

Trenco
818 Soundside Rd
Edenton, NC 27932

Re: 200675RT1
FREEDOM FAMILY HOMES

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

Pages or sheets covered by this seal: E14360062 thru E14360074

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

North Carolina COA: C-0844



May 1, 2020

Gilbert, Eric

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

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Pages or sheets covered by this seal: E14360062 thru E14360074

My license renewal date for the state of South Carolina is June 30, 2020.

South Carolina COA: 923



May 1, 2020

Gilbert, Eric

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

Job 200675RT1	Truss A01	Truss Type Piggyback Base	Qty 5	Ply 1	FREEDOM FAMILY HOMES	E14360062
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Carolina Structural Systems, LLC, Ether, NC - 27247,

8.330 s Mar 23 2020 MiTek Industries, Inc. Fri May 11 11:44:52 2020 Page 1

ID:r704xxkfHqrxjDW0b9OBVlzEGFu-kS77CrmUu?ETVfFA8dulhNjci0Wqw?9FMBEZMzKtdv

-1-2-8	4-4-11	8-4-0	13-7-5	16-10-12	18-10-10	25-5-8	27-1-6	33-3-2	38-9-12	39-4-14	46-0-0	47-2-8
1-2-8	4-4-11	3-11-5	5-3-5	3-3-7	1-11-14	6-6-14	1-7-14	6-1-12	5-6-10	0-7-2	6-7-2	1-2-8

Scale = 1:87.0

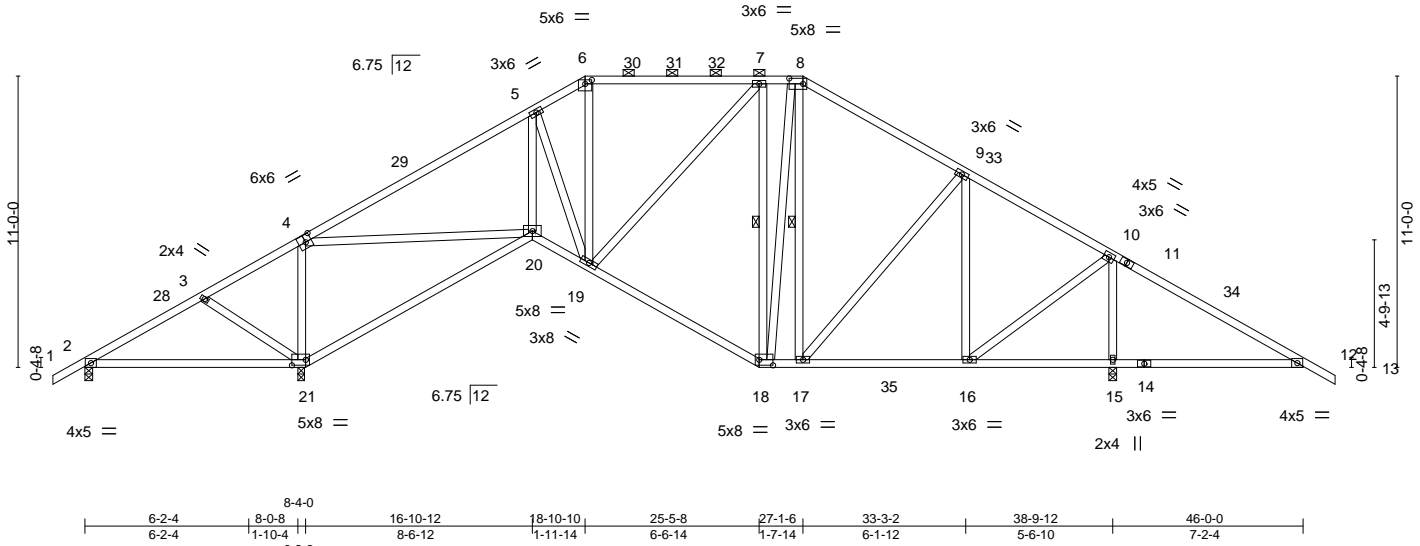


Plate Offsets (X,Y)-- [4:0-2-12,0-3-4], [6:0-3-0,0-1-13], [8:0-6-4,0-2-8], [18:0-6-4,0-2-8], [21:0-6-4,0-2-8]

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.00	TC 0.83	Vert(LL)	-0.06	20	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.49	Vert(CT)	-0.26	20-21	>999		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.56	Horz(CT)	0.08	15	n/a		
BCDL 10.0	Code IRC2015/TP12014		Matrix-MS						
								Weight: 305 lb	FT = 20%

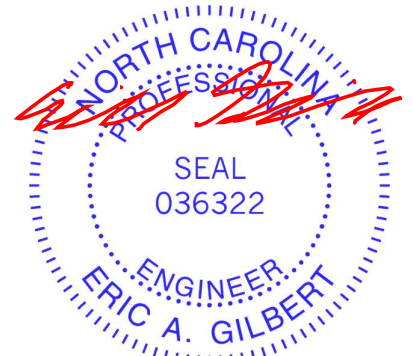
LUMBER-
 TOP CHORD 2x4 SP No.2
 BOT CHORD 2x4 SP No.2
 WEBS 2x4 SP No.2

BRACING-
 TOP CHORD Structural wood sheathing directly applied or 2-11-6 oc purlins, except 2-0-0 oc purlins (5-6-0 max.): 6-8.
 BOT CHORD Rigid ceiling directly applied or 5-2-9 oc bracing.
 WEBS 1 Row at midpt 7-18, 8-17

REACTIONS. (size) 2=0-3-8, 21=0-3-0, 15=0-3-8
 Max Horz 2=-208(LC 9)
 Max Uplift 2=-135(LC 21), 21=-4(LC 11), 15=-112(LC 11)
 Max Grav 2=26(LC 10), 21=2029(LC 1), 15=1831(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD 2-3=0/752, 3-4=0/949, 4-5=-1207/65, 5-6=-935/178, 6-7=-742/144, 7-8=-615/212, 8-9=-734/182, 9-10=-615/76, 10-12=-356/736
 BOT CHORD 2-21=-515/26, 20-21=-868/102, 19-20=0/1149, 18-19=0/716, 17-18=0/570, 16-17=0/458, 15-16=-543/392, 12-15=-543/392
 WEBS 4-21=-1330/118, 4-20=0/1658, 5-20=0/310, 5-19=-667/17, 6-19=-46/368, 7-19=0/267, 7-18=-584/89, 8-18=-132/343, 9-16=-607/226, 10-16=-204/1176, 10-15=-1644/399

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-10; Vult=125mph (3-second gust) Vasd=99mph; TC DL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=46ft; eave=6ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2) -1-2-8 to 3-4-11, Interior(1) 3-4-11 to 18-10-10, Exterior(2) 18-10-10 to 25-7-4, Interior(1) 25-7-4 to 27-1-6, Exterior(2) 27-1-6 to 33-7-7, Interior(1) 33-7-7 to 47-2-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - Provide adequate drainage to prevent water ponding.
 - * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 135 lb uplift at joint 2, 4 lb uplift at joint 21 and 112 lb uplift at joint 15.
 - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



