ENGINEERING BY TRENCO
A MiTek Affiliate

Trenco
818 Soundside Rd
Edenton, NC 27932

RE: 2411-0162-A - The Farm at Neills Creek Lot 00.0058

Site Information:

Project Customer: DRB Raleigh/Durham Project Name: The Farm at Neills Creek Lot 00.0058
Lot/Block: 00.0058 Subdivision: The Farm at Neills Creek
Model:
Address: 339 Winding Creek Dr
City: Lillington 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: B

No.	Seal#	Truss Name	Date
1	I69855195	F5GR	11/27/24
2	I69855196	F6GE	11/27/24
3	I69855197	F6	11/27/24
4	I69855198	F7	11/27/24
5	I69855199	F10GR	11/27/24
6	I69855200	F5	11/27/24
7	I69855201	F10	11/27/24
8	I69855202	F4	11/27/24
9	I69855203	F9	11/27/24
10	I69855204	F8	11/27/24
11	I69855205	F3S	11/27/24
12	I69855206	F3	11/27/24
13	I69855207	F3GR	11/27/24
14	I69855208	F2	11/27/24
	I69855209	F1	11/27/24
16	I69855210	F3GE	11/27/24
17	I69855211	F5GE	11/27/24
18	I69855212	F4GR	11/27/24
19	I69855213	F10GE	11/27/24
20	I69855214	F1GE	11/27/24

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, 2024.

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.

November 27,2024
Gilbert, Eric

Job	Truss	Truss Type	Qty	Ply	The Farm at Neills Creek Lot 00.0058
2411-0162-A	F5GR	Floor Girder	1	1	I69855195 Job Reference (optional)

Structural, LLC, Thurmont, MD - 21788, Run: 8.83 S Nov 8 2024 Print: 8.830 S Nov 8 2024 MiTek Industries, Inc. Tue Nov 26 11:03:55 Page: 1
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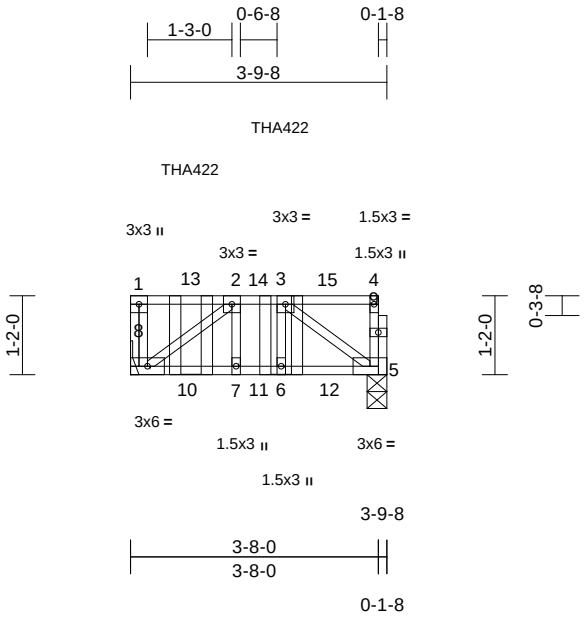

Scale = 1:24.4

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	0.48	Vert(LL)	-0.02	7-8	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.48	Vert(CT)	-0.02	7-8	>999	360		
BCLL	0.0	Rep Stress Incr	NO	WB	0.08	Horz(CT)	0.00	5	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-S							Weight: 24 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 3-9-8 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 5=0-3-8, 8= Mechanical
Max Grav 5=312 (LC 20), 8=324 (LC 7)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-8=-272/0, 4-5=-262/8, 1-2=0/0, 2-3=-245/0, 3-4=-16/0
BOT CHORD 7-8=0/245, 6-7=0/245, 5-6=0/245
WEBS 3-5=-303/0, 2-8=-303/0, 2-7=-80/193, 3-6=-69/199

NOTES
1) Unbalanced floor live loads have been considered for this design.
2) Bearings are assumed to be: , Joint 5 SP No.3 .
3) Refer to girder(s) for truss to truss connections.
4) Bearing at joint(s) 5 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
5) 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 spaced at 1-4-0 oc max. starting at 0-10-12 from the left end to 2-2-12 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: 5-8=-7, 1-4=-67
Concentrated Loads (lb)
Vert: 3=-87 (F), 13=-87 (F)

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Job	Truss	Truss Type	Qty	Ply	The Farm at Neills Creek Lot 00.0058
2411-0162-A	F6GE	Floor Supported Gable	1	1	I69855196 Job Reference (optional)

Structural, LLC, Thurmont, MD - 21788, Run: 8.83 S Nov 8 2024 Print: 8.830 S Nov 8 2024 MiTek Industries, Inc. Tue Nov 26 11:03:55 Page: 1
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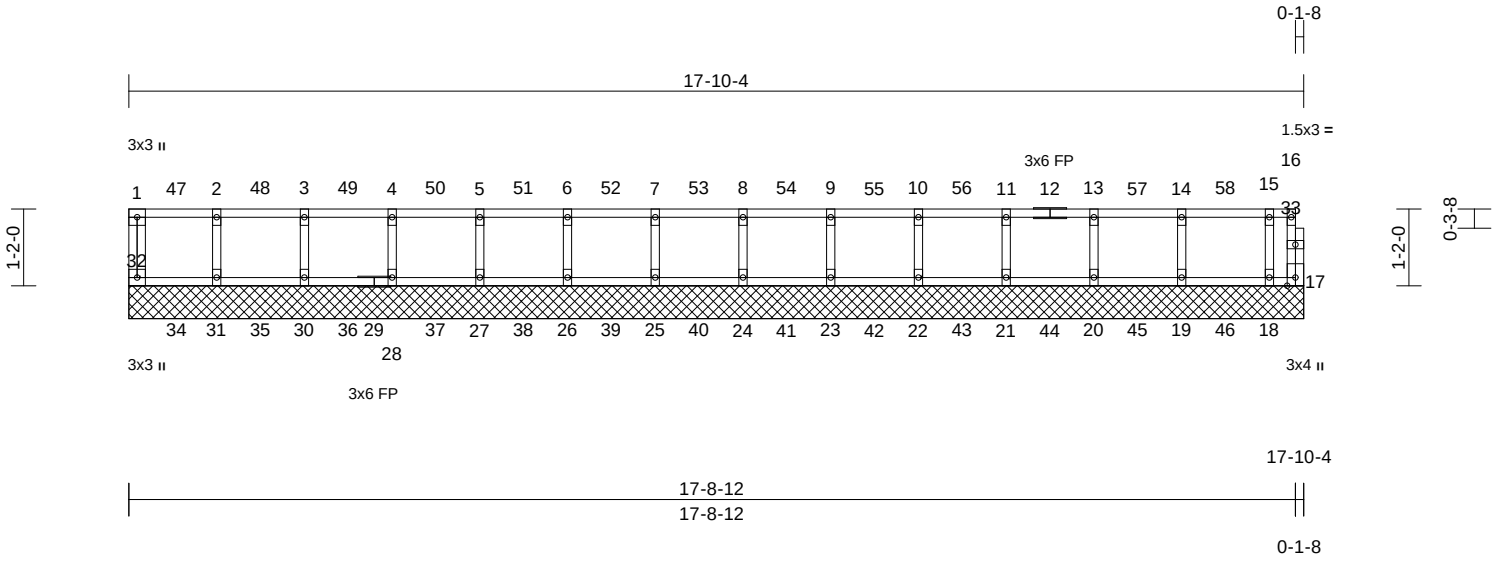

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Loading	(psf)	Spacing	1-4-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.27	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.28	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.05	Horiz(TL)	0.00	17	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-R							Weight: 76 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) 17=17-10-4, 18=17-10-4, 19=17-10-4, 20=17-10-4, 21=17-10-4, 22=17-10-4, 23=17-10-4, 24=17-10-4, 25=17-10-4, 26=17-10-4, 27=17-10-4, 28=17-10-4, 30=17-10-4, 31=17-10-4, 32=17-10-4
Max Uplift 17=-91 (LC 44), 18=-54 (LC 4), 19=-5 (LC 42), 20=-6 (LC 41), 21=-5 (LC 40), 22=-6 (LC 39), 23=-6 (LC 38), 24=-6 (LC 37), 25=-6 (LC 39), 26=-6 (LC 38), 27=-6 (LC 37), 28=-6 (LC 36), 30=-6 (LC 35), 31=-7 (LC 34), 32=-20 (LC 33)
Max Grav 17=254 (LC 60), 18=271 (LC 45), 19=281 (LC 58), 20=279 (LC 57), 21=280 (LC 56), 22=280 (LC 55), 23=280 (LC 54), 24=280 (LC 53), 25=280 (LC 52), 26=280 (LC 51), 27=280 (LC 50), 28=277 (LC 21), 30=280 (LC 48), 31=280 (LC 47), 32=264 (LC 46)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-32=-260/24, 16-17=-218/106, 1-2=-28/7, 2-3=-28/7, 3-4=-28/7, 4-5=-28/7, 5-6=-28/7, 6-7=-28/7, 7-8=-28/7, 8-9=-28/7, 9-10=-28/7, 10-11=-28/7, 11-13=-28/7, 13-14=-28/7, 14-15=-28/7, 15-16=-28/7
BOT CHORD 31-32=-7/28, 30-31=-7/28, 28-30=-7/28, 27-28=-7/28, 26-27=-7/28, 25-26=-7/28, 24-25=-7/28, 23-24=-7/28, 22-23=-7/28, 21-22=-7/28, 20-21=-7/28, 19-20=-7/28, 18-19=-7/28, 17-18=-7/28
WEBS 2-31=-268/16, 3-30=-269/14, 4-28=-269/14, 5-27=-269/14, 6-26=-269/14, 7-25=-269/14, 8-24=-269/14, 9-23=-269/14, 10-22=-269/14, 11-21=-269/14, 13-20=-268/14, 14-19=-269/14, 15-18=-255/42

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) Bearing at joint(s) 17 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
7) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 32, 17, 31, 30, 28, 27, 26, 25, 24, 23, 22, 21, 20, 19, and 18. This connection is for uplift only and does not consider lateral forces.
8) 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.
9) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
10) CAUTION, Do not erect truss backwards.

