: Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 14-22=-64, 3-4=-46, 19-23=-64, 1-6=-879(F=-845)  
Horz: 3-14=30, 4-19=-30  
Trapezoidal Loads (plf)  
Vert: 22=-275(F=-210)-to-3=-82(F=-18), 4=-82(F=-18)-to-23=-275(F=-210)
- 7) Dead + 0.6 C-C Wind (Neg. Internal) Case 2: Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 14-22=-64, 3-4=-46, 19-23=-64, 1-6=-879(F=-845)  
Horz: 3-14=30, 4-19=-30  
Trapezoidal Loads (plf)  
Vert: 22=-275(F=-210)-to-3=-82(F=-18), 4=-82(F=-18)-to-23=-275(F=-210)
- 10) Dead + 0.6 MWFRS Wind (Neg. Internal) Left: Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 14-22=-49, 3-4=-7, 19-23=-24, 1-6=-700(F=-666)  
Horz: 3-14=15, 4-19=11  
Trapezoidal Loads (plf)  
Vert: 22=-215(F=-166)-to-3=-63(F=-14), 4=-37(F=-14)-to-23=-189(F=-166)
- 11) Dead + 0.6 MWFRS Wind (Neg. Internal) Right: Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 14-22=-24, 3-4=-7, 19-23=-49, 1-6=-700(F=-666)  
Horz: 3-14=-11, 4-19=-15  
Trapezoidal Loads (plf)  
Vert: 22=-189(F=-166)-to-3=-37(F=-14), 4=-63(F=-14)-to-23=-215(F=-166)
- 16) Dead + 0.6 MWFRS Wind (Neg. Internal) 1st Parallel: Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 14-22=-7, 3-4=-23, 19-23=-23, 1-6=-584(F=-550)  
Horz: 3-14=-28, 4-19=11  
Trapezoidal Loads (plf)  
Vert: 22=-143(F=-137)-to-3=-18(F=-11), 4=-35(F=-11)-to-23=-160(F=-137)
- 17) Dead + 0.6 MWFRS Wind (Neg. Internal) 2nd Parallel: Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 14-22=-23, 3-4=-23, 19-23=-7, 1-6=-584(F=-550)  
Horz: 3-14=-11, 4-19=28  
Trapezoidal Loads (plf)  
Vert: 22=-160(F=-137)-to-3=-35(F=-11), 4=-18(F=-11)-to-23=-143(F=-137)
- 18) Dead + Uninhabitable Attic Storage: Lumber Increase=1.25, Plate Increase=1.25  
Uniform Loads (plf)  
Vert: 14-22=-34, 3-4=-34, 19-23=-34, 1-9=-517(F=-483), 9-24=-557(F=-483), 6-24=-517(F=-483)  
Trapezoidal Loads (plf)  
Vert: 22=-154(F=-120)-to-3=-44(F=-10), 4=-44(F=-10)-to-23=-154(F=-120)
- 19) Dead + 0.75 Roof Live (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) Left): Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 14-22=-76, 3-4=-44, 19-23=-56, 1-9=-1016(F=-982), 9-24=-1046(F=-982), 6-24=-1016(F=-982)  
Horz: 3-14=11, 4-19=8  
Trapezoidal Loads (plf)  
Vert: 22=-320(F=-244)-to-3=-96(F=-20), 4=-77(F=-20)-to-23=-300(F=-244)
- 20) Dead + 0.75 Roof Live (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) Right): Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 14-22=-56, 3-4=-44, 19-23=-76, 1-9=-1016(F=-982), 9-24=-1046(F=-982), 6-24=-1016(F=-982)  
Horz: 3-14=-8, 4-19=-11  
Trapezoidal Loads (plf)  
Vert: 22=-300(F=-244)-to-3=-77(F=-20), 4=-96(F=-20)-to-23=-320(F=-244)

Continued on page 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	Truss	Truss Type	Qty	Ply	JOHNSON RESIDENCE	I41573862
2000411-2000411A	CGR	PIGGYBACK BASE GIRDE	1	3	Job Reference (optional)	

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

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 8 12:55:04 2020 Page 3

ID:grH97r8Y2qqjGmUPA5lQnSz8NKp-SYNUw43dkSV0c04SktFaj6z4ymbt5T0XbdE\_rwz8L25

**LOAD CASE(S)** Standard Except:

- 21) Dead + 0.75 Roof Live (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) 1st Parallel): Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 14-22=-44, 3-4=-56, 19-23=-56, 1-9=-929(F=-895), 9-24=-959(F=-895), 6-24=-929(F=-895)  
Horz: 3-14=-21, 4-19=8  
Trapezoidal Loads (plf)  
Vert: 22=-266(F=-223)-to-3=-62(F=-19), 4=-75(F=-19)-to-23=-279(F=-223)
- 22) Dead + 0.75 Roof Live (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) 2nd Parallel): Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 14-22=-56, 3-4=-56, 19-23=-44, 1-9=-929(F=-895), 9-24=-959(F=-895), 6-24=-929(F=-895)  
Horz: 3-14=-8, 4-19=21  
Trapezoidal Loads (plf)  
Vert: 22=-279(F=-223)-to-3=-75(F=-19), 4=-62(F=-19)-to-23=-266(F=-223)
- 23) 1st Dead + Roof Live (unbalanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (plf)  
Vert: 14-22=-74, 3-4=-74, 19-23=-34, 1-6=-999(F=-965)  
Trapezoidal Loads (plf)  
Vert: 22=-314(F=-240)-to-3=-94(F=-20), 4=-54(F=-20)-to-23=-274(F=-240)
- 24) 2nd Dead + Roof Live (unbalanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (plf)  
Vert: 14-22=-34, 3-4=-74, 19-23=-74, 1-6=-999(F=-965)  
Trapezoidal Loads (plf)  
Vert: 22=-274(F=-240)-to-3=-54(F=-20), 4=-94(F=-20)-to-23=-314(F=-240)
- 25) 3rd Dead + 0.75 Roof Live (unbalanced) + 0.75 Uninhab. Attic Storage: Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (plf)  
Vert: 14-22=-64, 3-4=-64, 19-23=-34, 1-9=-879(F=-844), 9-24=-909(F=-844), 6-24=-879(F=-844)  
Trapezoidal Loads (plf)  
Vert: 22=-274(F=-210)-to-3=-82(F=-18), 4=-52(F=-17)-to-23=-244(F=-210)
- 26) 4th Dead + 0.75 Roof Live (unbalanced) + 0.75 Uninhab. Attic Storage: Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (plf)  
Vert: 14-22=-34, 3-4=-64, 19-23=-64, 1-9=-879(F=-844), 9-24=-909(F=-844), 6-24=-879(F=-844)  
Trapezoidal Loads (plf)  
Vert: 22=-244(F=-210)-to-3=-52(F=-18), 4=-82(F=-17)-to-23=-274(F=-210)
- 29) Reversal: Dead + 0.6 C-C Wind (Neg. Internal) Case 1: Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 14-22=-64, 3-4=-46, 19-23=-64, 1-6=-879(F=-845)  
Horz: 3-14=30, 4-19=-30  
Trapezoidal Loads (plf)  
Vert: 22=-275(F=-210)-to-3=-82(F=-18), 4=-82(F=-18)-to-23=-275(F=-210)
- 30) Reversal: Dead + 0.6 C-C Wind (Neg. Internal) Case 2: Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 14-22=-64, 3-4=-46, 19-23=-64, 1-6=-879(F=-845)  
Horz: 3-14=30, 4-19=-30  
Trapezoidal Loads (plf)  
Vert: 22=-275(F=-210)-to-3=-82(F=-18), 4=-82(F=-18)-to-23=-275(F=-210)
- 33) Reversal: Dead + 0.6 MWFRS Wind (Neg. Internal) Left: Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 14-22=-49, 3-4=-7, 19-23=-24, 1-6=-700(F=-666)  
Horz: 3-14=15, 4-19=11  
Trapezoidal Loads (plf)  
Vert: 22=-215(F=-166)-to-3=-63(F=-14), 4=-37(F=-14)-to-23=-189(F=-166)
- 34) Reversal: Dead + 0.6 MWFRS Wind (Neg. Internal) Right: Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 14-22=-24, 3-4=-7, 19-23=-49, 1-6=-700(F=-666)  
Horz: 3-14=-11, 4-19=-15  
Trapezoidal Loads (plf)  
Vert: 22=-189(F=-166)-to-3=-37(F=-14), 4=-63(F=-14)-to-23=-215(F=-166)
- 39) Reversal: Dead + 0.6 MWFRS Wind (Neg. Internal) 1st Parallel: Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 14-22=-7, 3-4=-23, 19-23=-23, 1-6=-584(F=-550)  
Horz: 3-14=-28, 4-19=11  
Trapezoidal Loads (plf)  
Vert: 22=-143(F=-137)-to-3=-18(F=-11), 4=-35(F=-11)-to-23=-160(F=-137)
- 40) Reversal: Dead + 0.6 MWFRS Wind (Neg. Internal) 2nd Parallel: Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 14-22=-23, 3-4=-23, 19-23=-7, 1-6=-584(F=-550)  
Horz: 3-14=-11, 4-19=28  
Trapezoidal Loads (plf)  
Vert: 22=-160(F=-137)-to-3=-35(F=-11), 4=-18(F=-11)-to-23=-143(F=-137)
- 41) Reversal: Dead + 0.75 Roof Live (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) Left): Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 14-22=-76, 3-4=-44, 19-23=-56, 1-9=-1016(F=-982), 9-24=-1046(F=-982), 6-24=-1016(F=-982)  
Horz: 3-14=11, 4-19=8  
Trapezoidal Loads (plf)  
Vert: 22=-320(F=-244)-to-3=-96(F=-20), 4=-77(F=-20)-to-23=-300(F=-244)

Continued on page 4

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-743 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	JOHNSON RESIDENCE	I41573862
2000411-2000411A	CGR	PIGGYBACK BASE GIRDE	1	<b>3</b>	Job Reference (optional)	

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

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 8 12:55:04 2020 Page 4  
 ID:grH97r8Y2qqjGmUPA5lQnSz8NKp-SYNUw43dkSV0c04SktFaJ6z4ymbt5T0XbdE\_rwz8L25

**LOAD CASE(S)**

- 42) Reversal: Dead + 0.75 Roof Live (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) Right): Lumber Increase=1.60, Plate Increase=1.60  
 Uniform Loads (plf)  
 Vert: 14-22=-56, 3-4=-44, 19-23=-76, 1-9=-1016(F=-982), 9-24=-1046(F=-982), 6-24=-1016(F=-982)  
 Horz: 3-14=-8, 4-19=-11  
 Trapezoidal Loads (plf)  
 Vert: 22=-300(F=-244)-to-3=-77(F=-20), 4=-96(F=-20)-to-23=-320(F=-244)
- 43) Reversal: Dead + 0.75 Roof Live (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) 1st Parallel): Lumber Increase=1.60, Plate Increase=1.60  
 Uniform Loads (plf)  
 Vert: 14-22=-44, 3-4=-56, 19-23=-56, 1-9=-929(F=-895), 9-24=-959(F=-895), 6-24=-929(F=-895)  
 Horz: 3-14=-21, 4-19=8  
 Trapezoidal Loads (plf)  
 Vert: 22=-266(F=-223)-to-3=-62(F=-19), 4=-75(F=-19)-to-23=-279(F=-223)
- 44) Reversal: Dead + 0.75 Roof Live (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) 2nd Parallel): Lumber Increase=1.60, Plate Increase=1.60  
 Uniform Loads (plf)  
 Vert: 14-22=-56, 3-4=-56, 19-23=-44, 1-9=-929(F=-895), 9-24=-959(F=-895), 6-24=-929(F=-895)  
 Horz: 3-14=-8, 4-19=21  
 Trapezoidal Loads (plf)  
 Vert: 22=-279(F=-223)-to-3=-75(F=-19), 4=-62(F=-19)-to-23=-266(F=-223)

**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.



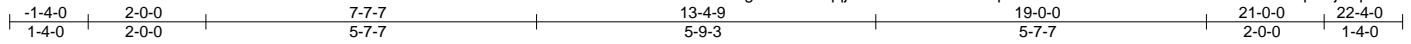
818 Soundside Road  
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	JOHNSON RESIDENCE	141573863
2000411-2000411A	CH	Hip Girder	1	1	Job Reference (optional)	

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

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 8 12:55:06 2020 Page 1

ID:grH97r8Y2qqjGmUPA5IQnSz8NKp-OwUFL4tG4lkrERsIH2PX2NdaGHZRtp2wj4wpz8L23



Scale = 1:39.1

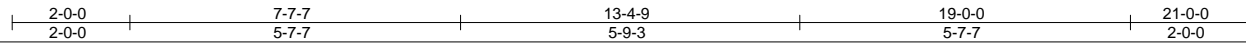
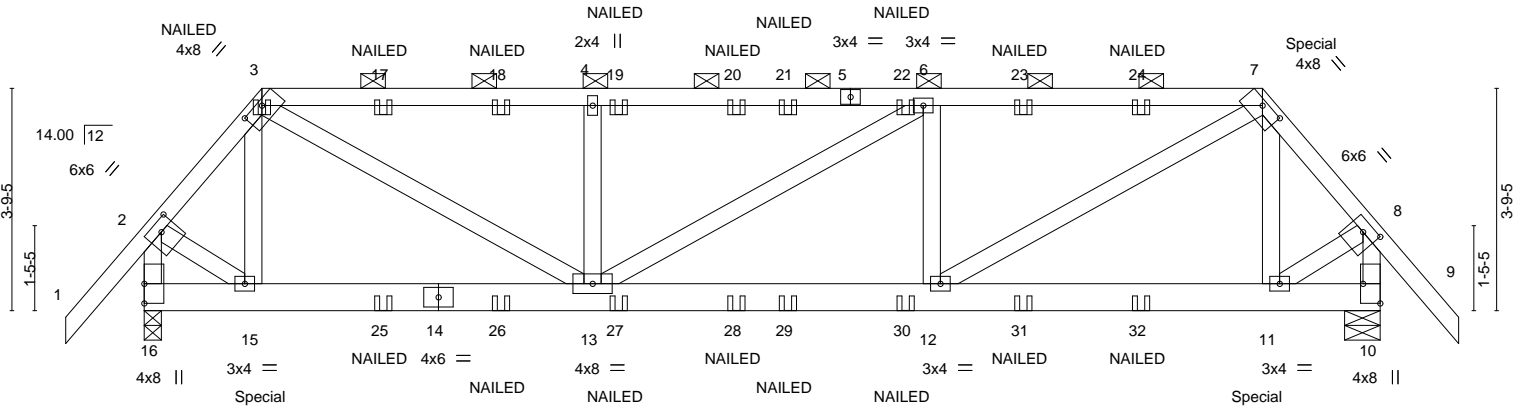


Plate Offsets (X, Y)-- [2:0-3-0,0-2-1], [3:0-4-4,0-1-0], [7:0-4-4,0-1-0], [8:0-3-0,0-2-1], [10:Edge,0-3-8]

<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 0.41	Vert(LL)	0.10 12-13	>999	240	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.25	Vert(CT)	-0.09 12-13	>999	180		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.61	Horz(CT)	-0.01 10	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-MS						
								Weight: 144 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, except end verticals, and 2-0-0 oc purlins (4-7-12 max.): 3-7.
BOT CHORD 2x6 SP No.2	BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 2x4 SP No.3	

**REACTIONS.** (size) 16=0-3-8, 10=0-7-4  
 Max Horz 16=-145(LC 33)  
 Max Uplift 16=-595(LC 9), 10=-617(LC 8)  
 Max Grav 16=1003(LC 41), 10=1033(LC 43)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-777/569, 3-4=-1409/1021, 4-6=-1409/1021, 6-7=-1419/1029, 7-8=-809/579, 2-16=-1027/710, 8-10=-1052/722  
 BOT CHORD 13-15=-388/559, 12-13=-992/1485, 11-12=-365/567  
 WEBS 3-13=-739/1081, 4-13=-398/319, 6-12=-395/320, 7-12=-733/1073, 2-15=-413/658, 8-11=-436/681

- 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; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 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.
  - Two H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 16 and 10. 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.
  - Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 179 lb down and 208 lb up at 19-0-0 on top chord, and 42 lb down and 65 lb up at 2-0-0, and 42 lb down and 65 lb up at 18-11-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
  - 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: 1-2=-60, 2-3=-60, 3-7=-60, 7-8=-60, 8-9=-60, 10-16=-20



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.

**ENGINEERING BY**  
**TRENCO**  
 A MiTek Affiliate

818 Soundside Road  
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	JOHNSON RESIDENCE	I41573863
2000411-2000411A	CH	Hip Girder	1	1	Job Reference (optional)	

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

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 8 12:55:06 2020 Page 2  
 ID:grH97r8Y2qqjGmUPA5lQnSz8NKp-OwUFLI4tG4lkrKErsIH2PX2NdaGHZRtp2wj4wpz8L23

**LOAD CASE(S)** Standard

Concentrated Loads (lb)

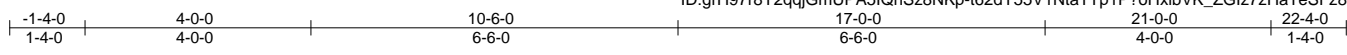
Vert: 15=9(F) 11=9(F) 25=4(F) 26=4(F) 27=4(F) 28=4(F) 29=4(F) 30=4(F) 31=4(F) 32=4(F)

**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/TP1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



818 Soundside Road  
 Edenton, NC 27932



Scale = 1:40.8

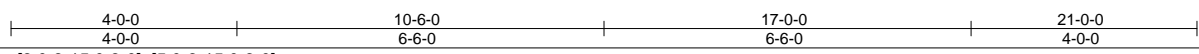
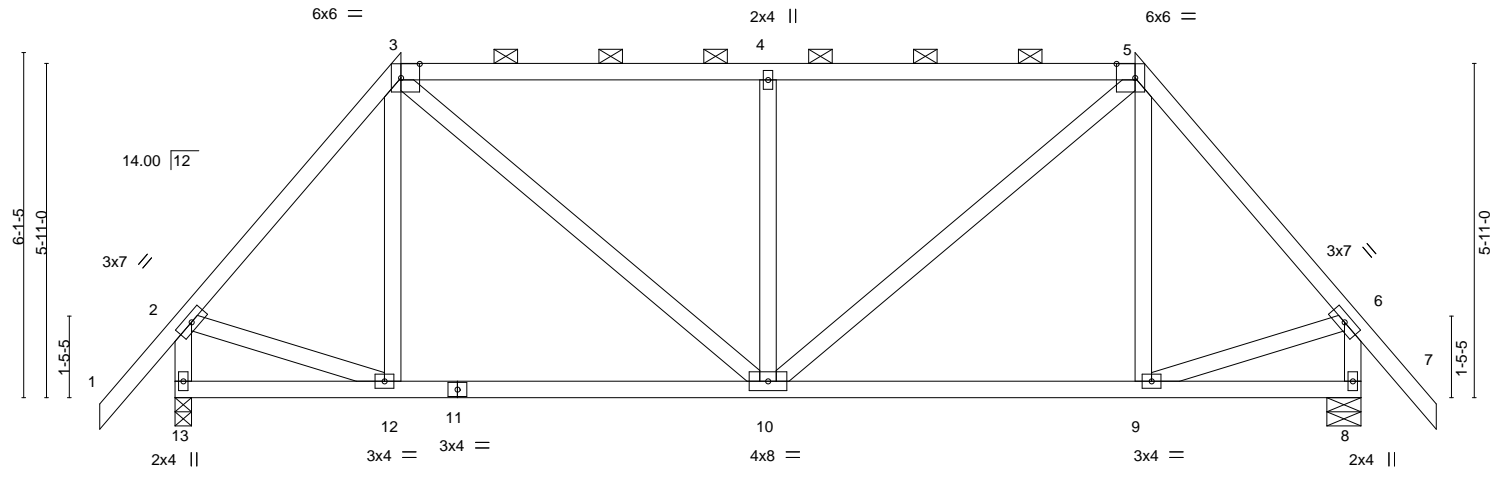


Plate Offsets (X,Y)-- [3:0-3-15,0-3-0], [5:0-3-15,0-3-0]

<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 0.61	Vert(LL) -0.04 10-12	>999 240	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.40	Vert(CT) -0.08 10-12	>999 180		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.29	Horz(CT) 0.01 8	n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-MS				
						Weight: 138 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, except end verticals, and 2-0-0 oc purlins (5-8-15 max.): 3-5.
BOT CHORD	2x4 SP No.2	BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS	2x4 SP No.3		

**REACTIONS.** (size) 13=0-3-8, 8=0-7-4  
 Max Horz 13=203(LC 11)  
 Max Uplift 13=-64(LC 9), 8=-64(LC 8)  
 Max Grav 13=917(LC 1), 8=917(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-799/190, 3-4=-813/253, 4-5=-813/253, 5-6=-799/190, 2-13=-892/229, 6-8=-892/229  
 BOT CHORD 10-12=-128/470, 9-10=-57/470  
 WEBS 3-10=-138/476, 4-10=-458/204, 5-10=-138/476, 2-12=-83/480, 6-9=-85/480

- 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) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 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.
  - One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 13. This connection is for uplift only and does not consider lateral forces.
  - One MTS12 Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 8. 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	Truss	Truss Type	Qty	Ply	JOHNSON RESIDENCE	I41573865
2000411-2000411A	CH2	Hip	1	1	Job Reference (optional)	

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

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 8 12:55:08 2020 Page 1

ID:grH97r8Y2qqjGmUPA5lQnSz8NKp-LJc?mR67oh?R4dODzjJWUy7dNNoG1SH6WECEB\_iz8L21

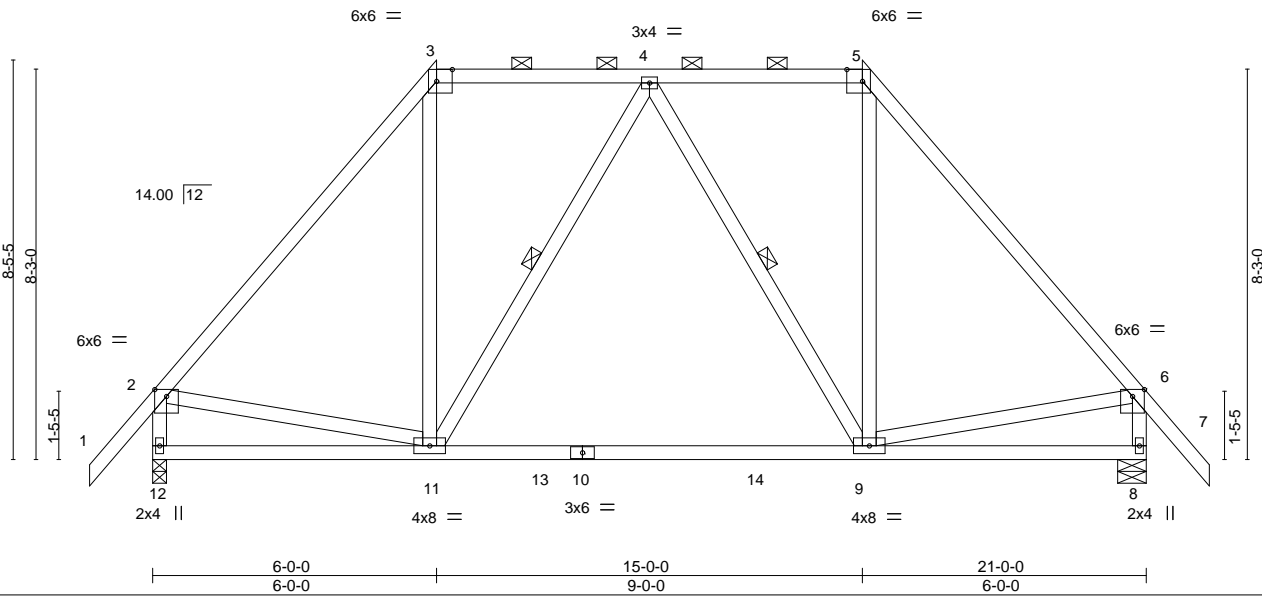
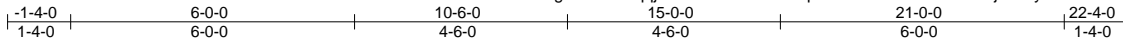


Plate Offsets (X,Y)--	[2:0-3-0,0-1-12], [3:0-3-15,0-3-0], [5:0-3-15,0-3-0], [6:0-3-0,0-1-12]
-----------------------	--

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	Plate Grip DOL 1.15	TC 0.78	Vert(LL) -0.27 9-11 >933 240	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.80	Vert(CT) -0.41 9-11 >605 180		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.17	Horz(CT) 0.01 8 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-MS		Weight: 148 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 5-7-14 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 3-5.
BOT CHORD 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.3	WEBS 1 Row at midpt 4-11, 4-9

REACTIONS.
(size) 12=0-3-8, 8=0-7-4
Max Horz 12=264(LC 11)
Max Uplift 12=-70(LC 12), 8=-70(LC 13)
Max Grav 12=917(LC 1), 8=917(LC 1)

FORCES.
(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-836/195, 3-4=-464/221, 4-5=-464/221, 5-6=-836/195, 2-12=-876/231, 6-8=-876/231
BOT CHORD 11-12=-283/359, 9-11=-116/563, 8-9=-142/269
WEBS 3-11=-18/323, 5-9=-17/323, 2-11=-93/504, 6-9=-96/505

- 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) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 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 H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 12. This connection is for uplift only and does not consider lateral forces.
  - One MTS12 Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 8. 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.

