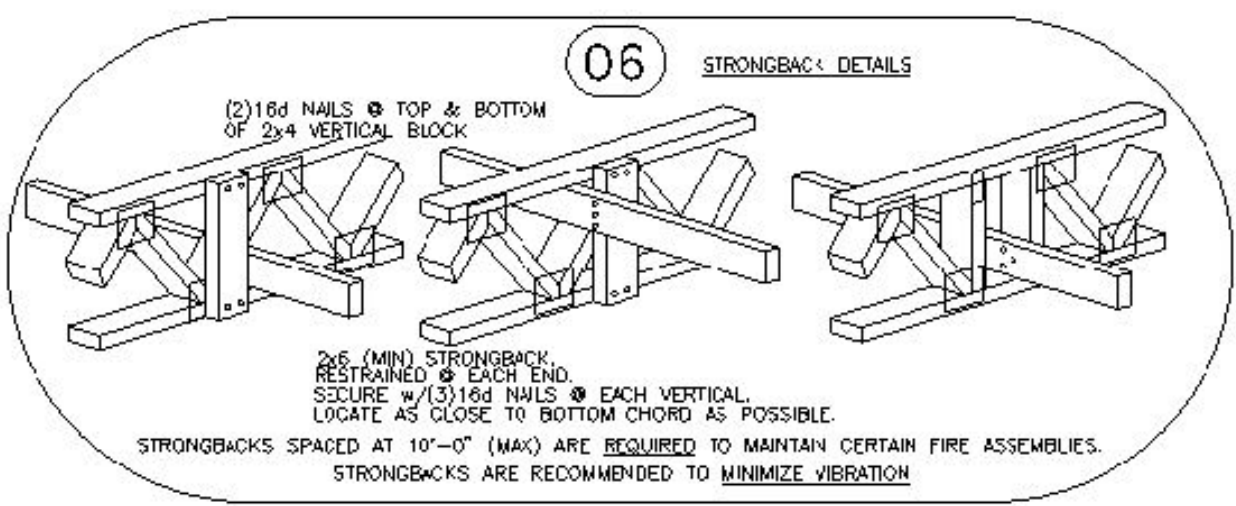


**FRAMER MUST REFER TO PLANS WHILE SETTING COMPONENTS**

REFER TO FINAL TRUSS ENGINEERING SHEETS FOR PLY TO PLY CONNECTIONS



**\*\* GIRDERS MUST BE FULLY CONNECTED TOGETHER PRIOR TO ADDING ANY LOADS.**

Scale:	<i>NTS</i>
Date:	8/15/2025
Designer:	Geoff Weston
Project Number:	25080088-A
Sheet Number:	1/1

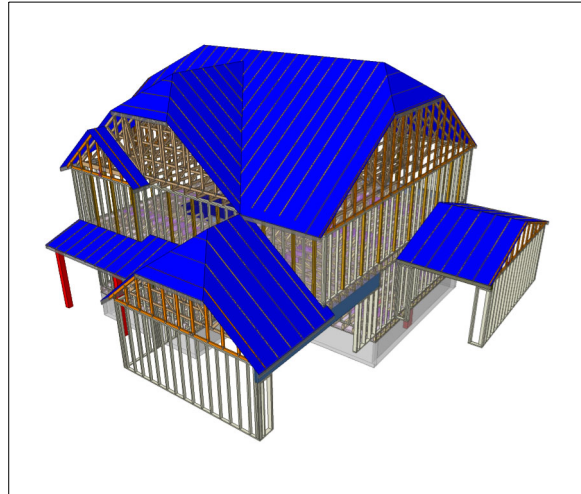


Carter Sanford Component Plant  
298 Harvey Faulk Rd  
Sanford, NC 27332

Phone #:919-775-1450

**Builder:** HH Hunt Homes Raleigh  
Durham

**Model:** Grayson EC 3CG SL RH - 1st  
Floor



#### THE PLACEMENT PLAN NOTES:

1. The Placement Plan is a diagram for truss installation. It is not an engineered drawing and has not been reviewed by an engineer. The Owner/Building Designer is responsible for obtaining an engineer's review if one is required by the local jurisdiction.
2. The responsibilities of the Owner, Contractor, Building Designer, Component Designer and Component Manufacturer shall be as set forth in ANSI/TPI 1. Capitalized terms shall be as defined in ANSI/TP 1 unless otherwise indicated.
3. Each Component is designed as an individual component utilizing information provided by others. The Owner/Building Designer is responsible for reviewing all Component Submittal Packages and individual Component Design Drawings for compliance with the Construction Documents and compatibility with the overall Building design.
4. Contractor will not proceed with component installation until the Owner/Building Designer has reviewed the Component Submittal Package. Questions on the suitability of any Component will be resolved by the Building Designer.
5. The Building Designer and Contractor are responsible for all temporary and permanent bracing.
6. The Placement Plan assumes the building is dimensionally correct, structurally sound, and in a suitable condition to support each Component during installation and thereafter, including but not limited to installation of all bearing points. Proper design and construction of all structural components, including foundations, headers, beams, walls and columns are the responsibility of the Owner, Building Designer and Contractor.
7. Do not cut, drill, or modify any Component without first consulting the Component Manufacturer or Building Designer. Damaged Components shall not be installed unless directed by the Building Designer or approved by the Component Manufacturer.
8. Components must be handled and installed following all applicable safety standards and best practices, including but not limited to BCSI, OSHA, TPI and local codes. Failure to properly handle, brace or otherwise install Component can result in serious injury or death.
9. All uplift connectors shown within these documents are recommendations only. Per ANSI/TPI 1, all uplift connectors are the responsibility of the building designer and or contractor.

**Approved By:** \_\_\_\_\_

**Date:** \_\_\_\_\_

Trenco  
818 Soundside Rd  
Edenton, NC 27932

Re: 25080088-A  
32 Magnolia Acres-Crawl-Grayson EC 3CG SL RH

The truss drawing(s) referenced below have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by Carter Components (Sanford, NC)).

Pages or sheets covered by this seal: I75669039 thru I75669052

My license renewal date for the state of North Carolina is December 31, 2025.

North Carolina COA: C-0844



August 18, 2025

Gilbert, Eric

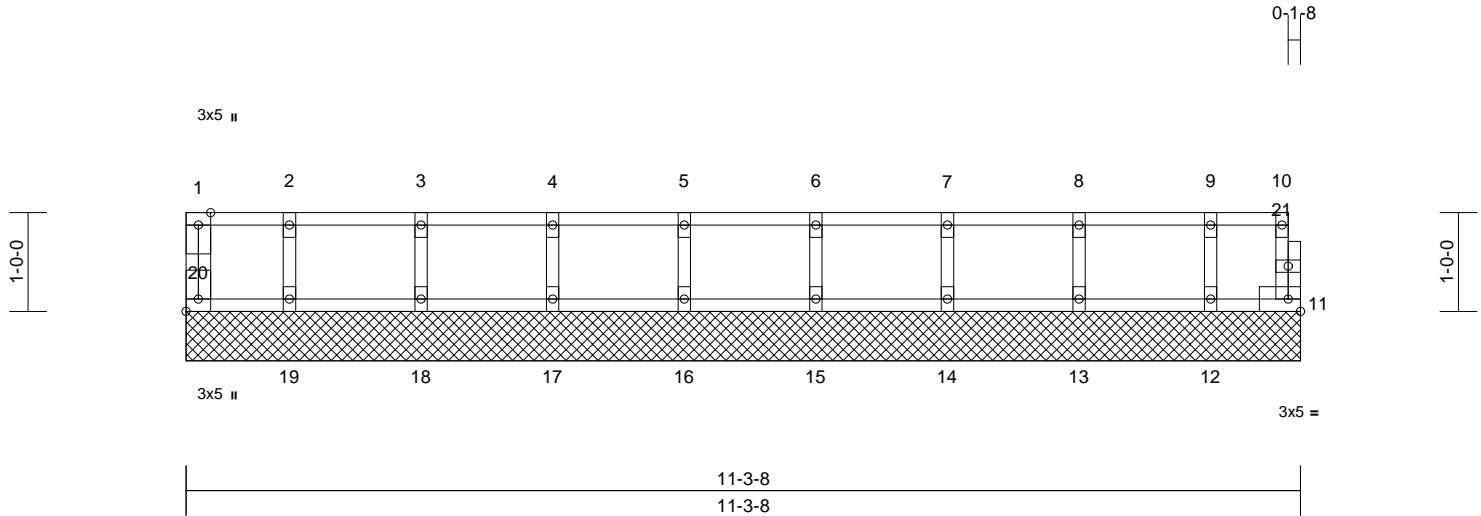
**IMPORTANT NOTE:** The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), 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	32 Magnolia Acres-Crawl-Grayson EC 3CG SL RH I75669039
25080088-A	F101	Floor Supported Gable	1	1	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Fri Aug 15 08:09:34  
ID:?\_THi1qR3t\_61louVX7nNzTAT6-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?i

