ENGINEERING BY
TRENCO
A MiTek Affiliate

Trenco
818 Soundside Rd
Edenton, NC 27932

Re: 21120071-A
Tuscany Plan-2nd Floor

The truss drawing(s) referenced below have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by Carter Components (Sanford, NC)).

Pages or sheets covered by this seal: I49330625 thru I49330635

My license renewal date for the state of North Carolina is December 31, 2021.

North Carolina COA: C-0844

December 20,2021

Sevier, Scott

IMPORTANT NOTE: The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), which were given to MiTek or TRENCO. Any project specific information included is for MiTek's or TRENCO's customers file reference purpose only, and was not taken into account in the preparation of these designs. MiTek or TRENCO has not independently verified the applicability of the design parameters or the designs for any particular building. Before use, the building designer should verify applicability of design parameters and properly incorporate these designs into the overall building design per ANSI/TPI 1, Chapter 2.

Job	Truss	Truss Type	Qty	Ply	Tuscany Plan-2nd Floor	I49330625
21120071-A	F201	Floor	1	1	Job Reference (optional)	

Carter Components (Sanford), Sanford, NC - 27332, Run: 8.53 S Dec 6 2021 Print: 8.530 S Dec 6 2021 MiTek Industries, Inc. Fri Dec 17 12:47:21 Page: 1
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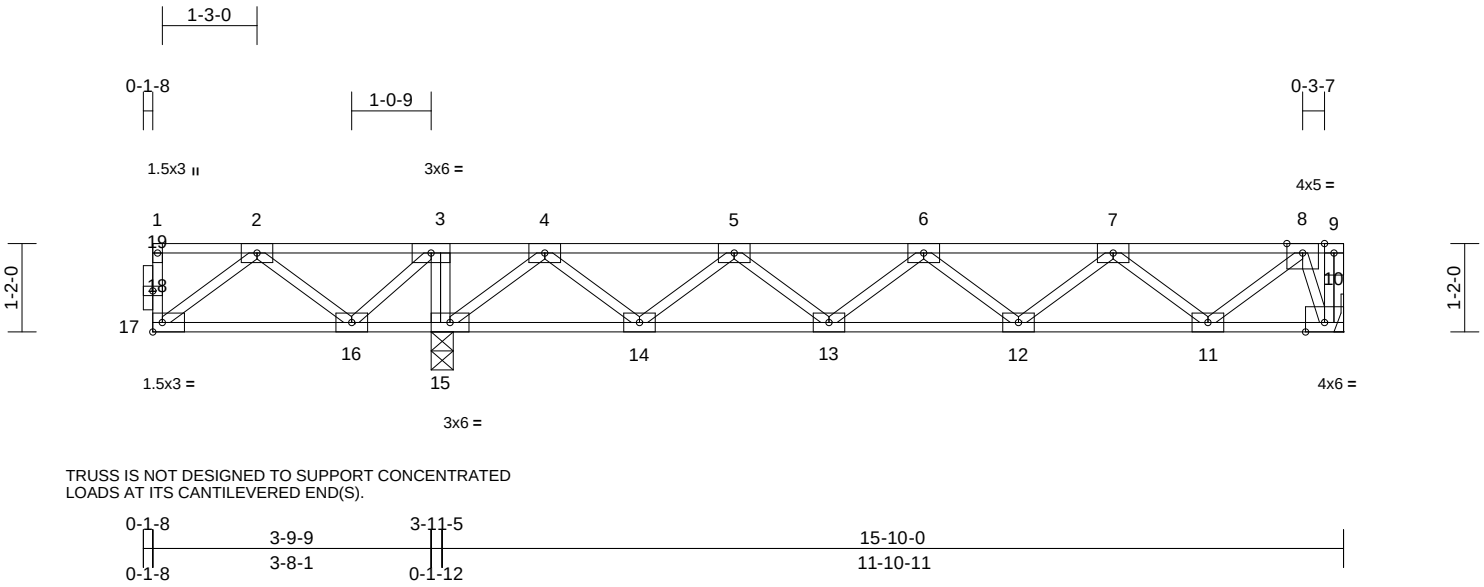

TRUSS IS NOT DESIGNED TO SUPPORT CONCENTRATED LOADS AT ITS CANTILEVERED END(S).

