

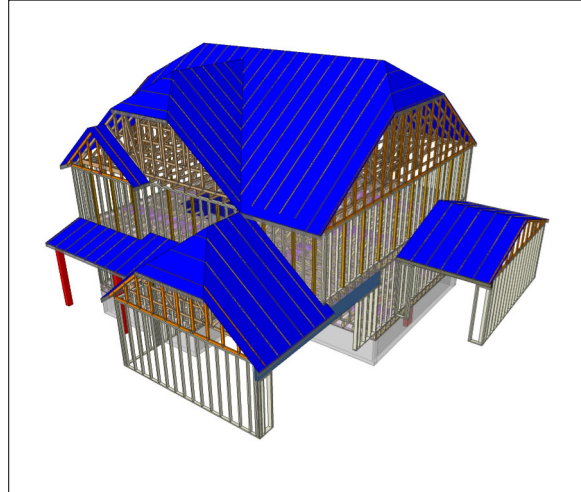


Carter Sanford Component Plant
298 Harvey Faulk Rd
Sanford, NC 27332

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: 25080088-02
32 Magnolia Acres-2nd Floor-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: I75679581 thru I75679600

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

North Carolina COA: C-0844

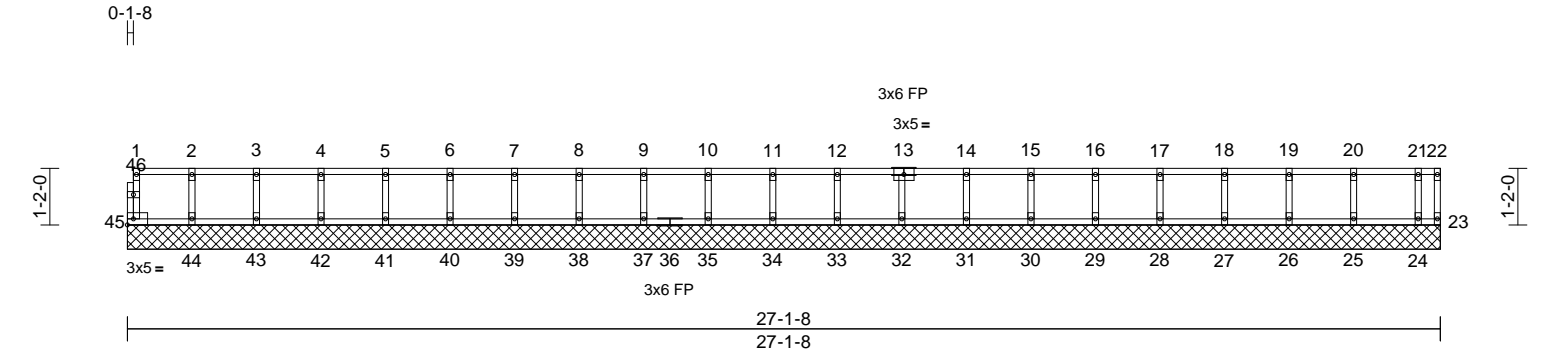


August 18, 2025

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-2nd Floor-Grayson EC 3CG SL RH
25080088-02	F201	Floor Supported Gable	1	1	I75679581
Job Reference (optional)					




Scale = 1:47.6												
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	23	n/a	n/a		
BCDL	5.0	Code	IRC2018/TPI2014	Matrix-MR							Weight: 112 lb	FT = 20%F, 11%E

LUMBER		BOT CHORD		44-45=0/3, 43-44=0/3, 42-43=0/3, 41-42=0/3, 40-41=0/3, 39-40=0/3, 38-39=0/3, 37-38=0/3, 35-37=0/3, 34-35=0/3, 33-34=0/3, 32-33=0/3, 31-32=0/8, 30-31=0/8, 29-30=0/8, 28-29=0/8, 27-28=0/8, 26-27=0/8, 25-26=0/8, 24-25=0/8, 23-24=0/8
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		WEBS		2-44=-135/0, 3-43=-133/0, 4-42=-133/0, 5-41=-133/0, 6-40=-133/0, 7-39=-133/0, 8-38=-133/0, 9-37=-133/0, 10-35=-134/0, 11-34=-132/0, 12-33=-137/0, 13-32=-133/0, 14-31=-130/0, 15-30=-134/0, 16-29=-133/0, 17-28=-133/0, 18-27=-134/0, 19-26=-132/0, 20-25=-138/0, 21-24=-98/0
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)		23=27-1-8, 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, 35=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	17=28--133/0, 18=27--134/0, 19=26--132/0, 20=25--138/0, 21=24--98/0
Max Grav	23=15 (LC 1), 24=97 (LC 1), 25=153 (LC 1), 26=145 (LC 1), 27=147 (LC 1), 28=147 (LC 1), 29=147 (LC 1), 30=147 (LC 1), 31=144 (LC 1), 32=146 (LC 1), 33=150 (LC 1), 34=146 (LC 1), 35=147 (LC 1), 37=147 (LC 1), 38=147 (LC 1), 39=147 (LC 1), 40=147 (LC 1), 41=147 (LC 1), 42=147 (LC 1), 43=146 (LC 1), 44=152 (LC 1), 45=48 (LC 1)		
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. 8) CAUTION, Do not erect truss backwards.	
LOAD CASE(S)		Standard	



FORCES (lb) - Maximum Compression/Maximum Tension				
TOP CHORD	1-45=-47/0, 22-23=-4/0, 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, 10-11=-3/0, 11-12=-3/0, 12-14=-8/0, 14-15=-8/0, 15-16=-8/0, 16-17=-8/0, 17-18=-8/0, 18-19=-8/0, 19-20=-8/0, 20-21=-8/0, 21-22=-8/0			



August 18,2025

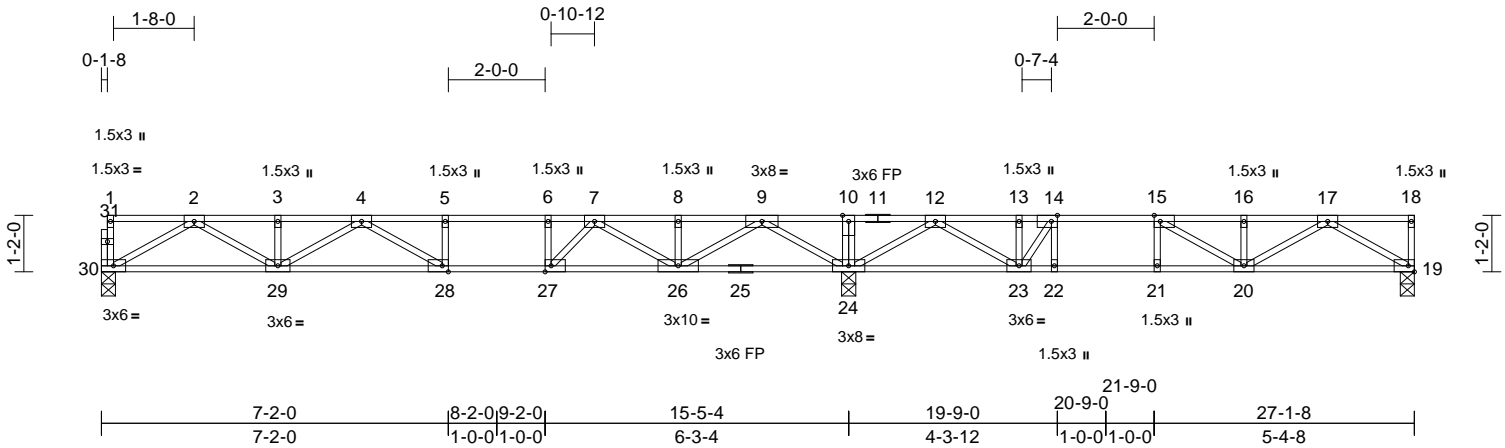
Job	Truss	Truss Type	Qty	Ply	32 Magnolia Acres-2nd Floor-Grayson EC 3CG SL RH I75679582
25080088-02	F202	Floor	2	1	Job Reference (optional)