Page: 1



Scale = 1:23.3

Plate Offsets (X, Y): [20:Edge,0-1-8]

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	0.06	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.01	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.02	Horiz(TL)	0.00	11	n/a	n/a		
BCDL	5.0	Code	IRC2018/TPI2014	Matrix-MR							Weight: 47 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) 11=11-3-8, 12=11-3-8, 13=11-3-8, 14=11-3-8, 15=11-3-8, 16=11-3-8, 17=11-3-8, 18=11-3-8, 19=11-3-8, 20=11-3-8  
Max Grav 11=21 (LC 1), 12=99 (LC 1), 13=121 (LC 1), 14=116 (LC 1), 15=117 (LC 1), 16=117 (LC 1), 17=117 (LC 1), 18=120 (LC 1), 19=105 (LC 1), 20=32 (LC 1)

#### FORCES

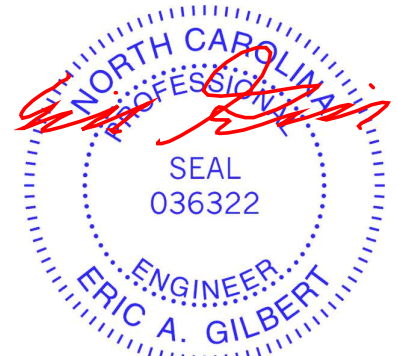
(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-20=-30/0, 10-11=-18/0, 1-2=-3/0, 2-3=-3/0, 3-4=-3/0, 4-5=-3/0, 5-6=-3/0, 6-7=-3/0, 7-8=-3/0, 8-9=-3/0, 9-10=-3/0  
BOT CHORD 19-20=0/3, 18-19=0/3, 17-18=0/3, 16-17=0/3, 15-16=0/3, 14-15=0/3, 13-14=0/3, 12-13=0/3, 11-12=0/3  
WEBS 9-12=-90/0, 8-13=-110/0, 7-14=-106/0, 6-15=-107/0, 5-16=-107/0, 4-17=-106/0, 3-18=-109/0, 2-19=-95/0

#### NOTES

- All plates are 1.5x3 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 1-4-0 oc.
- All bearings are assumed to be SP No.2 .

- 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.
- 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



August 18,2025

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 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 and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacompnents.com)

ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

818 Soundside Road  
Edenton, NC 27932



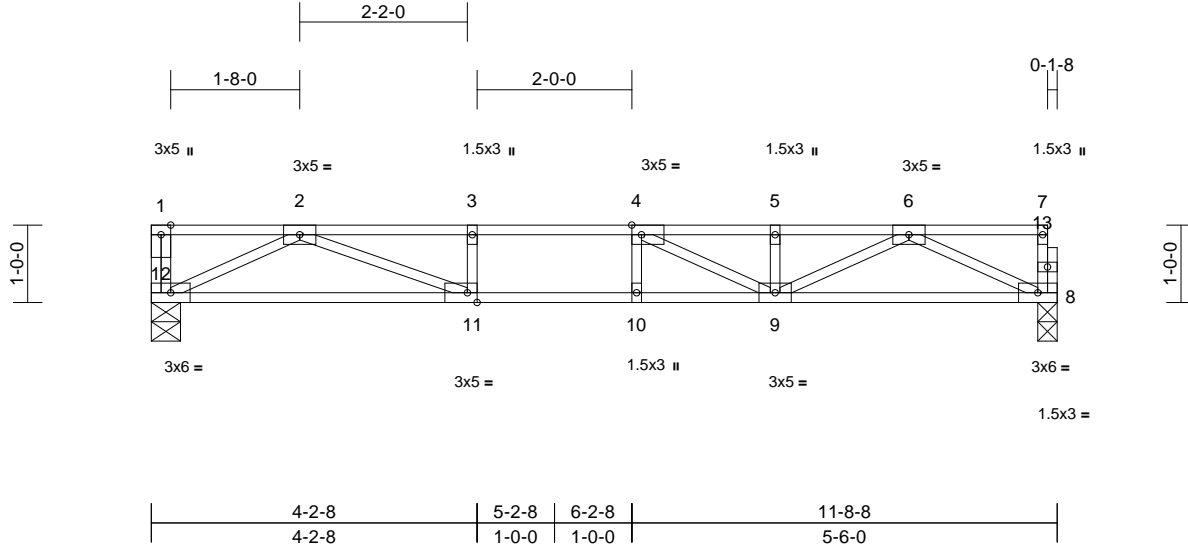
Job	Truss	Truss Type	Qty	Ply	32 Magnolia Acres-Crawl-Grayson EC 3CG SL RH
25080088-A	F102	Floor	12	1	I75669040
Job Reference (optional)					

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Fri Aug 15 08:09:35

Page: 1

ID:?\_TH1qR3t\_61louVX7nNzTAT6-RfC?PsB70Hq3NSgPqnL8w3uTXbGKWrCDoi7J4zJC?f



Scale = 1:29.8

Plate Offsets (X, Y): [4:0-1-8,Edge], [11:0-1-8,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	0.48	Vert(LL)	-0.12	9-10	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.73	Vert(CT)	-0.16	9-10	>872	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.36	Horz(CT)	0.02	8	n/a	n/a		
BCDL	5.0	Code	IRC2018/TPI2014	Matrix-MSH							Weight: 56 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) 8=0-3-0, 12=0-4-8  
 Max Grav 8=499 (LC 1), 12=504 (LC 1)

FORCES (lb) - Maximum Compression/Maximum  
 Tension

TOP CHORD 1-12=-59/0, 7-8=-59/0, 1-2=0/0, 2-3=-1592/0,  
 3-4=-1592/0, 4-5=-1437/0, 5-6=-1437/0,  
 6-7=-4/0

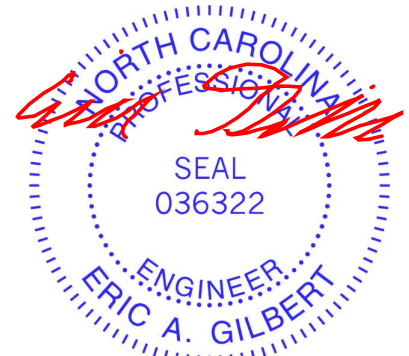
BOT CHORD 11-12=0/890, 10-11=0/1592, 9-10=0/1592,  
 8-9=0/883

WEBS 2-12=-991/0, 2-11=0/763, 6-8=-978/0,  
 6-9=0/621, 5-9=-183/4, 4-9=-381/19,  
 3-11=-218/0, 4-10=-77/31

#### NOTES

- 1) Unbalanced floor live loads have been considered for this design.
- 2) All bearings are assumed to be SP No.2 .
- 3) 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.
- 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



August 18, 2025

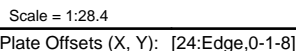
**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**

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 and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

ENGINEERING BY  
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818 Soundside Road  
 Edenton, NC 27932

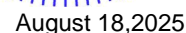
Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Fri Aug 15 08:09:35 Page: 1  
ID:ieYeEel2ik55hqiS XvU vzTATD-RfC?PsB70Hg3NSaPanL8w3uITXbGKWrcDo7J4zJC?f



<b>LUMBER</b>		4) Gable studs spaced at 1-4-0 oc.
TOP CHORD	2x4 SP No.2(flat)	5) All bearings are assumed to be SP No.2 .
BOT CHORD	2x4 SP No.2(flat)	6) 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.
WEBS	2x4 SP No.3(flat)	7) 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.
OTHERS	2x4 SP No.3(flat)	8) CAUTION, Do not erect truss backwards.
<b>BRACING</b>		
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.	
<b>REACTIONS</b>	(size) 13-14 7-0, 14-14 7-0, 15-14 7-0	<b>LOAD CASE(S)</b> Standard