**ENGINEERING BY**  
**TRENCO**  
 A MiTek Affiliate

818 Soundside Road  
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	JOHNSON RESIDENCE	141573866
2000411-2000411A	CH3	Hip	1	1	Job Reference (optional)	

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

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 8 12:55:09 2020 Page 1

ID:grH97r8Y2qqjGmUPA5lQnSz8NKp-pVANzn6mZ?7linzQXQl0AgvanCnmneGkuykW8z8L20

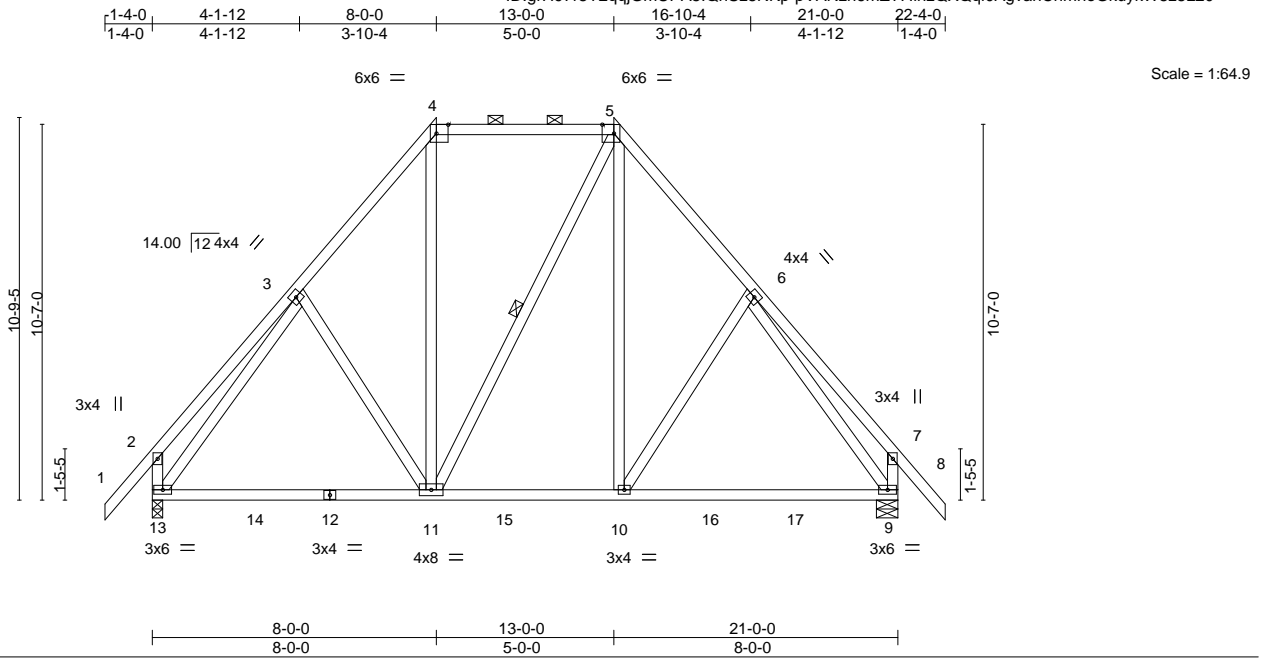


Plate Offsets (X,Y)--	[4:0-3-15,0-3-0], [5:0-3-15,0-3-0]				
<b>LOADING</b> (psf)	<b>SPACING-</b> 2-0-0	<b>CSI.</b>	<b>DEFL.</b> in (loc) l/defl L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL 1.15	TC 0.37	Vert(LL) -0.10 9-10 >999 240	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.52	Vert(CT) -0.20 9-10 >999 180		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.61	Horz(CT) 0.01 9 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-MS		Weight: 171 lb	FT = 20%

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

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 4-5.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
WEBS 1 Row at midpt 5-11

**REACTIONS.** (size) 13=0-3-8, 9=0-7-4  
Max Horz 13=-324(LC 10)  
Max Uplift 13=-76(LC 12), 9=-76(LC 13)  
Max Grav 13=917(LC 1), 9=922(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-311/206, 3-4=-708/285, 4-5=-472/250, 5-6=-723/285, 6-7=-311/206,  
2-13=-373/227, 7-9=-373/227  
BOT CHORD 11-13=-169/596, 10-11=-41/485, 9-10=0/476  
WEBS 4-11=-91/305, 5-10=-119/364, 3-13=-665/48, 6-9=-665/48

- 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) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 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 H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 13 and 9. 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/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 2000411-2000411A	Truss C	Truss Type Piggyback Base	Qty 3	Ply 1	JOHNSON RESIDENCE Job Reference (optional)	I41573867
-------------------------	------------	------------------------------	----------	----------	---	-----------

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

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 8 12:55:03 2020 Page 1

ID:grH97r8Y2qqjGmUPA5lQnSz8NKp\_Lp6ik2?z9N9\_sVGAALnvQsaM9YM4GNMzVQUz8L26

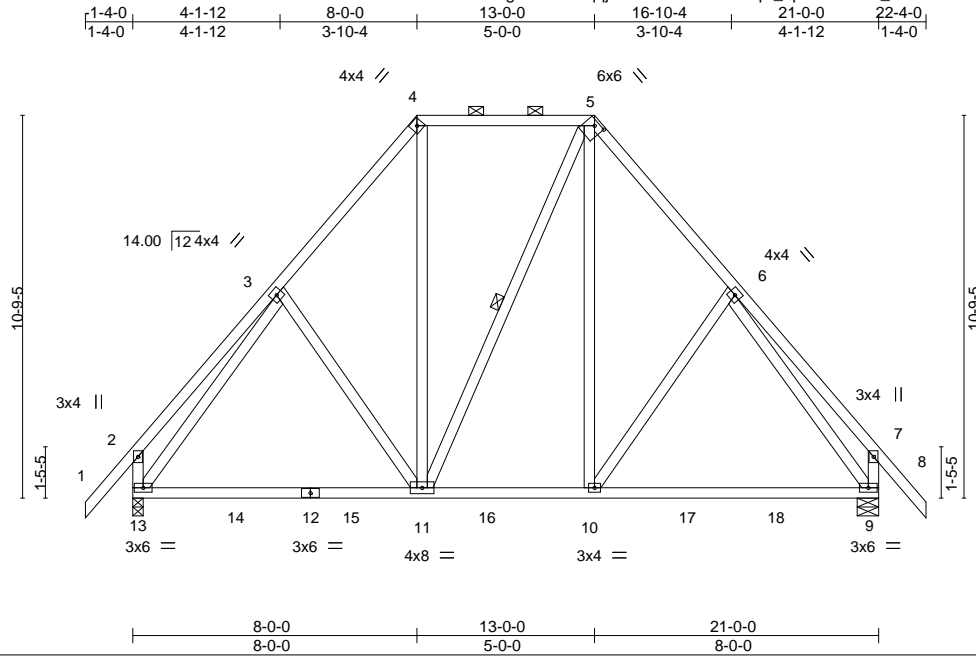


Plate Offsets (X,Y)-- [5:0-3:0,0-1-8]

<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 0.40	Vert(LL)	-0.12	9-10	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.57	Vert(CT)	-0.24	9-10	>999		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.60	Horz(CT)	0.01	9	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-MS						
								Weight: 172 lb	FT = 20%

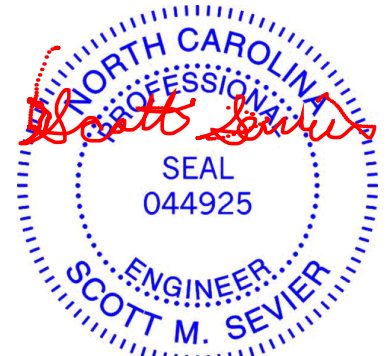
**LUMBER-**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.3

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 6'-0" oc purlins, except end verticals, and 2'-0" oc purlins (6'-0" max.): 4-5.  
BOT CHORD Rigid ceiling directly applied or 10'-0" oc bracing.  
WEBS 1 Row at midpt 5-11

**REACTIONS.** (size) 13=0-3-8, 9=0-7-4  
Max Horz 13=-329(LC 10)  
Max Uplift 13=-74(LC 12), 9=-74(LC 13)  
Max Grav 13=917(LC 1), 9=921(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-315/200, 3-4=-708/285, 4-5=-472/251, 5-6=-717/285, 6-7=-315/201,  
2-13=-376/222, 7-9=-376/222  
BOT CHORD 11-13=-173/598, 10-11=-42/482, 9-10=0/473  
WEBS 4-11=-93/309, 5-10=-120/359, 3-13=-656/56, 6-9=-655/56

- 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) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 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" tall by 2'-0" wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 13 and 9. 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.



June 9, 2020

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

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

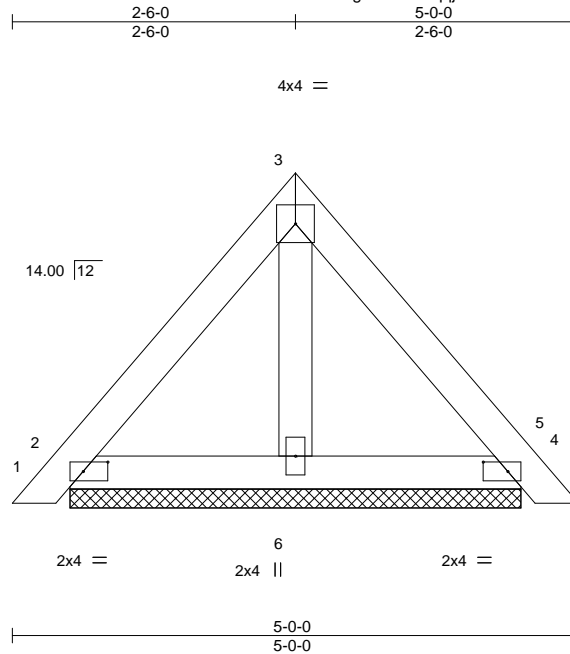


818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	JOHNSON RESIDENCE
2000411-2000411A	PB1	Piggyback	1	3	I41573868

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

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 8 12:55:27 2020 Page 1  
 ID:grH97r8Y2qqjGmUPA5lQnSz8NKp-HzGBlxK2KXOlsYLtaC9\_lzQ2H1Tw\_3VvtiJh85z8L1k



Scale = 1:20.3

Plate Offsets (X,Y)--	[2:0-2-10,0-1-0], [4:0-2-10,0-1-0]				
<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 0.03	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.01	Vert(LL) 0.00 4 n/r 120		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.00	Vert(CT) 0.00 4 n/r 90		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-P	Horz(CT) 0.00 4 n/a n/a		
				Weight: 61 lb	FT = 20%

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

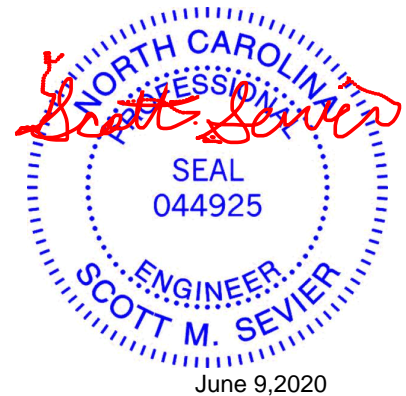
**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 5-0-0 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 2=3-11-12, 4=3-11-12, 6=3-11-12  
 Max Horz 2=70(LC 11)  
 Max Uplift 2=-32(LC 13), 4=-30(LC 13)  
 Max Grav 2=120(LC 1), 4=120(LC 1), 6=121(LC 3)

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

**NOTES-**

- 3-ply truss to be connected together with 10d (0.120"x3") nails as follows:  
 Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.  
 Bottom chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
- All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TC DL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 4. This connection is for uplift only and does not consider lateral forces.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.



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

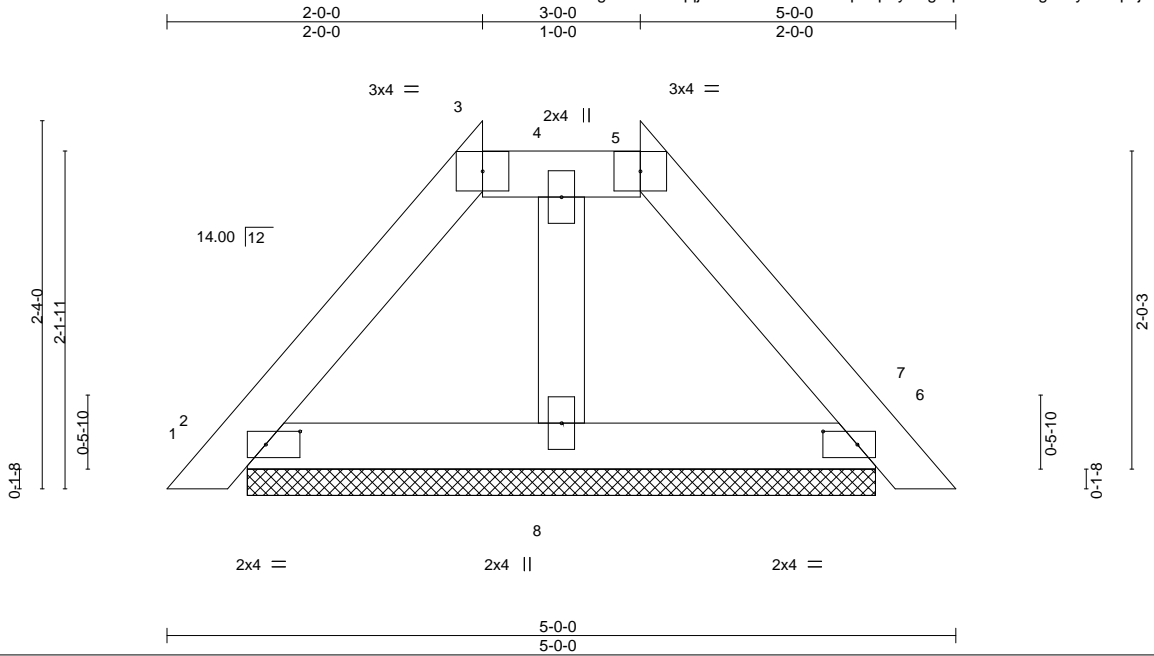
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall 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	JOHNSON RESIDENCE	I41573869
2000411-2000411A	PB2	Piggyback	1	1	Job Reference (optional)	

84 Components (Dunn), Dunn, NC - 28334, 8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 8 12:55:28 2020 Page 1  
 ID:grH97r8Y2qqjGmUPA5lQnSz8NKp-I9pZyHLg5qWcUiw38wgDIAyDwRpkjWc36M2FgXz8L1j



Scale = 1:14.6

Plate Offsets (X,Y)--	[2:0-2-10,0-1-0], [6:0-2-10,0-1-0]
-----------------------	------------------------------------

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP	
TCLL 20.0	Plate Grip DOL	1.15	TC 0.04	Vert(LL)	0.00	6	n/r	120	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.04	Vert(CT)	0.00	6	n/r	90		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.01	Horz(CT)	0.00	6	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S						Weight: 19 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 5-0-0 oc purlins, except
BOT CHORD 2x4 SP No.2	2-0-0 oc purlins: 3-5.
OTHERS 2x4 SP No.3	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 2=3-11-12, 6=3-11-12, 8=3-11-12  
 Max Horz 2=-52(LC 10)  
 Max Uplift 2=-25(LC 12), 6=-30(LC 13)  
 Max Grav 2=121(LC 1), 6=121(LC 1), 8=116(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; TC DL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 6. This connection is for uplift only and does not consider lateral forces.
- 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.



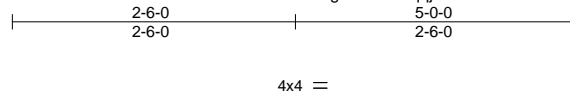
June 9, 2020

Job 2000411-2000411A	Truss PB3	Truss Type Piggyback	Qty 2	Ply 1	JOHNSON RESIDENCE Job Reference (optional)	I41573870
-------------------------	--------------	-------------------------	----------	----------	---	-----------

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

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 8 12:55:29 2020 Page 1

ID:grH97r8Y2qqjGmUPA5lQnSz8NKp-DLNxAdMlr8eT6sVGidBSqOVNmr9zSzqCL?ood\_z8L1i



Scale = 1:20.3

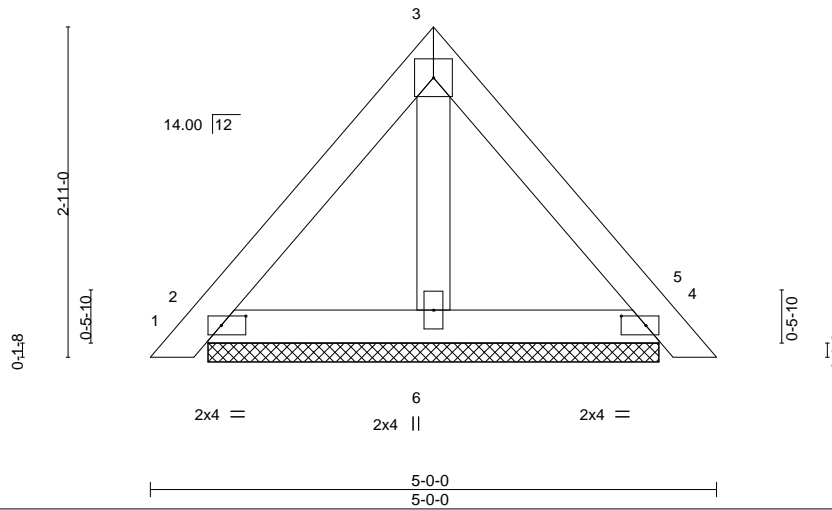


Plate Offsets (X,Y)-- [2:0-2-10,0-1-0], [4:0-2-10,0-1-0]

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.10	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.04	Vert(LL) 0.00 5 n/r 120		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.01	Vert(CT) 0.00 5 n/r 90		
BCDL 10.0	Rep Stress Incr YES	Matrix-P	Horz(CT) 0.00 4 n/a n/a		
	Code IRC2015/TPI2014			Weight: 20 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 5-0-0 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

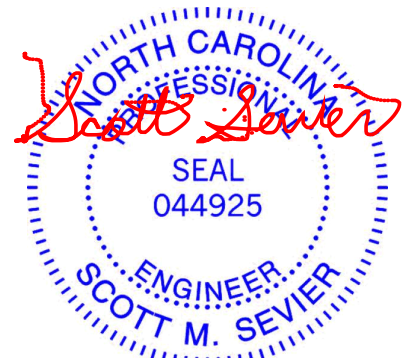
**REACTIONS.**

(size) 2=3-11-12, 4=3-11-12, 6=3-11-12  
 Max Horz 2=70(LC 11)  
 Max Uplift 2=-32(LC 13), 4=-30(LC 13)  
 Max Grav 2=120(LC 1), 4=120(LC 1), 6=121(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; TC DL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 4. This connection is for uplift only and does not consider lateral forces.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.



June 9,2020

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TP1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



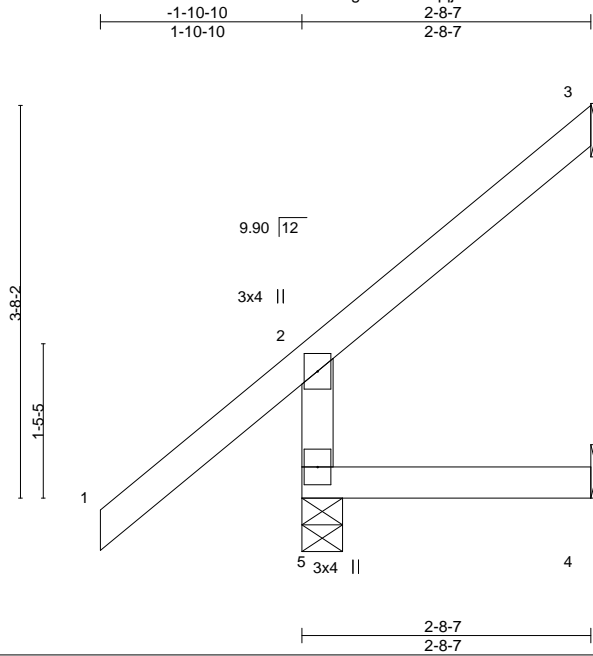
818 Soundside Road  
 Edenton, NC 27932

Job 2000411-2000411A	Truss CJ2	Truss Type Diagonal Hip Girder	Qty 1	Ply 1	JOHNSON RESIDENCE Job Reference (optional)	I41573871
-------------------------	--------------	-----------------------------------	----------	----------	---	-----------

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

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 8 12:55:10 2020 Page 1

ID:grH97r8Y2qqjGmUPA5lQnSz8NKp-HhkMA77OKIF9KxYc58M\_ZND12BeMVNLPzYhI3az8L2?



Scale = 1:21.6

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 0.45	Vert(LL)	0.01	4-5	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.18	Vert(CT)	-0.01	4-5	>999		
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.00	Horz(CT)	-0.02	3	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-MR					Weight: 15 lb	FT = 20%

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

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 2-8-7 oc purlins, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 5=0-4-9, 3=Mechanical, 4=Mechanical  
 Max Horz 5=112(LC 12)  
 Max Uplift 5=4(LC 12), 3=-64(LC 12), 4=-12(LC 12)  
 Max Grav 5=271(LC 1), 3=54(LC 19), 4=43(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) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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 to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 64 lb uplift at joint 3 and 12 lb uplift at joint 4.
- 6) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 5. This connection is for uplift only and does not consider lateral forces.



June 9, 2020

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

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

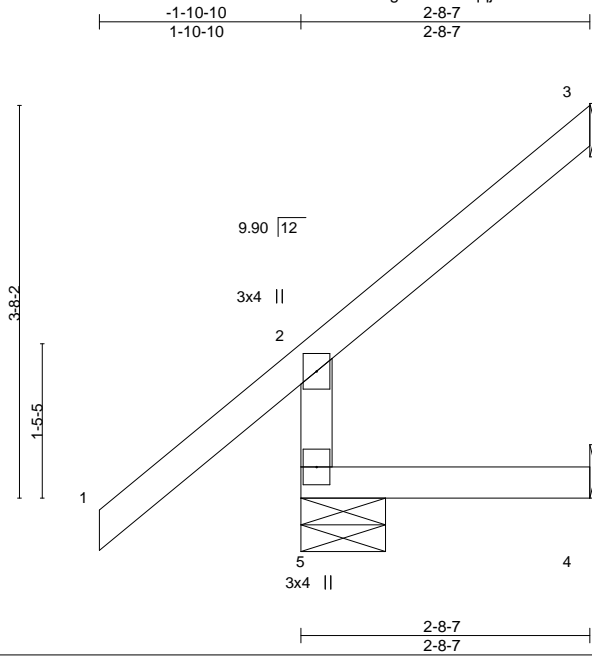


818 Soundside Road  
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	JOHNSON RESIDENCE
2000411-2000411A	CJ3	Diagonal Hip Girder	1	1	141573872
					Job Reference (optional)

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

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 8 12:55:11 2020 Page 1  
 ID:grH97r8Y2qqjGmUPA5lQnSz8NKp-lul8OT805cN0x57oertD6blCob\_bEqbZCCRrb1z8L2\_



Scale = 1:21.6

<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 0.45	Vert(LL)	0.01 4-5	>999	240	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.18	Vert(CT)	-0.01 4-5	>999	180		
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.00	Horz(CT)	-0.02 3	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-MR					Weight: 15 lb	FT = 20%

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

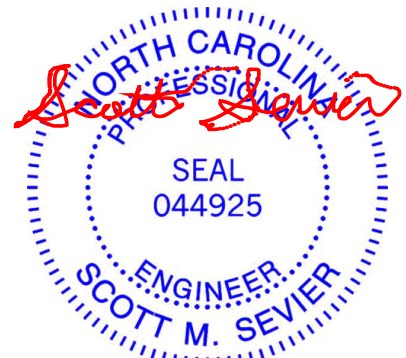
**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 2-8-7 oc purlins, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 3=Mechanical, 5=0-9-8, 4=Mechanical  
 Max Horz 5=112(LC 12)  
 Max Uplift 3=64(LC 12), 5=-4(LC 12), 4=-12(LC 12)  
 Max Grav 3=54(LC 19), 5=271(LC 1), 4=43(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; TCCL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) 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.
- 3) Gable studs spaced at 2-0-0 oc.
- 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 64 lb uplift at joint 3 and 12 lb uplift at joint 4.
- 8) One MTS12 Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 5. This connection is for uplift only and does not consider lateral forces.



June 9, 2020

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

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



818 Soundside Road  
 Edenton, NC 27932

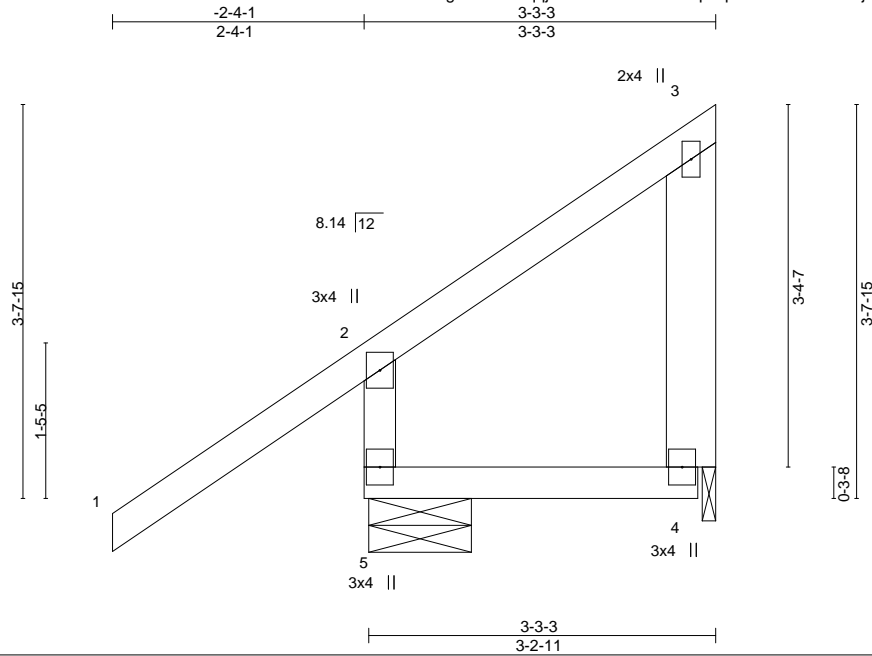


Job 2000411-2000411A	Truss J2	Truss Type Jack-Open Girder	Qty 1	Ply 1	JOHNSON RESIDENCE Job Reference (optional)	I41573873
-------------------------	-------------	--------------------------------	----------	----------	---	-----------

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

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 8 12:55:21 2020 Page 1

ID:grH97r8Y2qqjGmUPA5iQnSz8NKp-SpuwUuGHkheb8dtjEx2ZWiv2dOBaM41VmsNxRz8L1q



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 0.53	Vert(LL)	-0.00	4-5	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.16	Vert(CT)	-0.00	4-5	>999		
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.00	Horz(CT)	-0.00	4	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-MR					Weight: 23 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 3-3-3 oc purlins, except end verticals.
BOT CHORD 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 2x6 SP No.2 *Except* 2-5: 2x4 SP No.3	

**REACTIONS.** (size) 5=0-11-7, 4=0-1-8  
 Max Horz 5=146(LC 9)  
 Max Uplift 5=-67(LC 12), 4=-62(LC 9)  
 Max Grav 5=329(LC 1), 4=94(LC 10)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-5=-287/222

**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) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) 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.
- 3) Gable studs spaced at 2-0-0 oc.
- 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) Bearing at joint(s) 4 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 7) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 4.
- 8) One MTS12 Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 5. This connection is for uplift only and does not consider lateral forces.
- 9) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 4. This connection is for uplift only and does not consider lateral forces.



