

RE:Malbec

Site Information:

Project Customer: DRB Raleigh Project Name:

Lot/Block:

Subdivision: DRB Raleigh

Model:

Address:

City:

State:

General Truss Engineering Criteria & Design Loads (Individual Truss Design Drawings Show Special Loading Conditions):

Design Code: IRC2021/TPI2014

Wind Code: ASCE 7-16

Wind Speed: 115 mph

Roof Load: 50.0 psf

Mean Roof Height (feet): 25

Design Program: MiTek 20/20 8.8

Design Method: MWFRS (Envelope)/C-C hybrid Wind ASCE 7-16

Floor Load: N/A psf

Exposure Category: C

Trenco

818 Soundside Rd
Edenton, NC 27932

No.	Seal#	Truss Name	Date
1	I71683373	FG03	2/28/25
2	I71683374	FG01	2/28/25
3	I71683375	FT10	2/28/25
4	I71683376	FT09	2/28/25
5	I71683377	FT09GE	2/28/25
6	I71683378	FT03	2/28/25
7	I71683379	FT04	2/28/25
8	I71683380	FT04GE	2/28/25
9	I71683381	FT08	2/28/25
10	I71683382	FT02	2/28/25
11	I71683383	FG02	2/28/25
12	I71683384	FT05GE	2/28/25
13	I71683385	FT05	2/28/25
14	I71683386	FT05A	2/28/25
	I71683387	FT05B	2/28/25
16	I71683388	FT01GE	2/28/25
17	I71683389	FT01A	2/28/25
18	I71683390	FT01	2/28/25
19	I71683391	FT01B	2/28/25
20	I71683392	FT06A	2/28/25
21	I71683393	FT06	2/28/25
22	I71683394	FG04	2/28/25

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

Truss Design Engineer's Name: Gilbert, Eric

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

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.



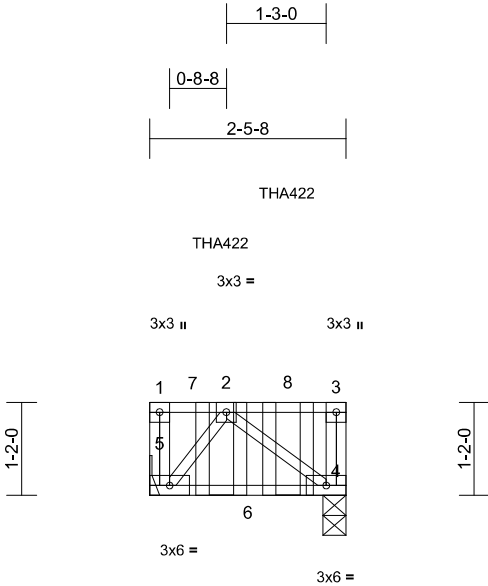
February 28, 2025

Job	Truss	Truss Type	Qty	Ply	Malbec	I71683373
	FG03	Floor Girder	1	1	Job Reference (optional)	

Structural, LLC, Thurmont, MD - 21788,

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Page: 1



Loading	(psf)	Spacing	1-4-0	CSI		DEFL	in	(loc)	I/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.49	Vert(LL)	-0.07	4-5	>377	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.91	Vert(CT)	-0.07	4-5	>359	360		
BCLL	0.0	Rep Stress Incr	NO	WB	0.16	Horz(CT)	0.00	4	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-P							Weight: 17 lb	FT = 20%F, 12%E

LUMBER

TOP CHORD 2x4 SP No.2(flat)

BOT CHORD 2x4 SP No.2(flat)

WEBS 2x4 SP No.3(flat)

Uniform Loads (lb/ft)

Vert: 4-5=-7, 1-3=-67

Concentrated Loads (lb)

Vert: 2=-621 (F), 8=-222 (B)

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-5-8 oc purlins, except end verticals.

BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 4=0-3-8, 5= Mechanical

Max Grav 4=538 (LC 6), 5=652 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-5=-250/47, 3-4=-292/0, 1-2=0/0, 2-3=0/0

BOT CHORD 4-5=0/440

WEBS 2-4=-552/0, 2-5=-705/0

- NOTES**
- 1) Bearings are assumed to be: , Joint 4 SP No.2 .
- 2) Refer to girder(s) for truss to truss connections.
- 3) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- 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) Use Simpson Strong-Tie THA422 (Single Chord Girder) or equivalent at 0-10-12 from the left end to connect truss(es) to front face of top chord.
- 6) Use Simpson Strong-Tie THA422 (Single Chord Girder) or equivalent at 1-8-12 from the left end to connect truss (es) to back face of top chord.
- 7) Fill all nail holes where hanger is in contact with lumber.
- 8) 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



February 28,2025

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

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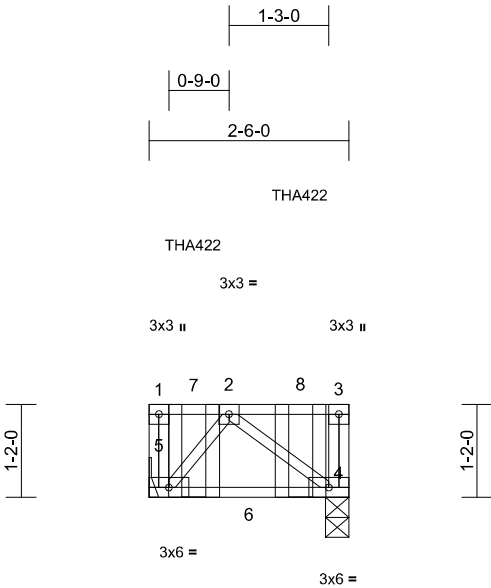
Job	Truss	Truss Type	Qty	Ply	Malbec
2412-1340-B	FG01	Floor Girder	1	1	Job Reference (optional)

I71683374

Structural, LLC, Thurmont, MD - 21788,

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Scale = 1:28

Loading	(psf)	Spacing	1-4-0	CSI	0.88	DEFL	in	(loc)	I/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.88	Vert(LL)	-0.07	4-5	>363	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.88	Vert(CT)	-0.08	4-5	>346	360		
BCLL	0.0	Rep Stress Incr	NO	WB	0.12	Horz(CT)	0.00	4	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-P							Weight: 17 lb	FT = 20%F, 12%E

LUMBER

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

Concentrated Loads (lb)

Vert: 7=-486 (F), 8=-484 (F)

BRACING

TOP CHORD Structural wood sheathing directly applied or
2-6-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc
bracing.

REACTIONS (size) 4=0-3-8, 5= Mechanical
Max Grav 4=558 (LC 1), 5=577 (LC 1)

FORCES (lb) - Maximum Compression/Maximum
Tension
TOP CHORD 1-5=-296/0, 3-4=-332/0, 1-2=0/0, 2-3=0/0
BOT CHORD 4-5=0/347
WEBS 2-4=-435/0, 2-5=-539/0

NOTES

- 1) Bearings are assumed to be: , Joint 4 SP No.2 .
- 2) Refer to girder(s) for truss to truss connections.
- 3) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- 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) Use Simpson Strong-Tie THA422 (Single Chord Girder) or equivalent spaced at 1-4-0 oc max. starting at 0-6-12 from the left end to 1-10-12 to connect truss(es) to front face of top chord.
- 6) Fill all nail holes where hanger is in contact with lumber.
- 7) 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: 4-5=-7, 1-3=-67



February 28, 2025

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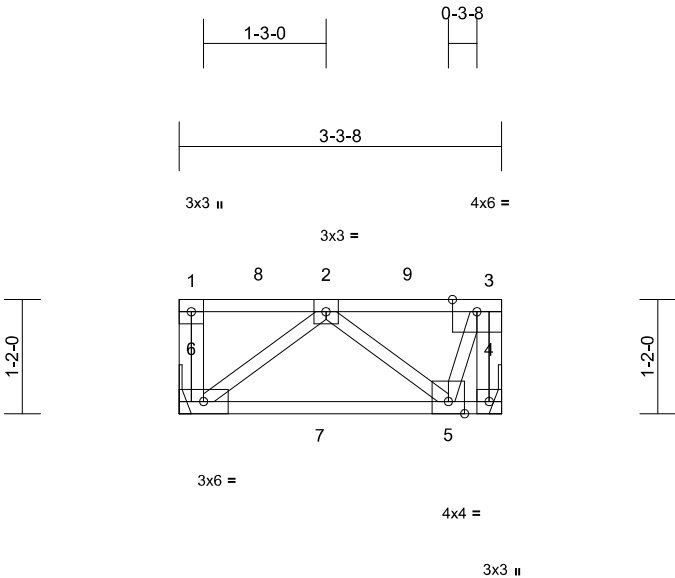
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Malbec	I71683375
	FT10	Floor	1	1	Job Reference (optional)	

Structural, LLC, Thurmont, MD - 21788,

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Loading	(psf)	Spacing	1-4-0	CSI		DEFL	in	(loc)	I/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.81	Vert(LL)	-0.07	5-6	>561	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.87	Vert(CT)	-0.07	5-6	>520	360		
BCLL	0.0	Rep Stress Incr	NO	WB	0.31	Horz(CT)	0.00	4	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-P							Weight: 21 lb	FT = 20%F, 12%E

- LUMBER**
 TOP CHORD 2x4 SP No.2(flat)
 BOT CHORD 2x4 SP No.2(flat)
 WEBS 2x4 SP No.3(flat)
- BRACING**
 TOP CHORD Structural wood sheathing directly applied or 3-3-8 oc purlins, except end verticals.
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
- REACTIONS** (size) 4= Mechanical, 6= Mechanical
 Max Grav 4=837 (LC 6), 6=866 (LC 3)
- FORCES** (lb) - Maximum Compression/Maximum Tension
 TOP CHORD 1-6=-393/0, 3-4=-944/0, 1-2=0/0, 2-3=-301/0
 BOT CHORD 5-6=0/794, 4-5=0/0
 WEBS 2-6=-996/0, 2-5=-771/0, 3-5=0/809

