

Truss Connector Total List			Connector Summary		
Manuf	Product	Qty	Qty	Manuf	Product
Simpson	LUS410	35	2	Simpson	HGUS414

Products					
PlotID	Length	Product	Plies	Net Qty	
BM5	5' 0"	1-3/4X9-1/4 LP-LVL 2900Fb-2.0E	2	2	
BM34	34' 0"	1-3/4X14 LP-LVL 2900Fb-2.0E	2	2	
BM17	17' 0"	1-3/4X14 LP-LVL 2900Fb-2.0E	2	2	
BM15	15' 0"	1-3/4X14 LP-LVL 2900Fb-2.0E	3	3	
BM14	14' 0"	1-3/4X14 LP-LVL 2900Fb-2.0E	2	2	

EXTERIOR DIMENSIONS ARE TO FACE OF SHEATHING.  
SHEATHING IS FLUSH WITH FOUNDATION.

**THIS IS A TRUSS PLACEMENT DIAGRAM ONLY**

These trusses are designed as individual building components to be incorporated into the building design at the specification of the building designer. See individual design sheets for each truss design identified on the placement drawing. The building designer is responsible for temporary and permanent bracing of the roof and floor system and for the overall structure. The design of the truss support structure including headers, beams, walls, and columns is the responsibility of the building designer. For general guidance regarding bracing, consult "Bracing of Wood Trusses" available from the Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53179.

**SHOP DRAWING APPROVAL**

THIS LAYOUT IS THE SOLE SOURCE FOR FABRICATION OF TRUSSES AND VOIDS ALL PREVIOUS ARCHITECTURAL OR OTHER TRUSS LAYOUTS. REVIEW AND APPROVAL OF THIS LAYOUT MUST BE RECEIVED BEFORE ANY TRUSSES WILL BE BUILT. VERIFY ALL CONDITIONS TO INSURE AGAINST CHANGES THAT WILL RESULT IN EXTRA CHARGES TO YOU.



APPROVED BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
REVIEWED BY: \_\_\_\_\_

QUALITY AUDITED BY:  
ANSI/APT 1-2005  
ANSI/APT 1-2007  
ANSI/APT 1-2014  
CAROLINA STRUCTURAL SYSTEMS, LLC  
SINCE 1969

**Carolina Structural Systems**  
Roof Trusses • Floor Trusses • EWP  
**Carolina Structural Systems**  
P.O. Box 157, Ether, NC 27247  
225 Frame Shop Rd., Star, NC 27356  
910-491-9004

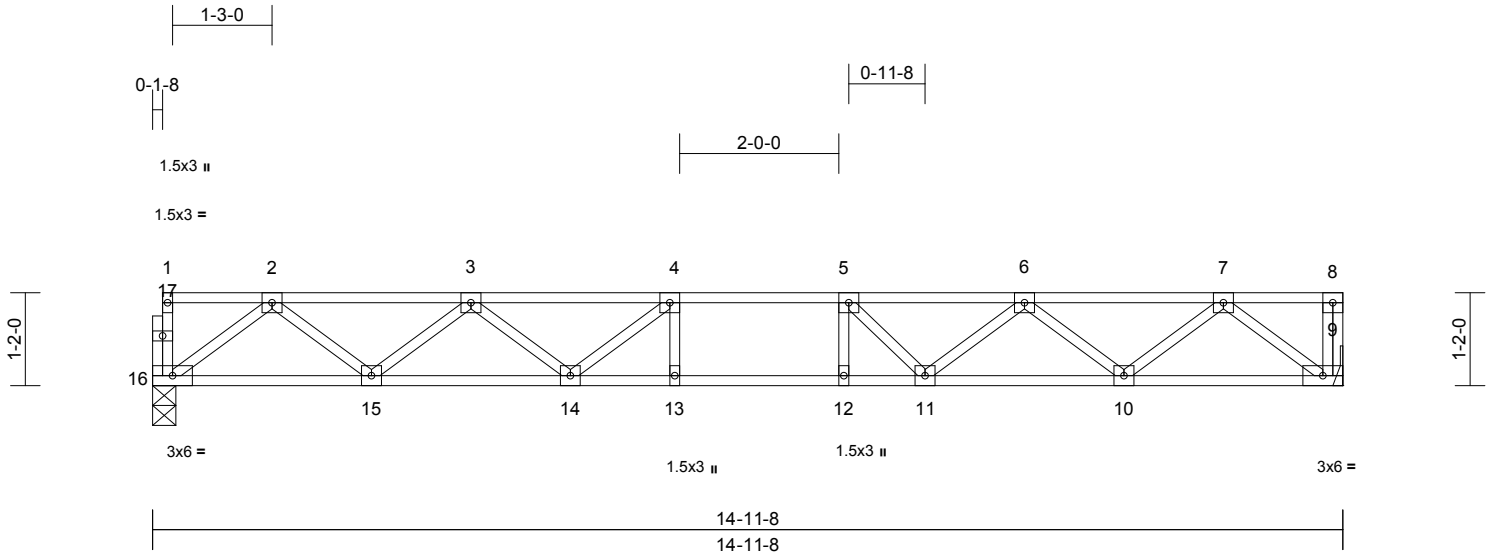
Job #:	GHAZAA	FLOOR LAYOUT RIGHT	Plan:	AZALEA-A
Customer:	GARMAN HOMES		Date:	11/1/2022
Site Address:	TBD		Sales Rep:	RW
City, ST, ZIP:			Designer:	JSP
			Roof Area:	1969.3 SF

Job GHAZAA	Truss F201	Truss Type Floor	Qty 9	Ply 1	GHAZAAF Job Reference (optional)	155484256
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Carolina Structural Systems, LLC, Ether, NC - 27247,

Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Tue Nov 29 15:06:23  
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Page: 1



Scale = 1:29

Loading	(psf)	Spacing	1-7-3	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL	40.0	Plate Grip DOL	1.00	TC	0.40	Vert(LL)	-0.14	13-14	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.87	Vert(CT)	-0.19	13-14	>947	240		
BCLL	0.0	Rep Stress Incr	YES	WB	0.32	Horz(CT)	0.04	9	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 75 lb	FT = 20%F, 11%E

**LUMBER**

TOP CHORD 2x4 SP No.2(flat)  
BOT CHORD 2x4 SP No.2(flat)  
WEBS 2x4 SP No.3(flat)  
OTHERS 2x4 SP No.3(flat)

**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) 9= Mechanical, 16=0-3-8  
Max Grav 9=647 (LC 1), 16=642 (LC 1)

**FORCES**

(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-16=-33/0, 8-9=-34/0, 1-2=-2/0,  
2-3=-1315/0, 3-4=-2043/0, 4-5=-2258/0,  
5-6=-2052/0, 6-7=-1314/0, 7-8=0/0  
BOT CHORD 15-16=0/795, 14-15=0/1809, 13-14=0/2258,  
12-13=0/2258, 11-12=0/2258, 10-11=0/1799,  
9-10=0/799  
WEBS 7-9=-1002/0, 2-16=-995/0, 7-10=0/670,  
2-15=0/677, 6-10=-632/0, 3-15=-643/0,  
6-11=0/386, 3-14=0/354, 4-14=-424/0,  
4-13=-108/110, 5-12=-100/153, 5-11=-444/0

**NOTES**

- 1) Unbalanced floor live loads have been considered for this design.
- 2) All plates are 3x3 MT20 unless otherwise indicated.
- 3) Refer to girder(s) for truss to truss connections.
- 4) 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.
- 5) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
- 6) CAUTION, Do not erect truss backwards.

**LOAD CASE(S)** Standard



November 30, 2022

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**

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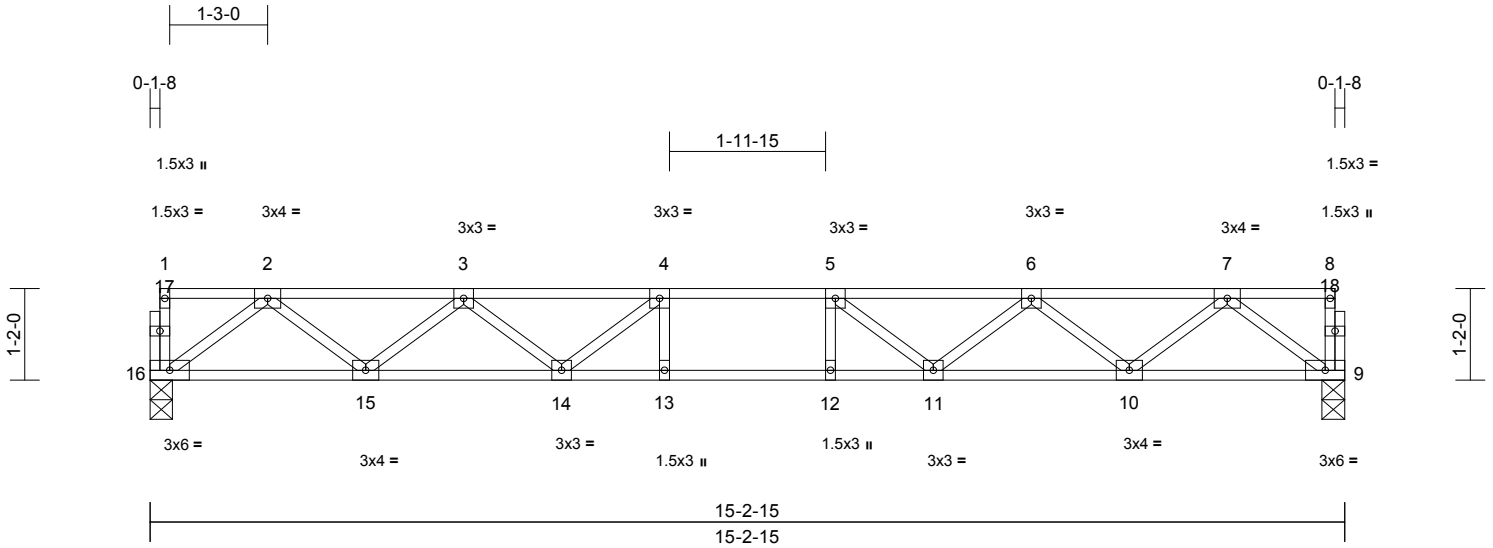
818 Soundside Road  
Edenton, NC 27932

Job GHAZAA	Truss F202	Truss Type Floor	Qty 2	Ply 1	GHAZAAF Job Reference (optional)	I55484257
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Carolina Structural Systems, LLC, Ether, NC - 27247,

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Scale = 1:29.4

Loading	(psf)	Spacing	1-7-3	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL	40.0	Plate Grip DOL	1.00	TC	0.38	Vert(LL)	-0.14	13-14	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.87	Vert(CT)	-0.19	12-13	>942	240		
BCLL	0.0	Rep Stress Incr	YES	WB	0.33	Horz(CT)	0.04	9	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 76 lb	FT = 20%F, 11%E

**LUMBER**

- TOP CHORD 2x4 SP No.2(flat)
- BOT CHORD 2x4 SP No.2(flat)
- WEBS 2x4 SP No.3(flat)
- OTHERS 2x4 SP No.3(flat)

**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) 9=0-3-8, 16=0-3-7  
Max Grav 9=655 (LC 1), 16=655 (LC 1)

- FORCES** (lb) - Maximum Compression/Maximum Tension
- TOP CHORD 1-16=-33/0, 8-9=-33/0, 1-2=-2/0, 2-3=-1347/0, 3-4=-2104/0, 4-5=-2350/0, 5-6=-2104/0, 6-7=-1347/0, 7-8=-2/0
  - BOT CHORD 15-16=0/812, 14-15=0/1854, 13-14=0/2350, 12-13=0/2350, 11-12=0/2350, 10-11=0/1854, 9-10=0/812
  - WEBS 7-9=-1017/0, 2-16=-1017/0, 7-10=0/696, 2-15=0/696, 6-10=-660/0, 3-15=-660/0, 6-11=0/374, 3-14=0/374, 5-11=-461/0, 4-14=-461/0, 4-13=-101/127, 5-12=-101/127

**NOTES**

- Unbalanced floor live loads have been considered for this design.
- 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.
- Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.

**LOAD CASE(S)** Standard



November 30, 2022

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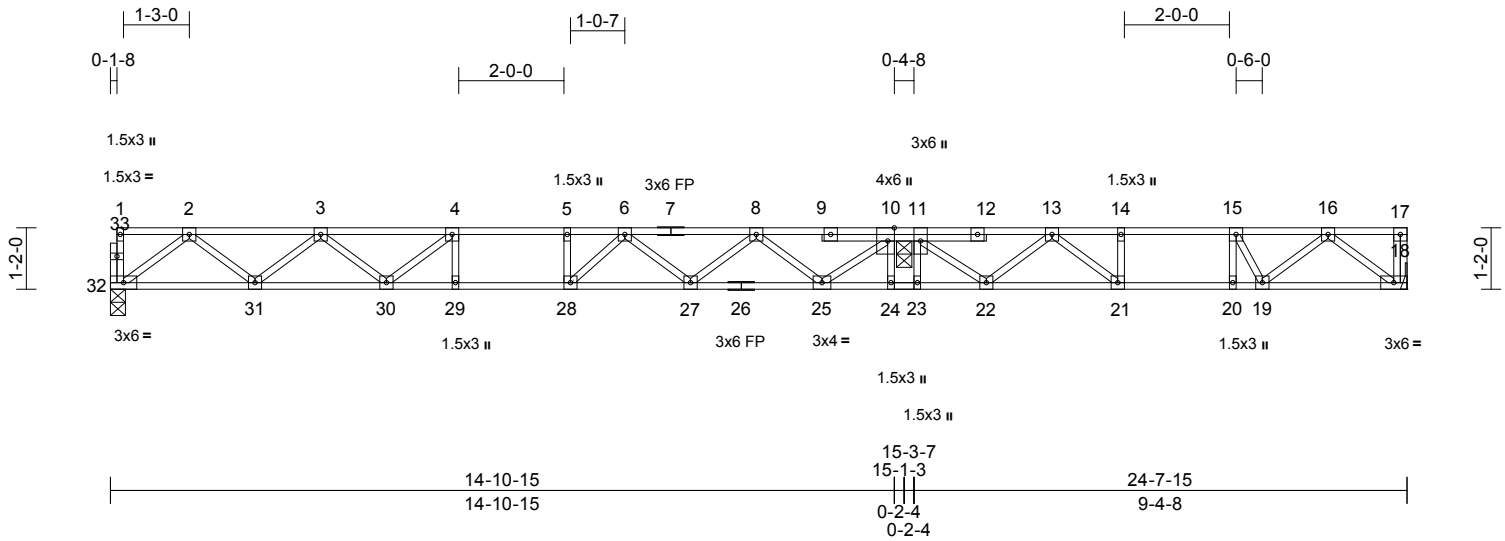
818 Soundside Road  
Edenton, NC 27932

Job GHAZAA	Truss F203	Truss Type Floor	Qty 3	Ply 1	GHAZAAF Job Reference (optional)	155484258
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Carolina Structural Systems, LLC, Ether, NC - 27247,

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Scale = 1:43.8

Plate Offsets (X, Y): [10:0-3-0,Edge]

Loading	(psf)	Spacing	1-7-3	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL	40.0	Plate Grip DOL	1.00	TC	0.47	Vert(LL)	-0.14	29-30	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.85	Vert(CT)	-0.19	29-30	>943	240		
BCLL	0.0	Rep Stress Incr	YES	WB	0.39	Horz(CT)	0.01	11	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S								
											Weight: 127 lb	FT = 20%F, 11%E

**LUMBER**

TOP CHORD 2x4 SP No.2(flat)  
BOT CHORD 2x4 SP No.2(flat)  
WEBS 2x4 SP No.3(flat)  
OTHERS 2x4 SP No.2(flat)

**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) 10=0-3-8, 11=0-3-8, 18= Mechanical, 32=0-3-7  
Max Uplift 11=-117 (LC 3)  
Max Grav 10=926 (LC 3), 11=558 (LC 4), 18=395 (LC 5), 32=634 (LC 13)

**FORCES**

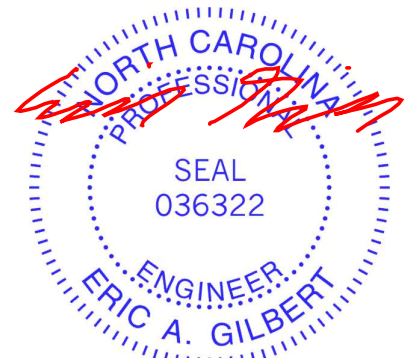
(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-32=-34/0, 17-18=-45/0, 1-2=-2/0, 2-3=-1295/0, 3-4=-2003/0, 4-5=-2194/0, 5-6=-2194/0, 6-8=-1623/0, 8-10=-666/0, 10-11=0/0, 11-13=-374/0, 13-14=-826/0, 14-15=-826/0, 15-16=-708/0, 16-17=0/0  
BOT CHORD 31-32=0/784, 30-31=0/1781, 29-30=0/2194, 28-29=0/2194, 27-28=0/2010, 25-27=0/1224, 24-25=0/0, 22-23=0/0, 21-22=0/667, 20-21=0/826, 19-20=0/826, 18-19=0/450  
WEBS 16-18=-564/0, 11-22=0/459, 16-19=0/336, 13-22=-390/0, 13-21=0/276, 2-32=-981/0, 10-25=0/822, 2-31=0/665, 8-25=-736/0, 3-31=-632/0, 8-27=0/520, 3-30=0/343, 6-27=-506/0, 4-30=-392/0, 4-29=-97/81, 5-28=-212/0, 6-28=0/452, 14-21=-132/0, 15-20=-45/104, 15-19=-297/0, 10-24=0/6, 11-23=-3/6

**NOTES**

- 1) Unbalanced floor live loads have been considered for this design.
- 2) All plates are 3x3 MT20 unless otherwise indicated.

- 3) Refer to girder(s) for truss to truss connections.
- 4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 117 lb uplift at joint 11.
- 5) 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.
- 6) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
- 7) Gap between inside of top chord bearing and first diagonal or vertical web shall not exceed 0.500in.
- 8) CAUTION, Do not erect truss backwards.
- 9) Bottom chord under the bearing from joint 23 to joint 24 is required to be field removed at time of installation. No plates are to be damaged or removed.

**LOAD CASE(S)** Standard



November 30, 2022

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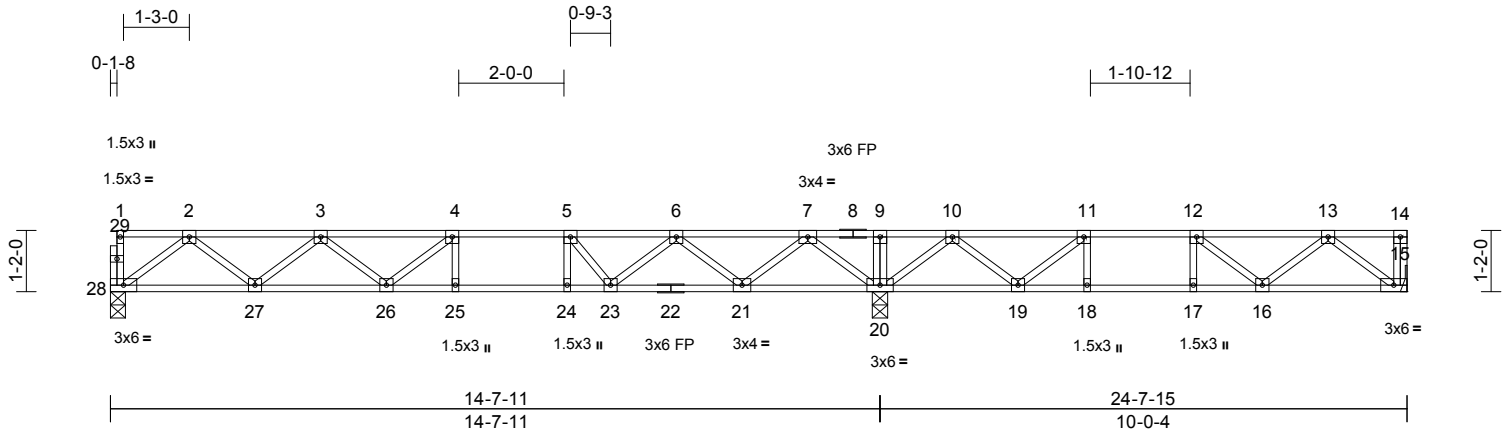
818 Soundside Road  
Edenton, NC 27932

Job GHAZAA	Truss F204	Truss Type Floor	Qty 9	Ply 1	GHAZAAF Job Reference (optional)	I55484259
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Carolina Structural Systems, LLC, Ether, NC - 27247,

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Scale = 1:43.8

Loading	(psf)	Spacing	1-7-3	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL	40.0	Plate Grip DOL	1.00	TC	0.51	Vert(LL)	-0.14	25-26	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	1.00	Vert(CT)	-0.18	25-26	>947	240		
BCLL	0.0	Rep Stress Incr	YES	WB	0.36	Horz(CT)	0.03	15	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S								
											Weight: 123 lb	FT = 20%F, 11%E

**LUMBER**  
TOP CHORD 2x4 SP No.2(flat)  
BOT CHORD 2x4 SP No.2(flat)  
WEBS 2x4 SP No.3(flat)  
OTHERS 2x4 SP No.2(flat)

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 1-4-12 oc bracing.

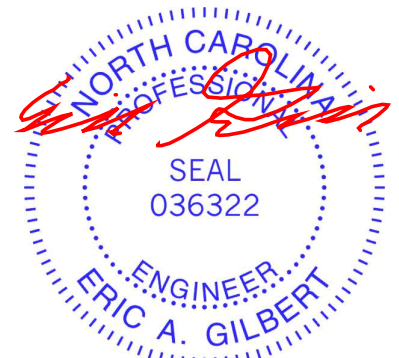
**REACTIONS** (size) 15= Mechanical, 20=0-3-8, 28=0-3-7  
Max Grav 15=390 (LC 4), 20=1242 (LC 1), 28=582 (LC 10)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-28=-34/0, 14-15=-25/2, 1-2=-2/0, 2-3=-1166/0, 3-4=-1748/0, 4-5=-1830/0, 5-6=-1564/0, 6-7=-702/0, 7-9=0/1036, 9-10=0/1036, 10-11=-459/349, 11-12=-805/108, 12-13=-662/0, 13-14=0/0  
BOT CHORD 27-28=0/714, 26-27=0/1596, 25-26=0/1830, 24-25=0/1830, 23-24=0/1830, 21-23=0/1234, 20-21=-179/147, 19-20=-539/144, 18-19=-108/805, 17-18=-108/805, 16-17=-108/805, 15-16=0/471  
WEBS 9-20=-91/0, 2-28=-893/0, 7-20=-1098/0, 2-27=0/588, 7-21=0/760, 3-27=-560/0, 6-21=-725/0, 3-26=0/220, 6-23=0/477, 4-26=-211/87, 4-25=-159/22, 13-15=-591/0, 10-20=-774/0, 13-16=-44/248, 10-19=0/508, 12-16=-183/150, 11-19=-594/0, 11-18=0/167, 12-17=-142/0, 5-24=-2/238, 5-23=-552/0

**NOTES**  
1) Unbalanced floor live loads have been considered for this design.  
2) All plates are 3x3 MT20 unless otherwise indicated.  
3) Refer to girder(s) for truss to truss connections.

- 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.
- Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
- CAUTION, Do not erect truss backwards.