Scale = 1:30.4

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	0.40	Vert(LL)	-0.07	12-13	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.50	Vert(CT)	-0.09	12-13	>999	240		
BCLL	0.0	Rep Stress Incr	YES	WB	0.34	Horz(CT)	0.02	10	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-SH							Weight: 83 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 (lb/size) 10=583/ Mechanical, 15=1124/0-3-8
Max Grav 10=631 (LC 4), 15=1124 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-17=-34/0, 9-10=0/82, 1-2=0/0, 2-3=0/373, 3-4=0/692, 4-5=-1083/228, 5-6=-1661/0, 6-7=-1577/0, 7-8=-832/0, 8-9=0/0
BOT CHORD 16-17=-57/0, 15-16=-692/0, 14-15=-444/609, 13-14=-43/1527, 12-13=0/1767, 11-12=0/1358, 10-11=0/280
WEBS 3-15=-476/0, 2-17=0/72, 2-16=-414/0, 3-16=0/427, 4-15=-1030/0, 4-14=0/693, 5-14=-656/0, 5-13=0/248, 6-13=-209/0, 6-12=-247/41, 7-12=-1/285, 7-11=-684/0, 8-11=0/719, 8-10=-759/0

NOTES
1) Unbalanced floor live loads have been considered for this design.
2) All plates are 3x5 MT20 unless otherwise indicated.
3) Refer to girder(s) for truss to truss connections.
4) One RT7A MiTek connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 15. This connection is for uplift only and does not consider lateral forces.
5) This truss is designed in accordance with the 2015 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

December 20,2021

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

Job	Truss	Truss Type	Qty	Ply	Tuscany Plan-2nd Floor
21120071-A	F202	Floor	6	1	I49330626
					Job Reference (optional)

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

Run: 8.53 S Dec 6 2021 Print: 8.530 S Dec 6 2021 MiTek Industries, Inc. Fri Dec 17 12:47:24

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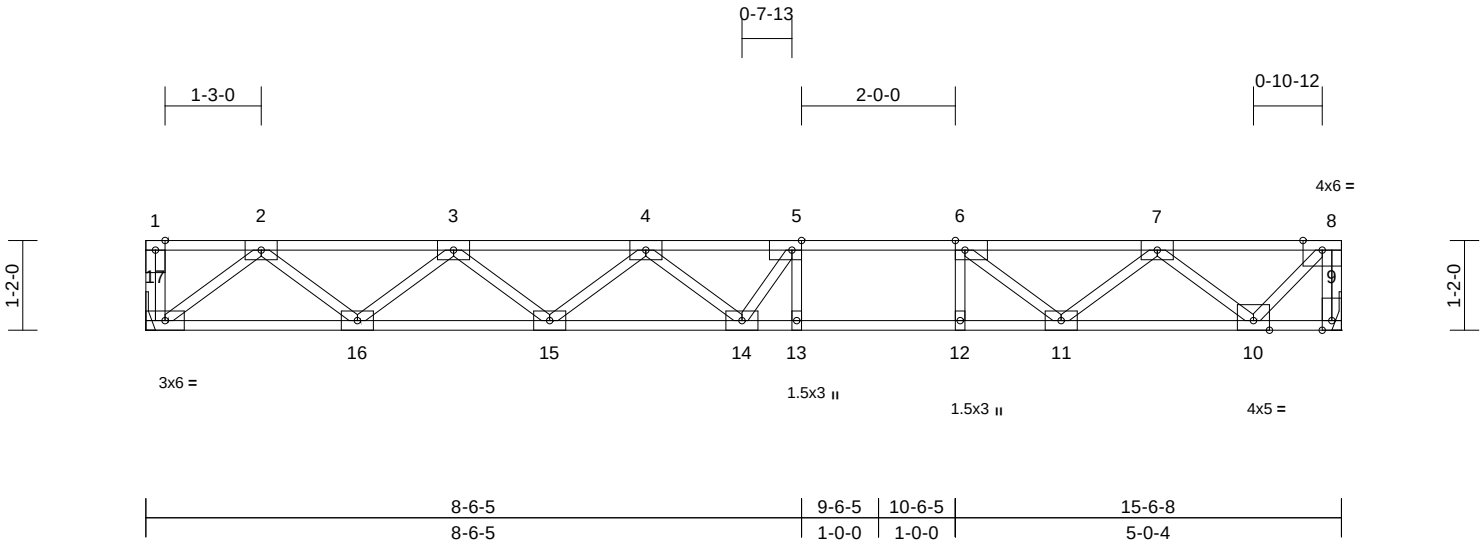