May 1, 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 200675RT1	Truss A02	Truss Type DOUBLE FINK	Qty 1	Ply 1	FREEDOM FAMILY HOMES	E14360063
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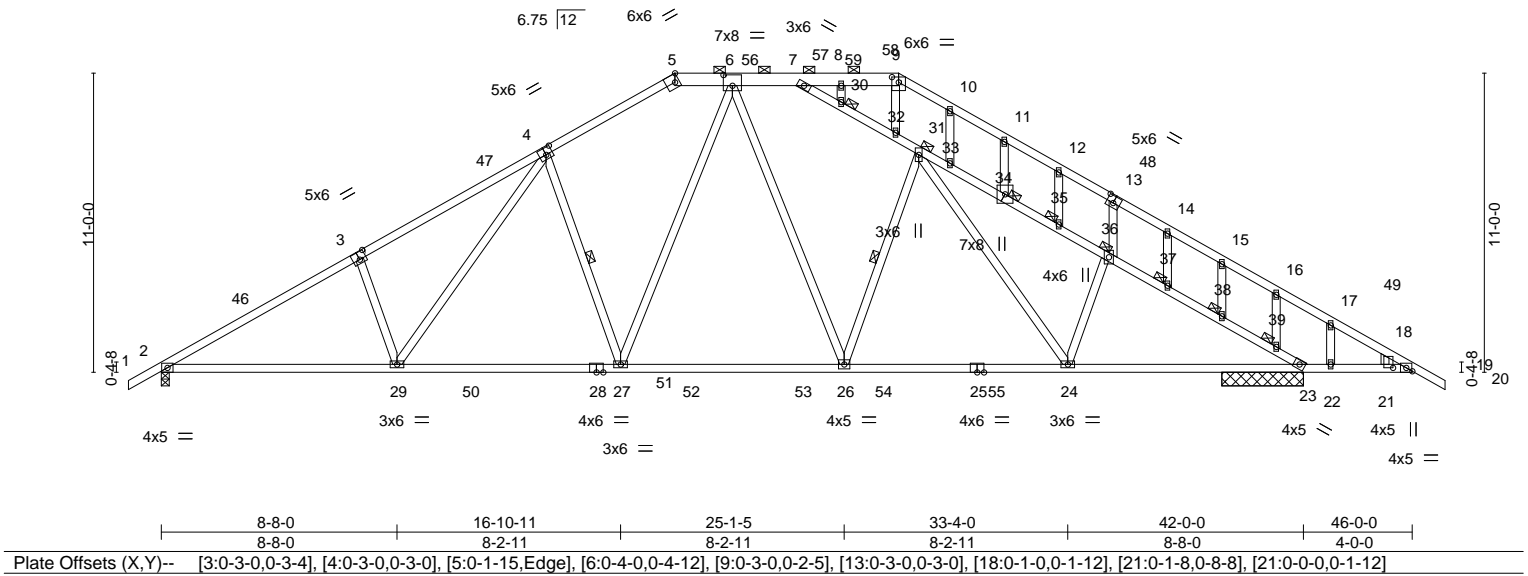
Carolina Structural Systems, LLC, Ether, NC - 27247,

8.330 s Mar 23 2020 MiTek Industries, Inc. Fri May 1 11:44:53 2020 Page 1

ID:r704xxkfHgrjxDW0b9OBVlzEGFu-CfhVQBn6fJMK7PEMiKQXEbrnzQmafMCObrz7vmzKtdu

1-2-8	7-3-9	14-1-12	18-10-10	21-0-0	23-0-0	27-1-6	27-10-4	34-8-7	46-0-0	47-2-8
1-2-8	7-3-9	6-10-4	4-8-14	2-1-6	2-0-0	4-1-6	0-8-14	6-10-4	11-3-9	1-2-8

Scale = 1:84.7



LOADING (psf)	SPACING-	2-0-0	CSL	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.00	TC 0.71	Vert(LL)	-0.31 24-26	>999	240	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.84	Vert(CT)	-0.55 24-26	>912	180		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.95	Horz(CT)	0.13 23	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-MS						
								Weight: 314 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2 *Except* 5-9: 2x6 SP DSS	TOP CHORD Structural wood sheathing directly applied or 2-5-8 oc purlins, except 2-0-0 oc purlins (4-6-4 max.): 5-9.
BOT CHORD 2x4 SP No.1	BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 2x4 SP No.2	WEBS 1 Row at midpt 23-38, 4-27, 26-31
	JOINTS 1 Brace at Jt(s): 30, 31, 34, 35, 36, 37, 38

REACTIONS.	(size) 2=0-3-8, 23=3-0-0
	Max Horz 2=-208(LC 9)
	Max Uplift 2=-87(LC 11), 23=-104(LC 11)
	Max Grav 2=1794(LC 16), 23=2089(LC 1)

FORCES.	(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD	2-3=-3063/262, 3-4=-2968/331, 4-5=-2237/327, 9-10=-190/315, 10-11=-160/343, 11-12=-162/287, 12-13=-143/284, 13-14=-133/320, 14-15=-159/302, 17-18=-289/362, 5-6=-1900/312, 6-7=-1903/307, 7-8=-193/261, 8-9=-193/263
BOT CHORD	2-29=-121/2746, 27-29=-34/2197, 26-27=0/1666, 24-26=-23/2135, 23-24=-137/2531, 22-23=-224/297, 21-22=-224/297, 19-21=-224/297
WEBS	7-30=-2479/316, 30-32=-2411/313, 31-32=-2494/340, 31-33=-2907/366, 33-34=-2973/394, 34-35=-2980/402, 35-36=-3025/418, 36-37=-3051/437, 37-38=-3093/452, 38-39=-3083/447, 23-39=-3136/484, 3-29=-411/161, 4-29=-67/742, 4-27=-586/185, 6-27=-80/931, 26-31=-647/149, 24-31=-82/673, 24-36=-402/194, 9-32=-259/60, 17-22=-380/126, 6-26=-51/963

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-10; Vult=125mph (3-second gust) Vasd=99mph; TC DL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=46ft; eave=6ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2) -1-2-8 to 3-4-11, Interior(1) 3-4-11 to 18-10-10, Exterior(2) 18-10-10 to 25-4-11, Interior(1) 25-4-11 to 27-1-6, Exterior(2) 27-1-6 to 33-7-7, Interior(1) 33-7-7 to 47-2-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - Provide adequate drainage to prevent water ponding.
 - All plates are 2x4 MT20 unless otherwise indicated.
 - * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 87 lb uplift at joint 2 and 104 lb uplift at joint 23.
 - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



Job 200675RT1	Truss A04	Truss Type Piggyback Base	Qty 3	Ply 1	FREEDOM FAMILY HOMES Job Reference (optional)	E14360065
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Carolina Structural Systems, LLC, Ether, NC - 27247,