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 12:11:35

Page: 1

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Scale = 1:47.6

Plate Offsets (X, Y): [14:0-1-8,Edge], [15:0-1-8,Edge], [27:0-1-8,Edge], [28:0-1-8,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	0.82	Vert(LL)	-0.21	28-29	>891	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.80	Vert(CT)	-0.28	28-29	>648	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.60	Horz(CT)	0.04	19	n/a	n/a		
BCDL	5.0	Code	IRC2018/TPI2014	Matrix-MSH							Weight: 135 lb	FT = 20%F, 11%E

LUMBER

TOP CHORD	2x4 SP No.1(flat) *Except* 11-18:2x4 SP No.2(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 6-0-0 oc bracing.

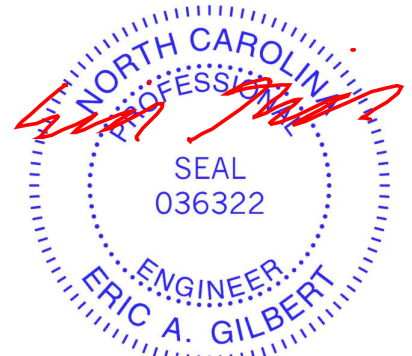
REACTIONS	(size) 19=0-3-8, 24=0-3-8, 30=0-3-8
Max Grav	19=580 (LC 4), 24=1702 (LC 1), 30=760 (LC 3)

FORCES	(lb) - Maximum Compression/Maximum Tension
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TOP CHORD	1-30=-70/0, 18-19=-73/0, 1-2=-4/0, 2-3=-1964/0, 3-4=-1964/0, 4-5=-2470/0, 5-6=-2470/0, 6-7=-2470/0, 7-8=-1347/0, 8-9=-1347/0, 9-10=0/1415, 10-12=0/1415, 12-13=-1037/374, 13-14=-1037/374, 14-15=-1388/119, 15-16=-1338/0, 16-17=-1338/0, 17-18=0/0
BOT CHORD	29-30=0/1169, 28-29=0/2412, 27-28=0/2470, 26-27=0/2065, 24-26=-243/305, 23-24=-693/389, 22-23=-119/1388, 21-22=-119/1388, 20-21=-119/1388, 19-20=0/823
WEBS	5-28=-129/22, 6-27=-453/0, 2-30=-1348/0, 2-29=0/928, 3-29=-150/0, 4-29=-523/0, 4-28=-188/294, 10-24=-200/0, 9-24=-1616/0, 9-26=0/1268, 8-26=-202/0, 7-26=-890/0, 7-27=0/803, 12-24=-1273/0, 12-23=0/878, 13-23=-7/219, 14-23=-949/0, 17-19=-960/0, 17-20=0/601, 16-20=-249/0, 15-20=-59/281, 14-22=0/333, 15-21=-174/0

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.1 .
 - 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 10-00-00 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



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
TRENCO
A MiTek Affiliate

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 12:11:36 Page: 1
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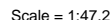
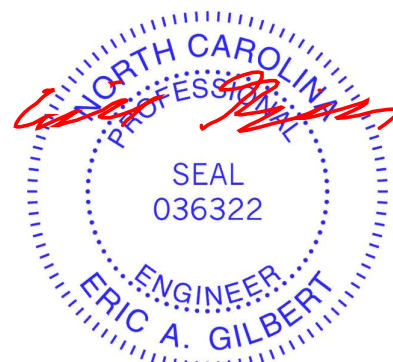


Plate Offsets (X, Y): [14:0-1-8,Edge], [15:0-1-8,Edge], [27:0-1-8,Edge], [28:0-1-8,Edge]

NUMBER
TOP CHORD 2x4 SP No.1(flat) *Except* 11-18:2x4 SP No.2(flat)
BOT CHORD 2x4 SP No.2(flat) *Except* 25-19:2x4 SP No.1(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 2-2-0 oc bracing.
REACTIONS (size) 19=0-3-8, 24=0-3-8, 30= Mechanical
Max Grav 19=580 (LC 4), 24=1692 (LC 1), 30=752 (LC 3)
FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-30=-62/0, 18-19=-73/0, 1-2=0/0, 2-3=-1833/0, 3-4=-1833/0, 4-5=-2386/0, 5-6=-2386/0, 6-7=-2386/0, 7-8=-1303/0, 8-9=-1303/0, 9-10=0/1419, 10-12=0/1419, 12-13=-1041/381, 13-14=-1041/381, 14-15=-1391/125, 15-16=-1339/0, 16-17=-1339/0, 17-18=0/0
BOT CHORD 29-30=0/1018, 28-29=0/2300, 27-28=0/2386, 26-27=0/1997, 24-26=-243/277, 23-24=-701/392, 22-23=-125/1391, 21-22=-125/1391, 20-21=-125/1391, 19-20=0/823
WEBS 5-28=-133/22, 6-27=-451/0, 14-22=0/334, 15-21=-175/0, 9-24=-1597/0, 9-26=0/1249, 8-26=-202/0, 7-26=-860/0, 7-27=0/781, 4-28=-158/307, 4-29=-545/0, 3-29=-155/0, 2-29=0/952, 2-30=-1223/0, 17-19=-961/0, 17-20=0/602, 16-20=-249/0, 15-20=-60/283, 12-24=-1274/0, 12-23=0/879, 13-23=-7/220, 14-23=-952/0, 10-24=-200/0

- 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 24 SP No.1 , Joint 19 SP No.1 .
- 4) Refer to girder(s) for truss to truss connections.
- 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

NOTES

 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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A MiTek Affiliat

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Edenton, NC 27932

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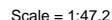


Plate Offsets (X, Y): [14:0-1-8.Edge], [22:0-1-8.Edge], [28:0-1-8.Edge], [29:0-1-8.Edge]

LUMBER
TOP CHORD 2x4 SP No.1(flat) *Except* 11-19:2x4 SP No.2(flat)
BOT CHORD 2x4 SP No.1(flat) *Except* 26-20:2x4 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.

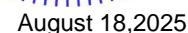
REACTIONS (size) 21=0-3-8, 25=0-3-8, 31= Mechanical
Max Grav 21=700 (LC 4), 25=1580 (LC 3), 31=756 (LC 14)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-31=61/0, 19-20=-71/0, 1-2=0/0, 2-3=-1845/0, 3-4=-1845/0, 4-5=-2415/0, 5-6=-2415/0, 6-7=-2415/0, 7-8=-1346/0, 8-9=-1346/0, 9-10=0/1403, 10-12=0/1403, 12-13=-622/472, 13-14=-622/472, 14-15=-743/301, 15-16=-743/301, 16-17=0/242, 17-18=0/242, 18-19=0/0
BOT CHORD 30-31=0/1024, 29-30=0/2318, 28-29=0/2415, 27-28=0/2038, 25-27=-315/328, 24-25=-724/150, 23-24=-301/743, 22-23=-301/743, 21-22=-224/511, 20-21=-130/0
WEBS 5-29=-135/25, 6-28=-439/0, 17-21=-144/26, 14-23=-16/153, 15-22=-197/50, 4-29=-158/314, 4-30=-551/0, 3-30=-155/0, 2-30=0/959, 2-31=-1231/0, 10-25=-199/0, 9-25=-1596/0, 9-27=0/1247, 8-27=-200/0, 7-27=-863/0, 7-28=0/776, 12-25=-1063/0, 12-24=0/685, 13-24=-105/142, 14-24=-600/0, 16-21=-674/0, 16-22=-102/353, 18-20=0/152, 18-21=-287/0

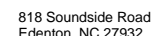
NOTES

- 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 25 SP No.2 , Joint 21 SP No.2 .
- 4) Refer to girder(s) for truss to truss connections.
- 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.

