ENGINEERING BY TRENCO
A MiTek Affiliate

RE: 4600426
CARDINAL FLOOR - LOT 23 - ILA'S WAY

Trenco
818 Soundside Rd
Edenton, NC 27932

Site Information:

Customer: Project Name: 4600426
Lot/Block: Model:
Address: Subdivision:
City: State:

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

Design Code: IRC2018/TPI2014 Design Program: MiTek 20/20 8.6
Wind Code: ASCE 7 - 16[Low Rise] Wind Speed: 130 mph
Roof Load: 40.0 psf Floor Load: N/A psf

This package includes 13 individual, dated Truss Design Drawings and 0 Additional Drawings.

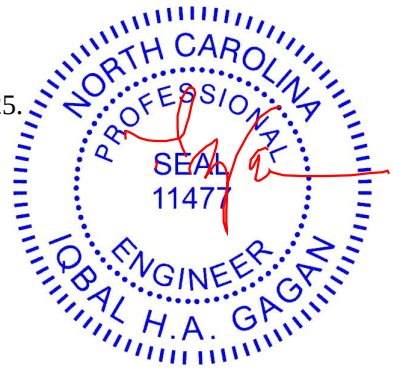
No.	Seal#	Truss Name	Date
1	I70577798	F01	1/7/2025
2	I70577799	F02	1/7/2025
3	I70577800	F03	1/7/2025
4	I70577801	F04	1/7/2025
5	I70577802	F05	1/7/2025
6	I70577803	F06	1/7/2025
7	I70577804	F07	1/7/2025
8	I70577805	F08	1/7/2025
9	I70577806	F09	1/7/2025
10	I70577807	F10	1/7/2025
11	I70577808	F11	1/7/2025
12	I70577809	F12	1/7/2025
13	I70577810	F13	1/7/2025

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

Truss Design Engineer's Name: Gagan, Iqbal

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

North Carolina COA: C-0844



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 TRENCO. Any project specific information included is for TRENCO customers file reference purpose only, and was not taken into account in the preparation of these designs. 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.

January 07, 2025

Gagan, Iqbal

Job	Truss	Truss Type	Qty	Ply	CARDINAL FLOOR - LOT 23 - ILA'S WAY
4600426	F01	Floor Supported Gable	1	1	I70577798 Job Reference (optional)

Builders FirstSource (Albermarle), Albemarle, NC - 28001, Run: 8.63 S Sep 26 2024 Print: 8.630 S Sep 26 2024 MiTek Industries, Inc. Tue Jan 07 11:20:05 Page: 1
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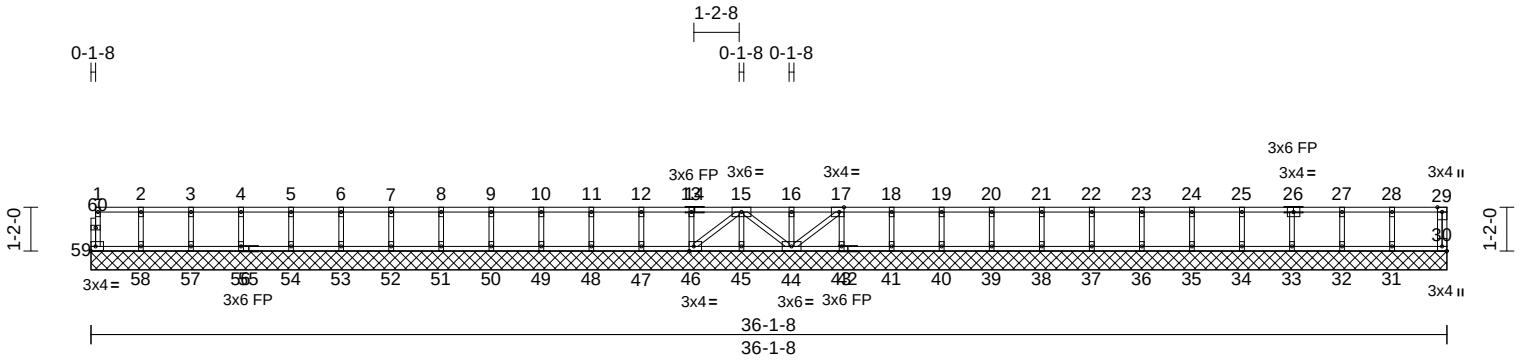


Scale = 1:61.4

Plate Offsets (X, Y): [17:0-1-8,Edge], [30:Edge,0-1-8], [46:0-1-8,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.09	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.01	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.03	Horiz(TL)	0.00	44	n/a	n/a		
BCDL	5.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 155 lb	FT = 20%F, 11%E

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

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

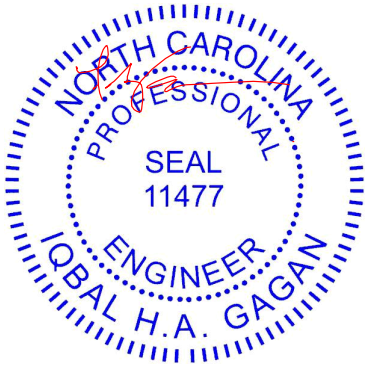
REACTIONS (size) 30=36-1-8, 31=36-1-8, 32=36-1-8, 33=36-1-8, 34=36-1-8, 35=36-1-8, 36=36-1-8, 37=36-1-8, 38=36-1-8, 39=36-1-8, 40=36-1-8, 41=36-1-8, 43=36-1-8, 44=36-1-8, 45=36-1-8, 46=36-1-8, 47=36-1-8, 48=36-1-8, 49=36-1-8, 50=36-1-8, 51=36-1-8, 52=36-1-8, 53=36-1-8, 54=36-1-8, 56=36-1-8, 57=36-1-8, 58=36-1-8, 59=36-1-8
Max Grav 30=58 (LC 1), 31=167 (LC 1), 32=138 (LC 1), 33=148 (LC 1), 34=150 (LC 1), 35=146 (LC 1), 36=147 (LC 1), 37=147 (LC 1), 38=147 (LC 1), 39=147 (LC 1), 40=147 (LC 1), 41=147 (LC 1), 43=136 (LC 1), 44=184 (LC 1), 45=111 (LC 1), 46=156 (LC 1), 47=147 (LC 1), 48=147 (LC 1), 49=147 (LC 1), 50=147 (LC 1), 51=147 (LC 1), 52=147 (LC 1), 53=147 (LC 1), 54=147 (LC 1), 56=147 (LC 1), 57=146 (LC 1), 58=152 (LC 1), 59=48 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-59=-44/0, 29-30=-53/0, 1-2=-3/0, 2-3=-3/0, 3-4=-3/0, 4-5=-3/0, 5-6=-3/0, 6-7=-3/0, 7-8=-3/0, 8-9=-3/0, 9-10=-3/0, 10-11=-3/0, 11-12=-3/0, 12-13=-3/0, 13-15=-3/0, 15-16=0/20, 16-17=0/20, 17-18=0/5, 18-19=0/5, 19-20=0/5, 20-21=0/5, 21-22=0/5, 22-23=0/5, 23-24=0/5, 24-25=0/5, 25-27=0/5, 27-28=0/0, 28-29=0/0
BOT CHORD 58-59=0/3, 57-58=0/3, 56-57=0/3, 54-56=0/3, 53-54=0/3, 52-53=0/3, 51-52=0/3, 50-51=0/3, 49-50=0/3, 48-49=0/3, 47-48=0/3, 46-47=0/3, 45-46=0/14, 44-45=0/14, 43-44=-5/0, 41-43=-5/0, 40-41=-5/0, 39-40=-5/0, 38-39=-5/0, 37-38=-5/0, 36-37=-5/0, 35-36=-5/0, 34-35=-5/0, 33-34=-5/0, 32-33=0/0, 31-32=0/0, 30-31=0/0
WEBS 2-58=-138/0, 3-57=-133/0, 4-56=-134/0, 5-54=-133/0, 6-53=-133/0, 7-52=-133/0, 8-51=-133/0, 9-50=-133/0, 10-49=-133/0, 11-48=-133/0, 12-47=-133/0, 13-46=-133/0, 15-45=-98/0, 16-44=-133/0, 17-43=-122/0, 18-41=-133/0, 19-40=-133/0, 20-39=-133/0, 21-38=-133/0, 22-37=-133/0, 23-36=-134/0, 24-35=-133/0, 25-34=-136/0, 26-33=-135/0, 27-32=-126/0, 28-31=-152/0, 15-44=-43/0, 17-44=-18/0, 15-46=-15/0

NOTES
1) All plates are 1.5x3 MT20 unless otherwise indicated.
2) Gable requires continuous bottom chord bearing.
3) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
4) Gable studs spaced at 1-4-0 oc.
5) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
7) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
8) CAUTION, Do not erect truss backwards.