### 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).



**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**

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818 Soundside Road  
Edenton, NC 27932

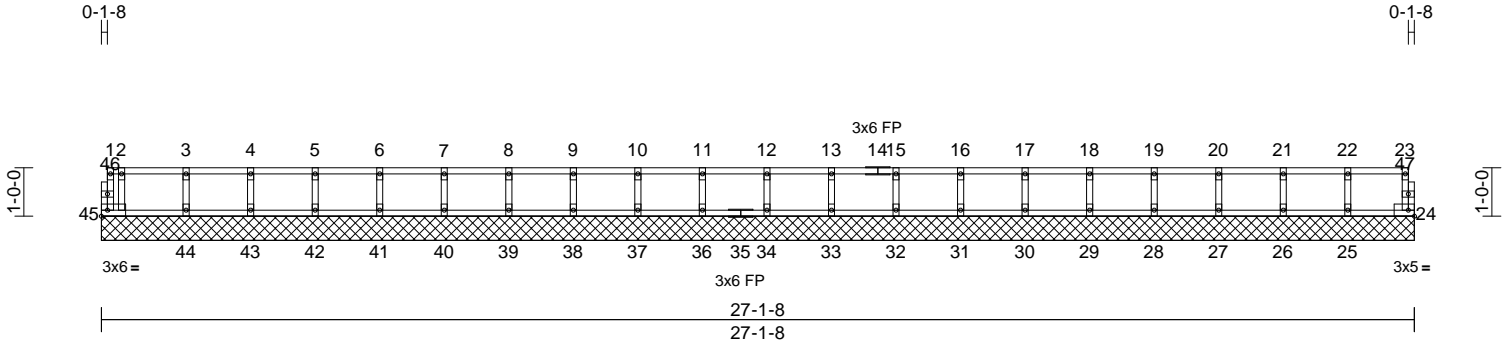
Job	Truss	Truss Type	Qty	Ply	32 Magnolia Acres-Crawl-Grayson EC 3CG SL RH I75669042
25080088-A	F104	Floor Supported Gable	1	1	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Fri Aug 15 08:09:35

Page: 1

ID:Aq60S\_lgT1DyJqleXEQjX6zTATC-RfC?PsB70Hq3NSgPqnL8w3uITxbGKWrCDoi7J4zJC7f



Scale = 1:47.6

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	0.07	Vert(LL)	n/a	-	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.02	Vert(TL)	n/a	-	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.03	Horiz(TL)	0.00	24	n/a		
BCDL	5.0	Code	IRC2018/TPI2014	Matrix-MR							
										Weight: 107 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.

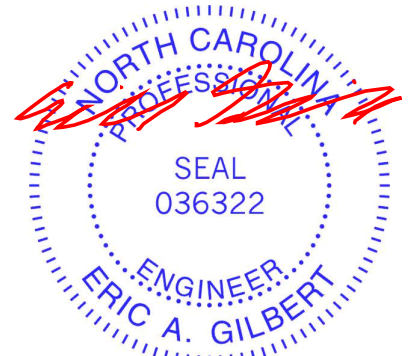
**REACTIONS** (size) 24=27-1-8, 25=27-1-8, 26=27-1-8, 27=27-1-8, 28=27-1-8, 29=27-1-8, 30=27-1-8, 31=27-1-8, 32=27-1-8, 33=27-1-8, 34=27-1-8, 36=27-1-8, 37=27-1-8, 38=27-1-8, 39=27-1-8, 40=27-1-8, 41=27-1-8, 42=27-1-8, 43=27-1-8, 44=27-1-8, 45=27-1-8  
Max Grav 24=51 (LC 1), 25=112 (LC 1), 26=119 (LC 1), 27=117 (LC 1), 28=117 (LC 1), 29=117 (LC 1), 30=117 (LC 1), 31=117 (LC 1), 32=117 (LC 1), 33=117 (LC 1), 34=117 (LC 1), 36=117 (LC 1), 37=117 (LC 1), 38=117 (LC 1), 39=117 (LC 1), 40=117 (LC 1), 41=117 (LC 1), 42=118 (LC 1), 43=113 (LC 1), 44=130 (LC 1), 45=68 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-45=0/9, 23-24=-45/0, 1-2=0/1, 2-3=-14/0, 3-4=-14/0, 4-5=-14/0, 5-6=-14/0, 6-7=-14/0, 7-8=-14/0, 8-9=-14/0, 9-10=-14/0, 10-11=-14/0, 11-12=-14/0, 12-13=-14/0, 13-15=-14/0, 15-16=-14/0, 16-17=-14/0, 17-18=-14/0, 18-19=-14/0, 19-20=-14/0, 20-21=-14/0, 21-22=-14/0, 22-23=-14/0

**BOT CHORD** 44-45=0/14, 43-44=0/14, 42-43=0/14, 41-42=0/14, 40-41=0/14, 39-40=0/14, 38-39=0/14, 37-38=0/14, 36-37=0/14, 34-36=0/14, 33-34=0/14, 32-33=0/14, 31-32=0/14, 30-31=0/14, 29-30=0/14, 28-29=0/14, 27-28=0/14, 26-27=0/14, 25-26=0/14, 24-25=0/14  
**WEBS** 22-25=-104/0, 21-26=-108/0, 20-27=-106/0, 19-28=-107/0, 18-29=-107/0, 17-30=-107/0, 16-31=-107/0, 15-32=-107/0, 13-33=-107/0, 12-34=-107/0, 11-36=-107/0, 10-37=-107/0, 9-38=-107/0, 8-39=-107/0, 7-40=-107/0, 6-41=-106/0, 5-42=-107/0, 4-43=-104/0, 3-44=-115/0, 2-45=-75/0

**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) All bearings are assumed to be SP No.2.  
6) 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.  
7) 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



August 18, 2025

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**

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ENGINEERING BY  
**TRENCO**  
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818 Soundside Road  
Edenton, NC 27932

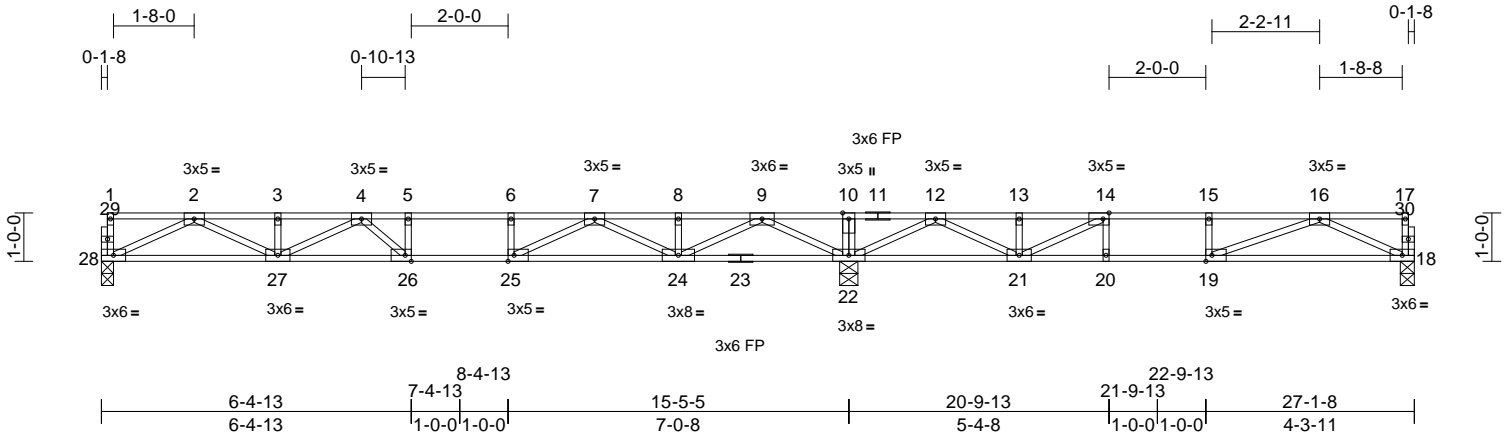
Job	Truss	Truss Type	Qty	Ply	32 Magnolia Acres-Crawl-Grayson EC 3CG SL RH
25080088-A	F105	Floor	10	1	I75669043
Job Reference (optional)					

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Fri Aug 15 08:09:35

Page: 1

ID:Aq60S\_lgT1DyJqleXEQjX6zTATC-RfC?PsB70Hq3NSgPqnL8w3uITxbGKWrCDoi7J4zJC7f



Scale = 1:47.6									
Plate Offsets (X, Y): [14:0-1-8,Edge], [19:0-1-8,Edge], [25:0-1-8,Edge], [26:0-1-8,Edge]									
<b>Loading</b>	(psf)	<b>Spacing</b>	1-7-3	<b>CSI</b>		<b>DEFL</b>	in	(loc)	l/defl
TCLL	40.0	Plate Grip DOL	1.00	TC	0.69	Vert(LL)	-0.18	26	>999
TCDL	10.0	Lumber DOL	1.00	BC	0.83	Vert(CT)	-0.24	26-27	>765
BCLL	0.0	Rep Stress Incr	YES	WB	0.58	Horz(CT)	0.04	18	n/a
BCDL	5.0	Code	IRC2018/TPI2014	Matrix-MSH					n/a
Weight: 129 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 6-0-0 oc bracing.