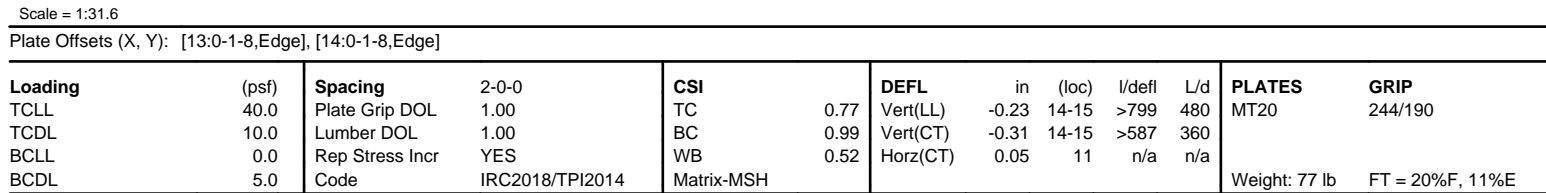
LOAD CASE(S) Standard



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.tpinet.org) and **BCSI Building Component Safety Information** available from the Structural Building Components Association (www.sbcacomponents.com)



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 12:11:36 Page: 1
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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

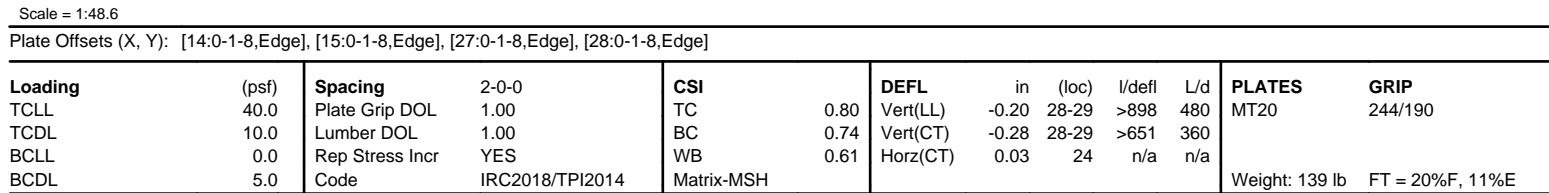
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NOTES

- 1) Unbalanced floor live loads have been considered for this design.
- 2) All plates are 1.5x3 MT20 unless otherwise indicated.
- 3) Bearings are assumed to be: Joint 30 SP No.1 , Joint 20 SP No.2 .
- 4) N/A

- 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

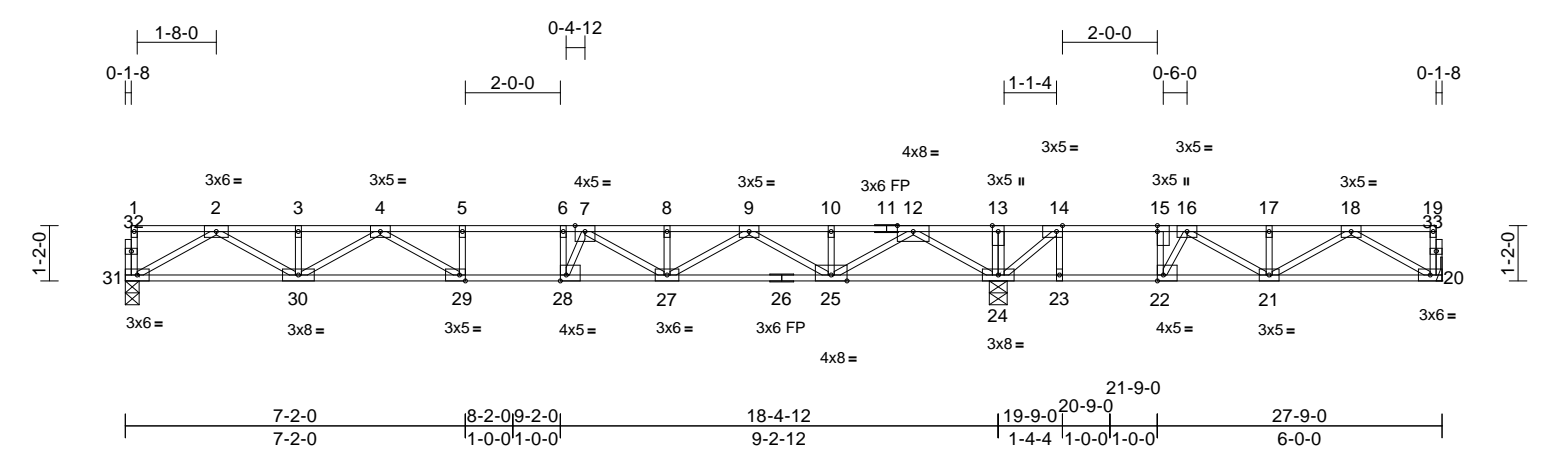


WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

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Job	Truss	Truss Type	Qty	Ply	32 Magnolia Acres-2nd Floor-Grayson EC 3CG SL RH
25080088-02	F207	Floor	1	1	I75679587
Job Reference (optional)					



Scale = 1:48.6

Plate Offsets (X, Y): [14:0-1-8,Edge], [15:0-1-8,Edge], [22:0-1-8,Edge], [28:0-1-8,Edge], [29:0-1-8,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	1.00	Vert(LL)	-0.29	28	>768	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.96	Vert(CT)	-0.39	28	>561	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.77	Horz(CT)	0.06	24	n/a	n/a		
BCDL	5.0	Code	IRC2018/TPI2014	Matrix-MSH							Weight: 140 lb	FT = 20%F, 11%E

LUMBER

TOP CHORD 2x4 SP No.2(flat) *Except* 11-19:2x4 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, except end verticals.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.

REACTIONS (size) 20= Mechanical, 24=0-4-8, 31=0-3-8
Max Uplift 20=-96 (LC 3)
Max Grav 20=473 (LC 4), 24=1822 (LC 1), 31=897 (LC 10)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-31=-71/0, 19-20=-70/0, 1-2=-4/0, 2-3=-2418/0, 3-4=-2418/0, 4-5=-3513/0, 5-6=-3513/0, 6-7=-3513/0, 7-8=-3071/0, 8-9=-3071/0, 9-10=-1327/0, 10-12=-1327/0, 12-13=0/2067, 13-14=0/2067, 14-15=-630/1312, 15-16=-630/1312, 16-17=-1006/468, 17-18=-1006/468, 18-19=-4/0
BOT CHORD 30-31=0/1397, 29-30=0/3099, 28-29=0/3513, 27-28=0/3457, 25-27=0/2347, 24-25=-276/199, 23-24=-1312/630, 22-23=-1312/630, 21-22=-913/924, 20-21=-199/680