LOAD CASE(S) Standard



January 7,2025

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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	CARDINAL FLOOR - LOT 23 - ILA'S WAY
4600426	F02	Floor	4	1	I70577799 Job Reference (optional)

Builders FirstSource (Albermarle), Albemarle, NC - 28001, Run: 8.63 S Sep 26 2024 Print: 8.630 S Sep 26 2024 MiTek Industries, Inc. Tue Jan 07 11:20:06 Page: 1
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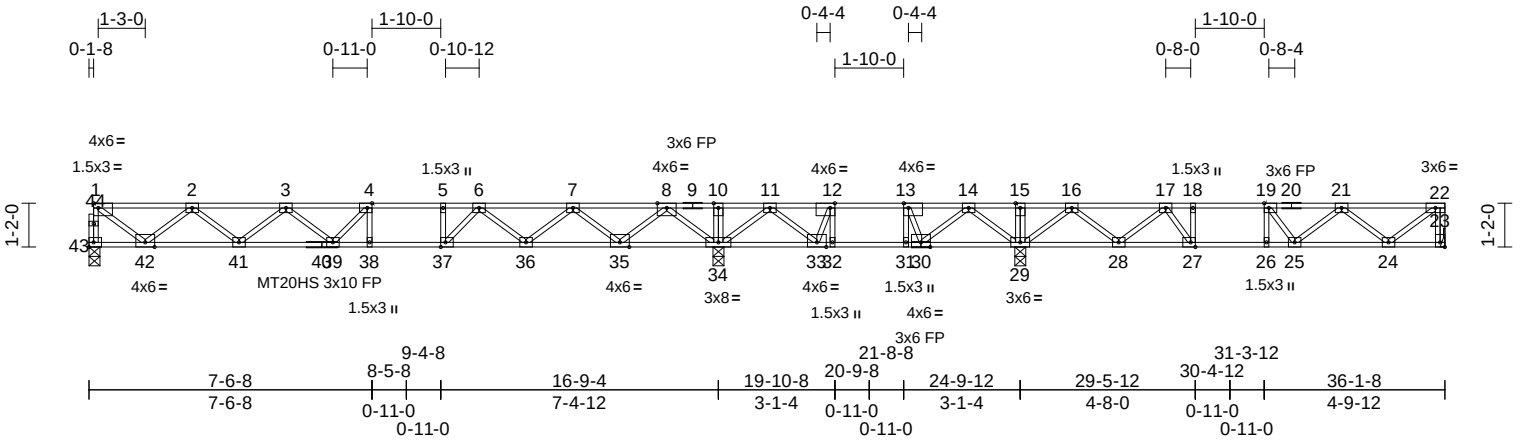


Scale = 1:61.4

Plate Offsets (X, Y): [1:Edge,0-1-8], [4:0-1-8,Edge], [12:0-1-8,Edge], [13:0-1-8,Edge], [19:0-1-8,Edge], [23:Edge,0-1-8], [27:0-1-8,Edge], [37:0-1-8,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.73	Vert(LL)	-0.22	38-39	>915	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.96	Vert(CT)	-0.30	38-39	>671	240	MT20HS	187/143
BCLL	0.0	Rep Stress Incr	YES	WB	0.57	Horz(CT)	0.04	34	n/a	n/a		
BCDL	5.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 182 lb	FT = 20%F, 11%E

LUMBER
TOP CHORD 2x4 SP No.2(flat)
BOT CHORD 2x4 SP No.2(flat) *Except* 40-30:2x4 SP No.1(flat)
WEBS 2x4 SP No.3(flat)
OTHERS 2x4 SP No.3(flat)

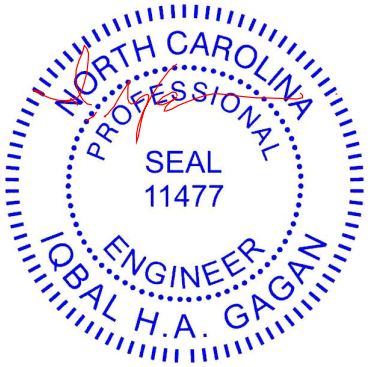
BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.

REACTIONS (size) 23= Mechanical, 29=0-3-8, 34=0-3-8, 43=0-3-8
Max Grav 23=541 (LC 4), 29=1140 (LC 4), 34=1616 (LC 3), 43=803 (LC 5)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-43=-798/0, 22-23=-534/0, 1-2=-920/0, 2-3=-2190/0, 3-4=-2762/0, 4-5=-2768/0, 5-6=-2768/0, 6-7=-1887/0, 7-8=-482/89, 8-10=0/1866, 10-11=0/1866, 11-12=-168/1197, 12-13=-280/1053, 13-14=-235/950, 14-15=0/1050, 15-16=0/1050, 16-17=-531/192, 17-18=-1220/0, 18-19=-1220/0, 19-21=-1199/0, 21-22=-566/0
BOT CHORD 42-43=0/48, 41-42=0/1725, 39-41=0/2632, 38-39=0/2768, 37-38=0/2768, 36-37=0/2441, 35-36=0/1349, 34-35=-605/0, 33-34=-1435/0, 32-33=-1053/280, 31-32=-1053/280, 29-31=-1053/280, 28-29=-381/47, 27-28=-7/1021, 26-27=0/1220, 25-26=0/1220, 24-25=0/1060, 23-24=0/0
WEBS 4-38=-244/43, 5-37=-338/0, 10-34=-149/0, 12-32=-10/338, 13-31=-316/31, 15-29=-117/0, 18-27=-320/0, 19-26=-180/0, 8-34=-1582/0, 8-35=0/1195, 7-35=-1148/0, 7-36=0/717, 6-36=-745/0, 6-37=0/715, 11-34=-799/0, 11-33=0/613, 12-33=-663/0, 14-29=-604/15, 14-30=-115/344, 13-30=-240/280, 16-29=-1073/0, 16-28=0/666, 17-28=-685/0, 17-27=0/549, 1-42=0/1114, 2-42=-1047/0, 2-41=0/606, 3-41=-574/0, 3-39=-3/294, 4-39=-259/236, 22-24=0/710, 21-24=-643/0, 21-25=-16/192, 19-25=-103/134

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 3x4 MT20 unless otherwise indicated.
4) Bearings are assumed to be: Joint 43 SP No.2 crushing capacity of 565 psi, Joint 34 SP No.1 crushing capacity of 565 psi, Joint 29 SP No.2 crushing capacity of 565 psi.
5) Refer to girder(s) for truss to truss connections.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
7) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
8) CAUTION, Do not erect truss backwards.

LOAD CASE(S) Standard



January 7,2025

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

Job	Truss	Truss Type	Qty	Ply	CARDINAL FLOOR - LOT 23 - ILA'S WAY
4600426	F03	Floor	8	1	I70577800 Job Reference (optional)

Builders FirstSource (Albermarle), Albemarle, NC - 28001, Run: 8.63 S Sep 26 2024 Print: 8.630 S Sep 26 2024 MiTek Industries, Inc. Tue Jan 07 11:20:06 Page: 1
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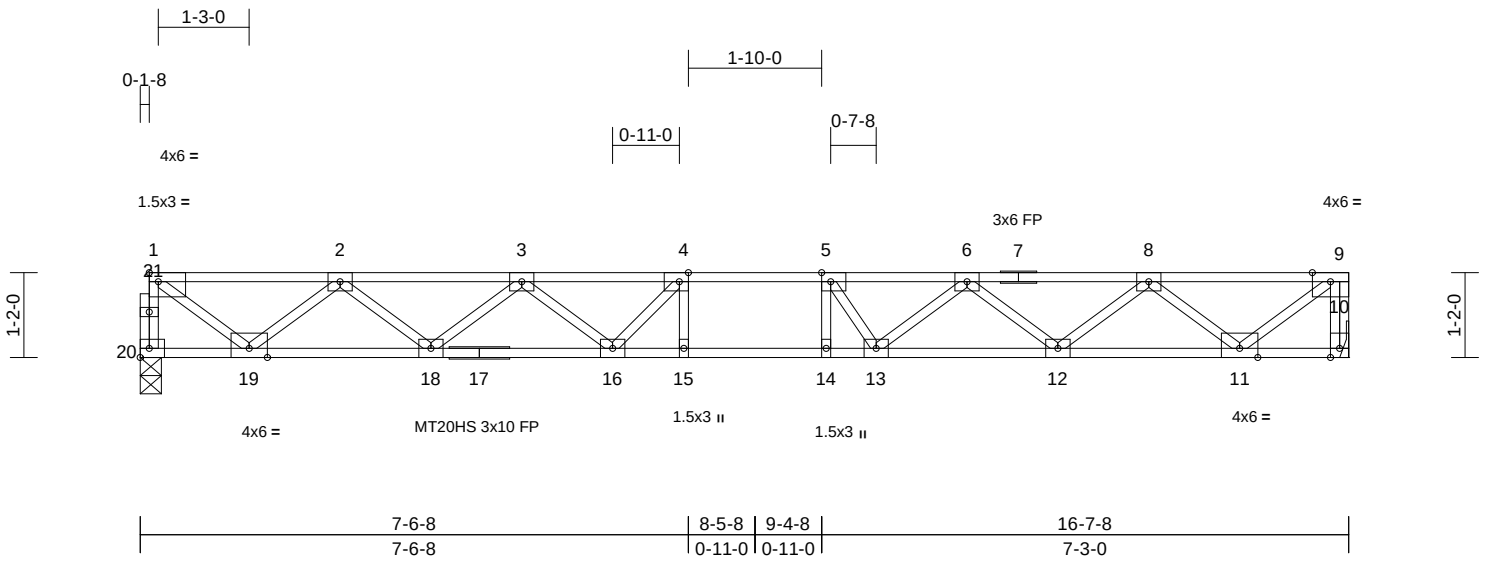