**REACTIONS** (size) 18=0-3-8, 22=0-4-8, 28=0-3-0  
Max Grav 18=433 (LC 4), 22=1419 (LC 1), 28=592 (LC 3)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-28=-57/0, 17-18=-51/0, 1-2=-4/0, 2-3=-1802/0, 3-4=-1802/0, 4-5=-2263/0, 5-6=-2263/0, 6-7=-2263/0, 7-8=-1078/134, 8-9=-1078/134, 9-10=0/1779, 10-12=0/1779, 12-13=-788/552, 13-14=-788/552, 14-15=-1221/134, 15-16=-1221/134, 16-17=-4/0  
BOT CHORD 27-28=0/1074, 26-27=0/2188, 25-26=0/2263, 24-25=0/1779, 22-24=-490/58, 21-22=-885/113, 20-21=-134/1221, 19-20=-134/1221, 18-19=0/768  
WEBS 5-26=-148/65, 6-25=-254/0, 10-22=-165/0, 14-20=0/121, 15-19=-155/47, 2-28=-1191/0, 2-27=0/816, 3-27=-136/0, 4-27=-433/0, 4-26=-190/259, 9-22=-1536/0, 9-24=0/1213, 8-24=-151/0, 7-24=-851/0, 7-25=0/768, 12-22=-1231/0, 12-21=0/881, 13-21=-121/59, 16-18=-847/0, 14-21=-830/0, 16-19=-172/485

- NOTES**
- 1) Unbalanced floor live loads have been considered for this design.
  - 2) All plates are 1.5x3 MT20 unless otherwise indicated.
  - 3) All bearings are assumed to be SP No.2.

- 4) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 28.
  - 5) 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.
  - 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) CAUTION, Do not erect truss backwards.
- LOAD CASE(S)** Standard



August 18,2025

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Edenton, NC 27932



Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Fri Aug 15 08:09:36 Page: 1  
ID:Aq60S IqT1DyJqleXEQIX6zTATC-RfC?PsB70Hg3NSaPqnL8w3ulTxBGKwRCDoi7J4zJC?f



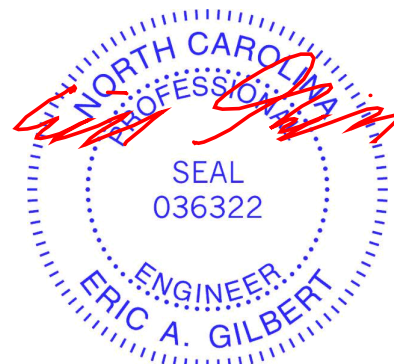
<b>Loading</b>	(psf)	<b>Spacing</b>	1-7-3	<b>CSI</b>		<b>DEFL</b>	in	(loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL	40.0	Plate Grip DOL	1.00	TC	0.67	Vert(LL)	-0.18	25	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.83	Vert(CT)	-0.24	25-26	>766	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.58	Horz(CT)	0.03	21	n/a	n/a		
BCDL	5.0	Code	IRC2018/TPI2014	Matrix-MSH							Weight: 119 lb	FT = 20%F, 11%E

- 4) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 27.
- 5) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at it(s) 17. This connection is for uplift only and does not consider lateral forces.
- 6) 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.
- 7) 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.
- 8) CAUTION, Do not erect truss backwards.

LOAD CASE(S) Standard

**NOTES**

- 1) Unbalanced floor live loads have been considered for this design.
- 2) All plates are 3x5 MT20 unless otherwise indicated.
- 3) All bearings are assumed to be SP No.2 .



August 18, 2025



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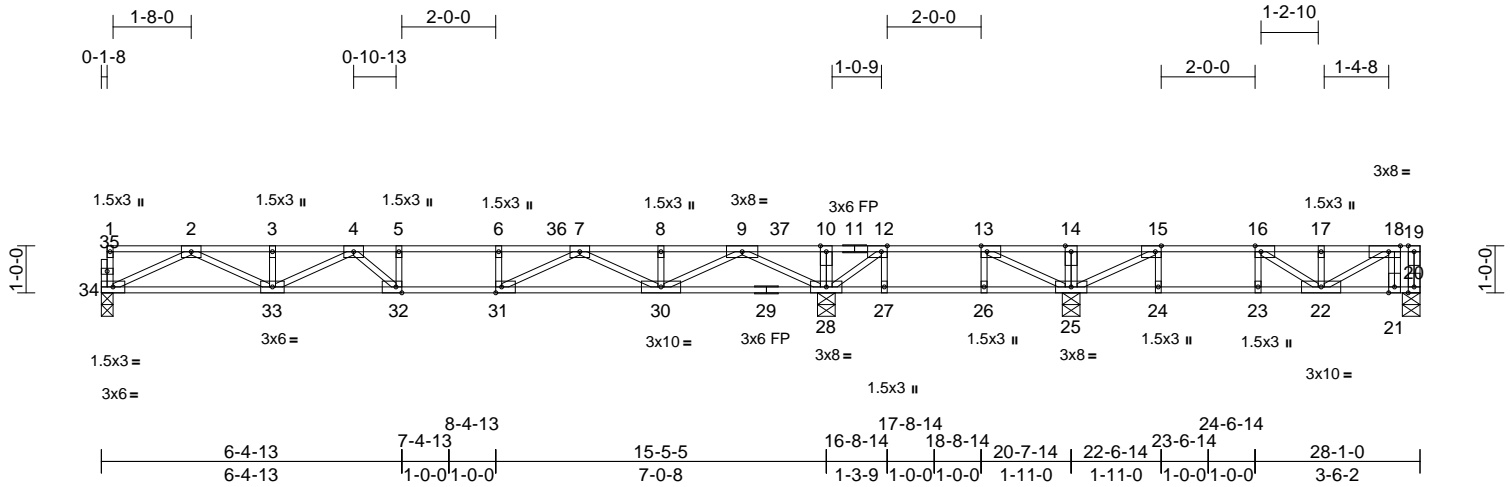
818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	32 Magnolia Acres-Crawl-Grayson EC 3CG SL RH I75669045
25080088-A	F107	Floor	11	1	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Fri Aug 15 08:09:36  
ID:3bMXHLpBXGkOnScPm4VfhyzTAT8-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:49.1

Plate Offsets (X, Y): [12:0-1-8,Edge], [13:0-1-8,Edge], [15:0-1-8,Edge], [16:0-1-8,Edge], [18:0-3-0,Edge], [31:0-1-8,Edge], [32:0-1-8,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	0.97	Vert(LL)	-0.18	31-32	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.92	Vert(CT)	-0.27	31-32	>671	360		
BCLL	0.0	Rep Stress Incr	NO	WB	0.66	Horz(CT)	0.04	20	n/a	n/a		
BCDL	5.0	Code	IRC2018/TPI2014	Matrix-MSH								
Weight: 137 lb											FT = 20%F, 11%E	

#### LUMBER

TOP CHORD	2x4 SP No.1(flat) *Except* 11-1:2x4 SP No.2 (flat)
BOT CHORD	2x4 SP No.2(flat) *Except* 29-20:2x4 SP No.1(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 6-0-0 oc bracing.