LOAD CASE(S) Standard

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Job	Truss	Truss Type	Qty	Ply	The Farm at Neills Creek Lot 00.0058
2411-0162-A	F6	Floor	5	1	I69855197
					Job Reference (optional)

Structural, LLC, Thurmont, MD - 21788, Run: 8.83 S Nov 8 2024 Print: 8.830 S Nov 8 2024 MiTek Industries, Inc. Tue Nov 26 11:03:55 Page: 1

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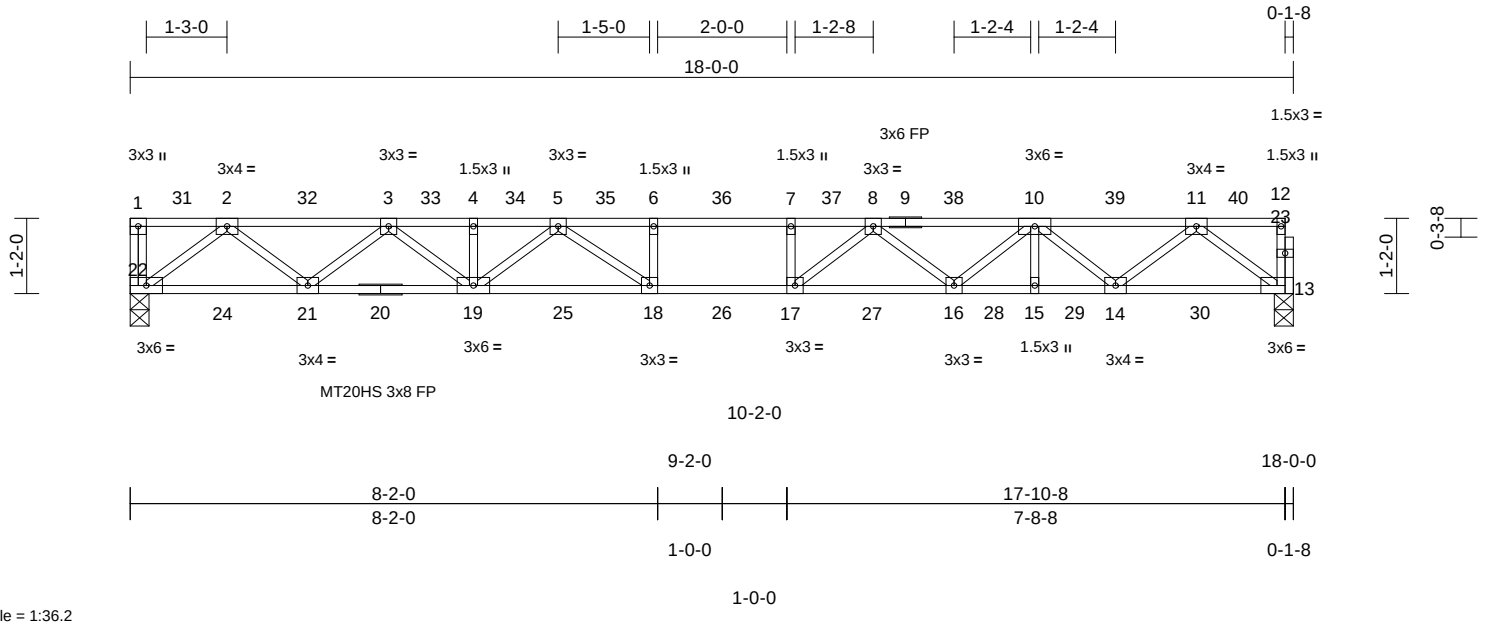

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Loading	(psf)	Spacing	1-4-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.64	Vert(LL)	-0.21	18-19	>999	480	MT20HS	187/143
TCDL	10.0	Lumber DOL	1.00	BC	0.86	Vert(CT)	-0.28	18-19	>751	360	MT20	244/190
BCLL	0.0	Rep Stress 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=0-3-8, 22=0-3-8
Max Grav 13=647 (LC 1), 22=651 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-22=-258/35, 12-13=-259/41, 1-2=0/0, 2-3=-1372/0, 3-4=-2290/0, 4-5=-2290/0, 5-6=-2739/0, 6-7=-2739/0, 7-8=-2739/0, 8-10=-2246/0, 10-11=-1375/0, 11-12=-15/2
BOT CHORD 21-22=0/813, 19-21=0/1910, 18-19=0/2569, 17-18=0/2739, 16-17=0/2561, 15-16=0/1921, 14-15=0/1921, 13-14=0/809
WEBS 6-18=-185/111, 7-17=-199/112, 2-22=-1020/0, 2-21=0/728, 3-21=-700/0, 3-19=-14/485, 4-19=-244/69, 5-19=-366/59, 5-18=-214/433, 11-13=-1013/0, 11-14=0/737, 10-14=-711/0, 10-16=0/518, 8-16=-410/35, 8-17=-224/452, 10-15=-106/238

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 , Joint 13 SP SS .
4) Bearing at joint(s) 13 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
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

November 27,2024

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Job	Truss	Truss Type	Qty	Ply	The Farm at Neills Creek Lot 00.0058
2411-0162-A	F7	Floor	2	1	I69855198
					Job Reference (optional)

Structural, LLC, Thurmont, MD - 21788, Run: 8.83 S Nov 8 2024 Print: 8.830 S Nov 8 2024 MiTek Industries, Inc. Tue Nov 26 11:03:56 Page: 1

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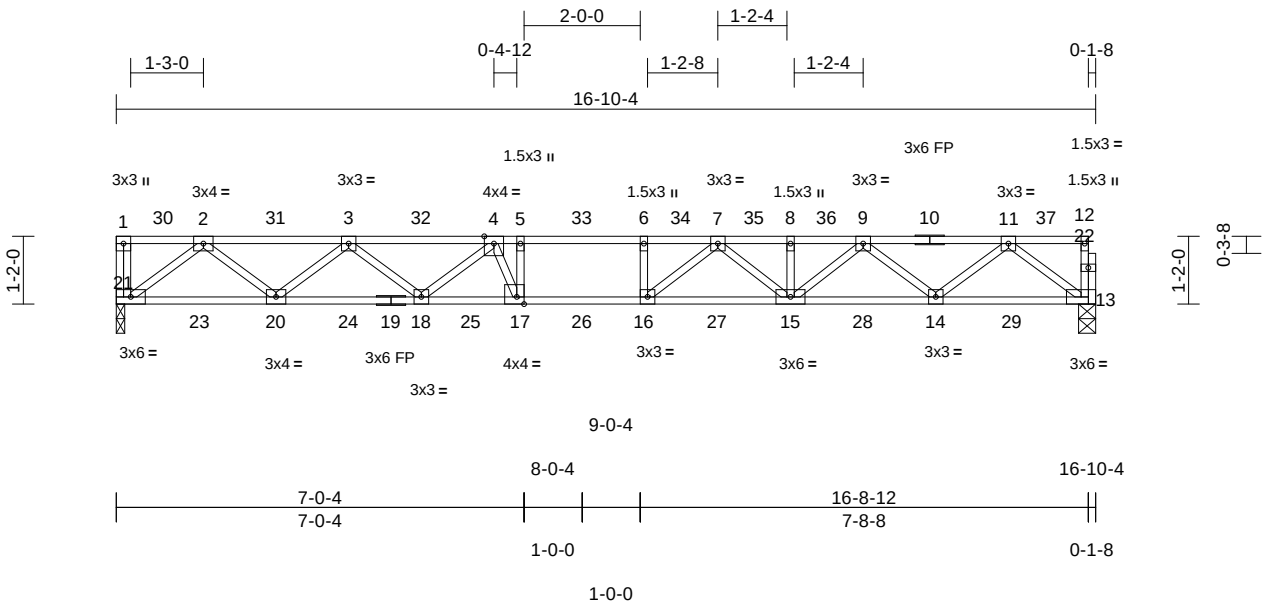

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Plate Offsets (X, Y): [17:0-1-8,Edge]

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	0.61	Vert(LL)	-0.17	15-16	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.82	Vert(CT)	-0.23	15-16	>858	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.32	Horz(CT)	0.04	13	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-S							Weight: 86 lb	FT = 20%F, 12%E

LUMBER

TOP CHORD 2x4 SP No.2(flat)

BOT CHORD 2x4 SP No.2(flat) *Except* 19-13:2x4 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=0-3-8, 21=0-1-12

Max Grav 13=605 (LC 1), 21=609 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-21=-259/37, 12-13=-258/35, 1-2=0/0, 2-3=-1272/0, 3-4=-2040/0, 4-5=-2392/0, 5-6=-2392/0, 6-7=-2392/0, 7-8=-2068/0, 8-9=-2068/0, 9-11=-1266/0, 11-12=-15/2

BOT CHORD 20-21=0/756, 18-20=0/1762, 17-18=0/2318, 16-17=0/2392, 15-16=0/2289, 14-15=0/1755, 13-14=0/757

WEBS 5-17=-322/312, 6-16=-178/128, 2-21=-948/0, 2-20=0/672, 3-20=-638/0, 3-18=0/391, 4-18=-380/103, 4-17=-385/456, 11-13=-948/0, 11-14=0/662, 9-14=-637/0, 9-15=-47/410, 7-15=-328/80, 7-16=-235/349, 8-15=-241/80

NOTES

1) Unbalanced floor live loads have been considered for this design.
2) Bearings are assumed to be: Joint 21 SP No.2 , Joint 13 SP SS .
3) Bearing at joint(s) 13 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
4) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 21.
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

November 27,2024

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Job	Truss	Truss Type	Qty	Ply	The Farm at Neills Creek Lot 00.0058
2411-0162-A	F10GR	Floor Girder	1	1	I69855199
					Job Reference (optional)

Structural, LLC, Thurmont, MD - 21788, Run: 8.83 S Nov 8 2024 Print: 8.830 S Nov 8 2024 MiTek Industries, Inc. Tue Nov 26 11:03:57 Page: 1

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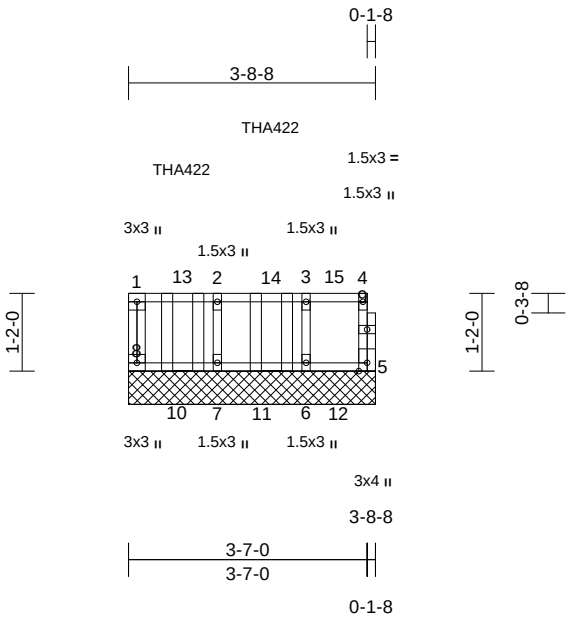

Scale = 1:24.4

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	0.74	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.30	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	NO	WB	0.16	Horiz(TL)	0.00	5	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-R							Weight: 19 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 3-8-8 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 5=3-8-8, 6=3-8-8, 7=3-8-8, 8=3-8-8
Max Uplift 5=-45 (LC 5)
Max Grav 5=254 (LC 16), 6=402 (LC 1), 7=752 (LC 1), 8=312 (LC 13)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-8=-313/0, 4-5=-232/58, 1-2=-32/5, 2-3=-32/5, 3-4=-32/5
BOT CHORD 7-8=-5/32, 6-7=-5/32, 5-6=-5/32
WEBS 2-7=-716/0, 3-6=-434/0

NOTES

1) Gable requires continuous bottom chord bearing.
2) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
3) Gable studs spaced at 1-4-0 oc.
4) All bearings are assumed to be SP No.3 .
5) Bearing at joint(s) 5 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 45 lb uplift at joint 5.
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.
10) Use Simpson Strong-Tie THA422 (Single Chord Girder) or equivalent spaced at 1-4-0 oc max. starting at 0-9-12 from the left end to 2-1-12 to connect truss(es) to back face of top chord.
11) Fill all nail holes where hanger is in contact with lumber.
12) 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: 5-8=-7, 1-4=-67
Concentrated Loads (lb)
Vert: 13=-559 (B), 14=-559 (B)

November 27,2024

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Job	Truss	Truss Type	Qty	Ply	The Farm at Neills Creek Lot 00.0058
2411-0162-A	F5	Floor	2	1	I69855200
					Job Reference (optional)

Structural, LLC, Thurmont, MD - 21788, Run: 8.83 S Nov 8 2024 Print: 8.830 S Nov 8 2024 MiTek Industries, Inc. Tue Nov 26 11:03:54 Page: 1