Scale = 1:31.7

Plate Offsets (X, Y): [1:Edge,0-1-8], [4:0-1-8,Edge], [5:0-1-8,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.51	Vert(LL)	-0.23	14-15	>844	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.90	Vert(CT)	-0.32	14-15	>613	240	MT20HS	187/143
BCLL	0.0	Rep Stress Incr	YES	WB	0.62	Horz(CT)	0.06	10	n/a	n/a		
BCDL	5.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 84 lb	FT = 20%F, 11%E

LUMBER
TOP CHORD 2x4 SP No.2(flat)
BOT CHORD 2x4 SP No.2(flat) *Except* 17-10:2x4 SP No.1(flat)
WEBS 2x4 SP No.3(flat)
OTHERS 2x4 SP No.3(flat)

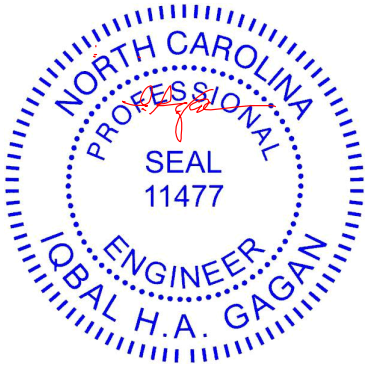
BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 10= Mechanical, 20=0-3-8
Max Grav 10=901 (LC 1), 20=894 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-20=-889/0, 9-10=-893/0, 1-2=-1041/0, 2-3=-2529/0, 3-4=-3330/0, 4-5=-3504/0, 5-6=-3344/0, 6-8=-2528/0, 8-9=-1040/0
BOT CHORD 19-20=0/53, 18-19=0/1958, 16-18=0/3070, 15-16=0/3504, 14-15=0/3504, 13-14=0/3504, 12-13=0/3060, 11-12=0/1963, 10-11=0/0
WEBS 4-15=-188/179, 5-14=-195/262, 1-19=0/1262, 2-19=-1193/0, 2-18=0/743, 3-18=-703/0, 3-16=0/453, 4-16=-501/69, 9-11=0/1305, 8-11=-1201/0, 8-12=0/736, 6-12=-693/0, 6-13=0/495, 5-13=-552/81

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 3x4 MT20 unless otherwise indicated.
4) Bearings are assumed to be: Joint 20 SP No.2 crushing capacity of 565 psi.
5) Refer to girder(s) for truss to truss connections.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
7) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
8) CAUTION, Do not erect truss backwards.

LOAD CASE(S) Standard



January 7,2025

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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	CARDINAL FLOOR - LOT 23 - ILA'S WAY
4600426	F04	Floor	2	1	I70577801
					Job Reference (optional)

Builders FirstSource (Albermarle), Albemarle, NC - 28001,

Run: 8.63 S Sep 26 2024 Print: 8.630 S Sep 26 2024 MiTek Industries, Inc. Tue Jan 07 11:20:06 Page: 1
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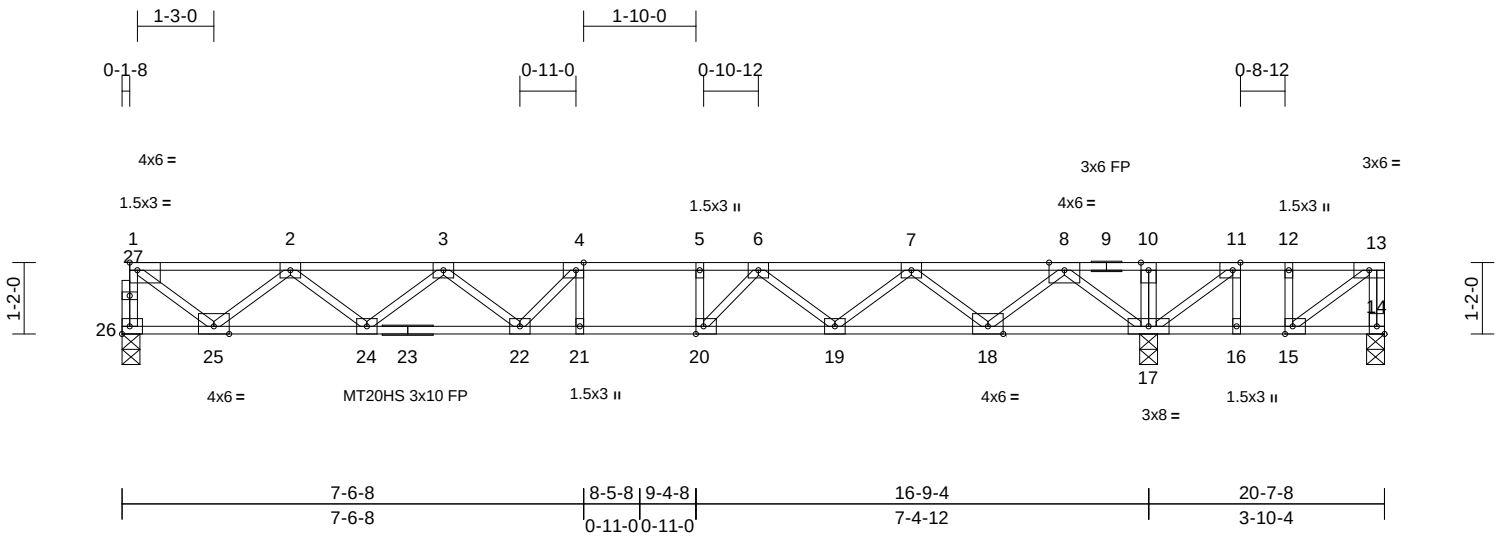


Scale = 1:37.6

Plate Offsets (X, Y): [1:Edge,0-1-8], [4:0-1-8,Edge], [11:0-1-8,Edge], [14:Edge,0-1-8], [15:0-1-8,Edge], [20:0-1-8,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.81	Vert(LL)	-0.22	21-22	>922	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.94	Vert(CT)	-0.30	21-22	>674	240	MT20HS	187/143
BCLL	0.0	Rep Stress Incr	YES	WB	0.57	Horz(CT)	0.04	17	n/a	n/a		
BCDL	5.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 106 lb	FT = 20%F, 11%E

LUMBER

TOP CHORD 2x4 SP No.2(flat) *Except* 9-13:2x4 SP No.1 (flat)
BOT CHORD 2x4 SP No.2(flat) *Except* 23-14:2x4 SP No.1(flat)
WEBS 2x4 SP No.3(flat)
OTHERS 2x4 SP No.3(flat)

BRACING

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

REACTIONS (size) 14=0-3-8, 17=0-3-8, 26=0-3-8
Max Uplift 14=-413 (LC 3)
Max Grav 14=73 (LC 4), 17=1698 (LC 1), 26=806 (LC 10)

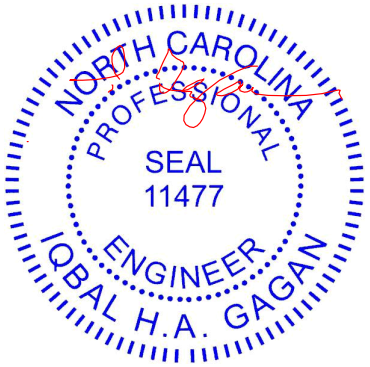
FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-26=-802/0, 13-14=-46/486, 1-2=-925/0, 2-3=-2203/0, 3-4=-2784/0, 4-5=-2796/0, 5-6=-2796/0, 6-7=-1924/0, 7-8=-536/0, 8-10=0/1722, 10-11=0/1722, 11-12=0/781, 12-13=0/781
BOT CHORD 25-26=0/48, 24-25=0/1734, 22-24=0/2649, 21-22=0/2796, 20-21=0/2796, 19-20=0/2474, 18-19=0/1392, 17-18=-439/0, 16-17=-781/0, 15-16=-781/0, 14-15=0/0
WEBS 4-21=-227/57, 5-20=-322/0, 10-17=-62/37, 8-17=-1620/0, 8-18=0/1187, 7-18=-1124/0, 7-19=0/698, 6-19=-725/0, 6-20=0/679, 11-17=-1285/0, 13-15=-965/0, 11-16=0/340, 12-15=-40/278, 1-25=0/1120, 2-25=-1053/0, 2-24=0/611, 3-24=-580/0, 3-22=0/315, 4-22=-290/199

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 3x4 MT20 unless otherwise indicated.
4) Bearings are assumed to be: Joint 26 SP No.2 crushing capacity of 565 psi, Joint 17 SP No.1 crushing capacity of 565 psi, Joint 14 SP No.1 crushing capacity of 565 psi.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 413 lb uplift at joint 14.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
7) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
8) CAUTION, Do not erect truss backwards.