8.330 s Mar 23 2020 MiTek Industries, Inc. Fri May 1 11:44:55 2020 Page 1

ID:r704xxkfHqrxjDW0b9OBVzEGFu-91oGrtoMBwc2MjOlqIS?J0x8cEaD7Jgh29SEzezKtds

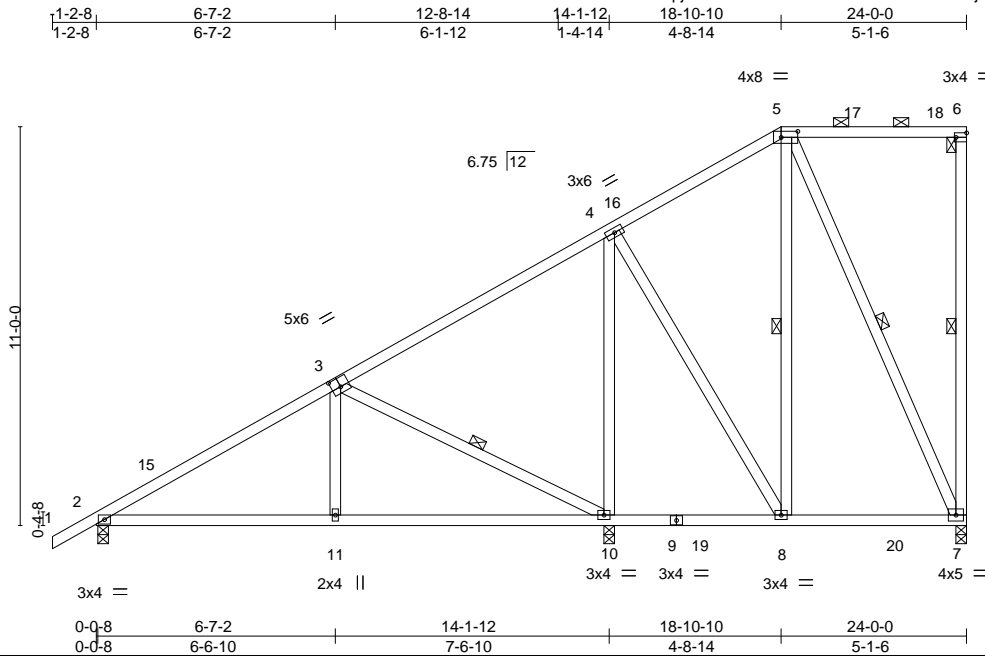


Plate Offsets (X,Y)-- [3:0-3-0,0-3-0], [5:0-5-8,0-2-0], [6:Edge,0-1-8]

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.00	TC 0.70	Vert(LL)	-0.04 11-14	>999	240	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.38	Vert(CT)	-0.09 11-14	>999	180		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.76	Horz(CT)	0.01 7	n/a	n/a		
BCDL 10.0	Code IRC2015/TP12014		Matrix-MS					Weight: 168 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 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.): 5-6.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 8-10.
WEBS 1 Row at midpt 6-7, 3-10, 5-8, 5-7

REACTIONS. (size) 7=0-3-8, 2=0-3-8, 10=0-3-8
Max Horz 2=355(LC 10)
Max Uplift 7=-107(LC 8), 2=-36(LC 11), 10=-42(LC 11)
Max Grav 7=356(LC 16), 2=587(LC 1), 10=1152(LC 16)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-679/68, 3-4=-212/317, 4-5=-251/170
BOT CHORD 2-11=-258/667, 10-11=-259/664
WEBS 3-10=-655/108, 4-10=-679/132, 4-8=0/257

- NOTES-**
- 1) Wind: ASCE 7-10; Vult=125mph (3-second gust) Vasd=99mph; TC DL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2) -1-2-8 to 1-9-8, Interior(1) 1-9-8 to 18-10-10, Exterior(2) 18-10-10 to 23-1-9, Interior(1) 23-1-9 to 23-10-4 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) * 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.
 - 4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 107 lb uplift at joint 7, 36 lb uplift at joint 2 and 42 lb uplift at joint 10.
 - 5) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



May 1, 2020

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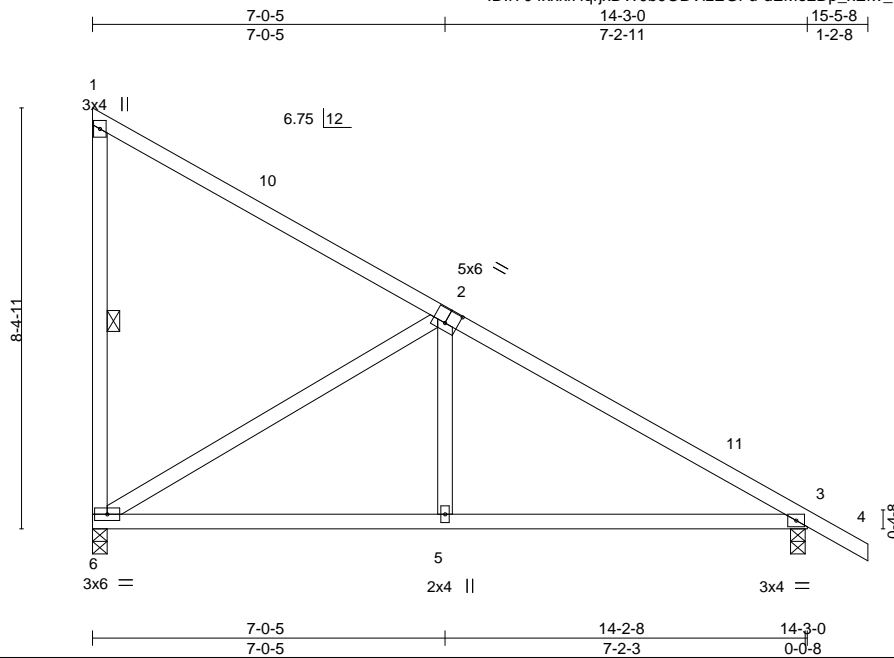


818 Soundside Road
Edenton, NC 27932

Job 200675RT1	Truss A05	Truss Type Roof Special	Qty 2	Ply 1	FREEDOM FAMILY HOMES	E14360066
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Carolina Structural Systems, LLC, Ether, NC - 27247,

8.330 s Mar 23 2020 MiTek Industries, Inc. Fri May 1 11:44:56 2020 Page 1
ID:r704xxkfHqrxDW0b9OBVlzEGFu-dEMe2Dp_xEkv_tzNSzErDTJndtMsm5qHoCnV4zKtr



Scale = 1:45.9

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

LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.67	Vert(LL)	-0.05	5-9	>999	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.00	BC 0.45	Vert(CT)	-0.13	5-9	>999		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.75	Horz(CT)	0.01	3	n/a		
BCDL 10.0	Rep Stress Incr YES	Matrix-MS						
	Code IRC2015/TPI2014						Weight: 77 lb	FT = 20%

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

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.
WEBS 1 Row at midpt 1-6

REACTIONS. (size) 3=0-3-8, 6=0-3-8
Max Horz 6=-267(LC 9)
Max Uplift 3=-42(LC 11), 6=-36(LC 7)
Max Grav 3=640(LC 1), 6=564(LC 17)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-755/91
BOT CHORD 5-6=0/591, 3-5=0/588
WEBS 2-6=-673/127

- NOTES-**
- 1) Wind: ASCE 7-10; Vult=125mph (3-second gust) Vasd=99mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2) 0-2-4 to 3-2-4, Interior(1) 3-2-4 to 15-6-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - 2) * 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.
 - 3) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 42 lb uplift at joint 3 and 36 lb uplift at joint 6.