WEBS

5-29=-271/0, 6-28=-422/149, 13-24=0/202, 14-23=0/344, 15-22=0/785, 2-31=-1611/0, 2-30=0/1191, 3-30=-168/0, 4-30=-795/0, 4-29=0/720, 12-24=-2078/0, 12-25=0/1611, 10-25=-161/0, 9-25=-1219/0, 9-27=0/878, 8-27=-176/0, 7-27=-535/0, 7-28=-241/556, 14-24=-1685/0, 18-20=-782/231, 18-21=-313/380, 17-21=-154/0, 16-21=0/521, 16-22=-1159/0

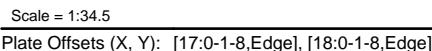
- NOTES**
- 1) Unbalanced floor live loads have been considered for this design.
2) All plates are 1.5x3 MT20 unless otherwise indicated.
3) Bearings are assumed to be: Joint 31 SP No.1 , Joint 24 SP No.1 .
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 96 lb uplift at joint 20.
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



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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 12:11:36 Page: 1
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LUMBER

TOP CHORD	2x4 SP 2400F 2.0E(flat) *Except* 10-13:2x4 SP No.2(flat)
BOT CHORD	2x4 SP No.2(flat) *Except* 19-14:2x4 SP 2400F 2.0E(flat)
WEBS	2x4 SP No.3(flat)
OTHERS	2x4 SP No.3(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.
- 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

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, Except: 2-2-0 oc bracing: 18-20.
REACTIONS	(size) 14=0-4-8, 21=0-3-8 Max Grav 14=1002 (LC 1), 21=1002 (LC 1)
FORCES	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-21=-74/0, 13-14=-70/0, 1-2=-4/0, 2-3=-2772/0, 3-4=-2772/0, 4-5=-4309/0, 5-6=-4309/0, 6-7=-4309/0, 7-8=-4201/0, 8-9=-4201/0, 9-11=-2768/0, 11-12=-2768/0, 12-13=-4/0
BOT CHORD	20-21=0/1570, 18-20=0/3622, 17-18=0/4309 16-17=0/4391, 15-16=0/3632, 14-15=0/1577
WEBS	5-18=-381/0, 6-17=-310/347, 2-21=-1811/0, 2-20=0/1404, 3-20=-189/0, 4-20=-992/0, 4-18=0/1008, 12-14=-1819/0, 12-15=0/1390, 11-15=-163/0, 9-15=-1010/0, 9-16=0/664, 8-16=-168/0. 7-16=-432/20. 7-17=-521/410

NOTES

- 1) Unbalanced floor live loads have been considered for this design.
- 2) All plates are MT20 plates unless otherwise indicated.
- 3) All plates are 1.5x3 MT20 unless otherwise indicated.
- 4) The Fabrication Tolerance at joint 19 = 11%
- 5) Bearings are assumed to be: Joint 21 SP No.2 , Joint 14 SP 2400F 2.0F



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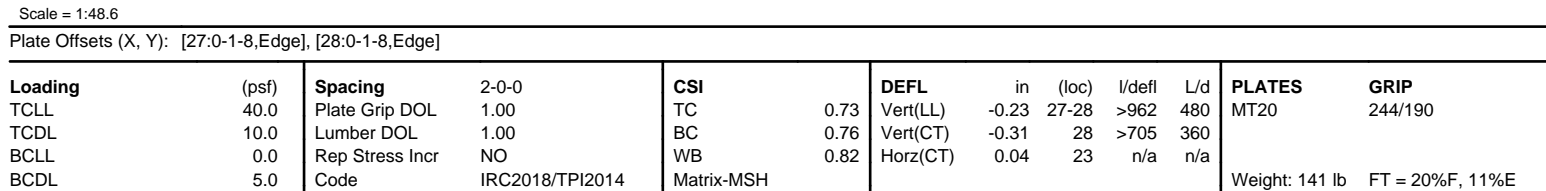


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NOTES

- 1) Unbalanced floor live loads have been considered for this design.
- 2) All plates are 1.5x3 MT20 unless otherwise indicated.
- 3) Bearings are assumed to be: Joint 30 SP No.1 , Joint 23 SP No.2 .
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 163 lb uplift at joint 20.
- 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.
- 9) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 50 lb down at 20-7-12 on top chord. The design/selection of such connection device(s) is the responsibility of others.
- 10) 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: 20-30=-10, 1-19=-100
Concentrated Loads (lb)
Vert: 15=-17 (F)



August 18, 2025

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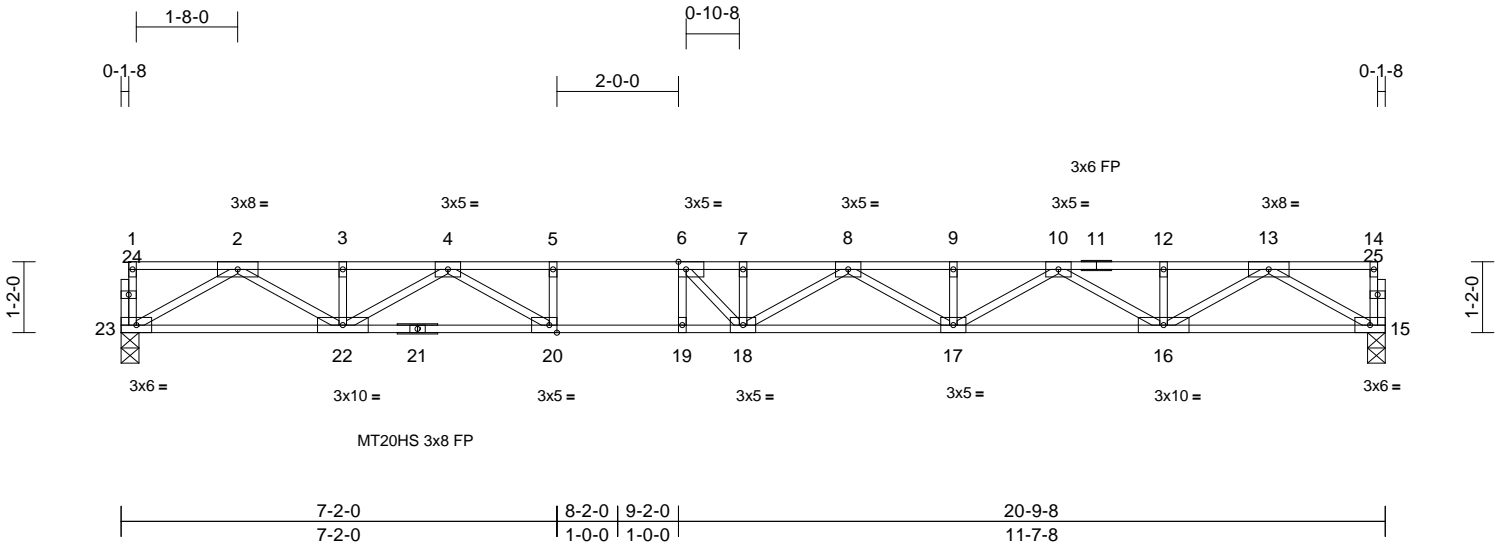
Job	Truss	Truss Type	Qty	Ply	32 Magnolia Acres-2nd Floor-Grayson EC 3CG SL RH
25080088-02	F210	Floor	5	1	I75679590
Job Reference (optional)					

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 12:11:37

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Scale = 1:37.9

Plate Offsets (X, Y): [6:0-1-8,Edge], [20:0-1-8,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	0.62	Vert(LL)	-0.42	18-19	>592	480	MT20HS	187/143
TCDL	10.0	Lumber DOL	1.00	BC	0.92	Vert(CT)	-0.57	18-19	>431	360	MT20	244/190
BCLL	0.0	Rep Stress Incr	YES	WB	0.62	Horz(CT)	0.07	15	n/a	n/a		
BCDL	5.0	Code	IRC2018/TPI2014	Matrix-MSH								
											Weight: 105 lb	FT = 20%F, 11%E

LUMBER

TOP CHORD 2x4 SP 2400F 2.0E(flat) *Except* 11-14:2x4 SP No.2(flat)
BOT CHORD 2x4 SP No.2(flat) *Except* 21-15:2x4 SP 2400F 2.0E(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, Except:
2-2-0 oc bracing: 20-22.

