ENGINEERING BY
TRENCO
A MiTek Affiliate

Trenco
818 Soundside Rd
Edenton, NC 27932

RE: Malbec Rev 1

Site Information:
Project Customer: DRB Raleigh Project Name:
Lot/Block: Subdivision: DRB Raleigh
Model:
Address:
City: State: NC

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

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.

NORTH CAROLINA PROFESSIONAL SEAL 036322 ENGINEER ERIC A. GILBERT

February 28,2025
Gilbert, Eric

Job	Truss	Truss Type	Qty	Ply	Malbec Rev 1
	FG03	Floor Girder	1	1	I71683373 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 Page: 1
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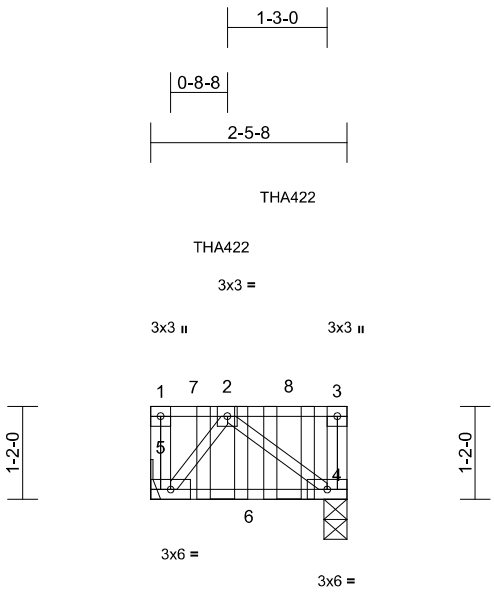


Scale = 1:28

Loading	(psf)	Spacing	1-4-0	CSI		DEFL	in	(loc)	l/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)

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.

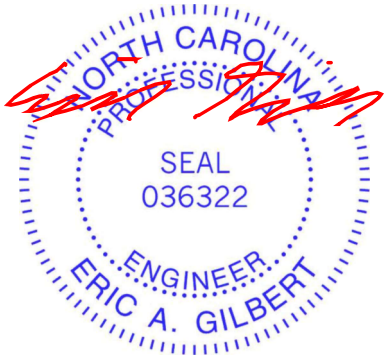
REACTIONS (size) 4=0-3-8, 5= Mechanical
Max Grav 4=538 (LC 6), 5=652 (LC 3)

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

Uniform Loads (lb/ft)
Vert: 4-5=-7, 1-3=-67
Concentrated Loads (lb)
Vert: 2=-621 (F), 8=-222 (B)



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Job	Truss	Truss Type	Qty	Ply	Malbec Rev 1
	FG01	Floor Girder	1	1	I71683374 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 05:37:59 Page: 1
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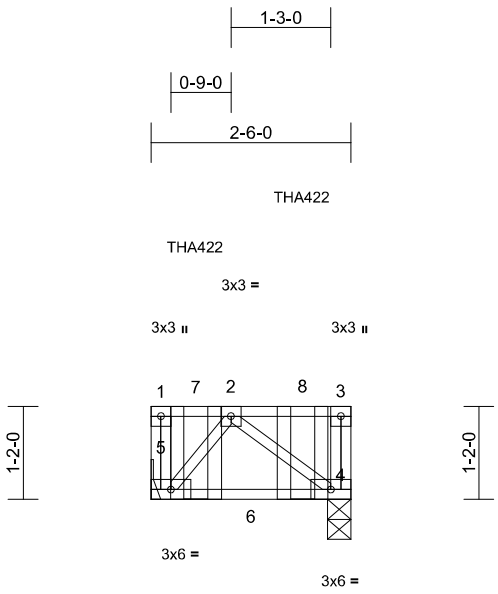

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Loading	(psf)	Spacing	1-4-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.88	Vert(LL)	-0.07	4-5	>363	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.88	Vert(CT)	-0.08	4-5	>346	360		
BCLL	0.0	Rep Stress Incr	NO	WB	0.12	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)

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

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

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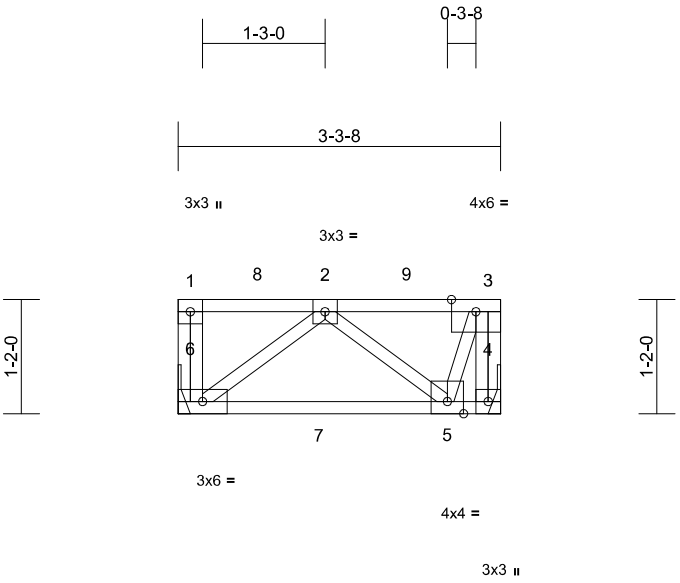
Job	Truss	Truss Type	Qty	Ply	Malbec Rev 1
	FT10	Floor	1	1	I71683375
					Job Reference (optional)



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Loading	(psf)	Spacing	1-4-0	CSI		DEFL	in	(loc)	l/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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Job	Truss	Truss Type	Qty	Ply	Malbec Rev 1
	FT09	Floor	6	1	I71683376
					Job Reference (optional)

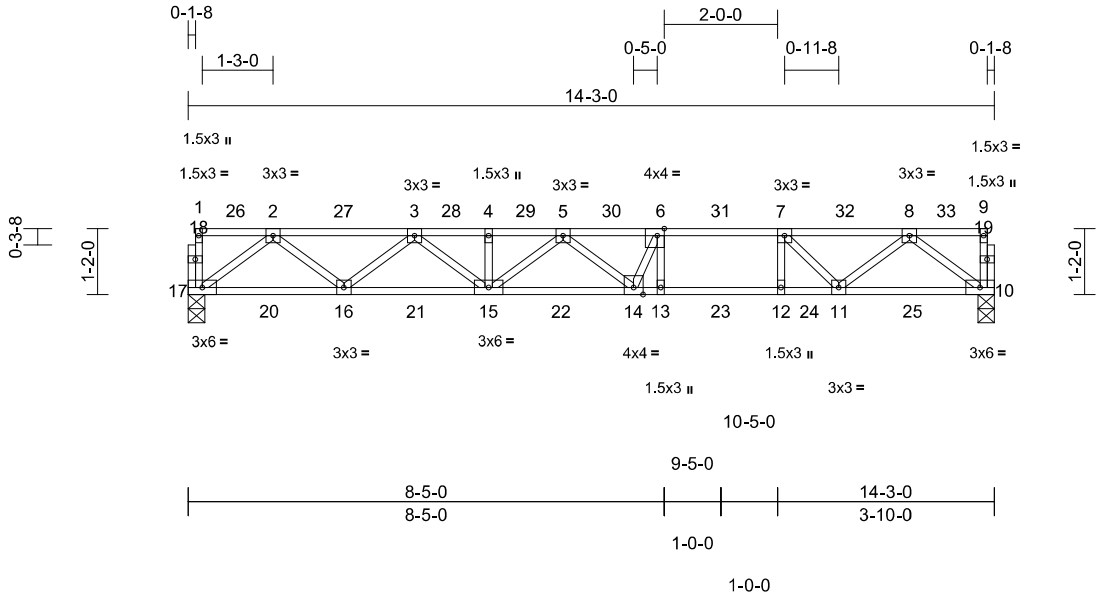

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Plate Offsets (X, Y): [6:0-1-8,Edge]

Loading	(psf)	Spacing	1-4-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.58	Vert(LL)	-0.14	13-14	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.59	Vert(CT)	-0.20	13-14	>861	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.27	Horz(CT)	0.02	10	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-S							Weight: 73 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 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

LOAD CASE(S) Standard

NOTES
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.