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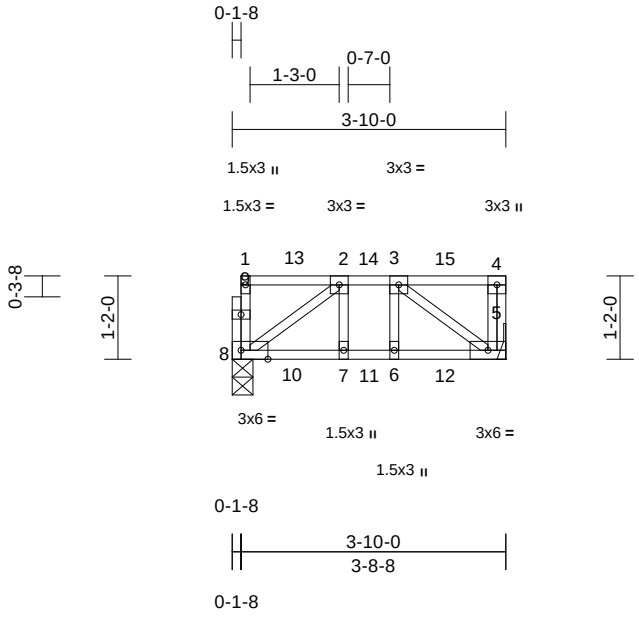

Scale = 1:24.4

Plate Offsets (X, Y): [8:0-4-8,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	0.39	Vert(LL)	-0.02	5-6	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.43	Vert(CT)	-0.02	5-6	>999	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.07	Horz(CT)	0.00	5	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-S							Weight: 24 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 3-10-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 5= Mechanical, 8=0-3-8
Max Grav 5=289 (LC 11), 8=288 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-8=-262/8, 4-5=-261/7, 1-2=-16/0, 2-3=-213/0, 3-4=0/0
BOT CHORD 7-8=0/213, 6-7=0/213, 5-6=0/213
WEBS 3-5=-263/0, 2-8=-263/0, 2-7=-69/196, 3-6=-71/196

NOTES

1) Unbalanced floor live loads have been considered for this design.
2) Bearings are assumed to be: Joint 8 SP No.3 .
3) Refer to girder(s) for truss to truss connections.
4) Bearing at joint(s) 8 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
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

November 27,2024

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

Job	Truss	Truss Type	Qty	Ply	The Farm at Neills Creek Lot 00.0058
2411-0162-A	F10	Floor	5	1	I69855201
					Job Reference (optional)

Structural, LLC, Thurmont, MD - 21788, Run: 8.83 S Nov 8 2024 Print: 8.830 S Nov 8 2024 MiTek Industries, Inc. Tue Nov 26 11:03:57 Page: 1

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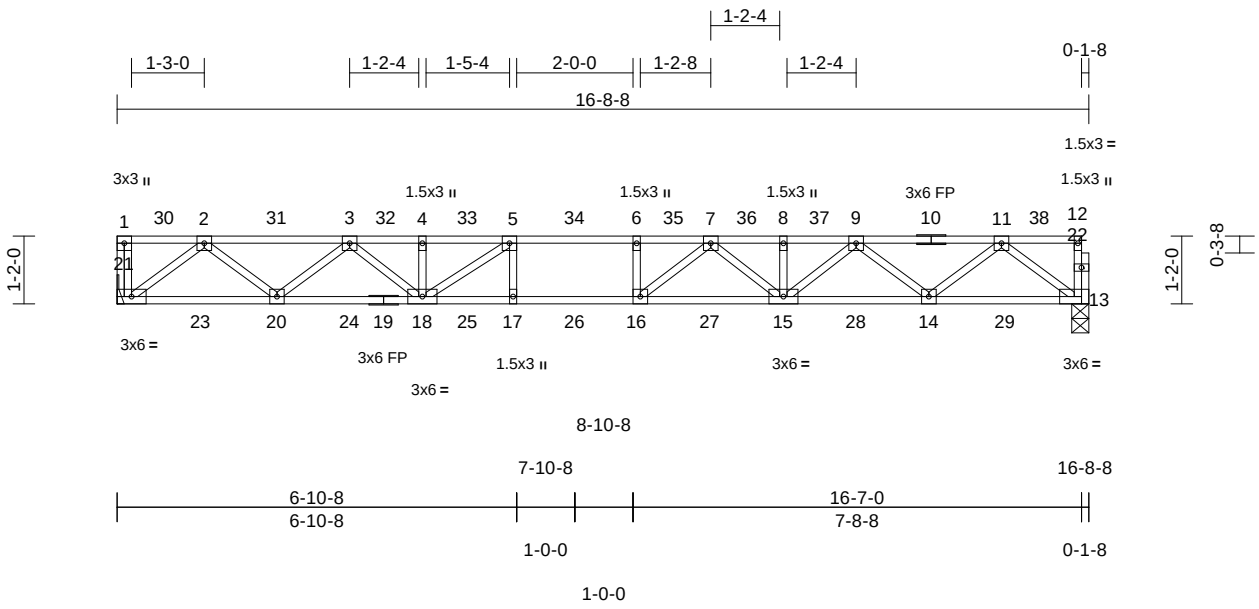


Scale = 1:34.9

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	0.59	Vert(LL)	-0.18	15-16	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.82	Vert(CT)	-0.24	15-16	>826	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.31	Horz(CT)	0.04	13	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-S							Weight: 85 lb	FT = 20%F, 12%E

LUMBER

TOP CHORD 2x4 SP No.2(flat)
BOT CHORD 2x4 SP No.2(flat) *Except* 19-13:2x4 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=0-3-8, 21= Mechanical
Max Grav 13=599 (LC 1), 21=603 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-21=-258/35, 12-13=-258/39, 1-2=0/0, 2-3=-1255/0, 3-4=-2031/0, 4-5=-2031/0, 5-6=-2347/0, 6-7=-2347/0, 7-8=-2042/0, 8-9=-2042/0, 9-11=-1252/0, 11-12=-15/2
BOT CHORD 20-21=0/752, 18-20=0/1733, 17-18=0/2347, 16-17=0/2347, 15-16=0/2256, 14-15=0/1736, 13-14=0/750
WEBS 5-17=-92/190, 6-16=-180/122, 2-21=-943/0, 2-20=0/656, 3-20=-621/0, 3-18=-34/443, 5-18=-552/178, 11-13=-939/0, 11-14=0/654, 9-14=-629/0, 9-15=-40/407, 7-15=-319/86, 7-16=-245/340, 8-15=-241/74, 4-18=-297/65

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 13 SP SS .
4) Refer to girder(s) for truss to truss connections.
5) Bearing at joint(s) 13 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
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

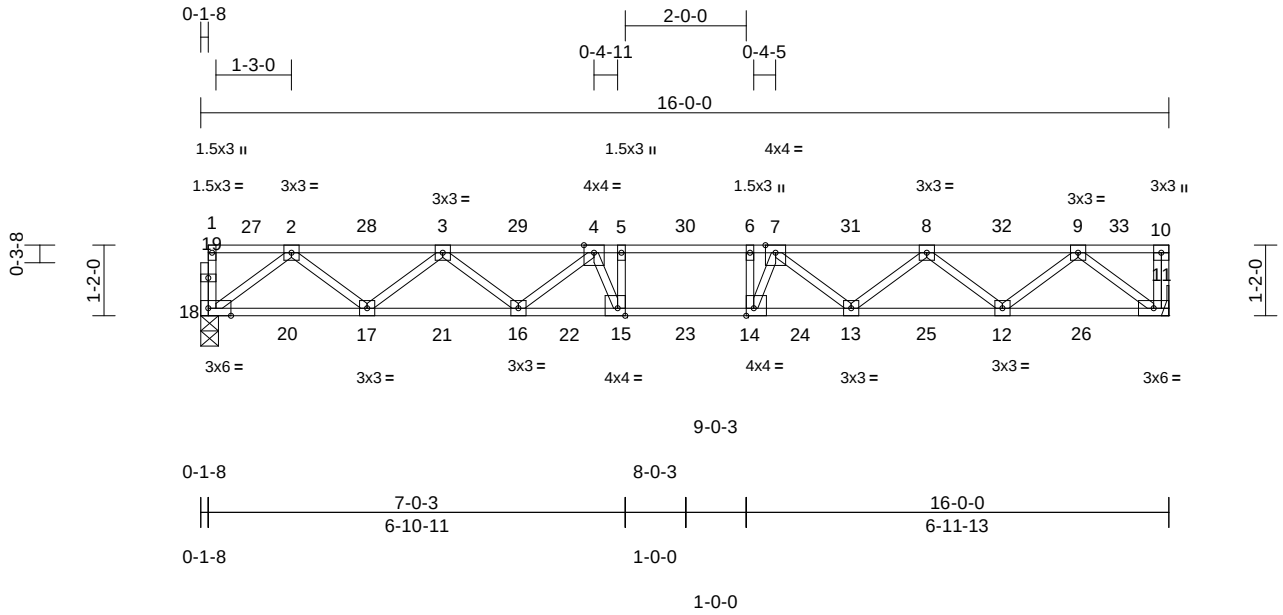
November 27,2024

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

Job	Truss	Truss Type	Qty	Ply	The Farm at Neills Creek Lot 00.0058
2411-0162-A	F4	Floor	4	1	I69855202
					Job Reference (optional)

Structural, LLC, Thurmont, MD - 21788, Run: 8.83 S Nov 8 2024 Print: 8.830 S Nov 8 2024 MiTek Industries, Inc. Tue Nov 26 11:03:54 Page: 1

ID:isjdfPHJqMFGvOysQcIYzryFYnL-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:34.9

Plate Offsets (X, Y): [14:0-1-8,Edge], [15:0-1-8,Edge], [18:0-4-8,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	0.61	Vert(LL)	-0.14	14-15	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.82	Vert(CT)	-0.19	14-15	>986	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.30	Horz(CT)	0.04	11	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-S							Weight: 81 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, 18=0-3-8
Max Grav 11=577 (LC 1), 18=573 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-18=-259/41, 10-11=-259/37, 1-2=-15/2, 2-3=-1192/0, 3-4=-1891/0, 4-5=-2154/0, 5-6=-2154/0, 6-7=-2154/0, 7-8=-1890/0, 8-9=-1192/0, 9-10=0/0

BOT CHORD 17-18=0/714, 16-17=0/1647, 15-16=0/2118, 14-15=0/2154, 13-14=0/2119, 12-13=0/1647, 11-12=0/714

WEBS 5-15=-279/351, 6-14=-293/374, 2-18=-893/0, 2-17=0/623, 3-17=-593/0, 3-16=-9/372, 4-16=-321/112, 4-15=-425/373, 9-11=-896/0, 9-12=0/622, 8-12=-592/0, 8-13=-9/371, 7-13=-324/114, 7-14=-446/386

NOTES

1) Unbalanced floor live loads have been considered for this design.
2) Bearings are assumed to be: Joint 18 SP No.3 .
3) Refer to girder(s) for truss to truss connections.
4) Bearing at joint(s) 18 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
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

November 27,2024

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

Job	Truss	Truss Type	Qty	Ply	The Farm at Neills Creek Lot 00.0058
2411-0162-A	F9	Floor	3	1	I69855203
					Job Reference (optional)

Structural, LLC, Thurmont, MD - 21788, Run: 8.83 S Nov 8 2024 Print: 8.830 S Nov 8 2024 MiTek Industries, Inc. Tue Nov 26 11:03:56 Page: 1