June 9, 2020

<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>
---	---

Job 2000411-2000411A	Truss J3	Truss Type Jack-Open	Qty 10	Ply 1	JOHNSON RESIDENCE Job Reference (optional)	141573874
-------------------------	-------------	-------------------------	-----------	----------	---	-----------

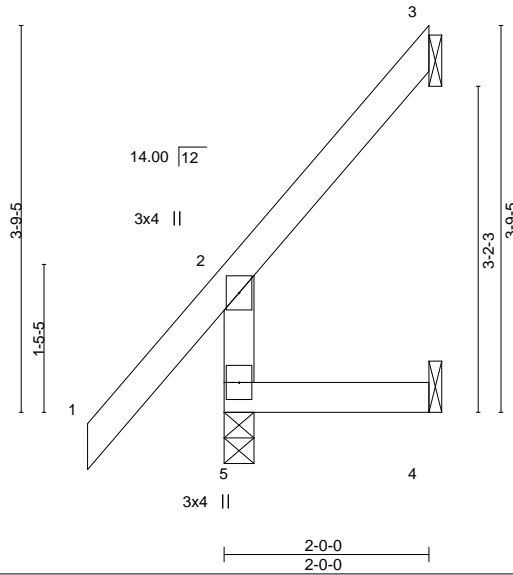
84 Components (Dunn), Dunn, NC - 28334,

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 8 12:55:22 2020 Page 1

ID:grH97r8Y2qqjGmUPA5lQnSz8NKp-w?SliEHvV\_mSmnSwmfZozvi6\_1jhJpJAKQbxTuz8L1p



Scale = 1:22.5



<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)	0.00	4-5	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.21	Vert(CT)	-0.00	4-5	>999		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.00	Horz(CT)	-0.02	3	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-MR						
								Weight: 13 lb	FT = 20%

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

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

**REACTIONS.** (size) 5=0-3-8, 3=Mechanical, 4=Mechanical  
Max Horz 5=124(LC 12)  
Max Uplift 3=80(LC 12), 4=32(LC 12)  
Max Grav 5=198(LC 1), 3=53(LC 19), 4=39(LC 10)

**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) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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 to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 80 lb uplift at joint 3 and 32 lb uplift at joint 4.



June 9, 2020

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.**  
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

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

Job 2000411-2000411A	Truss J2A	Truss Type Monopitch Structural Gable	Qty 2	Ply 1	JOHNSON RESIDENCE Job Reference (optional)	I41573875
-------------------------	--------------	--	----------	----------	---	-----------

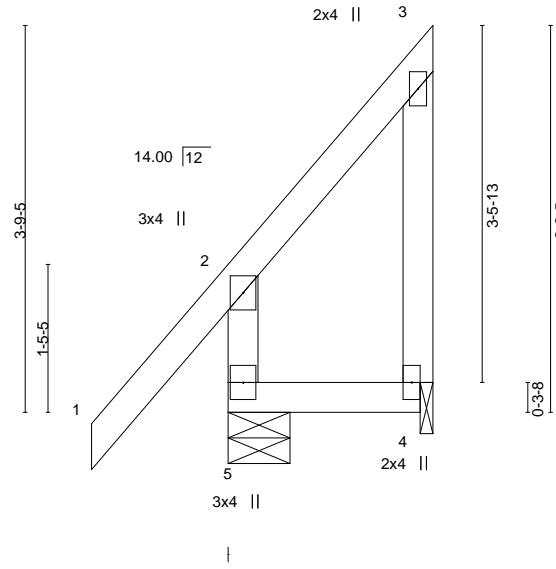
84 Components (Dunn), Dunn, NC - 28334,

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 8 12:55:22 2020 Page 1

ID:grH97r8Y2qqjGmUPA5IQnSz8NKp-w?SliEHvV\_mSmnSwnfZo2vi6y1jyJpJkQbxTuz8L1p



Scale = 1:22.5



<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)	-0.00 5	>999	240	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.19	Vert(CT)	-0.00 4-5	>999	180		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.00	Horz(CT)	-0.00 4	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-MR					Weight: 17 lb	FT = 20%

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

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 2-0-0 oc purlins, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

**REACTIONS.** (size) 5=0-7-4, 4=0-1-8  
 Max Horz 5=148(LC 9)  
 Max Uplift 5=-46(LC 8), 4=-116(LC 9)  
 Max Grav 5=224(LC 20), 4=112(LC 10)

**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) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) 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.
- 3) Gable studs spaced at 2-0-0 oc.
- 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) Bearing at joint(s) 4 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 7) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 4.
- 8) One MTS12 Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 5. This connection is for uplift only and does not consider lateral forces.
- 9) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 4. This connection is for uplift only and does not consider lateral forces.



June 9, 2020

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.**  
 Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

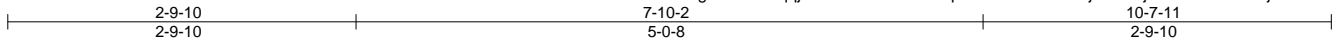


Job	Truss	Truss Type	Qty	Ply	JOHNSON RESIDENCE	141573876
2000411-2000411A	PB4	Piggyback	1	1	Job Reference (optional)	

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

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 8 12:55:30 2020 Page 1

ID:grH97r8Y2qjGmUPA5iQnSz8NKp-hYxJNzNxcSmKj03SFkjhNb2YOFsZBQjMZfXMIQz8L1h



Scale = 1:18.5

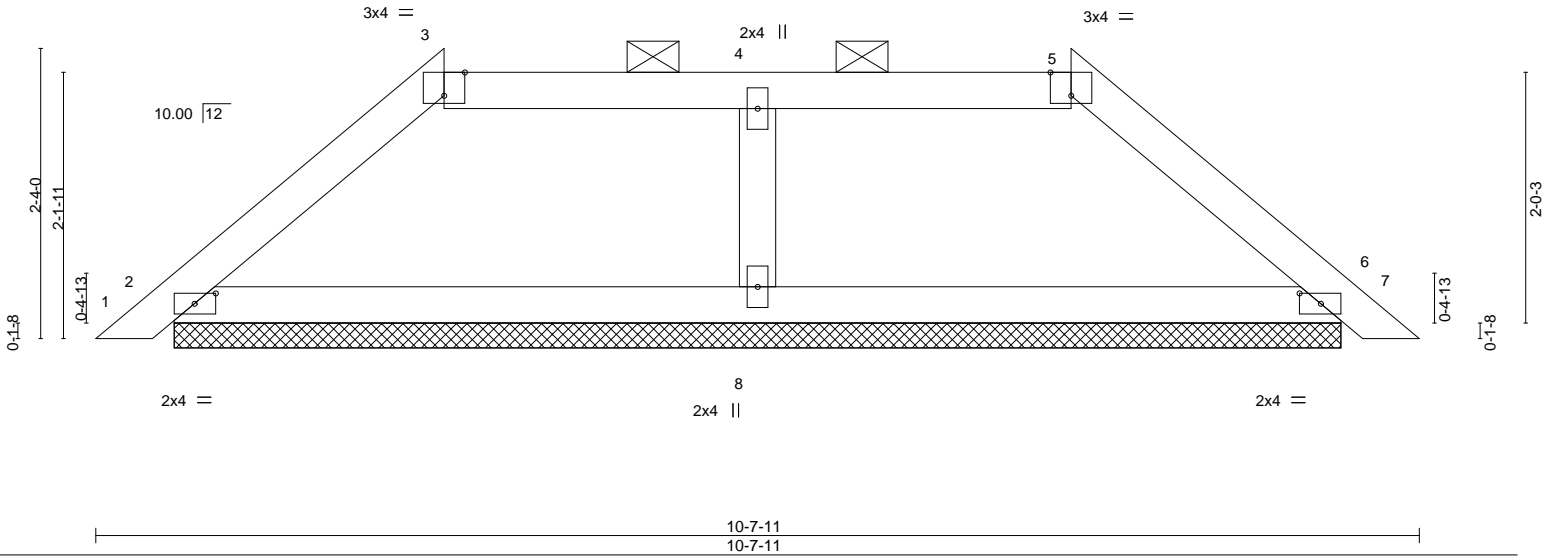


Plate Offsets (X,Y)-- [2:0-2-1,0-1-0], [3:0-2-0,Edge], [5:0-2-0,Edge], [6:0-2-1,0-1-0]

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.10	Vert(LL)	0.00	7	n/r	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.21	Vert(CT)	0.00	7	n/r		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.04	Horz(CT)	0.00	6	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S					Weight: 34 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, except 2-0-0 oc purlins (6-0-0 max.): 3-5.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 2=9-4-9, 6=9-4-9, 8=9-4-9  
 Max Horz 2=51(LC 11)  
 Max Uplift 2=-45(LC 12), 6=-45(LC 13), 8=-19(LC 9)  
 Max Grav 2=250(LC 1), 6=250(LC 1), 8=299(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; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2, 6, and 8. This connection is for uplift only and does not consider lateral forces.
- 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.



June 9, 2020

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

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



818 Soundside Road  
 Edenton, NC 27932

Job 2000411-2000411A	Truss J4	Truss Type Jack-Open	Qty 20	Ply 1	JOHNSON RESIDENCE Job Reference (optional)	I41573877
-------------------------	-------------	-------------------------	-----------	----------	---	-----------

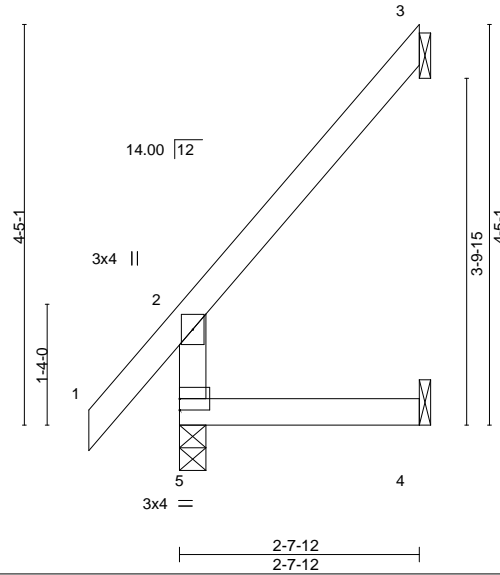
84 Components (Dunn), Dunn, NC - 28334,

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 8 12:55:23 2020 Page 1

ID:grH97r8Y2qqjGmUPA5lQnSz8NKp-PB0gvZHYGIuJOx16LM51b7FHWQ262GZKy4LU?Kz8L1o



Scale = 1:25.4



<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 0.40	Vert(LL)	0.01	4-5	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.26	Vert(CT)	-0.01	4-5	>999		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.00	Horz(CT)	-0.03	3	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-MR					Weight: 14 lb	FT = 20%

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

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 2-7-12 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 5=0-3-8, 3=Mechanical, 4=Mechanical  
Max Horz 5=139(LC 12)  
Max Uplift 3=-105(LC 12), 4=-27(LC 12)  
Max Grav 5=182(LC 1), 3=86(LC 19), 4=46(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) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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 to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 105 lb uplift at joint 3 and 27 lb uplift at joint 4.



June 9, 2020

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.**  
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

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

Job 2000411-2000411A	Truss A	Truss Type PIGGYBACK BASE	Qty 1	Ply 1	JOHNSON RESIDENCE Job Reference (optional)	141573878
-------------------------	------------	------------------------------	----------	----------	---	-----------

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

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 8 12:54:27 2020 Page 1  
ID:grH97r8Y2qqjGmUPA5lQnSz8NKp-2QeV9QcPS5qGgKlL3c4vJxg2snMwji44MmW1az8L2g

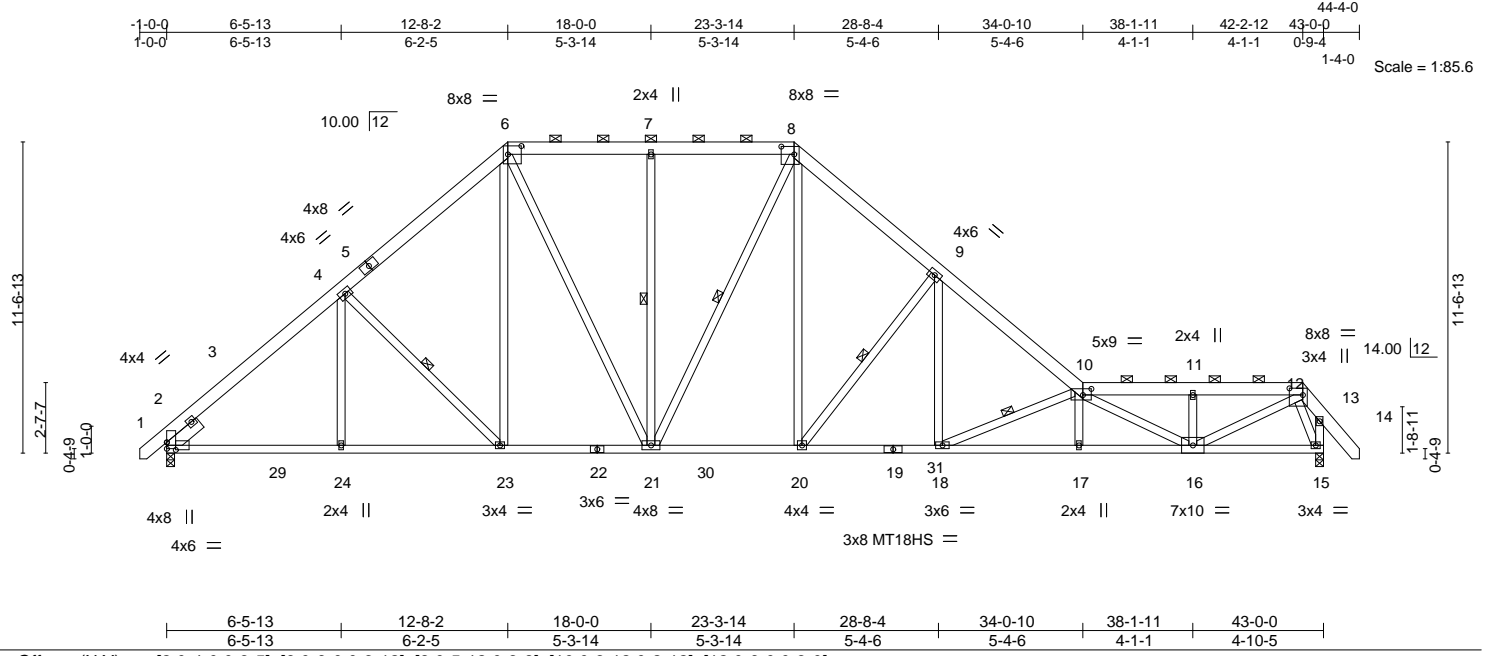


Plate Offsets (X, Y)--	[2:0-4-0,0-3-5], [6:0-6-0,0-3-12], [8:0-5-12,0-3-8], [10:0-3-12,0-2-12], [12:0-6-0,0-3-0]
------------------------	---

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.57	Vert(LL)	-0.29 17-18	>999	240	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.94	Vert(CT)	-0.59 17-18	>876	180	MT18HS	244/190
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.90	Horz(CT)	0.15 15	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-MS						
								Weight: 351 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.2	TOP CHORD Structural wood sheathing directly applied or 3-8-15 oc purlins, except end verticals, and 2-0-0 oc purlins (3-10-14 max.): 6-8, 10-12.
BOT CHORD 2x4 SP No.1 *Except* 19-22: 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 2-2-0 oc bracing: 17-18,16-17.
WEBS 2x4 SP No.3 *Except* 10-16,12-16: 2x4 SP No.2	WEBS 1 Row at midpt 4-23, 7-21, 8-21, 9-20, 10-18
SLIDER Left 2x6 SP No.2 -x 1-6-0	

**REACTIONS.** (size) 2=0-3-8, 15=0-3-8  
Max Horz 2=317(LC 11)  
Max Uplift 2=-131(LC 12), 15=-213(LC 13)  
Max Grav 2=1766(LC 1), 15=1795(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-4=-2224/419, 4-6=-1926/495, 6-7=-1632/486, 7-8=-1632/486, 8-9=-2279/570,  
9-10=-3249/627, 10-11=-3206/604, 11-12=-3206/604, 12-13=-285/199, 13-15=-335/256  
BOT CHORD 2-24=-183/1690, 23-24=-183/1690, 21-23=-118/1401, 20-21=-71/1651, 18-20=-307/2474,  
17-18=-851/5254, 16-17=-855/5250, 15-16=-30/477  
WEBS 4-23=-404/252, 6-23=-104/470, 6-21=-158/629, 7-21=-339/165, 8-20=-234/1202,  
9-20=-1333/380, 9-18=-172/1293, 10-18=-3014/602, 10-16=-2333/409, 11-16=-273/129,  
12-16=-535/3113, 12-15=-1488/204

**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) -0-10-7 to 44-2-5 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 15. 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.



June 9,2020

<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/TP1 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>
--	---

Job	Truss	Truss Type	Qty	Ply	JOHNSON RESIDENCE	I41573879
2000411-2000411A	PB5	Piggyback	1	1	Job Reference (optional)	

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

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 8 12:55:31 2020 Page 1  
 ID:grH97r8Y2qqjGmUPA5lQnSz8NKp-AkVibJOZNVBL9eep2Ewvvpag7focwsSVoJHvHsz8L1g

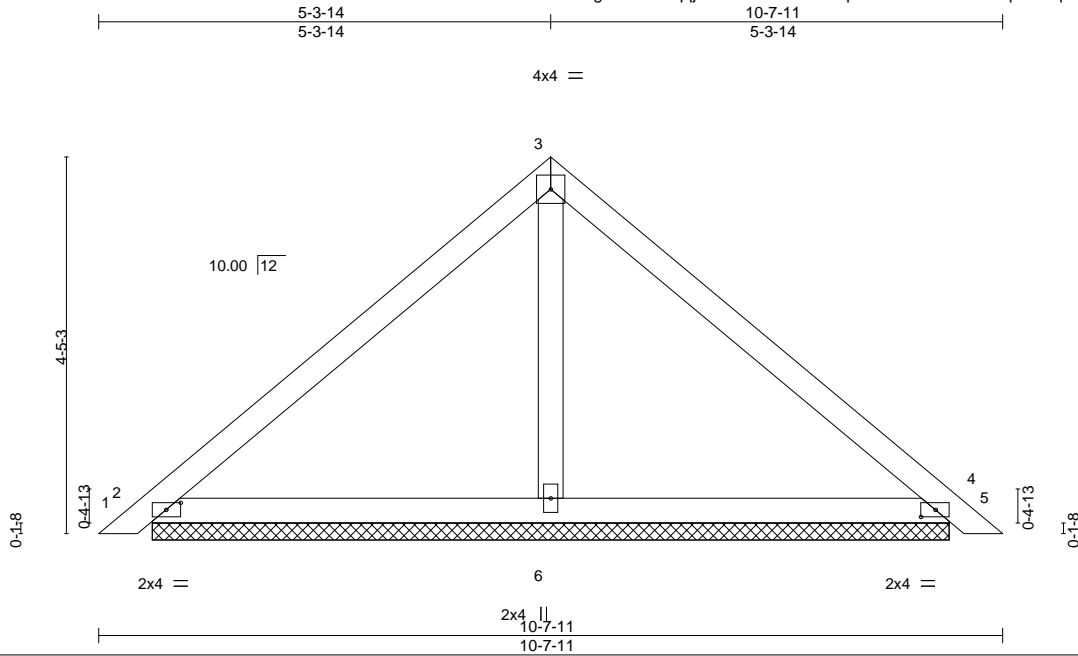


Plate Offsets (X,Y)-- [2:0-2-1,0-1-0], [4:0-2-1,0-1-0]

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.30	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.22	Vert(LL) 0.01 5 n/r 120		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.07	Vert(CT) 0.01 5 n/r 90		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.00 4 n/a n/a		
	Code IRC2015/TPI2014			Weight: 40 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.** (size) 2=9-4-9, 4=9-4-9, 6=9-4-9  
 Max Horz 2=-105(LC 10)  
 Max Uplift 2=-40(LC 12), 4=-53(LC 13), 6=-8(LC 12)  
 Max Grav 2=223(LC 1), 4=223(LC 1), 6=354(LC 1)

**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) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) 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) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2, 4, and 6. This connection is for uplift only and does not consider lateral forces.
- 7) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

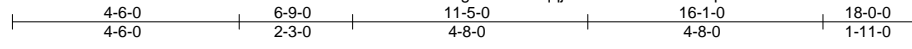


Job 2000411-2000411A	Truss DGR	Truss Type ROOF SPECIAL GIRDER	Qty 1	Ply 3	JOHNSON RESIDENCE Job Reference (optional)	141573880
-------------------------	--------------	-----------------------------------	----------	----------	---	-----------

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

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 8 12:55:16 2020 Page 1

ID:grH97r8Y2qqjGmUPA5iQnSz8NKp-6r51RAC9v80J2s?mROTOpeS6RcVmvuXILU8cFEz8L1v



6x6 ||

Scale = 1:45.7

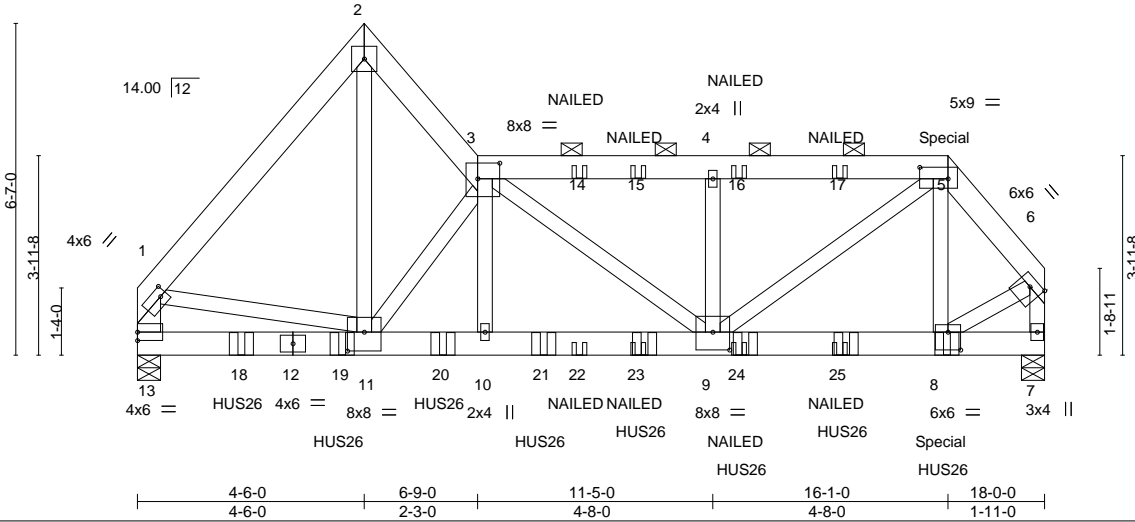


Plate Offsets (X,Y)-- [1:0-1-8,0-2-0], [3:0-5-4,0-3-12], [5:0-6-12,0-2-12], [8:0-3-0,0-4-4], [9:0-4-0,0-4-4], [11:0-4-0,0-4-8]

<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)	-0.08	9-10	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.95	Vert(CT)	-0.17	9-10	>999		
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.85	Horz(CT)	0.03	7	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-MS						
								Weight: 458 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x6 SP No.2	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 3-5.
BOT CHORD 2x6 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.3 *Except* 1-13: 2x6 SP No.2, 2-11: 2x4 SP No.2	

<b>REACTIONS.</b>	(size) 13=0-5-8, 7=0-5-8
	Max Horz 13=169(LC 9)
	Max Uplift 13=-1715(LC 13), 7=-1050(LC 13)
	Max Grav 13=6312(LC 1), 7=6245(LC 1)

<b>FORCES.</b>	(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD	1-2=-5966/1319, 2-3=-5829/1354, 3-4=-8373/1501, 4-5=-8373/1501, 5-6=-5449/954, 1-13=-5300/1117, 6-7=-6538/1110
BOT CHORD	11-13=-536/808, 10-11=-1448/8106, 9-10=-1445/8199, 8-9=-592/3435
WEBS	3-10=0/2219, 3-9=-91/302, 4-9=-333/292, 5-9=-1083/6172, 5-8=-26/332, 6-8=-697/4073, 2-11=-1878/8452, 1-11=-437/3210, 3-11=-7888/1200

- NOTES-**
- 3-ply truss to be connected together with 10d (0.120"x3") nails as follows:  
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.  
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-4-0 oc.  
Webs connected as follows: 2x4 - 1 row at 0-9-0 oc, Except member 8-5 2x4 - 1 row at 0-6-0 oc.
  - All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
  - Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TC DL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 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.
  - LGT3-SDS2.5 Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 13. This connection is for uplift only and does not consider lateral forces.
  - Two H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 7. 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.
  - Use Simpson Strong-Tie HUS26 (14-10d Girder, 6-10d Truss, Single Ply Girder) or equivalent at 2-0-12 from the left end to connect truss(es) to back face of bottom chord.
  - Use Simpson Strong-Tie HUS26 (14-10d Girder, 4-10d Truss) or equivalent spaced at 2-0-0 oc max. starting at 4-0-12 from the left end to connect truss(es) to back face of bottom chord.