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Job	Truss	Truss Type	Qty	Ply	Malbec Rev 1
	FT09GE	Floor Supported Gable	1	1	I71683377 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 05:38:07 Page: 1
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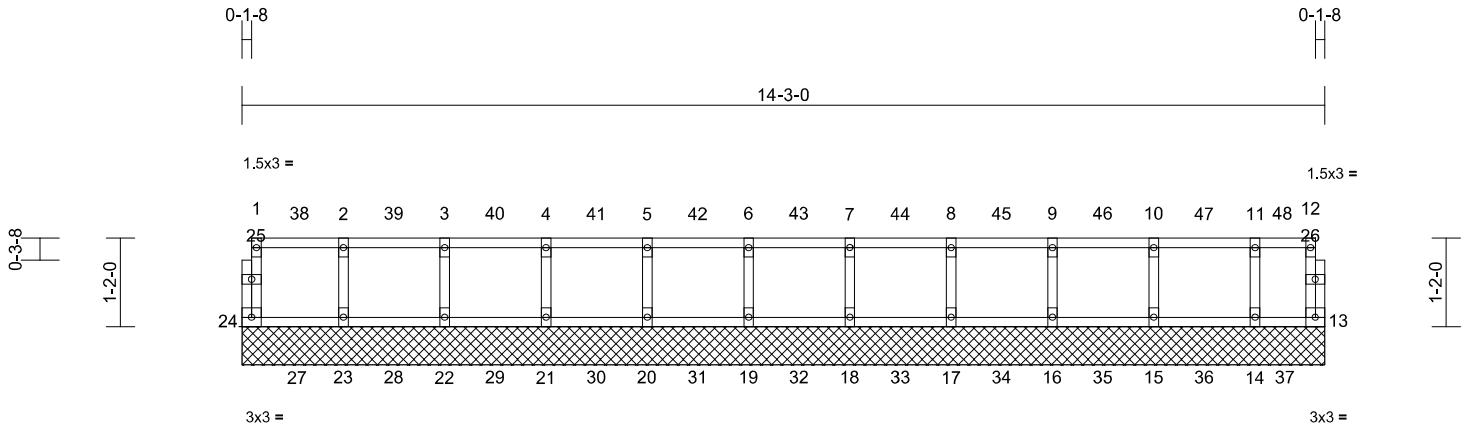

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Loading	(psf)	Spacing	1-4-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.27	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.28	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.05	Horiz(TL)	0.00	13	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-R							Weight: 61 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=14-3-0, 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 33), 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)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 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
BOT CHORD 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
WEBS 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

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 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

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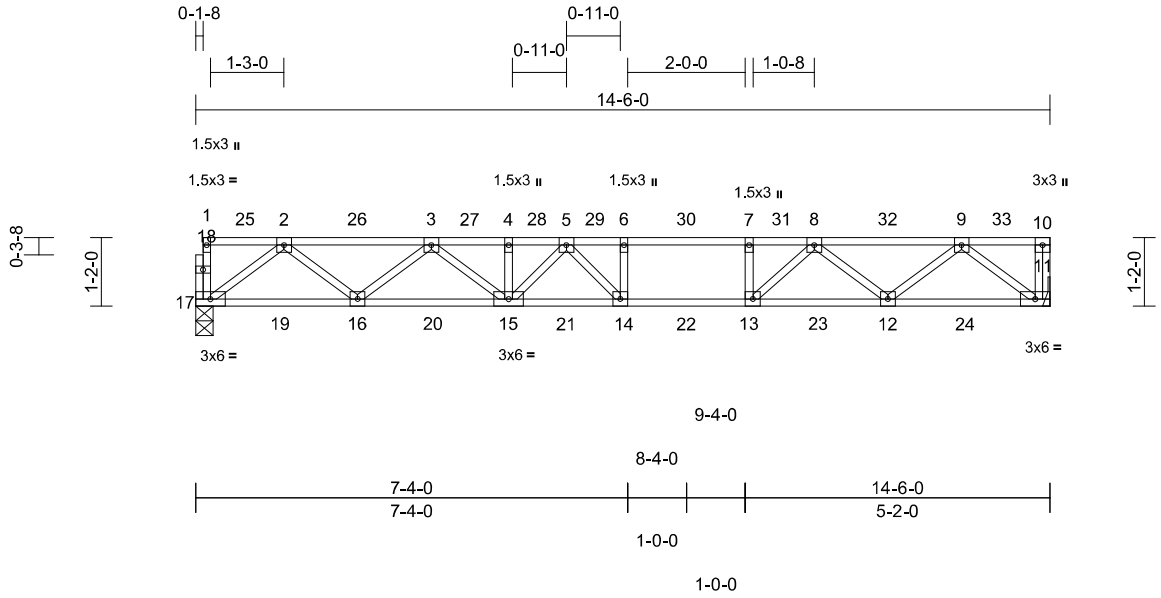
Job	Truss	Truss Type	Qty	Ply	Malbec Rev 1
	FT03	Floor	2	1	I71683378
					Job Reference (optional)



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Loading	(psf)	Spacing	1-4-0	CSI		DEFL	in	(loc)	l/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
TCDL	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		
BCDL	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)

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

REACTIONS (size) 11= 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
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 17 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.

LOAD CASE(S) Standard

February 28,2025

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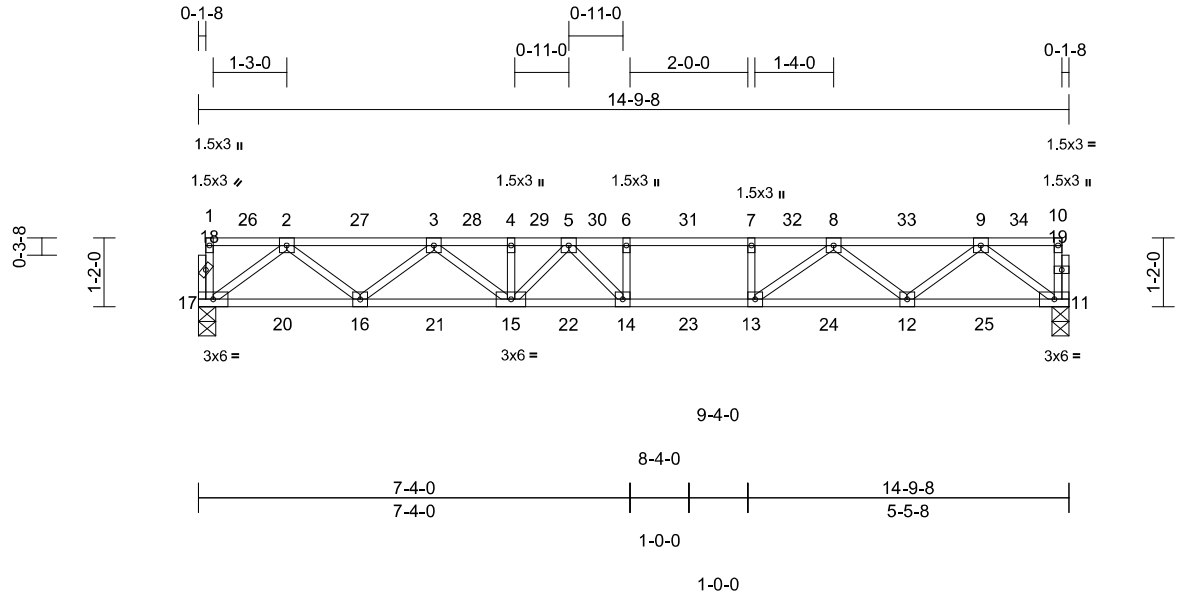
Job	Truss	Truss Type	Qty	Ply	Malbec Rev 1
	FT04	Floor	4	1	I71683379
					Job Reference (optional)



Scale = 1:38.1

Loading	(psf)	Spacing	1-4-0	CSI		DEFL	in	(loc)	l/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