LOAD CASE(S) Standard



January 7,2025

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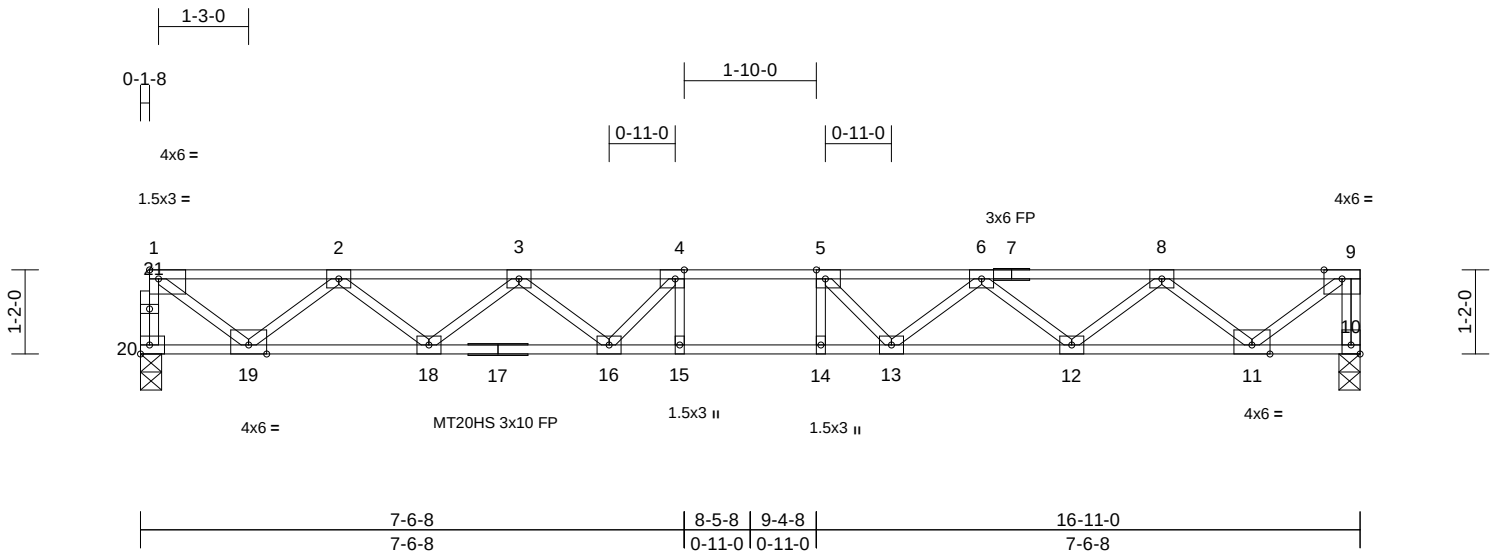
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	CARDINAL FLOOR - LOT 23 - ILA'S WAY
4600426	F05	Floor	3	1	I70577802
					Job Reference (optional)

Builders FirstSource (Albermarle), Albemarle, NC - 28001, Run: 8.63 S Sep 26 2024 Print: 8.630 S Sep 26 2024 MiTek Industries, Inc. Tue Jan 07 11:20:06 Page: 1
ID:FQF?m9nbcFTCDkxi1CMAr3y9fA8-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



Scale = 1:32

Plate Offsets (X, Y): [1:Edge,0-1-8], [4:0-1-8,Edge], [5:0-1-8,Edge], [10:Edge,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.51	Vert(LL)	-0.25	14-15	>814	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.89	Vert(CT)	-0.34	14-15	>590	240	MT20HS	187/143
BCLL	0.0	Rep Stress Incr	YES	WB	0.63	Horz(CT)	0.06	10	n/a	n/a		
BCDL	5.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 85 lb	FT = 20%F, 11%E

LUMBER
TOP CHORD 2x4 SP No.2(flat)
BOT CHORD 2x4 SP No.2(flat) *Except* 17-10:2x4 SP No.1(flat)
WEBS 2x4 SP No.3(flat)
OTHERS 2x4 SP No.3(flat)

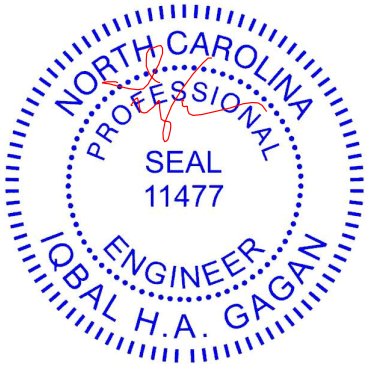
BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 10=0-3-8, 20=0-3-8
Max Grav 10=917 (LC 1), 20=910 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-20=-905/0, 9-10=-909/0, 1-2=-1063/0, 2-3=-2589/0, 3-4=-3428/0, 4-5=-3634/0, 5-6=-3428/0, 6-8=-2589/0, 8-9=-1060/0
BOT CHORD 19-20=0/54, 18-19=0/1999, 16-18=0/3146, 15-16=0/3634, 14-15=0/3634, 13-14=0/3634, 12-13=0/3146, 11-12=0/2001, 10-11=0/0
WEBS 4-15=-178/205, 5-14=-179/205, 1-19=0/1287, 2-19=-1219/0, 2-18=0/768, 3-18=-726/0, 3-16=0/478, 4-16=-546/53, 9-11=0/1330, 8-11=-1224/0, 8-12=0/766, 6-12=-724/0, 6-13=0/478, 5-13=-546/53

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 3x4 MT20 unless otherwise indicated.
4) Bearings are assumed to be: Joint 20 SP No.2 crushing capacity of 565 psi, Joint 10 SP No.1 crushing capacity of 565 psi.
5) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
6) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
7) CAUTION, Do not erect truss backwards.

LOAD CASE(S) Standard



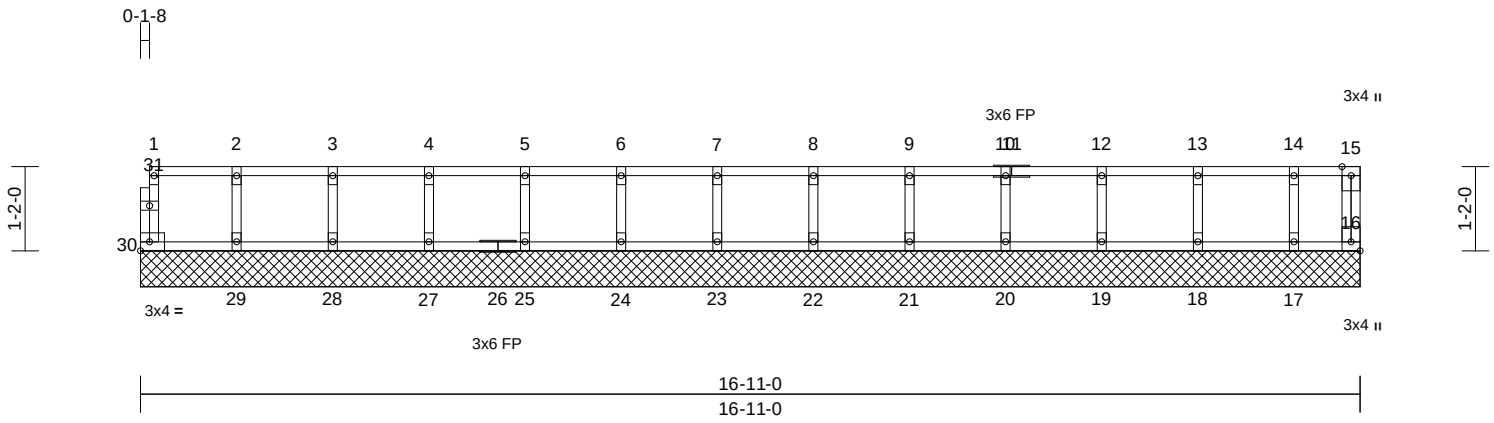
January 7,2025

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

Job	Truss	Truss Type	Qty	Ply	CARDINAL FLOOR - LOT 23 - ILA'S WAY
4600426	F06	Floor Supported Gable	1	1	I70577803 Job Reference (optional)

Builders FirstSource (Albermarle), Albemarle, NC - 28001,

Run: 8.63 S Sep 26 2024 Print: 8.630 S Sep 26 2024 MiTek Industries, Inc. Tue Jan 07 11:20:07 Page: 1
ID:jQOfgxPCND1qTjwi47IMy1y9f9K-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:32

Plate Offsets (X, Y): [16:Edge,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.02	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.03	Horiz(TL)	0.00	16	n/a	n/a		
BCDL	5.0	Code	IRC2018/TPI2014	Matrix-R							Weight: 72 lb	FT = 20%F, 11%E

LUMBER

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

BRACING

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

REACTIONS (size) 16=16-11-0, 17=16-11-0, 18=16-11-0, 19=16-11-0, 20=16-11-0, 21=16-11-0, 22=16-11-0, 23=16-11-0, 24=16-11-0, 25=16-11-0, 27=16-11-0, 28=16-11-0, 29=16-11-0, 30=16-11-0
Max Grav 16=38 (LC 1), 17=118 (LC 1), 18=152 (LC 1), 19=145 (LC 1), 20=147 (LC 1), 21=147 (LC 1), 22=147 (LC 1), 23=147 (LC 1), 24=147 (LC 1), 25=147 (LC 1), 27=147 (LC 1), 28=147 (LC 1), 29=147 (LC 1), 30=53 (LC 1)