June 9, 2020

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

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

**ENGINEERING BY**  
**TRENCO**  
A MiTek Affiliate

818 Soundside Road  
Edenton, NC 27932



Job	Truss	Truss Type	Qty	Ply	JOHNSON RESIDENCE	I41573880
2000411-2000411A	DGR	ROOF SPECIAL GIRDER	1	<b>3</b>	Job Reference (optional)	

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

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 8 12:55:16 2020 Page 2  
 ID:grH97r8Y2qjGmUPA5lQnSz8NKp-6r51RAC9v80J2s?mROTOpeS6RcVmvuXILU8cFEz8L1v

**NOTES-**

- 13) Fill all nail holes where hanger is in contact with lumber.
- 14) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidelines.
- 15) LGT3 Hurricane ties must have three studs in line below the truss.
- 16) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 185 lb down and 213 lb up at 16-1-0 on top 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: 1-2=-60, 2-3=-60, 3-5=-60, 5-6=-60, 7-13=-20

Concentrated Loads (lb)

Vert: 8=-1387(F=9, B=-1396) 18=-1401(B) 19=-1396(B) 20=-1396(B) 21=-1396(B) 22=4(F) 23=-1392(F=4, B=-1396) 24=-1392(F=4, B=-1396) 25=-1392(F=4, B=-1396)

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

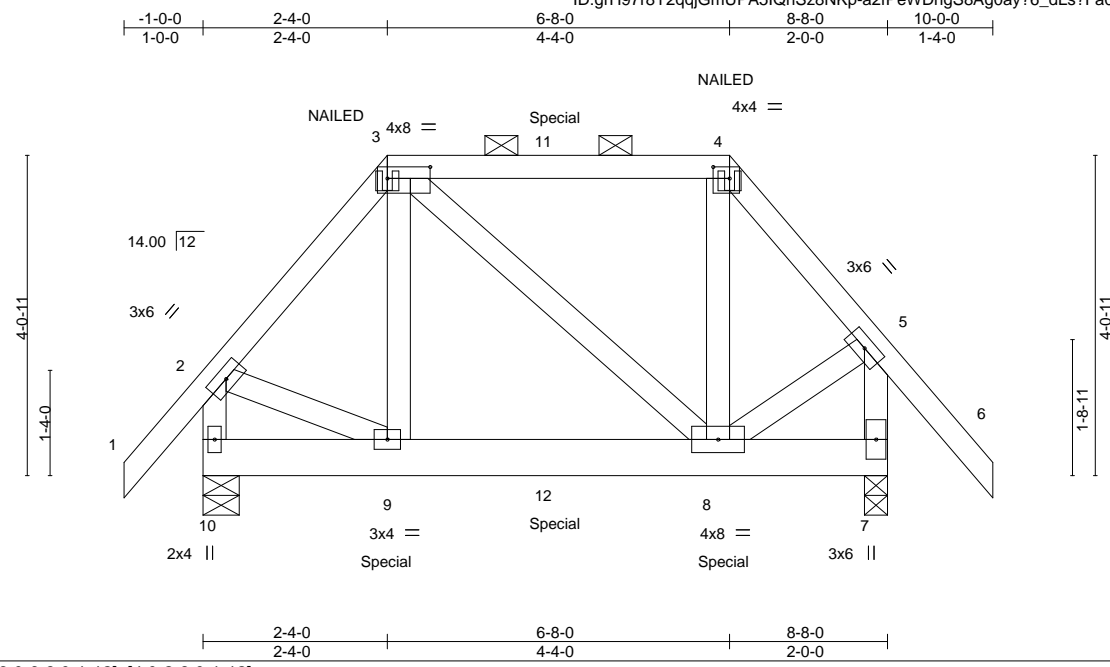
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall 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	JOHNSON RESIDENCE	141573881
2000411-2000411A	DH	Hip Girder	1	1	Job Reference (optional)	

84 Components (Dunn), Dunn, NC - 28334, 8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 8 12:55:17 2020 Page 1  
 ID:grH97r8Y2qqjGmUPA5lQnSz8NKp-a2fPeWDngS8Ag0ay?6\_dLs?Fa02KeXlRa8uAogz8L1u



Scale = 1:29.2

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

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.43	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.09	Vert(LL) 0.01 8-9 >999 240		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.09	Vert(CT) -0.01 8-9 >999 180		
BCDL 10.0	Rep Stress Incr NO	Matrix-MP	Horz(CT) -0.00 7 n/a n/a		
	Code IRC2015/TPI2014			Weight: 69 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, and 2-0-0 oc purlins (6-0-0 max.): 3-4.
BOT CHORD 2x6 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.3	

**REACTIONS.** (size) 10=0-5-8, 7=0-3-8  
 Max Horz 10=149(LC 11)  
 Max Uplift 10=-301(LC 12), 7=-321(LC 13)  
 Max Grav 10=469(LC 41), 7=495(LC 42)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-370/344, 4-5=-369/348, 2-10=-457/395, 5-7=-488/426  
 BOT CHORD 8-9=-227/281  
 WEBS 2-9=-214/269, 5-8=-237/298

- 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) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 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.
  - One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 10 and 7. 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.
  - Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 104 lb down and 108 lb up at 4-4-12, and 104 lb down and 108 lb up at 4-7-4 on top chord, and 53 lb down and 82 lb up at 2-4-0, 35 lb down and 51 lb up at 4-4-12, and 35 lb down and 51 lb up at 4-7-4, and 53 lb down and 82 lb up at 6-7-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
  - 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: 1-2=-60, 2-3=-60, 3-4=-60, 4-5=-60, 5-6=-60, 7-10=-20  
 Concentrated Loads (lb)  
 Vert: 9=8(F) 8=8(F) 12=7(F)



June 9, 2020

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

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

**TRENCO**  
 ENGINEERING BY  
 A MiTek Affiliate

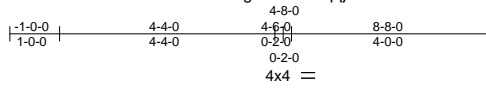
818 Soundside Road  
 Edenton, NC 27932

Job 2000411-2000411A	Truss DH1	Truss Type Hip	Qty 1	Ply 1	JOHNSON RESIDENCE Job Reference (optional)	I41573882
-------------------------	--------------	-------------------	----------	----------	---	-----------

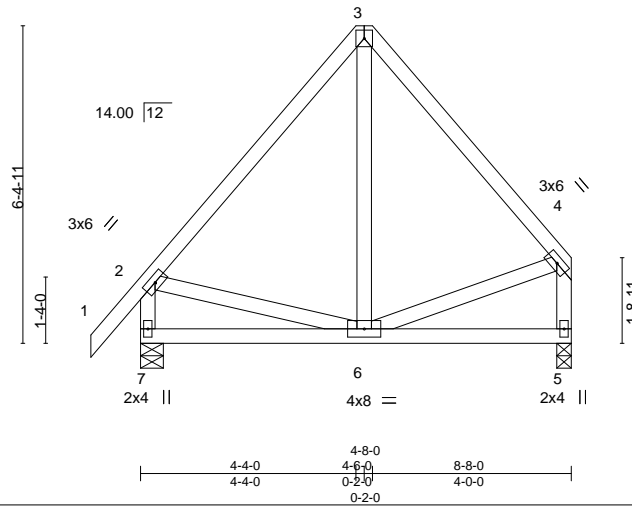
84 Components (Dunn), Dunn, NC - 28334,

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 8 12:55:18 2020 Page 1

ID:grH97r8Y2qqjGmUPA5iQnSz8NKp-2EDnssDPRmG1HA98ZpVsu3YP5PNNN?TapodjK7zL1t



Scale = 1:46.4



<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 0.51	Vert(LL)	-0.01 6-7	>999	240	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.17	Vert(CT)	-0.02 6-7	>999	180		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.06	Horz(CT)	-0.00 5	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-MP					Weight: 60 lb	FT = 20%

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

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

**REACTIONS.** (size) 7=0-5-8, 5=0-3-8  
 Max Horz 7=196(LC 9)  
 Max Uplift 7=-42(LC 13), 5=-45(LC 12)  
 Max Grav 7=408(LC 1), 5=330(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-285/101, 3-4=-258/98, 2-7=-374/164, 4-5=-300/113

- 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; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 7 and 5. This connection is for uplift only and does not consider lateral forces.



June 9, 2020

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.**  
 Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

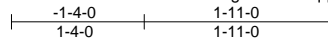
ENGINEERING BY  
**TRENCO**  
 A MiTek Affiliate  
 818 Soundside Road  
 Edenton, NC 27932

Job 2000411-2000411A	Truss J5	Truss Type Jack-Open	Qty 5	Ply 1	JOHNSON RESIDENCE I41573883 Job Reference (optional)
-------------------------	-------------	-------------------------	----------	----------	--

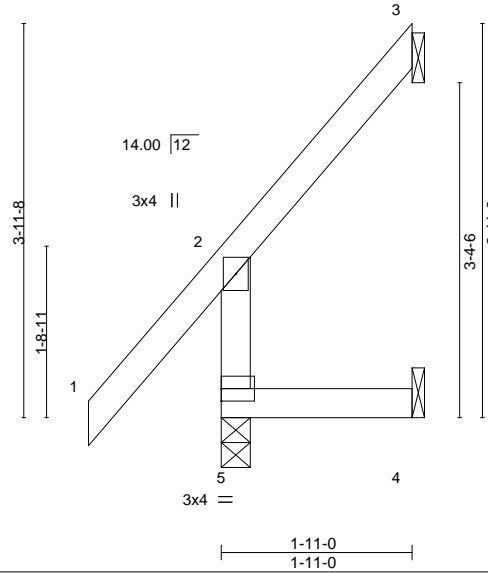
84 Components (Dunn), Dunn, NC - 28334,

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 8 12:55:24 2020 Page 1

ID:grH97r8Y2qqjGmUPA5iQnSz8NKp-tOa26vIA1c0A?5clv4cH7KoSaQOLnjpTBk41Xmz8L1n



Scale = 1:23.1



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 0.44	Vert(LL)	0.01	4-5 >999	240	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.26	Vert(CT)	-0.00	4-5 >999	180		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.00	Horz(CT)	-0.03	3 n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-MR					Weight: 13 lb	FT = 20%

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

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 1-11-0 oc purlins, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 5=0-3-8, 3=Mechanical, 4=Mechanical  
 Max Horz 5=116(LC 12)  
 Max Uplift 3=85(LC 12), 4=-43(LC 12)  
 Max Grav 5=196(LC 1), 3=53(LC 19), 4=47(LC 10)

**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) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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 to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 85 lb uplift at joint 3 and 43 lb uplift at joint 4.



June 9, 2020

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.**  
 Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

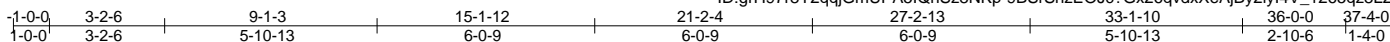
ENGINEERING BY  
**TRENCO**  
 A MiTek Affiliate  
 818 Soundside Road  
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	JOHNSON RESIDENCE	I41573884
2000411-2000411A	BH	Hip Girder	1	1	Job Reference (optional)	

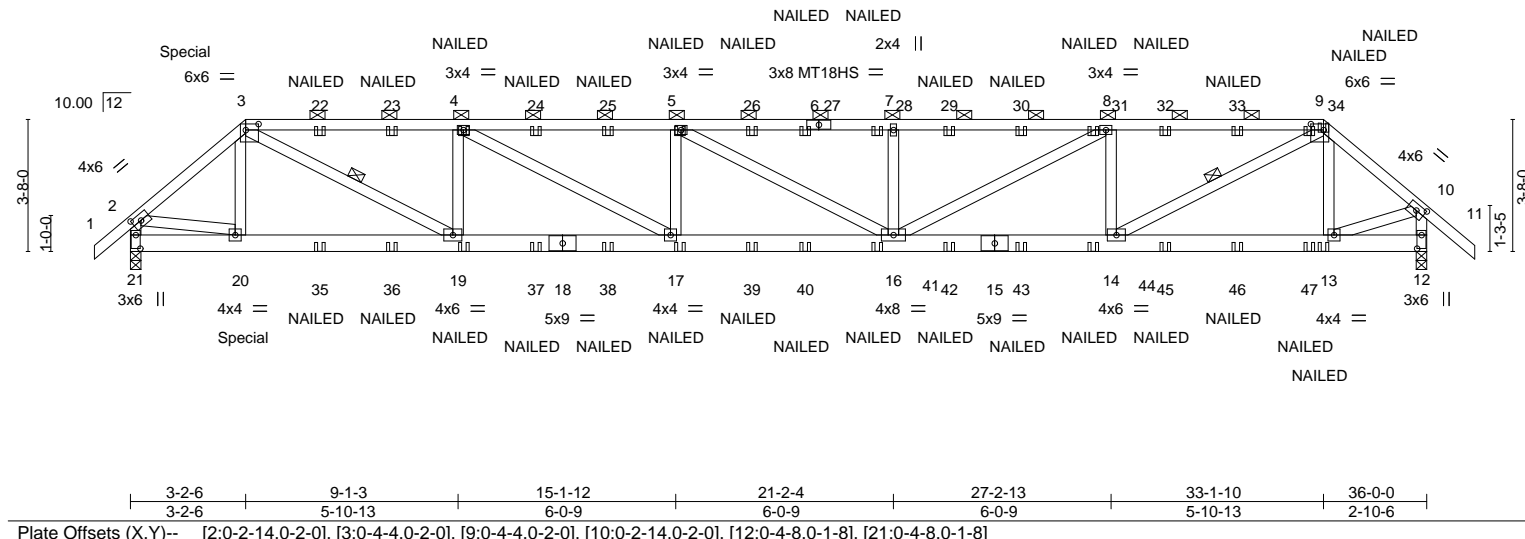
84 Components (Dunn), Dunn, NC - 28334,

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 8 12:54:57 2020 Page 1

ID:grH97r8Y2qqjGmUPA5lQnSz8NKp-9BSrShzEOJc?Gx26qvdXxXeAjBy2iyI4V\_1265qz8L2C



Scale: 3/16"=1'



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 0.84	Vert(LL)	0.60	16-17	>714	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.79	Vert(CT)	-0.55	16-17	>774	MT18HS	244/190
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.84	Horz(CT)	-0.08	12	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-MS						
								Weight: 228 lb	FT = 20%

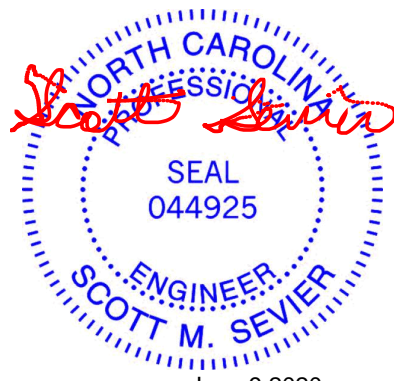
LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 4-2-13 oc purlins, except end verticals, and 2-0-0 oc purlins (2-5-11 max.): 3-9.
BOT CHORD 2x6 SP No.2	BOT CHORD Rigid ceiling directly applied or 4-3-3 oc bracing.
WEBS 2x4 SP No.3	WEBS 1 Row at midpt 3-19, 9-14

**REACTIONS.** (size) 21=0-3-8, 12=0-3-8  
 Max Horz 21=119(LC 11)  
 Max Uplift 21=-997(LC 9), 12=-1000(LC 8)  
 Max Grav 21=1648(LC 44), 12=1661(LC 43)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-1902/1263, 3-4=-3364/2336, 4-5=-4336/3006, 5-7=-4293/2978, 7-8=-4293/2978, 8-9=-3276/2281, 9-10=-1695/1137, 2-21=-1624/1090, 10-12=-1656/1115  
 BOT CHORD 19-20=-986/1476, 17-19=-2298/3424, 16-17=-2956/4396, 14-16=-2221/3330, 13-14=-854/1319  
 WEBS 3-19=-1522/2238, 4-19=-931/705, 4-17=-766/1113, 5-17=-360/313, 7-16=-376/324, 8-16=-797/1164, 8-14=-957/723, 9-14=-1567/2303, 9-13=-340/272, 2-20=-939/1411, 10-13=-900/1377

- 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; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - Provide adequate drainage to prevent water ponding.
  - All plates are MT20 plates 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.
  - Two H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 21 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.
  - "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidelines.
  - Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 190 lb down and 228 lb up at 3-2-6 on top chord, and 44 lb down and 58 lb up at 3-2-6 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
  - 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

<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><b>ENGINEERING BY</b>          A MiTek Affiliate</p> <p>818 Soundside Road        Edenton, NC 27932</p>
---	--

Job	Truss	Truss Type	Qty	Ply	JOHNSON RESIDENCE	I41573884
2000411-2000411A	BH	Hip Girder	1	1	Job Reference (optional)	

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

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 8 12:54:57 2020 Page 2  
 ID:grH97r8Y2qqjGmUPA5lQnSz8NKp-9BSrShzEOJc?Gx26qvdxXeAjBy2iyI4V\_1265qz8L2C

**LOAD CASE(S)** Standard

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

Uniform Loads (plf)

Vert: 1-2=-60, 2-3=-60, 3-9=-60, 9-10=-60, 10-11=-60, 12-21=-20

Concentrated Loads (lb)

Vert: 20=4(B) 19=1(B) 17=1(B) 13=2(B) 35=1(B) 36=1(B) 37=1(B) 38=1(B) 39=1(B) 40=1(B) 41=1(B) 42=1(B) 43=1(B) 44=1(B) 45=1(B) 46=1(B) 47=1(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.

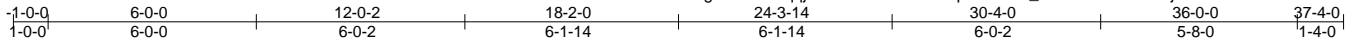


818 Soundside Road  
 Edenton, NC 27932

Job 2000411-2000411A	Truss BH1	Truss Type Hip	Qty 1	Ply 1	JOHNSON RESIDENCE Job Reference (optional)	141573885
-------------------------	--------------	-------------------	----------	----------	---	-----------

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

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 8 12:54:58 2020 Page 1  
ID:grH97r8Y2qjGmUPA5lQnSz8NKp-dO?Df0\_s9cksu5dlOc8A4rjx4LR4hrieChnfeHz8L2B



Scale = 1:66.4

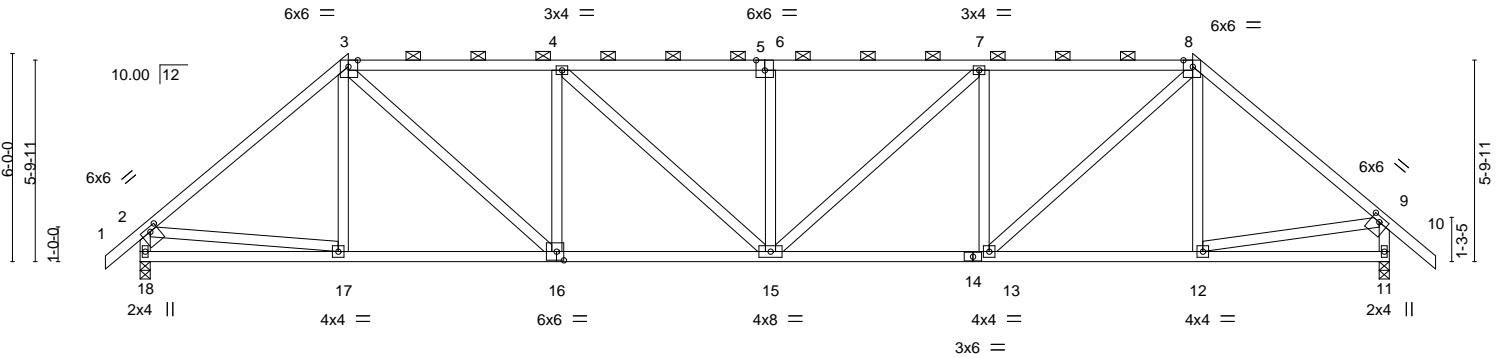


Plate Offsets (X, Y)--	[2:0-2-12,0-1-8], [3:0-3-4,Edge], [5:0-3-0,Edge], [5:0-0-0,0-1-12], [6:0-1-12,0-0-0], [8:0-3-4,Edge], [9:0-3-0,0-1-12], [16:0-2-8,0-3-0]
------------------------	--

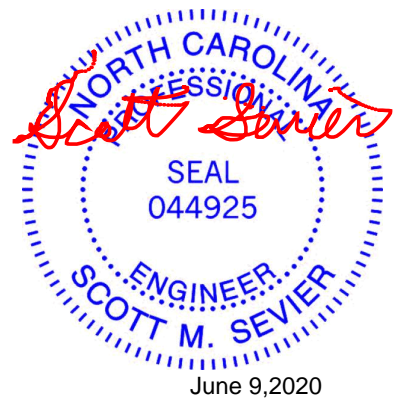
<b>LOADING</b> (psf)	<b>SPACING-</b> 2-0-0	<b>CSI.</b>	<b>DEFL.</b> in (loc) l/defl L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL 1.15	TC 0.64	Vert(LL) -0.13 15 >999 240	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.59	Vert(CT) -0.26 15-16 >999 180		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.49	Horz(CT) 0.07 11 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-MS		Weight: 221 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 3-10-3 oc purlins, except end verticals, and 2-0-0 oc purlins (3-6-1 max.): 3-8.
BOT CHORD 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 9-8-7 oc bracing.
WEBS 2x4 SP No.3	

**REACTIONS.** (size) 18=0-3-8, 11=0-3-8  
 Max Horz 18=176(LC 11)  
 Max Uplift 18=-148(LC 9), 11=-152(LC 8)  
 Max Grav 18=1496(LC 1), 11=1518(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-1765/355, 3-4=-2090/497, 4-6=-2342/546, 6-7=-2342/546, 7-8=-2060/493, 8-9=-1673/345, 2-18=-1441/340, 9-11=-1467/353  
 BOT CHORD 17-18=-219/395, 16-17=-237/1273, 15-16=-368/2089, 13-15=-319/2058, 12-13=-131/1210  
 WEBS 3-16=-255/1149, 4-16=-657/247, 4-15=-92/365, 6-15=-360/167, 7-15=-96/403, 7-13=-683/248, 8-13=-256/1187, 2-17=-208/1056, 9-12=-185/1095

- 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; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 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.
  - One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 18 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.

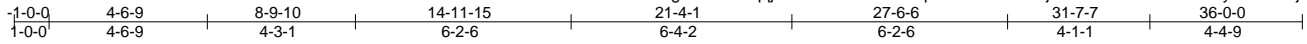


Job 2000411-2000411A	Truss BH2	Truss Type Hip	Qty 1	Ply 1	JOHNSON RESIDENCE Job Reference (optional)	I41573886
-------------------------	--------------	-------------------	----------	----------	---	-----------

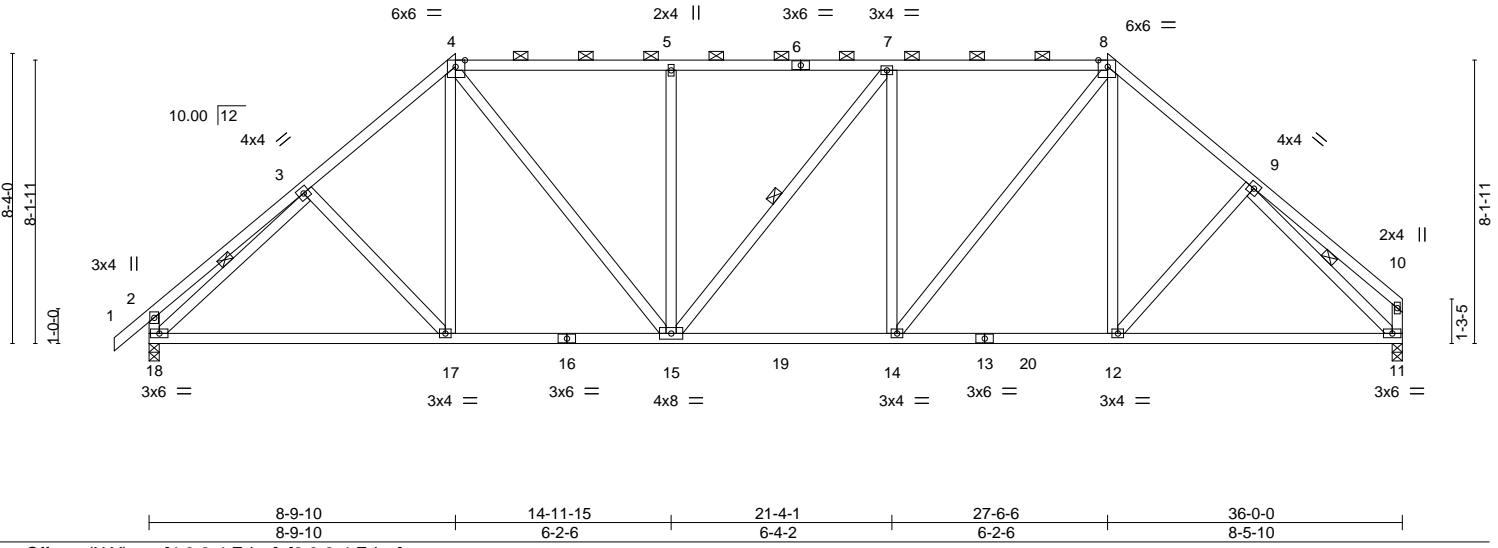
84 Components (Dunn), Dunn, NC - 28334,

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 8 12:54:59 2020 Page 1

ID:grH97r8Y2qqjGmUPA5lQnSz8NKp-6aZbtM?UwwtjVFCVxkFpc3F9tlmkQHyoRLXDajz8L2A



Scale = 1:66.2



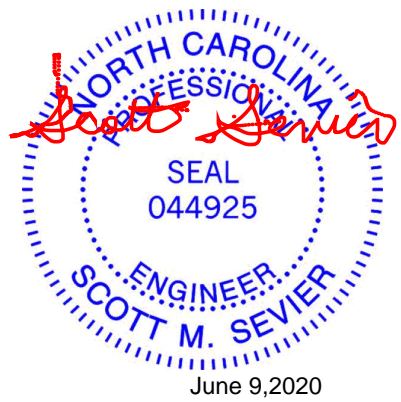
<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL	1.15	TC 0.51	Vert(LL)	-0.14 17-18	>999	240	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.69	Vert(CT)	-0.29 17-18	>999	180		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.56	Horz(CT)	0.07 11	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-MS						
								Weight: 242 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 4-4-8 oc purlins, except end verticals, and 2-0-0 oc purlins (3-11-15 max.): 4-8.
BOT CHORD 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.3	WEBS 1 Row at midpt 7-15, 3-18, 9-11

**REACTIONS.** (size) 18=0-3-8, 11=0-3-8  
 Max Horz 18=224(LC 9)  
 Max Uplift 18=-100(LC 12), 11=-74(LC 8)  
 Max Grav 18=1498(LC 1), 11=1427(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-394/151, 3-4=-1637/398, 4-5=-1623/443, 5-7=-1622/442, 7-8=-1630/442, 8-9=-1602/394, 9-10=-261/109, 2-18=-397/171  
 BOT CHORD 17-18=-259/1225, 15-17=-208/1213, 14-15=-219/1629, 12-14=-118/1190, 11-12=-206/1155  
 WEBS 4-17=-40/301, 4-15=-200/711, 5-15=-413/184, 7-14=-464/229, 8-14=-200/750, 8-12=-43/258, 3-18=-1429/250, 9-11=-1522/291

- 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; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 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 H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 18 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.