LOAD CASE(S) Standard

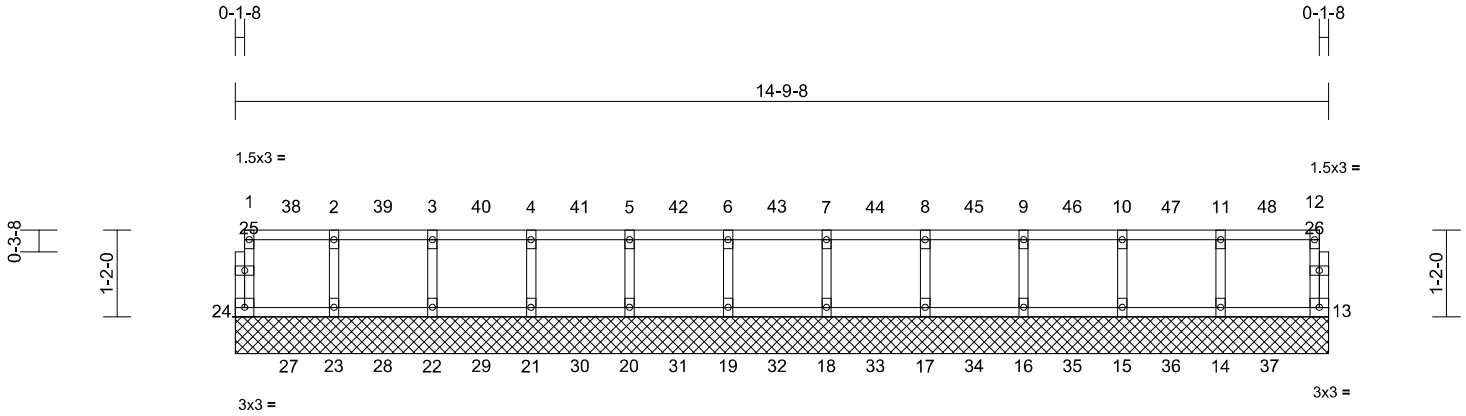
NOTES
1) Unbalanced floor live loads have been considered for this design.
2) All plates are 3x3 (=) MT20 unless otherwise indicated.
3) All bearings are assumed to be SP No.2 .
4) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and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

February 28,2025

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

Job	Truss	Truss Type	Qty	Ply	Malbec Rev 1
	FT04GE	Floor Supported Gable	1	1	I71683380
					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 Page: 1
ID:ob0QvHXYWs4z20Hxe41ujZyD_Q4-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:30.3

Loading	(psf)	Spacing	1-4-0	CSI		DEFL	in	(loc)	l/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/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

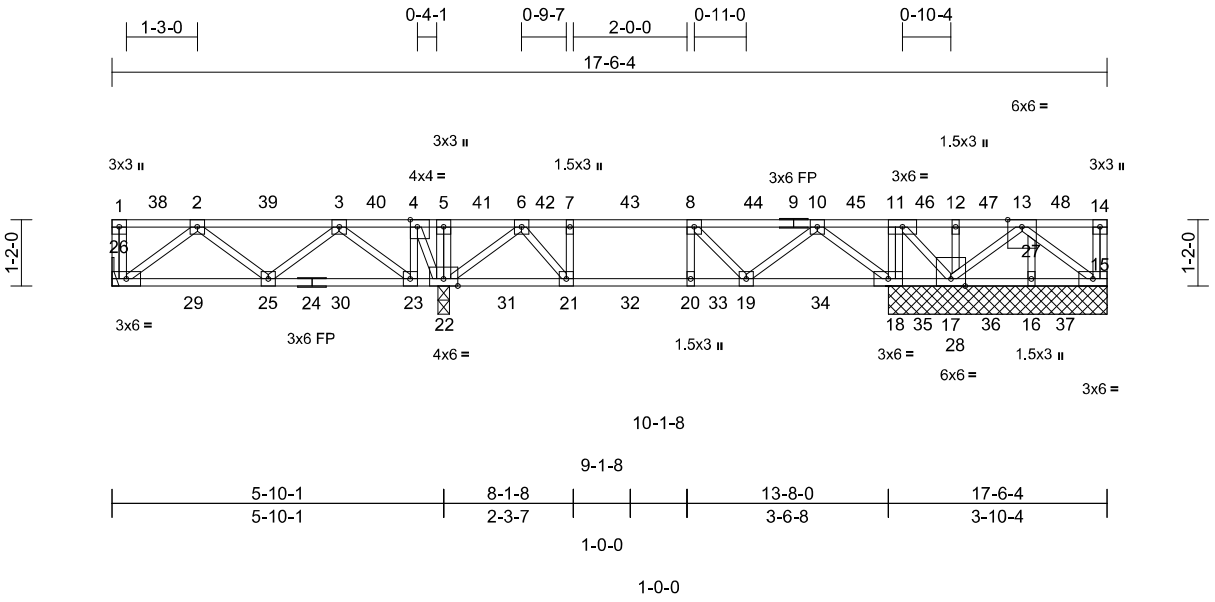
NOTES
1) All plates are 1.5x3 (||) MT20 unless otherwise indicated.
2) Gable requires continuous bottom chord bearing.
3) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
4) Gable studs spaced at 1-4-0 oc.
5) All bearings are assumed to be SP No.2 .
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

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

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



Scale = 1:39.5

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

Loading	(psf)	Spacing	1-10-8	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.56	Vert(LL)	-0.08	25-26	>827	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.78	Vert(CT)	-0.09	25-26	>776	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.20	Horz(CT)	0.00	18	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-S							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

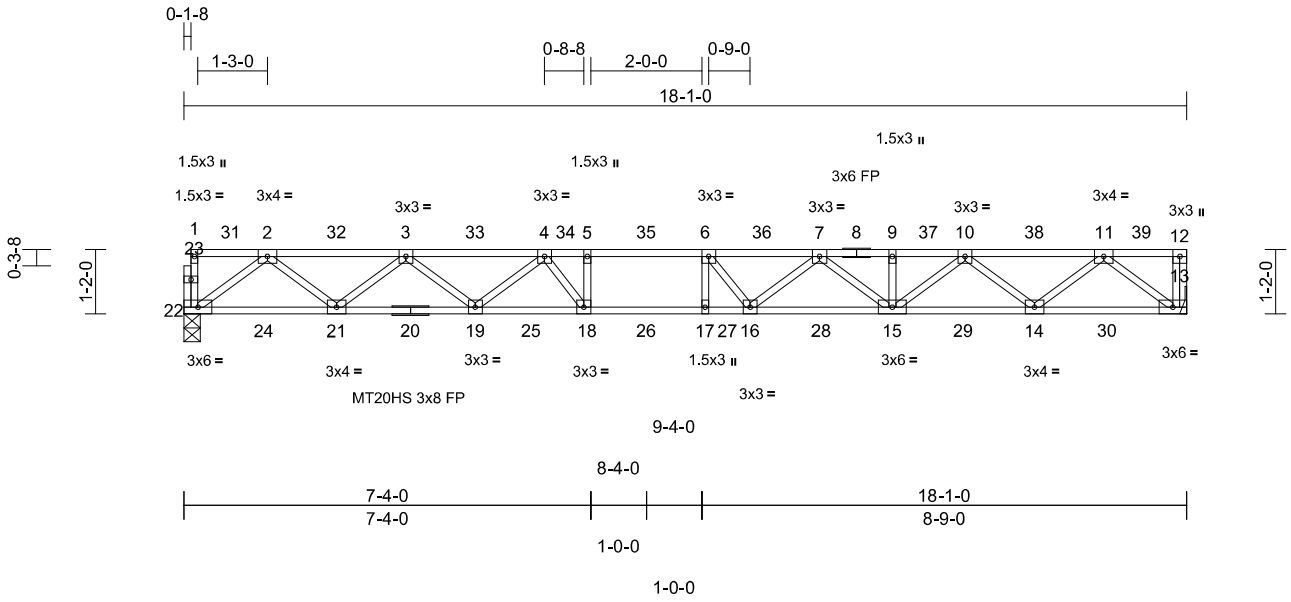
NOTES
1) Unbalanced floor live loads have been considered for this design.
2) All plates are 3x3 (=) MT20 unless otherwise indicated.
3) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
4) Gable studs spaced at 1-4-0 oc.
5) Bearings are assumed to be: , Joint 22 SP No.2 , Joint 16 SP No.2 .
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 22.
8) 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.
9) 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.
10) 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.
11) CAUTION, Do not erect truss backwards.

LOAD CASE(S) Standard

February 28,2025

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

Job	Truss	Truss Type	Qty	Ply	Malbec Rev 1
	FT02	Floor	6	1	I71683382
					Job Reference (optional)



Scale = 1:40.4

Loading	(psf)	Spacing	1-4-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.65	Vert(LL)	-0.22	16-17	>968	480	MT20HS	187/143
TCDL	10.0	Lumber DOL	1.00	BC	0.83	Vert(CT)	-0.30	16-17	>705	360	MT20	244/190
BCLL	0.0	Rep Stress Incr	YES	WB	0.35	Horz(CT)	0.04	13	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-S							Weight: 92 lb	FT = 20%F, 12%E

LUMBER
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)
OTHERS 2x4 SP No.3(flat)

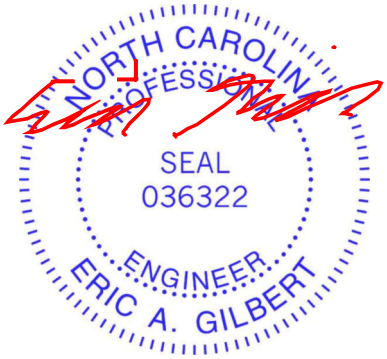
BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 13= Mechanical, 22=0-3-8
Max Grav 13=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

NOTES
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.