**LOAD CASE(S)** Standard



November 30, 2022

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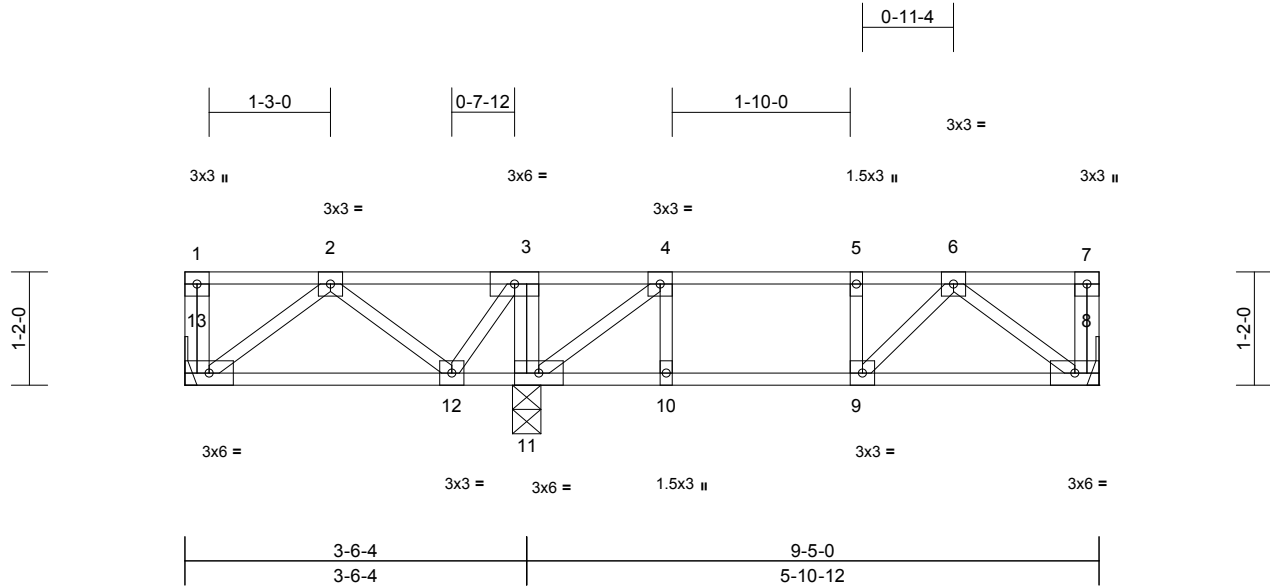
818 Soundside Road  
Edenton, NC 27932

Job GHAZAA	Truss F205	Truss Type Floor	Qty 3	Ply 1	GHAZAAF	I55484260
Job Reference (optional)						

Carolina Structural Systems, LLC, Ether, NC - 27247,

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Page: 1



Loading	(psf)	Spacing	1-7-3	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL	40.0	Plate Grip DOL	1.00	TC	0.17	Vert(LL)	-0.01	8-9	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.18	Vert(CT)	-0.02	8-9	>999	240		
BCLL	0.0	Rep Stress Incr	YES	WB	0.08	Horz(CT)	0.00	8	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 52 lb	FT = 20%F, 11%E

**LUMBER**

TOP CHORD 2x4 SP No.2(flat)  
BOT CHORD 2x4 SP No.2(flat)  
WEBS 2x4 SP No.3(flat)

**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) 8= Mechanical, 11=0-3-8, 13= Mechanical  
Max Grav 8=274 (LC 8), 11=375 (LC 7), 13=202 (LC 8)

**FORCES**

(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-13=-37/0, 7-8=-46/0, 1-2=0/0, 2-3=-203/0, 3-4=-181/0, 4-5=-384/0, 5-6=-384/0, 6-7=0/0  
BOT CHORD 12-13=0/209, 11-12=0/181, 10-11=0/384, 9-10=0/384, 8-9=0/284  
WEBS 3-11=-207/0, 6-8=-357/0, 4-11=-339/0, 4-10=0/35, 2-13=-262/0, 2-12=-84/42, 3-12=-4/92, 5-9=-99/0, 6-9=0/144

**NOTES**

- 1) Unbalanced floor live loads have been considered for this design.
- 2) Refer to girder(s) for truss to truss connections.
- 3) 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.
- 4) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
- 5) CAUTION, Do not erect truss backwards.

**LOAD CASE(S)** Standard



November 30, 2022

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Edenton, NC 27932

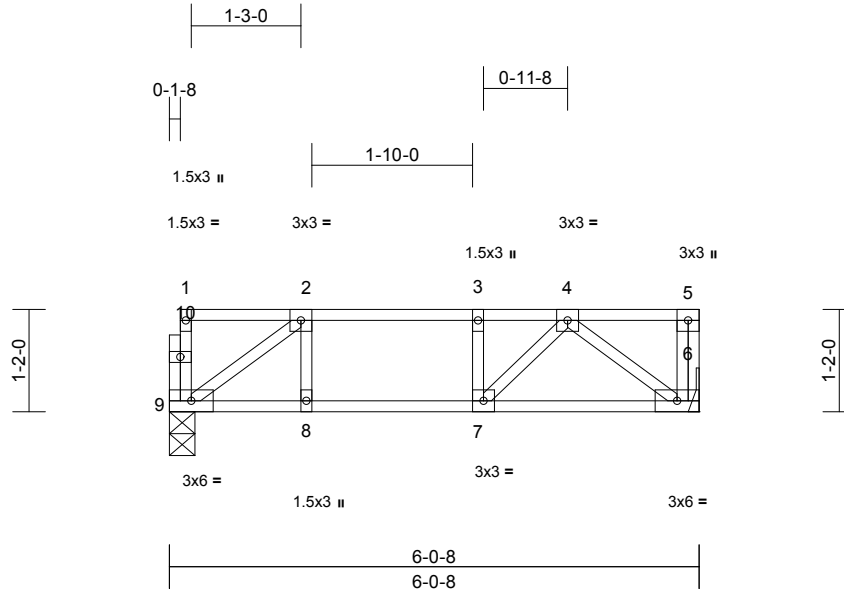


Job GHAZAA	Truss F206	Truss Type Floor	Qty 7	Ply 1	GHAZAAF Job Reference (optional)	155484261
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Carolina Structural Systems, LLC, Ether, NC - 27247,

Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Tue Nov 29 15:06:26  
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Page: 1



Scale = 1:26.3

Loading	(psf)	Spacing	1-7-3	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL	40.0	Plate Grip DOL	1.00	TC	0.27	Vert(LL)	-0.02	6-7	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.25	Vert(CT)	-0.03	6-7	>999	240		
BCLL	0.0	Rep Stress Incr	YES	WB	0.09	Horz(CT)	0.00	6	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 32 lb	FT = 20%F, 11%E

**LUMBER**

TOP CHORD 2x4 SP No.2(flat)  
 BOT CHORD 2x4 SP No.2(flat)  
 WEBS 2x4 SP No.3(flat)  
 OTHERS 2x4 SP No.2(flat)

**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) 6= Mechanical, 9=0-3-8  
 Max Grav 6=255 (LC 1), 9=250 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
 TOP CHORD 1-9=-34/23, 5-6=-44/0, 1-2=-2/1, 2-3=-325/0, 3-4=-325/0, 4-5=0/0  
 BOT CHORD 8-9=0/325, 7-8=0/325, 6-7=0/259  
 WEBS 4-6=-325/0, 2-9=-400/0, 2-8=0/55, 3-7=-89/0, 4-7=0/147

**NOTES**

- 1) Unbalanced floor live loads have been considered for this design.
- 2) Refer to girder(s) for truss to truss connections.
- 3) 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.
- 4) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
- 5) CAUTION, Do not erect truss backwards.

**LOAD CASE(S)** Standard



November 30, 2022

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 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, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



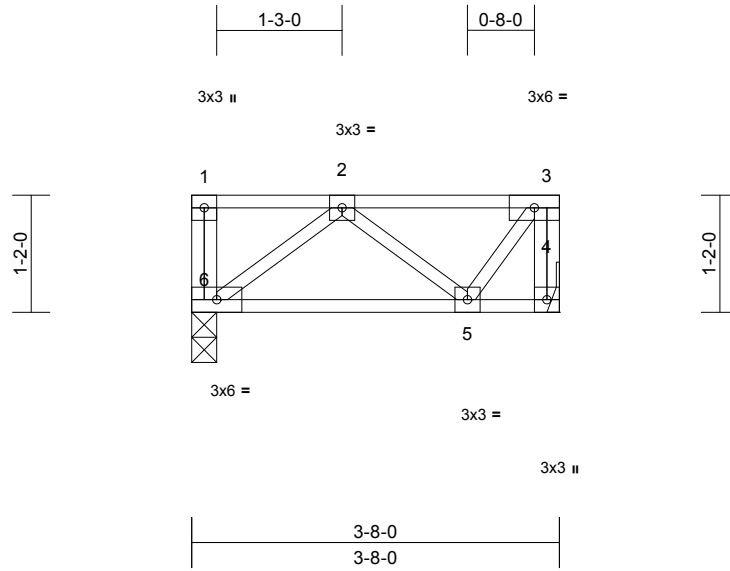
818 Soundside Road  
 Edenton, NC 27932

Job GHAZAA	Truss F207	Truss Type Floor	Qty 2	Ply 1	GHAZAAF Job Reference (optional)	I55484262
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Carolina Structural Systems, LLC, Ether, NC - 27247,

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Page: 1



Scale = 1:23

Loading	(psf)	Spacing	1-7-3	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL	40.0	Plate Grip DOL	1.00	TC	0.17	Vert(LL)	0.00	5-6	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.07	Vert(CT)	0.00	5-6	>999	240		
BCLL	0.0	Rep Stress Incr	YES	WB	0.05	Horz(CT)	0.00	4	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-P							Weight: 23 lb	FT = 20%F, 11%E

**LUMBER**

TOP CHORD 2x4 SP No.2(flat)  
BOT CHORD 2x4 SP No.2(flat)  
WEBS 2x4 SP No.3(flat)

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 3-8-0 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 4= Mechanical, 6=0-3-0  
Max Grav 4=150 (LC 1), 6=150 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-6=-32/0, 3-4=-153/0, 1-2=0/0, 2-3=-66/0  
BOT CHORD 5-6=0/144, 4-5=0/0  
WEBS 2-6=-181/0, 2-5=-102/0, 3-5=0/109

**NOTES**

- 1) Refer to girder(s) for truss to truss connections.
- 2) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 6.
- 3) 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.
- 4) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.

**LOAD CASE(S)** Standard



November 30, 2022

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Edenton, NC 27932

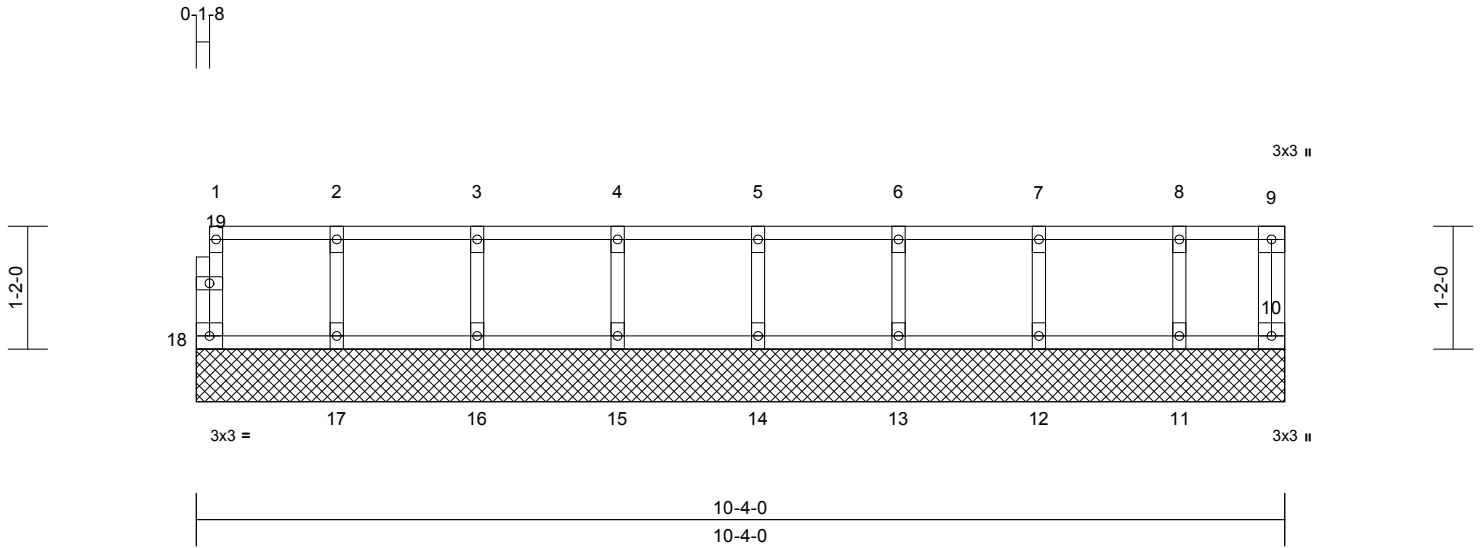


Job GHAZAA	Truss K201	Truss Type Floor Supported Gable	Qty 1	Ply 1	GHAZAAF Job Reference (optional)	I55484263
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Carolina Structural Systems, LLC, Ether, NC - 27247,

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Page: 1



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Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL	40.0	Plate Grip DOL	0.90	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Plate Metal DOL	0.90	BC	0.02	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Lumber DOL	0.90	WB	0.03	Horiz(TL)	0.00	10	n/a	n/a		
BCDL	5.0	Rep Stress Incr Code	YES IRC2015/TPI2014	Matrix-R								
										Weight: 45 lb	FT = 20%F, 11%E	

**LUMBER**  
TOP CHORD 2x4 SP No.2(flat)  
BOT CHORD 2x4 SP No.2(flat)  
WEBS 2x4 SP No.3(flat)  
OTHERS 2x4 SP No.3(flat)

**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)  
10=10-4-0, 11=10-4-0, 12=10-4-0,  
13=10-4-0, 14=10-4-0, 15=10-4-0,  
16=10-4-0, 17=10-4-0, 18=10-4-0  
Max Grav 10=43 (LC 5), 11=122 (LC 5),  
12=152 (LC 5), 13=145 (LC 5),  
14=147 (LC 5), 15=146 (LC 5),  
16=147 (LC 5), 17=146 (LC 5),  
18=54 (LC 5)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-18=-50/0, 9-10=-37/0, 1-2=-7/0, 2-3=-7/0,  
3-4=-7/0, 4-5=-7/0, 5-6=-7/0, 6-7=-7/0,  
7-8=-7/0, 8-9=-7/0  
BOT CHORD 17-18=0/7, 16-17=0/7, 15-16=0/7, 14-15=0/7,  
13-14=0/7, 12-13=0/7, 11-12=0/7, 10-11=0/7  
WEBS 2-17=-132/0, 3-16=-134/0, 4-15=-133/0,  
5-14=-134/0, 6-13=-132/0, 7-12=-138/0,  
8-11=-114/0

**NOTES**  
1) Unbalanced floor live loads have been considered for this design.  
2) All plates are 1.5x3 MT20 unless otherwise indicated.  
3) Gable requires continuous bottom chord bearing.  
4) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).  
5) Gable studs spaced at 1-4-0 oc.

- 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.
  - Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
  - CAUTION, Do not erect truss backwards.
- LOAD CASE(S)** Standard



November 30, 2022

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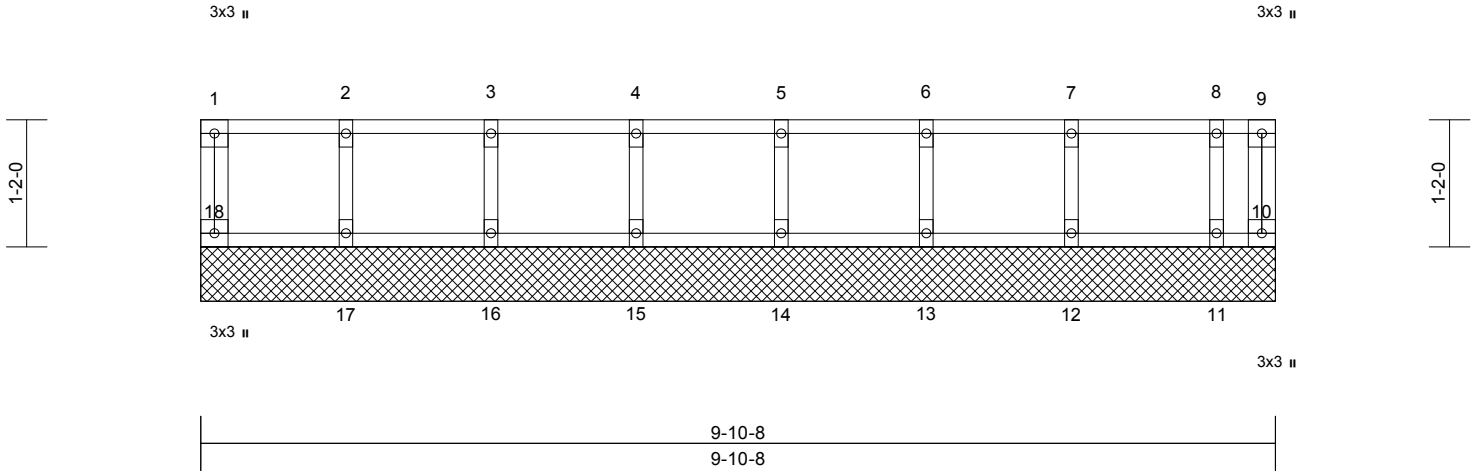
818 Soundside Road  
Edenton, NC 27932

Job GHAZAA	Truss K202	Truss Type Floor Supported Gable	Qty 1	Ply 1	GHAZAAF Job Reference (optional)	155484264
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Carolina Structural Systems, LLC, Ether, NC - 27247,

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Page: 1



Scale = 1:21.2

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL	40.0	Plate Grip DOL	1.00	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.02	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.03	Horiz(TL)	0.00	10	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-R							Weight: 44 lb	FT = 20%F, 11%E

**LUMBER**  
TOP CHORD 2x4 SP No.2(flat)  
BOT CHORD 2x4 SP No.2(flat)  
WEBS 2x4 SP No.3(flat)  
OTHERS 2x4 SP No.3(flat)

6) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.

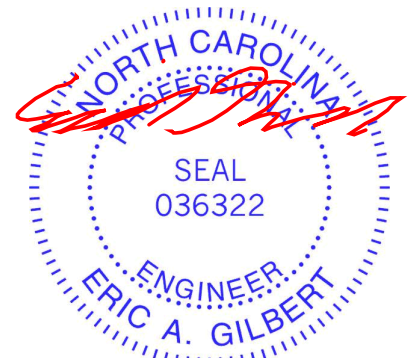
**LOAD CASE(S)** Standard

**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) 10=9-10-8, 11=9-10-8, 12=9-10-8, 13=9-10-8, 14=9-10-8, 15=9-10-8, 16=9-10-8, 17=9-10-8, 18=9-10-8  
Max Grav 10=14 (LC 1), 11=100 (LC 1), 12=153 (LC 1), 13=145 (LC 1), 14=147 (LC 1), 15=147 (LC 1), 16=147 (LC 1), 17=147 (LC 1), 18=59 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-18=-55/0, 9-10=-4/0, 1-2=-7/0, 2-3=-7/0, 3-4=-7/0, 4-5=-7/0, 5-6=-7/0, 6-7=-7/0, 7-8=-7/0, 8-9=-7/0  
BOT CHORD 17-18=0/7, 16-17=0/7, 15-16=0/7, 14-15=0/7, 13-14=0/7, 12-13=0/7, 11-12=0/7, 10-11=0/7  
WEBS 2-17=-132/0, 3-16=-134/0, 4-15=-133/0, 5-14=-134/0, 6-13=-132/0, 7-12=-138/0, 8-11=-100/0

**NOTES**  
1) All plates are 1.5x3 MT20 unless otherwise indicated.  
2) Gable requires continuous bottom chord bearing.  
3) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).  
4) Gable studs spaced at 1-4-0 oc.  
5) 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.



November 30, 2022

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**ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component**

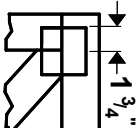
**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



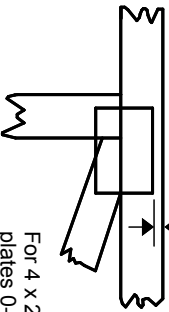
818 Soundside Road  
Edenton, NC 27932

# 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-<sup>1</sup>/<sub>16</sub>" from outside edge of truss.



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

\* Plate location details available in **MITek 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



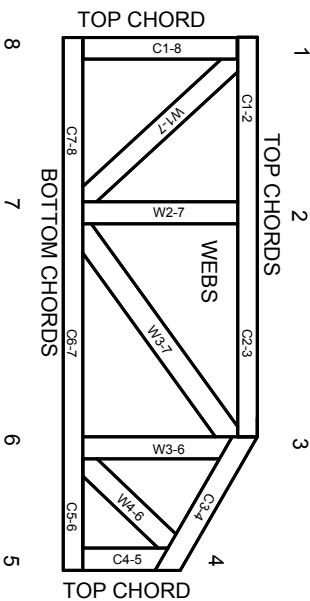
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

## Industry Standards:

ANSI/TFP 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/TFP 1 section 6.3 These truss designs rely on lumber values established by others.

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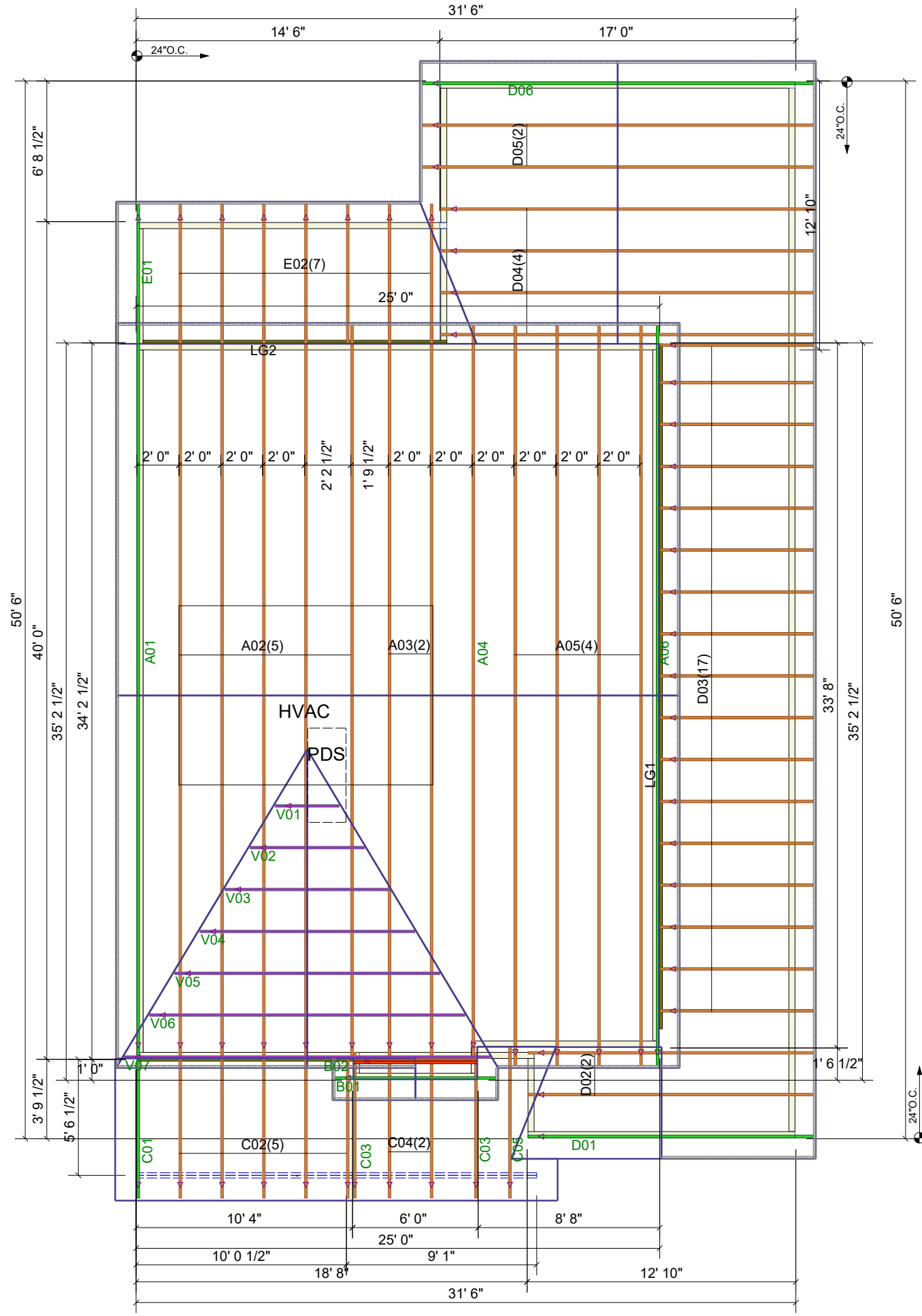


MITek Engineering Reference Sheet: Mill-7473 rev. 5/19/2020

# 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/TFP 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TFP 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/TFP 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.