- NOTES**
 1) Refer to girder(s) for truss to truss connections.
 2) 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.
 3) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
 4) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
- LOAD CASE(S)** Standard
 1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00
 Uniform Loads (lb/ft)
 Vert: 4-6=-7, 1-3=-342
 Concentrated Loads (lb)
 Vert: 2=-300

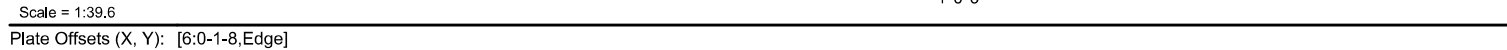


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LUMBER	
TOP CHORD	2x4 SP No.2(flat)
BOT CHORD	2x4 SP SS(flat)
WEBS	2x4 SP No.3(flat)
OTHERS	2x4 SP No.3(flat)
BRACING	
TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
REACTIONS	(size) 10=0-3-8, 17=0-3-8 Max Grav 10=509 (LC 1), 17=509 (LC 1)
FORCES	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-17=-258/38, 9-10=-263/37, 1-2=-15/2, 2-3=-1028/0, 3-4=-1600/0, 4-5=-1600/0, 5-6=-1667/0, 6-7=-1509/0, 7-8=-1042/0, 8-9=-16/2
BOT CHORD	16-17=0/632, 15-16=0/1400, 14-15=0/1738, 13-14=0/1509, 12-13=0/1509, 11-12=0/1509, 10-11=0/602
WEBS	6-13=-544/71, 7-12=-62/309, 8-10=-752/0, 8-11=0/573, 7-11=-668/20, 2-17=-791/0, 2-16=0/516, 3-16=-484/0, 3-15=-96/342, 4-15=-240/74, 5-15=-326/110, 5-14=-250/149, 6-14=-101/679

- 1) Unbalanced floor live loads have been considered for this design.
- 2) All bearings are assumed to be SP SS .
- 3) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- 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.



February 28, 2025

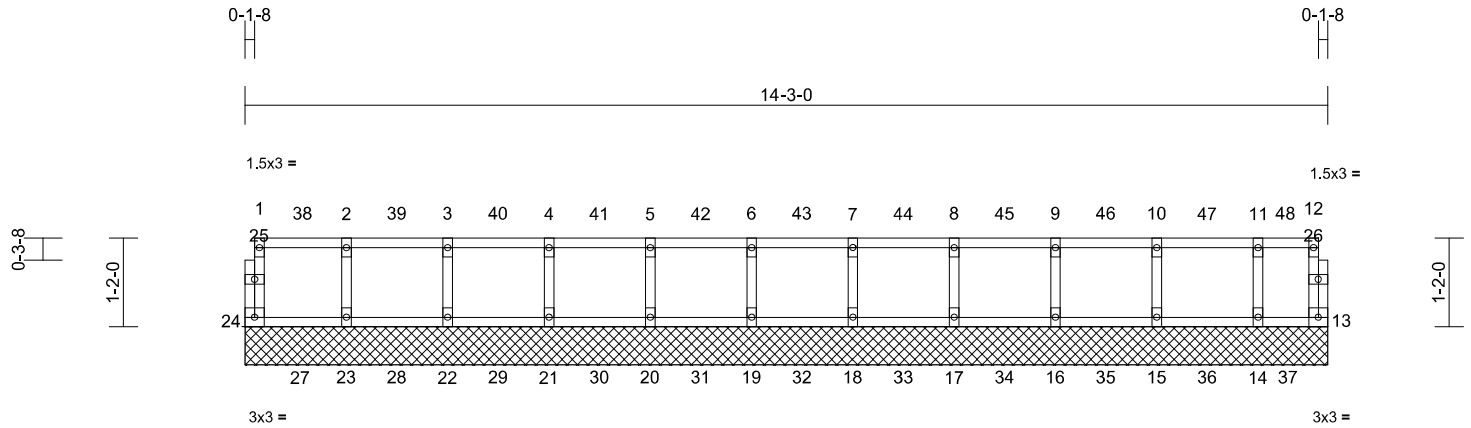
WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

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Scale = 1:29.5

Loading	(psf)	Spacing	1-4-0	CSI		DEFL	in	(loc)	I/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.27	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.28	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.05	Horiz(TL)	0.00	13	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPJ2014	Matrix-R							Weight: 61 lb	FT = 20%F, 12%E

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)

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.

(size)	13=14-3-0, 14=14-3-0, 15=14-3-0, 16=14-3-0, 17=14-3-0, 18=14-3-0, 19=14-3-0, 20=14-3-0, 21=14-3-0, 22=14-3-0, 23=14-3-0, 24=14-3-0
Max Uplift	13=43 (LC 37), 14=19 (LC 28), 15=5 (LC 35), 16=6 (LC 34), 17=5 (LC 33), 18=6 (LC 32), 19=6 (LC 34), 20=6 (LC 32), 21=6 (LC 32), 22=6 (LC 31), 23=7 (LC 30), 24=19 (LC 29)
Max Grav	13=259 (LC 50), 14=274 (LC 49), 15=281 (LC 48), 16=279 (LC 47), 17=280 (LC 46), 18=280 (LC 45), 19=280 (LC 44), 20=280 (LC 43), 21=280 (LC 42), 22=280 (LC 41), 23=280 (LC 40), 24=263 (LC 39)

(lb) - Maximum Compression/Maximum Tension

1-24=-256/24, 12-13=-250/48, 1-2=-24/6,
2-3=-24/6, 3-4=-24/6, 4-5=-24/6, 5-6=-24/6,
6-7=-24/6, 7-8=-24/6, 8-9=-24/6, 9-10=-24/6,
10-11=-24/6, 11-12=-24/6
23-24=-6/24, 22-23=-6/24, 21-22=-6/24,
20-21=-6/24, 19-20=-6/24, 18-19=-6/24,
17-18=-6/24, 16-17=-6/24, 15-16=-6/24,
14-15=-6/24, 13-14=-6/24
2-23=-268/15, 3-22=-269/14, 4-21=-269/14,
5-20=-269/14, 6-19=-269/14, 7-18=-269/14,
8-17=-269/14, 9-16=-268/14, 10-15=-269/13,
11-14=-262/25

- 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 19 lb uplift at joint 24, 43 lb uplift at joint 13, 7 lb uplift at joint 23, 6 lb uplift at joint 22, 6 lb uplift at joint 21, 6 lb uplift at joint 20, 6 lb uplift at joint 19, 6 lb uplift at joint 18, 5 lb uplift at joint 17, 6 lb uplift at joint 16, 5 lb uplift at joint 15 and 19 lb uplift at joint 14.
- 7) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- 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.

LOAD CASE(S) Standard



February 28, 2025



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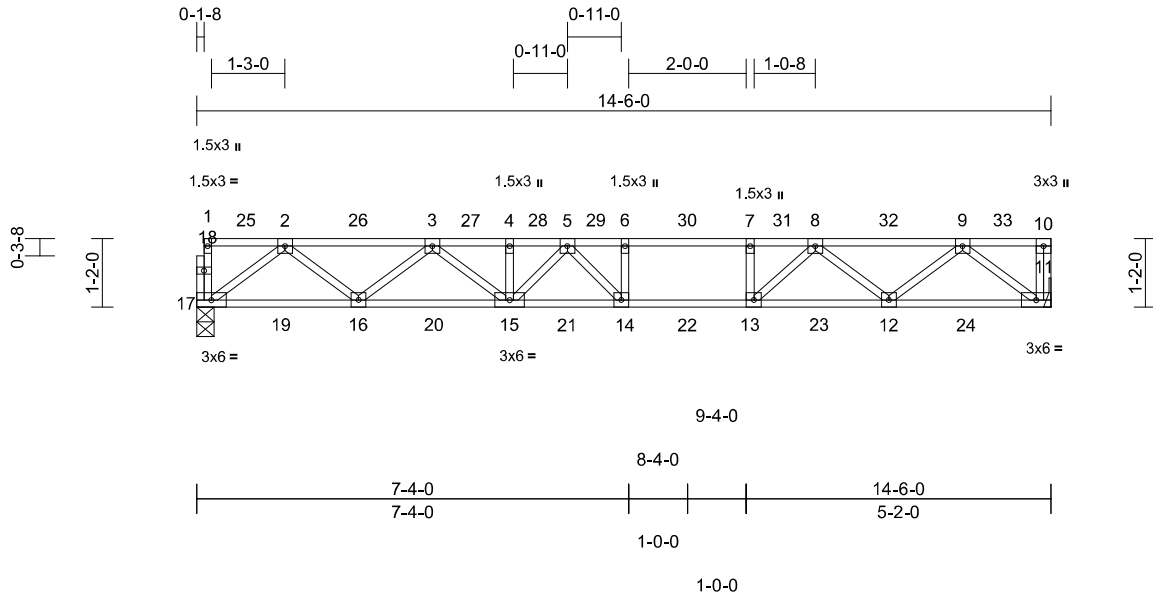
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Malbec	I71683378
	FT03	Floor	2	1	Job Reference (optional)	

Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Feb 18 2025 Print: 8.830 S Feb 18 2025 MiTek Industries, Inc. Thu Feb 27 05:38:03
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Page: 1



Scale = 1:38

Loading	(psf)	Spacing		CSI		DEFL	in	(loc)	I/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.58	Vert(LL)	-0.15	14-15	>999	480	MT20	244/190
TCCL	10.0	Lumber DOL	1.00	BC	0.87	Vert(CT)	-0.21	14-15	>833	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.25	Horz(CT)	0.03	11	n/a	n/a		
BCCL	5.0	Code	IRC2021/TPI2014	Matrix-S							Weight: 74 lb	FT = 20%F, 12%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)

7) CAUTION, Do not erect truss backwards.