LOAD CASE(S) Standard

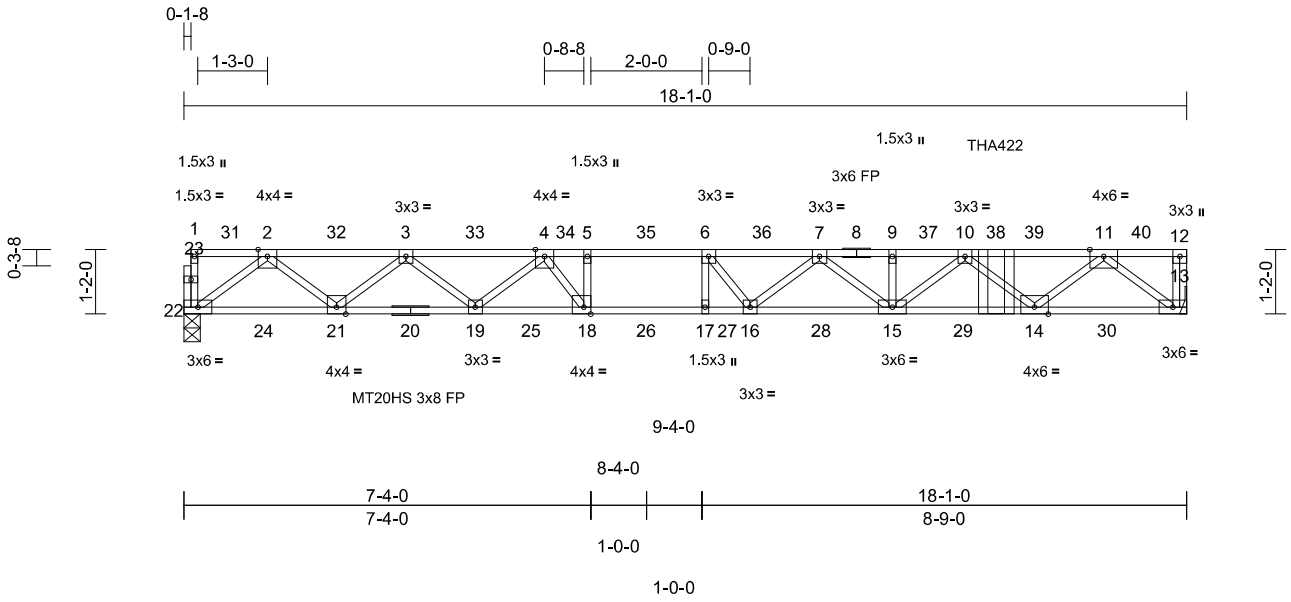


February 28,2025

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

Job	Truss	Truss Type	Qty	Ply	Malbec Rev 1
	FG02	Floor Girder	1	1	I71683383 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 05:38:00 Page: 1
ID:EcKWZmpjdQIXdMUkmvCcYPyD_7e-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:40.4

Plate Offsets (X, Y): [18:0-1-8,Edge]

Loading	(psf)	Spacing	1-4-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.66	Vert(LL)	-0.29	16-17	>751	480	MT20HS	187/143
TCDL	10.0	Lumber DOL	1.00	BC	0.94	Vert(CT)	-0.39	16-17	>544	360	MT20	244/190
BCLL	0.0	Rep Stress Incr	NO	WB	0.60	Horz(CT)	0.06	13	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-S							Weight: 92 lb	FT = 20%F, 12%E

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

NOTES
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).

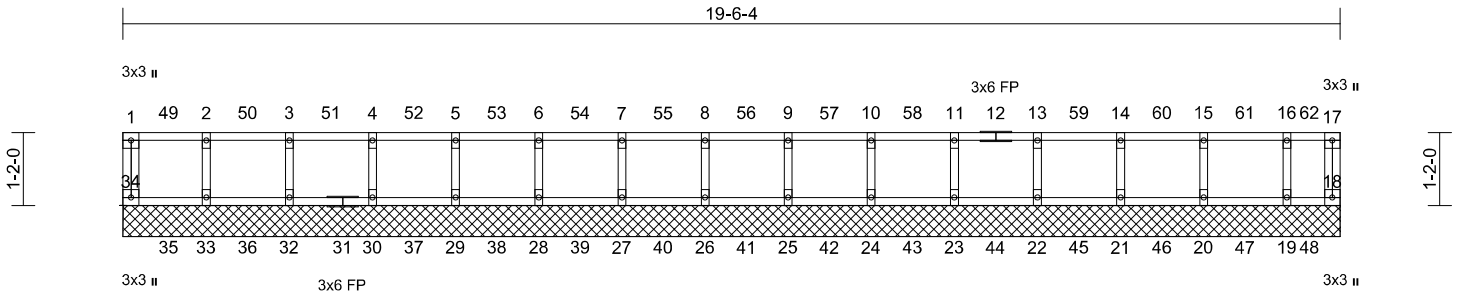
LOAD CASE(S) Standard
1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00
Uniform Loads (lb/ft)
Vert: 13-22=-7, 1-12=-67
Concentrated Loads (lb)
Vert: 38=-532 (F)

February 28,2025

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

Job	Truss	Truss Type	Qty	Ply	Malbec Rev 1
	FT05GE	Floor Supported Gable	1	1	I71683384 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 05:38:05 Page: 1
ID:sZXpKgXczMYBWn7u?00Mb4yD_On-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



Scale = 1:35.9

Loading	(psf)	Spacing	1-4-0	CSI		DEFL	in	(loc)	l/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: 83 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=19-6-4, 19=19-6-4, 20=19-6-4, 21=19-6-4, 22=19-6-4, 23=19-6-4, 24=19-6-4, 25=19-6-4, 26=19-6-4, 27=19-6-4, 28=19-6-4, 29=19-6-4, 30=19-6-4, 32=19-6-4, 33=19-6-4, 34=19-6-4
Max Uplift 18=-48 (LC 47), 19=-21 (LC 4), 20=-5 (LC 45), 21=-6 (LC 44), 22=-5 (LC 43), 23=-6 (LC 42), 24=-6 (LC 41), 25=-6 (LC 40), 26=-6 (LC 42), 27=-6 (LC 41), 28=-6 (LC 40), 29=-8 (LC 36), 30=-6 (LC 38), 32=-6 (LC 37), 33=-6 (LC 6), 34=-18 (LC 35)
Max Grav 18=259 (LC 64), 19=274 (LC 63), 20=281 (LC 62), 21=279 (LC 61), 22=280 (LC 60), 23=280 (LC 59), 24=280 (LC 58), 25=280 (LC 57), 26=280 (LC 56), 27=280 (LC 55), 28=280 (LC 54), 29=280 (LC 53), 30=280 (LC 52), 32=280 (LC 51), 33=280 (LC 50), 34=264 (LC 49)

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
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