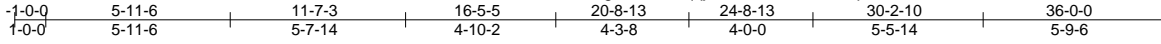


Job	Truss	Truss Type	Qty	Ply	JOHNSON RESIDENCE	141573887
2000411-2000411A	BH3	ROOF TRUSS	1	1		

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

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 8 12:55:00 2020 Page 1

ID:grH97r8Y2qqjGmUPA5IQnSz8NKp-am7\_4i06hE?at7PnhV1Ae9GoGt92E9eHxg?Gmi9z8L29



Scale = 1:74.3

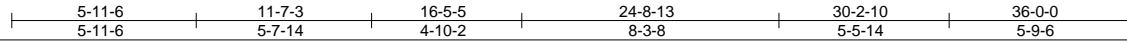
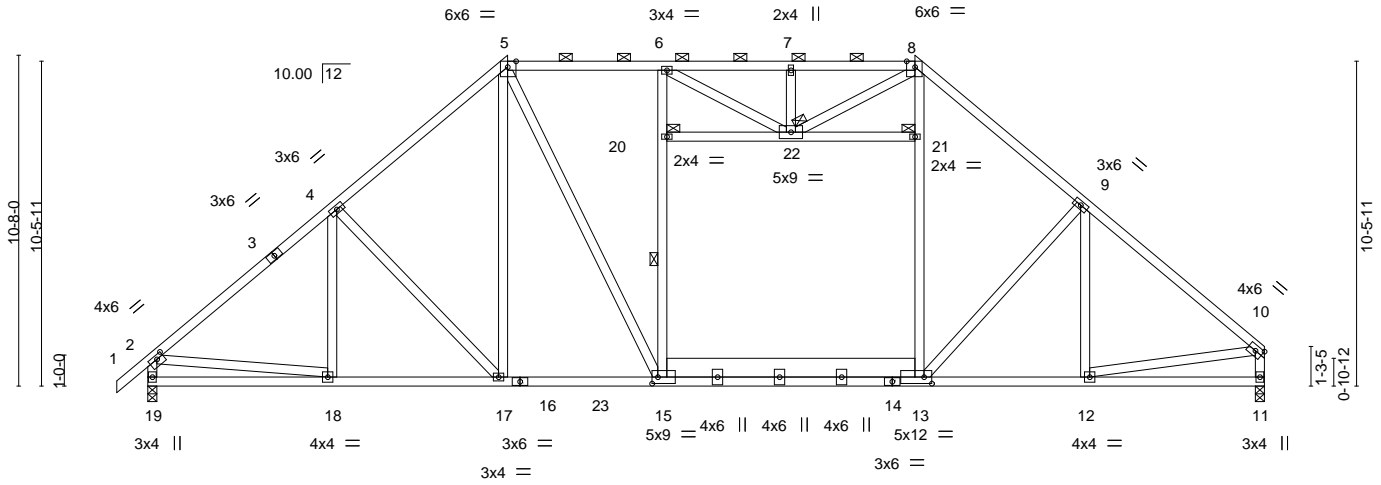


Plate Offsets (X, Y)-- [2:0-2-12,0-1-8], [5:0-3-4,Edge], [8:0-3-4,Edge], [13:0-3-0,0-2-8], [15:0-2-4,0-2-8]

<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 0.75	Vert(LL)	-0.52	15-17	>819	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.93	Vert(CT)	-0.91	15-17	>471		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.93	Horz(CT)	0.03	11	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-MS	Attic	-0.36	13-15	275	Weight: 290 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 3-8-6 oc purlins, except end verticals, and 2-0-0 oc purlins (3-4-5 max.): 5-8.
BOT CHORD 2x4 SP DSS *Except* 13-15: 2x8 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 2-2-0 oc bracing: 12-13.
WEBS 2x4 SP No.3 *Except* 5-17,6-15,8-13: 2x4 SP No.1	WEBS 1 Row at midpt 15-20
	JOINTS 1 Brace at Jt(s): 20, 21, 22

**REACTIONS.** (size) 19=0-3-8, 11=0-3-8  
 Max Horz 19=281(LC 9)  
 Max Uplift 19=-15(LC 12)  
 Max Grav 19=1635(LC 1), 11=1614(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-4=-1935/192, 4-5=-1796/262, 5-6=-1485/227, 6-7=-1682/290, 7-8=-1683/291,  
 8-9=-1902/213, 9-10=-1890/136, 2-19=-1567/214, 10-11=-1527/122  
 BOT CHORD 18-19=-300/445, 17-18=-97/1473, 15-17=-45/1313, 13-15=0/1448, 12-13=-25/1387  
 WEBS 4-17=-306/224, 5-17=-119/512, 5-15=-90/501, 15-20=-425/210, 6-20=-334/219,  
 13-21=-42/637, 8-21=0/662, 9-13=-224/277, 9-12=-300/96, 2-18=0/1195, 10-12=0/1258,  
 8-22=-171/593, 7-22=-312/136

- 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) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) 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, with BCDL = 10.0psf.
  - 6) Ceiling dead load (5.0 psf) on member(s). 20-22, 21-22; Wall dead load (5.0psf) on member(s).15-20, 13-21
  - 7) Bottom chord live load (20.0 psf) and additional bottom chord dead load (5.0 psf) applied only to room. 13-15
  - 8) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 19. 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) ATTIC SPACE SHOWN IS DESIGNED AS UNINHABITABLE.

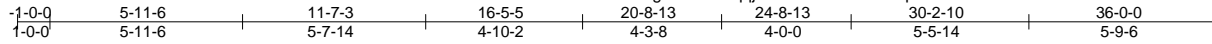


Job 2000411-2000411A	Truss BH4	Truss Type ROOF TRUSS	Qty 1	Ply 1	JOHNSON RESIDENCE Job Reference (optional)	I41573888
-------------------------	--------------	--------------------------	----------	----------	---	-----------

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

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 8 12:55:02 2020 Page 1

ID:grH97r8Y2qqjGmUPA5lQnSz8NKp-W9FkVO1NCrFIMiw4dSC6EhtcbzmLdYaE7Jltn2z8L27



Scale = 1:71.1

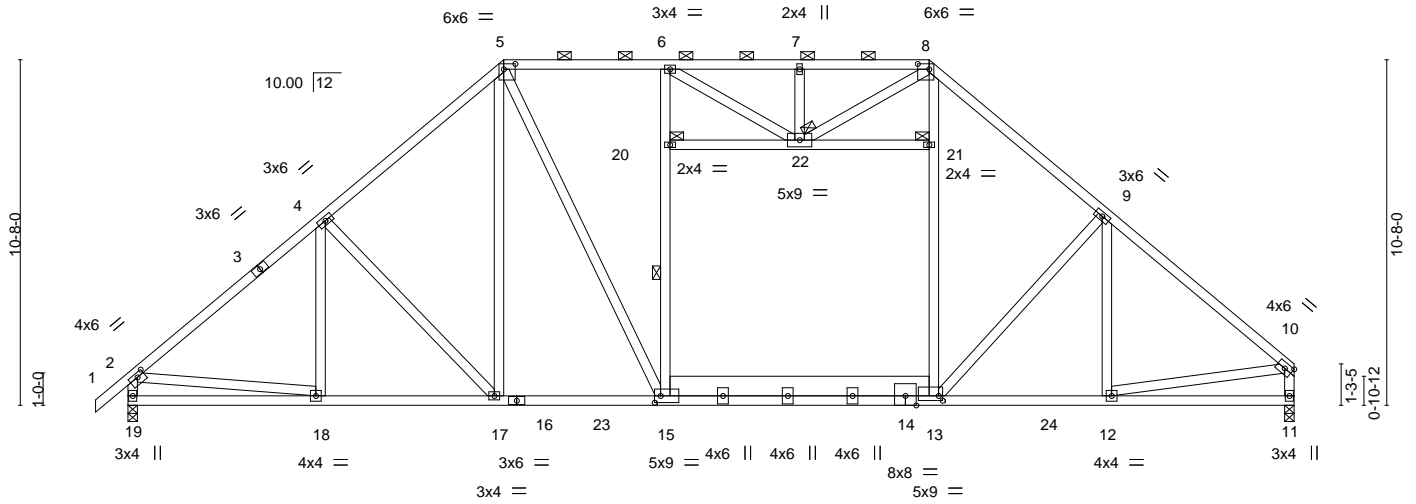


Plate Offsets (X,Y)--	[2:0-2-12,0-1-8], [5:0-4-4,0-2-0], [8:0-4-4,0-2-0], [13:0-1-8,0-1-12], [14:0-0-0,0-1-12], [15:0-2-4,0-2-8]
-----------------------	--

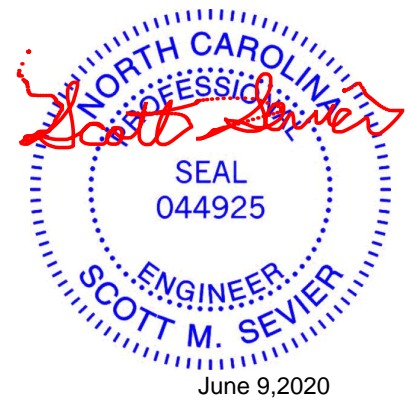
<b>LOADING</b> (psf)	<b>SPACING-</b> 2-0-0	<b>CSI.</b>	<b>DEFL.</b> in (loc) l/defl L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL 1.15	TC 0.73	Vert(LL) 0.50 15-17 >864 240	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.76	Vert(CT) -0.86 15-17 >498 180		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.95	Horz(CT) 0.04 11 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-MS	Attic -0.34 13-15 291 360	Weight: 291 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 3-8-1 oc purlins, except end verticals, and 2-0-0 oc purlins (3-7-0 max.): 5-8.
BOT CHORD 2x4 SP DSS *Except* 13-15: 2x8 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.3 *Except* 5-17,8-13: 2x4 SP No.1, 6-15: 2x4 SP No.2	WEBS 1 Row at midpt 15-20 JOINTS 1 Brace at Jt(s): 20, 21, 22

**REACTIONS.** (size) 19=0-3-8, 11=0-3-8  
 Max Horz 19=285(LC 9)  
 Max Uplift 19=-14(LC 12)  
 Max Grav 19=1638(LC 2), 11=1692(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-4=-1969/192, 4-5=-1833/264, 5-6=-1513/229, 6-7=-1673/285, 7-8=-1673/285,  
 8-9=-1987/216, 9-10=-2000/136, 2-19=-1569/214, 10-11=-1609/122  
 BOT CHORD 18-19=-302/447, 17-18=-99/1505, 15-17=-47/1323, 13-15=0/1486, 12-13=-26/1472  
 WEBS 4-17=-329/226, 5-17=-121/505, 5-15=-93/547, 15-20=-409/211, 6-20=-319/220,  
 13-21=-44/724, 8-21=0/747, 9-13=-240/279, 9-12=-269/98, 2-18=0/1226, 10-12=0/1352,  
 8-22=-163/537, 7-22=-293/137

- 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) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) 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, with BCDL = 10.0psf.
  - 6) Ceiling dead load (5.0 psf) on member(s). 20-22, 21-22; Wall dead load (5.0psf) on member(s). 15-20, 13-21
  - 7) Bottom chord live load (20.0 psf) and additional bottom chord dead load (5.0 psf) applied only to room. 13-15
  - 8) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 19 and 11. 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) ATTIC SPACE SHOWN IS DESIGNED AS UNINHABITABLE.



**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.



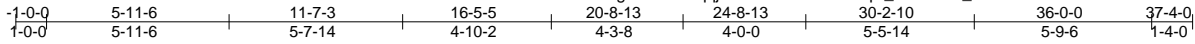
818 Soundside Road  
Edenton, NC 27932

Job 2000411-2000411A	Truss B	Truss Type ROOF TRUSS	Qty 4	Ply 1	JOHNSON RESIDENCE Job Reference (optional)	I41573889
-------------------------	------------	--------------------------	----------	----------	---	-----------

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

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 8 12:54:46 2020 Page 1

ID:grH97r8Y2qqjGmUPA5lQnSz8NKp-4Hh8wrK\_wEZSFi?h5wMbJDfWVG1t15tSpt1Czz8L2N



Scale = 1:75.1

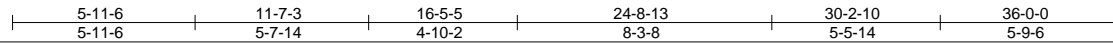
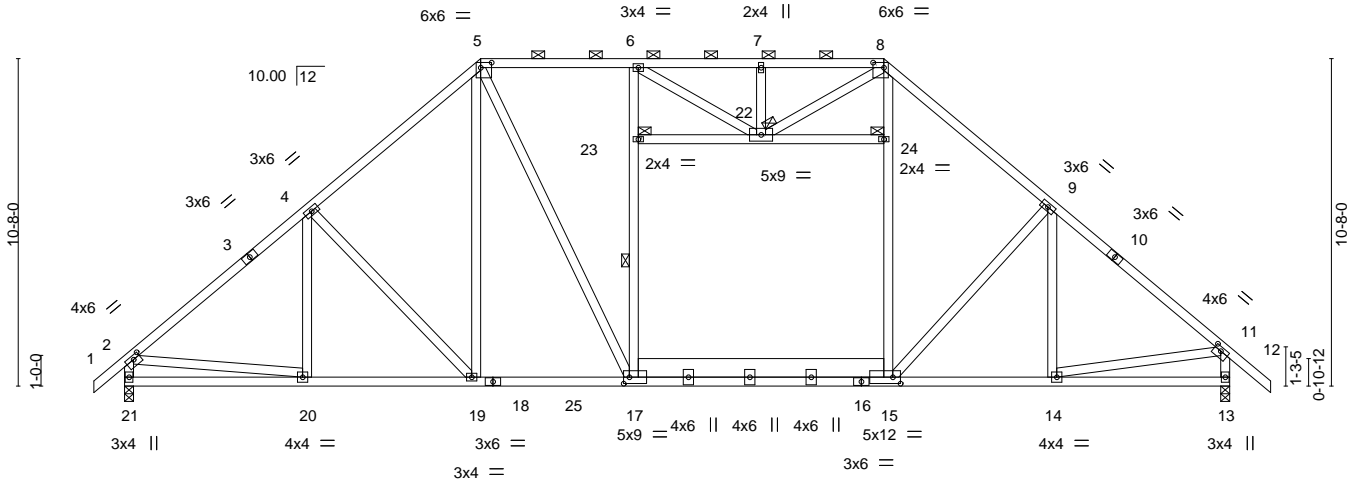


Plate Offsets (X,Y)-- [2:0-2-12,0-1-8], [5:0-4-4,0-2-0], [8:0-4-4,0-2-0], [11:0-2-12,0-1-8], [15:0-3-0,0-2-8], [17:0-2-4,0-2-8]

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 0.74	Vert(LL)	-0.52	17-19	>827	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.93	Vert(CT)	-0.89	17-19	>479		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.98	Horz(CT)	0.03	13	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-MS	Attic	-0.36	15-17	275		
								Weight: 294 lb	FT = 20%

**LUMBER-**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP DSS \*Except\*  
15-17: 2x8 SP No.2  
WEBS 2x4 SP No.3 \*Except\*  
5-19,8-15: 2x4 SP No.1, 6-17: 2x4 SP No.2

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 3-10-3 oc purlins, except end verticals, and 2-0-0 oc purlins (3-4-13 max.): 5-8.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 2-2-0 oc bracing: 14-15.  
WEBS 1 Row at midpt 17-23  
JOINTS 1 Brace at Jt(s): 22, 23, 24

**REACTIONS.** (size) 21=0-3-8, 13=0-3-8  
Max Horz 21=295(LC 11)  
Max Uplift 21=-15(LC 12)  
Max Grav 21=1633(LC 1), 13=1704(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-4=-1933/191, 4-5=-1794/263, 5-6=-1457/229, 6-7=-1617/285, 7-8=-1617/285,  
8-9=-1895/214, 9-11=-1886/139, 2-21=-1565/214, 11-13=-1618/188  
BOT CHORD 20-21=-290/462, 19-20=-87/1489, 17-19=-35/1302, 15-17=0/1425, 14-15=0/1377  
WEBS 4-19=-329/226, 5-19=-121/528, 5-17=-93/486, 17-23=-408/211, 6-23=-318/220,  
8-22=-163/537, 15-24=-41/643, 8-24=0/667, 9-15=-233/276, 9-14=-295/99, 2-20=0/1194,  
11-14=0/1239, 7-22=-293/137

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCCL=6.0psf; BCCL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) 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, with BCCL = 10.0psf.
  - 6) Ceiling dead load (5.0 psf) on member(s). 22-23, 22-24; Wall dead load (5.0psf) on member(s). 17-23, 15-24
  - 7) Bottom chord live load (20.0 psf) and additional bottom chord dead load (5.0 psf) applied only to room. 15-17
  - 8) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 21 and 13. 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) ATTIC SPACE SHOWN IS DESIGNED AS UNINHABITABLE.



**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 2000411-2000411A	Truss B1A	Truss Type Half Hip Girder	Qty 1	Ply 1	JOHNSON RESIDENCE Job Reference (optional)	I41573890
-------------------------	--------------	-------------------------------	----------	----------	---	-----------

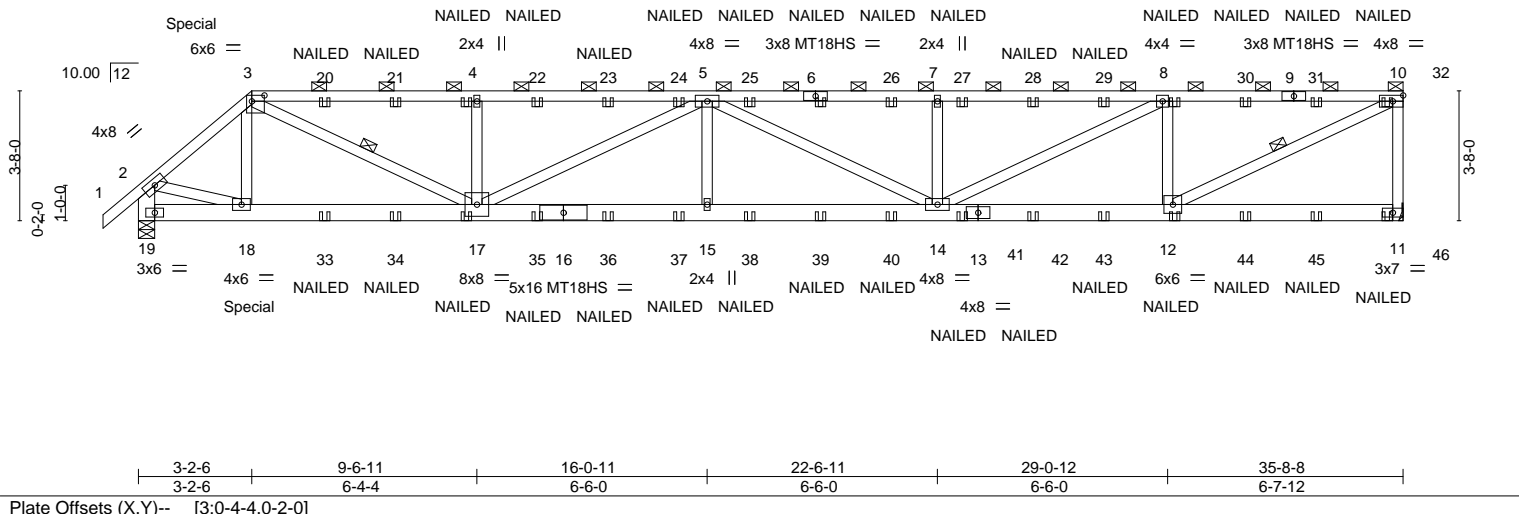
84 Components (Dunn), Dunn, NC - 28334,

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 8 12:54:50 2020 Page 1

ID:grH97r8Y2qqjGmUPA5lQnSz8NKp-srXC\_Hur19k?ws0mwx?ll9OXH7fp7WTNRrEMkz8L2J



Scale = 1:65.1



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 0.88	Vert(LL)	0.55 14-15	>764	240	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.81	Vert(CT)	-0.53 14-15	>802	180	MT18HS	244/190
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.95	Horz(CT)	-0.08 11	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-MS						
								Weight: 222 lb	FT = 20%

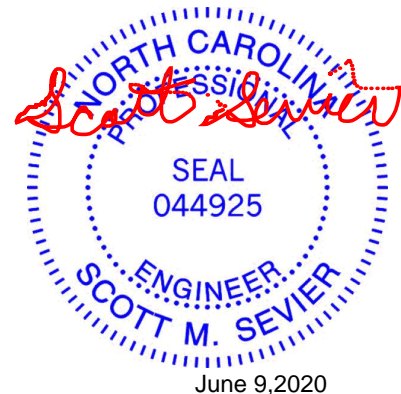
**LUMBER-**  
 TOP CHORD 2x4 SP No.2 \*Except\*  
 3-6: 2x4 SP No.1  
 BOT CHORD 2x6 SP No.2  
 WEBS 2x4 SP No.3 \*Except\*  
 3-17,5-17,5-14,8-14,10-12: 2x4 SP No.2, 2-19: 2x6 SP No.2

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 4-3-10 oc purlins, except end verticals, and 2-0-0 oc purlins (2-5-9 max.): 3-10.  
 BOT CHORD Rigid ceiling directly applied or 4-3-3 oc bracing.  
 WEBS 1 Row at midpt 3-17, 10-12

**REACTIONS.** (size) 19=0-5-8, 11=Mechanical  
 Max Horz 19=140(LC 11)  
 Max Uplift 19=-980(LC 9), 11=-1116(LC 9)  
 Max Grav 19=1635(LC 40), 11=1613(LC 39)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-1837/1205, 3-4=-3409/2345, 4-5=-3409/2345, 5-7=-4058/2780, 7-8=-4058/2780,  
 8-10=-2684/1847, 10-11=-1514/1082, 2-19=-1612/1076  
 BOT CHORD 18-19=-235/254, 17-18=-1022/1369, 15-17=-2992/4321, 14-15=-2992/4321,  
 12-14=-1838/2667  
 WEBS 3-17=-1554/2296, 4-17=-426/372, 5-17=-1031/701, 5-15=-39/268, 5-14=-308/228,  
 7-14=-391/357, 8-14=-1065/1546, 8-12=-1135/860, 10-12=-1991/2927, 2-18=-909/1370

- 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) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) Provide adequate drainage to prevent water ponding.
  - 3) All plates are MT20 plates unless otherwise indicated.
  - 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 5) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 6) Refer to girder(s) for truss to truss connections.
  - 7) Bearing at joint(s) 19 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
  - 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 1116 lb uplift at joint 11.
  - 9) Two H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 19. 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.
  - 11) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidelines.
  - 12) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 190 lb down and 228 lb up at 3-2-6 on top chord, and 44 lb down and 58 lb up at 3-2-6 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
  - 13) 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	JOHNSON RESIDENCE	I41573890
2000411-2000411A	B1A	Half Hip Girder	1	1	Job Reference (optional)	

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

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 8 12:54:50 2020 Page 2  
 ID:grH97r8Y2qqjGmUPA5lQnSz8NKp-srXC\_Hur19k?ws0mwx?lI9OXH7fp7WTNRrEMkz8L2J

**LOAD CASE(S)** Standard

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

Uniform Loads (plf)

Vert: 1-2=-60, 2-3=-60, 3-10=-60, 11-19=-20

Concentrated Loads (lb)

Vert: 18=4(F) 17=1(F) 12=1(F) 32=-0(F) 33=1(F) 34=1(F) 35=-3(F) 36=-3(F) 37=-3(F) 38=-3(F) 39=-3(F) 40=-3(F) 41=-3(F) 42=-3(F) 43=1(F) 44=1(F) 45=1(F)  
 46=-2(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.



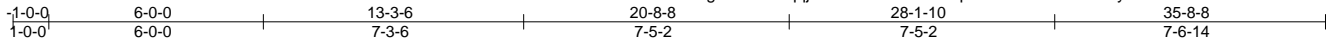
818 Soundside Road  
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	JOHNSON RESIDENCE	141573891
2000411-2000411A	B1B	Half Hip	1	1	Job Reference (optional)	

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

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 8 12:54:51 2020 Page 1

ID:grH97r8Y2qjGmUPA5lQnSz8NKp-L14aBdvToTssY0byTeWXINwiVX06Yb6cb5bouBz8L2l



Scale: 3/16"=1'

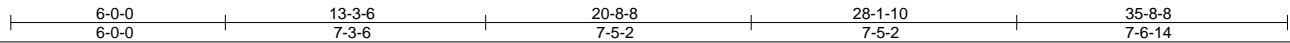
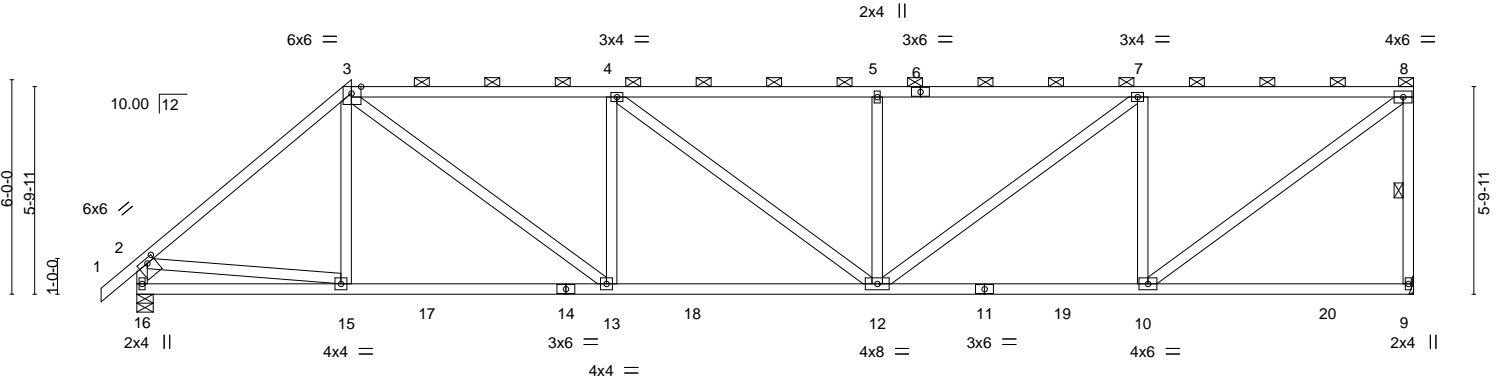


Plate Offsets (X,Y)-- [2:0-2,12,0-1-8], [3:0-3-4,Edge]

<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 0.85	Vert(LL)	-0.13 12-13	>999	240	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.74	Vert(CT)	-0.30 12-13	>999	180		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.80	Horz(CT)	0.06 9	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-MS						
								Weight: 212 lb	FT = 20%

**LUMBER-**  
 TOP CHORD 2x4 SP No.2 \*Except\*  
 3-6: 2x4 SP No.1  
 BOT CHORD 2x4 SP No.2  
 WEBS 2x4 SP No.3

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 3-10-15 oc purlins, except end verticals, and 2-0-0 oc purlins (2-11-6 max.): 3-8.  
 BOT CHORD Rigid ceiling directly applied or 7-10-7 oc bracing.  
 WEBS 1 Row at midpt 8-9

**REACTIONS.** (size) 9=Mechanical, 16=0-5-8  
 Max Horz 16=222(LC 9)  
 Max Uplift 9=-267(LC 9), 16=-159(LC 9)  
 Max Grav 9=1416(LC 1), 16=1487(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-1758/346, 3-4=-2190/514, 4-5=-2271/528, 5-7=-2271/528, 7-8=-1581/393,  
 8-9=-1348/331, 2-16=-1435/335  
 BOT CHORD 15-16=-431/549, 13-15=-405/1269, 12-13=-557/2189, 10-12=-382/1581  
 WEBS 3-13=-278/1197, 4-13=-575/260, 5-12=-429/199, 7-12=-203/859, 7-10=-998/349,  
 8-10=-413/1939, 2-15=-216/1069

- 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) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 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 connections.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 267 lb uplift at joint 9.
  - One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 16. 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.