LOAD CASE(S) Standard

BRACING

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

REACTIONS (size) 11= Mechanical, 17=0-3-8
Max Grav 11=522 (LC 1), 17=518 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-17=-258/38, 10-11=-258/34, 1-2=-15/2, 2-3=-1049/0, 3-4=-1656/0, 4-5=-1656/0, 5-6=-1716/0, 6-7=-1716/0, 7-8=-1716/0, 8-9=-1039/0, 9-10=0/0
BOT CHORD 16-17=0/643, 15-16=0/1437, 14-15=0/1746, 13-14=0/1716, 12-13=0/1437, 11-12=0/644
WEBS 6-14=-160/194, 7-13=-249/78, 2-17=-805/0, 2-16=0/528, 3-16=-505/0, 3-15=-87/349, 9-11=-808/0, 9-12=0/514, 8-12=-518/0, 8-13=-108/497, 4-15=-230/87, 5-15=-238/138, 5-14=-328/242

NOTES

- Unbalanced floor live loads have been considered for this design.
- All plates are 3x3 (=) MT20 unless otherwise indicated.
- Bearings are assumed to be: Joint 17 SP No.2.
- Refer to girder(s) for truss to truss connections.
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- 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.



February 28, 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/TPI Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinstitute.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacompoments.com)

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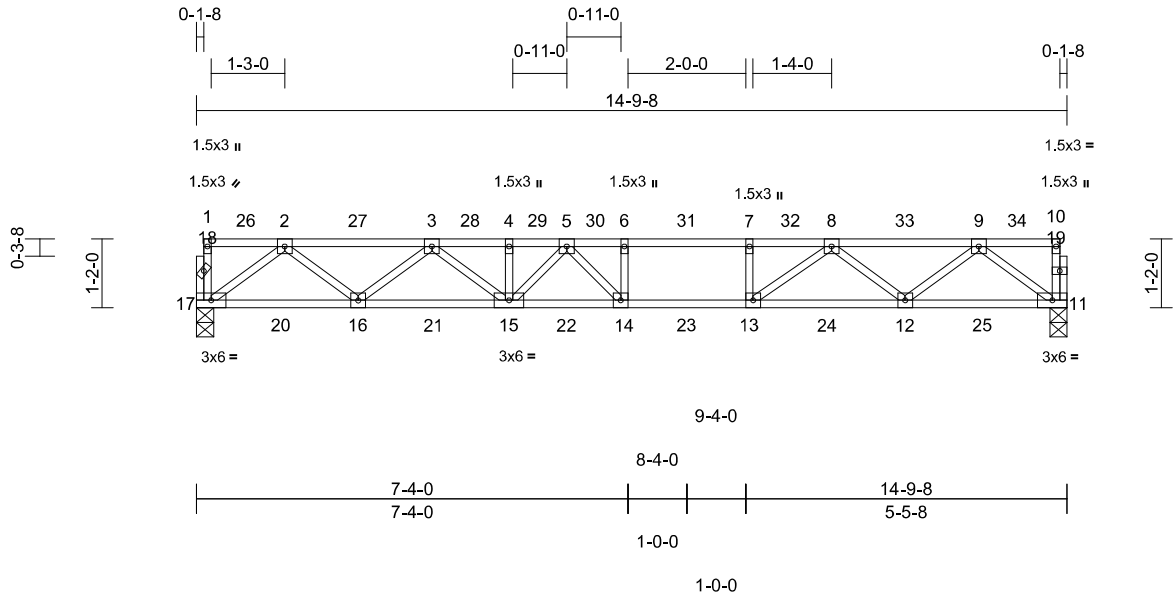
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Malbec	I71683379
	FT04	Floor	4	1	Job Reference (optional)	

Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Feb 18 2025 Print: 8.830 S Feb 18 2025 MiTek Industries, Inc. Thu Feb 27 05:38:04
ID:fH9ETPI0aC02NB0eueut74yD_R4-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoI7J4zJC?f

Page: 1



Loading	(psf)	Spacing	1-4-0	CSI		DEFL	in	(loc)	I/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.58	Vert(LL)	-0.16	14-15	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.92	Vert(CT)	-0.21	14-15	>832	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.26	Horz(CT)	0.03	11	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-S							Weight: 75 lb	FT = 20%F, 12%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, Except: 2-2-0 oc bracing: 12-13.
- REACTIONS** (size) 11=0-3-8, 17=0-3-8
- Max Grav 11=529 (LC 1), 17=529 (LC 1)
- FORCES** (lb) - Maximum Compression/Maximum Tension
- TOP CHORD 1-17=-258/38, 10-11=-257/38, 1-2=-15/2, 2-3=-1076/0, 3-4=-1708/0, 4-5=-1708/0, 5-6=-1798/0, 6-7=-1798/0, 7-8=-1798/0, 8-9=-1067/0, 9-10=-15/2
- BOT CHORD 16-17=0/657, 15-16=0/1476, 14-15=0/1809, 13-14=0/1798, 12-13=0/1473, 11-12=0/658
- WEBS 6-14=-168/187, 7-13=-225/73, 2-17=-823/0, 2-16=0/545, 3-16=-521/0, 3-15=-81/357, 4-15=-230/86, 5-15=-245/132, 5-14=-318/262, 9-11=-824/0, 9-12=0/533, 8-12=-528/0, 8-13=-90/516

- NOTES**
- Unbalanced floor live loads have been considered for this design.
 - All plates are 3x3 (=) MT20 unless otherwise indicated.
 - All bearings are assumed to be SP No.2.
 - This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
 - 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.



February 28,2025

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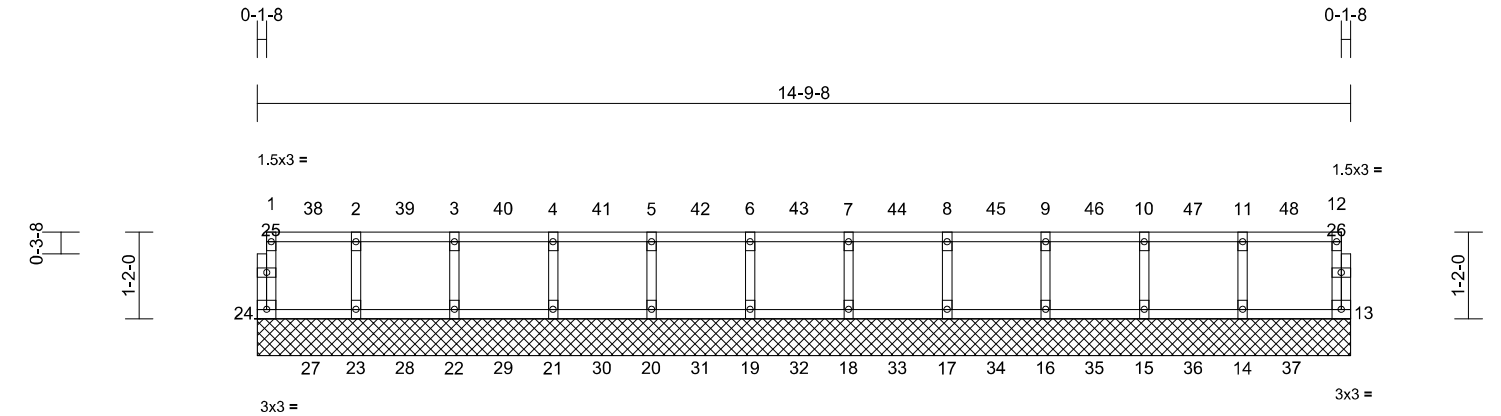
ENGINEERING BY
TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Malbec	I71683380
	FT04GE	Floor Supported Gable	1	1	Job Reference (optional)	

Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Feb 18 2025 Print: 8.830 S Feb 18 2025 MiTek Industries, Inc. Thu Feb 27 05:38:04
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Page: 1



Scale = 1:30.3

Loading	(psf)	Spacing	1-4-0	CSI	DEFL	in	(loc)	I/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.27	Vert(LL)	n/a	-	n/a	999	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.28	Vert(TL)	n/a	-	n/a	999	
BCLL	0.0	Rep Stress Incr	YES	WB	0.05	Horiz(TL)	0.00	13	n/a	n/a	
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-R							
										Weight: 62 lb	FT = 20%F, 12%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)	
	13=14-9-8, 14=14-9-8, 15=14-9-8, 16=14-9-8, 17=14-9-8, 18=14-9-8, 19=14-9-8, 20=14-9-8, 21=14-9-8, 22=14-9-8, 23=14-9-8, 24=14-9-8
Max Uplift	13=-13 (LC 37), 14=-4 (LC 36), 15=-7 (LC 38), 16=-6 (LC 37), 17=-6 (LC 36), 18=-6 (LC 35), 19=-6 (LC 34), 20=-6 (LC 33), 21=-6 (LC 32), 22=-5 (LC 31), 23=-8 (LC 30), 24=-17 (LC 29)
Max Grav	13=265 (LC 50), 14=281 (LC 49), 15=279 (LC 48), 16=280 (LC 47), 17=280 (LC 46), 18=280 (LC 45), 19=280 (LC 44), 20=280 (LC 43), 21=280 (LC 42), 22=280 (LC 41), 23=279 (LC 40), 24=264 (LC 39)
FORCES (lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-24=-256/23, 12-13=-257/18, 1-2=-25/4, 2-3=-25/4, 3-4=-25/4, 4-5=-25/4, 5-6=-25/4, 6-7=-25/4, 7-8=-25/4, 8-9=-25/4, 9-10=-25/4, 10-11=-25/4, 11-12=-25/4
BOT CHORD	23-24=-4/25, 22-23=-4/25, 21-22=-4/25, 20-21=-4/25, 19-20=-4/25, 18-19=-4/25, 17-18=-4/25, 16-17=-4/25, 15-16=-4/25, 14-15=-4/25, 13-14=-4/25
WEBS	2-23=-268/16, 3-22=-269/13, 4-21=-269/14, 5-20=-269/14, 6-19=-269/14, 7-18=-269/14, 8-17=-269/14, 9-16=-269/14, 10-15=-268/14, 11-14=-269/13

- 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 17 lb uplift at joint 24, 13 lb uplift at joint 13, 8 lb uplift at joint 23, 5 lb uplift at joint 22, 6 lb uplift at joint 21, 6 lb uplift at joint 20, 6 lb uplift at joint 19, 6 lb uplift at joint 18, 6 lb uplift at joint 17, 6 lb uplift at joint 16, 7 lb uplift at joint 15 and 4 lb uplift at joint 14.
 - 7) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
 - 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.