May 1, 2020

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

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ENGINEERING BY
TRENCO
A MiTek Affiliate

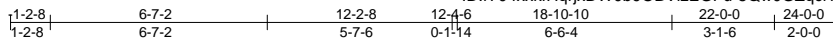
818 Soundside Road
Edenton, NC 27932

Job 200675RT1	Truss A06	Truss Type Piggyback Base	Qty 6	Ply 1	FREEDOM FAMILY HOMES	E14360067
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Carolina Structural Systems, LLC, Ether, NC - 27247,

8.330 s Mar 23 2020 MiTek Industries, Inc. Fri May 1 11:44:57 2020 Page 1

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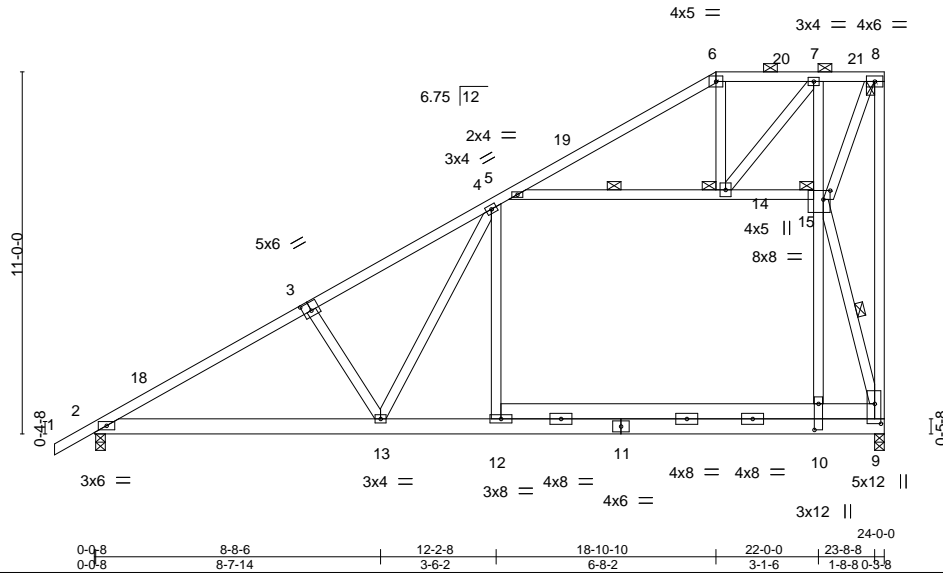


Plate Offsets (X,Y)-- [3:0-3-0,0-3-0], [9:0-7-4,0-2-4], [10:0-9-8,0-1-8], [15:0-2-8,0-3-4]

LOADING (psf)	SPACING-	2-0-0	CSL	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.00	TC 0.98	Vert(LL)	-0.16	12	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.65	Vert(CT)	-0.31	12-13	>922		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.73	Horz(CT)	0.02	9	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-MS						
								Weight: 221 lb	FT = 20%

LUMBER-
 TOP CHORD 2x4 SP No.2
 BOT CHORD 2x6 SP No.2
 WEBS 2x4 SP No.2

BRACING-
 TOP CHORD Structural wood sheathing directly applied or 4-5-3 oc purlins, except end verticals, and 2-0-0 oc purlins (10-0-0 max.): 6-8.
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
 WEBS 1 Row at midpt 5-14, 9-15
 JOINTS 1 Brace at Jt(s): 8, 14, 15

REACTIONS. (size) 9=0-3-8, 2=0-3-8
 Max Horz 2=350(LC 8)
 Max Uplift 9=85(LC 8), 2=54(LC 11)
 Max Grav 9=1124(LC 16), 2=1032(LC 16)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD 2-3=-1578/137, 3-4=-1428/167, 4-5=-752/169, 5-6=-186/543, 6-7=-96/421, 7-8=-232/697, 8-9=-368/1510
 BOT CHORD 2-13=-343/1434, 12-13=-242/923, 10-12=-247/924, 9-10=-242/887
 WEBS 3-13=-341/123, 4-13=-84/744, 6-14=-478/183, 7-14=-202/430, 5-14=-1264/177, 14-15=-1565/291, 10-15=-41/1139, 7-15=-483/264, 8-15=-1666/363, 9-15=-3398/598

- NOTES-**
- 1) Wind: ASCE 7-10; Vult=125mph (3-second gust) Vasd=99mph; TCCL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2) 1-2-8 to 1-9-8, Interior(1) 1-9-8 to 18-10-10, Exterior(2) 18-10-10 to 23-1-9, Interior(1) 23-1-9 to 23-10-4 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) * 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.
 - 4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 85 lb uplift at joint 9 and 54 lb uplift at joint 2.
 - 5) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



May 1, 2020

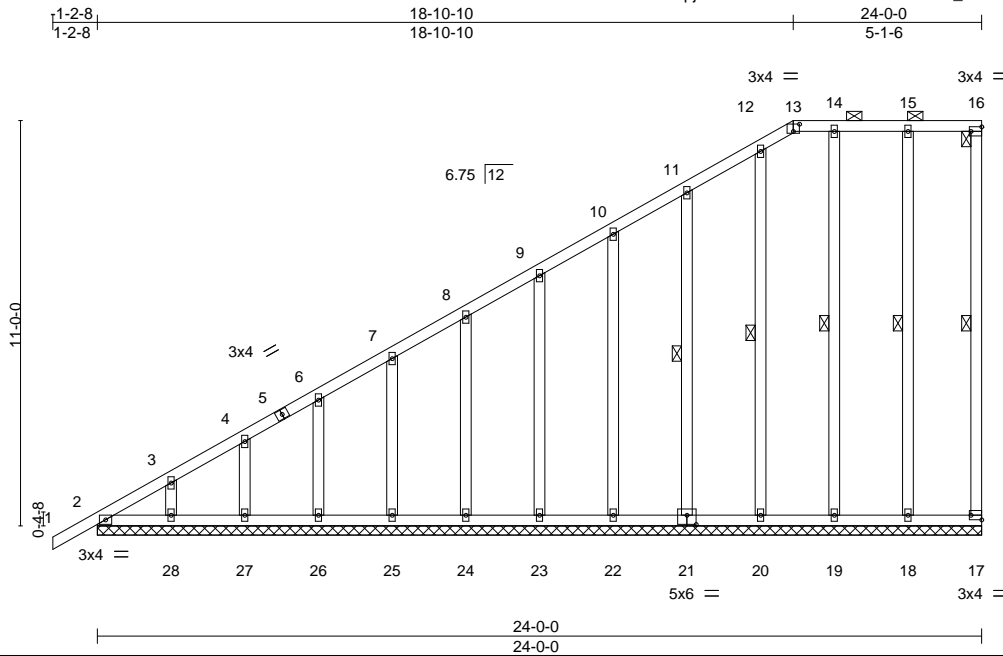
WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.
 Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before 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 200675RT1	Truss A07	Truss Type GABLE	Qty 1	Ply 1	FREEDOM FAMILY HOMES Job Reference (optional)	E14360068
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Carolina Structural Systems, LLC, Ether, NC - 27247,

8.330 s Mar 23 2020 MiTek Industries, Inc. Fri May 1 11:44:58 2020 Page 1
ID:r704xxkfHqrjxDW0b9OBVizEGFu-ZcUOTurETr_dDA7JVt?iweZfnRblKpG7k6huazzKtdp



Scale = 1:62.5

Plate Offsets (X,Y)-- [13:0-2-0,0-2-6], [16:Edge,0-1-8], [17:Edge,0-1-8], [21:0-3-0,0-3-0]