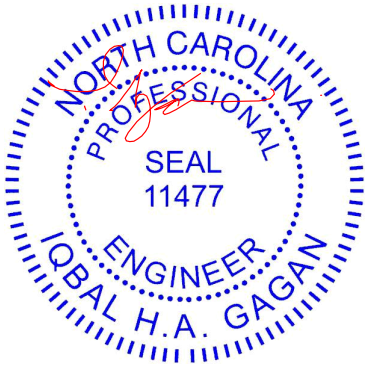
FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-30=-49/0, 15-16=-31/0, 1-2=-7/0, 2-3=-7/0, 3-4=-7/0, 4-5=-7/0, 5-6=-7/0, 6-7=-7/0, 7-8=-7/0, 8-9=-7/0, 9-10=-7/0, 10-12=-7/0, 12-13=-7/0, 13-14=-7/0, 14-15=-7/0
BOT CHORD 29-30=0/7, 28-29=0/7, 27-28=0/7, 25-27=0/7, 24-25=0/7, 23-24=0/7, 22-23=0/7, 21-22=0/7, 20-21=0/7, 19-20=0/7, 18-19=0/7, 17-18=0/7, 16-17=0/7
WEBS 2-29=-132/0, 3-28=-134/0, 4-27=-133/0, 5-25=-133/0, 6-24=-133/0, 7-23=-133/0, 8-22=-133/0, 9-21=-133/0, 10-20=-134/0, 12-19=-132/0, 13-18=-138/0, 14-17=-111/0

NOTES

1) All plates are 1.5x3 MT20 unless otherwise indicated.
2) Gable requires continuous bottom chord bearing.
3) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
4) Gable studs spaced at 1-4-0 oc.
5) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
7) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
8) CAUTION, Do not erect truss backwards.

LOAD CASE(S) Standard



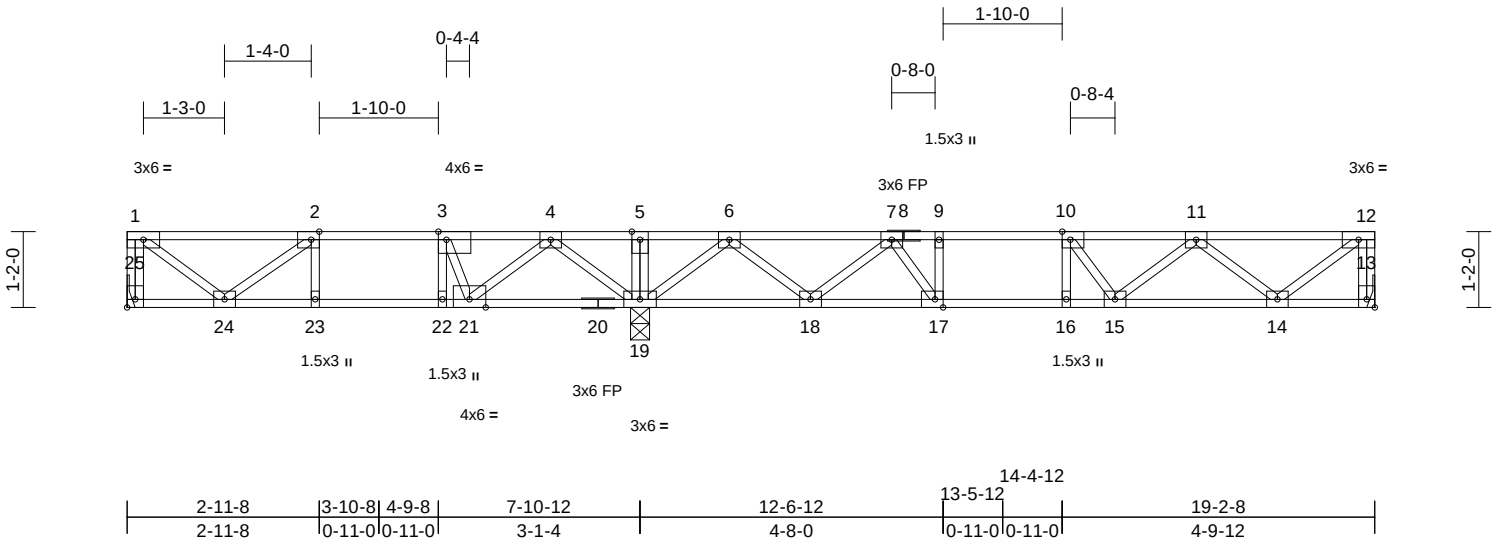
January 7,2025

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

Job	Truss	Truss Type	Qty	Ply	CARDINAL FLOOR - LOT 23 - ILA'S WAY
4600426	F07	Floor	5	1	I70577804 Job Reference (optional)

Builders FirstSource (Albermarle), Albemarle, NC - 28001,

Run: 8.63 S Sep 26 2024 Print: 8.630 S Sep 26 2024 MiTek Industries, Inc. Tue Jan 07 11:20:07 Page: 1
ID:VVxXVIwYU7JsVB7nYy2Cfuy9f8g-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:35.5

Plate Offsets (X, Y): [2:0-1-8,Edge], [3:0-1-8,Edge], [10:0-1-8,Edge], [13:Edge,0-1-8], [17:0-1-8,Edge], [25:Edge,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.54	Vert(LL)	-0.07	15-16	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.66	Vert(CT)	-0.09	15-16	>999	240		
BCLL	0.0	Rep Stress Incr	YES	WB	0.37	Horz(CT)	0.02	13	n/a	n/a		
BCDL	5.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 99 lb	FT = 20%F, 11%E

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

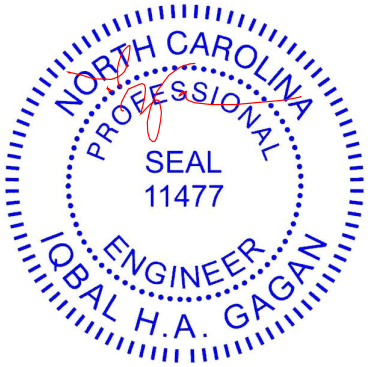
BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 13= Mechanical, 19=0-3-8, 25= Mechanical
Max Grav 13=582 (LC 7), 19=1166 (LC 1), 25=396 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-25=-394/0, 12-13=-576/0, 1-2=-364/0, 2-3=-678/4, 3-4=-562/97, 4-5=0/673, 5-6=0/673, 6-7=-870/0, 7-9=-1439/0, 9-10=-1439/0, 10-11=-1356/0, 11-12=-619/0
BOT CHORD 24-25=0/0, 23-24=-4/678, 22-23=-4/678, 21-22=-4/678, 19-21=-262/284, 18-19=-7/431, 17-18=0/1299, 16-17=0/1439, 15-16=0/1439, 14-15=0/1158, 13-14=0/0
WEBS 2-23=-111/0, 3-22=0/275, 5-19=-127/0, 9-17=-265/0, 10-16=-127/39, 4-19=-686/0, 4-21=0/458, 3-21=-472/0, 6-19=-1009/0, 6-18=0/617, 7-18=-621/0, 7-17=0/445, 1-24=0/457, 2-24=-392/45, 12-14=0/776, 11-14=-702/0, 11-15=0/278, 10-15=-219/31

NOTES
1) Unbalanced floor live loads have been considered for this design.
2) All plates are 3x4 MT20 unless otherwise indicated.
3) Bearings are assumed to be: , Joint 19 SP No.2 crushing capacity of 565 psi.
4) Refer to girder(s) for truss to truss connections.
5) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
6) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
7) CAUTION, Do not erect truss backwards.

LOAD CASE(S) Standard



January 7,2025

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

Job	Truss	Truss Type	Qty	Ply	CARDINAL FLOOR - LOT 23 - ILA'S WAY
4600426	F08	Floor	3	1	I70577805
					Job Reference (optional)

Builders FirstSource (Albermarle), Albemarle, NC - 28001, Run: 8.63 S Sep 26 2024 Print: 8.630 S Sep 26 2024 MiTek Industries, Inc. Tue Jan 07 11:20:07 Page: 1
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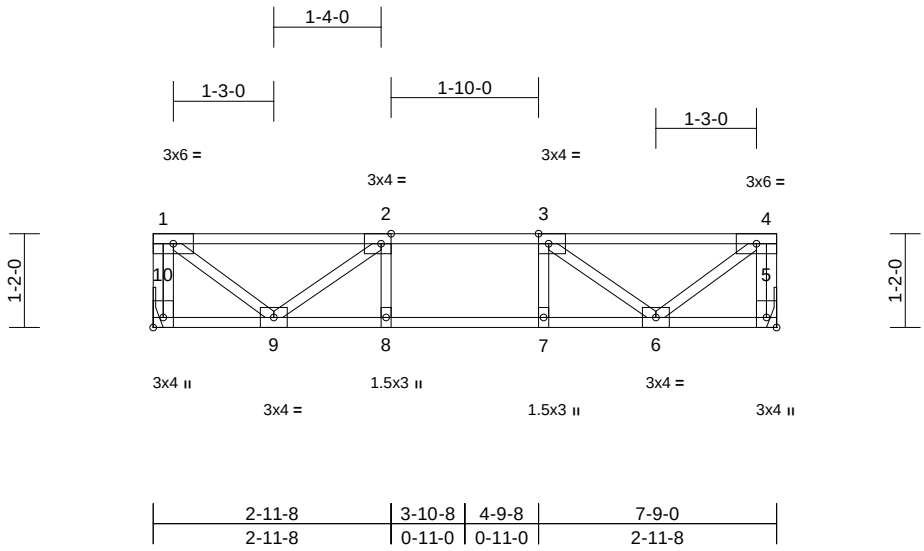