June 9, 2020

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

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



818 Soundside Road  
 Edenton, NC 27932

Job 2000411-2000411A	Truss B1C	Truss Type Hip	Qty 1	Ply 1	JOHNSON RESIDENCE Job Reference (optional)	I41573892
-------------------------	--------------	-------------------	----------	----------	---	-----------

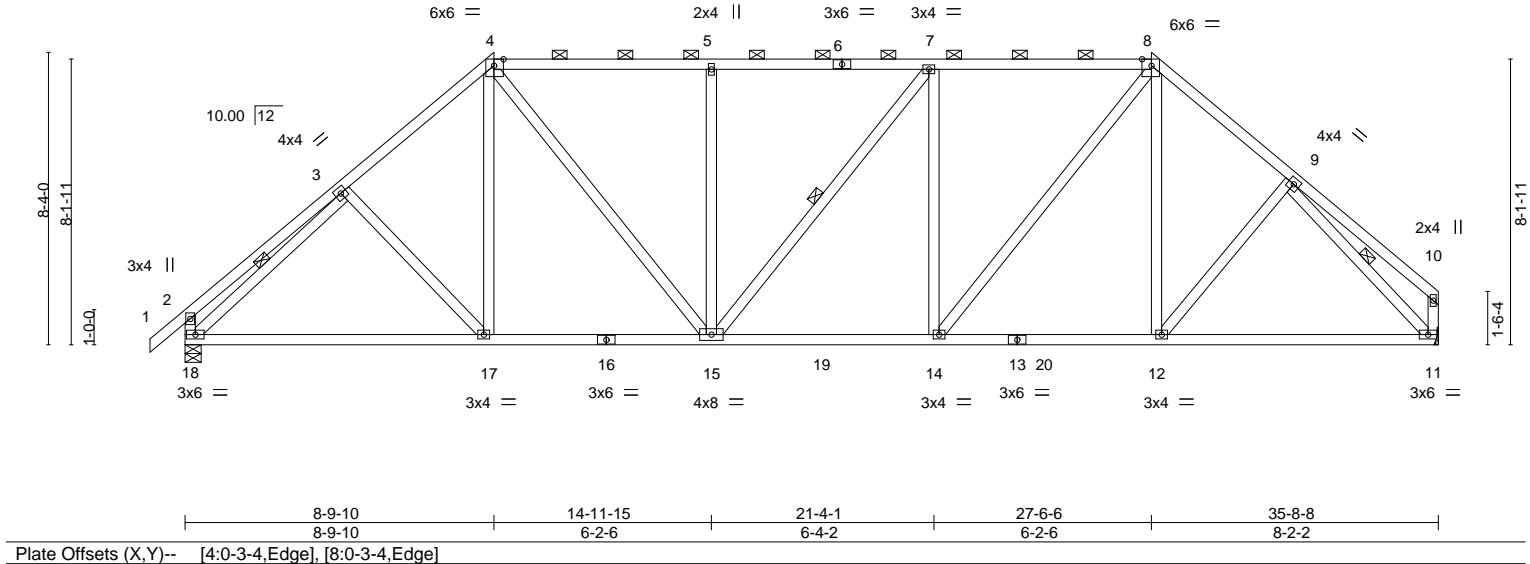
84 Components (Dunn), Dunn, NC - 28334,

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 8 12:54:52 2020 Page 1

ID:grH97r8Y2qqjGmUPA5lQnSz8NKp-pEeyPzv5Zm\_jAAA91M1mqaTzfxN7H62mqIKLQdz8L2H



Scale = 1:65.6



LOADING (psf)	SPACING-	CSL	DEFL.	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.51	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.69	Vert(LL) -0.14 17-18 >999 240		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.57	Vert(CT) -0.29 17-18 >999 180		
BCDL 10.0	Rep Stress Incr YES	Matrix-MS	Horz(CT) 0.07 11 n/a n/a		
	Code IRC2015/TPI2014			Weight: 241 lb	FT = 20%

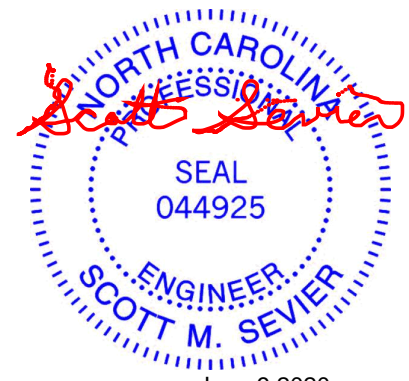
LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 4-4-13 oc purlins, except end verticals, and 2-0-0 oc purlins (4-0-4 max.): 4-8.
BOT CHORD 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.3	WEBS 1 Row at midpt 7-15, 3-18, 9-11

**REACTIONS.** (size) 18=0-5-8, 11=Mechanical  
 Max Horz 18=227(LC 9)  
 Max Uplift 18=-100(LC 12), 11=-75(LC 8)  
 Max Grav 18=1487(LC 1), 11=1416(LC 1)

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

TOP CHORD	BOT CHORD	WEBS
2-3=-393/151, 3-4=-1620/394, 4-5=-1602/439, 5-7=-1600/437, 7-8=-1600/436, 8-9=-1545/387, 2-18=-396/171	17-18=-263/1213, 15-17=-211/1200, 14-15=-222/1598, 12-14=-122/1150, 11-12=-198/1079	4-17=-40/302, 4-15=-199/696, 5-15=-413/184, 7-14=-472/229, 8-14=-198/763, 3-18=-1415/247, 9-11=-1516/287

- 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) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 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 connections.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 75 lb uplift at joint 11.
  - One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 18. 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.



June 9, 2020

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

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

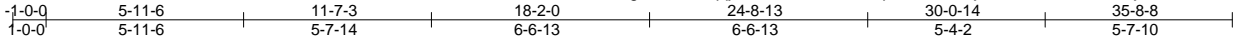
**ENGINEERING BY**  
**TRENCO**  
 A MiTek Affiliate

818 Soundside Road  
 Edenton, NC 27932

Job 2000411-2000411A	Truss B1D	Truss Type Hip	Qty 1	Ply 1	JOHNSON RESIDENCE Job Reference (optional)	141573893
-------------------------	--------------	-------------------	----------	----------	---	-----------

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

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 8 12:54:53 2020 Page 1  
 ID:grH97r8Y2qqjGmUPA5iQnSz8NKp-HQCKcJwjK46anKkLb3Y?No?6jKkz0axv3P4uy3z8L2G



Scale = 1:69.4

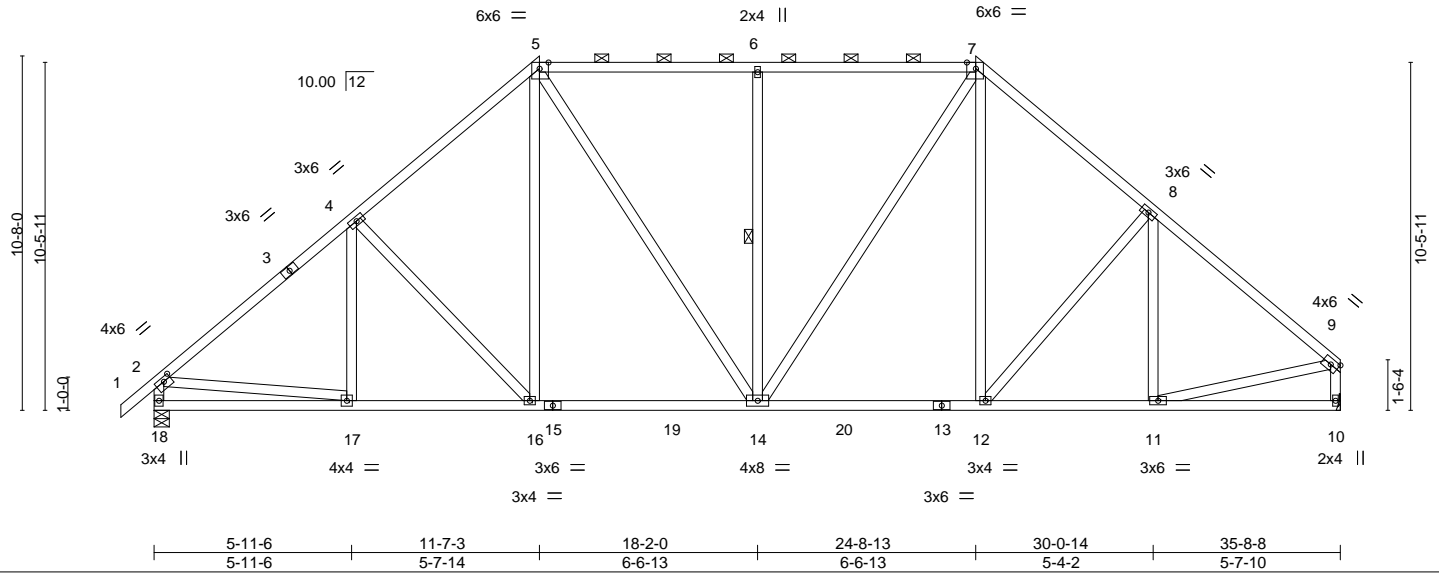


Plate Offsets (X, Y)--	[2:0-2-12,0-1-8], [5:0-3-4,Edge], [7:0-3-4,Edge]
------------------------	--

<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 0.62	Vert(LL) -0.10 14-16 >999 240	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.59	Vert(CT) -0.18 14-16 >999 180		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.49	Horz(CT) 0.05 10 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-MS		Weight: 256 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 4-1-15 oc purlins, except end verticals, and 2-0-0 oc purlins (4-6-4 max.): 5-7.
BOT CHORD 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.3	WEBS 1 Row at midpt 6-14

<b>REACTIONS.</b>	(size) 18=0-5-8, 10=Mechanical Max Horz 18=285(LC 9) Max Uplift 18=-124(LC 12), 10=-93(LC 13) Max Grav 18=1487(LC 1), 10=1416(LC 1)
-------------------	--

<b>FORCES.</b>	(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD	2-4=-1744/336, 4-5=-1521/412, 5-6=-1273/413, 6-7=-1273/413, 7-8=-1474/410, 8-9=-1593/317, 2-18=-1427/322, 9-10=-1360/271
BOT CHORD	17-18=-300/415, 16-17=-216/1285, 14-16=-165/1089, 12-14=-66/1059, 11-12=-169/1152
WEBS	4-16=-342/216, 5-16=-83/423, 5-14=-172/423, 6-14=-472/209, 7-14=-169/472, 7-12=-85/368, 8-12=-265/206, 2-17=-45/1047, 9-11=-128/1094

- 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) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) 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, with BCDL = 10.0psf.
  - 6) Refer to girder(s) for truss to truss connections.
  - 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 93 lb uplift at joint 10.
  - 8) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 18. 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.





Job 2000411-2000411A	Truss B2	Truss Type Piggyback Base	Qty 4	Ply 1	JOHNSON RESIDENCE Job Reference (optional)	141573894
-------------------------	-------------	------------------------------	----------	----------	---	-----------

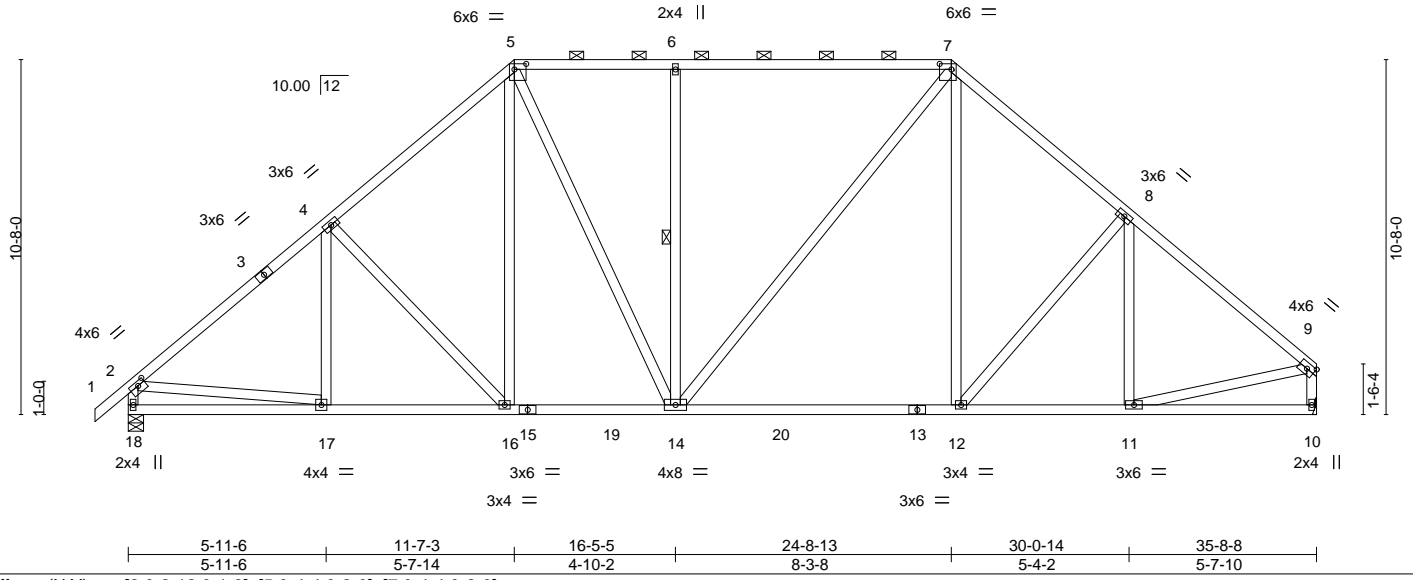
84 Components (Dunn), Dunn, NC - 28334,

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 8 12:54:54 2020 Page 1

ID:grH97r8Y2qqjGmUPA5lQnSz8NKp-lcmiqfX5OERPUIX9n3Ew?YC0k2RI0J2H3pSVWz8L2F



Scale = 1:69.2



<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 0.84	Vert(LL)	-0.18	12-14	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.77	Vert(CT)	-0.34	12-14	>999		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.52	Horz(CT)	0.05	10	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-MS						
								Weight: 257 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.2 *Except* 5-7: 2x4 SP No.1	TOP CHORD Structural wood sheathing directly applied or 4-1-11 oc purlins, except end verticals, and 2-0-0 oc purlins (3-5-6 max.): 5-7.
BOT CHORD 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.3 *Except* 7-14: 2x4 SP No.2	WEBS 1 Row at midpt 6-14

**REACTIONS.** (size) 18=0-5-8, 10=Mechanical  
 Max Horz 18=288(LC 9)  
 Max Uplift 18=-123(LC 12), 10=-93(LC 13)  
 Max Grav 18=1487(LC 1), 10=1416(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-4=-1746/335, 4-5=-1519/417, 5-6=-1248/411, 6-7=-1248/411, 7-8=-1482/409,  
 8-9=-1590/318, 2-18=-1429/321, 9-10=-1358/272  
 BOT CHORD 17-18=-302/410, 16-17=-219/1287, 14-16=-165/1064, 12-14=-62/1062, 11-12=-169/1148  
 WEBS 4-16=-371/217, 5-16=-104/371, 5-14=-184/509, 6-14=-481/221, 7-14=-165/398,  
 7-12=-73/434, 8-12=-271/215, 2-17=-48/1059, 9-11=-129/1086

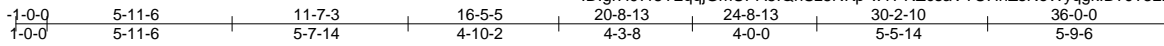
- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCCL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 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 93 lb uplift at joint 10.
  - One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 18. 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.



June 9, 2020

Job 2000411-2000411A	Truss B1	Truss Type ROOF TRUSS	Qty 1	Ply 1	JOHNSON RESIDENCE Job Reference (optional)	141573895
-------------------------	-------------	--------------------------	----------	----------	---	-----------

84 Components (Dunn), Dunn, NC - 28334, 8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 8 12:54:48 2020 Page 1



Scale = 1:74.0

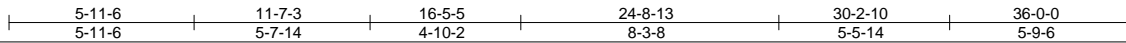
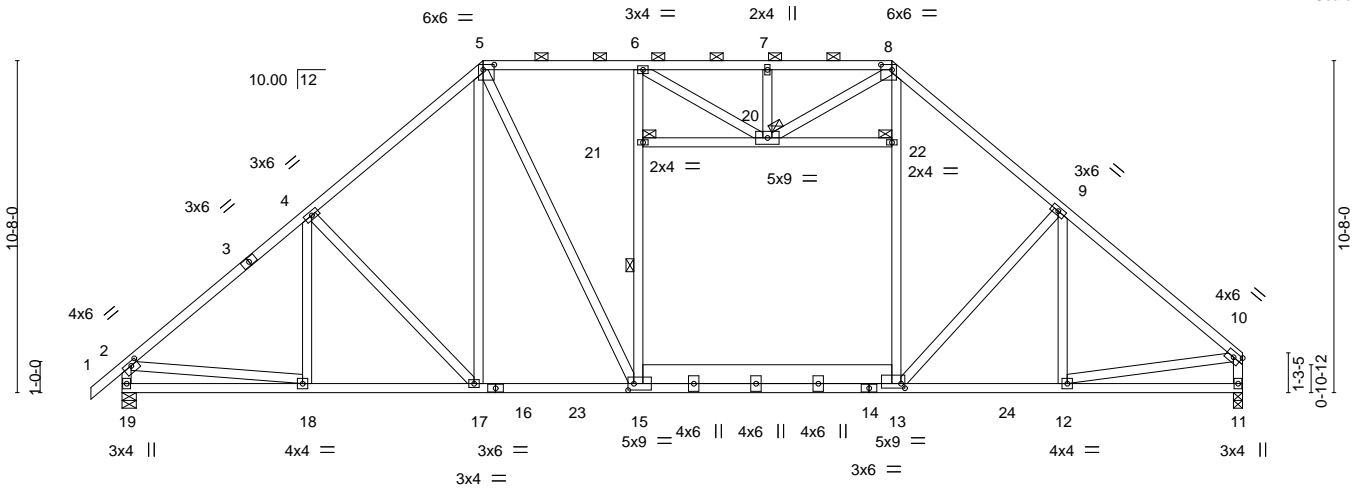


Plate Offsets (X, Y)--	[2:0-2-12,0-1-8], [5:0-4-4,0-2-0], [8:0-4-4,0-2-0], [13:0-1-8,0-1-12], [15:0-2-4,0-2-8]
------------------------	---

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 0.73	Vert(LL)	0.50	15-17	>864	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.76	Vert(CT)	-0.86	15-17	>498		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.95	Horz(CT)	0.04	11	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-MS	Attic	-0.34	13-15	291	Weight: 291 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 3-8-1 oc purlins, except end verticals, and 2-0-0 oc purlins (3-7-0 max.): 5-8.
BOT CHORD 2x4 SP DSS *Except* 13-15: 2x8 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.3 *Except* 5-17,8-13: 2x4 SP No.1, 6-15: 2x4 SP No.2	WEBS 1 Row at midpt 15-21
	JOINTS 1 Brace at Jt(s): 20, 21, 22

**REACTIONS.** (size) 19=0-5-8, 11=0-3-8  
Max Horz 19=285(LC 9)  
Max Uplift 19=-14(LC 12)  
Max Grav 19=1638(LC 2), 11=1692(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-4=-1969/192, 4-5=-1833/264, 5-6=-1513/229, 6-7=-1673/285, 7-8=-1673/285, 8-9=-1987/216, 9-10=-2000/136, 2-19=-1569/214, 10-11=-1609/122  
BOT CHORD 18-19=-302/447, 17-18=-99/1505, 15-17=-47/1323, 13-15=0/1486, 12-13=-26/1472  
WEBS 4-17=-329/226, 5-17=-121/505, 5-15=-93/547, 15-21=-409/211, 6-21=-319/220, 8-20=-163/537, 13-22=-44/724, 8-22=0/747, 9-13=-240/279, 9-12=-269/98, 2-18=0/1226, 10-12=0/1352, 7-20=-293/137

- 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) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) 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, with BCDL = 10.0psf.
  - 6) Ceiling dead load (5.0 psf) on member(s). 20-21, 20-22; Wall dead load (5.0psf) on member(s). 15-21, 13-22
  - 7) Bottom chord live load (20.0 psf) and additional bottom chord dead load (5.0 psf) applied only to room. 13-15
  - 8) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 19 and 11. 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) ATTIC SPACE SHOWN IS DESIGNED AS UNINHABITABLE.



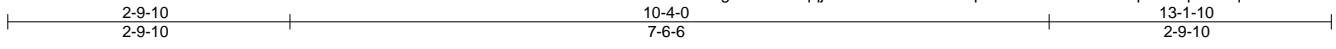
June 9, 2020

<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>
---	--

Job 2000411-2000411A	Truss PB6	Truss Type Piggyback	Qty 2	Ply 1	JOHNSON RESIDENCE Job Reference (optional)	141573896
-------------------------	--------------	-------------------------	----------	----------	---	-----------

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

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 8 12:55:31 2020 Page 1  
ID:grH97r8Y2qqjGmUPA5lQnSz8NKp-AkVibJOZNVBL9eep2EwvpahRfq9wtiVoJHvHsz8L1g



Scale = 1:22.9

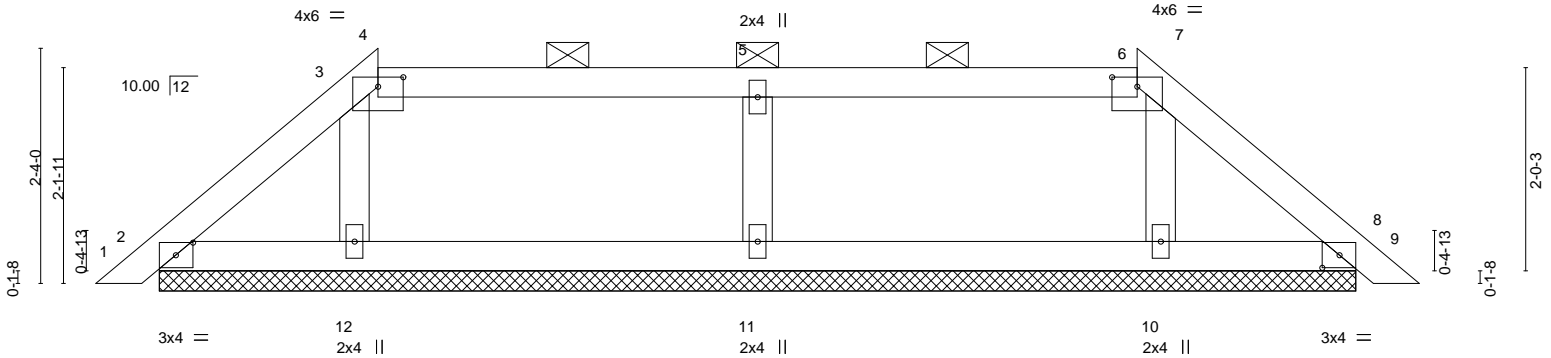


Plate Offsets (X,Y)--	[2:0-2-1,0-1-8], [3:0-1-12,0-1-7], [4:0-3-0,0-1-2], [4:0-0-0,0-1-2], [6:0-0-0,0-1-2], [6:0-3-0,0-1-2], [7:0-1-12,0-1-7], [8:0-2-1,0-1-8]
-----------------------	--

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 0.21	Vert(LL)	0.00	8	n/r	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.12	Vert(CT)	0.00	8	n/r		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.05	Horz(CT)	0.00	8	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S					Weight: 46 lb	FT = 20%

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

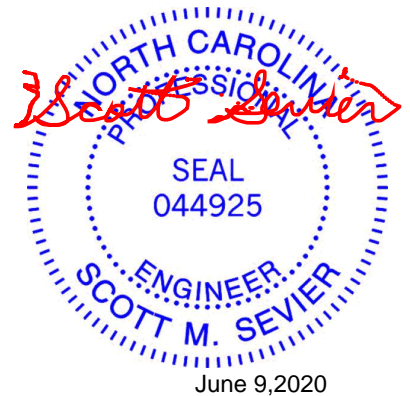
**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 4-6.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** All bearings 11-10-7.  
 (lb) - Max Horz 2=51(LC 11)  
 Max Uplift All uplift 100 lb or less at joint(s) 2, 8, 11, 12, 10  
 Max Grav All reactions 250 lb or less at joint(s) 2, 8, 12, 10 except 11=353(LC 23)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 WEBS 5-11=268/152

- 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; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 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.
  - n/a

- 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.



June 9, 2020

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.**  
 Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



Job 2000411-2000411A	Truss PB7	Truss Type Piggyback	Qty 2	Ply 1	JOHNSON RESIDENCE Job Reference (optional)	I41573897
-------------------------	--------------	-------------------------	----------	----------	---	-----------

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

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 8 12:55:32 2020 Page 1  
ID:grH97r8Y2qqjGmUPA5lQnSz8NKp-ew34oeOB8311zJDrNlI9S07uX2AKfK0e1z0SqJz8L1f

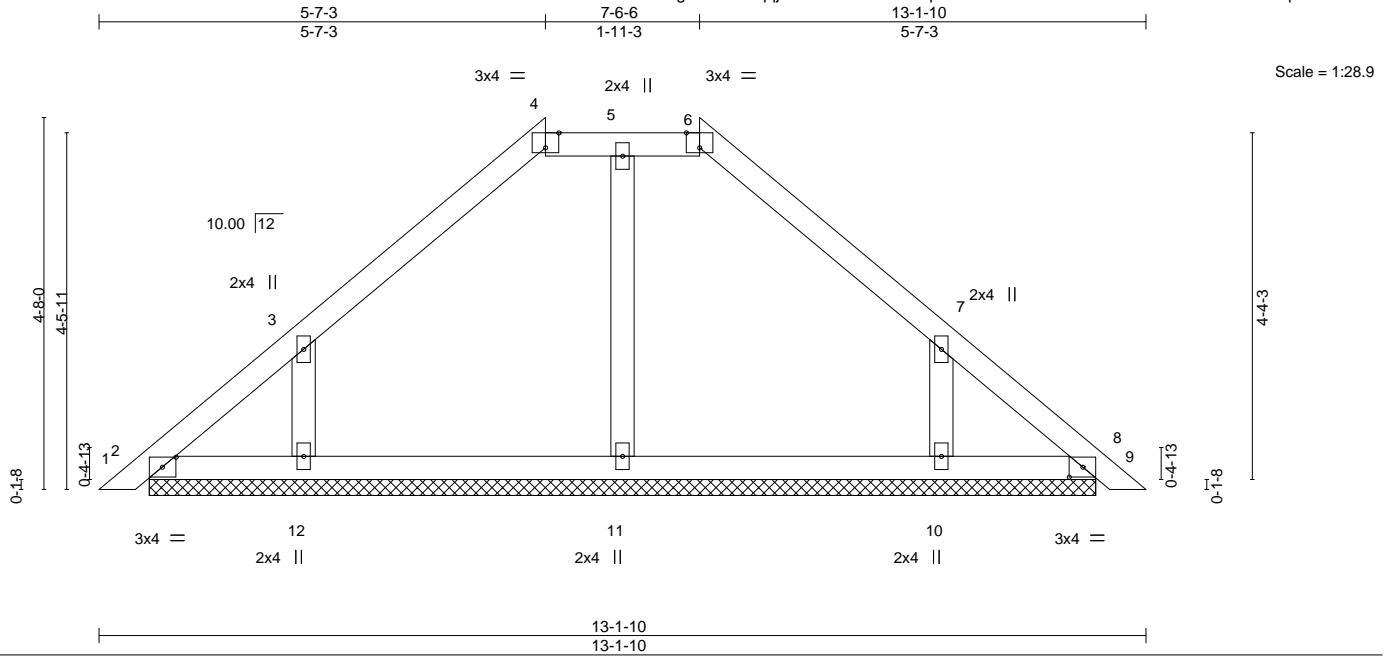


Plate Offsets (X,Y)--	[2:0-2-1,0-1-8], [4:0-2-0,Edge], [6:0-2-0,Edge], [8:0-2-1,0-1-8]
-----------------------	--

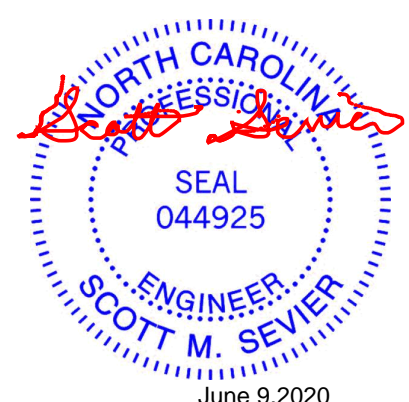
LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.13	Vert(LL)	0.00	8	n/r	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.13	Vert(CT)	0.00	8	n/r		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.05	Horz(CT)	0.00	8	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S					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
BOT CHORD 2x4 SP No.2	2-0-0 oc purlins (6-0-0 max.): 4-6.
OTHERS 2x4 SP No.3	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** All bearings 11-10-7.  
 (lb) - Max Horz 2=108(LC 10)  
 Max Uplift All uplift 100 lb or less at joint(s) 2, 8 except 12=131(LC 12), 10=129(LC 13)  
 Max Grav All reactions 250 lb or less at joint(s) 2, 8, 11 except 12=283(LC 19), 10=281(LC 20)

**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) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 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.
  - n/a
  - 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.