Scale = 1:30

Plate Offsets (X, Y): [5:0-1-8,Edge], [6:0-1-8,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	0.72	Vert(LL)	-0.23	13-14	>808	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.83	Vert(CT)	-0.31	13-14	>588	240		
BCLL	0.0	Rep Stress Incr	YES	WB	0.50	Horz(CT)	0.04	9	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-SH							Weight: 79 lb	FT = 20%F, 11%E

LUMBER

TOP CHORD 2x4 SP No.2(flat)

BOT CHORD 2x4 SP 2400F 2.0E(flat)

WEBS 2x4 SP No.3(flat)

BRACING

TOP CHORD Structural wood sheathing directly applied or 5-9-0 oc purlins, except end verticals.

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

REACTIONS (lb/size) 9=841/ Mechanical, 17=841/ Mechanical

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-17=-41/0, 8-9=-846/0, 1-2=0/0, 2-3=-1724/0, 3-4=-2716/0, 4-5=-3044/0, 5-6=-2879/0, 6-7=-2150/0, 7-8=-734/0

BOT CHORD 16-17=0/1040, 15-16=0/2371, 14-15=0/3043, 13-14=0/2879, 12-13=0/2879, 11-12=0/2879, 10-11=0/1585, 9-10=0/0

WEBS 5-13=-472/18, 6-12=0/351, 2-17=-1304/0, 2-16=0/890, 3-16=-843/0, 3-15=0/449, 4-15=-426/0, 4-14=-108/236, 5-14=-168/490, 6-11=-974/0, 7-11=0/736, 7-10=-1107/0, 8-10=0/1050

NOTES

1) Unbalanced floor live loads have been considered for this design.
2) All plates are 3x5 MT20 unless otherwise indicated.
3) Refer to girder(s) for truss to truss connections.
4) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
5) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.

LOAD CASE(S) Standard

December 20,2021

ENGINEERING BY TRENCO
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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Tuscany Plan-2nd Floor	I49330627
21120071-A	F203	Floor	3	1	Job Reference (optional)	