LOAD CASE(S) Standard



February 28, 2025

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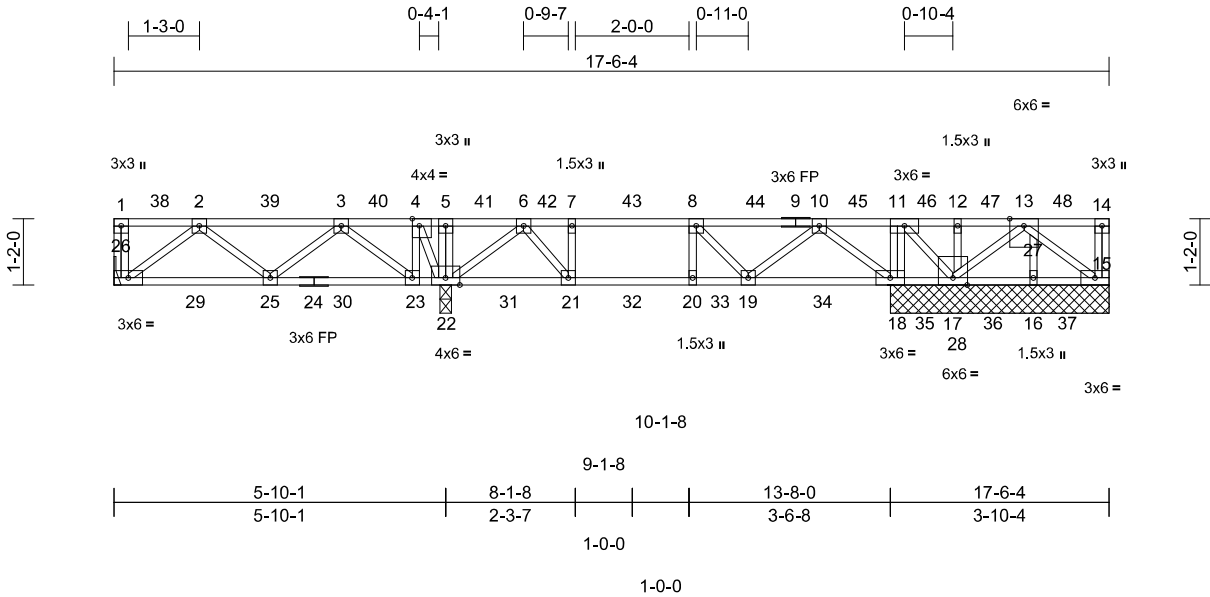
ENGINEERING BY
TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Malbec	I71683381
	FT08	Floor	1	1	Job Reference (optional)	

Structural, LLC, Thurmont, MD - 21788,

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Page: 1



Scale = 1:39.5									
Plate Offsets (X, Y): [4:0-1-8,Edge]									
Loading	(psf)	Spacing	1-10-8	CSI		DEFL	in	(loc)	I/defl
	40.0	Plate Grip DOL	1.00	TC	0.56	Vert(LL)	-0.08	25-26	>827
	10.0	Lumber DOL	1.00	BC	0.78	Vert(CT)	-0.09	25-26	>776
	0.0	Rep Stress Incr	YES	WB	0.20	Horz(CT)	0.00	18	n/a
	5.0	Code	IRC2021/TPI2014	Matrix-S					
							PLATES		
							GRIP		
							MT20		
							244/190		
							Weight: 97 lb		
							FT = 20%F, 12%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, Except: 10-0-0 oc bracing: 20-21,19-20.
REACTIONS (size)	
	15=3-10-4, 16=3-10-4, 18=3-10-4, 22=0-2-7, 26= Mechanical
Max Uplift	15=-101 (LC 27), 16=-66 (LC 27)
Max Grav	15=249 (LC 52), 16=260 (LC 51), 18=839 (LC 1), 22=686 (LC 1), 26=322 (LC 42)
FORCES (lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-26=-260/33, 14-15=-263/5, 1-2=0/0, 2-3=-400/65, 3-4=-134/305, 4-5=-104/368, 5-6=-104/369, 6-7=-389/0, 7-8=-389/0, 8-10=-237/0, 10-11=0/663, 11-12=-48/431, 12-13=-48/431, 13-14=0/0
BOT CHORD	25-26=-7/313, 23-25=-157/326, 22-23=-305/134, 21-22=-17/237, 20-21=0/389, 19-20=0/389, 18-19=-228/75, 17-18=-663/0, 16-17=-167/103, 15-16=-167/103
WEBS	5-22=-278/51, 7-21=-267/7, 8-20=-87/223, 11-18=-410/0, 6-22=-531/0, 6-21=0/374, 10-18=-679/0, 10-19=0/469, 8-19=-331/73, 2-26=-392/9, 2-25=-88/214, 3-25=-83/223, 3-23=-399/0, 4-23=-24/421, 4-22=-466/21, 13-27=-188/257, 15-27=-123/204, 17-28=-398/19, 13-28=-342/29, 11-17=0/419, 16-27=-93/78, 12-28=-252/28

NOTES

- Unbalanced floor live loads have been considered for this design.
- All plates are 3x3 (=) MT20 unless otherwise indicated.
- 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.
- Bearings are assumed to be: , Joint 22 SP No.2 , Joint 16 SP No.2 .
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate at joint(s) 22.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 15 and 16. This connection is for uplift only and does not consider lateral forces.
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- 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

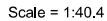


February 28,2025

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

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Edenton, NC 27932

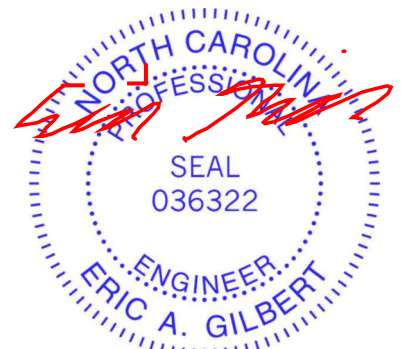
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LUMBER		6) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
TOP CHORD	2x4 SP No.2(flat)	
BOT CHORD	2x4 SP No.2(flat) *Except* 20-13:2x4 SP SS (flat)	
WEBS	2x4 SP No.3(flat)	7) CAUTION, Do not erect truss backwards.
OTHERS	2x4 SP No.3(flat)	LOAD CASE(S) Standard

BRACING	
TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
REACTIONS	(size) 13= Mechanical, 22=0-3-8 Max Grav 13=654 (LC 1), 22=650 (LC 1)
FORCES	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-22=-259/41, 12-13=-258/35, 1-2=-16/2, 2-3=-1386/0, 3-4=-2255/0, 4-5=-2749/0, 5-6=-2749/0, 6-7=-2723/0, 7-9=-2299/0, 9-10=-2299/0, 10-11=-1381/0, 11-12=0/0
BOT CHORD	21-22=0/814, 19-21=0/1928, 18-19=0/2593, 17-18=0/2749, 16-17=0/2749, 15-16=0/2604, 14-15=0/1921, 13-14=0/817
WEBS	5-18=-255/161, 6-17=-250/174, 2-22=-1019/0, 2-21=0/744, 3-21=-707/0, 3-19=0/426, 4-19=-439/56, 4-18=-239/469, 11-13=-1025/0, 11-14=0/733, 10-14=-703/0, 10-15=-18/482, 9-15=-243/71, 7-15=-444/23, 7-16=-127/287, 6-16=-288/369

- 1) Unbalanced floor live loads have been considered for this design.
- 2) All plates are MT20 plates unless otherwise indicated.
- 3) Bearings are assumed to be: Joint 22 SP No.2 .
- 4) Refer to girder(s) for truss to truss connections.
- 5) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.



February 28, 2025

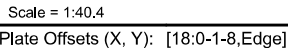
WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED LITERATURE REFERENCE PAGE MH-1473 (Rev. 11/22/2023) BEFORE USE.

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 D58-22** available from Truss Plate Institute (www.tpiinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbccomponents.com)

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818 Soundside Road
Edenton, NC 27932

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LUMBER
TOP CHORD 2x4 SP SS(flat)
BOT CHORD 2x4 SP No.2(flat) *Except* 20-13:2x4 SP SS (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) 13= Mechanical, 22=0-3-8
Max Grav 13=1087 (LC 1), 22=749 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

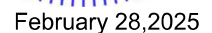
TOP CHORD 1-22=-259/40, 12-13=-248/45, 1-2=-16/2, 2-3=-1636/0, 3-4=-2728/0, 4-5=-3525/0, 5-6=-3525/0, 6-7=-3661/0, 7-9=-3460/0, 9-10=-3460/0, 10-11=-2406/0, 11-12=0/0

BOT CHORD 21-22=0/944, 19-21=0/2293, 18-19=0/3209, 17-18=0/3525, 16-17=0/3525, 15-16=0/3698, 14-15=0/3354, 13-14=0/1436

WEBS 5-18=-414/129, 6-17=-301/141, 2-22=-1182/0, 2-21=0/901, 3-21=-855/0, 3-19=0/566, 4-19=-627/0, 4-18=-164/761, 11-13=-1801/0, 11-14=0/1263, 10-14=-1234/0, 10-15=-128/339, 9-15=-195/137, 7-15=-420/48, 7-16=-212/234, 6-16=-207/441

- 1) Unbalanced floor live loads have been considered for this design.
- 2) All plates are MT20 plates unless otherwise indicated.
- 3) Bearings are assumed to be: Joint 22 SP No.2 .
- 4) Refer to girder(s) for truss to truss connections.