REACTIONS	(size) 20=0-4-8, 25=0-4-8, 28=0-4-8, 34=0-3-0
	Max Grav 20=642 (LC 4), 25=924 (LC 4), 28=1273 (LC 16), 34=641 (LC 16)

FORCES	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-34=-58/0, 19-20=-300/0, 1-2=-4/0, 2-3=-1994/0, 3-4=-1994/0, 4-5=-2668/0, 5-6=-2668/0, 6-7=-2668/0, 7-8=-1619/0, 8-9=-1619/0, 9-10=0/1448, 10-12=0/1448, 12-13=0/1010, 13-14=0/755, 14-15=0/755, 15-16=-1069/127, 16-17=-1180/0, 17-18=-1180/0, 18-19=0/0
BOT CHORD	33-34=0/1170, 32-33=0/2484, 31-32=0/2668, 30-31=0/2340, 28-30=0/404, 27-28=-1010/0, 26-27=-1010/0, 25-26=-1010/0, 24-25=-127/1069, 23-24=-127/1069, 22-23=-127/1069, 21-22=0/0, 20-21=0/0, 5-32=-251/0, 6-31=-179/0, 10-28=-52/0, 12-27=0/157, 13-26=-98/0, 14-25=-204/0, 15-24=0/207, 16-23=-264/0, 2-34=-1298/0, 2-33=0/923, 3-33=-142/0, 4-33=-549/0, 4-32=0/470, 9-28=-1925/0, 9-30=0/1379, 8-30=-221/0, 7-30=-826/0, 7-31=0/524, 12-28=-763/0, 13-25=-195/370, 15-25=-1735/0, 18-21=-456/0, 17-22=-504/0, 18-22=0/1353, 16-22=0/365
WEBS	

#### NOTES

- 1) Unbalanced floor live loads have been considered for this design.
- 2) All plates are 3x5 MT20 unless otherwise indicated.
- 3) Bearings are assumed to be: Joint 34 SP No.2 , Joint 28 SP No.1 , Joint 25 SP No.1 , Joint 20 SP No.1 .
- 4) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 34.
- 5) 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.
- 6) 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.
- 7) 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.
- 8) CAUTION, Do not erect truss backwards.
- 9) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

#### LOAD CASE(S) Standard

- 1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (lb/ft)  
Vert: 20-34=-8, 1-36=-80, 36-37=-127, 14-37=-80, 14-19=-180 (F=-100)



August 18, 2025

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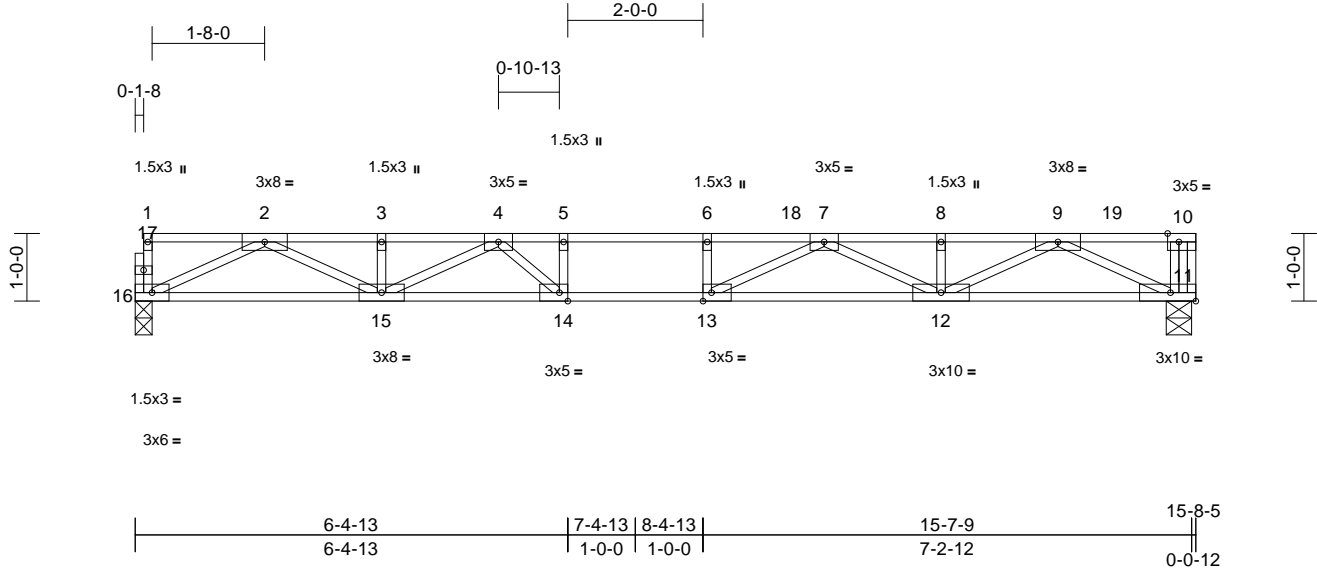
Job	Truss	Truss Type	Qty	Ply	32 Magnolia Acres-Crawl-Grayson EC 3CG SL RH
25080088-A	F108	Floor	1	1	I75669046
Job Reference (optional)					

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Fri Aug 15 08:09:36

Page: 1

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Scale = 1:34.1

Plate Offsets (X, Y): [10:0-2-0,Edge], [13:0-1-8,Edge], [14:0-1-8,Edge]

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	0.64	Vert(LL)	-0.24	12-13	>781	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	1.00	Vert(CT)	-0.38	12-13	>481	360		
BCLL	0.0	Rep Stress Incr	NO	WB	0.67	Horz(CT)	0.06	11	n/a	n/a		
BCDL	5.0	Code	IRC2018/TPI2014	Matrix-MSH							Weight: 77 lb	FT = 20%F, 11%E

#### LUMBER

TOP CHORD 2x4 SP 2400F 2.0E(flat)  
 BOT CHORD 2x4 SP No.1(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) 11=0-4-8, 16=0-3-0

Max Grav 11=993 (LC 1), 16=882 (LC 1)

#### FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-16=-75/0, 10-11=-82/0, 1-2=-5/0,  
 2-3=-2813/0, 3-4=-2813/0, 4-5=-4005/0,  
 5-6=-4005/0, 6-7=-4005/0, 7-8=-3147/0,  
 8-9=-3147/0, 9-10=0/0

BOT CHORD 15-16=0/1620, 14-15=0/3584, 13-14=0/4005,  
 12-13=0/3841, 11-12=0/1897

WEBS 5-14=-457/0, 6-13=-183/20, 2-16=-1797/0,  
 2-15=0/1337, 3-15=-194/0, 4-15=-865/0,  
 4-14=0/846, 7-13=-170/507, 7-12=-778/0,  
 8-12=-230/0, 9-12=0/1400, 9-11=-2099/0

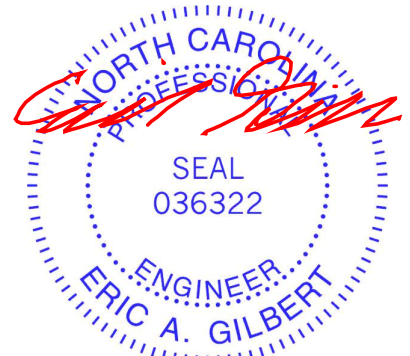
#### NOTES

- Unbalanced floor live loads have been considered for this design.
- All bearings are assumed to be SP No.1 .
- Provide mechanical connection (by others) of truss to bearing plate at joint(s) 16.
- 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.
- 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.