LOADING (psf)	SPACING-	CSL	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL 1.00	TC 0.70	Vert(LL) 0.00	1	n/r	120	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.33	Vert(CT) -0.00	1	n/r	120		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.13	Horz(CT) -0.00	17	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-S						
							Weight: 197 lb	FT = 20%

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

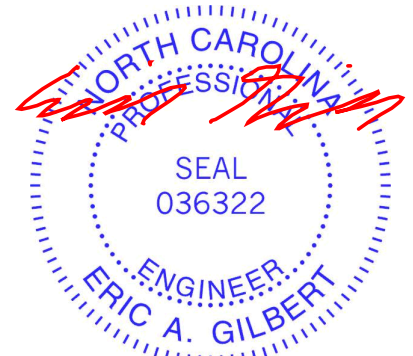
BRACING-
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 13-16.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 16-17, 15-18, 14-19, 12-20, 11-21

REACTIONS. All bearings 24-0-0.
(lb) - Max Horz 2=354(LC 8)
Max Uplift All uplift 100 lb or less at joint(s) 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28
Max Grav All reactions 250 lb or less at joint(s) 17, 2, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-506/473, 3-4=-457/433, 4-6=-413/395, 6-7=-369/360, 7-8=-326/323, 8-9=-282/287, 9-10=-239/251

NOTES-

- 1) Wind: ASCE 7-10; Vult=125mph (3-second gust) Vasd=99mph; TCCL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Corner(3) -1-2-8 to 2-0-0, Exterior(2) 2-0-0 to 18-10-10, Corner(3) 18-10-10 to 22-0-0, Exterior(2) 22-0-0 to 23-10-4 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) Provide adequate drainage to prevent water ponding.
- 4) All plates are 2x4 MT20 unless otherwise indicated.
- 5) Gable requires continuous bottom chord bearing.
- 6) Gable studs spaced at 2-0-0 oc.
- 7) * This truss has been designed for a 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.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28.
- 9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



May 1, 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 200675RT1	Truss B01	Truss Type Common	Qty 5	Ply 1	FREEDOM FAMILY HOMES	E14360069
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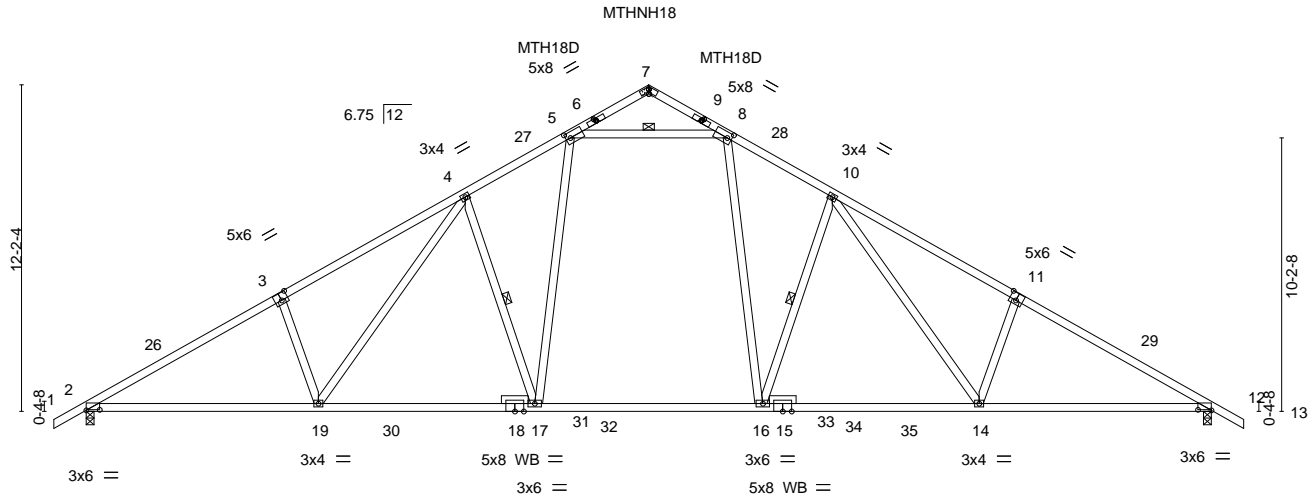
Carolina Structural Systems, LLC, Ether, NC - 27247,

8.330 s Mar 23 2020 MiTek Industries, Inc. Fri May 1 11:44:59 2020 Page 1

ID:r704xxkfHqrxDW0b9OBVlzEGFu-1p2nhErtE96UrKhW3bWxTs5oZrr83FhGzmQR6PzKtdo

-1-2-8	7-3-9	14-1-12	21-0-0	27-10-4	34-8-7	42-0-0	43-2-8
1-2-8	7-3-9	6-10-4	6-10-4	6-10-4	6-10-4	7-3-9	1-2-8

Scale = 1:86.0



8-8-0	16-10-11	25-1-5	33-4-0	42-0-0
8-8-0	8-2-11	8-2-11	8-2-11	8-8-0

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

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.00	TC 0.83	Vert(LL)	-0.83 14-16	>605	240	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.77	Vert(CT)	-1.00 14-16	>503	180	MT18HS	244/190
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.25	Horz(CT)	0.12 12	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-MS						
								Weight: 245 lb	FT = 20%

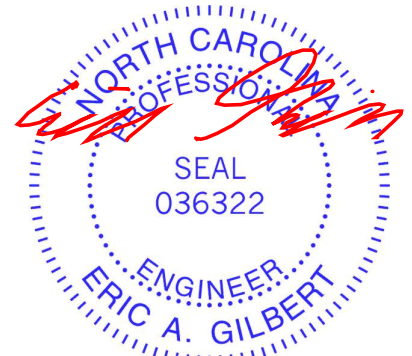
LUMBER-
TOP CHORD 2x4 SP No.2 *Except*
5-8: 2x4 SP No.1
BOT CHORD 2x4 SP No.1 *Except*
15-18: 2x4 SP DSS
WEBS 2x4 SP No.2
OTHERS 2x4 SP No.2

BRACING-
TOP CHORD Structural wood sheathing directly applied or 2-5-8 oc purlins.
Except:
1 Row at midpt 5-8
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 10-16, 4-17

REACTIONS. (size) 2=0-3-8, 12=0-3-8
Max Horz 2=229(LC 10)
Max Uplift 2=90(LC 11), 12=90(LC 11)
Max Grav 2=1816(LC 16), 12=1816(LC 17)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-3109/216, 3-4=-3009/285, 4-5=-2300/279, 8-10=-2300/279, 10-11=-3010/285,
11-12=-3109/216, 5-8=-1750/247
BOT CHORD 2-19=-84/2799, 17-19=0/2255, 16-17=0/1929, 14-16=0/2150, 12-14=-89/2627
WEBS 8-16=-48/951, 10-16=-735/161, 10-14=-66/742, 11-14=-399/161, 5-17=-48/951,
4-17=-735/161, 4-19=-66/741, 3-19=-399/161