- 5) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
 - 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.
 - 8) Use Simpson Strong-Tie THA422 (Single Chord Girder) or equivalent at 14-7-12 from the left end to connect truss(es) to front face of top chord.
 - 9) Fill all nail holes where hanger is in contact with lumber.
 - 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)
Ver: 13-22=-7, 1-12=-67
Concentrated Loads (lb)
Ver: 38=-532 (F)

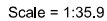


WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

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)

818 Soundside Road
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Structural, LLC, Thurmont, MD - 21788, Run: 8.83 S Feb 18 2025 Print: 8.830 S Feb 18 2025 MiTek Industries, Inc. Thu Feb 27 05:38:05 Page: 1
ID:sZXpKgXczMYBwn7u?00Mb4yD_On-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKwCDoi7J4zJC?f



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.

BOT CHORD	33-34=-6/24, 32-33=-6/24, 30-32=-6/24, 29-30=-6/24, 28-29=-6/24, 27-28=-6/24, 26-27=-6/24, 25-26=-6/24, 24-25=-6/24, 23-24=-6/24, 22-23=-6/24, 21-22=-6/24, 20-21=-6/24, 19-20=-6/24, 18-19=-6/24
WEBS	2-33=-268/15, 3-32=-269/14, 4-30=-269/14, 5-29=-269/14, 6-28=-269/14, 7-27=-269/14, 8-26=-269/14, 9-25=-269/14, 10-24=-269/14, 11-23=-269/14, 13-22=-269/14, 14-21=-268/14, 15-20=-269/13, 16-19=-261/27

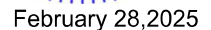
NOTES

- 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) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at j(s) 34, 18, 33, 32, 30, 29, 28, 27, 26, 25, 24, 23, 22, 21, 20, and 19. This connection is for uplift only and does not consider lateral forces.
- 7) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- 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.

LOAD CASE(S) Standard

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-34=-260/23, 17-18=-255/52, 1-2=-24/6, 2-3=-24/6, 3-4=-24/6, 4-5=-24/6, 5-6=-24/6, 6-7=-24/6, 7-8=-24/6, 8-9=-24/6, 9-10=-24/6, 10-11=-24/6, 11-13=-24/6, 13-14=-24/6, 14-15=-24/6, 15-16=-24/6, 16-17=-24/6

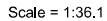


 WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

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 Components Association (www.sbcacomponents.com)

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Structural, LLC, Thurmont, MD - 21788, Run: 8.83 S Feb 18 2025 Print: 8.830 S Feb 18 2025 MiTek Industries, Inc. Thu Feb 27 05:38:04 Page: 1
ID:KUaZcCLzKsXSbJvp3fkbxiyD_P1-RfC?PsB70Hq3NSgPqnL8w3uITxbGKwRcDoi7J4zJC?f



- 5) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 24. This connection is for uplift only and does not consider lateral forces.
- 6) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- 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

- 1) Unbalanced floor live loads have been considered for this design.
- 2) All plates are 3x3 (=) MT20 unless otherwise indicated.
- 3) Bearings are assumed to be: Joint 24 SP No.2 , Joint 20 SP No.2 .
- 4) Refer to girder(s) for truss to truss connections.



February 28, 2025

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)

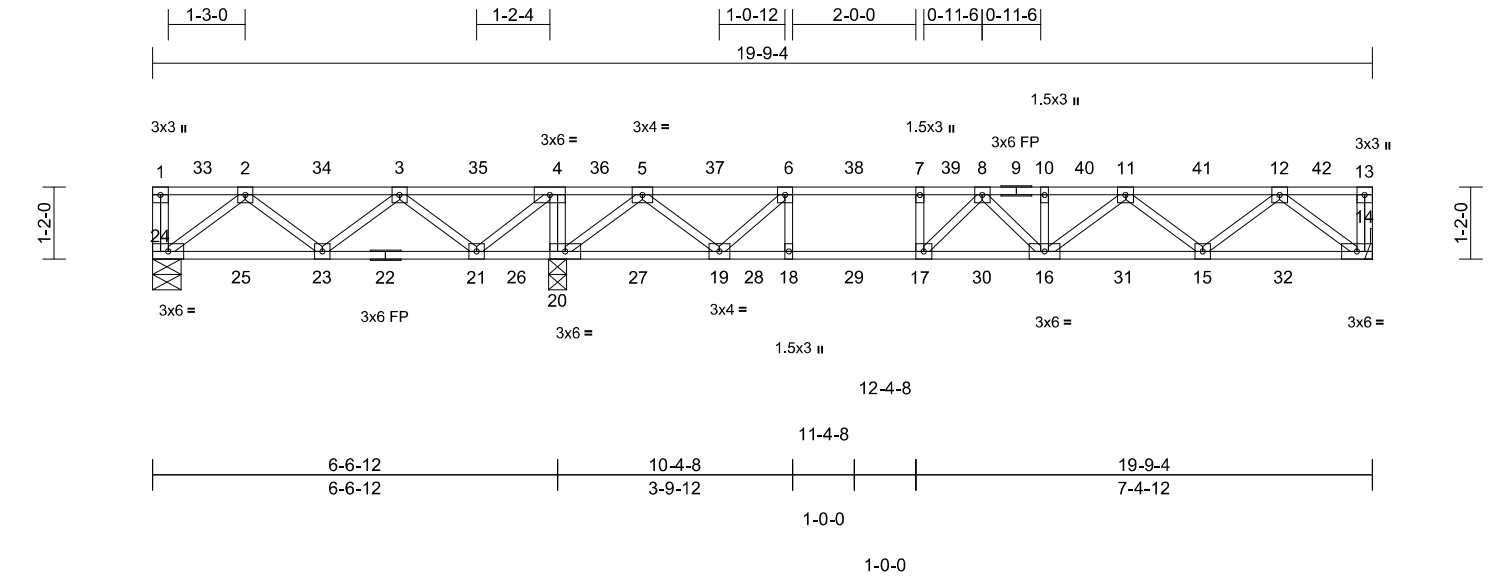
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Malbec	I71683386
	FT05A	Floor	4	1	Job Reference (optional)	

Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Feb 18 2025 Print: 8.830 S Feb 18 2025 MiTek Industries, Inc. Thu Feb 27 05:38:04
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Page: 1



Scale = 1:36.3																
Loading		(psf)	Spacing		1-8-0		CSI		DEFL		in (loc) I/defl L/d		PLATES		GRIP	
TCLL		40.0	Plate Grip DOL		1.00		TC		0.62		Vert(LL)		-0.16 16-17 >981 480		MT20 244/190	
TCDL		10.0	Lumber DOL		1.00		BC		0.78		Vert(CT)		-0.22 16-17 >722 360			
BCLL		0.0	Rep Stress Incr		YES		WB		0.34		Horz(CT)		0.02 14 n/a n/a			
BCDL		5.0	Code		IRC2021/TPI2014		Matrix-S								Weight: 102 lb FT = 20%F, 12%E	

LUMBER
TOP CHORD 2x4 SP No.2(flat)
BOT CHORD 2x4 SP No.2(flat) *Except* 22-14:2x4 SP SS (flat)
WEBS 2x4 SP No.3(flat)

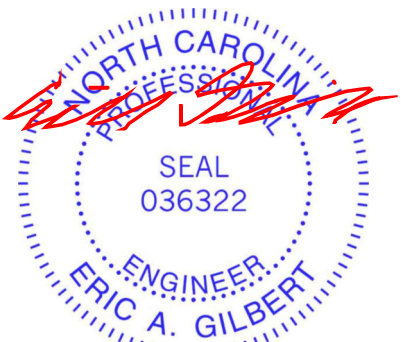
BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 14= Mechanical, 20=0-3-8, 24=0-5-8
Max Uplift 24=-19 (LC 28)
Max Grav 14=564 (LC 4), 20=1024 (LC 1), 24=310 (LC 43)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-24=-260/37, 13-14=-259/34, 1-2=0/0, 2-3=-411/129, 3-4=-171/410, 4-5=-44/597, 5-6=-829/0, 6-7=-1438/0, 7-8=-1438/0, 8-10=-1636/0, 10-11=-1636/0, 11-12=-1084/0, 12-13=0/0
BOT CHORD 23-24=-45/307, 21-23=-244/367, 20-21=-597/44, 19-20=-120/341, 18-19=0/1438, 17-18=0/1438, 16-17=0/1645, 15-16=0/1470, 14-15=0/685
WEBS 4-20=-452/0, 6-18=-3/316, 7-17=-115/176, 2-24=-385/57, 2-23=-110/226, 3-23=-107/207, 3-21=-425/0, 4-21=0/449, 5-20=-902/0, 5-19=0/708, 6-19=-851/0, 12-14=-860/0, 12-15=0/519, 11-15=-503/0, 11-16=-111/329, 10-16=-229/89, 8-17=-398/50, 8-16=-188/190

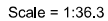
- NOTES**
- Unbalanced floor live loads have been considered for this design.
 - All plates are 3x3 (=) MT20 unless otherwise indicated.
 - Bearings are assumed to be: Joint 24 SP No.2, Joint 20 SP SS.
 - Refer to girder(s) for truss to truss connections.

- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 19 lb uplift at joint 24.
 - This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
 - 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



February 28,2025

Structural, LLC, Thurmont, MD - 21788, Run: 8.83 S Feb 18 2025 Print: 8.830 S Feb 18 2025 MiTek Industries, Inc. Thu Feb 27 05:38:05 Page: 1
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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 6-0-0 oc bracing.
REACTIONS	(size) 14= Mechanical, 20=0-3-8, 24=0-5-8
	Max Uplift 24=-32 (LC 28)
	Max Grav 14=451 (LC 4), 20=819 (LC 1), 24=299 (LC 43)
FORCES	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-24=-258/38, 13-14=-258/35, 1-2=0/0, 2-3=-400/145, 3-4=-182/409, 4-5=-78/579, 5-6=-668/0, 6-7=-1149/0, 7-8=-1149/0, 8-10=-1307/0, 10-11=-1307/0, 11-12=-868/0, 12-13=0/0
BOT CHORD	23-24=-58/297, 21-23=-256/362, 20-21=-579/78, 19-20=-138/335, 18-19=0/1149, 17-18=0/1149, 16-17=0/1321, 15-16=0/1175, 14-15=0/549
WEBS	4-20=-364/0, 6-18=-25/290, 7-17=-107/195, 2-24=-373/72, 2-23=-113/225, 3-23=-114/200, 3-21=-340/0, 4-21=0/425, 5-20=-720/0, 5-19=0/576, 6-19=-670/0, 12-14=-688/0, 12-15=0/439, 11-15=-400/0, 11-16=-124/316, 10-16=-227/90, 8-17=-390/60, 8-16=-202/181

- 1) Unbalanced floor live loads have been considered for this design.
- 2) All plates are 3x3 (=) MT20 unless otherwise indicated.
- 3) Bearings are assumed to be: Joint 24 SP No.2 , Joint 20 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 32 lb uplift at joint 24.
 - 6) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
 - 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



February 28, 2025

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TRENCO
A MiTek Affiliate

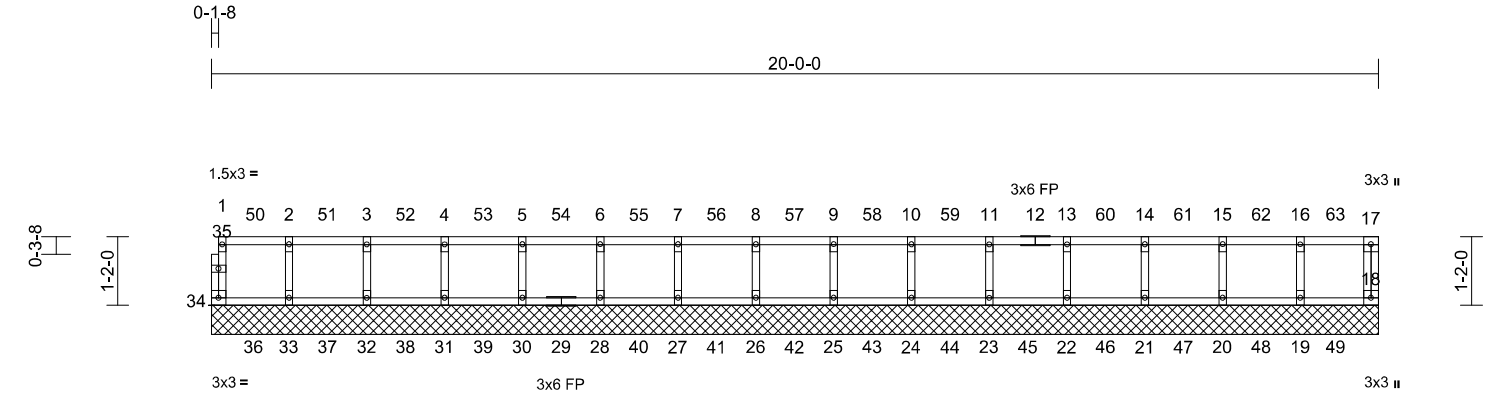
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Malbec	I71683388
	FT01GE	Floor Supported Gable	1	1	Job Reference (optional)	

Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Feb 18 2025 Print: 8.830 S Feb 18 2025 MiTek Industries, Inc. Thu Feb 27 05:38:03
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Page: 1



Scale = 1:38.4																
Loading		(psf)	Spacing		1-4-0		CSI		DEFL		in (loc) I/defl L/d		PLATES		GRIP	
TCLL		40.0	Plate Grip DOL		1.00		TC		0.27		Vert(LL) n/a - n/a		999		MT20 244/190	
TCDL		10.0	Lumber DOL		1.00		BC		0.28		Vert(TL) n/a - n/a		999			
BCLL		0.0	Rep Stress Incr		YES		WB		0.05		Horiz(TL) 0.00 18 n/a		n/a			
BCDL		5.0	Code		IRC2021/TPI2014		Matrix-R								Weight: 84 lb FT = 20%F, 12%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=20-0-0, 19=20-0-0, 20=20-0-0, 21=20-0-0, 22=20-0-0, 23=20-0-0, 24=20-0-0, 25=20-0-0, 26=20-0-0, 27=20-0-0, 28=20-0-0, 30=20-0-0, 31=20-0-0, 32=20-0-0, 33=20-0-0, 34=20-0-0
Max Uplift 18=-16 (LC 49), 19=-7 (LC 48), 20=-5 (LC 47), 21=-7 (LC 14), 22=-6 (LC 45), 23=-6 (LC 44), 24=-6 (LC 43), 25=-6 (LC 42), 26=-6 (LC 44), 27=-6 (LC 43), 28=-6 (LC 42), 30=-6 (LC 41), 31=-6 (LC 40), 32=-5 (LC 39), 33=-7 (LC 38), 34=-18 (LC 37)
Max Grav 18=264 (LC 66), 19=279 (LC 65), 20=280 (LC 64), 21=280 (LC 63), 22=280 (LC 62), 23=280 (LC 61), 24=280 (LC 60), 25=280 (LC 59), 26=280 (LC 58), 27=280 (LC 57), 28=280 (LC 56), 30=280 (LC 55), 31=280 (LC 54), 32=280 (LC 53), 33=279 (LC 52), 34=263 (LC 51)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-34=-256/23, 17-18=-260/22, 1-2=-21/4, 2-3=-21/4, 3-4=-21/4, 4-5=-21/4, 5-6=-21/4, 6-7=-21/4, 7-8=-21/4, 8-9=-21/4, 9-10=-21/4, 10-11=-21/4, 11-13=-21/4, 13-14=-21/4, 14-15=-21/4, 15-16=-21/4, 16-17=-21/4

BOT CHORD 33-34=-4/21, 32-33=-4/21, 31-32=-4/21, 30-31=-4/21, 28-30=-4/21, 27-28=-4/21, 26-27=-4/21, 25-26=-4/21, 24-25=-4/21, 23-24=-4/21, 22-23=-4/21, 21-22=-4/21, 20-21=-4/21, 19-20=-4/21, 18-19=-4/21
WEBS 2-33=-268/16, 3-32=-269/14, 4-31=-269/14, 5-30=-269/14, 6-28=-269/14, 7-27=-269/14, 8-26=-269/14, 9-25=-269/14, 10-24=-269/14, 11-23=-269/14, 13-22=-269/14, 14-21=-269/16, 15-20=-269/14, 16-19=-268/16

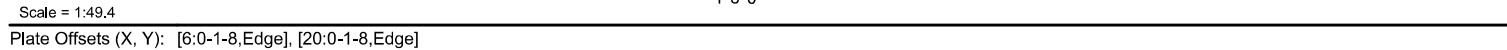
NOTES
1) All plates are 1.5x3 (II) MT20 unless otherwise indicated.
2) Gable requires continuous bottom chord bearing.
3) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
4) Gable studs spaced at 1-4-0 oc.
5) All bearings are assumed to be SP No.2 .
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 18 lb uplift at joint 34, 16 lb uplift at joint 18, 7 lb uplift at joint 33, 5 lb uplift at joint 32, 6 lb uplift at joint 31, 6 lb uplift at joint 30, 6 lb uplift at joint 28, 6 lb uplift at joint 27, 6 lb uplift at joint 26, 6 lb uplift at joint 25, 6 lb uplift at joint 24, 6 lb uplift at joint 23, 6 lb uplift at joint 22, 7 lb uplift at joint 21, 5 lb uplift at joint 20 and 7 lb uplift at joint 19.
7) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
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



February 28,2025

Structural, LLC, Thurmont, MD - 21788, Run: 8.83 S Feb 18 2025 Print: 8.830 S Feb 18 2025 MiTek Industries, Inc. Thu Feb 27 05:38:02 Page: 1
ID:6HYfYvbNewYFvRo1zS4pE9yD_wG-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrcDol7J4zJC?f



LUMBER		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.
TOP CHORD	2x4 SP SS(flat)	
BOT CHORD	2x4 SP SS(flat)	
WEBS	2x4 SP No.3(flat)	
OTHERS	2x4 SP No.3(flat)	6) CAUTION, Do not erect truss backwards.
BRACING		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.	
REACTIONS	(size) 14=0-5-8, 24=0-3-8	
	Max Grav 14=917 (LC 1), 24=911 (LC 1)	
FORCES	(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-24=-260/39, 13-14=-260/33, 1-2=-16/2, 2-3=-1983/0, 3-4=-3295/0, 4-5=-4209/0, 5-6=-4209/0, 6-7=-4338/0, 7-8=-4137/0, 8-10=-3369/0, 10-11=-3369/0, 11-12=-1974/0, 12-13=0/0	
BOT CHORD	23-24=0/1148, 21-23=0/2777, 20-21=0/3857, 19-20=0/4209, 18-19=0/4209, 17-18=0/4384, 16-17=0/3869, 15-16=0/2769, 14-15=0/1152	
WEBS	5-20=-451/110, 6-19=-463/140, 2-24=-1438/0, 2-23=0/1087, 3-23=-1034/0, 3-21=0/674, 4-21=-732/0, 4-20=-129/825, 12-14=-1445/0, 12-15=0/1071, 11-15=-1034/0, 11-16=0/766, 10-16=-261/58, 8-16=-638/0, 8-17=-20/364, 7-17=-322/89, 7-18=-265/268, 6-18=-217/616	

- 1) Unbalanced floor live loads have been considered for this design.
- 2) All plates are MT20 plates unless otherwise indicated.
- 3) All bearings are assumed to be SP SS .
- 4) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.