- 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

- Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00  
 Uniform Loads (lb/ft)  
 Vert: 11-16=-10, 1-18=-100, 18-19=-140, 10-19=-100



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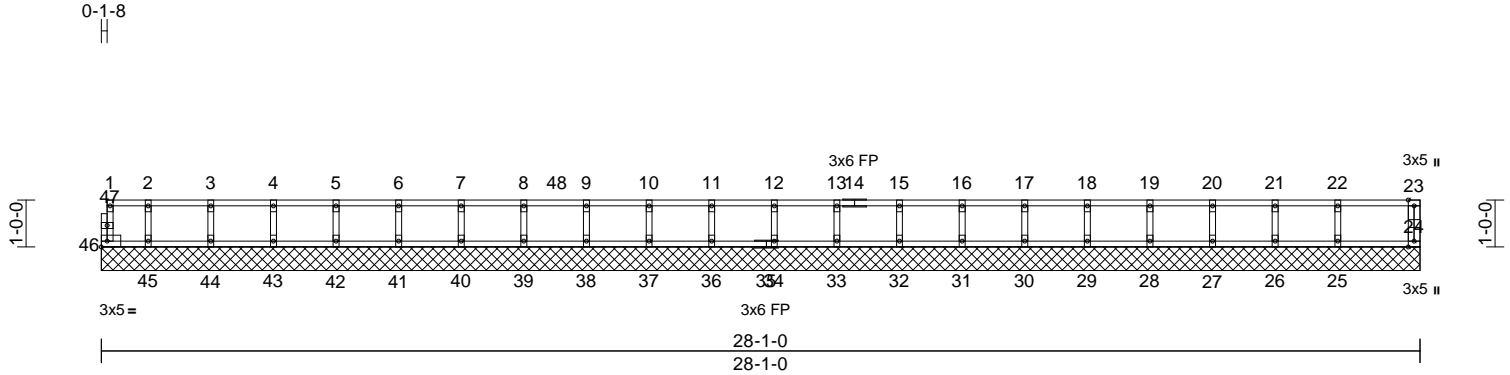
Job	Truss	Truss Type	Qty	Ply	32 Magnolia Acres-Crawl-Grayson EC 3CG SL RH I75669047
25080088-A	F109	Floor Supported Gable	1	1	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Fri Aug 15 08:09:36

Page: 1

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Scale = 1:49.1

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	0.10	Vert(LL)	n/a	-	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.03	Vert(TL)	n/a	-	999		
BCLL	0.0	Rep Stress Incr	NO	WB	0.03	Horiz(TL)	0.00	24	n/a		
BCDL	5.0	Code	IRC2018/TPI2014	Matrix-MR						Weight: 110 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)  
24=28-1-0, 25=28-1-0, 26=28-1-0,  
27=28-1-0, 28=28-1-0, 29=28-1-0,  
30=28-1-0, 31=28-1-0, 32=28-1-0,  
33=28-1-0, 34=28-1-0, 36=28-1-0,  
37=28-1-0, 38=28-1-0, 39=28-1-0,  
40=28-1-0, 41=28-1-0, 42=28-1-0,  
43=28-1-0, 44=28-1-0, 45=28-1-0,  
46=28-1-0  
Max Grav 24=66 (LC 1), 25=141 (LC 1),  
26=110 (LC 1), 27=119 (LC 1),  
28=117 (LC 1), 29=117 (LC 1),  
30=117 (LC 1), 31=117 (LC 1),  
32=117 (LC 1), 33=117 (LC 1),  
34=118 (LC 1), 36=118 (LC 1),  
37=118 (LC 1), 38=118 (LC 1),  
39=117 (LC 1), 40=117 (LC 1),  
41=117 (LC 1), 42=118 (LC 1),  
43=116 (LC 1), 44=123 (LC 1),  
45=90 (LC 1), 46=36 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-46=-29/0, 23-24=-63/0, 1-2=-12/0,  
2-3=-12/0, 3-4=-12/0, 4-5=-12/0, 5-6=-12/0,  
6-7=-12/0, 7-8=-12/0, 8-9=-12/0, 9-10=-12/0,  
10-11=-12/0, 11-12=-12/0, 12-13=-12/0,  
13-15=-12/0, 15-16=-12/0, 16-17=-12/0,  
17-18=-12/0, 18-19=-12/0, 19-20=-12/0,  
20-21=-12/0, 21-22=-12/0, 22-23=-12/0

**BOT CHORD** 45-46=0/12, 44-45=0/12, 43-44=0/12,  
42-43=0/12, 41-42=0/12, 40-41=0/12,  
39-40=0/12, 38-39=0/12, 37-38=0/12,  
36-37=0/12, 34-36=0/12, 33-34=0/12,  
32-33=0/12, 31-32=0/12, 30-31=0/12,  
29-30=0/12, 28-29=0/12, 27-28=0/12,  
26-27=0/12, 25-26=0/12, 24-25=0/12  
21-26=-101/0, 20-27=-108/0, 19-28=-106/0,  
18-29=-107/0, 17-30=-107/0, 16-31=-107/0,  
15-32=-107/0, 13-33=-107/0, 12-34=-107/0,  
11-36=-107/0, 10-37=-107/0, 9-38=-107/0,  
8-39=-107/0, 7-40=-107/0, 6-41=-107/0,  
5-42=-107/0, 4-43=-106/0, 3-44=-111/0,  
2-45=-87/0, 22-25=-125/0

- 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) All bearings are assumed to be SP No.2.
  - 6) 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.
  - 7) 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.
  - 8) 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.
  - 9) CAUTION, Do not erect truss backwards.

**LOAD CASE(S)** Standard  
1) Dead + Floor Live (balanced): Lumber Increase=1.00,  
Plate Increase=1.00  
Uniform Loads (lb/ft)  
Vert: 24-46=-8, 1-48=-80, 12-48=-80, 12-23=-80



August 18, 2025

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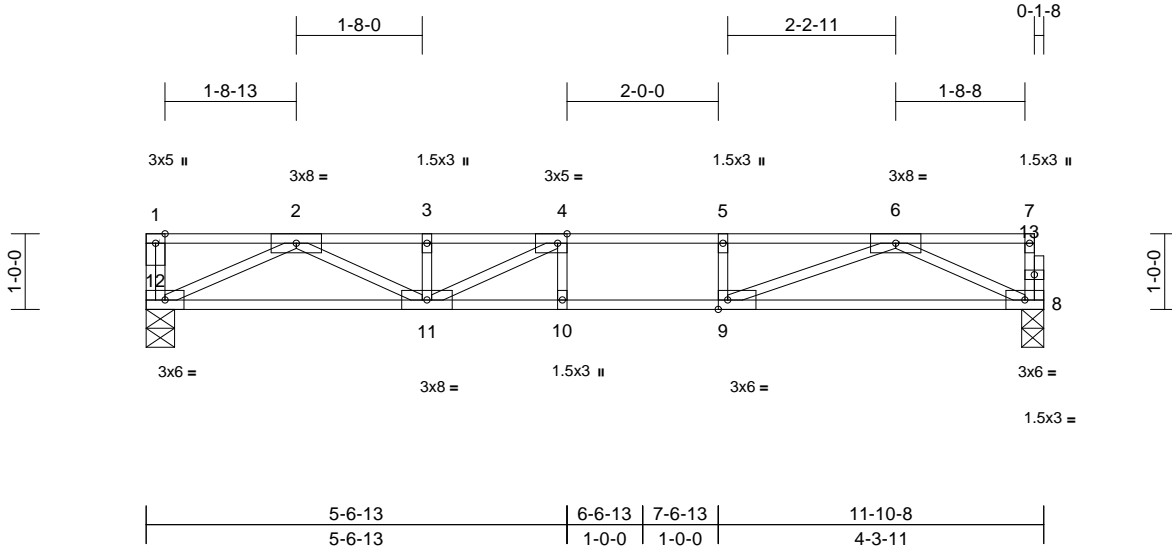


Job	Truss	Truss Type	Qty	Ply	32 Magnolia Acres-Crawl-Grayson EC 3CG SL RH
25080088-A	F110	Floor	2	1	I75669048
Job Reference (optional)					

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Fri Aug 15 08:09:36  
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Page: 1



Scale = 1:30.5

Plate Offsets (X, Y): [4:0-1-8,Edge], [9:0-1-8,Edge]

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	0.93	Vert(LL)	-0.22	10-11	>622	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.79	Vert(CT)	-0.29	10-11	>481	360		
BCLL	0.0	Rep Stress Incr	NO	WB	0.79	Horz(CT)	0.03	8	n/a	n/a		
BCDL	5.0	Code	IRC2018/TPI2014	Matrix-MSH							Weight: 57 lb	FT = 20%F, 11%E

#### LUMBER

TOP CHORD 2x4 SP No.1(flat)  
BOT CHORD 2x4 SP 2400F 2.0E(flat)  
WEBS 2x4 SP No.3(flat)  
OTHERS 2x4 SP No.3(flat)

- 1) Dead + Floor Live (balanced): Lumber Increase=1.00,  
Plate Increase=1.00  
Uniform Loads (lb/ft)  
Vert: 8-12=-10, 1-7=-180 (F=-80)

#### BRACING

TOP CHORD Structural wood sheathing directly applied or  
4-11-7 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc  
bracing.