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-10; Vult=125mph (3-second gust) Vasd=99mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=42ft; eave=5ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2) -1-2-8 to 2-11-14, Interior(1) 2-11-14 to 21-0-0, Exterior(2) 21-0-0 to 25-2-6, Interior(1) 25-2-6 to 43-2-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - Provide adequate drainage to prevent water ponding.
 - All plates are MT20 plates unless otherwise indicated.
 - Attach MiTek MTHNH18 (Half and Half Plate) on each face of truss with USP NA11 nails (0.131" x 1.5") in pre-punched holes provided. All nail holes must be filled (6 Nails per side 12 nails total).
 - See HINGE PLATE DETAILS for plate placement.
 - Provisions must be made to prevent lateral movement of hinged member(s) during transportation.
 - * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 12.
 - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



May 1, 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 ANSITPI Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



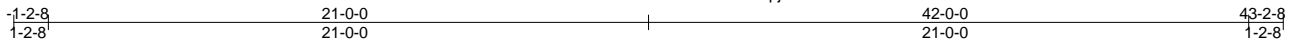
818 Soundside Road
Edenton, NC 27932

Job 200675RT1	Truss B02	Truss Type GABLE	Qty 1	Ply 1	FREEDOM FAMILY HOMES Job Reference (optional)	E14360070
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Carolina Structural Systems, LLC, Ether, NC - 27247,

8.330 s Mar 23 2020 MiTek Industries, Inc. Fri May 1 11:45:01 2020 Page 1

ID:r704xxkfHqrxDW0b9OBVlzEGFu-zBAX5wt7mmMC4eruA?ZPYHBlve1X9vZR4vYBlzKtdm



Scale = 1:80.6

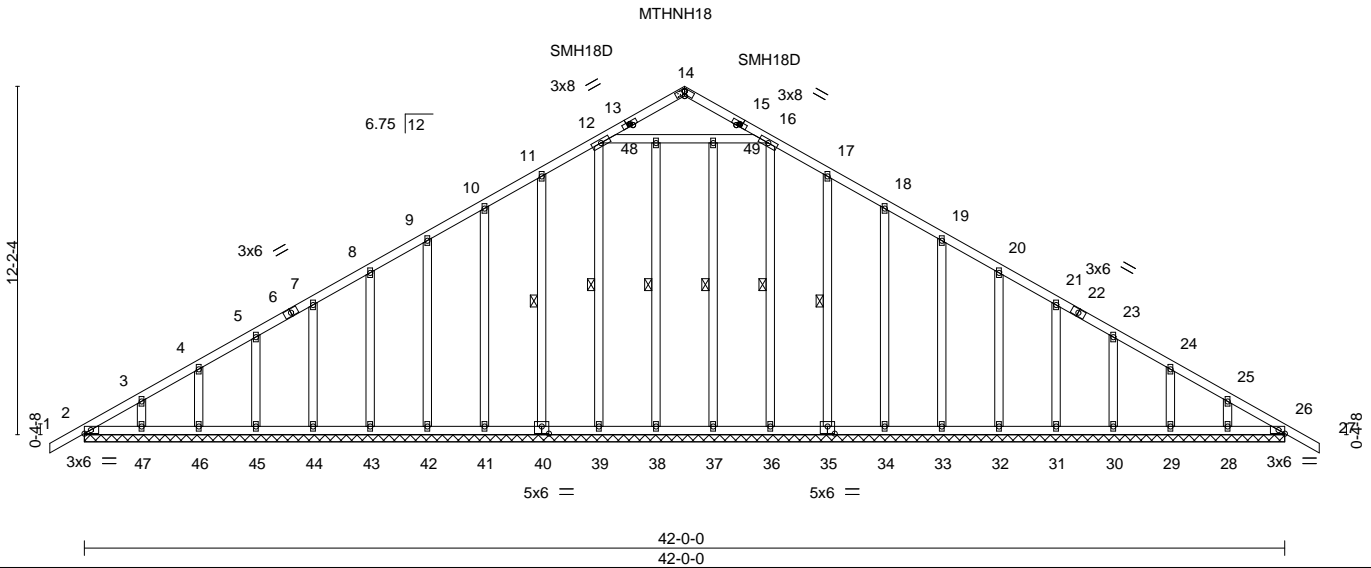


Plate Offsets (X,Y)-- [13:0-1-0,0-1-0], [14:0-1-0,0-1-12], [15:0-1-0,0-1-0], [26:0-2-11,Edge], [35:0-3-0,0-3-0], [40:0-3-0,0-3-0]

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.00	TC 0.14	Vert(LL)	-0.00	27	n/r	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.04	Vert(CT)	-0.01	27	n/r	MT18HS	244/190
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.14	Horz(CT)	0.01	26	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S						
								Weight: 323 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.
WEBS 2x4 SP No.2	WEBS 1 Row at midpt 11-40, 12-39, 38-48, 37-49, 16-36, 17-35
OTHERS 2x4 SP No.2	

REACTIONS. All bearings 42-0-0.
 (lb) - Max Horz 2=-229(LC 9)
 Max Uplift All uplift 100 lb or less at joint(s) 2, 26, 47, 46, 45, 44, 43, 42, 41, 40, 35, 34, 33, 32, 31, 30, 29, 28
 Max Grav All reactions 250 lb or less at joint(s) 2, 26, 47, 46, 45, 44, 43, 42, 41, 40, 38, 37, 35, 34, 33, 32, 31, 30, 29, 28 except 39=290(LC 16), 36=279(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD 11-12=-226/255, 16-17=-226/255
 WEBS 12-39=-250/0

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-10; Vult=125mph (3-second gust) Vasd=99mph; TCCL=6.0psf; BCCL=6.0psf; h=25ft; B=45ft; L=42ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Corner(3) -1-2-8 to 2-11-14, Exterior(2) 2-11-14 to 21-0-0, Corner(3) 21-0-0 to 25-2-6, Exterior(2) 25-2-6 to 43-2-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
 - All plates are MT20 plates unless otherwise indicated.
 - All plates are 2x4 MT20 unless otherwise indicated.
 - Attach MiTek MTHNH18 (Half and Half Plate) on each face of truss with USP NA11 nails (0.131" x 1.5") in pre-punched holes provided. All nail holes must be filled (6 Nails per side 12 nails total).
 - See HINGE PLATE DETAILS for plate placement.
 - Provisions must be made to prevent lateral movement of hinged member(s) during transportation.
 - Gable requires continuous bottom chord bearing.
 - Gable studs spaced at 2-0-0 oc.
 - * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 26, 47, 46, 45, 44, 43, 42, 41, 40, 35, 34, 33, 32, 31, 30, 29, 28.



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.