February 28, 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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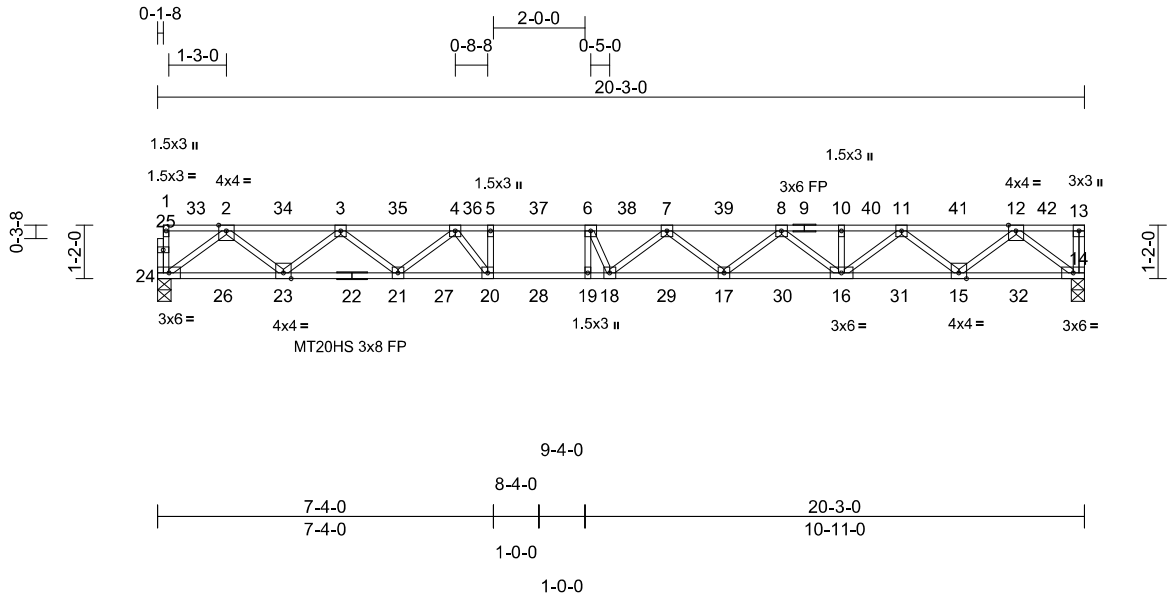
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Malbec	I71683390
	FT01	Floor	4	1	Job Reference (optional)	

Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Feb 18 2025 Print: 8.830 S Feb 18 2025 MiTek Industries, Inc. Thu Feb 27 05:38:01
ID:6HYFYvbNewYFvRo1zS4pE9yD_wG-RFC?PsB70Hq3NSgPqnL8w3uITXbGKWrcDoi7J4zJC?f

Page: 1



Scale = 1:48.9

Loading	(psf)	Spacing	1-4-0	CSI		DEFL	in	(loc)	I/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.77	Vert(LL)	-0.36	18-19	>671	480	MT20HS	187/143
TCDL	10.0	Lumber DOL	1.00	BC	0.72	Vert(CT)	-0.49	18-19	>488	360	MT20	244/190
BCLL	0.0	Rep Stress Incr	YES	WB	0.41	Horz(CT)	0.06	14	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-S							Weight: 103 lb	FT = 20%F, 12%E

LUMBER

TOP CHORD 2x4 SP No.2(flat)

BOT CHORD 2x4 SP SS(flat)

WEBS 2x4 SP No.3(flat)

OTHERS 2x4 SP No.3(flat)

BRACING

TOP CHORD Structural wood sheathing directly applied or 5-5-7 oc purlins, except end verticals.

BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 14=0-3-8, 24=0-3-8

Max Grav 14=733 (LC 1), 24=729 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-24=-259/41, 13-14=-258/35, 1-2=-16/2, 2-3=-1587/0, 3-4=-2634/0, 4-5=-3365/0, 5-6=-3365/0, 6-7=-3475/0, 7-8=-3309/0, 8-10=-2693/0, 10-11=-2693/0, 11-12=-1580/0, 12-13=0/0

BOT CHORD 23-24=0/919, 21-23=0/2221, 20-21=0/3091, 19-20=0/3365, 18-19=0/3365, 17-18=0/3506, 16-17=0/3096, 15-16=0/2216, 14-15=0/921

WEBS 5-20=-328/124, 6-19=-480/139, 2-24=-1151/0, 2-23=0/869, 3-23=-825/0, 3-21=0/538, 4-21=-594/3, 4-20=-162/643, 12-14=-1156/0, 12-15=0/857, 11-15=-828/0, 11-16=0/610, 10-16=-258/63, 8-16=-514/0, 8-17=-43/341, 7-17=-300/106, 7-18=-255/213, 6-18=-203/618

- 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 3x3 (=) MT20 unless otherwise indicated.
 - 4) All bearings are assumed to be SP SS.
 - 5) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.

- 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



February 28, 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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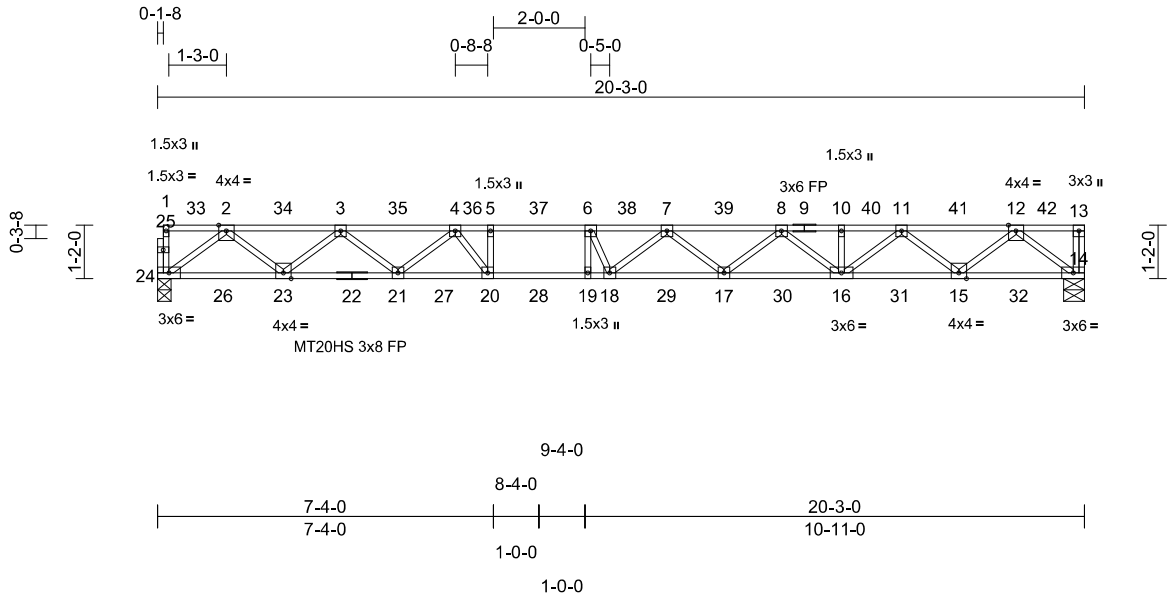
ENGINEERING BY
TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Malbec	I71683391
	FT01B	Floor	1	1	Job Reference (optional)	

Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Feb 18 2025 Print: 8.830 S Feb 18 2025 MiTek Industries, Inc. Thu Feb 27 05:38:02
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Page: 1



Scale = 1:48.9

Loading	(psf)	Spacing	1-4-0	CSI		DEFL	in	(loc)	I/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.77	Vert(LL)	-0.36	18-19	>671	480	MT20HS	187/143
TCDL	10.0	Lumber DOL	1.00	BC	0.72	Vert(CT)	-0.49	18-19	>488	360	MT20	244/190
BCLL	0.0	Rep Stress Incr	YES	WB	0.41	Horz(CT)	0.06	14	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-S							Weight: 103 lb	FT = 20%F, 12%E

LUMBER

TOP CHORD 2x4 SP No.2(flat)

BOT CHORD 2x4 SP SS(flat)

WEBS 2x4 SP No.3(flat)

OTHERS 2x4 SP No.3(flat)

BRACING

TOP CHORD Structural wood sheathing directly applied or 5-5-7 oc purlins, except end verticals.

BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 14=0-5-8, 24=0-3-8

Max Grav 14=733 (LC 1), 24=729 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-24=-259/41, 13-14=-258/35, 1-2=-16/2, 2-3=-1587/0, 3-4=-2634/0, 4-5=-3365/0, 5-6=-3365/0, 6-7=-3475/0, 7-8=-3309/0, 8-10=-2693/0, 10-11=-2693/0, 11-12=-1580/0, 12-13=0/0

BOT CHORD 23-24=0/919, 21-23=0/2221, 20-21=0/3091, 19-20=0/3365, 18-19=0/3365, 17-18=0/3506, 16-17=0/3096, 15-16=0/2216, 14-15=0/921

WEBS 5-20=-328/124, 6-19=-480/139, 2-24=-1151/0, 2-23=0/869, 3-23=-825/0, 3-21=0/538, 4-21=-594/3, 4-20=-162/643, 12-14=-1156/0, 12-15=0/857, 11-15=-828/0, 11-16=0/610, 10-16=-258/63, 8-16=-514/0, 8-17=-43/341, 7-17=-300/106, 7-18=-255/213, 6-18=-203/618

- 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 3x3 (=) MT20 unless otherwise indicated.
 - 4) All bearings are assumed to be SP SS.
 - 5) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.