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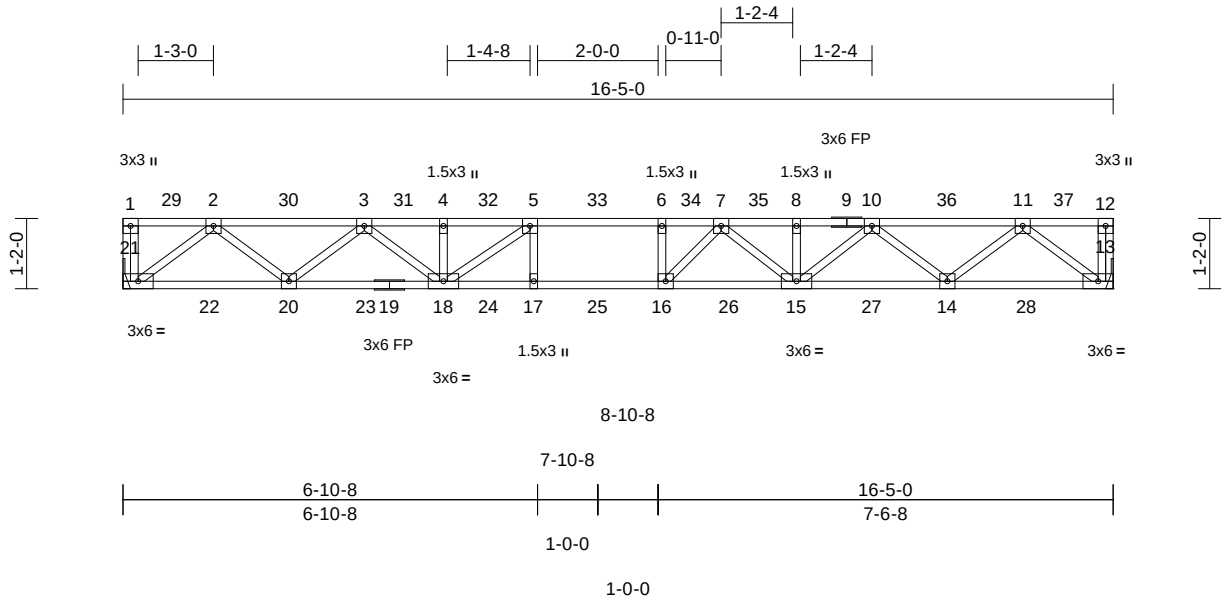

Scale = 1:34.9

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	0.59	Vert(LL)	-0.18	15-16	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.95	Vert(CT)	-0.24	15-16	>819	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.30	Horz(CT)	0.04	13	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-S							Weight: 85 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 10-0-0 oc bracing, Except:
2-2-0 oc bracing: 15-16.

REACTIONS (size) 13= Mechanical, 21= Mechanical
Max Grav 13=593 (LC 1), 21=593 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-21=-258/35, 12-13=-258/35, 1-2=0/0, 2-3=-1228/0, 3-4=-1995/0, 4-5=-1995/0, 5-6=-2267/0, 6-7=-2267/0, 7-8=-1990/0, 8-10=-1990/0, 10-11=-1226/0, 11-12=0/0
BOT CHORD 20-21=0/737, 18-20=0/1694, 17-18=0/2267, 16-17=0/2267, 15-16=0/2189, 14-15=0/1695, 13-14=0/737
WEBS 5-17=-88/187, 6-16=-199/155, 2-21=-925/0, 2-20=0/639, 3-20=-606/0, 3-18=-35/443, 5-18=-508/188, 11-13=-925/0, 11-14=0/637, 10-14=-610/0, 10-15=-49/399, 7-15=-302/82, 7-16=-256/335, 8-15=-244/75, 4-18=-305/68

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) Refer to girder(s) for truss to truss connections.
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.

November 27,2024

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

Job	Truss	Truss Type	Qty	Ply	The Farm at Neills Creek Lot 00.0058
2411-0162-A	F8	Floor	7	1	I69855204
					Job Reference (optional)

Structural, LLC, Thurmont, MD - 21788, Run: 8.83 S Nov 8 2024 Print: 8.830 S Nov 8 2024 MiTek Industries, Inc. Tue Nov 26 11:03:56 Page: 1

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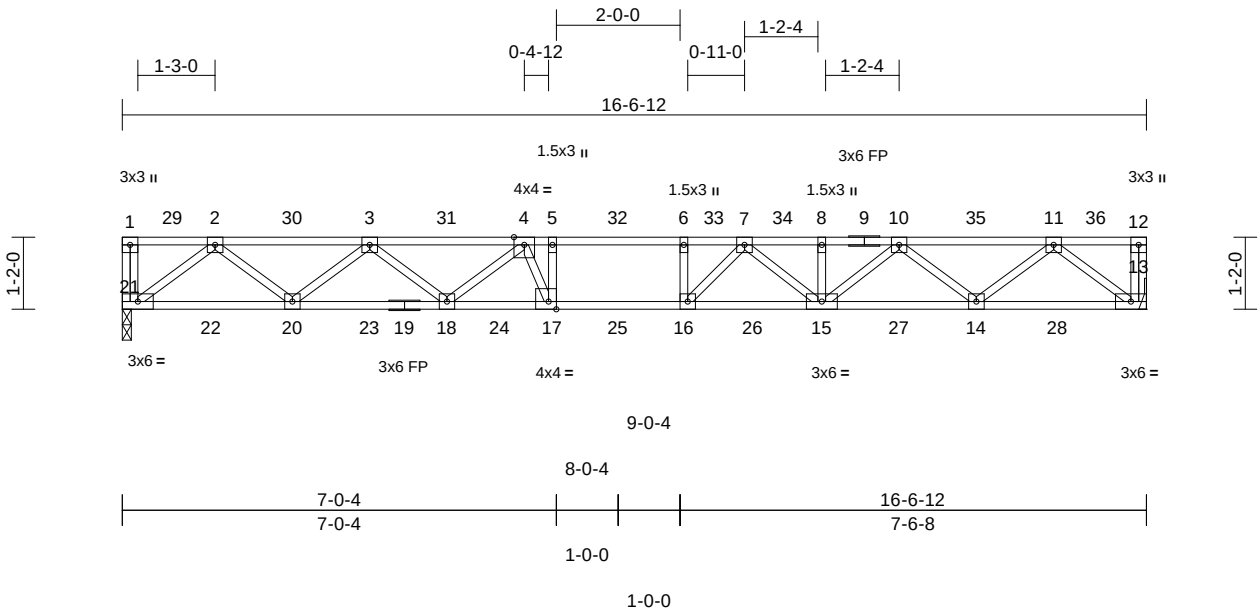


Scale = 1:34.9

Plate Offsets (X, Y): [17:0-1-8,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	0.61	Vert(LL)	-0.17	15-16	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.94	Vert(CT)	-0.23	15-16	>852	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.31	Horz(CT)	0.04	13	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-S							Weight: 85 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 10-0-0 oc bracing, Except:
2-2-0 oc bracing: 15-16.

REACTIONS (size) 13= Mechanical, 21=0-1-12
Max Grav 13=598 (LC 1), 21=598 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-21=-259/37, 12-13=-258/35, 1-2=0/0, 2-3=-1244/0, 3-4=-1990/0, 4-5=-2310/0, 5-6=-2310/0, 6-7=-2310/0, 7-8=-2016/0, 8-10=-2016/0, 10-11=-1240/0, 11-12=0/0
BOT CHORD 20-21=0/741, 18-20=0/1723, 17-18=0/2249, 16-17=0/2310, 15-16=0/2222, 14-15=0/1714, 13-14=0/744
WEBS 5-17=-322/334, 6-16=-199/158, 2-21=-930/0, 2-20=0/655, 3-20=-623/0, 3-18=0/386, 4-18=-352/98, 4-17=-403/436, 11-13=-933/0, 11-14=0/645, 10-14=-618/0, 10-15=-47/402, 7-15=-311/84, 7-16=-246/344, 8-15=-244/74

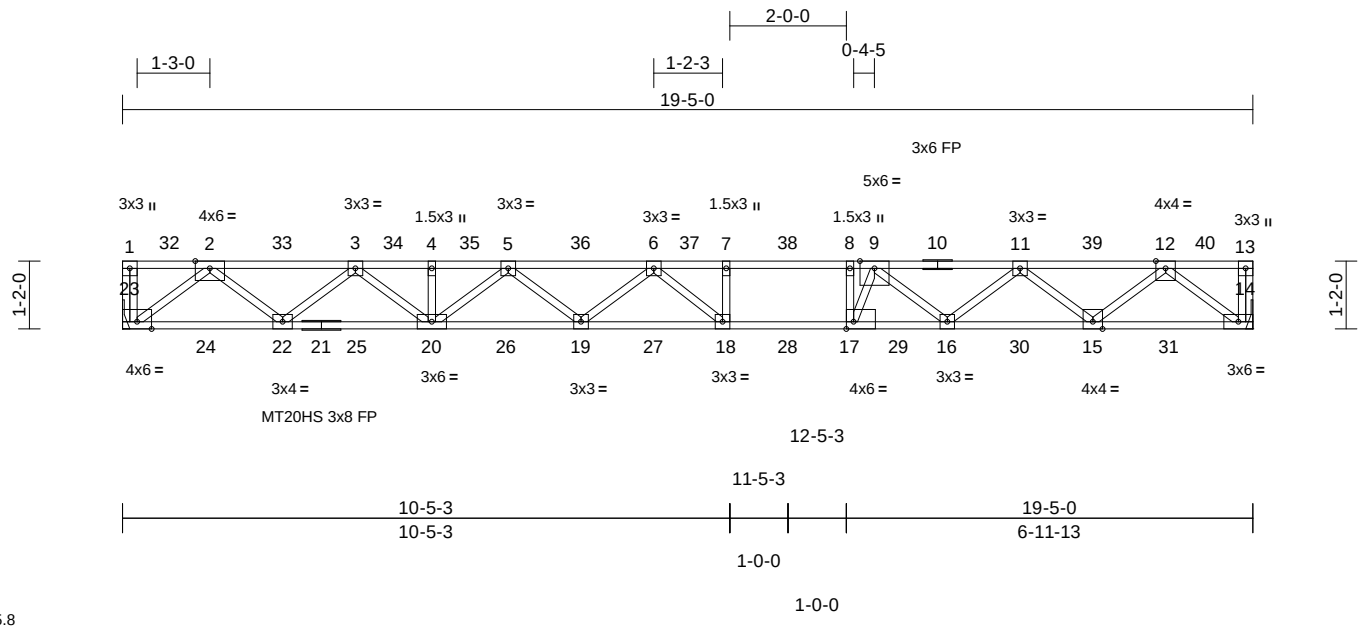
NOTES
1) Unbalanced floor live loads have been considered for this design.
2) All plates are 3x3 (=) MT20 unless otherwise indicated.
3) Bearings are assumed to be: Joint 21 SP No.2 .
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 21.
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.

LOAD CASE(S) Standard

November 27,2024

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

Job	Truss	Truss Type	Qty	Ply	The Farm at Neills Creek Lot 00.0058
2411-0162-A	F3S	Floor	2	1	I69855205
					Job Reference (optional)



Scale = 1:35.8

Plate Offsets (X, Y): [17:0-1-8,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	0.73	Vert(LL)	-0.35	18-19	>662	480	MT20HS	187/143
TCDL	10.0	Lumber DOL	1.00	BC	0.74	Vert(CT)	-0.50	18-19	>462	360	MT20	244/190
BCLL	0.0	Rep Stress Incr	NO	WB	0.58	Horz(CT)	0.07	14	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-S							Weight: 99 lb	FT = 20%F, 12%E

LUMBER
TOP CHORD 2x4 SP SS(flat) *Except* 10-13:2x4 SP No.2 (flat)
BOT CHORD 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.