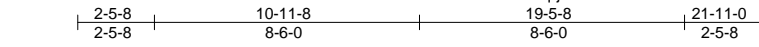


Job 200675RT1	Truss C02	Truss Type GABLE	Qty 1	Ply 1	FREEDOM FAMILY HOMES Job Reference (optional)	E14360072
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Carolina Structural Systems, LLC, Ether, NC - 27247,

8.330 s Mar 23 2020 MiTek Industries, Inc. Fri May 1 11:45:03 2020 Page 1

ID:r704xxkfHqjxDW0b9OBVIZEGFu-waHHWcvNIOcwKx?HIQbtdiGfgSGS?4xsuOOFAzKtdk



5x6 =

Scale = 1:73.9

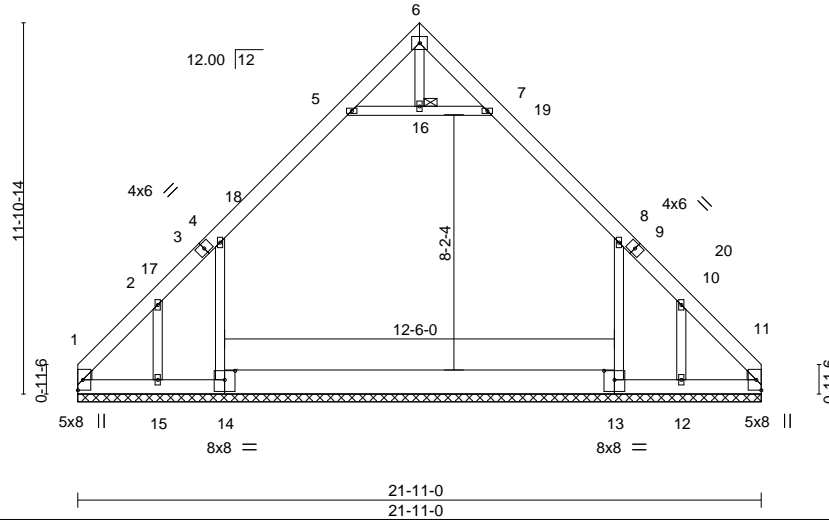


Plate Offsets (X,Y)-- [1:0-0-15,0-0-15], [1:0-1-15,0-4-4], [11:0-1-15,0-4-4], [11:0-0-15,0-0-15], [13:0-4-0,0-3-8], [14:0-4-0,0-3-8]

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.00	TC 0.12	Vert(LL)	n/a	-	n/a	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.49	Vert(CT)	n/a	-	n/a		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.10	Horz(CT)	0.00	11	n/a		
BCDL 10.0	Code	IRC2015/TPI2014	Matrix-S					Weight: 178 lb	FT = 20%

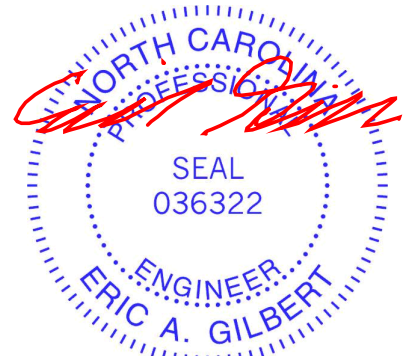
LUMBER-
TOP CHORD 2x6 SP No.2
BOT CHORD 2x6 SP No.2 *Except*
13-14: 2x10 SP No.2
WEBS 2x4 SP No.2
OTHERS 2x4 SP No.2
WEDGE
Left: 2x4 SP No.3 , Right: 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
JOINTS 1 Brace at Jt(s): 16

REACTIONS. All bearings 21-11-0.
(lb) - Max Horz 1=236(LC 10)
Max Uplift All uplift 100 lb or less at joint(s) except 15=-266(LC 15), 12=-266(LC 15)
Max Grav All reactions 250 lb or less at joint(s) 15, 12 except 1=448(LC 18), 14=865(LC 17), 13=856(LC 18), 11=446(LC 17)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-481/37, 2-4=-442/50, 4-5=-457/141, 7-8=-457/141, 8-10=-438/47, 10-11=-479/34
BOT CHORD 1-15=-35/313, 14-15=-32/322, 13-14=-33/303, 12-13=-23/315, 11-12=-26/306
WEBS 4-14=-275/141, 8-13=-272/141, 5-16=-270/172, 7-16=-270/172

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-10; Vult=125mph (3-second gust) Vasd=99mph; TC DL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2) 0-0-8 to 3-0-8, Interior(1) 3-0-8 to 11-0-0, Exterior(2) 11-0-0 to 14-0-0, Interior(1) 14-0-0 to 21-11-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
 - All plates are 2x4 MT20 unless otherwise indicated.
 - Gable requires continuous bottom chord bearing.
 - Gable studs spaced at 2-0-0 oc.
 - * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 266 lb uplift at joint 15 and 266 lb uplift at joint 12.
 - Attic room checked for L/360 deflection.



May 1, 2020

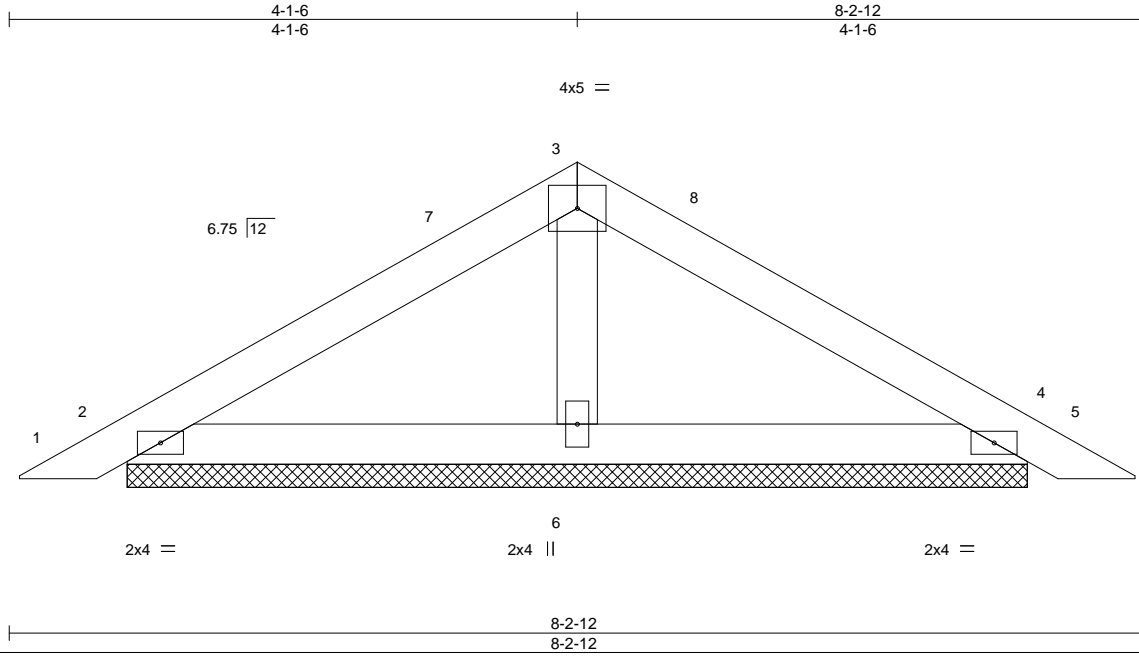
WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, 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 200675RT1	Truss PB01	Truss Type Piggyback	Qty 9	Ply 1	FREEDOM FAMILY HOMES Job Reference (optional)	E14360073
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Carolina Structural Systems, LLC, Ether, NC - 27247,

8.330 s Mar 23 2020 MiTek Industries, Inc. Fri May 1 11:45:04 2020 Page 1
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LOADING (psf)	SPACING-	CSL	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL 1.00	TC 0.19	Vert(LL) 0.01	5	n/r	120	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.08	Vert(CT) 0.01	5	n/r	120		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.02	Horz(CT) 0.00	4	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-P					Weight: 26 lb	FT = 20%

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

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

REACTIONS. (size) 2=6-6-4, 4=6-6-4, 6=6-6-4
 Max Horz 2=38(LC 10)
 Max Uplift 2=-34(LC 11), 4=-34(LC 11)
 Max Grav 2=167(LC 1), 4=167(LC 1), 6=248(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=125mph (3-second gust) Vasd=99mph; TCCL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2) 0-4-4 to 3-4-4, Interior(1) 3-4-4 to 4-1-6, Exterior(2) 4-1-6 to 7-4-8, Interior(1) 7-4-8 to 7-10-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - Gable requires continuous bottom chord bearing.
 - * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 34 lb uplift at joint 2 and 34 lb uplift at joint 4.
 - See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.