Scale = 1:28.6

Plate Offsets (X, Y): [2:0-1-8,Edge], [3:0-1-8,Edge], [5:Edge,0-1-8], [10:Edge,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.52	Vert(LL)	-0.04	6-7	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.43	Vert(CT)	-0.04	6-7	>999	240		
BCLL	0.0	Rep Stress Incr	YES	WB	0.23	Horz(CT)	0.01	5	n/a	n/a		
BCDL	5.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 41 lb	FT = 20%F, 11%E

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

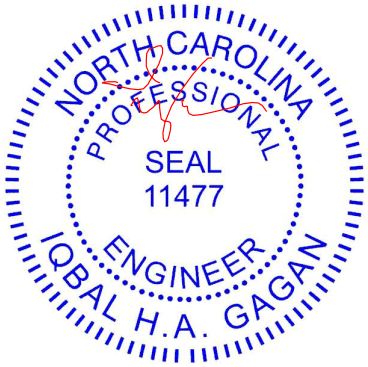
BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 5= Mechanical, 10= Mechanical
Max Grav 5=413 (LC 1), 10=413 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-10=-406/0, 4-5=-406/0, 1-2=-382/0, 2-3=-750/0, 3-4=-382/0
BOT CHORD 9-10=0/0, 8-9=0/750, 7-8=0/750, 6-7=0/750, 5-6=0/0
WEBS 2-8=-66/98, 3-7=-66/98, 1-9=0/479, 2-9=-459/0, 4-6=0/479, 3-6=-459/0

NOTES
1) Unbalanced floor live loads have been considered for this design.
2) Refer to girder(s) for truss to truss connections.
3) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
4) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.

LOAD CASE(S) Standard



January 7,2025

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

Job	Truss	Truss Type	Qty	Ply	CARDINAL FLOOR - LOT 23 - ILA'S WAY
4600426	F09	Floor	3	1	I70577806 Job Reference (optional)

Builders FirstSource (Albermarle), Albemarle, NC - 28001,

Run: 8.63 S Sep 26 2024 Print: 8.630 S Sep 26 2024 MiTek Industries, Inc. Tue Jan 07 11:20:07 Page: 1
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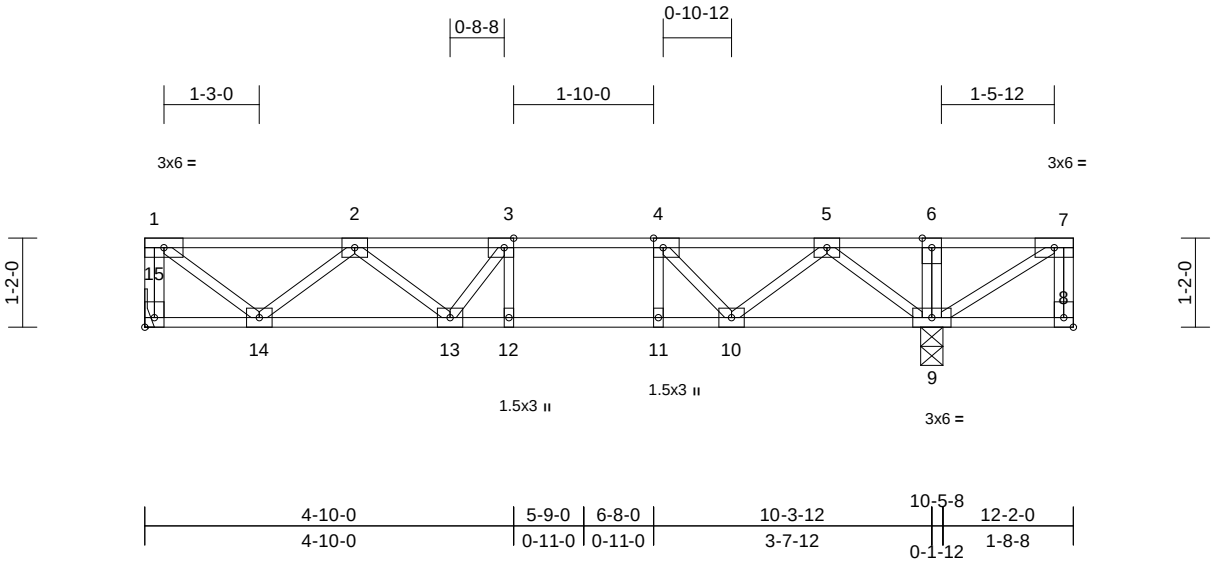


Scale = 1:30.2

Plate Offsets (X, Y): [3:0-1-8,Edge], [4:0-1-8,Edge], [8:Edge,0-1-8], [15:Edge,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.44	Vert(LL)	-0.07	12-13	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.75	Vert(CT)	-0.09	12-13	>999	240		
BCLL	0.0	Rep Stress Incr	YES	WB	0.35	Horz(CT)	0.02	9	n/a	n/a		
BCDL	5.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 65 lb	FT = 20%F, 11%E

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

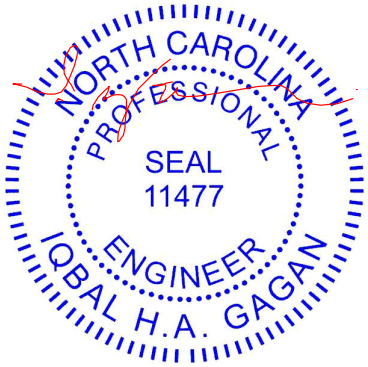
BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 9=0-3-8, 15= Mechanical
Max Grav 9=766 (LC 1), 15=556 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-15=-550/0, 7-8=0/5, 1-2=-586/0, 2-3=-1258/0, 3-4=-1308/0, 4-5=-999/0, 5-6=0/126, 6-7=0/127
BOT CHORD 14-15=0/0, 13-14=0/1097, 12-13=0/1308, 11-12=0/1308, 10-11=0/1308, 9-10=0/622, 8-9=0/0
WEBS 3-12=-178/64, 4-11=-34/177, 6-9=-181/0, 5-9=-807/0, 5-10=0/515, 4-10=-522/0, 7-9=-148/0, 1-14=0/735, 2-14=-665/0, 2-13=0/279, 3-13=-240/92

LOAD CASE(S) Standard

NOTES
1) Unbalanced floor live loads have been considered for this design.
2) All plates are 3x4 MT20 unless otherwise indicated.
3) Bearings are assumed to be: , Joint 9 SP No.2 crushing capacity of 565 psi.
4) Refer to girder(s) for truss to truss connections.
5) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
6) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
7) CAUTION, Do not erect truss backwards.

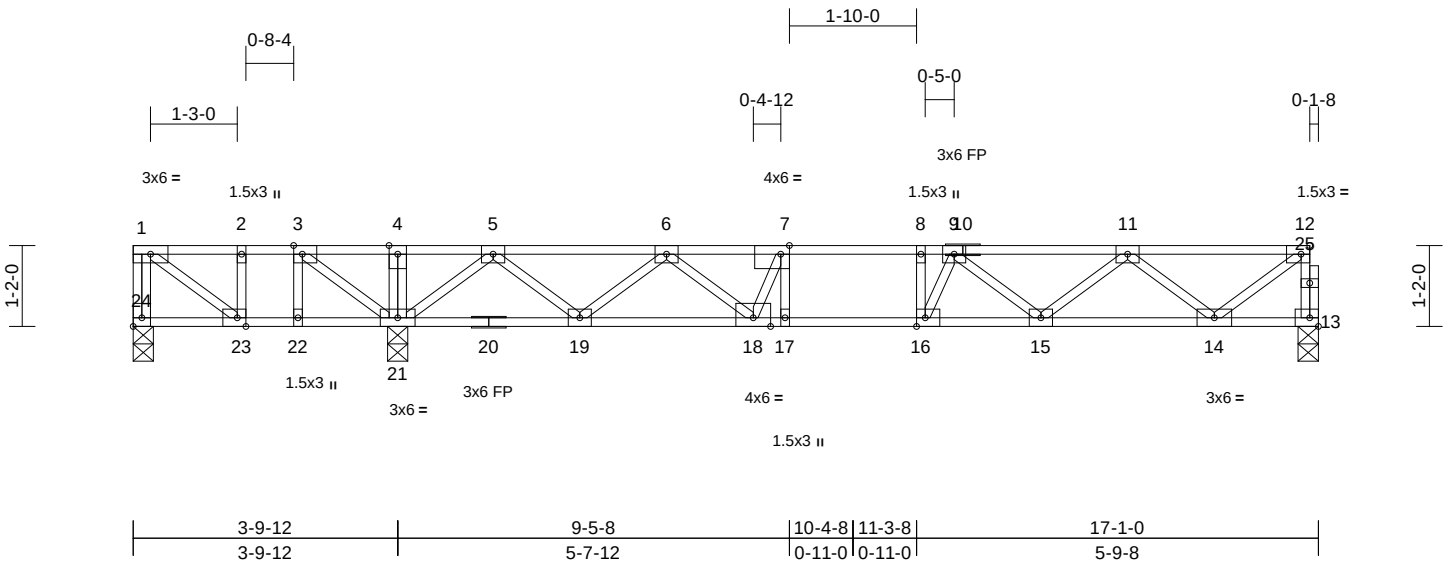


January 7,2025

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

Job	Truss	Truss Type	Qty	Ply	CARDINAL FLOOR - LOT 23 - ILA'S WAY
4600426	F10	Floor	1	1	I70577807
					Job Reference (optional)