REACTIONS (size) 14= Mechanical, 23= Mechanical
Max Grav 14=767 (LC 1), 23=1540 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-23=-264/29, 13-14=-259/37, 1-2=0/0, 2-3=-2522/0, 3-4=-3403/0, 4-5=-3403/0, 5-6=-3809/0, 6-7=-3594/0, 7-8=-3594/0, 8-9=-3594/0, 9-11=-2802/0, 11-12=-1672/0, 12-13=0/0
BOT CHORD 22-23=0/1976, 20-22=0/3045, 19-20=0/3694, 18-19=0/3849, 17-18=0/3594, 16-17=0/3327, 15-16=0/2345, 14-15=0/965
WEBS 7-18=-82/272, 8-17=-707/142, 2-23=-2479/0, 2-22=0/710, 3-22=-682/0, 3-20=-93/456, 4-20=-259/60, 5-20=-372/111, 5-19=-137/256, 6-19=-172/271, 6-18=-574/148, 12-14=-1211/0, 12-15=0/921, 11-15=-875/0, 11-16=0/595, 9-16=-683/0, 9-17=-115/970

NOTES
1) Unbalanced floor live loads have been considered for this design.
2) All plates are MT20 plates unless otherwise indicated.
3) Refer to girder(s) for truss to truss connections.
4) 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.
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.

LOAD CASE(S) Standard
1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00
Uniform Loads (lb/ft)
Vert: 14-23=-7, 1-13=-67
Concentrated Loads (lb)
Vert: 2=-901

November 27,2024

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

Job	Truss	Truss Type	Qty	Ply	The Farm at Neills Creek Lot 00.0058
2411-0162-A	F3	Floor	5	1	I69855206
					Job Reference (optional)

Structural, LLC, Thurmont, MD - 21788, Run: 8.83 S Nov 8 2024 Print: 8.830 S Nov 8 2024 MiTek Industries, Inc. Tue Nov 26 11:03:52 Page: 1

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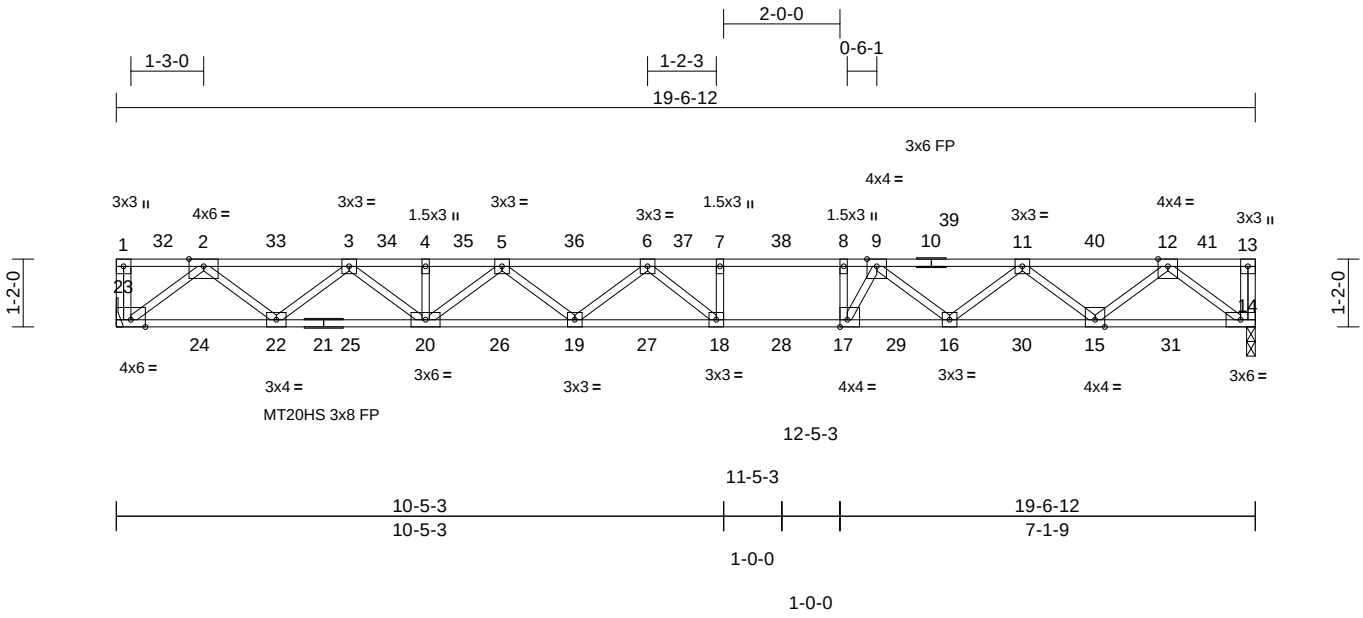

Scale = 1:36

Plate Offsets (X, Y): [17:0-1-8,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	0.76	Vert(LL)	-0.36	18-19	>649	480	MT20HS	187/143
TCDL	10.0	Lumber DOL	1.00	BC	0.75	Vert(CT)	-0.51	18-19	>453	360	MT20	244/190
BCLL	0.0	Rep Stress Incr	NO	WB	0.60	Horz(CT)	0.07	14	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-S							Weight: 99 lb	FT = 20%F, 12%E

LUMBER

TOP CHORD 2x4 SP SS(flat) *Except* 10-13:2x4 SP No.2 (flat)
BOT CHORD 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.

REACTIONS (size) 14=0-1-12, 23= Mechanical
Max Grav 14=775 (LC 1), 23=1575 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-23=-264/29, 13-14=-259/37, 1-2=0/0, 2-3=-2573/0, 3-4=-3462/0, 4-5=-3462/0, 5-6=-3878/0, 6-7=-3671/0, 7-8=-3671/0, 8-9=-3671/0, 9-11=-2834/0, 11-12=-1691/0, 12-13=0/0

BOT CHORD 22-23=0/2022, 20-22=0/3101, 19-20=0/3758, 18-19=0/3921, 17-18=0/3671, 16-17=0/3357, 15-16=0/2372, 14-15=0/974

WEBS 7-18=-87/272, 8-17=-588/84, 2-23=-2537/0, 2-22=0/716, 3-22=-687/0, 3-20=-93/462, 4-20=-259/60, 5-20=-378/111, 5-19=-136/257, 6-19=-178/271, 6-18=-575/157, 12-14=-1222/0, 12-15=0/933, 11-15=-887/0, 11-16=0/601, 9-16=-681/0, 9-17=-51/882

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 14 SP SS .
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 14.
6) Load case(s) 1 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.
7) 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

1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00
Uniform Loads (lb/ft)
Vert: 14-23=-7, 1-13=-67
Concentrated Loads (lb)
Vert: 2=-933

November 27,2024

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

Job	Truss	Truss Type	Qty	Ply	The Farm at Neills Creek Lot 00.0058
2411-0162-A	F3GR	Floor Girder	1	2	I69855207
					Job Reference (optional)

Structural, LLC, Thurmont, MD - 21788, Run: 8.83 S Nov 8 2024 Print: 8.830 S Nov 8 2024 MiTek Industries, Inc. Tue Nov 26 11:03:53 Page: 1

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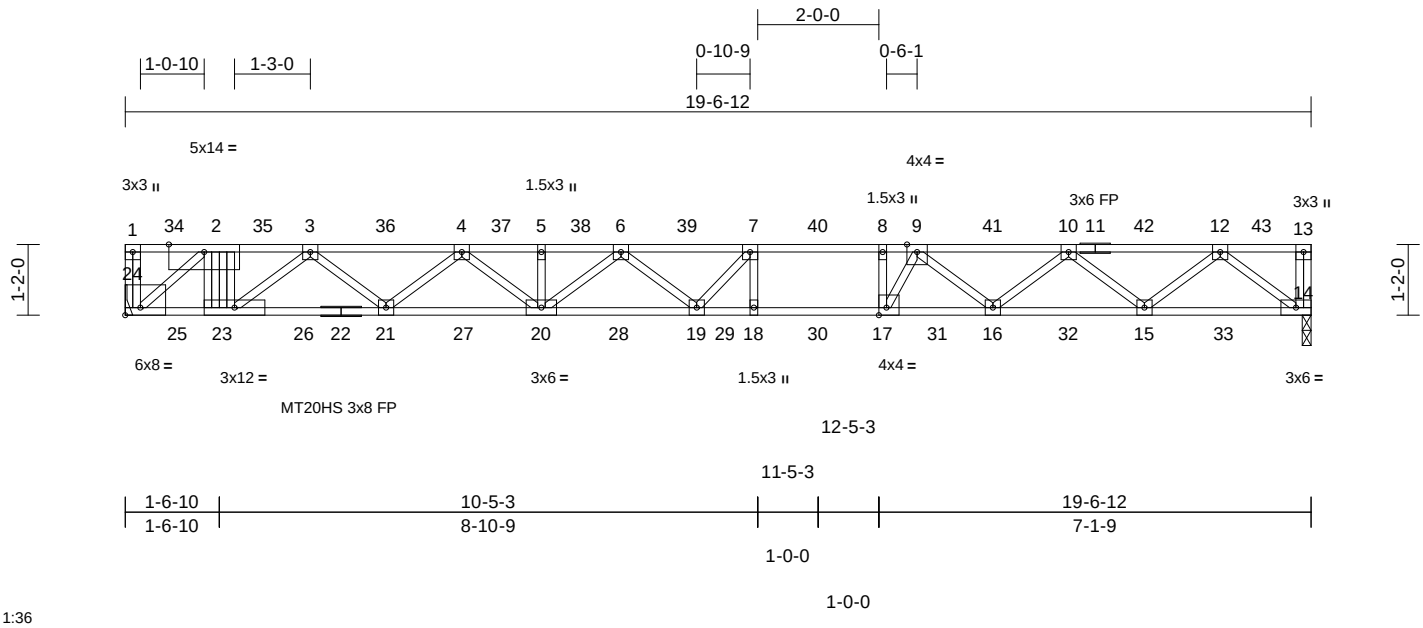

Scale = 1:36

Plate Offsets (X, Y): [17:0-1-8,Edge], [24:Edge,0-1-8]

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	0.51	Vert(LL)	-0.27	18-19	>859	480	MT20HS	187/143
TCDL	10.0	Lumber DOL	1.00	BC	0.97	Vert(CT)	-0.41	18-19	>568	360	MT20	244/190
BCLL	0.0	Rep Stress Incr	NO	WB	0.80	Horz(CT)	0.06	14	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-S							Weight: 208 lb	FT = 20%F, 12%E

LUMBER

TOP CHORD 2x4 SP SS(flat) *Except* 11-13:2x4 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 10-0-0 oc bracing.