- 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



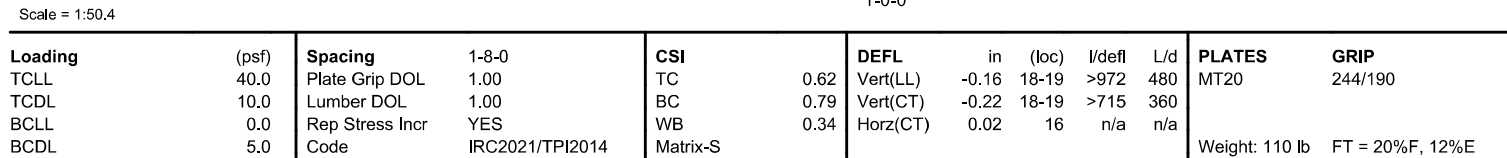
February 28, 2025

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

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Edenton, NC 27932

Structural, LLC, Thurmont, MD - 21788, Run: 8.83 S Feb 18 2025 Print: 8.830 S Feb 18 2025 MiTek Industries, Inc. Thu Feb 27 05:38:06 Page: 1
ID:5re3LN2aray4ANv91YIRq8yD_O6-RfC?PsB70Hq3NSgPqnL8w3uITxbGKWRcdoi7J4zJC?f



- 5) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- 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

NOTES

- 1) Unbalanced floor live loads have been considered for this design.
- 2) All plates are 3x3 (=) MT20 unless otherwise indicated.
- 3) Bearings are assumed to be: , Joint 22 SP SS .
- 4) Refer to girder(s) for truss to truss connections.



February 28, 2025

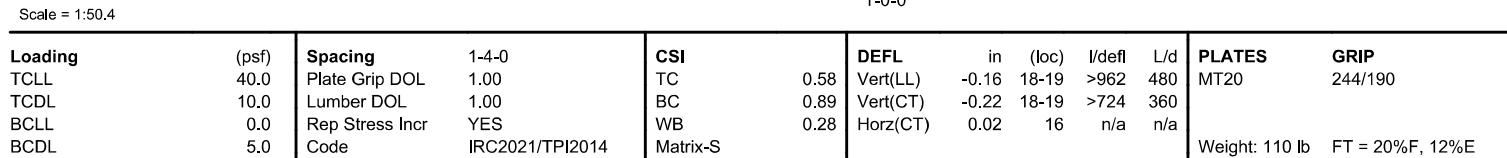
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ID:5re3LN2aray4ANv91YIRq8yD_O6-RfC?PsB70Hq3NSgPqnL8w3uITxbGKWRcdoi7J4zJC?i



- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 1 lb uplift at joint 26.
- 6) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- 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

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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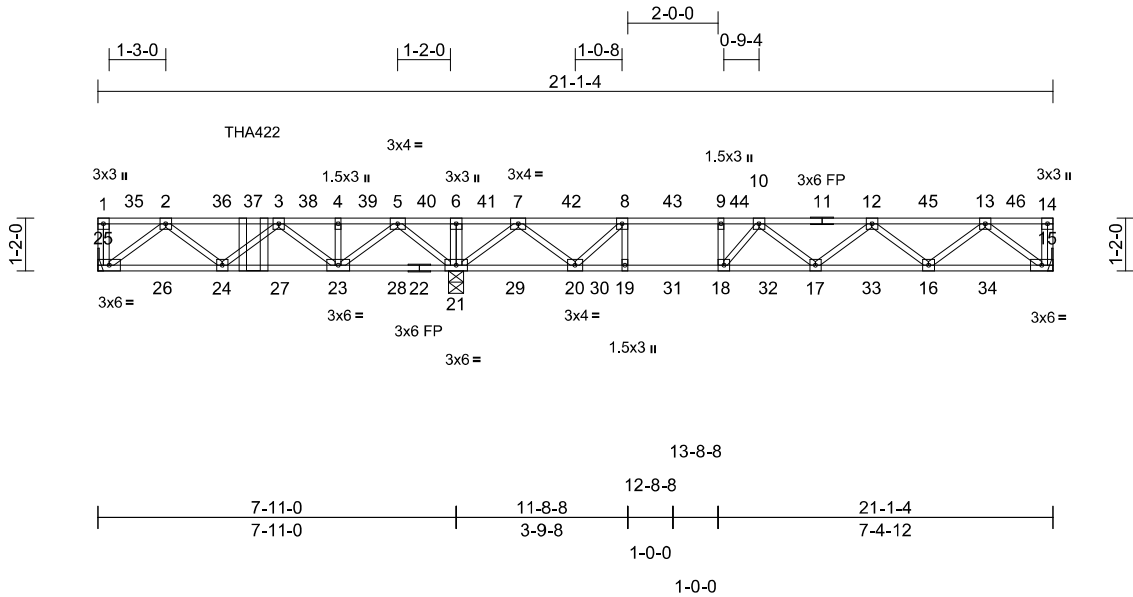
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Malbec	I71683394
	FG04	Floor Girder	1	1	Job Reference (optional)	

Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Feb 18 2025 Print: 8.830 S Feb 18 2025 MiTek Industries, Inc. Thu Feb 27 05:38:01
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Page: 1



Loading	(psf)	Spacing	1-10-8	CSI		DEFL	in	(loc)	I/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.71	Vert(LL)	-0.16	17-18	>951	480	MT20	244/190
TCCL	10.0	Lumber DOL	1.00	BC	0.95	Vert(CT)	-0.22	17-18	>697	360		
BCCL	0.0	Rep Stress Incr	NO	WB	0.40	Horz(CT)	0.03	15	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-S							Weight: 109 lb	FT = 20%F, 12%E

LUMBER

TOP CHORD 2x4 SP SS(flat) *Except* 11-14:2x4 SP No.2 (flat)

BOT CHORD 2x4 SP No.2(flat) *Except* 22-15:2x4 SP SS (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: 21-23,20-21.

REACTIONS (size) 15= Mechanical, 21=0-4-0, 25= Mechanical

Max Grav 15=626 (LC 4), 21=1458 (LC 1), 25=621 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-25=-233/60, 14-15=-260/36, 1-2=0/0, 2-3=-1134/0, 3-4=-810/15, 4-5=-810/15, 5-6=0/908, 6-7=0/908, 7-8=-869/45, 8-9=-1547/0, 9-10=-1547/0, 10-12=-1774/0, 12-13=-1201/0, 13-14=0/0

BOT CHORD 24-25=0/806, 23-24=0/1429, 21-23=-320/246, 20-21=-265/247, 19-20=0/1547, 18-19=0/1547, 17-18=0/1806, 16-17=0/1631, 15-16=0/758

WEBS 6-21=-287/35, 8-19=0/327, 9-18=-65/297, 2-25=-1012/0, 2-24=0/495, 3-24=-384/0, 3-23=-869/0, 4-23=-162/157, 5-23=0/825, 5-21=-1062/0, 7-21=-1034/0, 7-20=0/849, 8-20=-991/0, 13-15=-951/0, 13-16=0/578, 12-16=-559/0, 12-17=-69/319, 10-17=-141/221, 10-18=-523/0

- NOTES**
- Unbalanced floor live loads have been considered for this design.
 - All plates are 3x3 (=) MT20 unless otherwise indicated.
 - Bearings are assumed to be: , Joint 21 SP SS .
 - Refer to girder(s) for truss to truss connections.

- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
 - 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.
 - Use Simpson Strong-Tie THA422 (Single Chord Girder) or equivalent at 3-5-4 from the left end to connect truss (es) to front face of top chord.
 - Fill all nail holes where hanger is in contact with lumber.
 - 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: 15-25=-9, 1-14=-94
- Concentrated Loads (lb)
- Vert: 37=-466 (F)



February 28,2025

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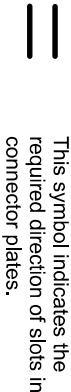
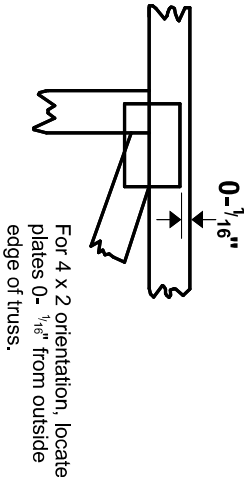
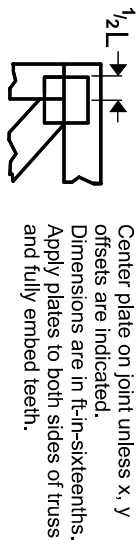
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Edenton, NC 27932

Symbols

PLATE LOCATION AND ORIENTATION



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

PLATE SIZE

4 X 4

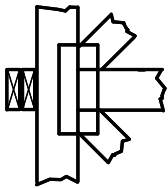
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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.

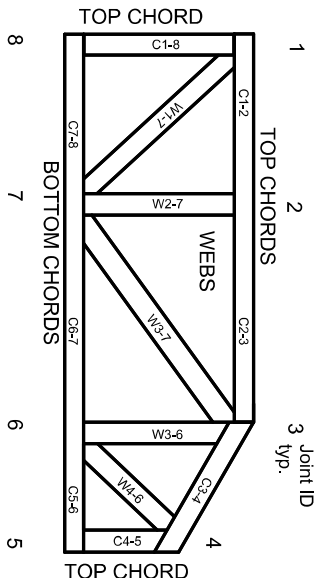
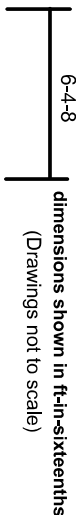
BEARING



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/TP11: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-22: Design Standard for Bracing.
BCSI: 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 l 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.