REACTIONS (size) 15=0-3-8, 23=0-3-8
Max Grav 15=898 (LC 1), 23=898 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

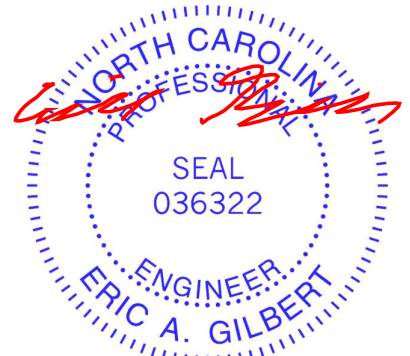
TOP CHORD 1-23=-60/0, 14-15=-56/0, 1-2=-4/0,
2-3=-2539/0, 3-4=-2539/0, 4-5=-4176/0,
5-6=-4176/0, 6-7=-4477/0, 7-8=-4477/0,
8-9=-3998/0, 9-10=-3998/0, 10-12=-2541/0,
12-13=-2541/0, 13-14=-3/0
BOT CHORD 22-23=0/1416, 20-22=0/3384, 19-20=0/4176,
18-19=0/4176, 17-18=0/4344, 16-17=0/3388,
15-16=0/1428
WEBS 5-20=-369/0, 6-19=-284/17, 2-23=-1634/0,
2-22=0/1311, 3-22=-164/0, 4-22=-987/0,
4-20=0/1057, 13-15=-1648/0, 13-16=0/1299,
12-16=-130/0, 10-16=-989/0, 10-17=0/712,
9-17=-139/0, 8-17=-404/0, 8-18=0/283,
7-18=-312/16, 6-18=-204/689

NOTES

- 1) Unbalanced floor live loads have been considered for this design.
- 2) All plates are MT20 plates unless otherwise indicated.
- 3) All plates are 1.5x3 MT20 unless otherwise indicated.
- 4) The Fabrication Tolerance at joint 21 = 11%

- 5) Bearings are assumed to be: Joint 23 SP No.2, Joint 15 SP 2400F 2.0E.
- 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

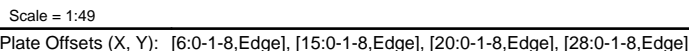
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NUMBER

TOP CHORD 2x4 SP No.1(flat) *Except* 11-18:2x4 SP 2400F 2.0E(flat)

BOT CHORD 2x4 SP 2400F 2.0E(flat) *Except* 25-19:2x4 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 2-2-0 oc bracing.

REACTIONS (size) 19=0-5-8, 22=0-5-8, 30=0-3-8
Max Uplift 19=166 (LC 3)
Max Grav 19=262 (LC 4), 22=1548 (LC 1), 30=821 (LC 10)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-30=-57/0, 18-19=-51/12, 1-2=-3/0, 2-3=-2273/0, 3-4=-2273/0, 4-5=-3589/0, 5-6=-3589/0, 6-7=-3709/0, 7-8=-3709/0, 8-9=-2971/0, 9-10=-2971/0, 10-12=-1241/0, 12-13=-1241/0, 13-14=0/1804, 14-15=0/1804, 15-16=-284/886, 16-17=-284/886, 17-18=0/0

BOT CHORD 29-30=0/1288, 28-29=0/3000, 27-28=0/3589, 26-27=0/3589, 24-26=0/3453, 23-24=0/2221, 22-23=-193/46, 21-22=-886/284, 20-21=-886/284, 19-20=-326/325

WEBS 5-28=-278/0, 6-27=-225/59, 14-22=-28/87, 15-21=0/192, 16-20=0/320, 2-30=-1486/0, 2-29=0/1150, 3-29=-145/0, 4-29=-849/0, 4-28=0/834, 13-22=-1872/0, 13-23=0/1482, 12-23=-129/0, 10-23=-1164/0, 10-24=0/895, 9-24=-140/0, 8-24=-582/0, 8-26=0/345, 7-26=-230/39, 6-26=-325/436, 15-22=-1385/0, 17-19=-376/378, 17-20=-695/0

- 1) Unbalanced floor live loads have been considered for this design.
- 2) All plates are MT20 plates unless otherwise indicated.
- 3) All plates are 1.5x3 MT20 unless otherwise indicated.
- 4) The Fabrication Tolerance at joint 25 = 11%
- 5) Bearings are assumed to be: Joint 30 SP 2400F 2.0E , Joint 22 SP No.2 , Joint 19 SP No.2 .
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 166 lb uplift at joint 19.
- 7) 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.
- 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



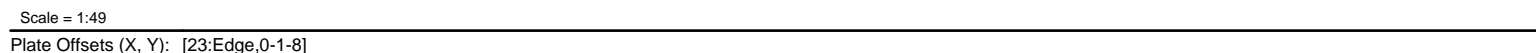
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LUMBER		BOT CHORD	44-45=0/6, 43-44=0/6, 42-43=0/6, 41-42=0/6, 40-41=0/6, 39-40=0/6, 38-39=0/6, 37-38=0/6, 36-37=0/6, 34-36=0/6, 33-34=0/6, 32-33=0/6, 31-32=0/10, 30-31=0/10, 29-30=0/10, 28-29=0/10, 27-28=0/10, 26-27=0/10, 25-26=0/10, 24-25=0/10, 23-24=0/10
TOP CHORD	2x4 SP No.2(flat)		
BOT CHORD	2x4 SP No.2(flat)		
WEBS	2x4 SP No.3(flat)	WEBS	2-44=-105/0, 3-43=-107/0, 4-42=-106/0, 5-41=-107/0, 6-40=-107/0, 7-39=-107/0, 8-38=-107/0, 9-37=-107/0, 10-36=-107/0, 11-34=-106/0, 12-33=-109/0, 13-32=-107/0, 14-31=-104/0, 15-30=-107/0, 16-29=-106/0, 17-28=-107/0, 18-27=-107/0, 19-26=-106/0, 20-25=-107/0, 21-24=-105/0
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) 23=28-0-8, 24=28-0-8, 25=28-0-8, 26=28-0-8, 27=28-0-8, 28=28-0-8,		

- 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.
- 8) CAUTION. Do not erect truss backwards.