REACTIONS (size) 14=0-1-12, 24= Mechanical

Max Grav 14=978 (LC 1), 24=4217 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-24=-291/0, 13-14=-260/34, 1-2=0/0, 2-3=-5495/0, 3-4=-6110/0, 4-5=-6194/0, 5-6=-6194/0, 6-7=-5788/0, 7-8=-5233/0, 8-9=-5233/0, 9-10=-3806/0, 10-12=-2208/0, 12-13=0/0

BOT CHORD 23-24=0/5465, 21-23=0/5932, 20-21=0/6249, 19-20=0/6166, 18-19=0/5233, 17-18=0/5233, 16-17=0/4649, 15-16=0/3122, 14-15=0/1243

WEBS 2-23=-138/305, 7-18=-555/0, 8-17=-874/0, 2-24=-6847/0, 3-23=-539/214, 3-21=-287/232, 4-21=-182/378, 4-20=-525/117, 5-20=-190/129, 6-20=-97/416, 6-19=-709/17, 7-19=0/1135, 12-14=-1560/0, 12-15=0/1256, 10-15=-1190/0, 10-16=0/890, 9-16=-1098/0, 9-17=0/1435

NOTES

1) Special connection required to distribute top chord loads equally between all plies.
2) Special connection required to distribute bottom chord loads equally between all plies.
3) Special connection required to distribute web loads equally between all plies.
4) 2-ply truss to be connected together with 7/16" x 1-3/4" Staple as follows:
   Top chords connected as follows: 2x4(flat) - 4 rows staggered at 0-1-0 oc.
   Bottom chords connected as follows: 2x4(flat) - 4 rows staggered at 0-1-0 oc.
   Web connected as follows: 2x4(flat) - 4 rows staggered at 0-1-0 oc.
5) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
6) Unbalanced floor live loads have been considered for this design.
7) All plates are MT20 plates unless otherwise indicated.
8) All plates are 3x3 (=) MT20 unless otherwise indicated.
9) Bearings are assumed to be: , Joint 14 SP SS .
10) Refer to girder(s) for truss to truss connections.
11) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 14.
12) 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.
13) 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.
14) 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.
15) CAUTION, Do not erect truss backwards.

LOAD CASE(S) Standard

1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00
   Uniform Loads (lb/ft)
   Vert: 14-24=-7, 1-13=-67
   Concentrated Loads (lb)
   Vert: 2=-3779

November 27,2024

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

Job	Truss	Truss Type	Qty	Ply	The Farm at Neills Creek Lot 00.0058
2411-0162-A	F2	Floor	2	1	I69855208
					Job Reference (optional)

Structural, LLC, Thurmont, MD - 21788, Run: 8.83 S Nov 8 2024 Print: 8.830 S Nov 8 2024 MiTek Industries, Inc. Tue Nov 26 11:03:52 Page: 1

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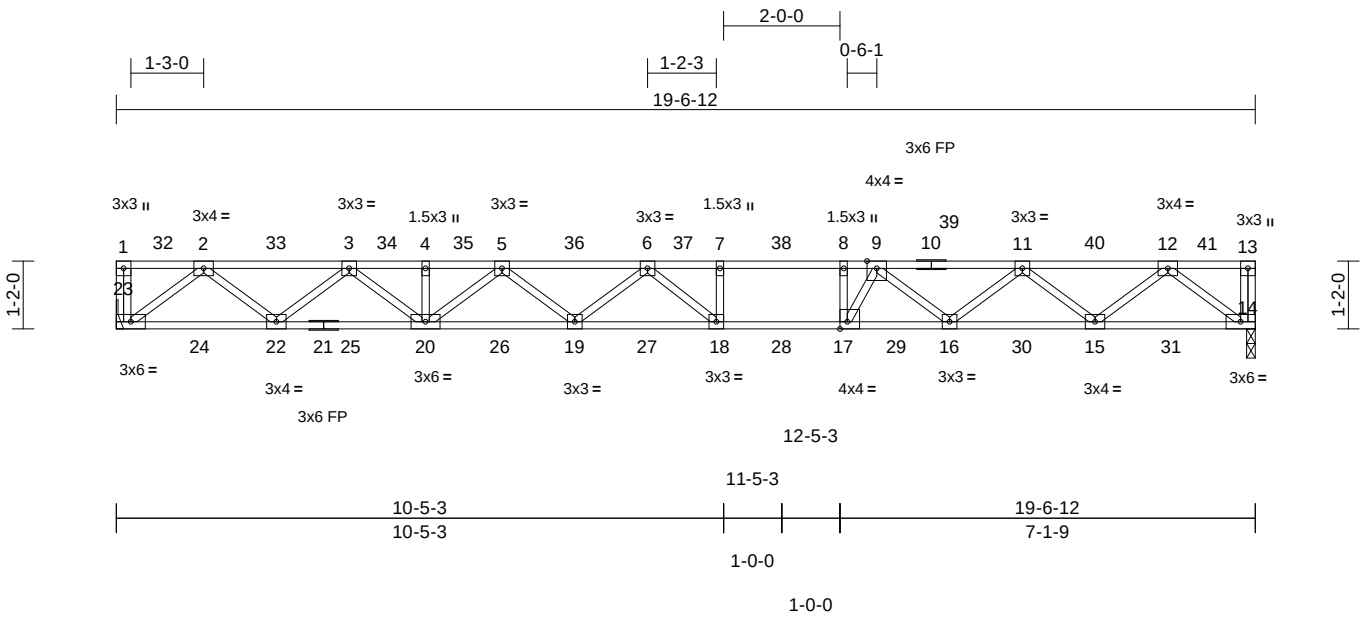

Scale = 1:36

Plate Offsets (X, Y): [17:0-1-8,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	0.83	Vert(LL)	-0.33	18-19	>708	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.83	Vert(CT)	-0.45	18-19	>514	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.39	Horz(CT)	0.06	14	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-S							Weight: 99 lb	FT = 20%F, 12%E

LUMBER

TOP CHORD 2x4 SP No.2(flat)

BOT CHORD 2x4 SP No.2(flat) *Except* 21-14:2x4 SP SS (flat)

WEBS 2x4 SP No.3(flat)

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals.

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

REACTIONS (size) 14=0-1-12, 23= Mechanical

Max Grav 14=708 (LC 1), 23=708 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-23=-258/35, 13-14=-259/37, 1-2=0/0, 2-3=-1518/0, 3-4=-2564/0, 4-5=-2564/0, 5-6=-3137/0, 6-7=-3158/0, 7-8=-3158/0, 8-9=-3158/0, 9-11=-2514/0, 11-12=-1523/0, 12-13=0/0

BOT CHORD 22-23=0/889, 20-22=0/2121, 19-20=0/2946, 18-19=0/3266, 17-18=0/3158, 16-17=0/2942, 15-16=0/2127, 14-15=0/887

WEBS 7-18=-132/179, 8-17=-429/190, 2-23=-1115/0, 2-22=0/819, 3-22=-785/0, 3-20=0/566, 4-20=-258/63, 5-20=-487/4, 5-19=-43/351, 6-19=-227/159, 6-18=-389/229, 12-14=-1112/0, 12-15=0/829, 11-15=-787/0, 11-16=0/503, 9-16=-557/16, 9-17=-229/670

NOTES

1) Unbalanced floor live loads have been considered for this design.
2) Bearings are assumed to be: , Joint 14 SP SS .
3) Refer to girder(s) for truss to truss connections.
4) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 14.
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.

LOAD CASE(S) Standard

November 27,2024

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

Job	Truss	Truss Type	Qty	Ply	The Farm at Neills Creek Lot 00.0058
2411-0162-A	F1	Floor	5	1	I69855209 Job Reference (optional)

Structural, LLC, Thurmont, MD - 21788, Run: 8.83 S Nov 8 2024 Print: 8.830 S Nov 8 2024 MiTek Industries, Inc. Tue Nov 26 11:03:50 Page: 1
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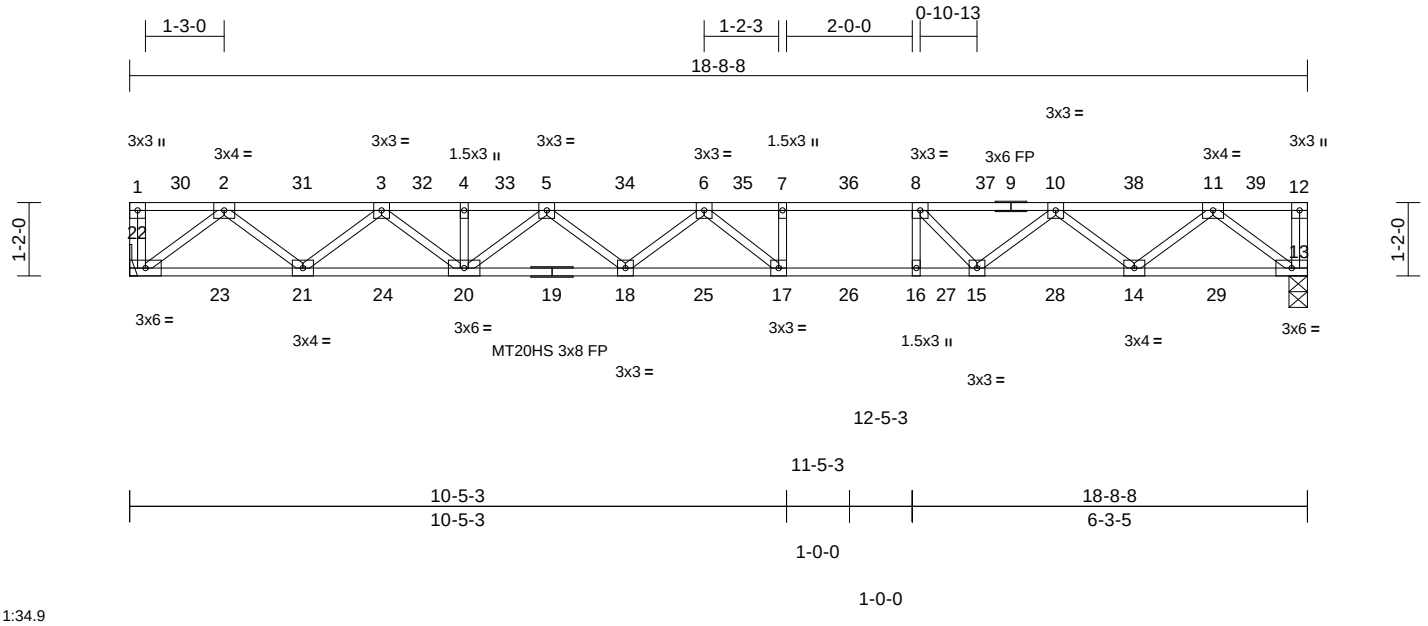

Scale = 1:34.9

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	0.79	Vert(LL)	-0.31	17-18	>719	480	MT20HS	187/143
TCDL	10.0	Lumber DOL	1.00	BC	0.93	Vert(CT)	-0.43	17-18	>521	360	MT20	244/190
BCLL	0.0	Rep Stress Incr	YES	WB	0.37	Horz(CT)	0.05	13	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-S							Weight: 95 lb	FT = 20%F, 12%E

LUMBER
TOP CHORD 2x4 SP No.2(flat)
BOT CHORD 2x4 SP No.2(flat) *Except* 19-13:2x4 SP SS (flat)
WEBS 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, Except:
2-2-0 oc bracing: 18-20.

REACTIONS (size) 13=0-3-8, 22= Mechanical
Max Grav 13=677 (LC 1), 22=677 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-22=-258/35, 12-13=-257/38, 1-2=0/0, 2-3=-1439/0, 3-4=-2410/0, 4-5=-2410/0, 5-6=-2910/0, 6-7=-2820/0, 7-8=-2820/0, 8-10=-2398/0, 10-11=-1437/0, 11-12=0/0
BOT CHORD 21-22=0/848, 20-21=0/2004, 18-20=0/2752, 17-18=0/2991, 16-17=0/2820, 15-16=0/2820, 14-15=0/1988, 13-14=0/853
WEBS 7-17=-132/173, 8-16=-90/294, 2-22=-1064/0, 2-21=0/769, 3-21=-736/0, 3-20=-3/519, 4-20=-260/61, 5-20=-443/22, 5-18=-60/331, 6-18=-193/195, 6-17=-424/167, 11-13=-1070/0, 11-14=0/761, 10-14=-717/0, 10-15=0/556, 8-15=-711/88

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 13 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.