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

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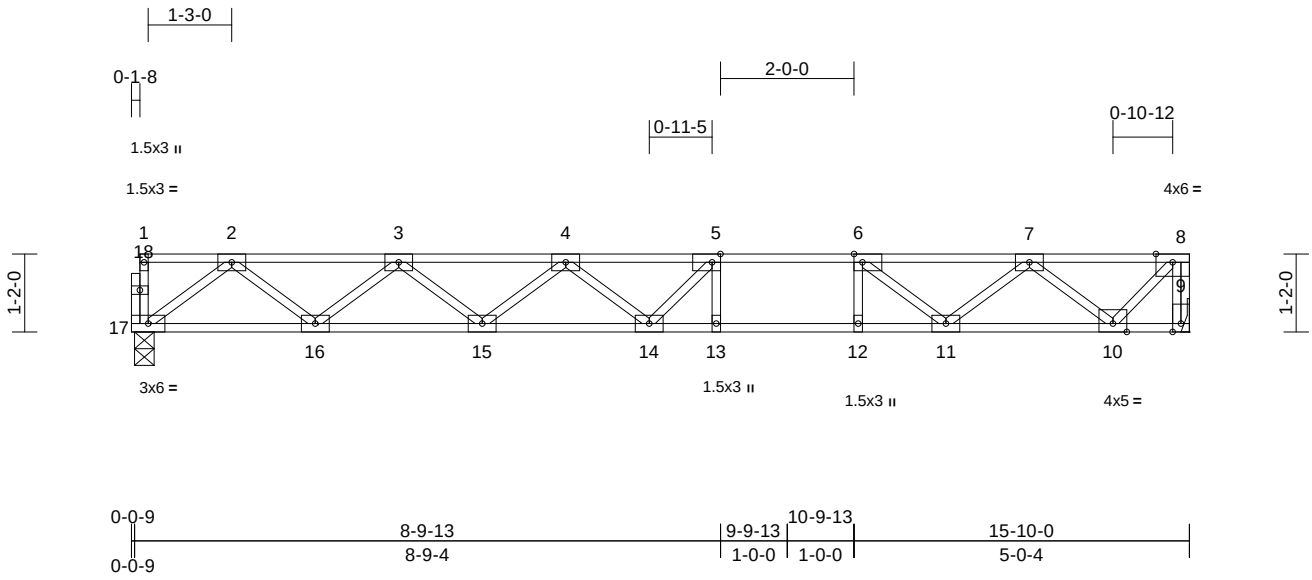

Scale = 1:34.5

Plate Offsets (X, Y): [5:0-1-8,Edge], [6:0-1-8,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	0.79	Vert(LL)	-0.25	13-14	>734	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.85	Vert(CT)	-0.35	13-14	>535	240		
BCLL	0.0	Rep Stress Incr	YES	WB	0.51	Horz(CT)	0.04	9	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-SH							Weight: 79 lb	FT = 20%F, 11%E

LUMBER

TOP CHORD	2x4 SP No.2(flat)
BOT CHORD	2x4 SP 2400F 2.0E(flat)
WEBS	2x4 SP No.3(flat)
OTHERS	2x4 SP No.3(flat)

BRACING

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

REACTIONS (lb/size) 9=857/ Mechanical, 17=851/0-3-8

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-17=-36/0, 8-9=-863/0, 1-2=-2/0, 2-3=-1763/0, 3-4=-2796/0, 4-5=-3161/0, 5-6=-2977/0, 6-7=-2204/0, 7-8=-750/0
BOT CHORD	16-17=0/1061, 15-16=0/2428, 14-15=0/3151, 13-14=0/2977, 12-13=0/2977, 11-12=0/2977, 10-11=0/1617, 9-10=0/0
WEBS	5-13=-407/8, 6-12=0/378, 2-17=-1328/0, 2-16=0/914, 3-16=-866/0, 3-15=0/479, 4-15=-462/0, 4-14=-90/231, 5-14=-177/450, 6-11=-1030/0, 7-11=0/764, 7-10=-1128/0, 8-10=0/1073

NOTES

1) Unbalanced floor live loads have been considered for this design.
2) All plates are 3x5 MT20 unless otherwise indicated.
3) Refer to girder(s) for truss to truss connections.
4) One RT7A MiTek connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 17. This connection is for uplift only and does not consider lateral forces.
5) This truss is designed in accordance with the 2015 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

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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Tuscany Plan-2nd Floor	I49330628
21120071-A	F204	Floor	1	1	Job Reference (optional)	