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-45=-40/0, 22-23=-48/0, 1-2=-6/0, 2-3=-6/0,
3-4=-6/0, 4-5=-6/0, 5-6=-6/0, 6-7=-6/0,
7-8=-6/0, 8-9=-6/0, 9-10=-6/0, 10-11=-6/0,
11-12=-6/0, 12-14=-10/0, 14-15=-10/0,
15-16=-10/0, 16-17=-10/0, 17-18=-10/0,
18-19=-10/0, 19-20=-10/0, 20-21=-10/0,
21-22=-10/0



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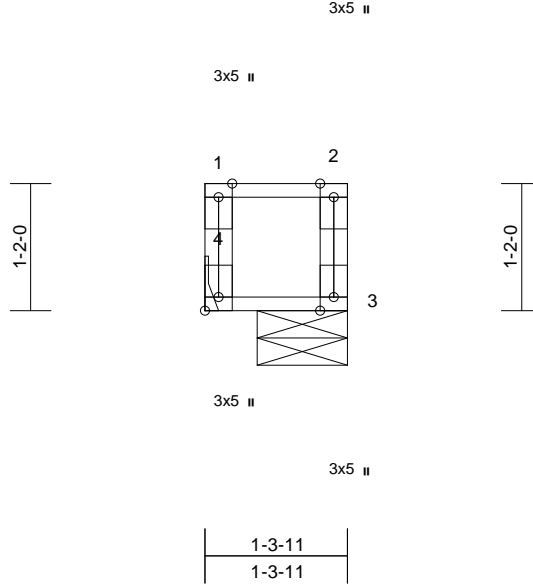
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	32 Magnolia Acres-2nd Floor-Grayson EC 3CG SL RH
25080088-02	F213	Floor	1	1	I75679593
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 12:11:37
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Page: 1



Scale = 1:21.1

Plate Offsets (X, Y): [4: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	0.04	Vert(LL)	0.00	4	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.01	Vert(CT)	0.00	4	>999	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL	5.0	Code	IRC2018/TPI2014	Matrix-MR							Weight: 9 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
1-3-11 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc
bracing.

REACTIONS (size) 3=0-9-15, 4= Mechanical
Max Grav 3=58 (LC 1), 4=58 (LC 1)

FORCES (lb) - Maximum Compression/Maximum
Tension

TOP CHORD 1-4=-53/0, 2-3=-53/0, 1-2=-9/0
BOT CHORD 3-4=0/9

NOTES

- 1) Unbalanced floor live loads have been considered for this design.
- 2) Bearings are assumed to be: , Joint 3 SP No.2 .
- 3) Refer to girder(s) for truss to truss connections.
- 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 10-00-00 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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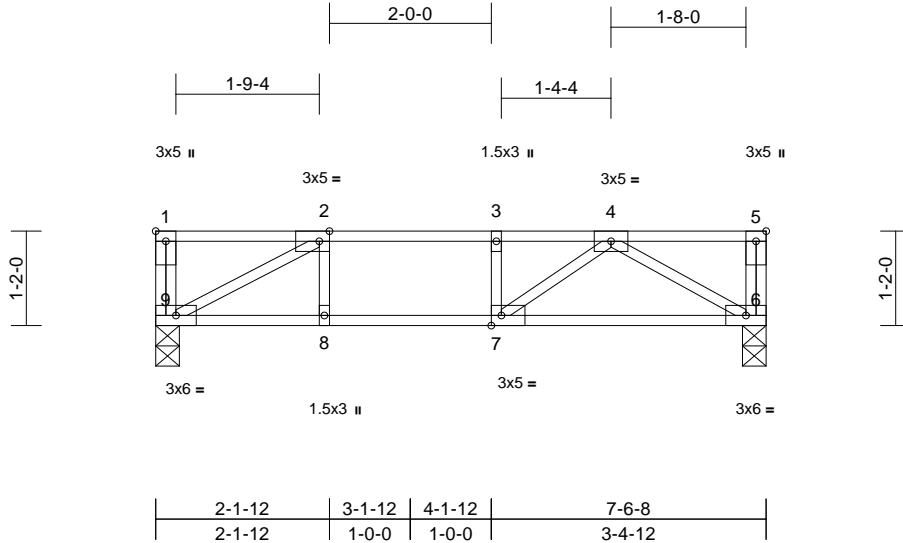
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	32 Magnolia Acres-2nd Floor-Grayson EC 3CG SL RH
25080088-02	F214	Floor	1	1	I75679594
Job Reference (optional)					

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

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Page: 1



Scale = 1:28.5

Plate Offsets (X, Y): [1:Edge,0-1-8], [2:0-1-8,Edge], [7:0-1-8,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	0.48	Vert(LL)	-0.07	6-7	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.46	Vert(CT)	-0.09	6-7	>943	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.18	Horz(CT)	0.01	6	n/a	n/a		
BCDL	5.0	Code	IRC2018/TPI2014	Matrix-MSH							Weight: 39 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=0-3-8, 9=0-3-8
Max Grav 6=401 (LC 1), 9=401 (LC 1)

FORCES (lb) - Maximum Compression/Maximum
Tension

TOP CHORD 1-9=-74/20, 5-6=-70/0, 1-2=0/0, 2-3=-656/0,
3-4=-656/0, 4-5=0/0

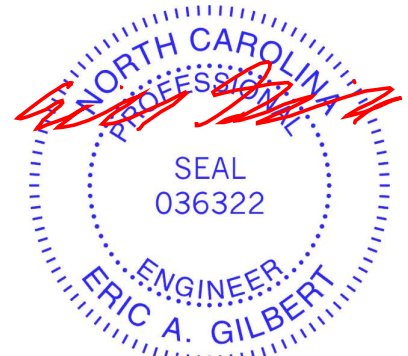
BOT CHORD 8-9=0/656, 7-8=0/656, 6-7=0/531

WEBS 2-8=0/82, 3-7=-117/0, 2-9=-743/0,
4-6=-614/0, 4-7=0/249

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.

LOAD CASE(S) Standard



August 18, 2025

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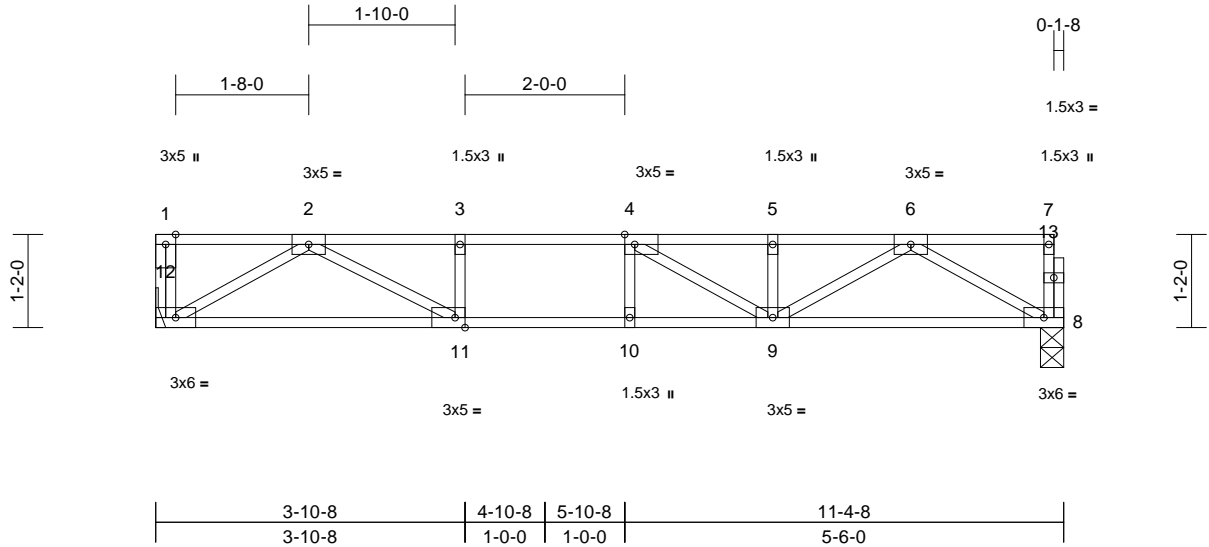
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	32 Magnolia Acres-2nd Floor-Grayson EC 3CG SL RH
25080088-02	F215	Floor	3	1	I75679595
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 12:11:37
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Page: 1