LOAD CASE(S) Standard

November 27,2024

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

Job	Truss	Truss Type	Qty	Ply	The Farm at Neills Creek Lot 00.0058
2411-0162-A	F3GE	Floor Supported Gable	1	1	I69855210
					Job Reference (optional)

Structural, LLC, Thurmont, MD - 21788, Run: 8.83 S Nov 8 2024 Print: 8.830 S Nov 8 2024 MiTek Industries, Inc. Tue Nov 26 11:03:53 Page: 1

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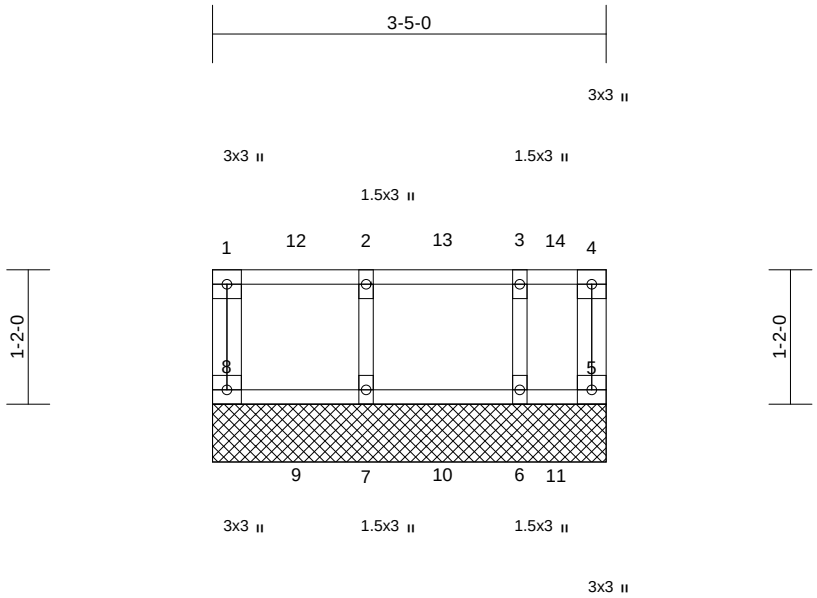

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Loading	(psf)	Spacing	1-4-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.30	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.29	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	NO	WB	0.10	Horiz(TL)	0.00	5	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-R							Weight: 18 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 3-5-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 5=3-5-0, 6=3-5-0, 7=3-5-0, 8=3-5-0
Max Uplift 5=-73 (LC 11), 6=-70 (LC 10), 8=-21 (LC 11)
Max Grav 5=258 (LC 16), 6=274 (LC 15), 7=543 (LC 14), 8=265 (LC 13)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-8=-261/22, 4-5=-253/70, 1-2=-28/11, 2-3=-28/11, 3-4=-28/11
BOT CHORD 7-8=-11/28, 6-7=-11/28, 5-6=-11/28
WEBS 2-7=-531/0, 3-6=-262/45

NOTES

1) Gable requires continuous bottom chord bearing.
2) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
3) Gable studs spaced at 1-4-0 oc.
4) All bearings are assumed to be SP No.2 .
5) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 8, 5, and 6. This connection is for uplift only and does not consider lateral forces.
6) Load case(s) 1 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.
7) 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

1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00
Uniform Loads (lb/ft)
Vert: 5-8=-7, 1-4=-67
Concentrated Loads (lb)
Vert: 2=-265

November 27,2024

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

Job	Truss	Truss Type	Qty	Ply	The Farm at Neills Creek Lot 00.0058
2411-0162-A	F5GE	Floor Supported Gable	1	1	I69855211 Job Reference (optional)

Structural, LLC, Thurmont, MD - 21788, Run: 8.83 S Nov 8 2024 Print: 8.830 S Nov 8 2024 MiTek Industries, Inc. Tue Nov 26 11:03:55 Page: 1

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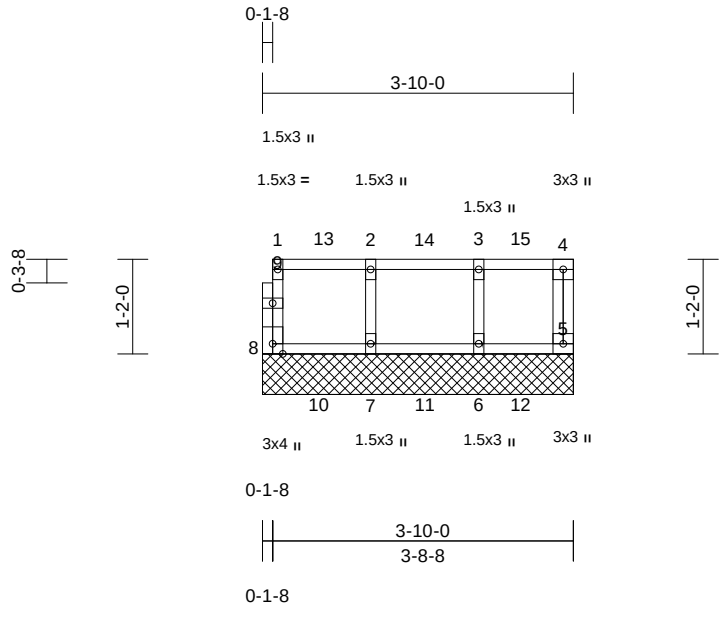

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Loading	(psf)	Spacing	1-4-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.27	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.27	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.05	Horiz(TL)	0.00	5	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-R							Weight: 19 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 3-10-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 5=3-10-0, 6=3-10-0, 7=3-10-0, 8=3-10-0
Max Uplift 5=-32 (LC 13), 6=-43 (LC 12), 7=-17 (LC 14), 8=-22 (LC 13)
Max Grav 5=263 (LC 18), 6=277 (LC 17), 7=280 (LC 16), 8=263 (LC 15)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-8=-252/26, 4-5=-259/34, 1-2=-27/11, 2-3=-27/11, 3-4=-27/11
BOT CHORD 7-8=-11/27, 6-7=-11/27, 5-6=-11/27
WEBS 2-7=-268/14, 3-6=-266/31

NOTES

1) Gable requires continuous bottom chord bearing.
2) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
3) Gable studs spaced at 1-4-0 oc.
4) All bearings are assumed to be SP No.3 .
5) Bearing at joint(s) 8 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 22 lb uplift at joint 8.
7) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 5, 7, and 6. This connection is for uplift only and does not consider lateral forces.
8) 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.
9) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
10) CAUTION, Do not erect truss backwards.

LOAD CASE(S) Standard

November 27,2024

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

Job	Truss	Truss Type	Qty	Ply	The Farm at Neills Creek Lot 00.0058
2411-0162-A	F4GR	Floor Girder	1	1	I69855212 Job Reference (optional)

Structural, LLC, Thurmont, MD - 21788, Run: 8.83 S Nov 8 2024 Print: 8.830 S Nov 8 2024 MiTek Industries, Inc. Tue Nov 26 11:03:54 Page: 1
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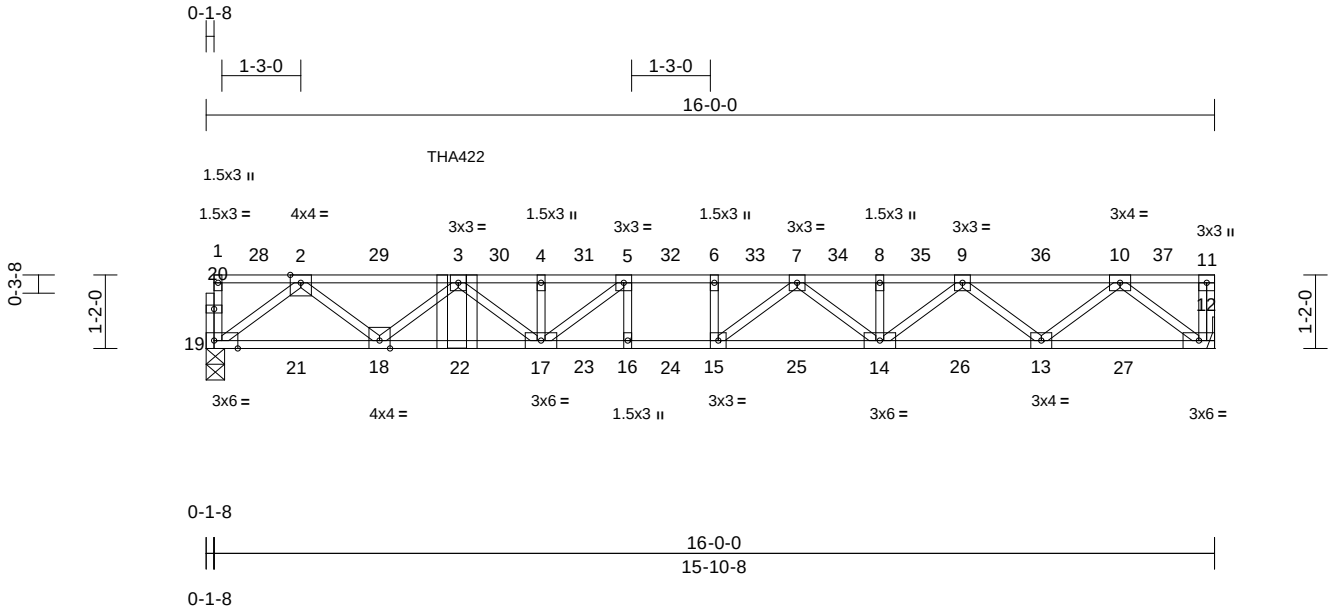

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Plate Offsets (X, Y): [19:0-4-8,Edge]

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	0.69	Vert(LL)	-0.15	15-16	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.51	Vert(CT)	-0.20	15-16	>924	360		
BCLL	0.0	Rep Stress Incr	NO	WB	0.41	Horz(CT)	0.04	12	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-S							Weight: 83 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) 12= Mechanical, 19=0-3-8
Max Grav 12=630 (LC 1), 19=736 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-19=-258/38, 11-12=-258/35, 1-2=-15/2, 2-3=-1595/0, 3-4=-2459/0, 4-5=-2459/0, 5-6=-2583/0, 6-7=-2583/0, 7-8=-2187/0, 8-9=-2187/0, 9-10=-1322/0, 10-11=0/0
BOT CHORD 18-19=0/930, 17-18=0/2237, 16-17=0/2583, 15-16=0/2583, 14-15=0/2445, 13-14=0/1834, 12-13=0/787
WEBS 10-12=-987/0, 2-19=-1165/0, 10-13=0/696, 2-18=0/866, 9-13=-667/0, 3-18=-836/0, 9-14=-29/451, 8-14=-249/67, 3-17=-72/392, 4-17=-292/51, 7-14=-342/76, 5-17=-399/215, 7-15=-202/396, 5-16=-112/167, 6-15=-164/122

NOTES
1) Unbalanced floor live loads have been considered for this design.
2) Bearings are assumed to be: Joint 19 SP No.3 .
3) Refer to girder(s) for truss to truss connections.
4) Bearing at joint(s) 19 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
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 3-11-12 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).