Truss Connector Total List		
Manuf	Product	Qty
Simpson	H2.5A	75
	THA29	1

EXTERIOR DIMENSIONS ARE TO FACE OF SHEATHING.  
SHEATHING IS FLUSH WITH FOUNDATION.

**THIS IS A TRUSS PLACEMENT DIAGRAM ONLY**

These trusses are designed as individual building components to be incorporated into the building design at the specification of the building designer. See individual design sheets for each truss design identified on the placement drawing. The building designer is responsible for temporary and permanent bracing of the roof and floor system and for the overall structure. The design of the truss support structure including headers, beams, walls, and columns is the responsibility of the building designer. For general guidance regarding bracing, consult "Bracing of Wood Trusses" available from the Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53179.

**SHOP DRAWING APPROVAL**

THIS LAYOUT IS THE SOLE SOURCE FOR FABRICATION OF TRUSSES AND VOIDS ALL PREVIOUS ARCHITECTURAL OR OTHER TRUSS LAYOUTS. REVIEW AND APPROVAL OF THIS LAYOUT MUST BE RECEIVED BEFORE ANY TRUSSES WILL BE BUILT. VERIFY ALL CONDITIONS TO INSURE AGAINST CHANGES THAT WILL RESULT IN EXTRA CHARGES TO YOU.



APPROVED BY:

DATE:

Plan: AZALEA-A

Date: 2/14/2023

Sales Rep: RW

Designer: JSP

Job #: GHAZAAR GARAGE RIGHT ROOF

Customer: GARMAN HOMES

Site Address: TBD

City, ST, ZIP:



**ROOF DATA**

Roof Area: 2110.8 SF

P.O. Box 157, Ether, NC 27247  
225 Frame Shop Rd., Star, NC 27356  
910-491-9004

**Trenco**

818 Soundside Rd  
Edenton, NC 27932

Re: GHAZAA  
Garman Homes - Azalea A Roof

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: 156629987 thru 156630014

My license renewal date for the state of North Carolina is December 31, 2023.

North Carolina COA: C-0844



February 14, 2023

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.

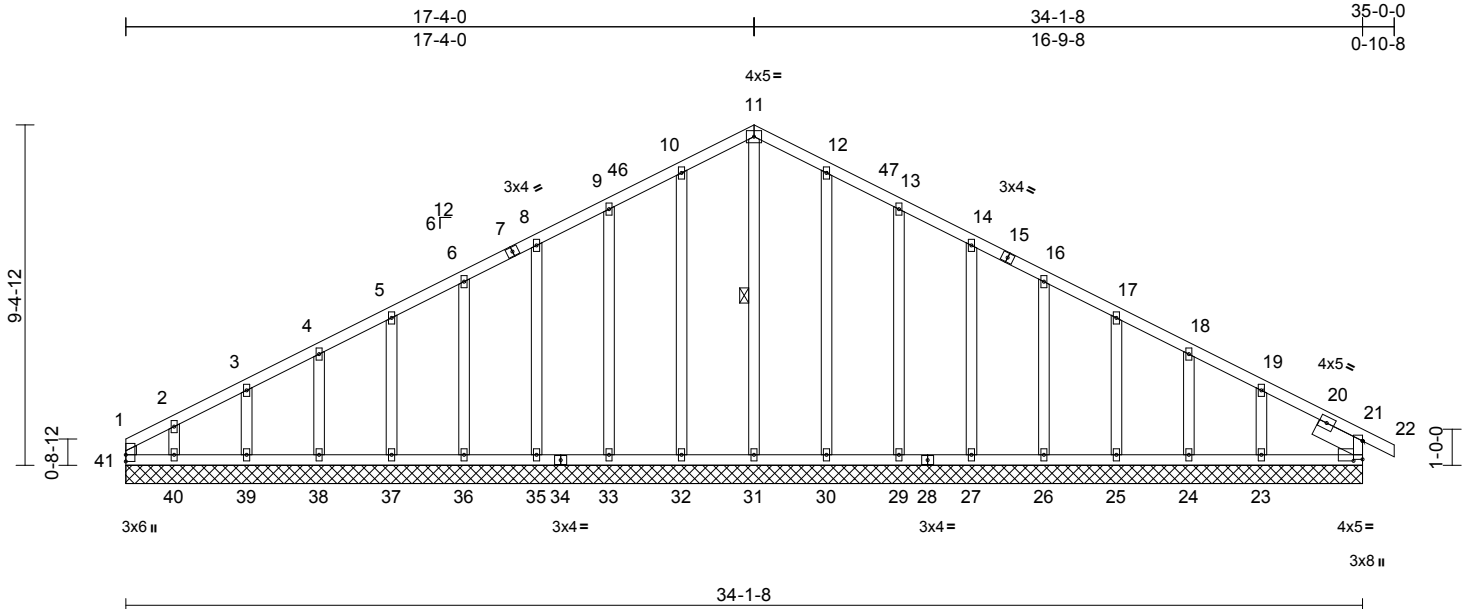


Job GHAZAA	Truss A01	Truss Type Common Supported Gable	Qty 1	Ply 1	Garman Homes - Azalea A Roof Job Reference (optional)	156629987
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Carolina Structural Systems (Star, NC), Ether, NC - 27247,

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Scale = 1:63.6

Plate Offsets (X, Y): [21:0-3-0-0-6-9]

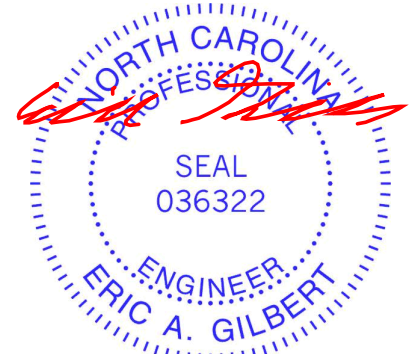
Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.08	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.16	Horz(CT)	0.01	21	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS							Weight: 229 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
SLIDER	Right 2x6 SP No.2 -- 1-6-0
BRACING	
TOP CHORD	Structural wood sheathing directly applied, except end verticals.
BOT CHORD	Rigid ceiling directly applied.
WEBS	1 Row at midpt 11-31
REACTIONS (size)	
21=34-1-8, 23=34-1-8, 24=34-1-8, 25=34-1-8, 26=34-1-8, 27=34-1-8, 29=34-1-8, 30=34-1-8, 31=34-1-8, 32=34-1-8, 33=34-1-8, 35=34-1-8, 36=34-1-8, 37=34-1-8, 38=34-1-8, 39=34-1-8, 40=34-1-8, 41=34-1-8, 42=34-1-8	
Max Horiz	41=-149 (LC 10)
Max Uplift	23=48 (LC 12), 24=-10 (LC 12), 25=-22 (LC 12), 26=-19 (LC 12), 27=-19 (LC 12), 29=-23 (LC 12), 30=-10 (LC 12), 32=-10 (LC 12), 33=-23 (LC 12), 35=-19 (LC 12), 36=-20 (LC 12), 37=-19 (LC 12), 38=-21 (LC 12), 39=-16 (LC 12), 40=-51 (LC 12), 41=-63 (LC 10)
Max Grav	21=173 (LC 1), 23=214 (LC 18), 24=145 (LC 1), 25=164 (LC 22), 26=159 (LC 1), 27=160 (LC 22), 29=160 (LC 1), 30=165 (LC 22), 31=146 (LC 12), 32=166 (LC 21), 33=160 (LC 1), 35=160 (LC 21), 36=160 (LC 21), 37=160 (LC 1), 38=159 (LC 21), 39=166 (LC 1), 40=164 (LC 17), 41=112 (LC 11), 42=173 (LC 1)

FORCES	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-41=-81/48, 1-2=-125/103, 2-3=-112/88, 3-4=-107/81, 4-5=-99/78, 5-6=-92/119, 6-8=-85/160, 8-9=-79/200, 9-10=-93/243, 10-11=-106/277, 11-12=-106/287, 12-13=-93/253, 13-14=-79/210, 14-16=-64/170, 16-17=-54/129, 17-18=-60/87, 18-19=-69/54, 19-21=-65/47, 21-22=0/23
BOT CHORD	40-41=-33/90, 39-40=-33/90, 38-39=-33/90, 37-38=-33/90, 36-37=-33/90, 35-36=-33/90, 33-35=-33/90, 32-33=-33/90, 31-32=-33/90, 30-31=-33/90, 29-30=-33/90, 27-29=-33/90, 26-27=-33/90, 25-26=-33/90, 24-25=-33/90, 23-24=-33/90, 21-23=-33/90
WEBS	11-31=-163/19, 10-32=-126/108, 9-33=-120/85, 8-35=-120/66, 6-36=-120/67, 5-37=-120/68, 4-38=-119/67, 3-39=-124/94, 2-40=-113/129, 12-30=-125/109, 13-29=-120/85, 14-27=-120/66, 16-26=-120/67, 17-25=-122/71, 18-24=-112/55, 19-23=-148/140

- NOTES**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCCL=6.0psf; BCCL=6.0psf; h=29ft; B=45ft; L=34ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Corner (3) 0-1-12 to 3-4-0, Exterior (2) 3-4-0 to 17-4-0, Corner (3) 17-4-0 to 20-8-15, Exterior (2) 20-8-15 to 35-0-0 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

- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) All plates are 2x4 MT20 unless otherwise indicated.
- 5) Gable requires continuous bottom chord bearing.
- 6) Gable studs spaced at 2-0-0 oc.
- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 63 lb uplift at joint 41, 10 lb uplift at joint 32, 23 lb uplift at joint 33, 19 lb uplift at joint 35, 20 lb uplift at joint 36, 19 lb uplift at joint 37, 21 lb uplift at joint 38, 16 lb uplift at joint 39, 51 lb uplift at joint 40, 10 lb uplift at joint 30, 23 lb uplift at joint 29, 19 lb uplift at joint 27, 19 lb uplift at joint 26, 22 lb uplift at joint 25, 10 lb uplift at joint 24 and 48 lb uplift at joint 23.



February 14, 2023

Continued on page 2

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 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, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



818 Soundside Road  
Edenton, NC 27932



Job GHAZAA	Truss A01	Truss Type Common Supported Gable	Qty 1	Ply 1	Garman Homes - Azalea A Roof I56629987 Job Reference (optional)
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Carolina Structural Systems (Star, NC)), Ether, NC - 27247,

Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Tue Feb 14 08:03:29  
ID:C62DD1be73YP1J7KS27d0BzFmPN-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 2

- 10) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 21.
- 11) 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.
- 12) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

**LOAD CASE(S)** Standard

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 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, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



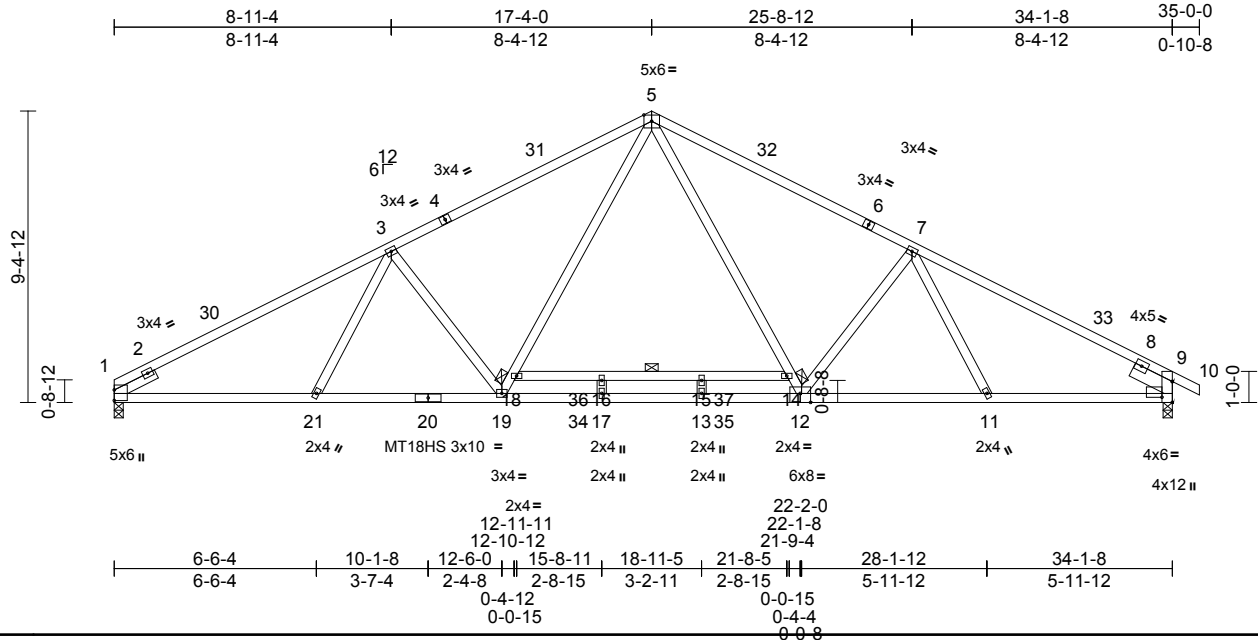
818 Soundside Road  
Edenton, NC 27932

Job GHAZAA	Truss A02	Truss Type Common	Qty 5	Ply 1	Garman Homes - Azalea A Roof Job Reference (optional)	156629988
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Carolina Structural Systems (Star, NC)), Ether, NC - 27247,

Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Tue Feb 14 08:03:31  
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Page: 1



Scale = 1:74.3

Plate Offsets (X, Y): [9:0-4-0,0-6-1], [12:0-4-0,Edge]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.96	Vert(LL)	-0.38	13-17	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.84	Vert(CT)	-0.72	13-17	>568	180	MT18HS	244/190
BCLL	0.0*	Rep Stress Incr	NO	WB	0.50	Horz(CT)	0.13	9	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS								
											Weight: 192 lb	FT = 20%

**LUMBER**

TOP CHORD 2x4 SP DSS \*Except\* 4-5:2x4 SP No.2, 5-6:2x4 SP No.1  
 BOT CHORD 2x4 SP DSS \*Except\* 1-20:2x4 SP No.1, 18-14:2x4 SP No.2  
 WEBS 2x4 SP No.3  
 SLIDER Left 2x4 SP No.2 -- 1-6-0, Right 2x6 SP No.2 -- 1-6-0

**BRACING**

TOP CHORD Structural wood sheathing directly applied.  
 BOT CHORD Rigid ceiling directly applied. Except: 6-0-0 oc bracing: 14-18

**REACTIONS**

(size) 1=0-3-8, 9=0-3-8  
 Max Horiz 1=-139 (LC 10)  
 Max Uplift 9=-21 (LC 12)  
 Max Grav 1=1453 (LC 1), 9=1510 (LC 1)

**FORCES**

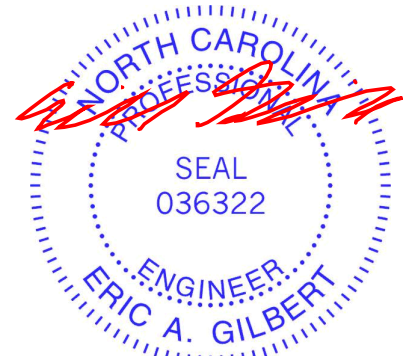
(lb) - Maximum Compression/Maximum Tension  
 TOP CHORD 1-3=-2440/40, 3-5=-2198/85, 5-7=-2150/78, 7-9=-2269/73, 9-10=0/23  
 BOT CHORD 1-21=-119/2194, 19-21=0/2193, 17-19=0/1616, 13-17=0/1616, 11-13=0/1983, 9-11=-55/1929, 16-18=-107/0, 15-16=-107/0, 14-15=-107/0  
 WEBS 5-14=0/826, 12-14=0/700, 7-12=-403/163, 7-11=-123/38, 18-19=0/775, 5-18=0/904, 3-19=-514/164, 3-21=-14/143, 16-17=-73/0, 13-15=-88/0

**NOTES**

1) Unbalanced roof live loads have been considered for this design.

- 2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TC DL=6.0psf; BCDL=6.0psf; h=29ft; B=45ft; L=34ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) 0-0-0 to 3-4-15, Interior (1) 3-4-15 to 17-4-0, Exterior (2) 17-4-0 to 20-8-15, Interior (1) 20-8-15 to 35-0-0 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
- 3) All plates are MT20 plates unless otherwise indicated.
- 4) All plates are 2x4 MT20 unless otherwise indicated.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 21 lb uplift at joint 9.
- 8) 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.
- 9) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

**LOAD CASE(S)** Standard



February 14, 2023

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 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, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



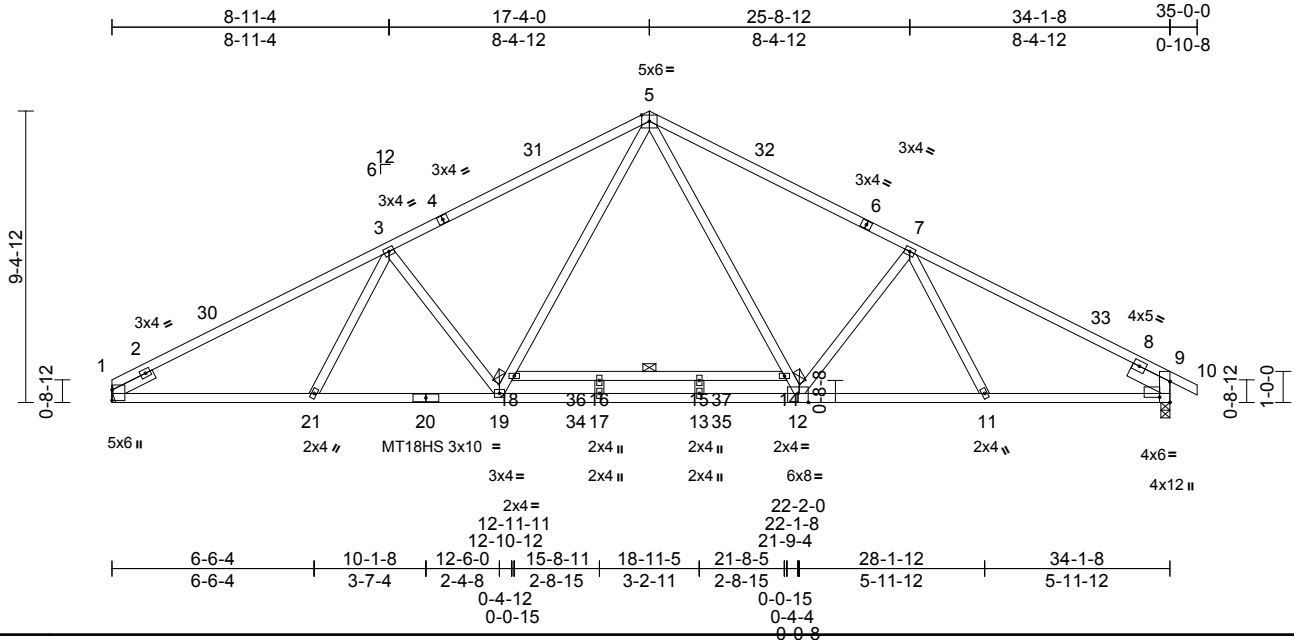
818 Soundside Road  
 Edenton, NC 27932

Job GHAZAA	Truss A03	Truss Type Common	Qty 2	Ply 1	Garman Homes - Azalea A Roof Job Reference (optional)	156629989
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Carolina Structural Systems (Star, NC)), Ether, NC - 27247,

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Page: 1



Scale = 1:74.3

Plate Offsets (X, Y): [9:0-4-0,0-6-1], [12:0-4-0,Edge]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.96	Vert(LL)	-0.38	13-17	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.84	Vert(CT)	-0.72	13-17	>568	180	MT18HS	244/190
BCLL	0.0*	Rep Stress Incr	NO	WB	0.50	Horz(CT)	0.13	9	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS								Weight: 192 lb FT = 20%

**LUMBER**  
TOP CHORD 2x4 SP DSS \*Except\* 4-5:2x4 SP No.2, 5-6:2x4 SP No.1  
BOT CHORD 2x4 SP DSS \*Except\* 1-20:2x4 SP No.1, 18-14:2x4 SP No.2  
WEBS 2x4 SP No.3  
SLIDER Left 2x4 SP No.2 -- 1-6-0, Right 2x6 SP No.2 -- 1-6-0

**BRACING**  
TOP CHORD Structural wood sheathing directly applied.  
BOT CHORD Rigid ceiling directly applied. Except: 6-0-0 oc bracing: 14-18

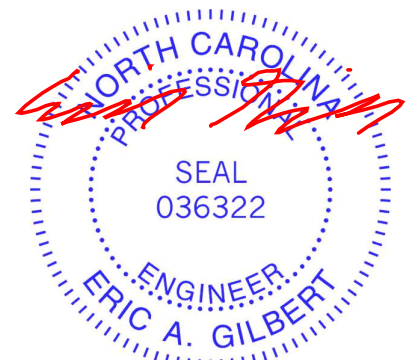
**REACTIONS** (size) 1= Mechanical, 9=0-3-8  
Max Horiz 1=-139 (LC 10)  
Max Uplift 9=-21 (LC 12)  
Max Grav 1=1453 (LC 1), 9=1510 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-3=-2440/40, 3-5=-2198/85, 5-7=-2150/78, 7-9=-2269/73, 9-10=0/23  
BOT CHORD 1-21=-119/2194, 19-21=0/2193, 17-19=0/1616, 13-17=0/1616, 11-13=0/1983, 9-11=-55/1929, 16-18=-107/0, 15-16=-107/0, 14-15=-107/0  
WEBS 5-14=0/826, 12-14=0/700, 7-12=-403/163, 7-11=-123/38, 18-19=0/775, 5-18=0/904, 3-19=-514/164, 3-21=-14/143, 16-17=-73/0, 13-15=-88/0