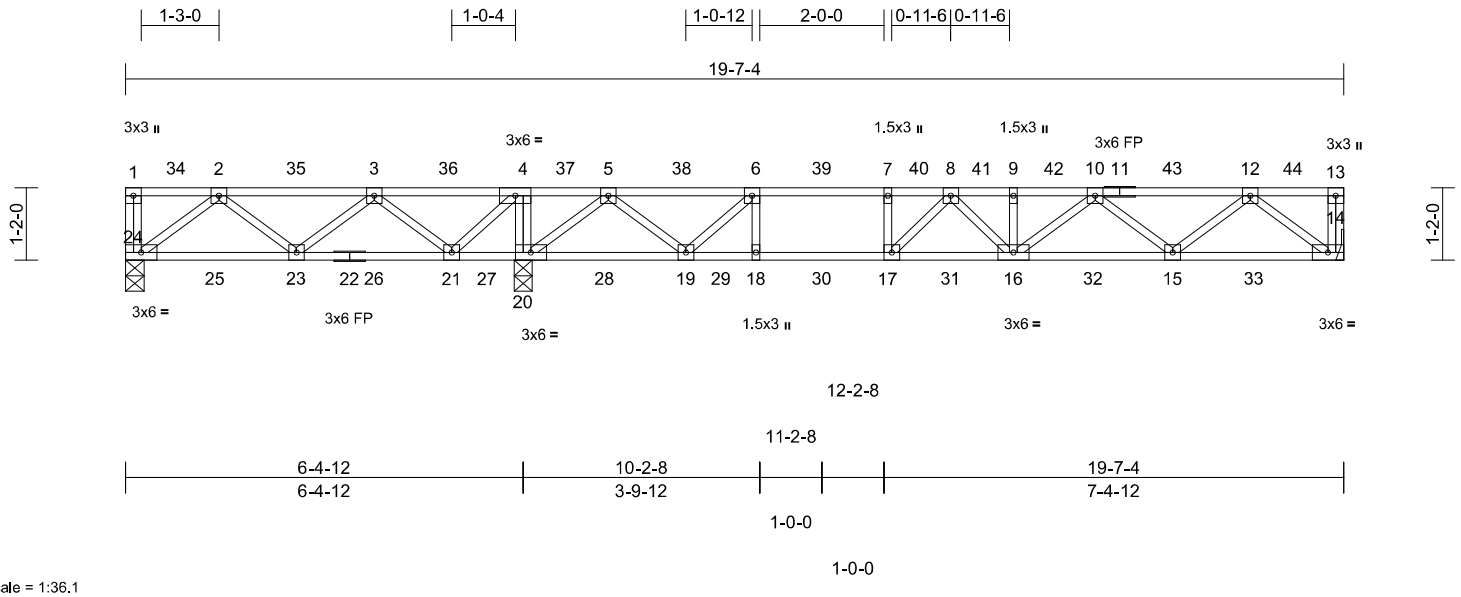
NOTES
1) All plates are 1.5x3 (||) MT20 unless otherwise indicated.
2) Gable requires continuous bottom chord bearing.
3) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
4) Gable studs spaced at 1-4-0 oc.
5) All bearings are assumed to be SP No.2 .
6) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(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

February 28,2025

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

Job	Truss	Truss Type	Qty	Ply	Malbec Rev 1
	FT05	Floor	4	1	I71683385
					Job Reference (optional)



Scale = 1:36.1

Loading	(psf)	Spacing	1-4-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.58	Vert(LL)	-0.16	16-17	>963	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.89	Vert(CT)	-0.22	16-17	>726	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.27	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)
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=0-3-8
Max Uplift 24=-36 (LC 28)
Max Grav 14=451 (LC 4), 20=813 (LC 1), 24=297 (LC 43)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-24=-258/38, 13-14=-258/35, 1-2=0/0, 2-3=-388/156, 3-4=-150/430, 4-5=-79/581, 5-6=-668/0, 6-7=-1148/0, 7-8=-1148/0, 8-9=-1307/0, 9-10=-1307/0, 10-12=-868/0, 12-13=0/0
BOT CHORD 23-24=-63/292, 21-23=-273/340, 20-21=-581/79, 19-20=-140/337, 18-19=0/1148, 17-18=0/1148, 16-17=0/1321, 15-16=0/1175, 14-15=0/548
WEBS 4-20=-355/0, 6-18=-23/290, 7-17=-107/194, 2-24=-367/80, 2-23=-121/217, 3-23=-105/208, 3-21=-344/0, 4-21=0/434, 5-20=-720/0, 5-19=0/575, 6-19=-669/0, 12-14=-688/0, 12-15=0/439, 10-15=-400/0, 10-16=-124/316, 9-16=-227/90, 8-17=-394/60, 8-16=-202/181

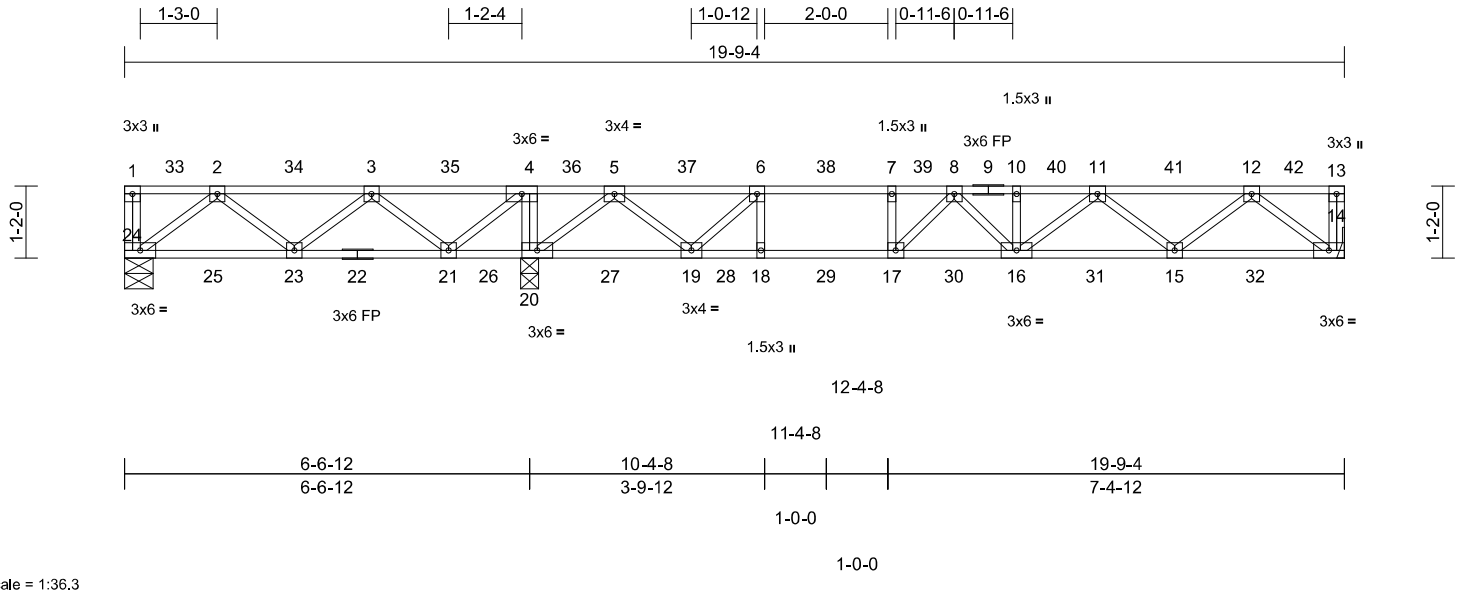
NOTES
1) Unbalanced floor live loads have been considered for this design.
2) All plates are 3x3 (=) MT20 unless otherwise indicated.
3) Bearings are assumed to be: Joint 24 SP No.2 , Joint 20 SP No.2 .
4) Refer to girder(s) for truss to truss connections.
5) One H2.5A Simpson Strong-Tie connectors recommended 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

February 28,2025

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

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



Scale = 1:36.3

Loading	(psf)	Spacing	1-8-0	CSI		DEFL	in	(loc)	l/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

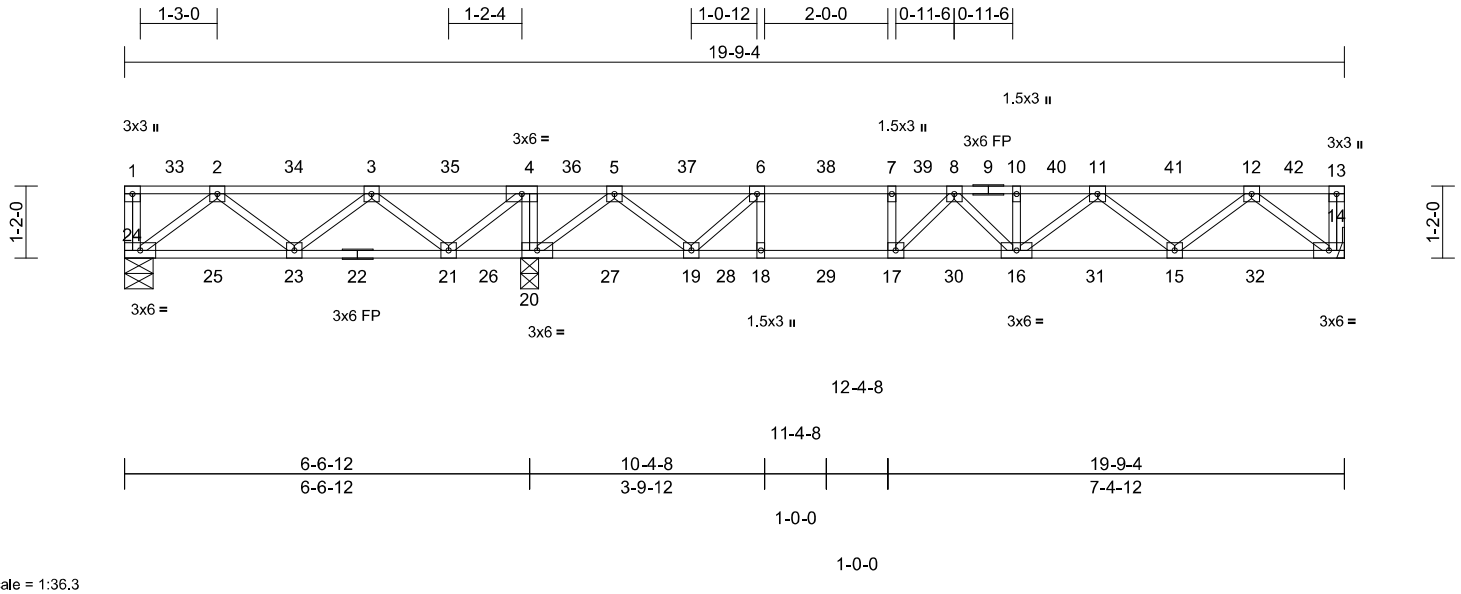
NOTES
1) Unbalanced floor live loads have been considered for this design.
2) All plates are 3x3 (=) MT20 unless otherwise indicated.
3) Bearings are assumed to be: Joint 24 SP No.2 , Joint 20 SP SS .
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 19 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