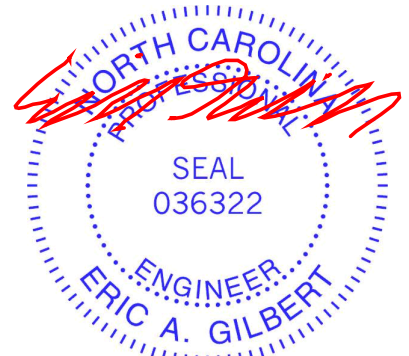
REACTIONS (size) 8=0-3-8, 12=0-4-8  
Max Grav 8=1093 (LC 1), 12=1105 (LC 1)

FORCES (lb) - Maximum Compression/Maximum  
Tension  
TOP CHORD 1-12=-141/0, 7-8=-128/0, 1-2=0/0,  
2-3=-3189/0, 3-4=-3189/0, 4-5=-3541/0,  
5-6=-3541/0, 6-7=-9/0  
BOT CHORD 11-12=0/2019, 10-11=0/3541, 9-10=0/3541,  
8-9=0/2011  
WEBS 4-10=-196/71, 5-9=-484/0, 4-11=-848/36,  
3-11=-392/0, 2-11=0/1311, 2-12=-2231/0,  
6-8=-2219/0, 6-9=0/1651

#### NOTES

- Unbalanced floor live loads have been considered for this design.
- All bearings are assumed to be SP 2400F 2.0E.
- 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.
- 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.
- 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



August 18, 2025

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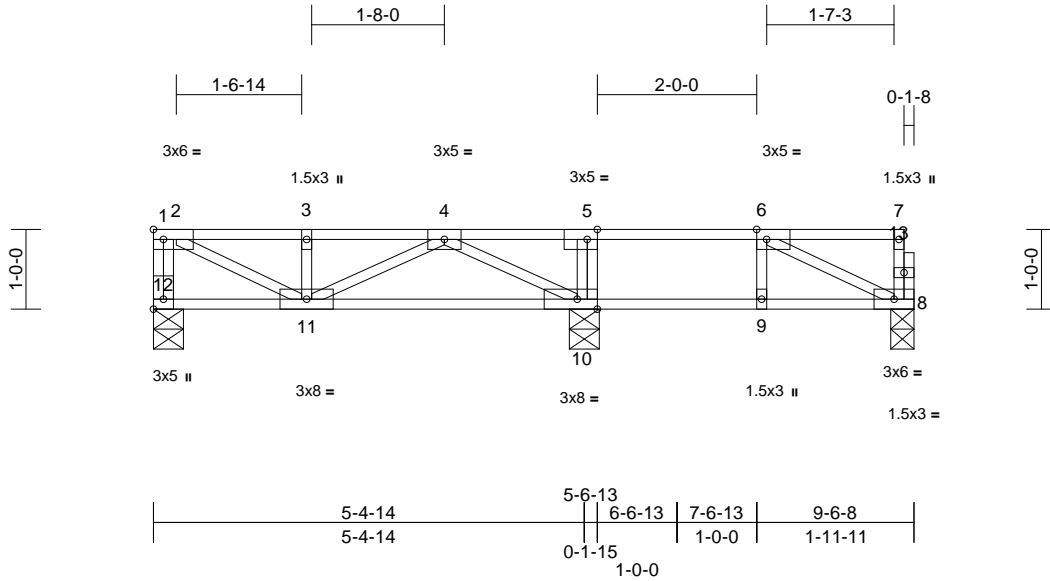
818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	32 Magnolia Acres-Crawl-Grayson EC 3CG SL RH
25080088-A	F111	Floor	1	1	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 E May 9 2024 Print: 8.730 E May 9 2024 MiTek Industries, Inc. Mon Aug 18 08:36:29  
ID:XovvVhpplasFPbAckn0uEAzTAT7-vyKerHWGRtyjiQtLhCjGoPye9GMZ76R8e69L6wymgyn

Page: 1



Scale = 1:28.9

Plate Offsets (X, Y): [5:0-1-8,Edge], [6:0-1-8,Edge], [10:0-3-0,Edge], [12:Edge,0-1-8]

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	0.70	Vert(LL)	-0.03	9	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.47	Vert(CT)	-0.04	9	>999	360		
BCLL	0.0	Rep Stress Incr	NO	WB	0.50	Horz(CT)	0.01	8	n/a	n/a		
BCDL	5.0	Code	IRC2018/TPI2014	Matrix-MSH							Weight: 48 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)

- 1) Dead + Floor Live (balanced): Lumber Increase=1.00,  
Plate Increase=1.00  
Uniform Loads (lb/ft)  
Vert: 8-12=-10, 1-7=-180 (F=-80)

#### 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** (lb/size) 8=483/0-3-8, 10=687/0-4-8,  
12=585/0-4-8  
Max Grav 8=506 (LC 4), 10=730 (LC 9),  
12=585 (LC 1)

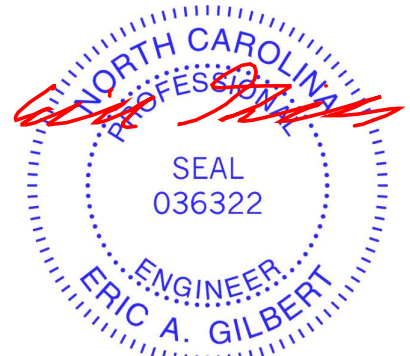
**FORCES** (lb) - Maximum Compression/Maximum  
Tension

TOP CHORD 1-12=-571/0, 7-8=-134/0, 1-2=0/0,  
2-3=-923/0, 3-4=-923/0, 4-5=-717/0,  
5-6=-738/0, 6-7=-10/0  
BOT CHORD 11-12=0/0, 10-11=0/1026, 9-10=0/738,  
8-9=0/738  
WEBS 5-10=-433/0, 6-9=-22/0, 4-10=-692/153,  
4-11=-179/46, 3-11=-431/0, 2-11=0/1046,  
6-8=-812/0

#### NOTES

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



August 18, 2025

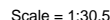
**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**

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 and DSB-22** available from Truss Plate Institute ([www.tpinst.org](http://www.tpinst.org)) and **BCSI Building Component Safety Information** available from the Structural Building Component Association ([www.sbcacompnents.com](http://www.sbcacompnents.com))

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Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Fri Aug 15 08:09:36 Page: 1  
ID:XovvVhnpplasFPbAcKn0uEAzTAT7-RfC?PsB70Hq3NSaPanL8w3uITXbGKWrcDOI7J4zJC?f



<b>Loading</b>	(psf)	<b>Spacing</b>	2-0-0	<b>CSI</b>		<b>DEFL</b>	in	(loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL	40.0	Plate Grip DOL	1.00	TC	0.98	Vert(LL)	-0.13	9-10	>673	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.96	Vert(CT)	-0.18	9-10	>490	360		
BCLL	0.0	Rep Stress Incr	NO	WB	0.36	Horz(CT)	0.02	9	n/a	n/a		
BCDL	5.0	Code	IRC2018/TPI2014	Matrix-MSH							Weight: 62 lb	FT = 20%F, 11%E

- 1) Unbalanced floor live loads have been considered for this design.
- 2) All plates are 3x5 MT20 unless otherwise indicated.
- 3) All bearings are assumed to be SP No.2.
- 4) 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.
- 5) Recommend 2x6 strongbacks, on edge, spaced at 10'-0" 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.
- 7) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

1) Dead + Floor Live (balanced): Lumber Increase=1.00,  
Plate Increase=1.00  
Uniform Loads (lb/ft)  
Vert: 9-15=-10, 1-8=-180 (F=-80)