Carter Components (Sanford), Sanford, NC - 27332, Run: 8.53 S Dec 6 2021 Print: 8.530 S Dec 6 2021 MiTek Industries, Inc. Fri Dec 17 12:47:25 Page: 1
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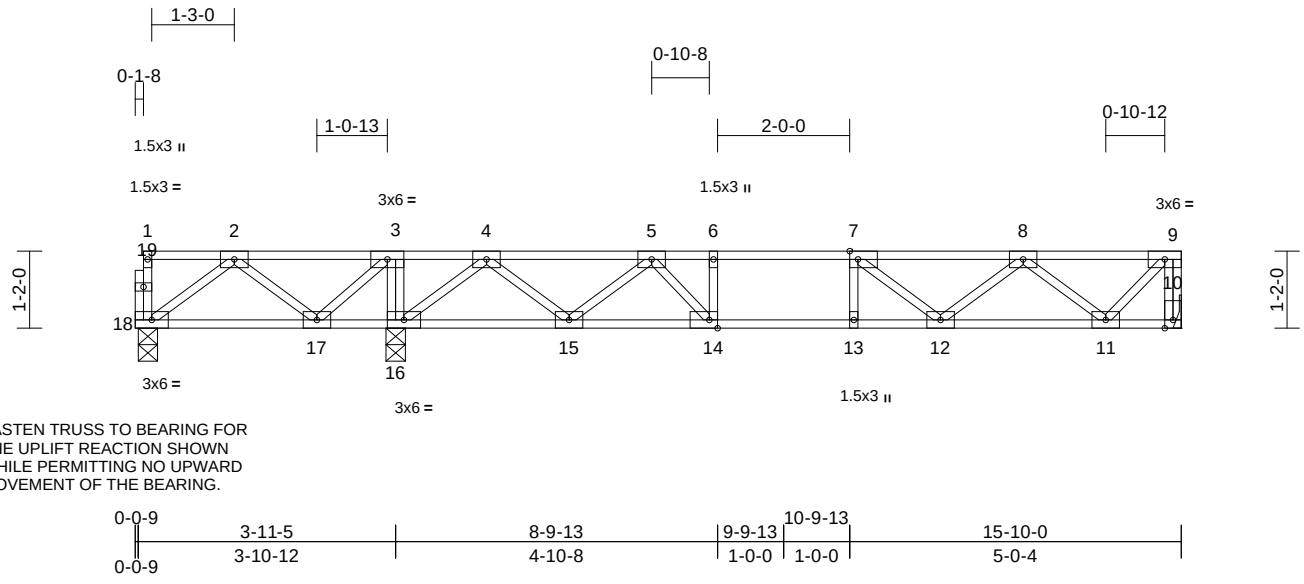

FASTEN TRUSS TO BEARING FOR THE UPLIFT REACTION SHOWN WHILE PERMITTING NO UPWARD MOVEMENT OF THE BEARING.

Scale = 1:34.9

Plate Offsets (X, Y): [7:0-1-8,Edge], [14:0-1-8,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	0.50	Vert(LL)	-0.09	12-13	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.75	Vert(CT)	-0.12	12-13	>999	240		
BCLL	0.0	Rep Stress Incr	YES	WB	0.33	Horz(CT)	0.02	10	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-SH							Weight: 82 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 (lb/size) 10=578/ Mechanical, 16=1139/0-3-8, 18=-9/0-3-8
Max Uplift 18=-151 (LC 4)
Max Grav 10=580 (LC 4), 16=1139 (LC 1), 18=138 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-18=-33/0, 9-10=-574/0, 1-2=-2/0, 2-3=0/514, 3-4=0/900, 4-5=-631/0, 5-6=-1419/0, 6-7=-1419/0, 7-8=-1272/0, 8-9=-480/0
BOT CHORD 17-18=-223/126, 16-17=-900/0, 15-16=-155/202, 14-15=0/1148, 13-14=0/1419, 12-13=0/1419, 11-12=0/1053, 10-11=0/0
WEBS 3-16=-530/0, 6-14=-259/0, 7-13=-100/9, 2-18=-156/280, 2-17=-500/0, 3-17=0/513, 4-16=-1073/0, 4-15=0/671, 5-15=-682/0, 5-14=0/494, 7-12=-232/0, 8-12=0/286, 8-11=-746/0, 9-11=0/686