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

Job	Truss	Truss Type	Qty	Ply	Malbec Rev 1
	FT05B	Floor	1	1	I71683387
					Job Reference (optional)



Scale = 1:36.3

Loading	(psf)	Spacing	1-4-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.58	Vert(LL)	-0.16	16-17	>963	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.89	Vert(CT)	-0.22	16-17	>726	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.27	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)
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

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 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.

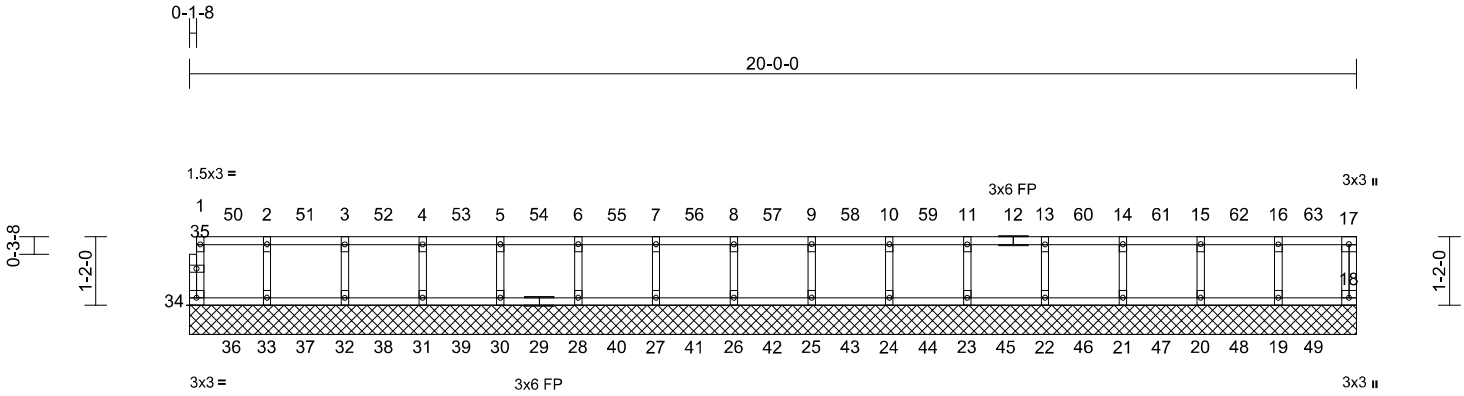
LOAD CASE(S) Standard

February 28,2025

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

Job	Truss	Truss Type	Qty	Ply	Malbec Rev 1
	FT01GE	Floor Supported Gable	1	1	I71683388
					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 Page: 1
ID:E?Cq9FftK2Db7bfOGpHJdbyD_Tn-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



Scale = 1:38.4

Loading	(psf)	Spacing	1-4-0	CSI		DEFL	in	(loc)	l/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

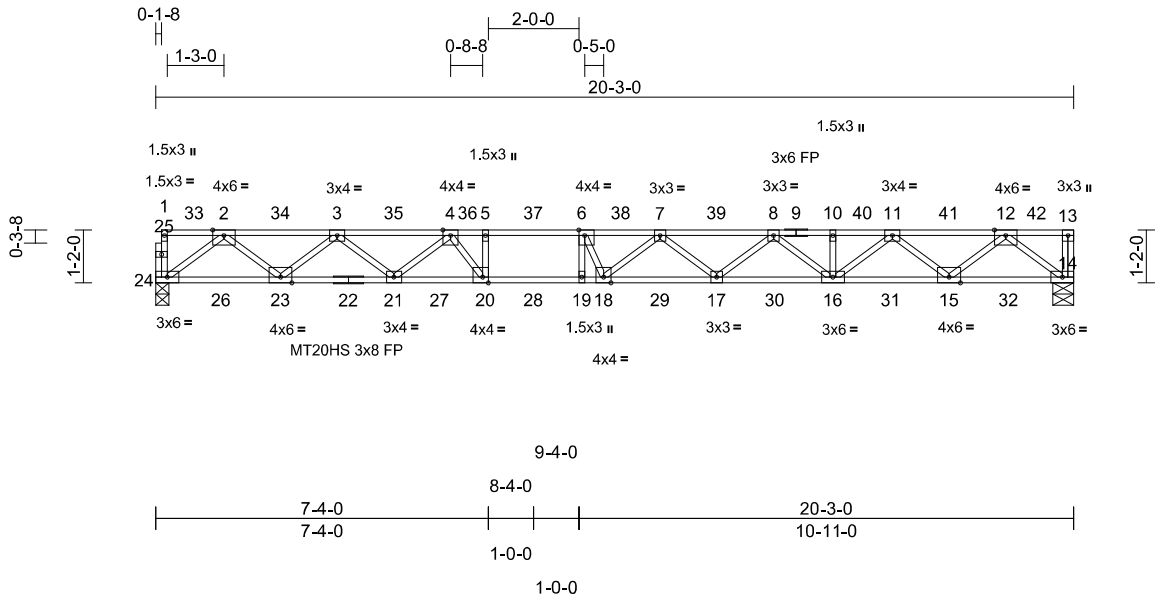
NOTES
1) All plates are 1.5x3 (||) MT20 unless otherwise indicated.
2) Gable requires continuous bottom chord bearing.
3) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
4) Gable studs spaced at 1-4-0 oc.
5) All bearings are assumed to be SP No.2 .
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

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

Job	Truss	Truss Type	Qty	Ply	Malbec Rev 1
	FT01A	Floor	4	1	I71683389
					Job Reference (optional)



Scale = 1:49.4

Plate Offsets (X, Y): [6:0-1-8,Edge], [20:0-1-8,Edge]

Loading	(psf)	Spacing	1-8-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.57	Vert(LL)	-0.39	18-19	>608	480	MT20HS	187/143
TCDL	10.0	Lumber DOL	1.00	BC	0.83	Vert(CT)	-0.54	18-19	>442	360	MT20	244/190
BCLL	0.0	Rep Stress Incr	YES	WB	0.52	Horz(CT)	0.08	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 SS(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) 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

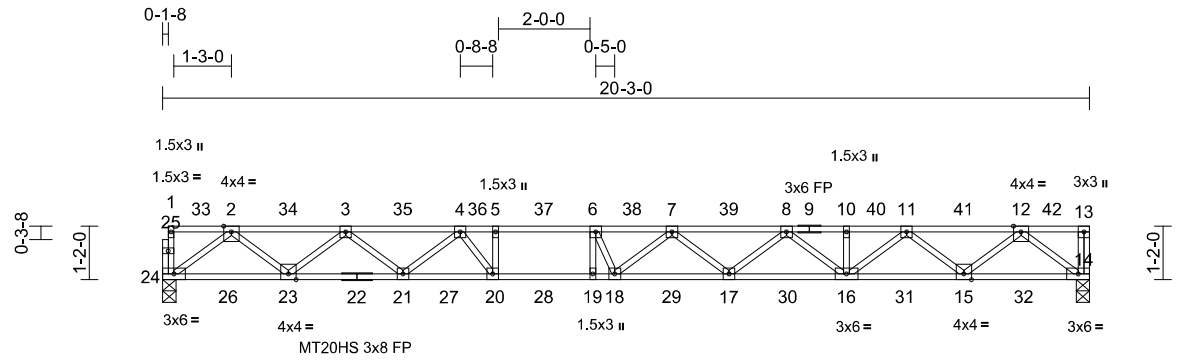
NOTES
1) Unbalanced floor live loads have been considered for this design.
2) All plates are MT20 plates unless otherwise indicated.
3) All bearings are assumed to be SP SS .
4) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at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