Builders FirstSource (Albermarle), Albemarle, NC - 28001, Run: 8.63 S Sep 26 2024 Print: 8.630 S Sep 26 2024 MiTek Industries, Inc. Tue Jan 07 11:20:07 Page: 1
ID:a5cTKZ9bvzdcCcmKuIsbfvy9f5n-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:33.2

Plate Offsets (X, Y): [3:0-1-8,Edge], [7:0-1-8,Edge], [12:0-1-8,Edge], [16:0-1-8,Edge], [23:0-1-8,Edge], [24:Edge,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.59	Vert(LL)	-0.10	15-16	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.84	Vert(CT)	-0.14	15-16	>999	240		
BCLL	0.0	Rep Stress Incr	YES	WB	0.41	Horz(CT)	0.02	13	n/a	n/a		
BCDL	5.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 90 lb	FT = 20%F, 11%E

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

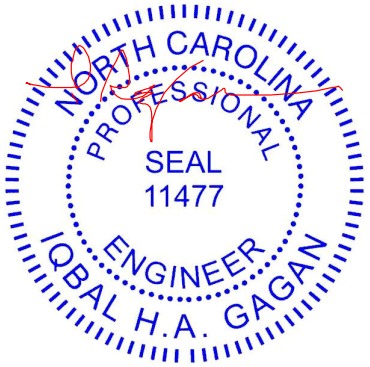
BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 22-23,21-22.

REACTIONS (size) 13=0-3-8, 21=0-3-8, 24=0-3-8
Max Uplift 24=-196 (LC 4)
Max Grav 13=649 (LC 7), 21=1253 (LC 1), 24=130 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-24=-112/237, 12-13=-642/0, 1-2=-56/392, 2-3=-56/392, 3-4=0/930, 4-5=0/930, 5-6=-738/0, 6-7=-1657/0, 7-8=-1817/0, 8-9=-1817/0, 9-11=-1621/0, 11-12=-718/0
BOT CHORD 23-24=0/0, 22-23=-392/56, 21-22=-392/56, 19-21=0/123, 18-19=0/1314, 17-18=0/1817, 16-17=0/1817, 15-16=0/1842, 14-15=0/1345, 13-14=0/38
WEBS 4-21=-75/0, 7-17=-37/249, 8-16=-192/122, 3-21=-781/0, 1-23=-484/69, 2-23=-77/137, 3-22=0/193, 5-21=-1241/0, 5-19=0/809, 6-19=-761/0, 6-18=0/496, 7-18=-521/0, 12-14=0/868, 11-14=-817/0, 11-15=0/359, 9-15=-287/0, 9-16=-234/253

NOTES
1) Unbalanced floor live loads have been considered for this design.
2) All plates are 3x4 MT20 unless otherwise indicated.
3) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 196 lb uplift at joint 24.
5) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
6) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
7) CAUTION, Do not erect truss backwards.

LOAD CASE(S) Standard

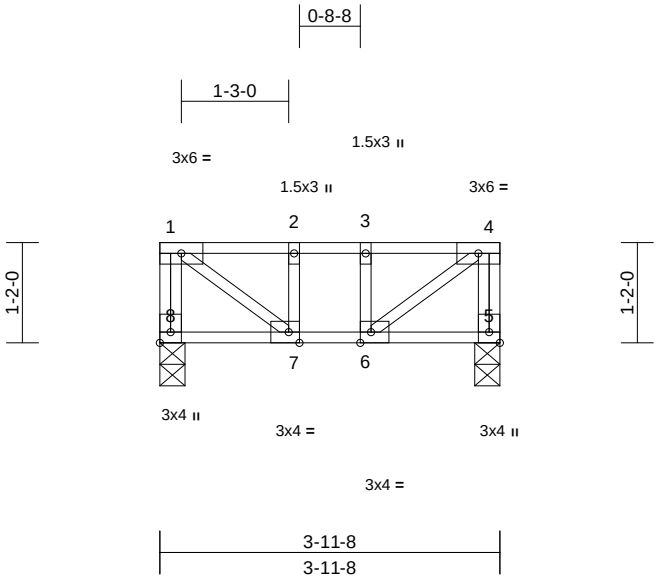


January 7,2025

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

Job	Truss	Truss Type	Qty	Ply	CARDINAL FLOOR - LOT 23 - ILA'S WAY
4600426	F11	Floor	1	1	I70577808
					Job Reference (optional)

Builders FirstSource (Albermarle), Albemarle, NC - 28001, Run: 8.63 S Sep 26 2024 Print: 8.630 S Sep 26 2024 MiTek Industries, Inc. Tue Jan 07 11:20:07 Page: 1
ID:aegJSBZwvQvoHqNstRTZ13y9f5F-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:26.8

Plate Offsets (X, Y): [5:Edge,0-1-8], [6:0-1-8,Edge], [7:0-1-8,Edge], [8:Edge,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.13	Vert(LL)	0.00	5-6	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.09	Vert(CT)	0.00	7-8	>999	240		
BCLL	0.0	Rep Stress Incr	YES	WB	0.11	Horz(CT)	0.00	5	n/a	n/a		
BCDL	5.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 25 lb	FT = 20%F, 11%E

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

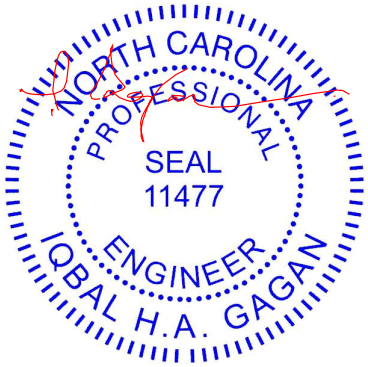
BRACING
TOP CHORD Structural wood sheathing directly applied or 3-11-8 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 5=0-3-8, 8=0-3-8
Max Grav 5=204 (LC 1), 8=204 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-8=-197/0, 4-5=-197/0, 1-2=-187/0, 2-3=-187/0, 3-4=-187/0
BOT CHORD 7-8=0/0, 6-7=0/187, 5-6=0/0
WEBS 4-6=0/231, 1-7=0/231, 2-7=-124/0, 3-6=-124/0

NOTES
1) Unbalanced floor live loads have been considered for this design.
2) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
3) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
4) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.

LOAD CASE(S) Standard



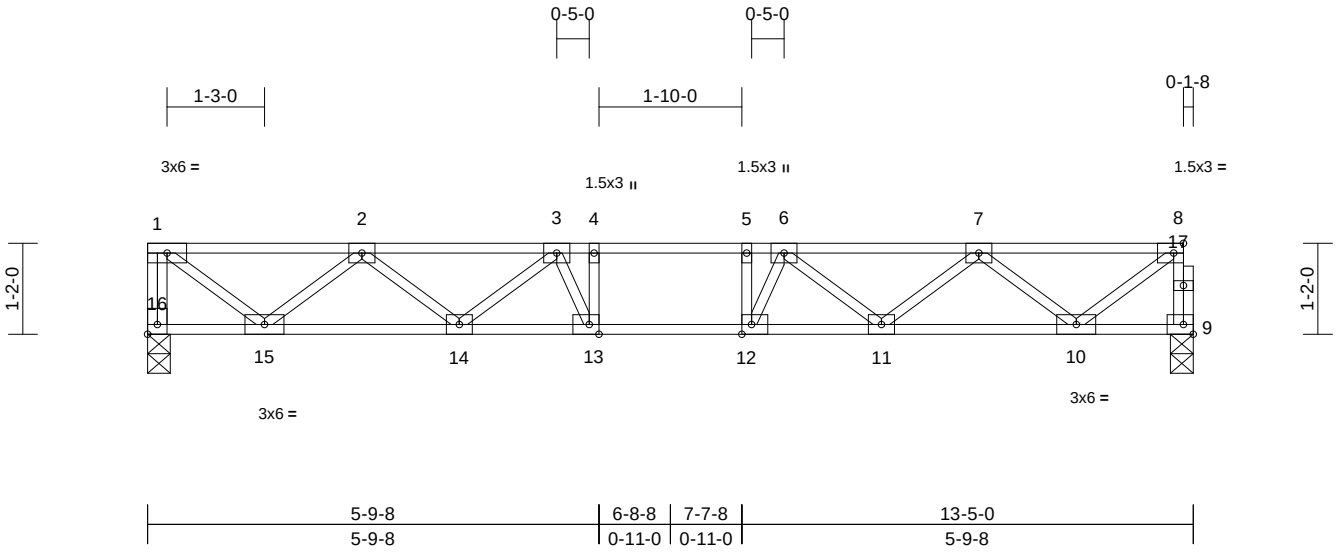
January 7,2025

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

Job	Truss	Truss Type	Qty	Ply	CARDINAL FLOOR - LOT 23 - ILA'S WAY
4600426	F12	Floor	4	1	I70577809
					Job Reference (optional)