**NOTES**  
1) Unbalanced roof live loads have been considered for this design.

- 2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TC DL=6.0psf; BCDL=6.0psf; h=29ft; B=45ft; L=34ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) 0-0-0 to 3-4-15, Interior (1) 3-4-15 to 17-4-0, Exterior (2) 17-4-0 to 20-8-15, Interior (1) 20-8-15 to 35-0-0 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
- 3) All plates are MT20 plates unless otherwise indicated.
- 4) All plates are 2x4 MT20 unless otherwise indicated.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 7) Refer to girder(s) for truss to truss connections.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 21 lb uplift at joint 9.
- 9) 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.
- 10) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

**LOAD CASE(S)** Standard



February 14, 2023

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 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, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



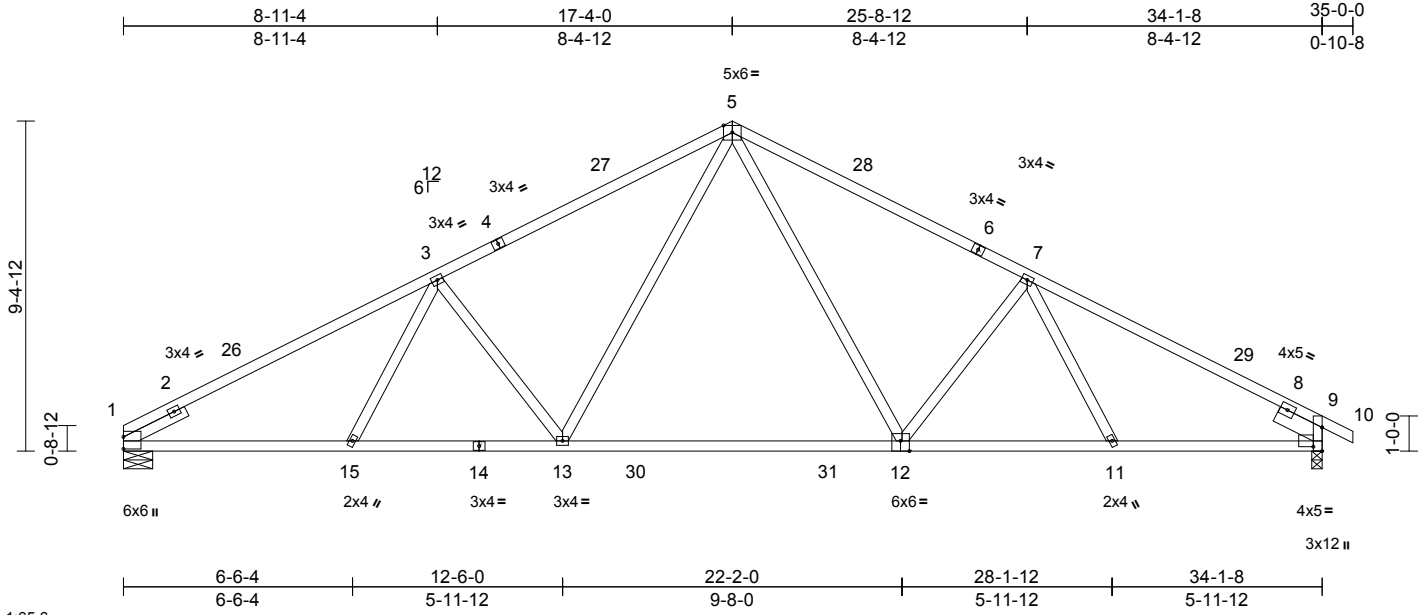
818 Soundside Road  
Edenton, NC 27932

Job GHAZAA	Truss A04	Truss Type Common	Qty 1	Ply 1	Garman Homes - Azalea A Roof Job Reference (optional)	156629990
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Carolina Structural Systems (Star, NC), Ether, NC - 27247,

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Page: 1



Scale = 1:65.6  
Plate Offsets (X, Y): [9:0-3-0,0-6-9], [12:0-3-0,Edge]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.93	Vert(LL)	-0.29	12-13	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.61	Vert(CT)	-0.53	12-13	>766	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.33	Horz(CT)	0.11	9	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS								Weight: 178 lb FT = 20%

**LUMBER**  
TOP CHORD 2x4 SP No.2 \*Except\* 1-4,6-10:2x4 SP DSS  
BOT CHORD 2x4 SP DSS  
WEBS 2x4 SP No.3  
SLIDER Left 2x4 SP No.2 -- 1-11-13, Right 2x6 SP No.2 -- 1-6-0

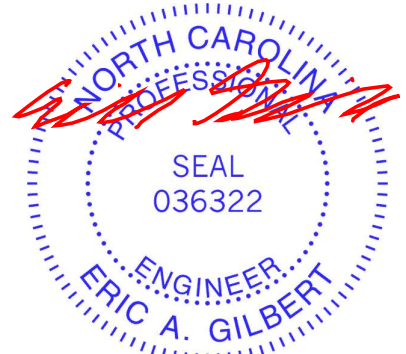
**BRACING**  
TOP CHORD Structural wood sheathing directly applied.  
BOT CHORD Rigid ceiling directly applied.

**REACTIONS** (size) 1=0-10-0, 9=0-3-8  
Max Horiz 1=-139 (LC 10)  
Max Uplift 1=-52 (LC 12), 9=-75 (LC 12)  
Max Grav 1=1381 (LC 1), 9=1401 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-3=-2115/135, 3-5=-1845/197, 5-7=-1833/192, 7-9=-2080/130, 9-10=0/23  
BOT CHORD 1-15=-24/1808, 13-15=-47/1822, 11-13=-49/1769, 9-11=-74/1759  
WEBS 5-12=-13/667, 7-12=-436/146, 7-11=-63/110, 5-13=-16/685, 3-13=-459/148, 3-15=-38/132

- NOTES**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=29ft; B=45ft; L=34ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) 0-0-0 to 3-4-15, Interior (1) 3-4-15 to 17-4-0, Exterior (2) 17-4-0 to 20-8-15, Interior (1) 20-8-15 to 35-0-0 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
  - 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 3-06-00 tall by 2-00-00 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 52 lb uplift at joint 1 and 75 lb uplift at joint 9.
  - 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.
  - This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- LOAD CASE(S)** Standard



February 14, 2023

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**

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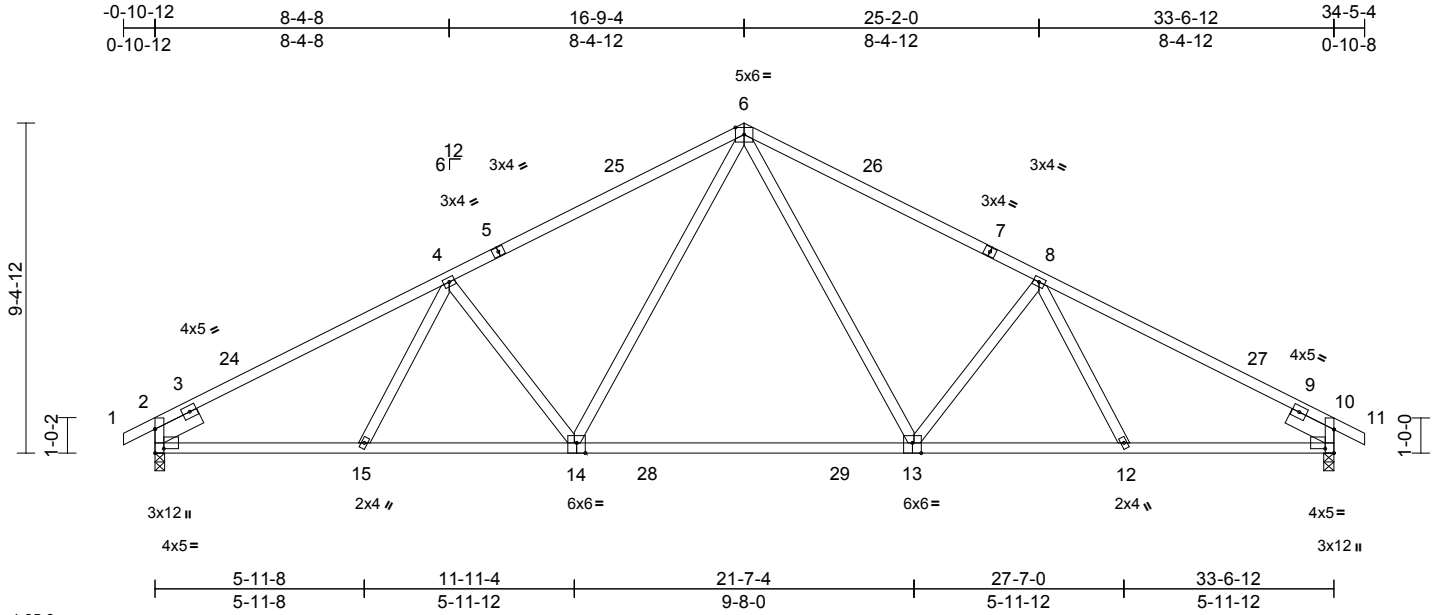
818 Soundside Road  
Edenton, NC 27932

Job GHAZAA	Truss A05	Truss Type Common	Qty 4	Ply 1	Garman Homes - Azalea A Roof Job Reference (optional)	I56629991
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Carolina Structural Systems (Star, NC), Ether, NC - 27247,

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Page: 1



Scale = 1:65.6

Plate Offsets (X, Y): [2:0-3-0,0-6-11], [10:0-3-0,0-6-9], [13:0-3-0,Edge], [14:0-3-0,Edge]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.91	Vert(LL)	-0.33	13-14	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.96	Vert(CT)	-0.60	13-14	>668	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.32	Horz(CT)	0.11	10	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS							Weight: 179 lb	FT = 20%

**LUMBER**

TOP CHORD 2x4 SP No.2 \*Except\* 1-5-7-11:2x4 SP DSS  
 BOT CHORD 2x4 SP DSS \*Except\* 14-13:2x4 SP No.2  
 WEBS 2x4 SP No.3  
 SLIDER Left 2x6 SP No.2 -- 1-6-0, Right 2x6 SP No.2 -- 1-6-0

**BRACING**

TOP CHORD Structural wood sheathing directly applied.  
 BOT CHORD Rigid ceiling directly applied.

**REACTIONS**

(size) 2=0-3-4, 10=0-3-8  
 Max Horiz 2=137 (LC 11)  
 Max Uplift 2=-75 (LC 12), 10=-75 (LC 12)  
 Max Grav 2=1396 (LC 1), 10=1395 (LC 1)

**FORCES**

(lb) - Maximum Compression/Maximum Tension  
 TOP CHORD 1-2=0/24, 2-4=-2063/128, 4-6=-1816/190,  
 6-8=-1819/191, 8-10=-2068/129, 10-11=0/23  
 BOT CHORD 2-15=-84/1757, 12-15=-46/1783,  
 10-12=-73/1749  
 WEBS 6-13=-14/666, 8-13=-436/146, 8-12=-63/111,  
 6-14=-13/662, 4-14=-433/146, 4-15=-66/109

**NOTES**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=120mph (3-second gust)  
 Vasd=95mph; TCCL=6.0psf; BCDL=6.0psf; h=29ft;  
 B=45ft; L=34ft; eave=4ft; Cat. II; Exp B; Enclosed;  
 MWFRS (directional) and C-C Exterior (2) -0-10-8 to 2-5-12, Interior (1) 2-5-12 to 16-9-8, Exterior (2) 16-9-8 to 20-1-12, Interior (1) 20-1-12 to 34-5-8 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
- 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 3-06-00 tall by 2-00-00 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 75 lb uplift at joint 2 and 75 lb uplift at joint 10.
- 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.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

**LOAD CASE(S)** Standard



February 14, 2023

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 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, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



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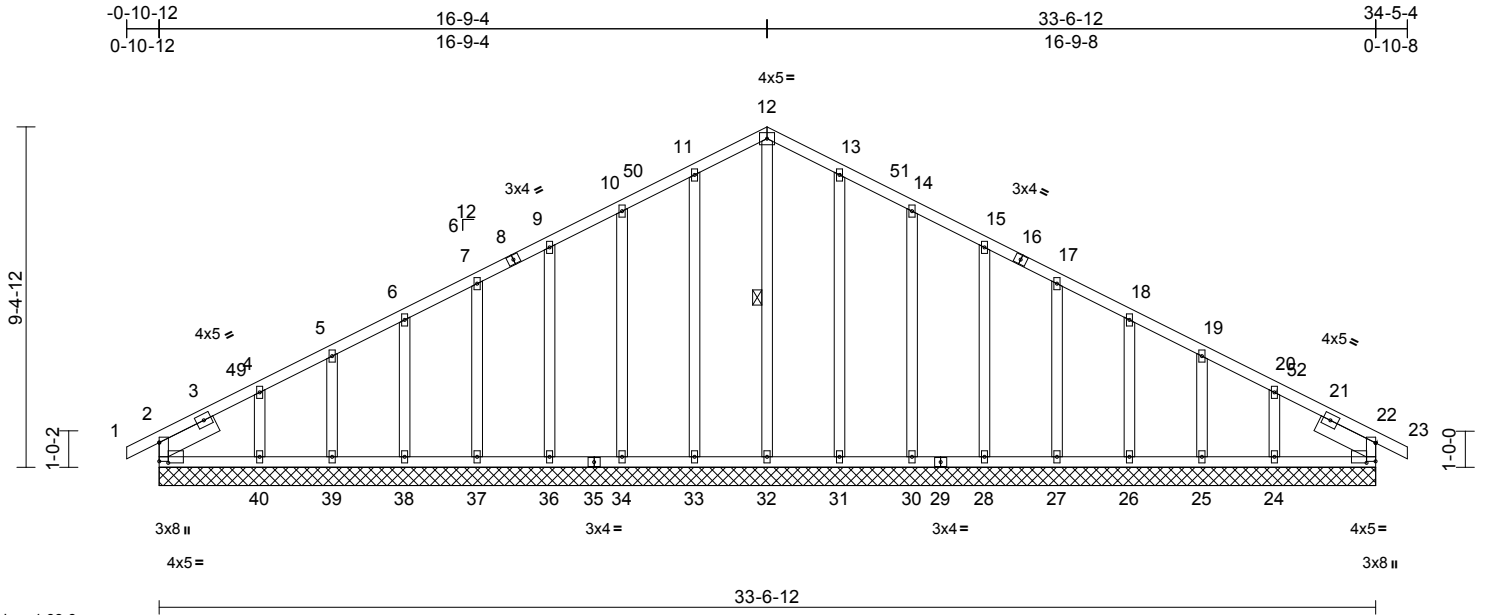


Job GHAZAA	Truss A06	Truss Type Common Supported Gable	Qty 1	Ply 1	Garman Homes - Azalea A Roof Job Reference (optional)	156629992
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Carolina Structural Systems (Star, NC)), Ether, NC - 27247,

Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Tue Feb 14 08:03:33  
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Page: 1



Scale = 1:63.6

Plate Offsets (X, Y): [2-0-3-0,0-6-11], [22-0-3-0,0-6-9]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.16	Horz(CT)	0.01	22	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS							Weight: 232 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
OTHERS 2x4 SP No.3  
SLIDER Left 2x6 SP No.2 -- 1-9-14, Right 2x6 SP No.2 -- 1-10-2

**BRACING**  
TOP CHORD Structural wood sheathing directly applied.  
BOT CHORD Rigid ceiling directly applied.  
WEBS 1 Row at midpt 12-32

**REACTIONS** (size)  
2=33-6-12, 22=33-6-12,  
24=33-6-12, 25=33-6-12,  
26=33-6-12, 27=33-6-12,  
28=33-6-12, 30=33-6-12,  
31=33-6-12, 32=33-6-12,  
33=33-6-12, 34=33-6-12,  
36=33-6-12, 37=33-6-12,  
38=33-6-12, 39=33-6-12,  
40=33-6-12, 41=33-6-12,  
45=33-6-12  
Max Horiz 2=137 (LC 11), 41=137 (LC 11)  
Max Uplift 24=47 (LC 12), 25=-10 (LC 12),  
26=-22 (LC 12), 27=-19 (LC 12),  
28=-19 (LC 12), 30=-23 (LC 12),  
31=-10 (LC 12), 33=-10 (LC 12),  
34=-23 (LC 12), 36=-19 (LC 12),  
37=-19 (LC 12), 38=-22 (LC 12),  
39=-11 (LC 12), 40=-47 (LC 12)  
Max Grav 2=191 (LC 18), 22=183 (LC 1),  
24=210 (LC 18), 25=146 (LC 1),  
26=164 (LC 22), 27=159 (LC 1),  
28=160 (LC 22), 30=160 (LC 1),  
31=165 (LC 22), 32=146 (LC 12),  
33=165 (LC 21), 34=160 (LC 1),  
36=160 (LC 21), 37=159 (LC 1),  
38=164 (LC 21), 39=147 (LC 1),  
40=221 (LC 17), 41=191 (LC 18),  
45=183 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/24, 2-4=-116/93, 4-5=-114/67,  
5-6=-107/84, 6-7=-100/127, 7-9=-93/167,  
9-10=-87/207, 10-11=-102/250,  
11-12=-115/284, 12-13=-115/286,  
13-14=-102/253, 14-15=-87/209,  
15-17=-73/169, 17-18=-66/129,  
18-19=-73/86, 19-20=-82/53, 20-22=-67/45,  
22-23=0/23  
BOT CHORD 2-40=-30/87, 39-40=-30/87, 38-39=-30/87,  
37-38=-30/87, 36-37=-30/87, 34-36=-30/87,  
33-34=-30/87, 32-33=-30/87, 31-32=-30/87,  
30-31=-30/87, 28-30=-30/87, 27-28=-30/87,  
26-27=-30/87, 25-26=-30/87, 24-25=-30/87,  
22-24=-30/87  
WEBS 12-32=-163/26, 11-33=-125/108,  
10-34=-120/84, 9-36=-120/66, 7-37=-120/67,  
6-38=-122/71, 5-39=-113/56, 4-40=-155/132,  
13-31=-125/108, 14-30=-120/84,  
15-28=-120/66, 17-27=-120/67,  
18-26=-122/71, 19-25=-113/56,  
20-24=-147/132

**NOTES**  
1) Unbalanced roof live loads have been considered for this design.  
2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCCL=6.0psf; BCCL=6.0psf; h=29ft; B=45ft; L=34ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Corner (3) -0-10-8 to 2-5-12, Exterior (2) 2-5-12 to 16-9-8, Corner (3) 16-9-8 to 20-1-12, Exterior (2) 20-1-12 to 34-5-8 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 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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 10 lb uplift at joint 33, 23 lb uplift at joint 34, 19 lb uplift at joint 36, 19 lb uplift at joint 37, 22 lb uplift at joint 38, 11 lb uplift at joint 39, 47 lb uplift at joint 40, 10 lb uplift at joint 31, 23 lb uplift at joint 30, 19 lb uplift at joint 28, 19 lb uplift at joint 27, 22 lb uplift at joint 26, 10 lb uplift at joint 25 and 47 lb uplift at joint 24.



February 14, 2023

Continued on page 2

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Job GHAZAA	Truss A06	Truss Type Common Supported Gable	Qty 1	Ply 1	Garman Homes - Azalea A Roof I56629992 Job Reference (optional)
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Carolina Structural Systems (Star, NC)), Ether, NC - 27247,

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Page: 2

- 10) 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.
- 11) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

**LOAD CASE(S)** Standard

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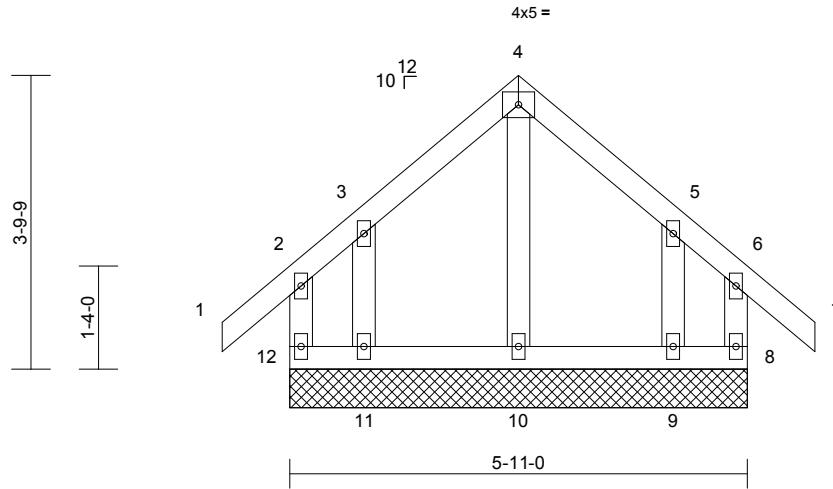
Job GHAZAA	Truss B01	Truss Type Common Supported Gable	Qty 1	Ply 1	Garman Homes - Azalea A Roof Job Reference (optional)	156629993
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Carolina Structural Systems (Star, NC)), Ether, NC - 27247,

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Page: 1

-0-10-8	2-11-8	5-11-0	6-9-8
0-10-8	2-11-8	2-11-8	0-10-8



Scale = 1:29.8

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.07	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.04	Horz(CT)	0.00	8	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS							Weight: 36 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, except end verticals.
BOT CHORD	Rigid ceiling directly applied.