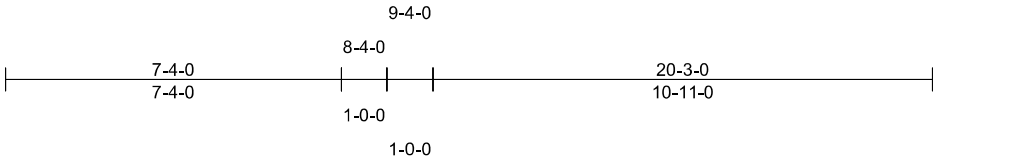
LOAD CASE(S) Standard

February 28,2025

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

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





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Loading	(psf)	Spacing	1-4-0	CSI		DEFL	in	(loc)	l/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

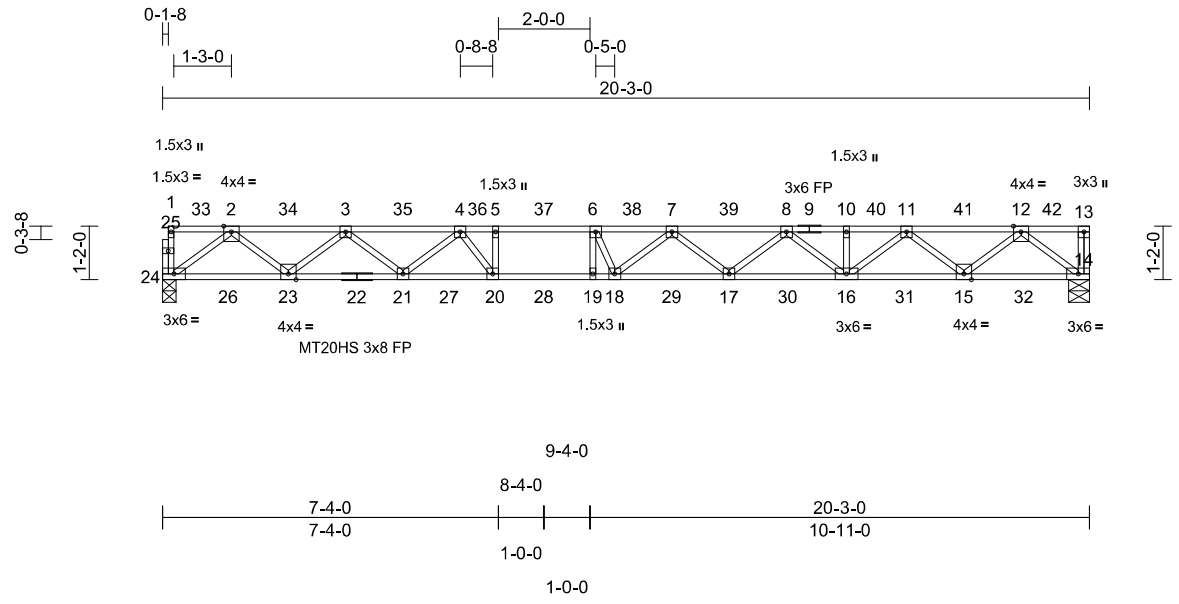
NOTES
1) Unbalanced floor live loads have been considered for this design.
2) All plates are MT20 plates unless otherwise indicated.
3) All plates are 3x3 (=) MT20 unless otherwise indicated.
4) All bearings are assumed to be SP SS .
5) This truss has been designed for a moving concentrated load of 250.0lb 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

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

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



Scale = 1:48.9

Loading	(psf)	Spacing	1-4-0	CSI		DEFL	in	(loc)	l/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

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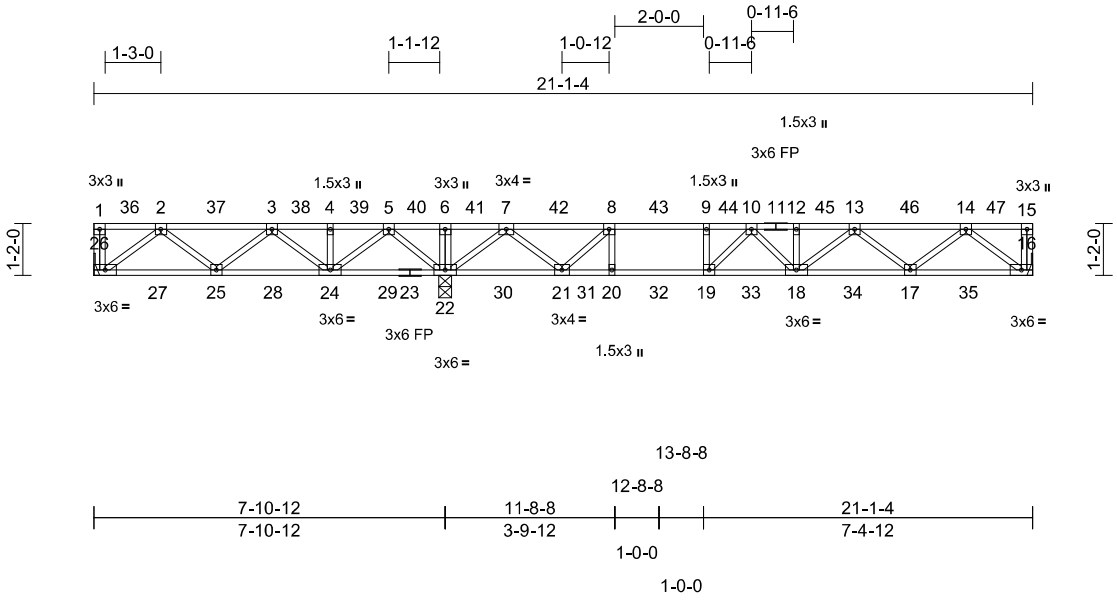
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Malbec Rev 1
	FT06A	Floor	2	1	I71683392
					Job Reference (optional)



Scale = 1:50.4

Loading	(psf)	Spacing	1-8-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.62	Vert(LL)	-0.16	18-19	>972	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.79	Vert(CT)	-0.22	18-19	>715	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.34	Horz(CT)	0.02	16	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-S							Weight: 110 lb	FT = 20%F, 12%E

LUMBER
TOP CHORD 2x4 SP No.2(flat)
BOT CHORD 2x4 SP No.2(flat) *Except* 23-16:2x4 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) 16= Mechanical, 22=0-3-8, 26= Mechanical
Max Grav 16=564 (LC 4), 22=1082 (LC 1), 26=329 (LC 47)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-26=-259/34, 15-16=-259/34, 1-2=0/0, 2-3=-500/41, 3-4=-407/236, 4-5=-407/236, 5-6=-18/630, 6-7=-18/630, 7-8=-831/0, 8-9=-1439/0, 9-10=-1439/0, 10-12=-1637/0, 12-13=-1637/0, 13-14=-1084/0, 14-15=0/0
BOT CHORD 25-26=0/364, 24-25=-114/545, 22-24=-402/167, 21-22=-108/319, 20-21=0/1439, 19-20=0/1439, 18-19=0/1646, 17-18=0/1471, 16-17=0/685
WEBS 6-22=-282/41, 8-20=-9/316, 9-19=-114/178, 2-26=-457/0, 2-25=-56/280, 3-25=-173/152, 3-24=-308/56, 4-24=-264/56, 5-24=0/423, 5-22=-588/0, 7-22=-909/0, 7-21=0/714, 8-21=-860/0, 14-16=-860/0, 14-17=0/519, 13-17=-503/0, 13-18=-113/326, 12-18=-229/89, 10-19=-403/48, 10-18=-185/193

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.
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