May 1, 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.

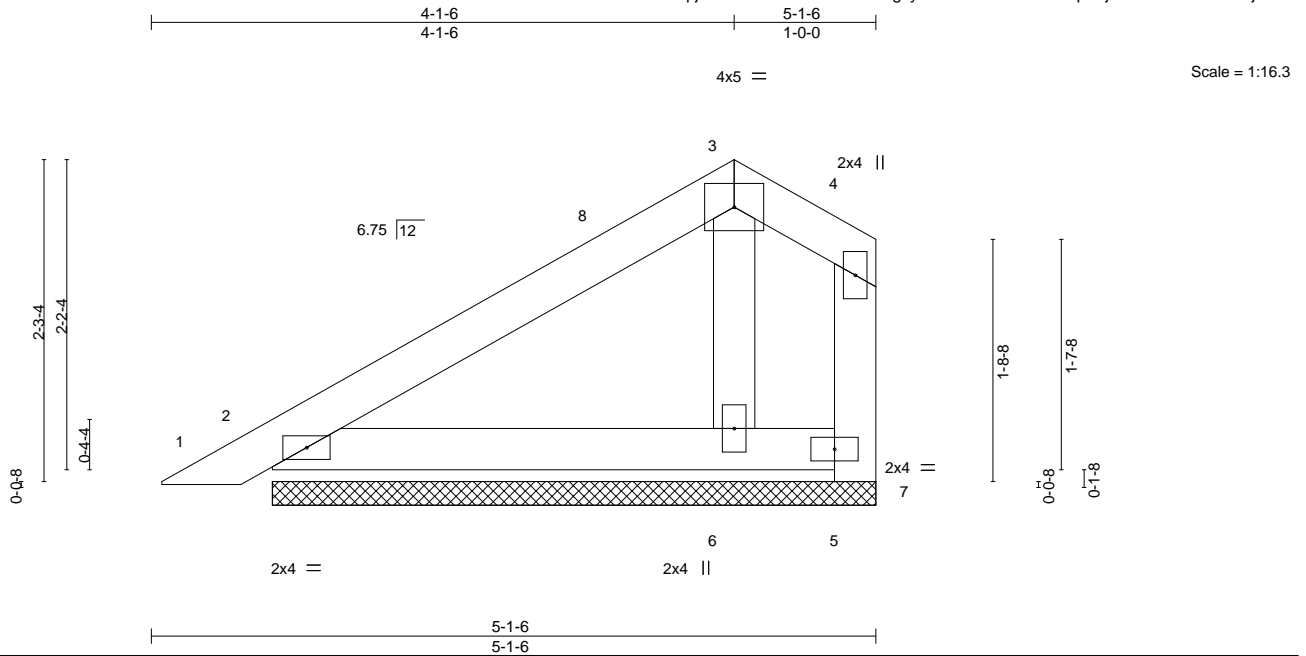


818 Soundside Road
Edenton, NC 27932

Job 200675RT1	Truss PB02	Truss Type Piggyback	Qty 10	Ply 1	FREEDOM FAMILY HOMES Job Reference (optional)	E14360074
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Carolina Structural Systems, LLC, Ether, NC - 27247,

8.330 s Mar 23 2020 MiTek Industries, Inc. Fri May 1 11:45:04 2020 Page 1
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LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.00	TC 0.19	Vert(LL)	0.00	1	n/r	120	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.06	Vert(CT)	0.00	1	n/r	120		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.02	Horz(CT)	0.00	5	n/a	n/a		
BCDL 10.0	Code	IRC2015/TPI2014	Matrix-P						Weight: 19 lb	FT = 20%

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

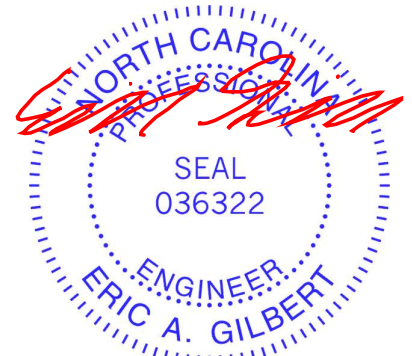
BRACING-
TOP CHORD Structural wood sheathing directly applied or 5-1-6 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 7=4-3-2, 2=4-3-2, 5=4-3-2, 6=4-3-2
Max Horz 2=62(LC 10)
Max Uplift 2=-25(LC 11), 5=-28(LC 11)
Max Grav 2=156(LC 1), 5=15(LC 17), 6=194(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=125mph (3-second gust) Vasd=99mph; TC DL=6.0psf; BC DL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2) 0-4-4 to 3-4-4, Interior(1) 3-4-4 to 4-1-6, Exterior(2) 4-1-6 to 4-11-10 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 live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- Bearing at joint(s) 7, 5 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 25 lb uplift at joint 2 and 28 lb uplift at joint 5.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.



May 1, 2020

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

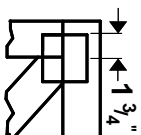
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall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



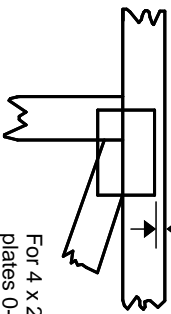
818 Soundside Road
Edenton, NC 27932

Symbols

PLATE LOCATION AND ORIENTATION



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



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



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

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

PLATE SIZE

4 X 4

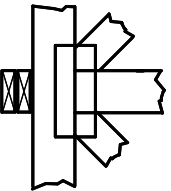
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



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

BEARING



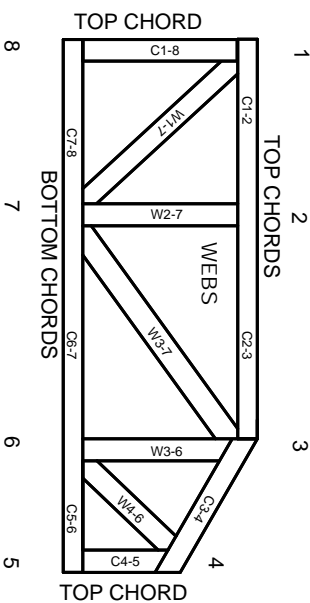
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TPI 1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-89: Design Standard for Bracing.
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

Numbering System

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



JOINTS ARE GENERALLY NUMBERED/LETTERED CLOCKWISE AROUND THE TRUSS STARTING AT THE JOINT FARTHEST TO THE LEFT.

CHORDS AND WEBS ARE IDENTIFIED BY END JOINT NUMBERS/LETTERS.

PRODUCT CODE APPROVALS

ICC-ES Reports:

ESR-1311, ESR-1352, ESR1988
ER-3907, ESR-2362, ESR-1397, ESR-3282

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

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

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MITteK 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.