August 18, 2025



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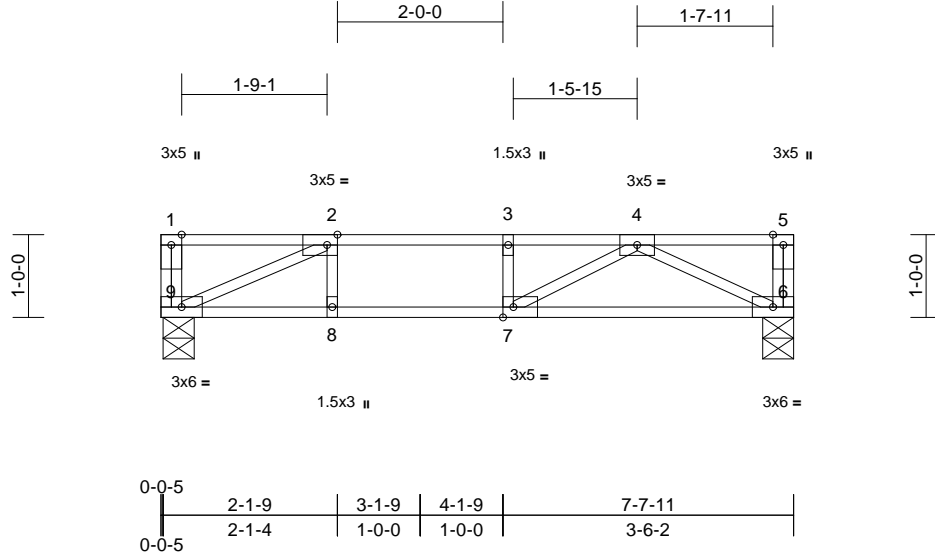
Job	Truss	Truss Type	Qty	Ply	32 Magnolia Acres-Crawl-Grayson EC 3CG SL RH
25080088-A	F113	Floor	1	1	I75669051
Job Reference (optional)					

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Fri Aug 15 08:09:36

Page: 1

ID:?\_THi1qR3t\_61louVX7nNzTAT6-RfC?PsB70Hq3NSgPqnL8w3uTXbGKWrCDoi7J4zJC?f



Scale = 1:27.8

Plate Offsets (X, Y): [2:0-1-8,Edge], [7:0-1-8,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	0.90	Vert(LL)	-0.12	6-7	>734	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.84	Vert(CT)	-0.16	6-7	>552	360		
BCLL	0.0	Rep Stress Incr	NO	WB	0.32	Horz(CT)	0.01	6	n/a	n/a		
BCDL	5.0	Code	IRC2018/TPI2014	Matrix-MSH							Weight: 37 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) 6=0-4-8, 9=0-4-8  
Max Grav 6=621 (LC 1), 9=621 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-9=-117/28, 5-6=-109/0, 1-2=0/0,  
2-3=-1217/0, 3-4=-1217/0, 4-5=0/0

BOT CHORD 8-9=0/1217, 7-8=0/1217, 6-7=0/980

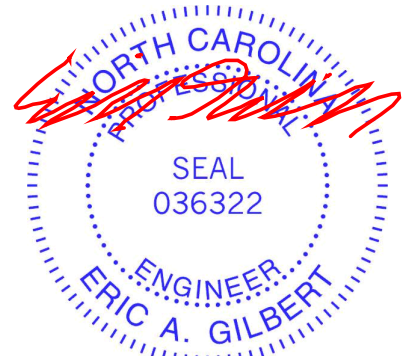
WEBS 2-8=0/119, 3-7=-188/0, 2-9=-1334/0,  
4-6=-1094/0, 4-7=0/427

#### NOTES

- Unbalanced floor live loads have been considered for this design.
- All bearings are assumed to be SP No.2 .
- 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.
- 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.
- 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 + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (lb/ft)  
Vert: 6-9=-8, 1-5=-160 (F=-80)



August 18,2025

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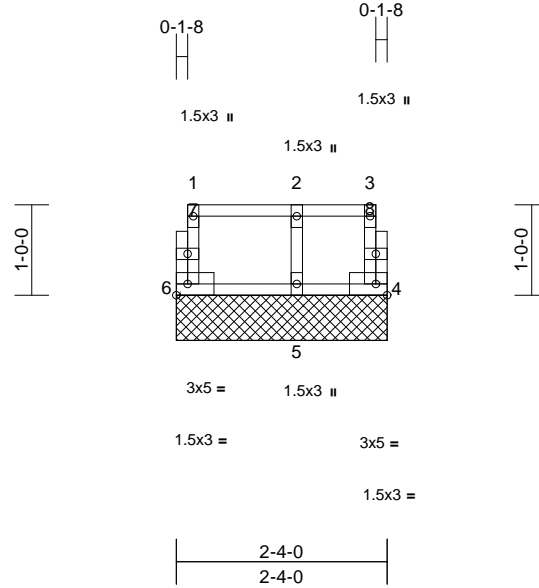


Job	Truss	Truss Type	Qty	Ply	32 Magnolia Acres-Crawl-Grayson EC 3CG SL RH I75669052
25080088-A	F114	Floor Supported Gable	1	1	Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Fri Aug 15 08:09:36  
ID: ?\_THi1qR3t\_61louVX7nNzTAT6-RfC?PsB70Hq3NSgPqnL8w3uTXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:25.5

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	0.04	Vert(LL)	n/a	-	n/a	999	MT20
TCDL	10.0	Lumber DOL	1.00	BC	0.02	Vert(TL)	n/a	-	n/a	999	244/190
BCLL	0.0	Rep Stress Incr	YES	WB	0.02	Horiz(TL)	0.00	4	n/a	n/a	
BCDL	5.0	Code	IRC2018/TPI2014	Matrix-MR							Weight: 12 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 2-4-0 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

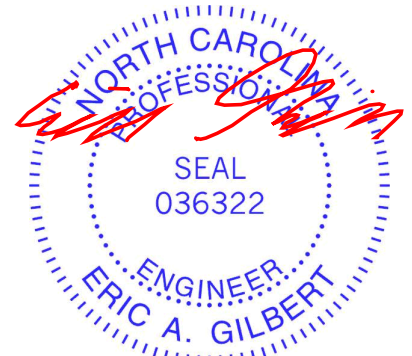
REACTIONS	(size) 4=2-4-0, 5=2-4-0, 6=2-4-0
	Max Grav 4=33 (LC 1), 5=93 (LC 1), 6=48 (LC 1)

FORCES	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-6=-44/0, 3-4=-28/0, 1-2=-9/0, 2-3=-9/0
BOT CHORD	5-6=0/9, 4-5=0/9
WEBS	2-5=-86/0

#### NOTES

- 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 1-4-0 oc.
- All bearings are assumed to be SP No.2 .
- 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.
- 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



August 18, 2025

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# Symbols

## PLATE LOCATION AND ORIENTATION



\* Plate location details available in MITek software or upon request.

## PLATE SIZE

**4 X 4**

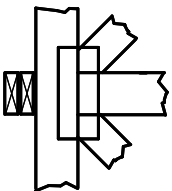
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

## 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

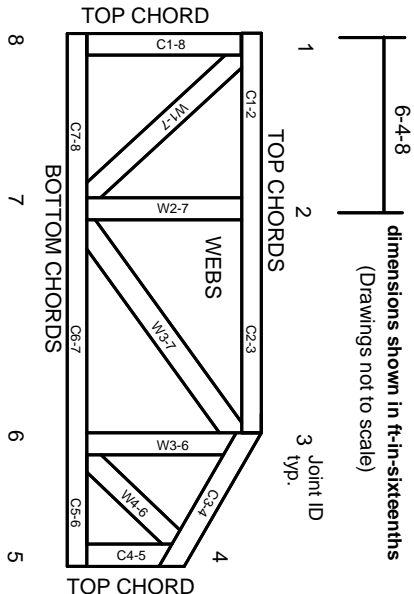


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

## Industry Standards:

ANSI/TP1: National Design Specification for Metal Plate Connected Wood Truss Construction.  
DSB-22: Building Component Safety Information, Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses.

# Numbering System



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

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

# Product Code Approvals

ICC-ES Reports:

ESR-1988, ESR-2362, ESR-2685, ESR-3282  
ESR-4722, ESL-1388

# Design General Notes

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

Lumber design values are in accordance with ANSI/TP1 1 section 6.3. These truss designs rely on lumber values established by others.

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# General Safety Notes

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

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative Tor I bracing should be considered.
3. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
4. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
5. Cut members to bear tightly against each other.
6. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/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.

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MITek Engineering Reference Sheet: MII-7473 rev. 1/2/2023