Scale = 1:28.9

Plate Offsets (X, Y): [4:0-1-8,Edge], [11:0-1-8,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	0.75	Vert(LL)	-0.13	9-10	>994	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.93	Vert(CT)	-0.17	9-10	>788	360		
BCLL	0.0	Rep Stress Incr	NO	WB	0.37	Horz(CT)	0.02	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.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=0-3-8, 12= Mechanical
Max Grav 8=606 (LC 1), 12=612 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-12=-79/0, 7-8=-73/0, 1-2=0/0, 2-3=-1562/0, 3-4=-1562/0, 4-5=-1456/0, 5-6=-1456/0, 6-7=-4/0

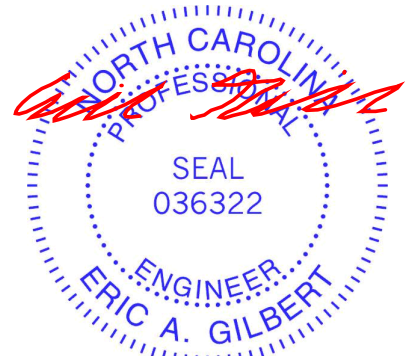
BOT CHORD 11-12=0/903, 10-11=0/1562, 9-10=0/1562, 8-9=0/899

WEBS 3-11=-280/0, 4-10=-102/24, 2-12=-1044/0, 2-11=0/775, 6-8=-1035/0, 6-9=0/651, 5-9=-235/0, 4-9=-357/55

NOTES

- Unbalanced floor live loads have been considered for this design.
- Bearings are assumed to be: , Joint 8 SP No.2 .
- Refer to girder(s) for truss to truss connections.
- 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

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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	32 Magnolia Acres-2nd Floor-Grayson EC 3CG SL RH
25080088-02	F216	Floor	1	1	I75679596
Job Reference (optional)					

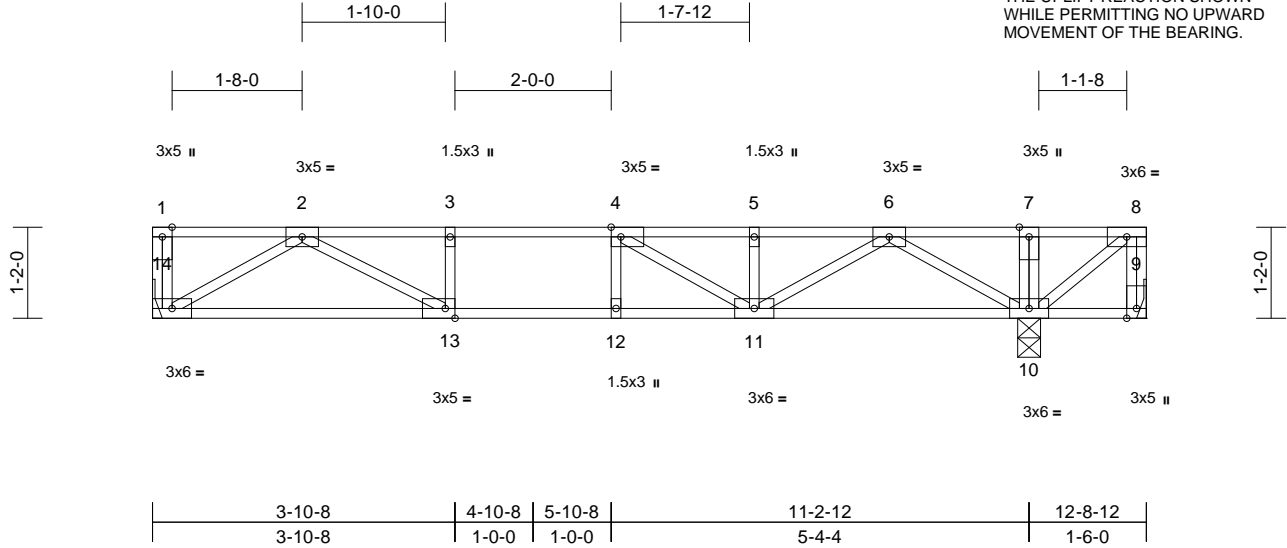
Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Fri Aug 15 12:11:37

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FASTEN TRUSS TO BEARING FOR
THE UPLIFT REACTION SHOWN
WHILE PERMITTING NO UPWARD
MOVEMENT OF THE BEARING.



Scale = 1:29.5

Plate Offsets (X, Y): [4:0-1-8,Edge], [13:0-1-8,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	0.51	Vert(LL)	-0.06	13-14	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.45	Vert(CT)	-0.08	13-14	>999	360		
BCLL	0.0	Rep Stress Incr	NO	WB	0.38	Horz(CT)	0.01	9	n/a	n/a		
BCDL	5.0	Code	IRC2018/TPI2014	Matrix-MSH							Weight: 67 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, Except:
6-0-0 oc bracing: 10-11.

REACTIONS (size) 9= Mechanical, 10=0-3-8, 14= Mechanical
Max Uplift 9=-556 (LC 3)
Max Grav 9=384 (LC 4), 10=1563 (LC 8), 14=522 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-14=-72/0, 8-9=-385/551, 1-2=0/0, 2-3=-1163/0, 3-4=-1163/0, 4-5=-787/0, 5-6=-787/0, 6-7=0/1037, 7-8=0/1037
BOT CHORD 13-14=0/746, 12-13=0/1163, 11-12=0/1163, 10-11=-98/207, 9-10=0/0
WEBS 3-13=-194/0, 4-12=-19/48, 7-10=-194/0, 2-14=-863/0, 2-13=0/475, 6-10=-1168/0, 6-11=0/796, 5-11=-185/7, 4-11=-454/0, 8-10=-1301/0

NOTES

- Unbalanced floor live loads have been considered for this design.
- Bearings are assumed to be: , Joint 10 SP No.2 .
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 556 lb uplift at joint 9.
- 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.
- Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 500 lb down at 12-7-4 on top 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 + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00
Uniform Loads (lb/ft)
Vert: 9-14=-10, 1-8=-100
Concentrated Loads (lb)
Vert: 8=-500 (F)



August 18, 2025

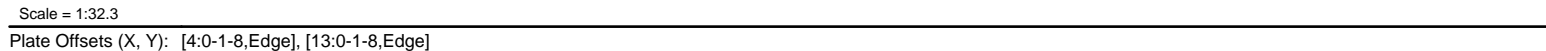
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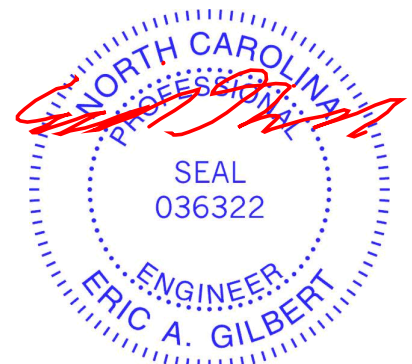
818 Soundside Road
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LUMBER			6) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
TOP CHORD	2x4 SP No.2(flat)		
BOT CHORD	2x4 SP No.2(flat)		
WEBS	2x4 SP No.3(flat)		
OTHERS	2x4 SP No.3(flat)		
BRACING			7) CAUTION, Do not erect truss backwards.
TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.		8) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 500 lb down at 12-10-12 on top chord. The design/selection of such connection device(s) is the responsibility of others.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 10-11.		9) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).
REACTIONS	(size) 9= Mechanical, 10=0-3-8, 14=0-3-8		LOAD CASE(S) Standard
	Max Uplift 9=-398 (LC 3)		1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00
	Max Grav 9=413 (LC 4), 10=1254 (LC 8), 14=430 (LC 3)		Uniform Loads (lb/ft) Vert: 9-14=-8, 1-8=-80 Concentrated Loads (lb) Vert: 8=-500 (F)
FORCES			
	(lb) - Maximum Compression/Maximum Tension		
TOP CHORD	1-14=-51/0, 8-9=-414/394, 1-2=-3/0, 2-3=-1011/0, 3-4=-1011/0, 4-5=-667/0, 5-6=-667/0, 6-7=0/830, 7-8=0/830		
BOT CHORD	13-14=0/628, 12-13=0/1011, 11-12=0/1011, 10-11=-92/195, 9-10=0/0		
WEBS	3-13=-159/0, 4-12=-11/47, 7-10=-151/0, 2-14=-723/0, 2-13=0/424, 6-10=-932/0, 6-11=0/663, 5-11=-149/10, 4-11=-403/0, 8-10=-1040/0		

- 1) Unbalanced floor live loads have been considered for this design.
- 2) Bearings are assumed to be: Joint 14 SP No.2 , Joint 10 SP No.2 .
- 3) Refer to girder(s) for truss to truss connections.
- 4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 398 lb uplift at joint 9.
- 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.