**REACTIONS**

(size)	8=5-11-0, 9=5-11-0, 10=5-11-0, 11=5-11-0, 12=5-11-0
Max Horiz	12=92 (LC 10)
Max Uplift	8=56 (LC 12), 9=45 (LC 8), 11=48 (LC 9), 12=59 (LC 8)
Max Grav	8=111 (LC 17), 9=157 (LC 18), 10=178 (LC 1), 11=162 (LC 17), 12=117 (LC 18)

**FORCES**

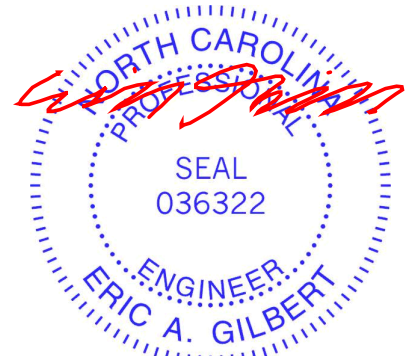
(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	2-12=-91/96, 1-2=0/39, 2-3=-48/55, 3-4=-62/100, 4-5=-63/100, 5-6=-42/52, 6-7=0/39, 6-8=-90/93
BOT CHORD	11-12=-58/54, 10-11=-58/54, 9-10=-58/54, 8-9=-58/54
WEBS	4-10=-135/0, 3-11=-110/75, 5-9=-106/74

**NOTES**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TC DL=6.0psf; BC DL=6.0psf; h=29ft; B=45ft; L=24ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Corner (3) 0-10-8 to 2-1-8, Exterior (2) 2-1-8 to 2-11-8, Corner (3) 2-11-8 to 5-9-4, Exterior (2) 5-9-4 to 6-9-8 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.
- Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 59 lb uplift at joint 12, 56 lb uplift at joint 8, 48 lb uplift at joint 11 and 45 lb uplift at joint 9.
- 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.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

**LOAD CASE(S)** Standard



February 14, 2023

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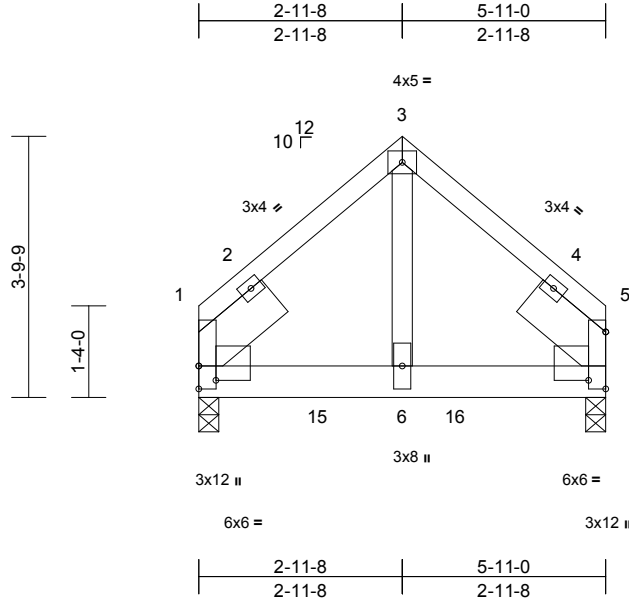
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Job GHAZAA	Truss B02	Truss Type Common Girder	Qty 1	Ply 2	Garman Homes - Azalea A Roof Job Reference (optional)	156629994
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Carolina Structural Systems (Star, NC)), Ether, NC - 27247,

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Page: 1



Scale = 1:33.5

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.29	Vert(LL)	-0.01	6-9	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.47	Vert(CT)	-0.03	6-9	>999	180		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.35	Horz(CT)	0.02	5	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MP							Weight: 79 lb	FT = 20%

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

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 5-11-0 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 1=0-3-8, 5=0-3-8  
Max Horiz 1=46 (LC 7)  
Max Grav 1=1781 (LC 1), 5=1559 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-3=-1381/0, 3-5=-1388/0  
BOT CHORD 1-6=-162/997, 5-6=-108/997  
WEBS 3-6=0/1682

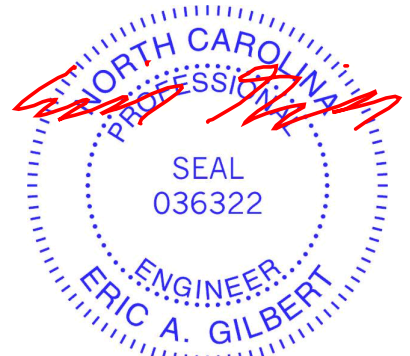
**NOTES**

- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.  
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-6-0 oc.  
Web 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=120mph (3-second gust)  
Vasd=95mph; TC DL=6.0psf; BCDL=6.0psf; h=29ft;  
B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed;  
MWFRS (directional); cantilever left and right exposed ;  
end vertical left and right exposed; 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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 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.
- Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1437 lb down at 1-8-12, and 1437 lb down at 3-8-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

**LOAD CASE(S)** Standard

- Dead + Roof Live (balanced): Lumber Increase=1.15,  
Plate Increase=1.00  
Uniform Loads (lb/ft)  
Vert: 1-3=-60, 3-5=-60, 7-11=-20  
Concentrated Loads (lb)  
Vert: 15=-1433 (B), 16=-1433 (B)



February 14, 2023

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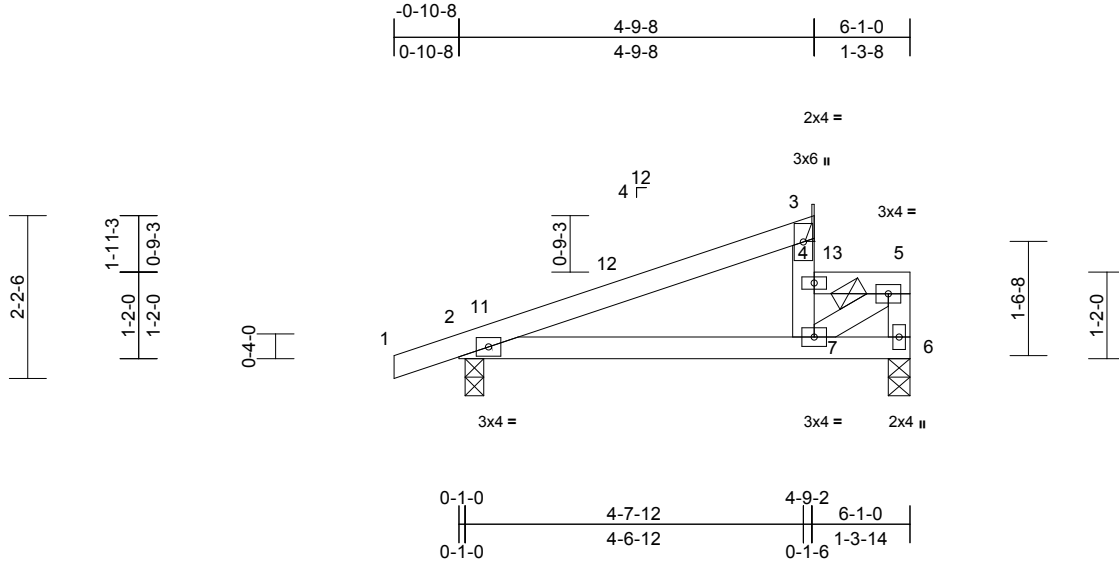


Job GHAZAA	Truss C03	Truss Type Half Hip	Qty 2	Ply 1	Garman Homes - Azalea A Roof Job Reference (optional)	156629997
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Carolina Structural Systems (Star, NC)), Ether, NC - 27247,

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Scale = 1:31.1

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.33	Vert(LL)	0.03	7-10	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.26	Vert(CT)	-0.03	7-10	>999	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.01	Horz(CT)	0.00	2	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MP							Weight: 25 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.): 4-7, 4-5.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS**

(size) 2=0-3-0, 3= Mechanical, 6=0-3-8  
Max Horiz 2=56 (LC 9)  
Max Uplift 2=-61 (LC 12)  
Max Grav 2=231 (LC 21), 3=608 (LC 1), 6=215 (LC 22)

**FORCES**

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/17, 2-3=-75/47, 4-7=-173/180, 3-4=0/500, 4-5=-23/30, 5-6=-244/0  
BOT CHORD 2-7=-99/65, 6-7=-13/15  
WEBS 5-7=-47/41

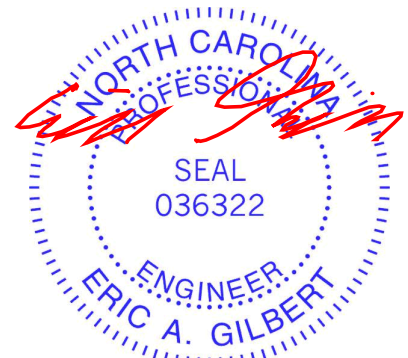
**NOTES**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCCL=6.0psf; BCDL=6.0psf; h=29ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 5-11-4 zone; cantilever left and right exposed; end vertical left and right exposed; porch 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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 61 lb uplift at joint 2.
- 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.
- Load case(s) 1 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- Gap between inside of top chord bearing and first diagonal or vertical web shall not exceed 0.500in.

**LOAD CASE(S)** Standard

- Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.00  
Uniform Loads (lb/ft)  
Vert: 1-3=-60, 4-13=-60, 5-13=-170, 6-8=-20  
Concentrated Loads (lb)  
Vert: 13=-410



February 14, 2023

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818 Soundside Road  
Edenton, NC 27932

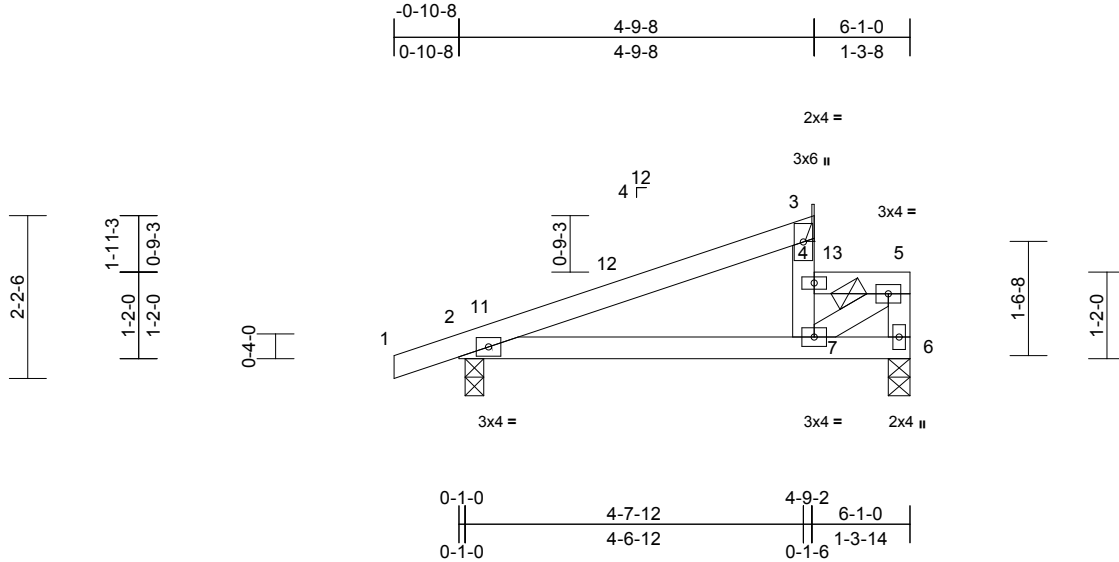


Job GHAZAA	Truss C04	Truss Type Half Hip	Qty 2	Ply 1	Garman Homes - Azalea A Roof Job Reference (optional)	156629998
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Carolina Structural Systems (Star, NC)), Ether, NC - 27247,

Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Tue Feb 14 08:03:36  
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Scale = 1:31.1

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.27	Vert(LL)	0.03	7-10	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.26	Vert(CT)	-0.03	7-10	>999	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.01	Horz(CT)	0.00	2	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MP							Weight: 25 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.): 4-7, 4-5.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS**

(size) 2=0-3-0, 3= Mechanical, 6=0-3-8  
Max Horiz 2=56 (LC 9)  
Max Uplift 2=-62 (LC 12), 3=-72 (LC 12)  
Max Grav 2=230 (LC 21), 3=328 (LC 1), 6=86 (LC 22)

**FORCES**

(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/17, 2-3=-74/48, 4-7=-170/183, 3-4=-182/219, 4-5=-20/33, 5-6=-116/36  
BOT CHORD 2-7=-100/65, 6-7=-13/15  
WEBS 5-7=-51/37

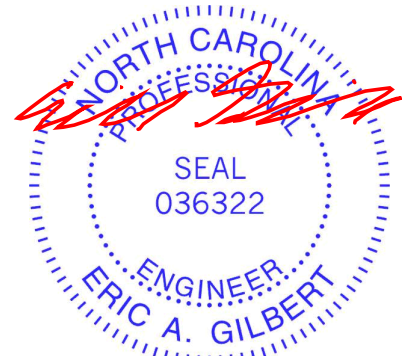
**NOTES**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TC DL=6.0psf; BC DL=6.0psf; h=29ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) 0-10-8 to 2-1-8, Interior (1) 2-1-8 to 5-11-4 zone; cantilever left and right exposed; end vertical left and right exposed; porch 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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 72 lb uplift at joint 3 and 62 lb uplift at joint 2.
- 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.
- Load case(s) 1 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- Gap between inside of top chord bearing and first diagonal or vertical web shall not exceed 0.500in.

**LOAD CASE(S)** Standard

- Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.00  
Uniform Loads (lb/ft)  
Vert: 1-3=-60, 4-13=-60, 5-13=-170, 6-8=-20



February 14, 2023

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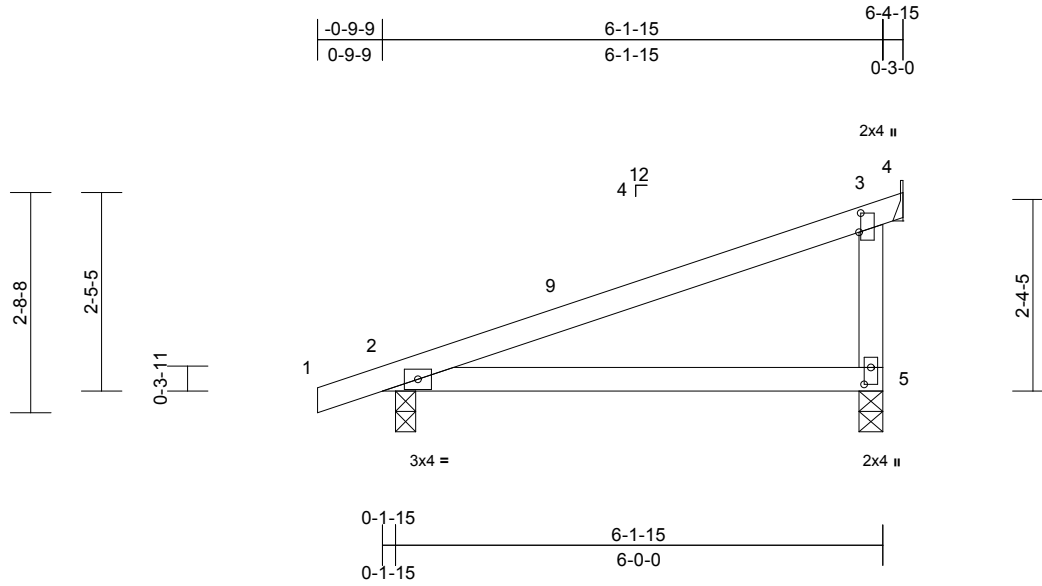
818 Soundside Road  
Edenton, NC 27932

Job GHAZAA	Truss C05	Truss Type Monopitch	Qty 1	Ply 1	Garman Homes - Azalea A Roof Job Reference (optional)	156629999
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Carolina Structural Systems (Star, NC)), Ether, NC - 27247,

Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Tue Feb 14 08:03:36  
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Page: 1



Scale = 1:28.4

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	Vert(LL)	0.09	5-8	>840	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	Vert(CT)	-0.10	5-8	>742	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS						Weight: 23 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, except end verticals.  
BOT CHORD Rigid ceiling directly applied.

**REACTIONS** (size) 2=0-3-0, 4= Mechanical, 5=0-3-8  
Max Horiz 2=68 (LC 9)  
Max Uplift 2=-73 (LC 12), 4=-615 (LC 1), 5=-259 (LC 12)  
Max Grav 2=257 (LC 1), 4=180 (LC 12), 5=908 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension

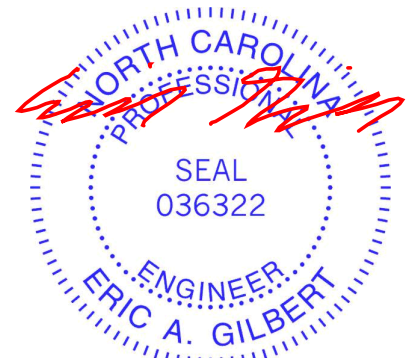
TOP CHORD 1-2=0/15, 2-3=-123/93, 3-4=-201/114, 3-5=-842/452  
BOT CHORD 2-5=-94/102

#### NOTES

- 1) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=29ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 6-3-4 zone; cantilever left and right exposed; end vertical left and right exposed; porch 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 3-06-00 tall by 2-00-00 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 615 lb uplift at joint 4, 259 lb uplift at joint 5 and 73 lb uplift at joint 2.
- 6) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 7) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

**LOAD CASE(S)** Standard



February 14, 2023

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ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

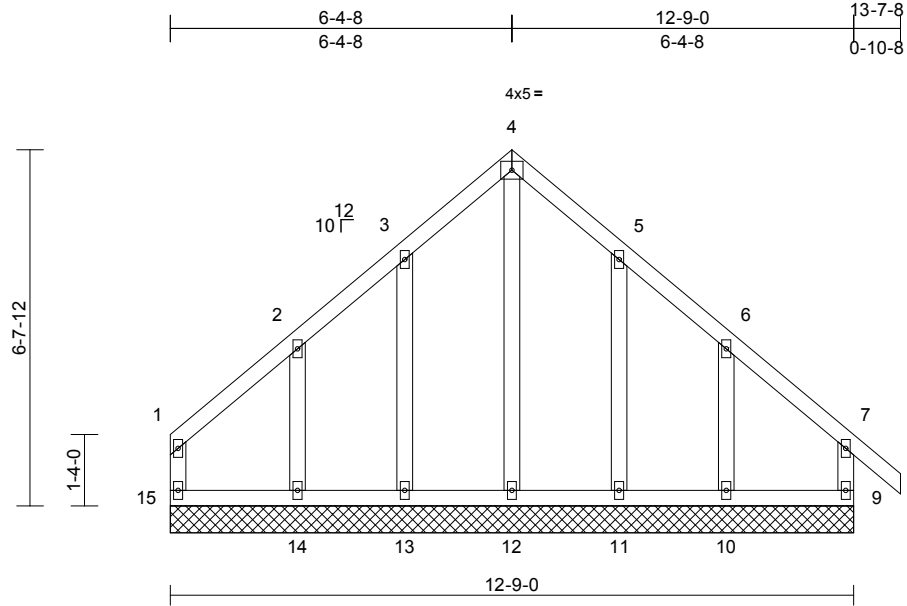
818 Soundside Road  
Edenton, NC 27932

Job GHAZAA	Truss D01	Truss Type Common Supported Gable	Qty 1	Ply 1	Garman Homes - Azalea A Roof Job Reference (optional)	156630000
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Carolina Structural Systems (Star, NC)), Ether, NC - 27247,

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Page: 1



Scale = 1:43

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.11	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.07	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.14	Horz(CT)	0.00	9	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS							Weight: 79 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, except end verticals.
BOT CHORD	Rigid ceiling directly applied.

**REACTIONS**

(size)	9=12-9-0, 10=12-9-0, 11=12-9-0, 12=12-9-0, 13=12-9-0, 14=12-9-0, 15=12-9-0
Max Horiz	15=-141 (LC 10)
Max Uplift	9=-48 (LC 12), 10=-65 (LC 12), 11=-31 (LC 12), 13=-33 (LC 12), 14=-58 (LC 12), 15=-56 (LC 8)
Max Grav	9=181 (LC 17), 10=208 (LC 18), 11=165 (LC 22), 12=193 (LC 12), 13=160 (LC 21), 14=229 (LC 17), 15=186 (LC 18)

**FORCES**

(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-15=-94/45, 1-2=-99/72, 2-3=-119/129, 3-4=-170/191, 4-5=-170/191, 5-6=-119/128, 6-7=-103/62, 7-8=0/39, 7-9=-145/87
BOT CHORD	14-15=-67/75, 13-14=-67/75, 12-13=-67/75, 11-12=-67/75, 10-11=-67/75, 9-10=-67/75
WEBS	4-12=-187/104, 3-13=-122/75, 2-14=-161/110, 5-11=-126/76, 6-10=-150/110

**NOTES**

- Unbalanced roof live loads have been considered for this design.

- Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCCL=6.0psf; BCCL=6.0psf; h=29ft; B=45ft; L=24ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Corner (3) 0-1-12 to 3-1-12, Exterior (2) 3-1-12 to 6-4-8, Corner (3) 6-4-8 to 9-4-8, Exterior (2) 9-4-8 to 13-7-8 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.
- Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 56 lb uplift at joint 15, 48 lb uplift at joint 9, 33 lb uplift at joint 13, 58 lb uplift at joint 14, 31 lb uplift at joint 11 and 65 lb uplift at joint 10.
- 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.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

- Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 69 lb down and 24 lb up at 0-1-12 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

- Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.00  
Uniform Loads (lb/ft)  
Vert: 1-4=-60, 4-7=-60, 7-8=-60, 9-15=-20  
Concentrated Loads (lb)  
Vert: 15=-69 (F)



February 14, 2023

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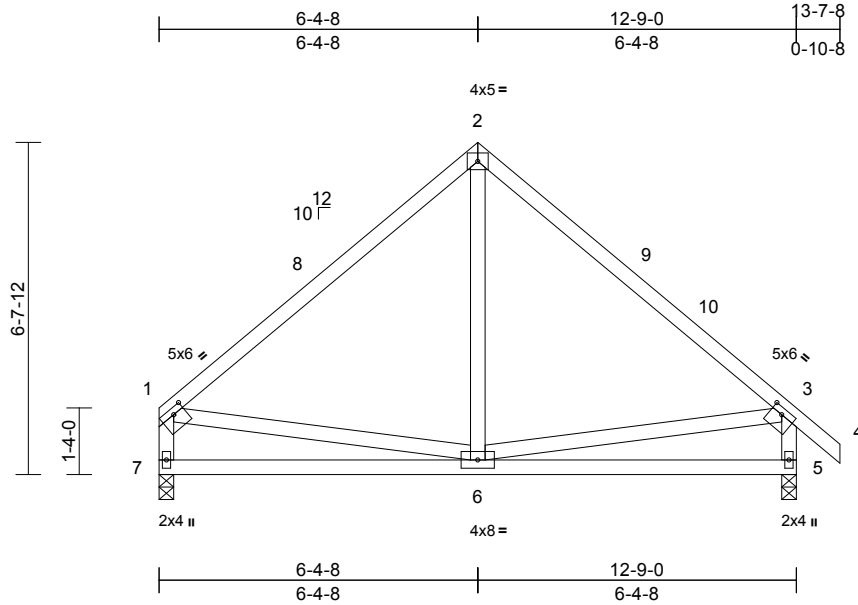
818 Soundside Road  
Edenton, NC 27932

Job GHAZAA	Truss D02	Truss Type Common	Qty 2	Ply 1	Garman Homes - Azalea A Roof Job Reference (optional)	156630001
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Carolina Structural Systems (Star, NC), Ether, NC - 27247,

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Page: 1



Scale = 1:46.1

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	Vert(LL)	-0.03	6-7	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	Vert(CT)	-0.06	6-7	>999	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	Horz(CT)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS						Weight: 75 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, except end verticals.  
BOT CHORD Rigid ceiling directly applied.

**REACTIONS**

(size) 5=0-3-8, 7=0-3-8  
Max Horiz 7=-141 (LC 10)  
Max Uplift 5=-47 (LC 12), 7=-19 (LC 12)  
Max Grav 5=562 (LC 1), 7=496 (LC 1)

**FORCES**

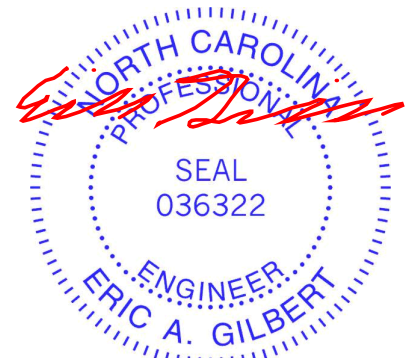
(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-479/79, 2-3=-485/82, 3-4=0/39,  
1-7=-437/78, 3-5=-503/112  
BOT CHORD 6-7=-88/262, 5-6=-54/223  
WEBS 2-6=0/237, 1-6=-32/175, 3-6=-60/177

**NOTES**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TC DL=6.0psf; BC DL=6.0psf; h=29ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) 0-1-12 to 3-1-12, Interior (1) 3-1-12 to 6-4-8, Exterior (2) 6-4-8 to 9-4-8, Interior (1) 9-4-8 to 13-7-8 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
- 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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.

- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 19 lb uplift at joint 7 and 47 lb uplift at joint 5.
- 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.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

**LOAD CASE(S)** Standard



February 14, 2023

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**

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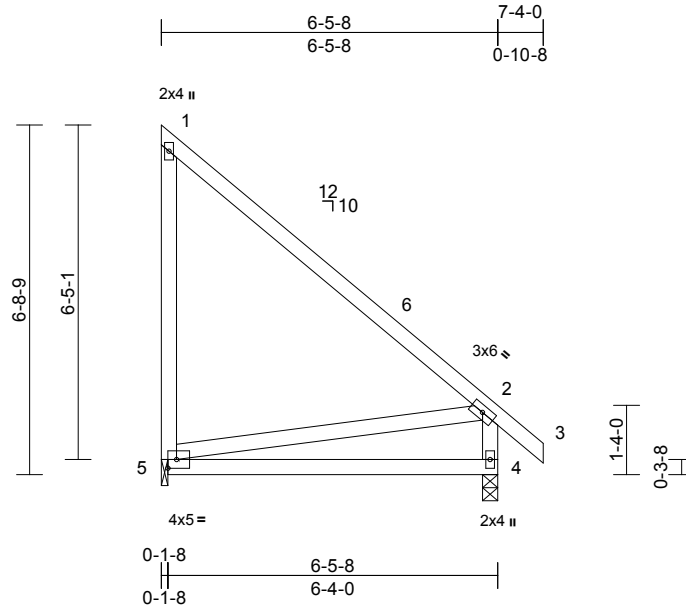
818 Soundside Road  
Edenton, NC 27932

Job GHAZAA	Truss D03	Truss Type Roof Special	Qty 17	Ply 1	Garman Homes - Azalea A Roof Job Reference (optional)	156630002
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Carolina Structural Systems (Star, NC)), Ether, NC - 27247,

Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Tue Feb 14 08:03:37  
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Page: 1



Scale = 1:44.3

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	Vert(LL)	-0.09	4-5	>853	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	Vert(CT)	-0.17	4-5	>427	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS						Weight: 43 lb	FT = 20%

**LUMBER**

TOP CHORD 2x4 SP No.2  
 BOT CHORD 2x4 SP No.2  
 WEBS 2x4 SP No.3 \*Except\* 4-2:2x4 SP No.2

**BRACING**

TOP CHORD Structural wood sheathing directly applied, except end verticals.  
 BOT CHORD Rigid ceiling directly applied.

**REACTIONS** (size) 4=0-3-8, 5=0-1-8  
 Max Horiz 5=-202 (LC 10)  
 Max Uplift 4=-15 (LC 12), 5=-81 (LC 8)  
 Max Grav 4=315 (LC 17), 5=275 (LC 18)

**FORCES** (lb) - Maximum Compression/Maximum Tension

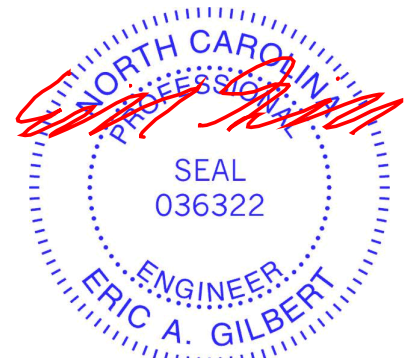
TOP CHORD 1-5=-265/198, 1-2=-220/218, 2-3=0/39,  
 2-4=-253/115

BOT CHORD 4-5=-17/18  
 WEBS 2-5=-259/285

**NOTES**

- 1) Wind: ASCE 7-10; Vult=120mph (3-second gust)  
 Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=29ft;  
 B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed;  
 MWFRS (directional) and C-C Exterior (2) 6-3-12 to  
 10-6-11, Interior (1) 10-6-11 to 13-6-0 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 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  
 3-06-00 tall by 2-00-00 wide will fit between the bottom  
 chord and any other members.
- 4) Bearing at joint(s) 5 considers parallel to grain value  
 using ANSI/TPI 1 angle to grain formula. Building  
 designer should verify capacity of bearing surface.
- 5) Provide mechanical connection (by others) of truss to  
 bearing plate at joint(s) 5.

- 6) Provide mechanical connection (by others) of truss to  
 bearing plate capable of withstanding 15 lb uplift at joint  
 4 and 81 lb uplift at joint 5.
  - 7) 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.
  - 8) This truss design requires that a minimum of 7/16"  
 structural wood sheathing be applied directly to the top  
 chord and 1/2" gypsum sheetrock be applied directly to  
 the bottom chord.
- LOAD CASE(S)** Standard



February 14, 2023

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**ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component**

**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



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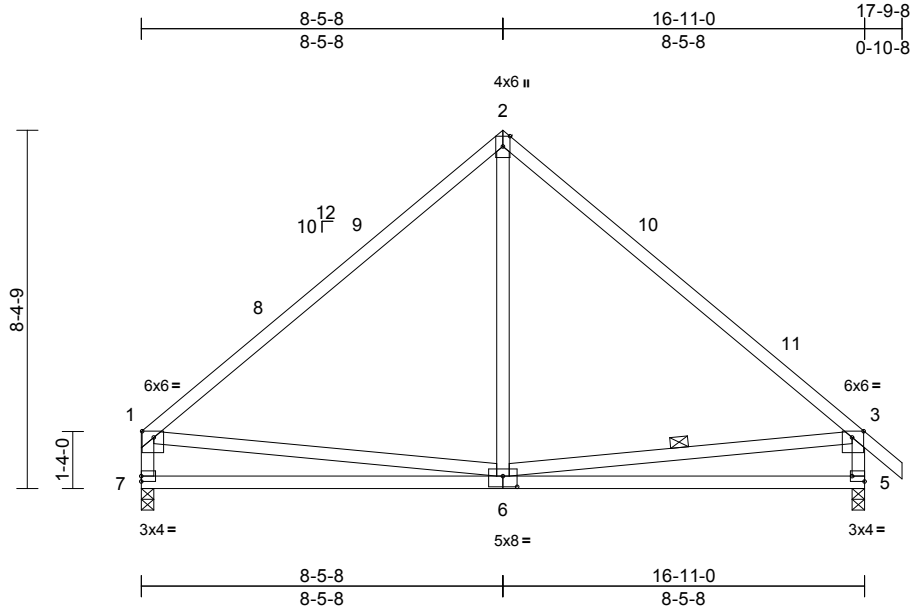


Job GHAZAA	Truss D04	Truss Type Common	Qty 4	Ply 1	Garman Homes - Azalea A Roof Job Reference (optional)	156630003
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Carolina Structural Systems (Star, NC), Ether, NC - 27247,

Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Tue Feb 14 08:03:38  
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Page: 1



Scale = 1:53.9

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.72	Vert(LL)	-0.08	6-7	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.59	Vert(CT)	-0.17	6-7	>999	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.13	Horz(CT)	0.01	5	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS							Weight: 98 lb	FT = 20%

**LUMBER**

- TOP CHORD 2x4 SP No.2
- BOT CHORD 2x4 SP No.2
- WEBS 2x4 SP No.3 \*Except\* 7-1,5-3;2x4 SP No.2

**BRACING**

- TOP CHORD Structural wood sheathing directly applied, except end verticals.
- BOT CHORD Rigid ceiling directly applied.
- WEBS 1 Row at midpt 3-6

**REACTIONS**

- (size) 5=0-3-8, 7=0-3-8
- Max Horiz 7=-173 (LC 10)
- Max Uplift 5=-53 (LC 12), 7=-25 (LC 12)
- Max Grav 5=728 (LC 1), 7=663 (LC 1)

**FORCES**

- (lb) - Maximum Compression/Maximum Tension

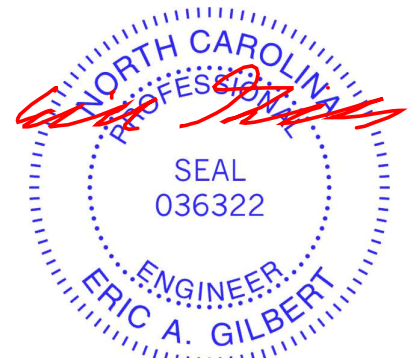
- TOP CHORD 1-2=-664/86, 2-3=-672/90, 3-4=0/39, 1-7=-586/87, 3-5=-651/118
- BOT CHORD 5-7=-111/414
- WEBS 2-6=0/339, 1-6=-81/198, 3-6=-143/212

**NOTES**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TC DL=6.0psf; BC DL=6.0psf; h=29ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) 0-1-12 to 3-1-12, Interior (1) 3-1-12 to 8-5-8, Exterior (2) 8-5-8 to 11-5-8, Interior (1) 11-5-8 to 17-9-8 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
- 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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.

- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 25 lb uplift at joint 7 and 53 lb uplift at joint 5.
- 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.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

**LOAD CASE(S)** Standard



February 14, 2023

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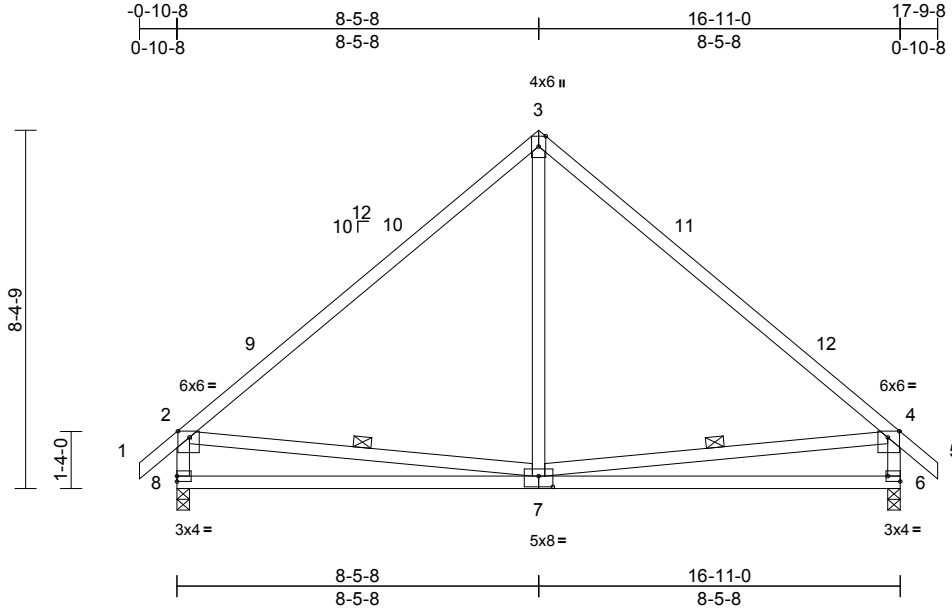


Job GHAZAA	Truss D05	Truss Type Common	Qty 2	Ply 1	Garman Homes - Azalea A Roof Job Reference (optional)	156630004
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Carolina Structural Systems (Star, NC)), Ether, NC - 27247,

Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Tue Feb 14 08:03:38  
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Page: 1



Scale = 1:53.9

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.72	Vert(LL)	-0.08	6-7	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.59	Vert(CT)	-0.17	6-7	>999	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.13	Horz(CT)	0.01	6	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS							Weight: 100 lb	FT = 20%

**LUMBER**

TOP CHORD 2x4 SP No.2  
 BOT CHORD 2x4 SP No.2  
 WEBS 2x4 SP No.3 \*Except\* 8-2,6-4:2x4 SP No.2

**BRACING**

TOP CHORD Structural wood sheathing directly applied, except end verticals.  
 BOT CHORD Rigid ceiling directly applied.  
 WEBS 1 Row at midpt 2-7, 4-7

**REACTIONS**

(size) 6=0-3-8, 8=0-3-8  
 Max Horiz 8=-178 (LC 10)  
 Max Uplift 6=-53 (LC 12), 8=-53 (LC 12)  
 Max Grav 6=726 (LC 1), 8=726 (LC 1)

**FORCES**

(lb) - Maximum Compression/Maximum Tension

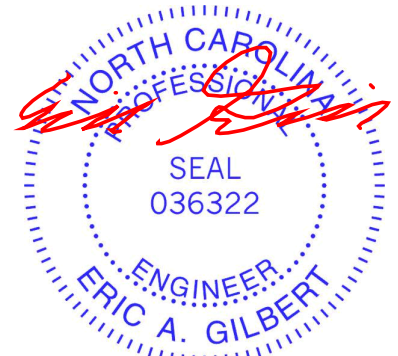
TOP CHORD 1-2=0/39, 2-3=-668/90, 3-4=-668/90,  
 4-5=0/39, 2-8=-649/119, 4-6=-649/119  
 BOT CHORD 6-8=-147/493  
 WEBS 3-7=0/343, 2-7=-137/211, 4-7=-144/212

**NOTES**

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TC DL=6.0psf; BC DL=6.0psf; h=29ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) 0-10-8 to 2-1-8, Interior (1) 2-1-8 to 8-5-8, Exterior (2) 8-5-8 to 11-5-8, Interior (1) 11-5-8 to 17-9-8 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
- 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 4) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.

- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 53 lb uplift at joint 8 and 53 lb uplift at joint 6.
- 6) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 7) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

**LOAD CASE(S)** Standard



February 14, 2023

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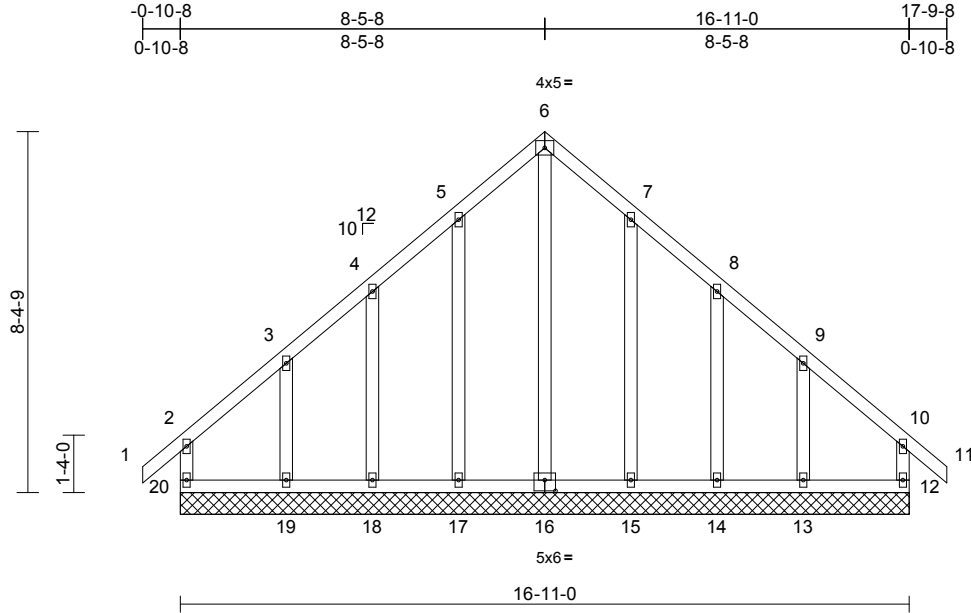
818 Soundside Road  
 Edenton, NC 27932

Job GHAZAA	Truss D06	Truss Type Common Supported Gable	Qty 1	Ply 1	Garman Homes - Azalea A Roof Job Reference (optional)	156630005
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Carolina Structural Systems (Star, NC)), Ether, NC - 27247,

Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Tue Feb 14 08:03:39  
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Page: 1



Scale = 1:53.5

Plate Offsets (X, Y): [16:0-3-0-0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.14	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.09	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.32	Horz(CT)	0.00	12	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS								
											Weight: 116 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, except end verticals.  
BOT CHORD Rigid ceiling directly applied.

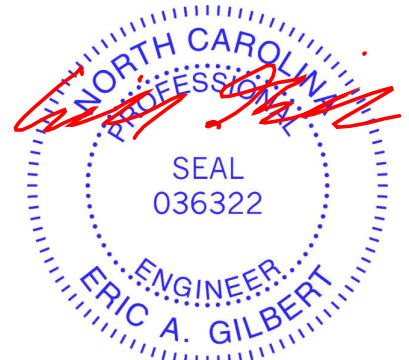
**REACTIONS** (size)  
12=16-11-0, 13=16-11-0,  
14=16-11-0, 15=16-11-0,  
16=16-11-0, 17=16-11-0,  
18=16-11-0, 19=16-11-0,  
20=16-11-0  
Max Horiz 20=-178 (LC 10)  
Max Uplift 12=-44 (LC 12), 13=-65 (LC 12),  
14=-43 (LC 12), 15=-32 (LC 12),  
17=-32 (LC 12), 18=-43 (LC 12),  
19=-65 (LC 12), 20=-52 (LC 8)  
Max Grav 12=189 (LC 17), 13=226 (LC 18),  
14=156 (LC 1), 15=175 (LC 18),  
16=260 (LC 12), 17=176 (LC 17),  
18=156 (LC 1), 19=232 (LC 17),  
20=200 (LC 18)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 2-20=-159/80, 1-2=0/39, 2-3=-122/100,  
3-4=-104/118, 4-5=-160/188, 5-6=-210/246,  
6-7=-210/246, 7-8=-159/187, 8-9=-105/119,  
9-10=-111/85, 10-11=0/39, 10-12=-150/78  
BOT CHORD 19-20=-83/85, 18-19=-83/85, 17-18=-83/85,  
15-17=-83/85, 14-15=-83/85, 13-14=-83/85,  
12-13=-83/85  
WEBS 6-16=-256/154, 5-17=-133/69, 4-18=-127/85,  
3-19=-159/104, 7-15=-132/68, 8-14=-126/85,  
9-13=-156/103

**NOTES**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCCL=6.0psf; BCCL=6.0psf; h=29ft; B=45ft; L=24ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Corner (3) -0-10-8 to 2-1-8, Exterior (2) 2-1-8 to 8-5-8, Corner (3) 8-5-8 to 11-5-8, Exterior (2) 11-5-8 to 17-9-8 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.
- Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 52 lb uplift at joint 20, 44 lb uplift at joint 12, 32 lb uplift at joint 17, 43 lb uplift at joint 18, 65 lb uplift at joint 19, 32 lb uplift at joint 15, 43 lb uplift at joint 14 and 65 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.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

**LOAD CASE(S)** Standard



February 14, 2023

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**ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component**

**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

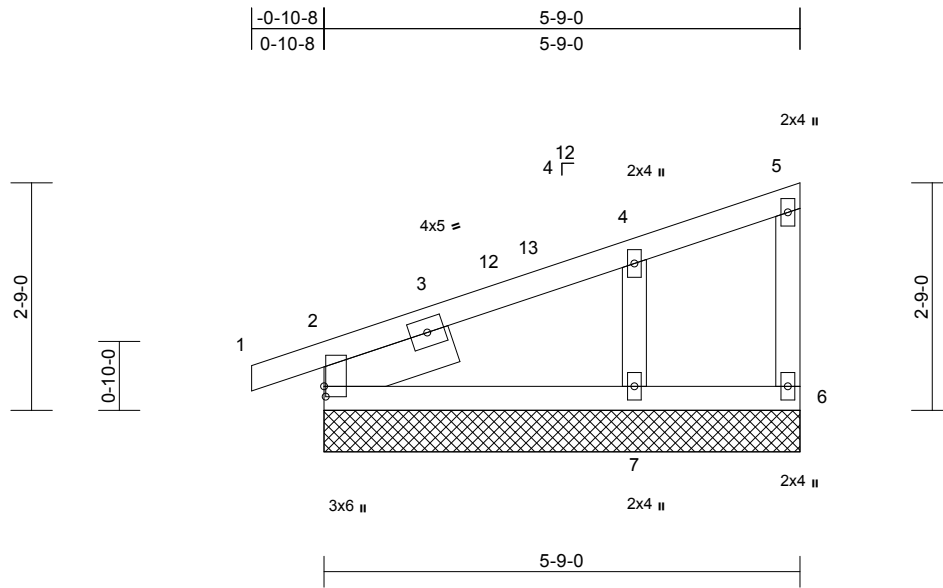
818 Soundside Road  
Edenton, NC 27932

Job GHAZAA	Truss E01	Truss Type Monopitch Supported Gable	Qty 1	Ply 1	Garman Homes - Azalea A Roof Job Reference (optional)	156630006
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Carolina Structural Systems (Star, NC)), Ether, NC - 27247,

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Page: 1



Scale = 1:27.8

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.13	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.09	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00	2	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS							Weight: 28 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  
 SLIDER Left 2x6 SP No.2 -- 1-7-13

**BRACING**

TOP CHORD Structural wood sheathing directly applied, except end verticals.  
 BOT CHORD Rigid ceiling directly applied.

**REACTIONS**

(size) 2=5-9-0, 6=5-9-0, 7=5-9-0, 8=5-9-0  
 Max Horiz 2=74 (LC 11), 8=74 (LC 11)  
 Max Uplift 2=-22 (LC 12), 7=-27 (LC 12),  
 8=-22 (LC 12)  
 Max Grav 2=183 (LC 1), 6=23 (LC 1), 7=295 (LC 1), 8=183 (LC 1)

**FORCES**

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/17, 2-4=-119/80, 4-5=-47/47,  
 5-6=-23/40  
 BOT CHORD 2-7=-37/49, 6-7=-37/49  
 WEBS 4-7=-205/212

**NOTES**

- 1) Wind: ASCE 7-10; Vult=120mph (3-second gust)  
 Vasd=95mph; TCCL=6.0psf; BCDL=6.0psf; h=29ft;  
 B=45ft; L=24ft; eave=2ft; Cat. II; Exp B; Enclosed;  
 MWFRS (directional) and C-C Corner (3) 0-10-8 to 2-1-8, Exterior (2) 2-1-8 to 5-7-4 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) Gable requires continuous bottom chord bearing.
- 4) Gable studs spaced at 2-0-0 oc.

- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 22 lb uplift at joint 2, 27 lb uplift at joint 7 and 22 lb uplift at joint 2.
- 8) 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.
- 9) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

**LOAD CASE(S)** Standard



February 14, 2023

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 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, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



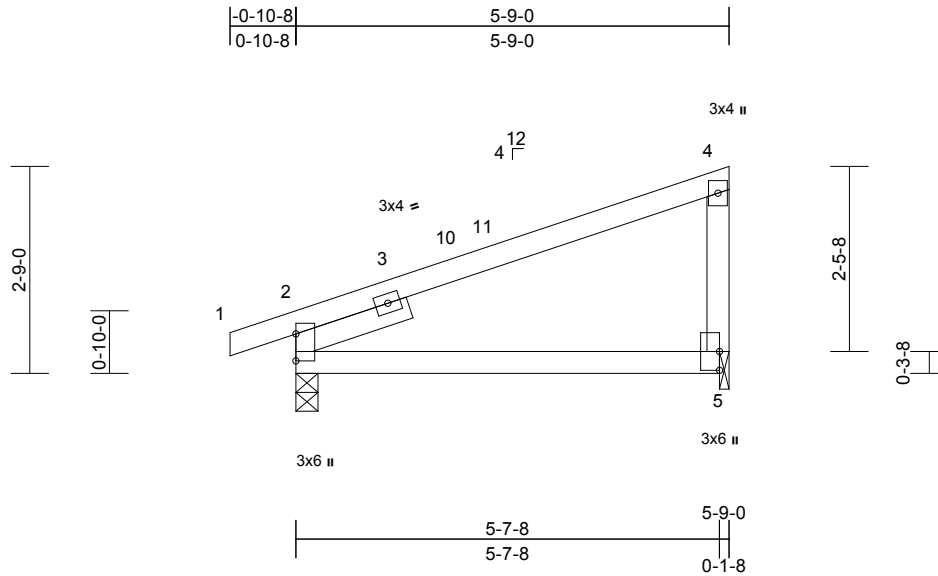
818 Soundside Road  
 Edenton, NC 27932

Job GHAZAA	Truss E02	Truss Type Monopitch	Qty 7	Ply 1	Garman Homes - Azalea A Roof Job Reference (optional)	156630007
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Carolina Structural Systems (Star, NC)), Ether, NC - 27247,

Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Tue Feb 14 08:03:39  
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Page: 1



Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.39	Vert(LL)	-0.02	5-8	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.23	Vert(CT)	-0.04	5-8	>999	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.01	2	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS							Weight: 24 lb	FT = 20%

- LUMBER**
- TOP CHORD 2x4 SP No.2
  - BOT CHORD 2x4 SP No.2
  - OTHERS 2x4 SP No.2
  - SLIDER Left 2x4 SP No.2 -- 1-7-6

- BRACING**
- TOP CHORD Structural wood sheathing directly applied.
  - BOT CHORD Rigid ceiling directly applied.