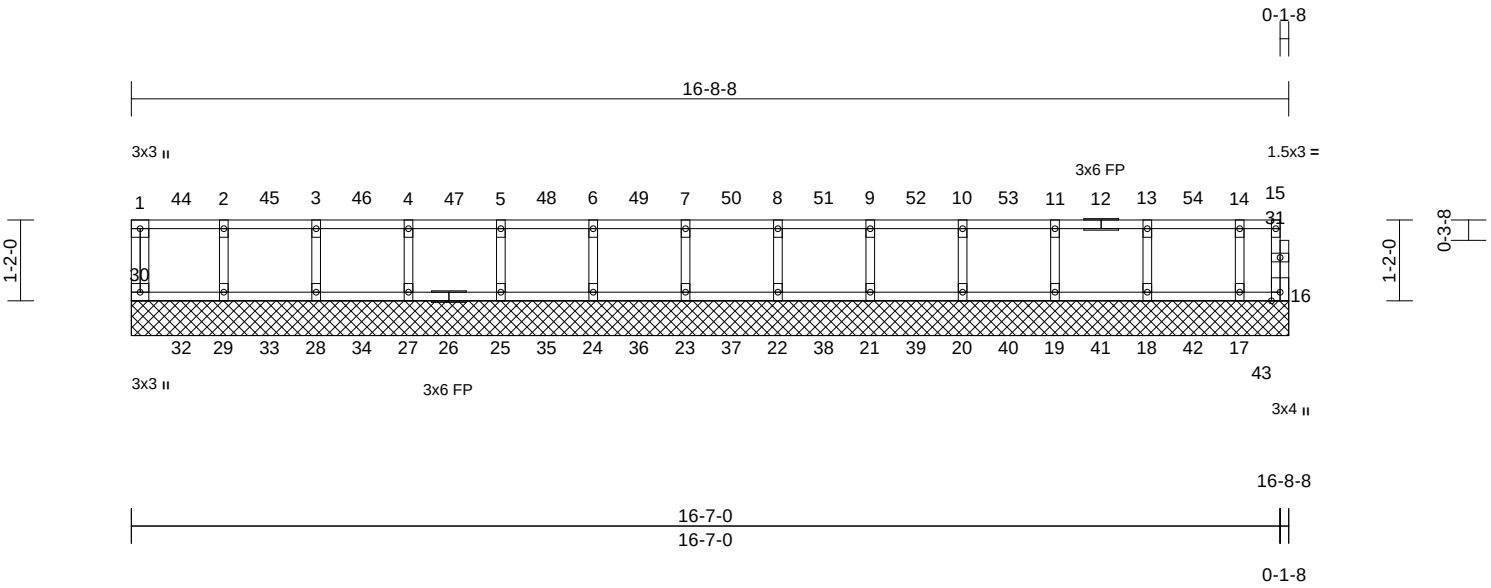
LOAD CASE(S) Standard
1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00
Uniform Loads (lb/ft)
Vert: 12-19=-7, 1-11=-67
Concentrated Loads (lb)
Vert: 3=-215 (F)

November 27,2024

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

Job	Truss	Truss Type	Qty	Ply	The Farm at Neills Creek Lot 00.0058
2411-0162-A	F10GE	Floor Supported Gable	1	1	I69855213 Job Reference (optional)

Structural, LLC, Thurmont, MD - 21788, Run: 8.83 S Nov 8 2024 Print: 8.830 S Nov 8 2024 MiTek Industries, Inc. Tue Nov 26 11:03:57 Page: 1
ID:3Y?57I7ofglzTY2Yj54kUJyFYnX-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:34.2

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	16	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-R							Weight: 71 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) 16=16-8-8, 17=16-8-8, 18=16-8-8, 19=16-8-8, 20=16-8-8, 21=16-8-8, 22=16-8-8, 23=16-8-8, 24=16-8-8, 25=16-8-8, 27=16-8-8, 28=16-8-8, 29=16-8-8, 30=16-8-8
Max Uplift 16=-58 (LC 15), 17=-31 (LC 4), 18=-5 (LC 39), 19=-6 (LC 38), 20=-5 (LC 37), 21=-6 (LC 36), 22=-6 (LC 35), 23=-6 (LC 37), 24=-6 (LC 36), 25=-6 (LC 35), 27=-6 (LC 34), 28=-8 (LC 33), 29=-7 (LC 32), 30=-19 (LC 31)
Max Grav 16=257 (LC 56), 17=273 (LC 55), 18=281 (LC 54), 19=279 (LC 53), 20=280 (LC 52), 21=280 (LC 51), 22=280 (LC 50), 23=280 (LC 49), 24=280 (LC 48), 25=280 (LC 47), 27=280 (LC 46), 28=280 (LC 45), 29=280 (LC 44), 30=264 (LC 43)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-30=-260/24, 15-16=-234/69, 1-2=-26/6, 2-3=-26/6, 3-4=-26/6, 4-5=-26/6, 5-6=-26/6, 6-7=-26/6, 7-8=-26/6, 8-9=-26/6, 9-10=-26/6, 10-11=-26/6, 11-13=-26/6, 13-14=-26/6, 14-15=-26/6
BOT CHORD 29-30=-6/26, 28-29=-6/26, 27-28=-6/26, 25-27=-6/26, 24-25=-6/26, 23-24=-6/26, 22-23=-6/26, 21-22=-6/26, 20-21=-6/26, 19-20=-6/26, 18-19=-6/26, 17-18=-6/26, 16-17=-6/26
WEBS 2-29=-268/16, 3-28=-269/14, 4-27=-269/14, 5-25=-269/14, 6-24=-269/14, 7-23=-269/14, 8-22=-269/14, 9-21=-269/14, 10-20=-269/14, 11-19=-268/14, 13-18=-269/13, 14-17=-258/32

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) Bearing at joint(s) 16 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
7) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 30, 16, 29, 28, 27, 25, 24, 23, 22, 21, 20, 19, 18, and 17. This connection is for uplift only and does not consider lateral forces.
8) 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.
9) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
10) CAUTION, Do not erect truss backwards.

LOAD CASE(S) Standard

November 27,2024

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

Job	Truss	Truss Type	Qty	Ply	The Farm at Neills Creek Lot 00.0058
2411-0162-A	F1GE	Floor Supported Gable	1	1	I69855214 Job Reference (optional)

Structural, LLC, Thurmont, MD - 21788, Run: 8.83 S Nov 8 2024 Print: 8.830 S Nov 8 2024 MiTek Industries, Inc. Tue Nov 26 11:03:51 Page: 1
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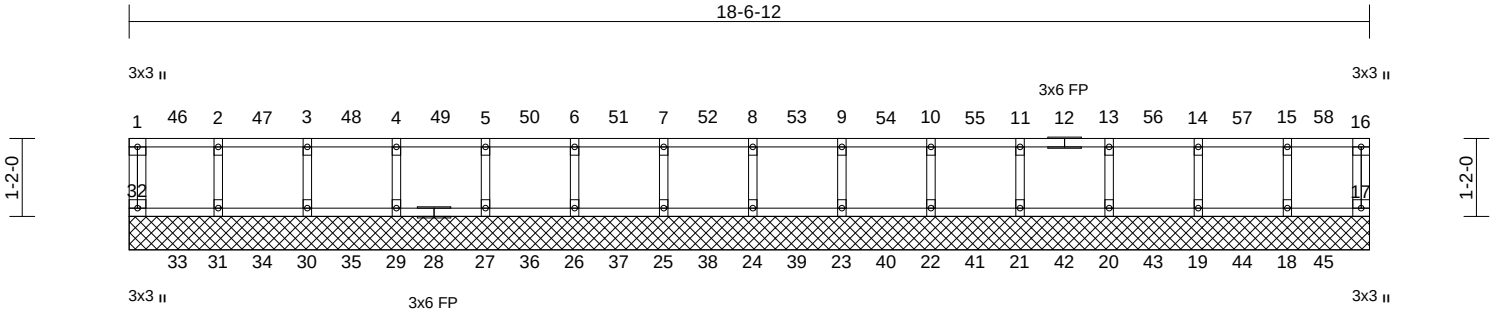


Scale = 1:34.5

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	17	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-R							Weight: 78 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) 17=18-6-12, 18=18-6-12, 19=18-6-12, 20=18-6-12, 21=18-6-12, 22=18-6-12, 23=18-6-12, 24=18-6-12, 25=18-6-12, 26=18-6-12, 27=18-6-12, 29=18-6-12, 30=18-6-12, 31=18-6-12, 32=18-6-12
Max Uplift 17=-21 (LC 44), 18=-10 (LC 43), 19=-5 (LC 42), 20=-6 (LC 41), 21=-6 (LC 40), 22=-6 (LC 39), 23=-6 (LC 38), 24=-6 (LC 37), 25=-6 (LC 39), 26=-6 (LC 38), 27=-6 (LC 37), 29=-6 (LC 36), 30=-8 (LC 35), 31=-7 (LC 34), 32=-17 (LC 33)
Max Grav 17=263 (LC 60), 18=278 (LC 59), 19=280 (LC 58), 20=280 (LC 57), 21=280 (LC 56), 22=280 (LC 55), 23=280 (LC 54), 24=280 (LC 53), 25=280 (LC 52), 26=280 (LC 51), 27=280 (LC 50), 29=280 (LC 49), 30=280 (LC 48), 31=279 (LC 47), 32=264 (LC 46)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-32=-260/23, 16-17=-259/27, 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
BOT CHORD 31-32=-4/21, 30-31=-4/21, 29-30=-4/21, 27-29=-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, 17-18=-4/21
WEBS 2-31=-268/16, 3-30=-269/14, 4-29=-269/14, 5-27=-269/14, 6-26=-269/14, 7-25=-269/14, 8-24=-269/14, 9-23=-269/14, 10-22=-269/14, 11-21=-269/14, 13-20=-269/14, 14-19=-269/13, 15-18=-267/18

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) 32, 17, 31, 30, 29, 27, 26, 25, 24, 23, 22, 21, 20, 19, and 18. 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

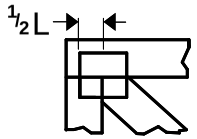
NORTH CAROLINA PROFESSIONAL SEAL 036322 ENGINEER ERIC A. GILBERT

November 27,2024

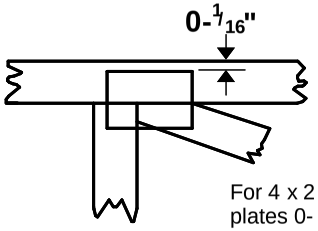
ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

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.

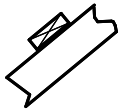
* Plate location details available in MiTek software or upon request.

PLATE SIZE

4 x 4

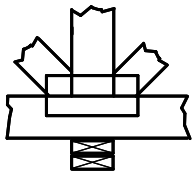
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

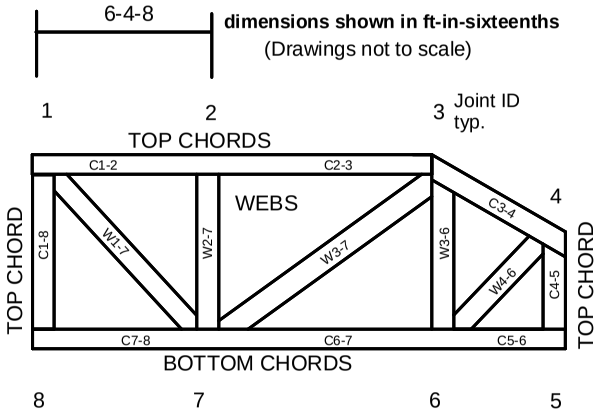


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

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®

ENGINEERING BY TRENCO
A MiTek Affiliate

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

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.