ENGINEERING BY TRENCO
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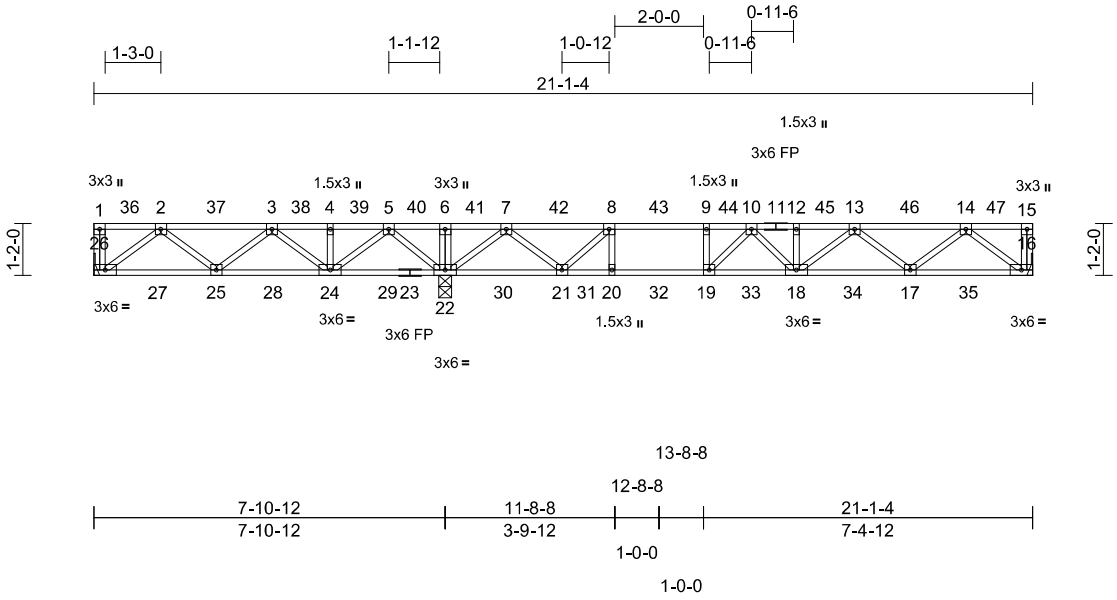
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Malbec Rev 1
	FT06	Floor	2	1	I71683393
					Job Reference (optional)



Scale = 1:50.4

Loading	(psf)	Spacing	1-4-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.58	Vert(LL)	-0.16	18-19	>962	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.89	Vert(CT)	-0.22	18-19	>724	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.28	Horz(CT)	0.02	16	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-S							Weight: 110 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 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 16= Mechanical, 22=0-3-8, 26= Mechanical
Max Uplift 26=-1 (LC 32)
Max Grav 16=451 (LC 4), 22=865 (LC 1), 26=314 (LC 47)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-26=-258/35, 15-16=-258/35, 1-2=0/0, 2-3=-481/68, 3-4=-400/258, 4-5=-400/258, 5-6=-58/574, 6-7=-58/574, 7-8=-666/0, 8-9=-1146/0, 9-10=-1146/0, 10-12=-1306/0, 12-13=-1306/0, 13-14=-867/0, 14-15=0/0
BOT CHORD 25-26=-17/329, 24-25=-143/507, 22-24=-409/177, 21-22=-132/317, 20-21=0/1146, 19-20=0/1146, 18-19=0/1320, 17-18=0/1174, 16-17=0/548
WEBS 6-22=-277/47, 8-20=-29/290, 9-19=-106/197, 2-26=-413/21, 2-25=-67/274, 3-25=-175/150, 3-24=-295/70, 4-24=-261/60, 5-24=0/391, 5-22=-472/0, 7-22=-724/0, 7-21=0/581, 8-21=-678/0, 14-16=-688/0, 14-17=0/437, 13-17=-400/0, 13-18=-126/314, 12-18=-227/90, 10-19=-394/59, 10-18=-200/182

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 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 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

February 28,2025

ENGINEERING BY TRENCO
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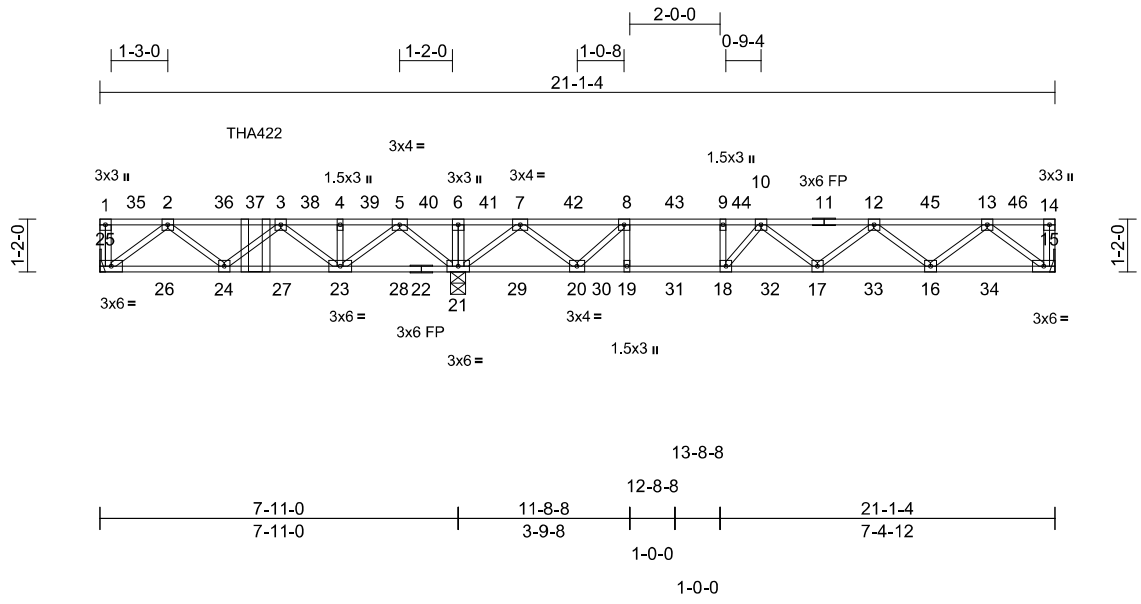
818 Soundside Road
Edenton, NC 27932

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



Scale = 1:49.5

Loading	(psf)	Spacing	1-10-8	CSI		DEFL	in	(loc)	l/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
TCDL	10.0	Lumber DOL	1.00	BC	0.95	Vert(CT)	-0.22	17-18	>697	360		
BCLL	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
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 21 SP SS .
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 3-5-4 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)
Vert: 15-25=-9, 1-14=-94
Concentrated Loads (lb)
Vert: 37=-466 (F)

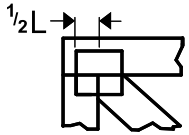
NORTH CAROLINA PROFESSIONAL SEAL 036322 ENGINEER ERIC A. GILBERT

February 28,2025

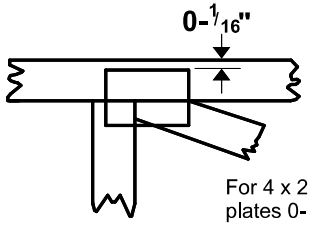
ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Symbols

PLATE LOCATION AND ORIENTATION



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



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

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

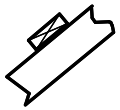
* Plate location details available in MiTek software or upon request.

PLATE SIZE

4 x 4

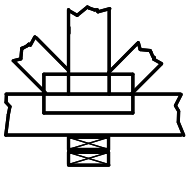
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

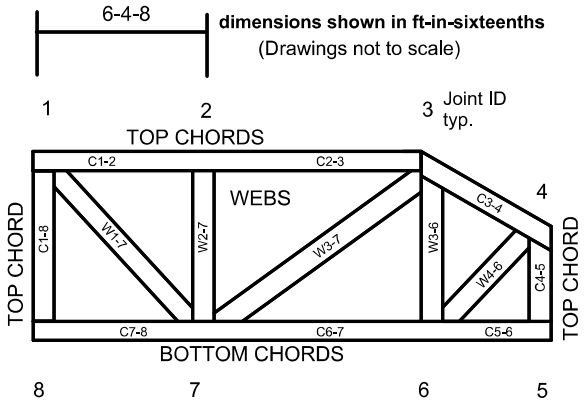


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TPI1: 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/TPI 1 section 6.3 These truss designs rely on lumber values established by others.

MiTek®

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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/TPI 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TPI 1.
8. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
9. Unless expressly noted, this design is not applicable for use with fire retardant, preservative treated, or green lumber.
10. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
11. Plate type, size, orientation and location dimensions indicated are minimum plating requirements.
12. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
13. Top chords must be sheathed or purlins provided at spacing indicated on design.
14. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
15. Connections not shown are the responsibility of others.
16. Do not cut or alter truss member or plate without prior approval of an engineer.
17. Install and load vertically unless indicated otherwise.
18. Use of green or treated lumber may pose unacceptable environmental, health or performance risks. Consult with project engineer before use.
19. Review all portions of this design (front, back, words and pictures) before use. Reviewing pictures alone is not sufficient.
20. Design assumes manufacture in accordance with ANSI/TPI 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.