June 9, 2020

Job 2000411-2000411A	Truss PB8	Truss Type Piggyback	Qty 6	Ply 1	JOHNSON RESIDENCE Job Reference (optional)	I41573898
-------------------------	--------------	-------------------------	----------	----------	---	-----------

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

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 8 12:55:33 2020 Page 1

ID:grH97r8Y2qqjGmUPA5lQnSz8NKp-67dS?\_PpvN9uaTo1xTGO?Eg2WSVdOmpoFdm0Mlz8L1e

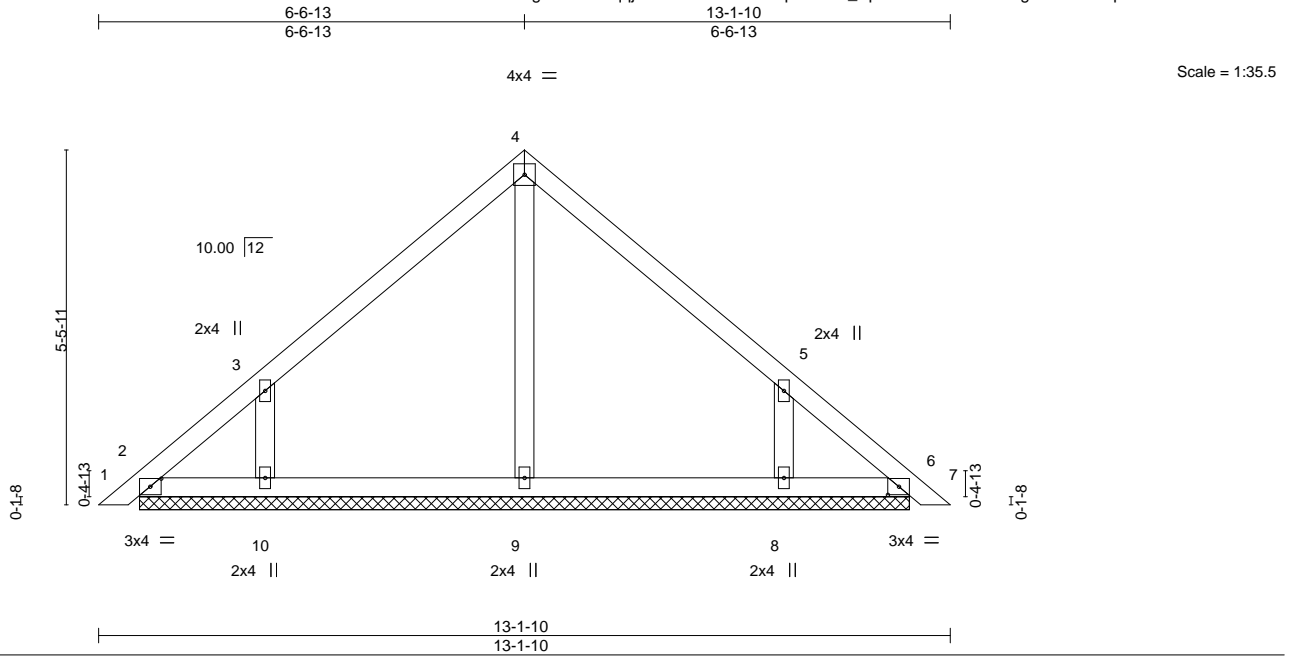


Plate Offsets (X,Y)--	[2:0-2-1,0-1-8], [6:0-2-1,0-1-8]
-----------------------	----------------------------------

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.18	in (loc) l/def L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.12	Vert(LL) -0.00 6 n/r 120		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.08	Vert(CT) -0.00 6 n/r 90		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.00 6 n/a n/a		
	Code IRC2015/TPI2014			Weight: 54 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 11-10-7.  
 (lb) - Max Horz 2=-131(LC 10)  
 Max Uplift All uplift 100 lb or less at joint(s) 2, 6 except 10=-165(LC 12), 8=-164(LC 13)  
 Max Grav All reactions 250 lb or less at joint(s) 2, 6, 9 except 10=322(LC 19), 8=321(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
**WEBS** 3-10=-274/207, 5-8=-274/207

- 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; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) 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) n/a
  - 7) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.



June 9, 2020

Job 2000411-2000411A	Truss V1	Truss Type Valley	Qty 1	Ply 1	JOHNSON RESIDENCE Job Reference (optional)	I41573899
-------------------------	-------------	----------------------	----------	----------	---	-----------

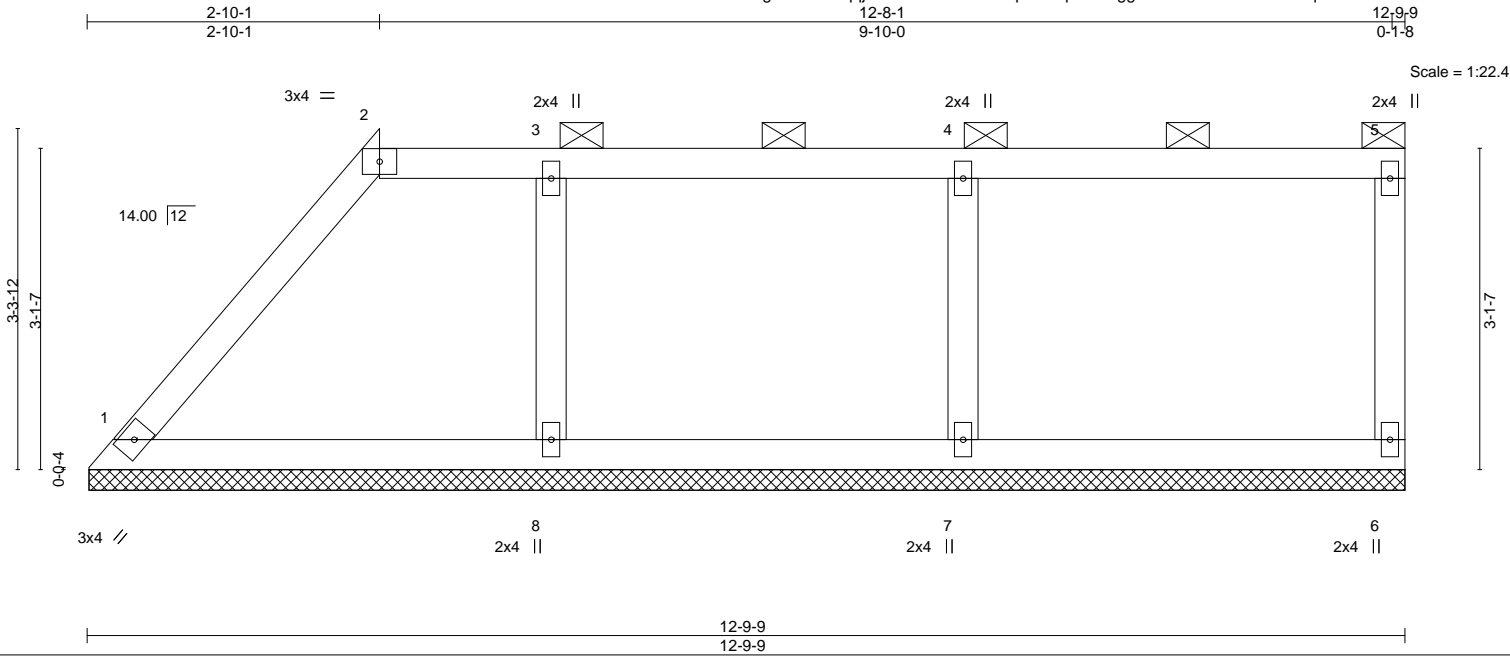
84 Components (Dunn), Dunn, NC - 28334,

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 8 12:55:34 2020 Page 1

ID:grH97r8Y2qqjGmUPA5lQnSz8NKp-aJBqDKQRggHlCdNDUAndXRCCOsqd7DixUHVZuBz8L1d

12-8-1 12-9-9  
9-10-0 0-1-8

Scale = 1:22.4



LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.23	Vert(LL)	n/a	-	n/a	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.14	Vert(CT)	n/a	-	n/a		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.06	Horz(CT)	-0.00	6	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S					Weight: 51 lb	FT = 20%

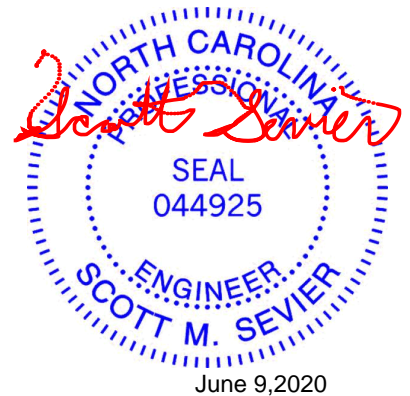
**LUMBER-**  
 TOP CHORD 2x4 SP No.2  
 BOT CHORD 2x4 SP No.2  
 WEBS 2x4 SP No.3  
 OTHERS 2x4 SP No.3

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 2-5.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** All bearings 12-9-6.  
 (lb) - Max Horz 1=106(LC 9)  
 Max Uplift All uplift 100 lb or less at joint(s) 1, 6, 7, 8  
 Max Grav All reactions 250 lb or less at joint(s) 1, 6 except 7=349(LC 24), 8=353(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 WEBS 4-7=-267/137, 3-8=-252/211

- 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) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 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.
  - n/a
  - 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.

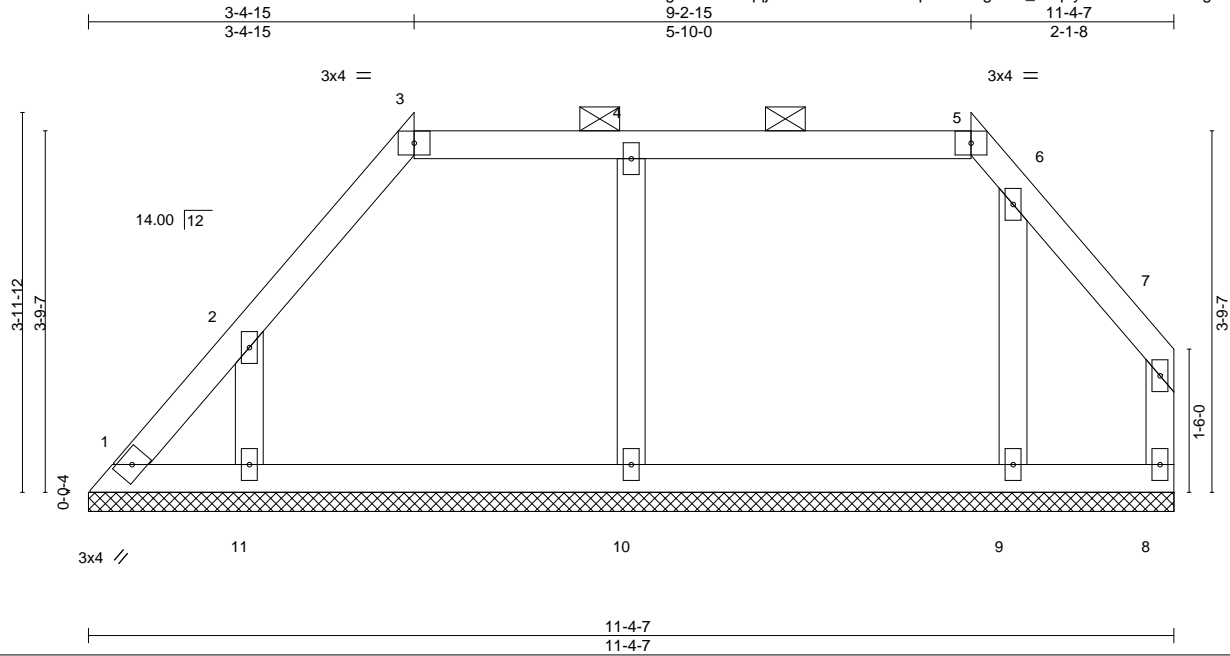
ENGINEERING BY  
**TRENCO**  
 A MiTek Affiliate  
 818 Soundside Road  
 Edenton, NC 27932

Job 2000411-2000411A	Truss V2	Truss Type GABLE	Qty 1	Ply 1	JOHNSON RESIDENCE Job Reference (optional)	141573900
-------------------------	-------------	---------------------	----------	----------	---	-----------

84 Components (Dunn),

Dunn, NC - 28334,

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 8 12:55:35 2020 Page 1  
ID:grH97r8Y2qqjGmUPA5lQnSz8NKp-2VICQgR3R\_PcqnyP2uls4flOrGB4sgR5jxF7Qdz8L1c



Scale: 1/2"=1'

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	999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.12	Vert(CT)	n/a	-	n/a	999		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.07	Horz(CT)	-0.00	8	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S						Weight: 51 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, and 2-0-0 oc purlins (6-0-0 max.): 3-5.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** All bearings 11-4-7.  
(lb) - Max Horz 1=106(LC 9)  
Max Uplift All uplift 100 lb or less at joint(s) 1, 8, 10, 9 except 11=102(LC 12)  
Max Grav All reactions 250 lb or less at joint(s) 1, 8, 9 except 10=328(LC 23), 11=258(LC 19)

**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; BC DL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Provide adequate drainage to prevent water ponding.
- All plates are 2x4 MT20 unless otherwise indicated.
- 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.
- n/a
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



June 9, 2020

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

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



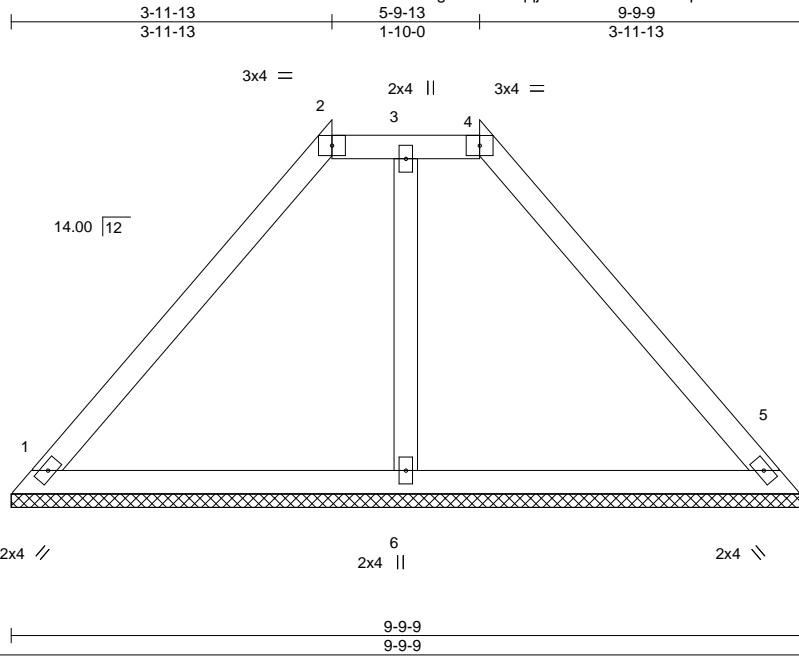
818 Soundside Road  
Edenton, NC 27932

Job 2000411-2000411A	Truss V3	Truss Type GABLE	Qty 1	Ply 1	JOHNSON RESIDENCE Job Reference (optional)	I41573901
-------------------------	-------------	---------------------	----------	----------	---	-----------

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

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 8 12:55:36 2020 Page 1

ID:grH97r8Y2qqjGmUPA5lQnSz8NKp-Wilbe0RhCIXTRxXccbp5csHY?gVvb8REyb\_gz4z8L1b



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 0.22	Vert(LL)	n/a	-	n/a	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.21	Vert(CT)	n/a	-	n/a		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.02	Horz(CT)	0.00	5	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S					Weight: 40 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 2-0-0 oc purlins (6-0-0 max.): 2-4.
BOT CHORD 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
OTHERS 2x4 SP No.3	

**REACTIONS.** (size) 1=9-9-9, 5=9-9-9, 6=9-9-9  
 Max Horz 1=108(LC 9)  
 Max Uplift 1=-72(LC 13), 5=-77(LC 13)  
 Max Grav 1=280(LC 1), 5=280(LC 1), 6=236(LC 3)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-2=-275/175, 4-5=-275/175

- 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; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) Provide adequate drainage to prevent water ponding.
  - 4) Gable requires continuous bottom chord bearing.
  - 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) n/a
  - 8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



June 9, 2020

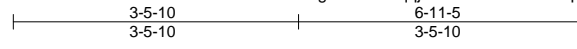


Job 2000411-2000411A	Truss V4	Truss Type Valley	Qty 1	Ply 1	JOHNSON RESIDENCE Job Reference (optional)	I41573902
-------------------------	-------------	----------------------	----------	----------	---	-----------

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

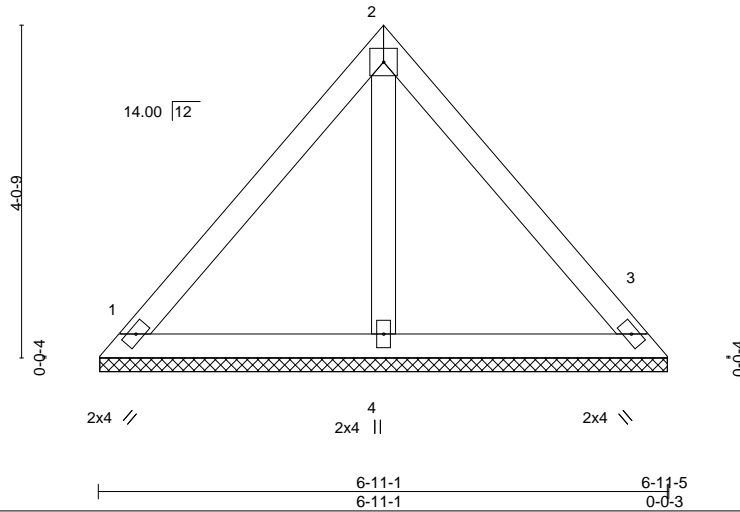
8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 8 12:55:37 2020 Page 1

ID:grH97r8Y2qqjGmUPA5lQnSz8NKp-uszrMSKzbfK356oAJLK94qjW3tuKbXNAFkDVWz8L1a



4x4 =

Scale = 1:28.0



LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP	
TCLL 20.0	Plate Grip DOL	1.15	TC 0.24	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.10	Vert(CT)	n/a	-	n/a	999		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.03	Horz(CT)	0.00	3	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-P						Weight: 30 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.** (size) 1=6-10-14, 3=6-10-14, 4=6-10-14  
 Max Horz 1=95(LC 8)  
 Max Uplift 1=44(LC 13), 3=35(LC 12)  
 Max Grav 1=158(LC 1), 3=158(LC 1), 4=194(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; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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.



June 9, 2020

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.**  
 Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



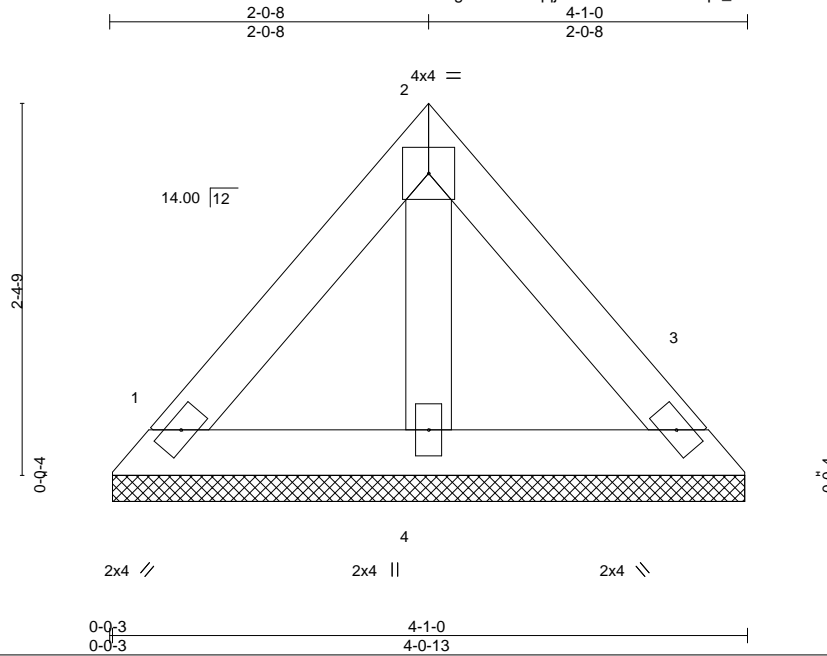
818 Soundside Road  
 Edenton, NC 27932

Job 2000411-2000411A	Truss V5	Truss Type Valley	Qty 1	Ply 1	JOHNSON RESIDENCE Job Reference (optional)	I41573903
-------------------------	-------------	----------------------	----------	----------	---	-----------

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

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 8 12:55:37 2020 Page 1

ID:grH97r8Y2qqjGmUPA5lQnSz8NKp-\_uszfMSKzbfK356oAJLK94qlA3u?KbrNAFkDVWz8L1a



Scale = 1:14.8

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 0.07	Vert(LL)	n/a	-	n/a	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.03	Vert(CT)	n/a	-	n/a		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.01	Horz(CT)	0.00	3	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-P					Weight: 17 lb	FT = 20%

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

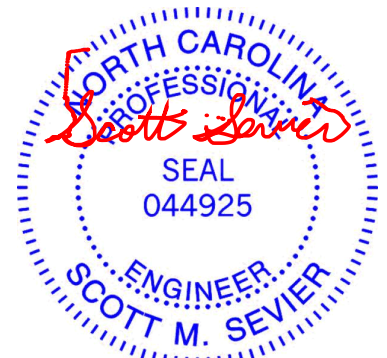
**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 4-1-0 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 1=4-0-9, 3=4-0-9, 4=4-0-9  
 Max Horz 1=-52(LC 8)  
 Max Uplift 1=-24(LC 13), 3=-19(LC 12)  
 Max Grav 1=87(LC 1), 3=87(LC 1), 4=106(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; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) 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.



June 9,2020

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

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

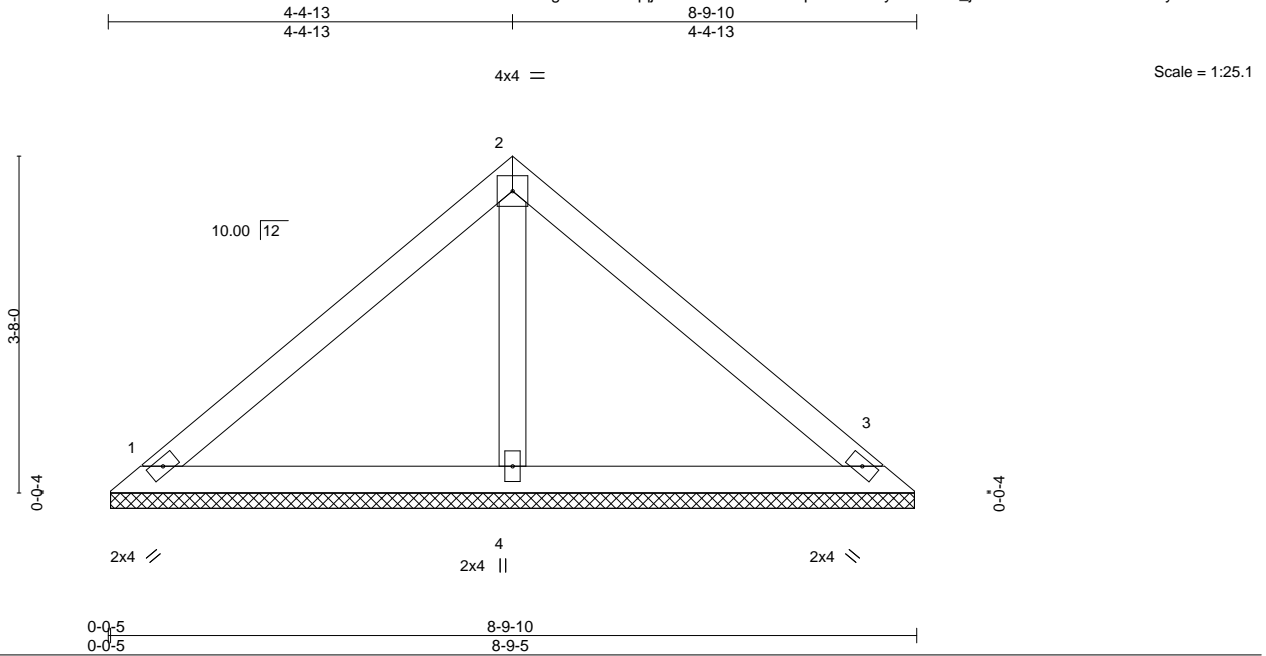


818 Soundside Road  
 Edenton, NC 27932

Job 2000411-2000411A	Truss V6	Truss Type Valley	Qty 1	Ply 1	JOHNSON RESIDENCE Job Reference (optional)	I41573904
-------------------------	-------------	----------------------	----------	----------	---	-----------

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

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 8 12:55:38 2020 Page 1  
ID:grH97r8Y2qajGmUPA5lQnSz8NKp-T4QL3iTykvnBhEh\_j0sZiHNt6TCB32YXPvTn1yz8L1Z



LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.31	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.16	Vert(LL) n/a - n/a 999		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.05	Vert(CT) n/a - n/a 999		
BCDL 10.0	Rep Stress Incr YES	Matrix-P	Horz(CT) 0.00 3 n/a n/a	Weight: 33 lb	FT = 20%
	Code IRC2015/TPI2014				

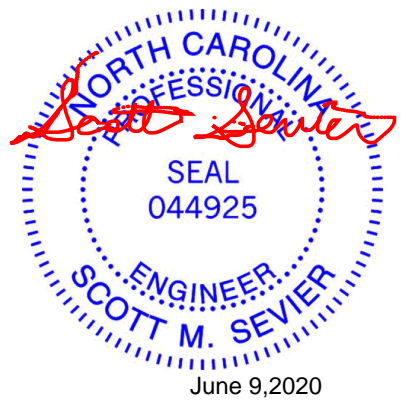
LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
OTHERS 2x4 SP No.3	

**REACTIONS.** (size) 1=8-9-0, 3=8-9-0, 4=8-9-0  
 Max Horz 1=82(LC 11)  
 Max Uplift 1=-38(LC 13), 3=-49(LC 13)  
 Max Grav 1=183(LC 1), 3=183(LC 1), 4=273(LC 1)

**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; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) 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.