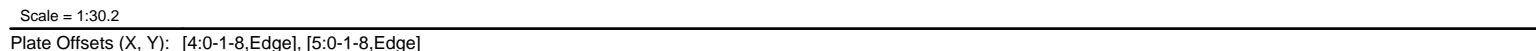
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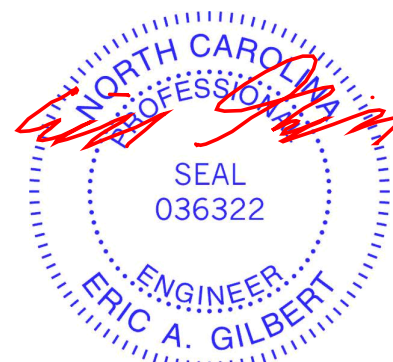
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LUMBER		6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
TOP CHORD	2x4 SP No.2(flat)	7) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 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.
BOT CHORD	2x4 SP No.2(flat)	
WEBS	2x4 SP No.3(flat)	
BRACING		8) CAUTION, Do not erect truss backwards.
TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.	LOAD CASE(S) Standard
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing, Except:	
	6-0-0 oc bracing: 11-12.	
REACTIONS	(size)	1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00
		Uniform Loads (lb/ft)
	Max Uplift	Vert: 10-16=-8, 1-9=-80
	Max Grav	Concentrated Loads (lb)
		Vert: 9=-500
FORCES		
	(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-16=-57/0, 9-10=-389/433, 1-2=0/0, 2-3=-971/0, 3-4=-971/0, 4-5=-1017/0, 5-6=-666/0, 6-7=-666/0, 7-8=0/793, 8-9=0/793	
BOT CHORD	15-16=0/635, 14-15=0/1017, 13-14=0/1017, 12-13=0/1017, 11-12=-34/124, 10-11=0/0	
WEBS	4-14=-88/33, 5-13=-6/60, 8-11=-154/0, 2-16=-734/0, 2-15=0/393, 3-15=-117/54, 4-15=-234/42, 7-11=-972/0, 7-12=0/671, 6-12=-144/9, 5-12=-424/0, 9-11=-995/0	

- ### 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 16 SP No.2 , Joint 11 SP No.2 .
 - 4) Refer to girder(s) for truss to truss connections.
 - 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 438 lb uplift at joint 10.



August 18, 2025

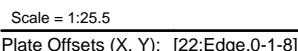
 WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

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.tpinet.org) and **BCSI Building Component Safety Information** available from the Structural Building Components Association (www.sbcacomponents.com)

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TRENCO
A MiTek Affiliat

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 12:11:38 Page: 1
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LUMBER			
TOP CHORD	2x4 SP No.2(flat)		3) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
BOT CHORD	2x4 SP No.2(flat)		4) Gable studs spaced at 1-4-0 oc.
WEBS	2x4 SP No.3(flat)		5) Bearings are assumed to be: Joint 13 SP No.2 .
OTHERS	2x4 SP No.3(flat)		6) Refer to girder(s) for truss to truss connections.
BRACING			7) N/A
TOP CHORD	Structural wood sheathing directly applied or 10-0-0 oc purlins, except end verticals.		
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.		
REACTIONS (size)			
	12= Mechanical, 13=11-4-0,		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.
	14=11-4-0, 15=11-4-0, 16=11-4-0,		9) 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.
	17=11-4-0, 18=11-4-0, 19=11-4-0,		
	20=11-4-0, 21=11-4-0, 22=11-4-0		
Max Uplift	14=-6 (LC 4)		10) CAUTION, Do not erect truss backwards.
Max Grav	12=549 (LC 1), 13=107 (LC 1),		LOAD CASE(S) Standard
	14=88 (LC 3), 15=124 (LC 1),		1) Dead + Floor Live (balanced): Lumber Increase=1.00,
	16=116 (LC 3), 17=118 (LC 1),		Plate Increase=1.00
	18=117 (LC 3), 19=118 (LC 1),		Uniform Loads (lb/ft)
	20=116 (LC 3), 21=125 (LC 1),		Vert: 12-22=-8, 1-11=-80
	22=41 (LC 3)		Concentrated Loads (lb)
FORCES	(lb) - Maximum Compression/Maximum Tension		Vert: 11=-500
TOP CHORD	1-22=-270, 11-12, 5-11/0, 1-3, 2/0, 2-2, 2/0		

NOTES

- 1) Unbalanced floor live loads have been considered for this design.
- 2) All plates are 1.5x3 MT20 unless otherwise indicated.



August 18, 2025

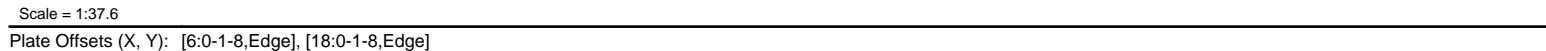
WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

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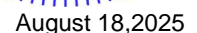
Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Fri Aug 15 12:11:38 Page: 1
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LUMBER		6) Recommend 2x6 strongbacks, on edge, spaced at 10'-00"-00" oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
TOP CHORD	2x4 SP 2400F 2.0E(flat)	
BOT CHORD	2x4 SP 2400F 2.0E(flat)	
WEBS	2x4 SP No.3(flat)	
OTHERS	2x4 SP No.3(flat)	
	LOAD CASE(S)	Standard

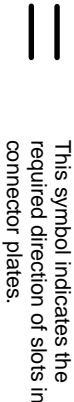
NOTES

- 1) Unbalanced floor live loads have been considered for this design.
- 2) All plates are MT20 plates unless otherwise indicated.
- 3) All plates are 1.5x3 MT20 unless otherwise indicated.
- 4) All bearings are assumed to be SP 2400F 2.0E .
- 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.



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.

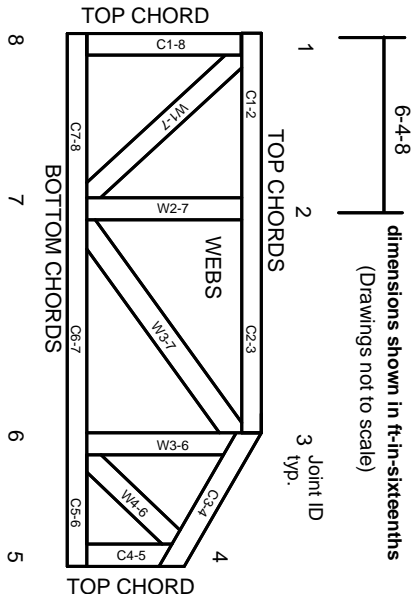
BEARING



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 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