- REACTIONS** (size) 2=0-3-8, 5=0-1-8
- Max Horiz 2=110 (LC 12)
  - Max Uplift 2=-12 (LC 8), 5=-31 (LC 12)
  - Max Grav 2=281 (LC 1), 5=220 (LC 1)

- FORCES** (lb) - Maximum Compression/Maximum Tension
- TOP CHORD 1-2=0/17, 2-4=-156/52, 4-5=-141/107
  - BOT CHORD 2-5=-189/133

- NOTES**
- 1) Wind: ASCE 7-10; Vult=120mph (3-second gust)  
Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=29ft;  
B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed;  
MWFRS (directional) and C-C Exterior (2) -0-10-8 to  
2-1-8, Interior (1) 2-1-8 to 5-7-4 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) 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  
3-06-00 tall by 2-00-00 wide will fit between the bottom  
chord and any other members.
  - 4) Bearing at joint(s) 5 considers parallel to grain value  
using ANSI/TPI 1 angle to grain formula. Building  
designer should verify capacity of bearing surface.
  - 5) Provide mechanical connection (by others) of truss to  
bearing plate at joint(s) 5.
  - 6) Provide mechanical connection (by others) of truss to  
bearing plate capable of withstanding 12 lb uplift at joint  
2 and 31 lb uplift at joint 5.

- 7) 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.
  - 8) This truss design requires that a minimum of 7/16"  
structural wood sheathing be applied directly to the top  
chord and 1/2" gypsum sheetrock be applied directly to  
the bottom chord.
- LOAD CASE(S)** Standard



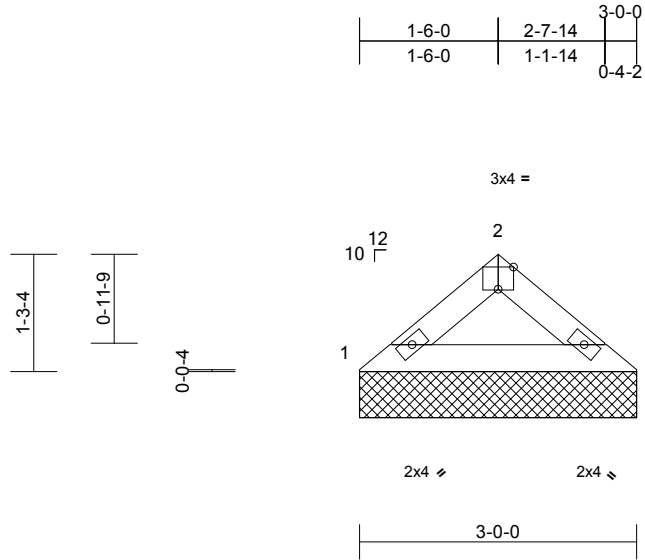
February 14, 2023

Job GHAZAA	Truss V01	Truss Type Valley	Qty 1	Ply 1	Garman Homes - Azalea A Roof Job Reference (optional)	156630008
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Carolina Structural Systems (Star, NC)), Ether, NC - 27247,

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Page: 1



Scale = 1:25

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.07	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.09	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MP							Weight: 9 lb	FT = 20%

**LUMBER**

TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.3

**BRACING**

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

**REACTIONS** (size) 1=3-0-0, 3=3-0-0  
Max Horiz 1=20 (LC 11)  
Max Uplift 1=-4 (LC 12), 3=-4 (LC 12)  
Max Grav 1=120 (LC 1), 3=120 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-155/24, 2-3=-155/24  
BOT CHORD 1-3=-10/115

**NOTES**

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=29ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) Gable requires continuous bottom chord bearing.
- 5) Gable studs spaced at 2-0-0 oc.
- 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- 7) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 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 4 lb uplift at joint 1 and 4 lb uplift at joint 3.
- 9) 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.

**LOAD CASE(S)** Standard



February 14, 2023

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ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

818 Soundside Road  
Edenton, NC 27932

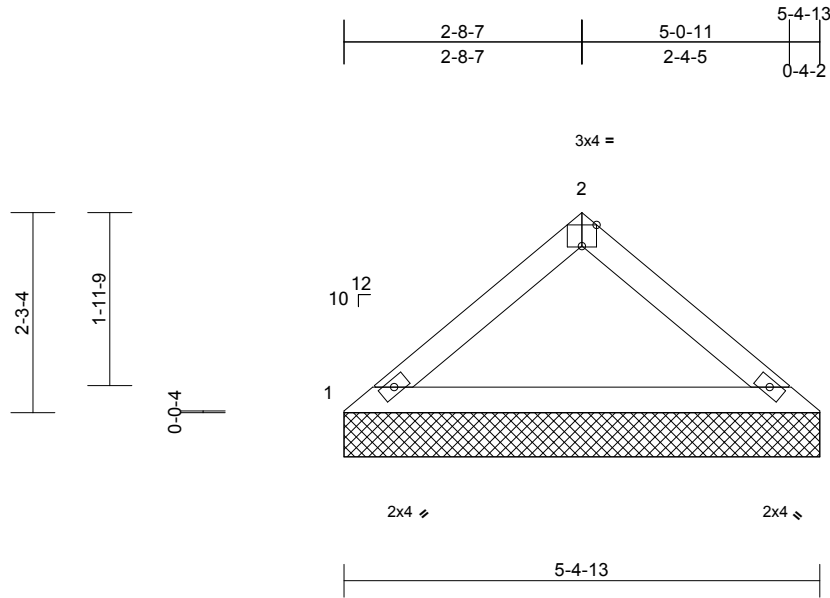


Job GHAZAA	Truss V02	Truss Type Valley	Qty 1	Ply 1	Garman Homes - Azalea A Roof Job Reference (optional)	156630009
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Carolina Structural Systems (Star, NC), Ether, NC - 27247,

Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Tue Feb 14 08:03:40  
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Page: 1



Scale = 1:26.2

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.20	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.28	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.01	3	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS							Weight: 17 lb	FT = 20%

#### LUMBER

TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.3

#### BRACING

TOP CHORD Structural wood sheathing directly applied.  
BOT CHORD Rigid ceiling directly applied.

#### REACTIONS

(size) 1=5-4-13, 3=5-4-13  
Max Horiz 1=39 (LC 11)  
Max Uplift 1=-8 (LC 12), 3=-8 (LC 12)  
Max Grav 1=216 (LC 1), 3=216 (LC 1)

#### FORCES

(lb) - Maximum Compression/Maximum Tension

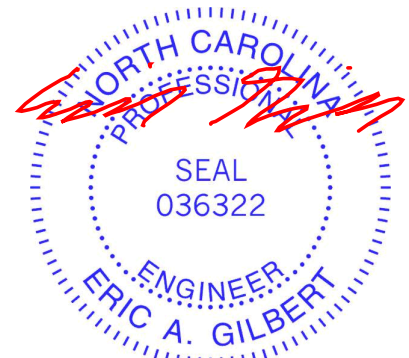
TOP CHORD 1-2=-300/43, 2-3=-300/43  
BOT CHORD 1-3=-25/224

#### NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TC DL=6.0psf; BCDL=6.0psf; h=29ft; B=45ft; L=24ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Corner (3) 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.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 6-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.

- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 8 lb uplift at joint 1 and 8 lb uplift at joint 3.
- 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.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



February 14, 2023

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

818 Soundside Road  
Edenton, NC 27932

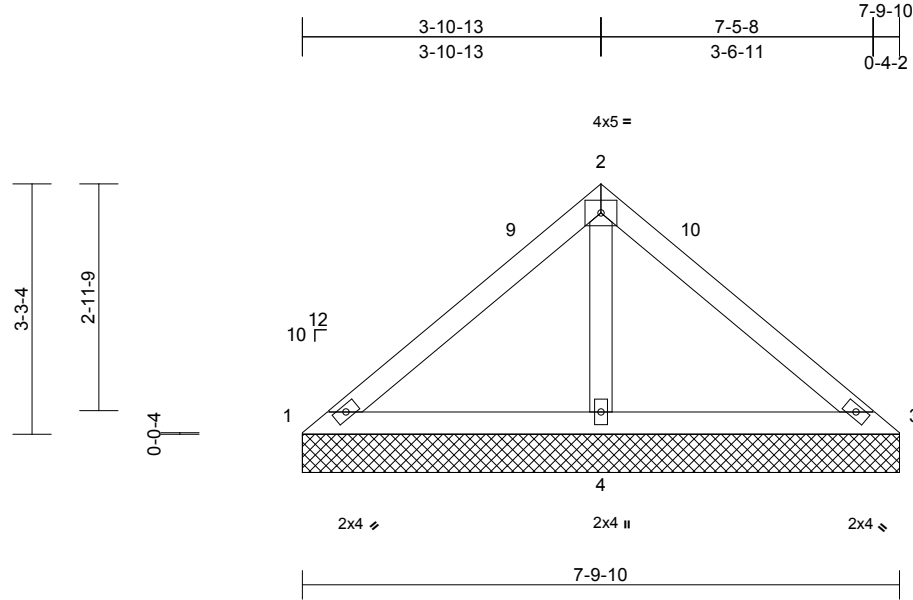


Job GHAZAA	Truss V03	Truss Type Valley	Qty 1	Ply 1	Garman Homes - Azalea A Roof Job Reference (optional)	156630010
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Carolina Structural Systems (Star, NC), Ether, NC - 27247,

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Page: 1



Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.18	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.30	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.10	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS							Weight: 29 lb	FT = 20%

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

**BRACING**  
TOP CHORD Structural wood sheathing directly applied.  
BOT CHORD Rigid ceiling directly applied.

**REACTIONS** (size) 1=7-9-10, 3=7-9-10, 4=7-9-10  
Max Horiz 1=-58 (LC 10)  
Max Uplift 1=-12 (LC 22), 3=-12 (LC 21),  
4=-56 (LC 12)  
Max Grav 1=66 (LC 21), 3=66 (LC 22), 4=551  
(LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-62/220, 2-3=-61/220  
BOT CHORD 1-4=-179/102, 3-4=-179/102  
WEBS 2-4=-401/116

- 7) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 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 12 lb uplift at joint 1, 12 lb uplift at joint 3 and 56 lb uplift at joint 4.
- 9) 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.
- 10) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- LOAD CASE(S)** Standard

- NOTES**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=29ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) 0-0-5 to 3-0-5, Interior (1) 3-0-5 to 3-11-2, Exterior (2) 3-11-2 to 7-0-9, Interior (1) 7-0-9 to 7-9-15 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.
  - Gable requires continuous bottom chord bearing.
  - Gable studs spaced at 6-0-0 oc.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.



February 14, 2023

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**ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component**

**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



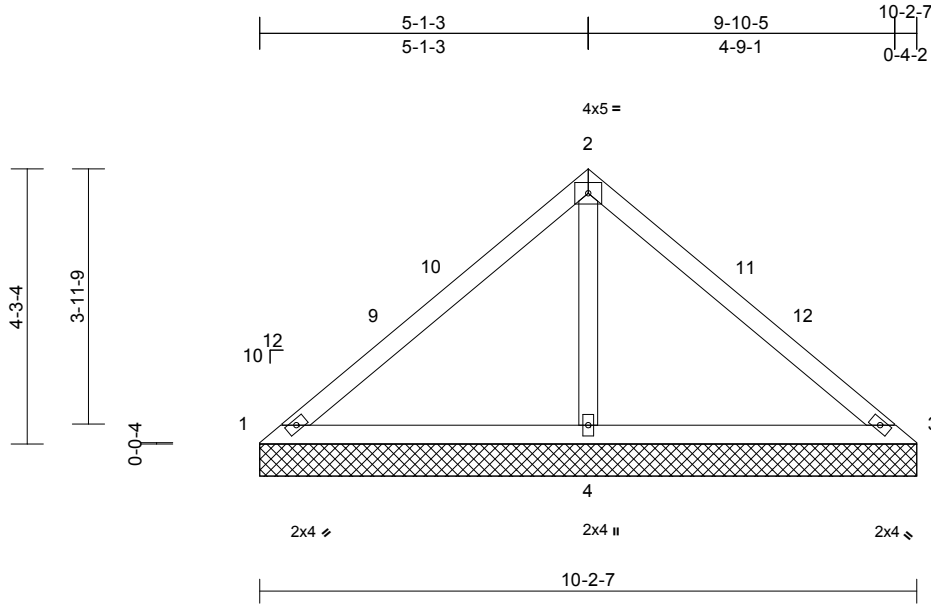
818 Soundside Road  
Edenton, NC 27932

Job GHAZAA	Truss V04	Truss Type Valley	Qty 1	Ply 1	Garman Homes - Azalea A Roof Job Reference (optional)	156630011
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Carolina Structural Systems (Star, NC), Ether, NC - 27247,

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Page: 1



Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.27	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.39	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.19	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS							Weight: 39 lb	FT = 20%

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

**BRACING**  
TOP CHORD Structural wood sheathing directly applied.  
BOT CHORD Rigid ceiling directly applied.

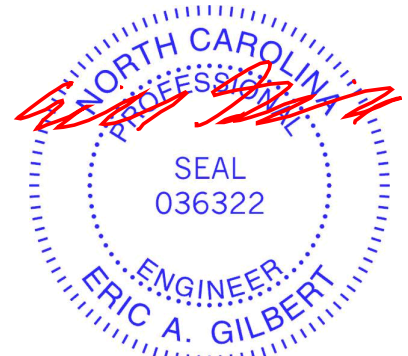
**REACTIONS** (size) 1=10-2-7, 3=10-2-7, 4=10-2-7  
Max Horiz 1=-77 (LC 10)  
Max Uplift 1=-24 (LC 22), 3=-24 (LC 21), 4=-71 (LC 12)  
Max Grav 1=79 (LC 21), 3=79 (LC 22), 4=740 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-67/311, 2-3=-67/311  
BOT CHORD 1-4=-219/106, 3-4=-219/106  
WEBS 2-4=-575/148

- 7) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 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 24 lb uplift at joint 1, 24 lb uplift at joint 3 and 71 lb uplift at joint 4.
- 9) 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.
- 10) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- LOAD CASE(S)** Standard

**NOTES**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=29ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) 0-0-5 to 3-0-5, Interior (1) 3-0-5 to 5-1-8, Exterior (2) 5-1-8 to 8-1-8, Interior (1) 8-1-8 to 10-2-12 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.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 6-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.



February 14, 2023

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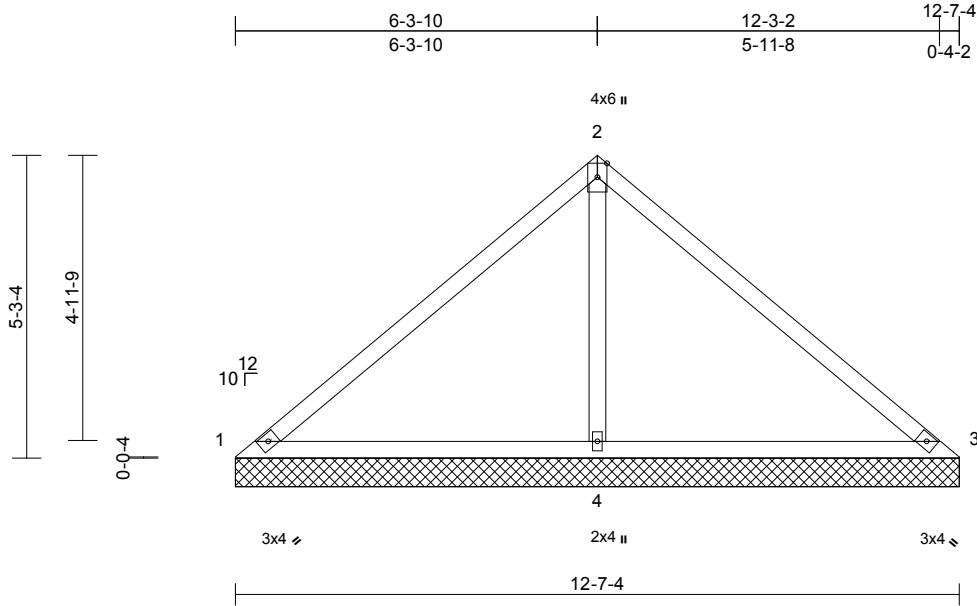
818 Soundside Road  
Edenton, NC 27932

Job GHAZAA	Truss V05	Truss Type Valley	Qty 1	Ply 1	Garman Homes - Azalea A Roof Job Reference (optional)	156630012
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Carolina Structural Systems (Star, NC)), Ether, NC - 27247,

Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Tue Feb 14 08:03:41  
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Page: 1



Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.41	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.35	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.38	Horiz(TL)	0.01	3	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS							Weight: 49 lb	FT = 20%

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

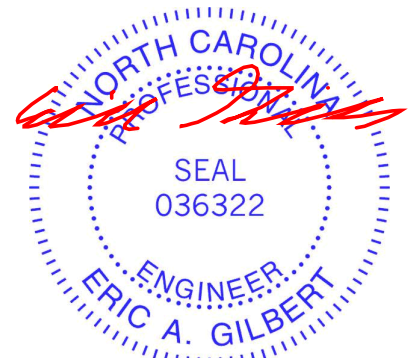
**BRACING**  
TOP CHORD Structural wood sheathing directly applied.  
BOT CHORD Rigid ceiling directly applied.

**REACTIONS** (size) 1=12-7-4, 3=12-7-4, 4=12-7-4  
Max Horiz 1=95 (LC 11)  
Max Uplift 1=-54 (LC 22), 3=-54 (LC 21),  
4=-108 (LC 12)  
Max Grav 1=72 (LC 21), 3=72 (LC 22), 4=985  
(LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-106/441, 2-3=-106/441  
BOT CHORD 1-4=-309/153, 3-4=-309/153  
WEBS 2-4=-785/227

- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 54 lb uplift at joint 1, 54 lb uplift at joint 3 and 108 lb uplift at joint 4.
  - 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.
  - This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- LOAD CASE(S)** Standard

- NOTES**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCCL=6.0psf; h=29ft; B=45ft; L=24ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Corner (3) 0-0-5 to 3-0-5, Exterior (2) 3-0-5 to 6-3-15, Corner (3) 6-3-15 to 9-3-15, Exterior (2) 9-3-15 to 12-7-8 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.
  - Gable requires continuous bottom chord bearing.
  - Gable studs spaced at 6-0-0 oc.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.



February 14, 2023

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 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, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



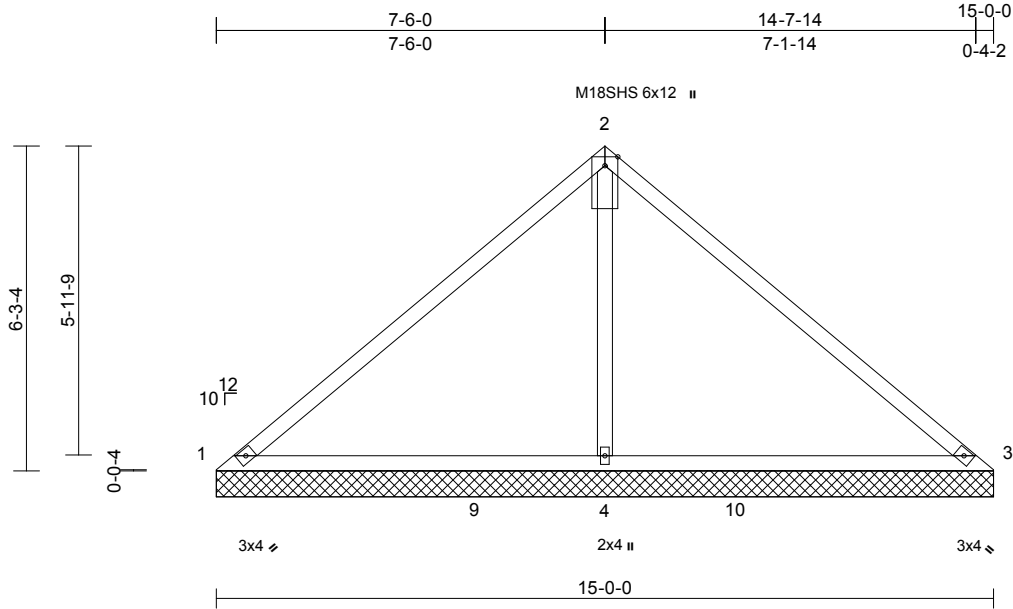
818 Soundside Road  
Edenton, NC 27932

Job GHAZAA	Truss V06	Truss Type Valley	Qty 1	Ply 1	Garman Homes - Azalea A Roof Job Reference (optional)	156630013
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Carolina Structural Systems (Star, NC)), Ether, NC - 27247,

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Page: 1



Scale = 1:44.5

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.59	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.51	Vert(TL)	n/a	-	n/a	999	M18SHS	244/190
BCLL	0.0*	Rep Stress Incr	YES	WB	0.70	Horiz(TL)	0.01	3	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS							Weight: 58 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.  
BOT CHORD Rigid ceiling directly applied.

**REACTIONS** (size) 1=15-0-0, 3=15-0-0, 4=15-0-0  
Max Horiz 1=-114 (LC 10)  
Max Uplift 1=-95 (LC 22), 3=-95 (LC 21),  
4=-153 (LC 12)  
Max Grav 1=55 (LC 21), 3=55 (LC 22),  
4=1295 (LC 17)

**FORCES** (lb) - Maximum Compression/Maximum Tension

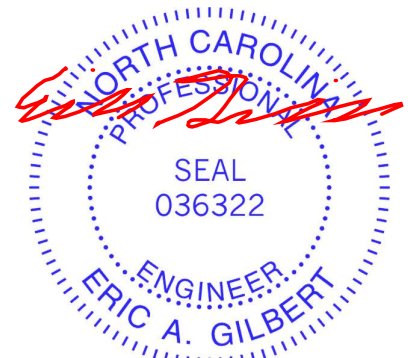
TOP CHORD 1-2=-151/597, 2-3=-151/597  
BOT CHORD 1-4=-419/196, 3-4=-419/196  
WEBS 2-4=-1029/296

#### NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=120mph (3-second gust)  
Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=29ft;  
B=45ft; L=24ft; eave=2ft; Cat. II; Exp B; Enclosed;  
MWFRS (directional) and C-C Corner (3) 0-0-5 to 3-0-5,  
Exterior (2) 3-0-5 to 7-6-5, Corner (3) 7-6-5 to 10-6-5,  
Exterior (2) 10-6-5 to 15-0-5 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
- 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.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 6'-0-0 oc.
- This truss has been designed for a 10.0 psf bottom  
chord live load nonconcurrent with any other live loads.