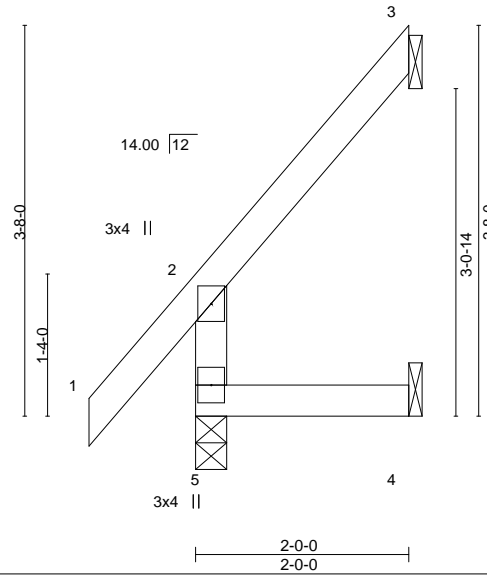
Job 2000411-2000411A	Truss J6	Truss Type Jack-Open	Qty 25	Ply 1	JOHNSON RESIDENCE I41573905 Job Reference (optional)
-------------------------	-------------	-------------------------	-----------	----------	--

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

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 8 12:55:24 2020 Page 1



Scale = 1:21.6



<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 0.31	Vert(LL) 0.00	4-5 >999	240	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.19	Vert(CT) -0.00	4-5 >999	180		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.00	Horz(CT) -0.02	3 n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-MR				Weight: 12 lb	FT = 20%

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

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

**REACTIONS.** (size) 5=0-3-8, 3=Mechanical, 4=Mechanical  
Max Horz 5=112(LC 12)  
Max Uplift 3=-83(LC 12), 4=-29(LC 12)  
Max Grav 5=164(LC 1), 3=62(LC 19), 4=38(LC 10)

**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) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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 to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 83 lb uplift at joint 3 and 29 lb uplift at joint 4.



June 9, 2020

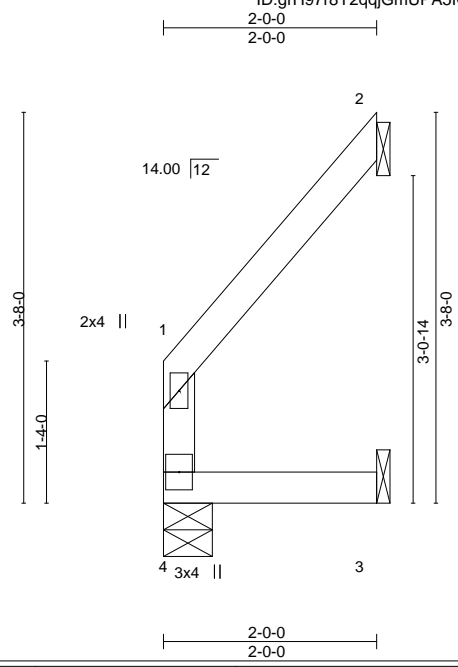
**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.**  
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

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

Job	Truss	Truss Type	Qty	Ply	JOHNSON RESIDENCE
2000411-2000411A	J7	Jack-Open	8	1	I41573906
					Job Reference (optional)

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

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 8 12:55:25 2020 Page 1  
 ID:grH97r8Y2qjGmUPA5lQnSz8NKp-La8QKFJoov81dEBUTn7WgYkFBEm6WA3cQOqb4Dz8L1m



Scale = 1:21.6

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 0.26	Vert(LL)	0.00	3-4	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.16	Vert(CT)	-0.00	3-4	>999		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.00	Horz(CT)	-0.02	2	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-MR					Weight: 9 lb	FT = 20%

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

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

**REACTIONS.** (size) 4=0-5-8, 2=Mechanical, 3=Mechanical  
 Max Horz 4=70(LC 9)  
 Max Uplift 2=-87(LC 12), 3=-22(LC 12)  
 Max Grav 4=92(LC 21), 2=75(LC 19), 3=39(LC 10)

**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) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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 to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 87 lb uplift at joint 2 and 22 lb uplift at joint 3.



June 9, 2020

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

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



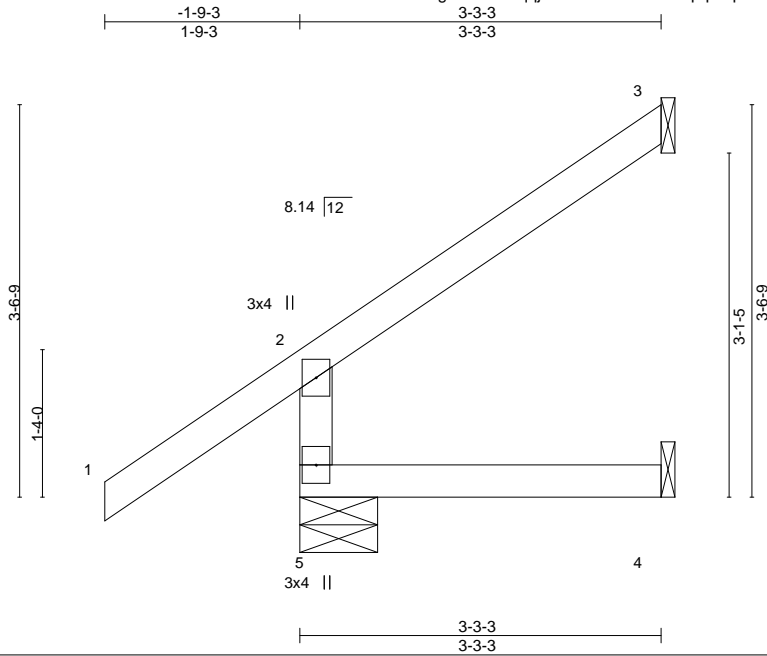
818 Soundside Road  
 Edenton, NC 27932

Job 2000411-2000411A	Truss J8	Truss Type Jack-Open Girder	Qty 1	Ply 1	JOHNSON RESIDENCE Job Reference (optional)	141573907
-------------------------	-------------	--------------------------------	----------	----------	---	-----------

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

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 8 12:55:26 2020 Page 1

ID:grH97r8Y2qqjGmUPA5lQnSz8NKp-pmpjXbKQZDGuFOmh0VelDltobe62FdJme2Z8cfz8L11



Scale = 1:20.8

<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 0.35	Vert(LL)	0.01 4-5	>999	240	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.18	Vert(CT)	-0.01 4-5	>999	180		
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.00	Horz(CT)	-0.02 3	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-MR					Weight: 16 lb	FT = 20%

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

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

**REACTIONS.** (size) 5=0-8-7, 3=Mechanical, 4=Mechanical  
 Max Horz 5=108(LC 12)  
 Max Uplift 5=-15(LC 12), 3=-66(LC 12), 4=-3(LC 12)  
 Max Grav 5=273(LC 1), 3=77(LC 19), 4=55(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) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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 to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 66 lb uplift at joint 3 and 3 lb uplift at joint 4.
- 6) One MTS12 Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 5. This connection is for uplift only and does not consider lateral forces.



June 9, 2020

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

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

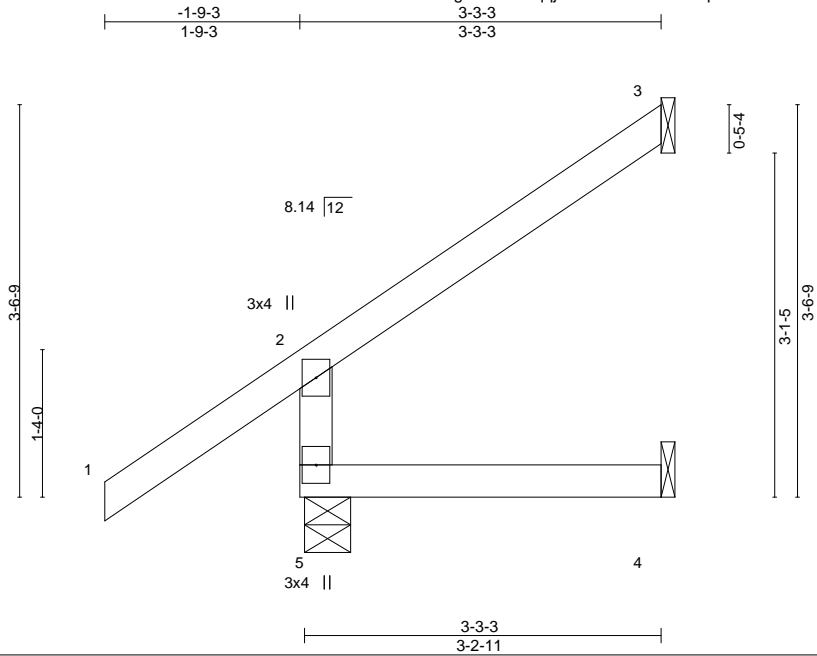


818 Soundside Road  
 Edenton, NC 27932

Job 2000411-2000411A	Truss J9	Truss Type Jack-Open Girder	Qty 1	Ply 1	JOHNSON RESIDENCE Job Reference (optional)	141573908
-------------------------	-------------	--------------------------------	----------	----------	---	-----------

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

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 8 12:55:27 2020 Page 1  
ID:grH97r8Y2qjGmUPA5lQnSz8NKp-HzGBIxK2KXOlsYLtaC9\_lzQzL1RH\_3ZvtiJh85z8L1k



Scale = 1:20.8

<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 0.35	Vert(LL) 0.01 4-5 >999 240	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.18	Vert(CT) -0.01 4-5 >999 180		
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.00	Horz(CT) -0.02 3 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-MR		Weight: 16 lb	FT = 20%

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

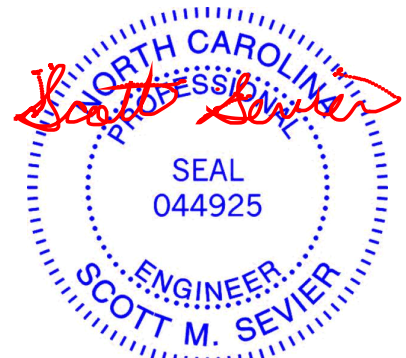
**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 3-3-3 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 5=0-5-0, 3=Mechanical, 4=Mechanical  
Max Horz 5=108(LC 12)  
Max Uplift 5=-15(LC 12), 3=-66(LC 12), 4=-3(LC 12)  
Max Grav 5=273(LC 1), 3=77(LC 19), 4=55(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) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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 to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 66 lb uplift at joint 3 and 3 lb uplift at joint 4.
- 6) One MTS12 Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 5. This connection is for uplift only and does not consider lateral forces.



June 9, 2020

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TP1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



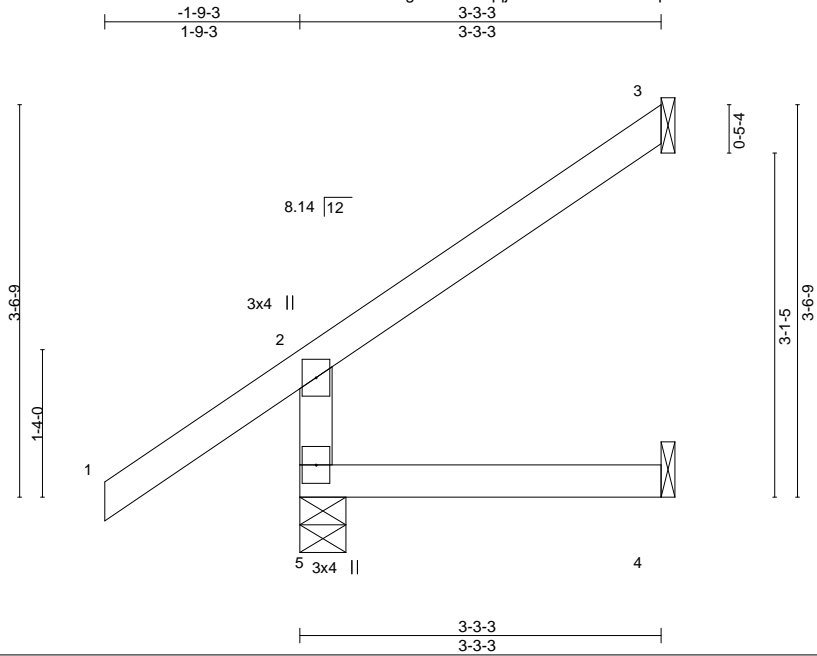
818 Soundside Road  
Edenton, NC 27932

Job 2000411-2000411A	Truss J10	Truss Type Jack-Open Girder	Qty 1	Ply 1	JOHNSON RESIDENCE Job Reference (optional)	I41573909
-------------------------	--------------	--------------------------------	----------	----------	---	-----------

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

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 8 12:55:19 2020 Page 1

ID:grH97r8Y2qqjGmUPA5lQnSz8NKp-WQn93CE1C3OuvJkL6X05QH4cMpjP6Sak1SNGsZz8L1s



Scale = 1:20.8

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 0.35	Vert(LL)	0.01	4-5	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.18	Vert(CT)	-0.01	4-5	>999		
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.00	Horz(CT)	-0.02	3	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-MR						
								Weight: 16 lb	FT = 20%

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

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

**REACTIONS.** (size) 5=0-5-0, 3=Mechanical, 4=Mechanical  
Max Horz 5=108(LC 12)  
Max Uplift 5=-15(LC 12), 3=-66(LC 12), 4=-3(LC 12)  
Max Grav 5=273(LC 1), 3=77(LC 19), 4=55(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) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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 to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 66 lb uplift at joint 3 and 3 lb uplift at joint 4.
- 6) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 5. This connection is for uplift only and does not consider lateral forces.



June 9, 2020

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.**  
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

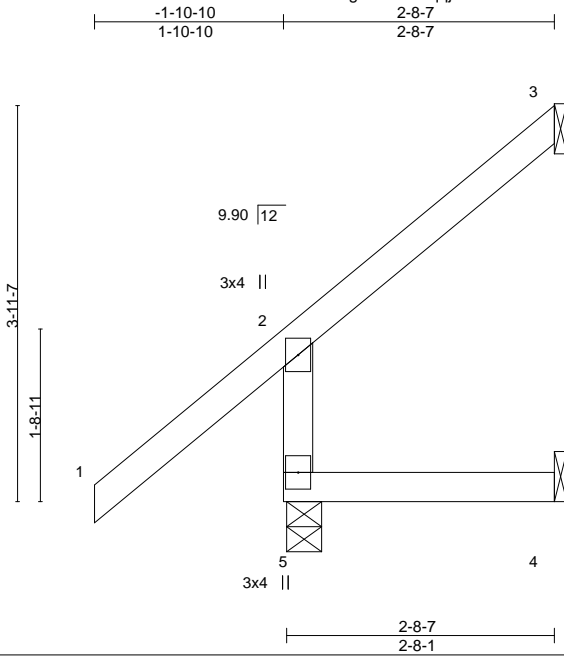
ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate  
818 Soundside Road  
Edenton, NC 27932



Job	Truss	Truss Type	Qty	Ply	JOHNSON RESIDENCE
2000411-2000411A	CJ4	Diagonal Hip Girder	1	1	I41573910
					Job Reference (optional)

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

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 8 12:55:12 2020 Page 1  
 ID:grH97r8Y2qqjGmUPA5lQnSz8NKp-D4sWbp9eswVtZFh?CZOSeoIng?JyzHriQsAP6Tz8L1z



Scale = 1:23.0

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.50	Vert(LL)	0.01	4-5	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.24	Vert(CT)	-0.01	4-5	>999		
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.00	Horz(CT)	-0.03	3	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-MR						
								Weight: 15 lb	FT = 20%

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

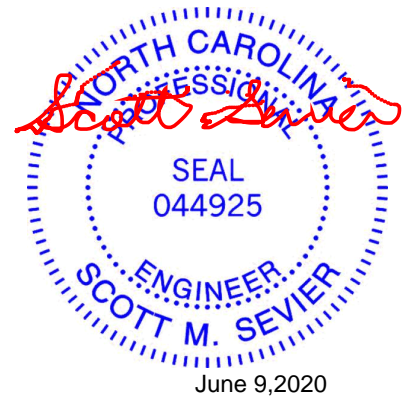
**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 2-8-7 oc purlins, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 5=0-4-3, 3=Mechanical, 4=Mechanical  
 Max Horz 5=107(LC 12)  
 Max Uplift 3=-70(LC 12), 4=-18(LC 12)  
 Max Grav 5=271(LC 1), 3=55(LC 19), 4=44(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) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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 to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 70 lb uplift at joint 3 and 18 lb uplift at joint 4.



**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.

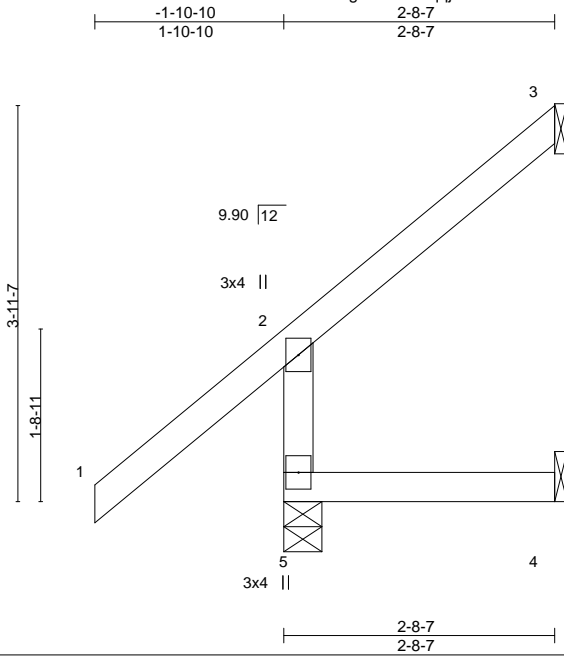


818 Soundside Road  
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	JOHNSON RESIDENCE
2000411-2000411A	CJ5	Diagonal Hip Girder	1	1	I41573911
					Job Reference (optional)

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

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 8 12:55:12 2020 Page 1  
 ID:grH97r8Y2qqjGmUPA5lQnSz8NKp-D4sWbp9eswVtZFh?CZOSeoIng?JyzHriQsAP6Tz8L1z



Scale = 1:23.0

<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 0.50	Vert(LL)	0.01 4-5	>999	240	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.24	Vert(CT)	-0.01 4-5	>999	180		
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.00	Horz(CT)	-0.03 3	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-MR					Weight: 15 lb	FT = 20%

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

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 2-8-7 oc purlins, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 5=0-4-9, 3=Mechanical, 4=Mechanical  
 Max Horz 5=107(LC 12)  
 Max Uplift 3=-70(LC 12), 4=-18(LC 12)  
 Max Grav 5=271(LC 1), 3=55(LC 19), 4=44(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) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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 to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 70 lb uplift at joint 3 and 18 lb uplift at joint 4.



June 9, 2020

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

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



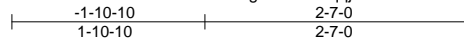
818 Soundside Road  
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	JOHNSON RESIDENCE
2000411-2000411A	CJ6	Diagonal Hip Girder	1	1	I41573912
					Job Reference (optional)

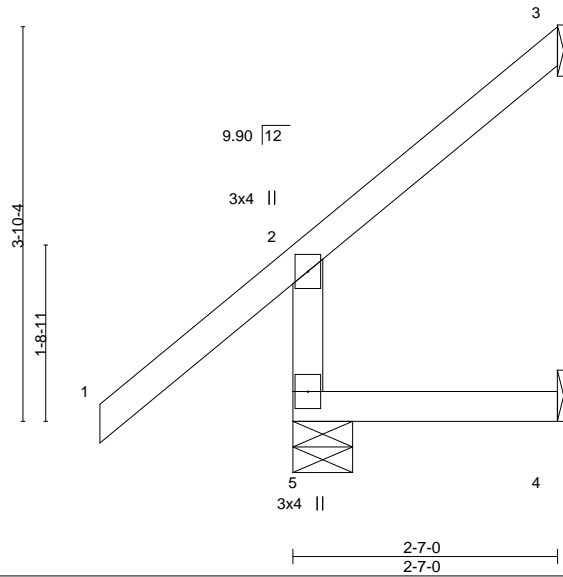
84 Components (Dunn), Dunn, NC - 28334,

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 8 12:55:13 2020 Page 1

ID:grH97r8Y2qqjGmUPA5lQnSz8NKp-hGPup9AGdDdkBOGBmGvhB0rYWOiMik5rWwYfvz8L1y



Scale = 1:22.5



LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.50	Vert(LL)	0.01	4-5	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.22	Vert(CT)	-0.01	4-5	>999		
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.00	Horz(CT)	-0.03	3	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-MR						
								Weight: 15 lb	FT = 20%

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

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 2-7-0 oc purlins, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 3=Mechanical, 5=0-7-0, 4=Mechanical  
 Max Horz 5=103(LC 12)  
 Max Uplift 3=-66(LC 12), 4=-19(LC 12)  
 Max Grav 3=49(LC 19), 5=269(LC 1), 4=41(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) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) 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.
- 3) Gable studs spaced at 2-0-0 oc.
- 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 66 lb uplift at joint 3 and 19 lb uplift at joint 4.



June 9, 2020

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.**  
 Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

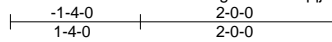
ENGINEERING BY  
**TRENCO**  
 A MiTek Affiliate  
 818 Soundside Road  
 Edenton, NC 27932

Job 2000411-2000411A	Truss J11	Truss Type Jack-Open	Qty 4	Ply 1	JOHNSON RESIDENCE Job Reference (optional)	I41573913
-------------------------	--------------	-------------------------	----------	----------	---	-----------

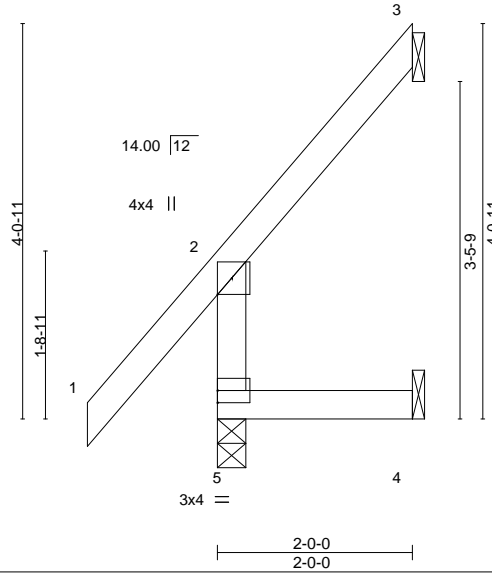
84 Components (Dunn), Dunn, NC - 28334,

8.330 s May 6 2020 MiTek Industries, Inc. Mon Jun 8 12:55:20 2020 Page 1

ID:grH97r8Y2qqjGmUPA5iQnSz8NKp\_dLXHYYfzNWkXTJXgEXKzUdIVD0ErvqtG66qO7z8L1r



Scale = 1:23.6



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 0.45	Vert(LL)	0.01	4-5	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.27	Vert(CT)	0.01	4-5	>999		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.00	Horz(CT)	-0.04	3	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-MR					Weight: 13 lb	FT = 20%

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

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

**REACTIONS.** (size) 5=0-3-8, 3=Mechanical, 4=Mechanical  
 Max Horz 5=120(LC 12)  
 Max Uplift 3=88(LC 12), 4=42(LC 12)  
 Max Grav 5=198(LC 1), 3=57(LC 19), 4=47(LC 10)

**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) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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 to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 88 lb uplift at joint 3 and 42 lb uplift at joint 4.



June 9, 2020

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

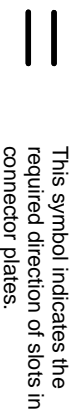
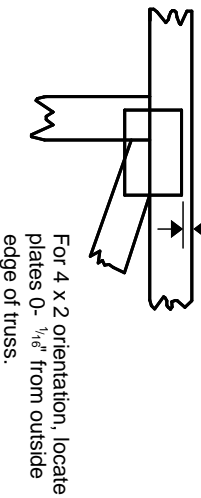
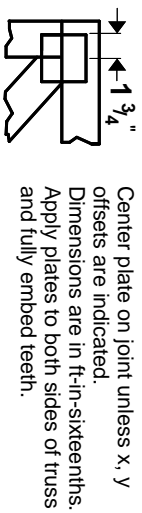
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall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



818 Soundside Road  
 Edenton, NC 27932

# Symbols

## PLATE LOCATION AND ORIENTATION



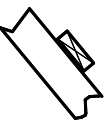
\* Plate location details available in **MITrak 20/20 software or upon request.**

## PLATE SIZE

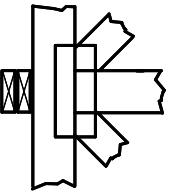
4 X 4

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

## LATERAL BRACING LOCATION



## BEARING

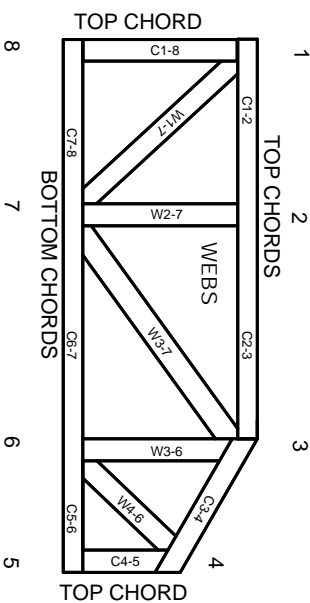


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

## 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.

© 2012 MITTEK® All Rights Reserved



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



# General Safety Notes

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

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative Tor I bracing should be considered.
3. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
4. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
5. Cut members to bear tightly against each other.
6. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TPI 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TPI 1.
8. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
9. Unless expressly noted, this design is not applicable for use with fire retardant, preservative treated, or green lumber.
10. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
11. Plate type, size, orientation and location dimensions indicated are minimum plating requirements.
12. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
13. Top chords must be sheathed or purlins provided at spacing indicated on design.
14. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
15. Connections not shown are the responsibility of others.
16. Do not cut or alter truss member or plate without prior approval of an engineer.
17. Install and load vertically unless indicated otherwise.
18. Use of green or treated lumber may pose unacceptable environmental, health or performance risks. Consult with project engineer before use.
19. Review all portions of this design (front, back, words and pictures) before use. Reviewing pictures alone is not sufficient.
20. Design assumes manufacture in accordance with ANSI/TPI 1 Quality Criteria.