Builders FirstSource (Albermarle), Albemarle, NC - 28001,

Run: 8.63 S Sep 26 2024 Print: 8.630 S Sep 26 2024 MiTek Industries, Inc. Tue Jan 07 11:20:07 ID:IZG5ZchCYUANTN8nSYfvRAy9f55-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



Scale = 1:29.6

Plate Offsets (X, Y): [8:0-1-8,Edge], [12:0-1-8,Edge], [13:0-1-8,Edge], [16:Edge,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.44	Vert(LL)	-0.11	12-13	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.67	Vert(CT)	-0.15	12-13	>999	240		
BCLL	0.0	Rep Stress Incr	YES	WB	0.48	Horz(CT)	0.03	9	n/a	n/a		
BCDL	5.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 69 lb	FT = 20%F, 11%E

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

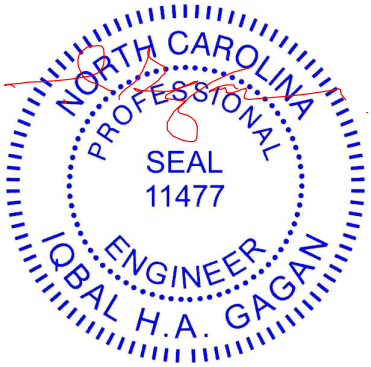
BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 9=0-3-8, 16=0-3-8
Max Grav 9=718 (LC 1), 16=724 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-16=-718/0, 8-9=-713/0, 1-2=-810/0, 2-3=-1872/0, 3-4=-2253/0, 4-5=-2253/0, 5-6=-2253/0, 6-7=-1871/0, 7-8=-811/0
BOT CHORD 15-16=0/0, 14-15=0/1520, 13-14=0/2196, 12-13=0/2253, 11-12=0/2197, 10-11=0/1518, 9-10=0/43
WEBS 4-13=-336/84, 5-12=-335/86, 1-15=0/1016, 2-15=-925/0, 2-14=0/457, 3-14=-423/0, 3-13=-139/453, 8-10=0/981, 7-10=-920/0, 7-11=0/459, 6-11=-425/0, 6-12=-142/453

LOAD CASE(S) Standard

NOTES
1) Unbalanced floor live loads have been considered for this design.
2) All plates are 3x4 MT20 unless otherwise indicated.
3) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
4) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
5) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
6) CAUTION, Do not erect truss backwards.

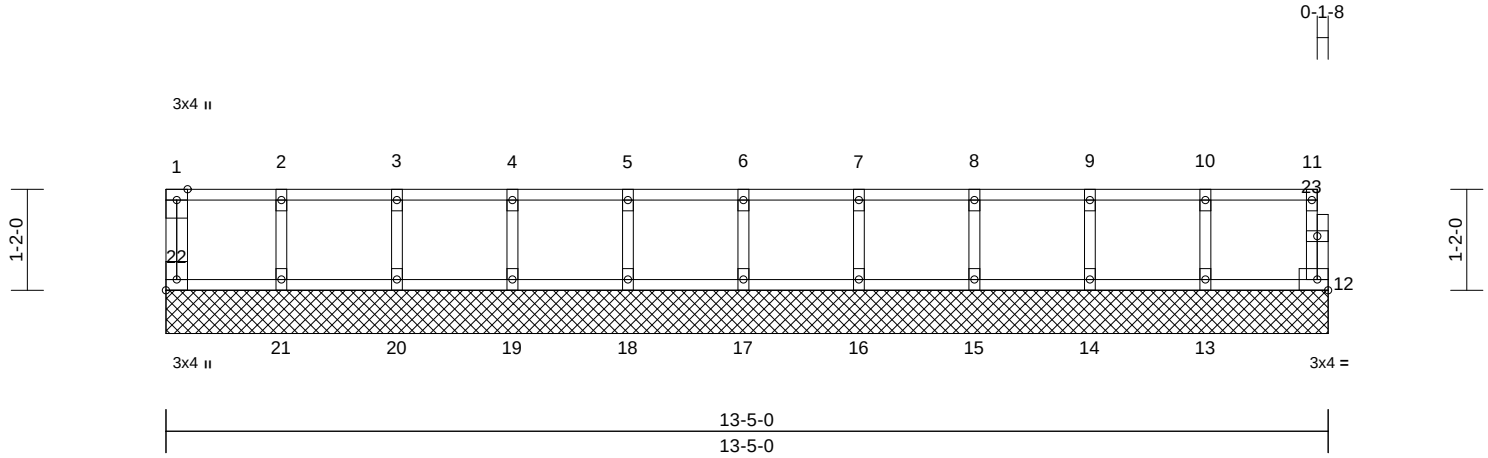


January 7,2025

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

Job	Truss	Truss Type	Qty	Ply	CARDINAL FLOOR - LOT 23 - ILA'S WAY
4600426	F13	Floor Supported Gable	1	1	I70577810 Job Reference (optional)

Builders FirstSource (Albermarle), Albemarle, NC - 28001, Run: 8.63 S Sep 26 2024 Print: 8.630 S Sep 26 2024 MiTek Industries, Inc. Tue Jan 07 11:20:07 Page: 1
ID:eW4_cJlKN1ofa80lF5F48Ey9f50-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:26.6

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.01	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.03	Horiz(TL)	0.00	12	n/a	n/a		
BCDL	5.0	Code	IRC2018/TPI2014	Matrix-R							Weight: 57 lb	FT = 20%F, 11%E

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

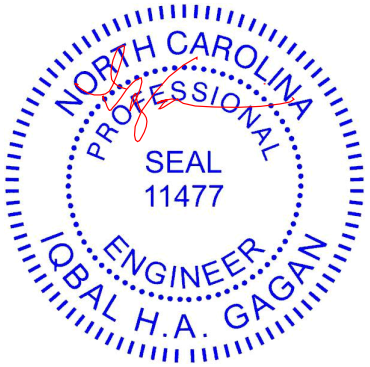
BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 12=13-5-0, 13=13-5-0, 14=13-5-0, 15=13-5-0, 16=13-5-0, 17=13-5-0, 18=13-5-0, 19=13-5-0, 20=13-5-0, 21=13-5-0, 22=13-5-0
Max Grav 12=61 (LC 1), 13=148 (LC 1), 14=147 (LC 1), 15=147 (LC 1), 16=147 (LC 1), 17=147 (LC 1), 18=147 (LC 1), 19=146 (LC 1), 20=148 (LC 1), 21=141 (LC 1), 22=64 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-22=-57/0, 11-12=-56/0, 1-2=-11/0, 2-3=-11/0, 3-4=-11/0, 4-5=-11/0, 5-6=-11/0, 6-7=-11/0, 7-8=-11/0, 8-9=-11/0, 9-10=-11/0, 10-11=-11/0
BOT CHORD 21-22=0/11, 20-21=0/11, 19-20=0/11, 18-19=0/11, 17-18=0/11, 16-17=0/11, 15-16=0/11, 14-15=0/11, 13-14=0/11, 12-13=0/11
WEBS 2-21=-130/0, 3-20=-134/0, 4-19=-133/0, 5-18=-133/0, 6-17=-133/0, 7-16=-133/0, 8-15=-133/0, 9-14=-133/0, 10-13=-135/0

NOTES
1) All plates are 1.5x3 MT20 unless otherwise indicated.
2) Gable requires continuous bottom chord bearing.
3) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
4) Gable studs spaced at 1-4-0 oc.
5) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
7) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
8) CAUTION, Do not erect truss backwards.

LOAD CASE(S) Standard



January 7,2025

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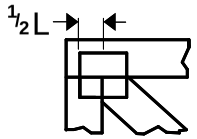
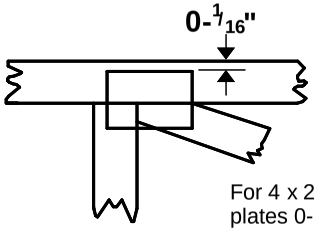
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

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.

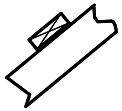
* Plate location details available in MiTek software or upon request.

PLATE SIZE

4 x 4

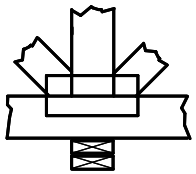
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

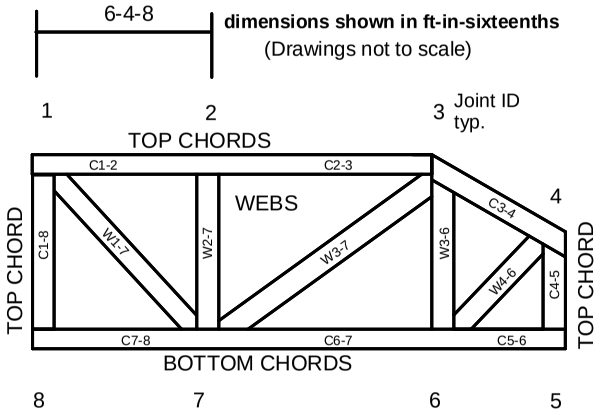


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

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.