- \* This truss has been designed for a live load of 20.0psf  
on the bottom chord in all areas where a rectangle  
3'-06-00 tall by 2'-00-00 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 95 lb uplift at joint  
1, 95 lb uplift at joint 3 and 153 lb uplift at joint 4.
- 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.
- This truss design requires that a minimum of 7/16"  
structural wood sheathing be applied directly to the top  
chord and 1/2" gypsum sheetrock be applied directly to  
the bottom chord.

**LOAD CASE(S)** Standard



February 14, 2023

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 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

**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

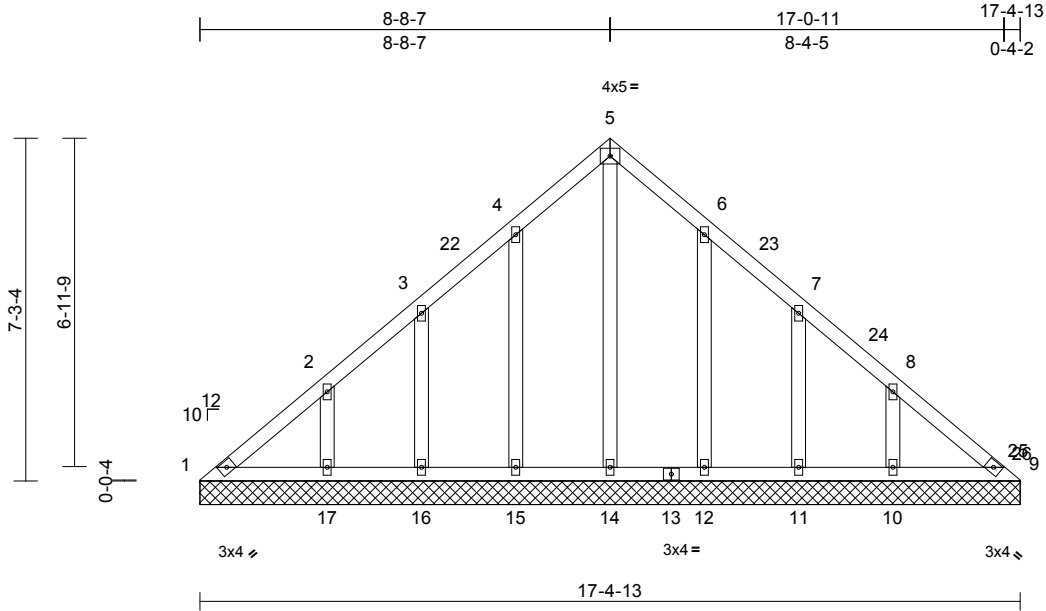
818 Soundside Road  
Edenton, NC 27932

Job GHAZAA	Truss V07	Truss Type Valley	Qty 1	Ply 1	Garman Homes - Azalea A Roof Job Reference (optional)	156630014
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Carolina Structural Systems (Star, NC)), Ether, NC - 27247,

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Page: 1



Scale = 1:48.9

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.07	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.07	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.11	Horiz(TL)	0.00	9	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS							Weight: 98 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.  
BOT CHORD Rigid ceiling directly applied.

**REACTIONS** (size)

1=17-4-13, 9=17-4-13, 10=17-4-13,  
11=17-4-13, 12=17-4-13,  
14=17-4-13, 15=17-4-13,  
16=17-4-13, 17=17-4-13  
Max Horiz 1=-131 (LC 10)  
Max Uplift 1=-9 (LC 10), 10=-41 (LC 12),  
11=-47 (LC 12), 12=-38 (LC 12),  
15=-38 (LC 12), 16=-46 (LC 12),  
17=-43 (LC 12)  
Max Grav 1=111 (LC 18), 9=73 (LC 17),  
10=221 (LC 18), 11=147 (LC 18),  
12=176 (LC 18), 14=156 (LC 1),  
15=178 (LC 17), 16=144 (LC 17),  
17=228 (LC 17)

**FORCES** (lb) - Maximum Compression/Maximum Tension

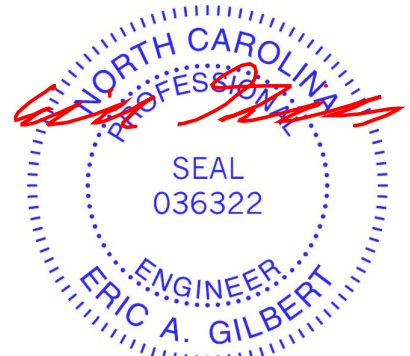
TOP CHORD 1-2=-134/122, 2-3=-84/89, 3-4=-65/77,  
4-5=-101/113, 5-6=-101/113, 6-7=-46/61,  
7-8=-52/56, 8-9=-93/101  
BOT CHORD 1-17=-87/109, 16-17=-87/86, 15-16=-87/86,  
14-15=-87/86, 12-14=-87/86, 11-12=-87/86,  
10-11=-87/86, 9-10=-87/86  
WEBS 5-14=-118/21, 4-15=-135/76, 3-16=-123/70,  
2-17=-152/73, 6-12=-133/76, 7-11=-123/71,  
8-10=-149/78

**NOTES**

1) Unbalanced roof live loads have been considered for this design.

- Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TC DL=6.0psf; BC DL=6.0psf; h=29ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) 0-0-5 to 2-8-11, Interior (1) 2-8-11 to 8-8-11, Exterior (2) 8-8-11 to 11-8-11, Interior (1) 11-8-11 to 17-0-9 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 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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 9 lb uplift at joint 1, 38 lb uplift at joint 15, 46 lb uplift at joint 16, 43 lb uplift at joint 17, 38 lb uplift at joint 12, 47 lb uplift at joint 11 and 41 lb uplift at joint 10.
- 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.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

**LOAD CASE(S)** Standard



February 14, 2023

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 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, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

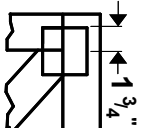


818 Soundside Road  
Edenton, NC 27932

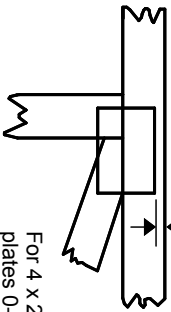


# Symbols

## 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- $\frac{1}{16}$ " from outside edge of truss.



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

\* Plate location details available in **MITek 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



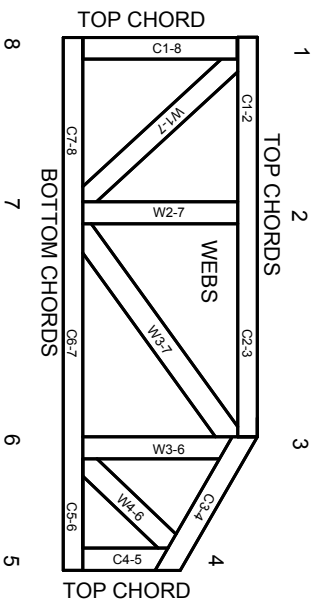
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

## Industry Standards:

ANSI/TP1: 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/TP1 section 6.3 These truss designs rely on lumber values established by others.

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MITek Engineering Reference Sheet: Mill-7473 rev. 5/19/2020

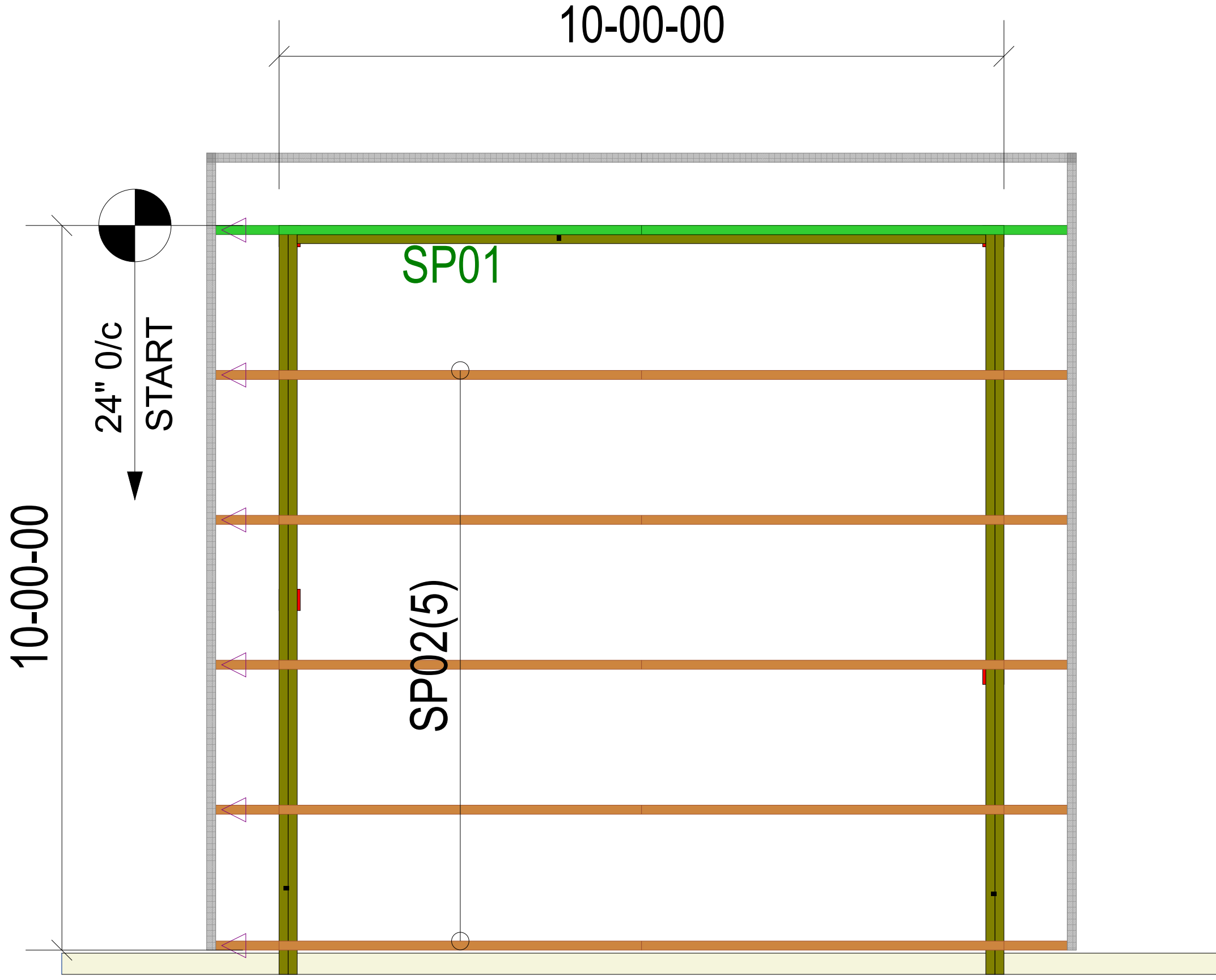
# General Safety Notes

## 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/TP1 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TP1 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/TP1 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.



# OPTIONAL SERENITY SCREENED PORCH



**THIS IS A TRUSS PLACEMENT DIAGRAM ONLY**

These trusses are designed as individual building components to be incorporated into the building design at the specification of the building designer. See individual design sheets for each truss design identified on the placement drawing. The building designer is responsible for temporary and permanent bracing of the roof and floor system and for the overall structure. The design of the truss support structure including headers, beams, walls, and columns is the responsibility of the building designer. For general guidance regarding bracing, consult "Bracing of Wood Trusses" available from the Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53179.

**SHOP DRAWING APPROVAL**

THIS LAYOUT IS THE SOLE SOURCE FOR FABRICATION OF TRUSSES AND VOIDS ALL PREVIOUS ARCHITECTURAL OR OTHER TRUSS LAYOUTS. REVIEW AND APPROVAL OF THIS LAYOUT MUST BE RECEIVED BEFORE ANY TRUSSES WILL BE BUILT. VERIFY ALL CONDITIONS TO INSURE AGAINST CHANGES THAT WILL RESULT IN EXTRA CHARGES TO YOU.

REVIEWED BY:

APPROVED BY:

DATE:



Plan: SERENITY SCREEN PORCH

Date: 9/14/2022

Sales Rep: RW

Designer: JSP



**ROOF DATA**

Roof Area: 139.14 SF

City, ST, ZIP:

Customer: GARMAN HOMES

Site Address:

Job #: SER SCRPN PCH

P.O. Box 157, Ether, NC 27247  
225 Frame Shop Rd., Star, NC 27356  
910-491-9004

**Trenco**

818 Soundside Rd  
Edenton, NC 27932

Re: SER\_SCRN\_PCH  
Optional Serenity Screen Porch

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: I54217105 thru I54217106

My license renewal date for the state of North Carolina is December 31, 2022.

North Carolina COA: C-0844



September 15, 2022

Gilbert, Eric

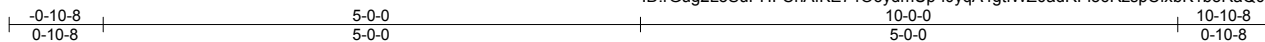
**IMPORTANT NOTE:** The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), 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	Truss	Truss Type	Qty	Ply	Optional Serenity Screen Porch	154217105
SER_SCRN_PCH	SP01	GABLE	1	1		
Job Reference (optional)						

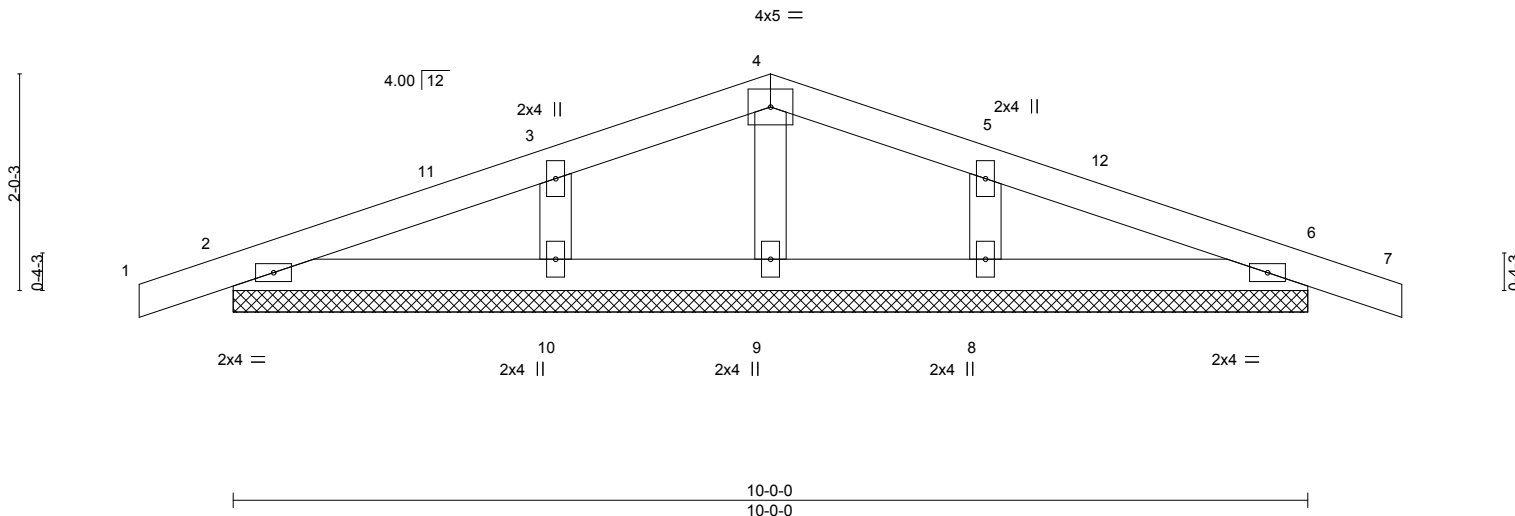
Carolina Structural Systems, LLC, Ether, NC - 27247,

8.430 s Aug 16 2021 MiTek Industries, Inc. Thu Sep 15 08:45:27 2022 Page 1

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Scale = 1:21.4



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 1.00	BC 0.06	Vert(LL) 0.00 7 n/r 120		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.06	Vert(CT) 0.00 7 n/r 120		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.00 6 n/a n/a	Weight: 38 lb	FT = 20%
	Code IRC2018/TPI2014				

**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.

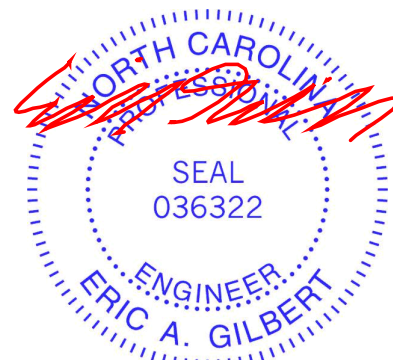
**REACTIONS.**

All bearings 10-0-0.  
 (lb) - Max Horz 2--19(LC 10)  
 Max Uplift All uplift 100 lb or less at joint(s) 2, 6, 10, 8  
 Max Grav All reactions 250 lb or less at joint(s) 2, 6, 9, 10, 8

**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 7-16; Vult=125mph (3-second gust) Vasd=99mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Corner(3E) -0-10-8 to 2-1-8, Exterior(2N) 2-1-8 to 5-0-0, Corner(3R) 5-0-0 to 8-0-0, Exterior(2N) 8-0-0 to 10-10-8 zone; cantilever left and right exposed; end vertical left and right exposed; porch 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.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 6, 10, 8.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



September 15, 2022

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 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, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



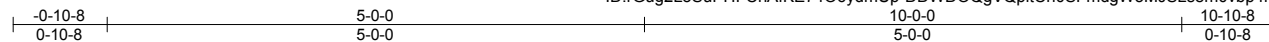
818 Soundside Road  
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Optional Serenity Screen Porch	I54217106
SER_SCRN_PCH	SP02	COMMON	5	1		
Job Reference (optional)						

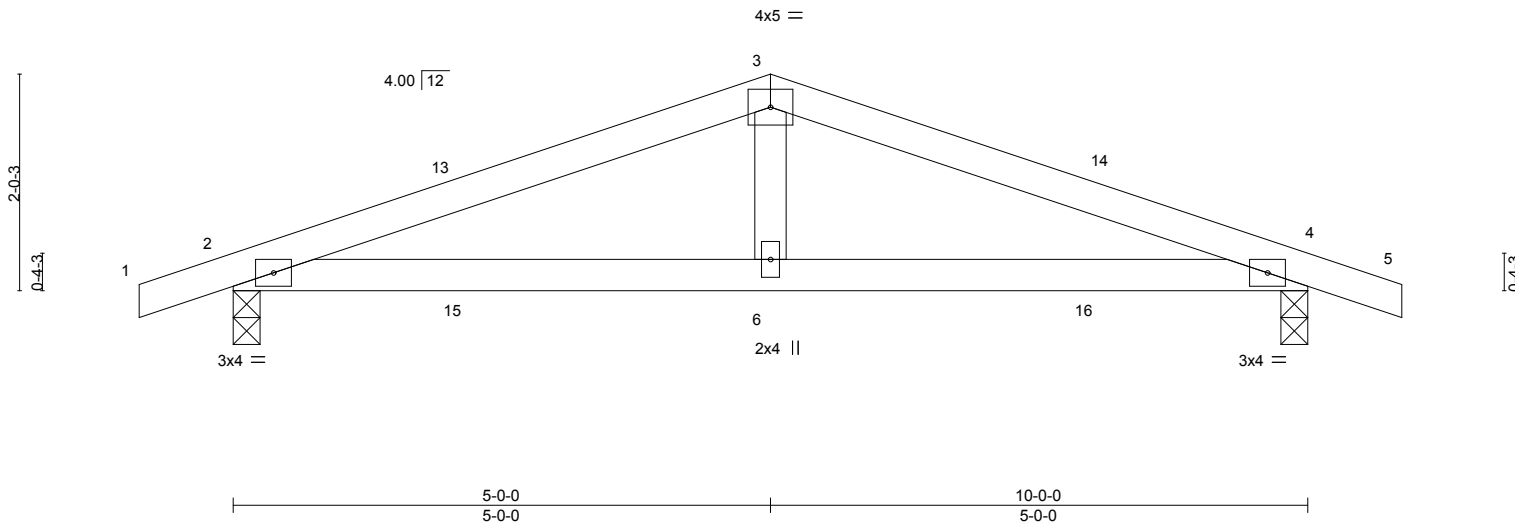
Carolina Structural Systems, LLC, Ether, NC - 27247,

8.430 s Aug 16 2021 MiTek Industries, Inc. Thu Sep 15 08:45:28 2022 Page 1

ID:rGug2L5SuPHFChAfKE74O6ydmUp-DDWDOQgVQpitCn0SFmdgW3MJSLs8m0vbp4l4vSydRK5



Scale = 1:21.4



LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.35	Vert(LL)	0.06	6-12	>999	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.00	BC 0.35	Vert(CT)	-0.05	6-12	>999		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.09	Horz(CT)	-0.01	4	n/a		
BCDL 10.0	Rep Stress Incr YES	Matrix-MS					Weight: 36 lb	FT = 20%
	Code IRC2018/TPI2014							

**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.  
 BOT CHORD Rigid ceiling directly applied or 6-4-7 oc bracing.

**REACTIONS.**

(size) 2=0-3-0, 4=0-3-0  
 Max Horz 2=-19(LC 10)  
 Max Uplift 2=-130(LC 12), 4=-130(LC 12)  
 Max Grav 2=453(LC 1), 4=453(LC 1)

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

TOP CHORD 2-3=-721/898, 3-4=-721/893  
 BOT CHORD 2-6=-781/657, 4-6=-781/657  
 WEBS 3-6=-334/224

**NOTES-**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; 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(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 5-0-0, Exterior(2R) 5-0-0 to 8-0-0, Interior(1) 8-0-0 to 10-10-8 zone; cantilever left and right exposed; end vertical left and right exposed; porch 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=130, 4=130.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



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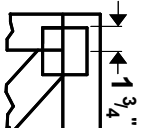
ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component



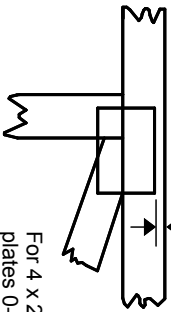
818 Soundside Road  
 Edenton, NC 27932

# 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 **MITek 20/20 software** or upon request.

## PLATE SIZE

**4 X 4**

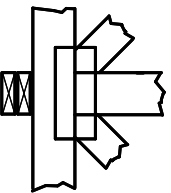
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

## 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



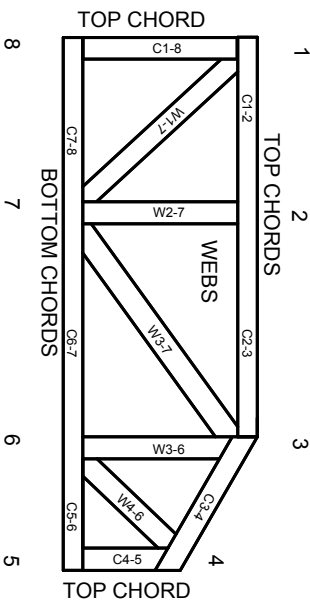
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

## Industry Standards:

ANSI/TFP 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/TFP 1 section 6.3 These truss designs rely on lumber values established by others.

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MITek Engineering Reference Sheet: Mill-7473 rev. 5/19/2020



# 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/TFP 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TFP 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/TFP 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.