NOTES
1) Unbalanced floor live loads have been considered for this design.
2) All plates are 3x5 MT20 unless otherwise indicated.
3) Refer to girder(s) for truss to truss connections.
4) One RT7A MiTek connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 18 and 16. This connection is for uplift only and does not consider lateral forces.
5) This truss is designed in accordance with the 2015 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

December 20,2021

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

Job	Truss	Truss Type	Qty	Ply	Tuscany Plan-2nd Floor	I49330629
21120071-A	F205	Floor	3	1	Job Reference (optional)	

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

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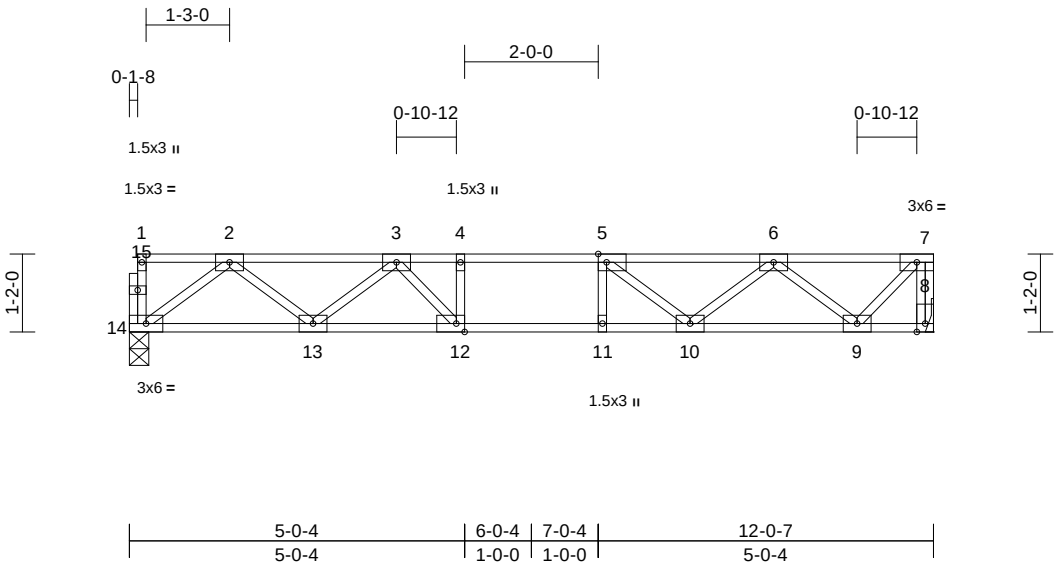

Scale = 1:34.5

Plate Offsets (X, Y): [5:0-1-8,Edge], [12:0-1-8,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	0.43	Vert(LL)	-0.09	12-13	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.70	Vert(CT)	-0.12	10-11	>999	240		
BCLL	0.0	Rep Stress Incr	YES	WB	0.37	Horz(CT)	0.02	8	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-SH							Weight: 61 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 (lb/size) 8=648/ Mechanical, 14=642/0-3-8

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-14=-35/0, 7-8=-645/0, 1-2=-2/0, 2-3=-1233/0, 3-4=-1801/0, 4-5=-1801/0, 5-6=-1506/0, 6-7=-545/0
BOT CHORD	13-14=0/789, 12-13=0/1650, 11-12=0/1801, 10-11=0/1801, 9-10=0/1191, 8-9=0/0
WEBS	4-12=-232/0, 5-11=-77/95, 2-14=-987/0, 2-13=0/578, 3-13=-543/0, 3-12=0/437, 5-10=-469/0, 6-10=0/417, 6-9=-840/0, 7-9=0/780

NOTES

1) Unbalanced floor live loads have been considered for this design.
2) All plates are 3x5 MT20 unless otherwise indicated.
3) Refer to girder(s) for truss to truss connections.
4) One RT7A MiTek connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 14. This connection is for uplift only and does not consider lateral forces.
5) This truss is designed in accordance with the 2015 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

December 20,2021

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A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Tuscany Plan-2nd Floor	
21120071-A	F206	Floor	1	1	Job Reference (optional)	I49330630

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

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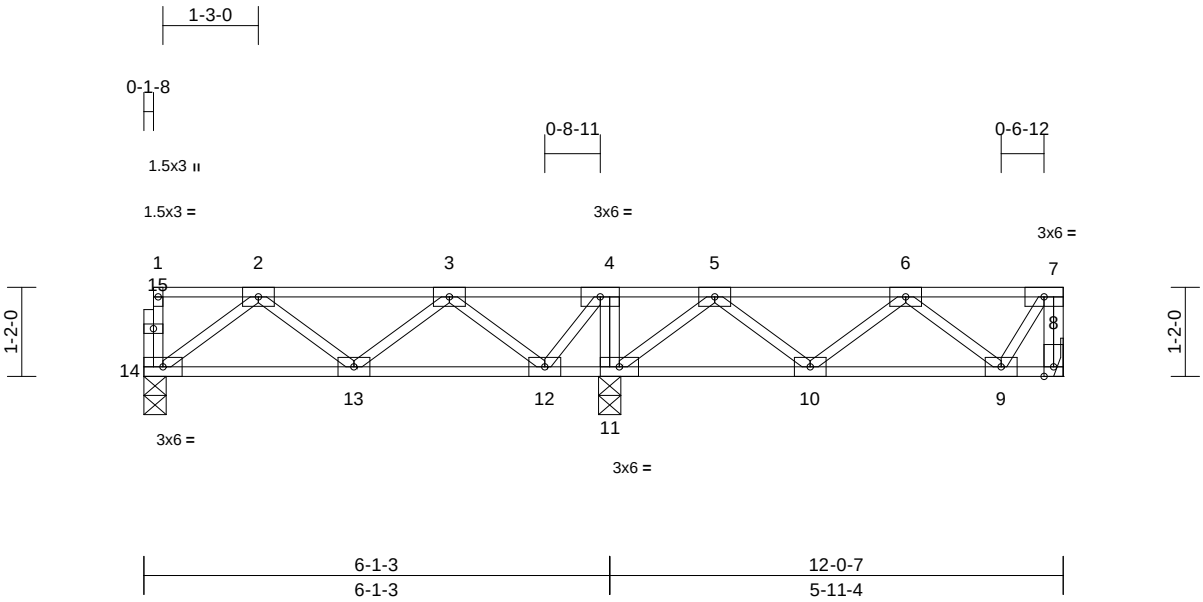

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.28	Vert(LL)	-0.01	13	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.12	Vert(CT)	-0.01	13-14	>999	240		
BCLL	0.0	Rep Stress Incr	YES	WB	0.18	Horz(CT)	0.00	8	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-SH							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)
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 (lb/size) 8=250/ Mechanical, 11=787/0-3-8, 14=254/0-3-8
Max Grav 8=277 (LC 4), 11=787 (LC 1), 14=278 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-14=-35/0, 7-8=-278/0, 1-2=-2/0, 2-3=-325/0, 3-4=0/143, 4-5=0/361, 5-6=-283/23, 6-7=-137/0
BOT CHORD	13-14=0/308, 12-13=-32/307, 11-12=-361/0, 10-11=-107/173, 9-10=0/362, 8-9=0/0
WEBS	4-11=-445/0, 2-14=-383/0, 2-13=-23/23, 3-13=0/70, 3-12=-445/0, 4-12=0/379, 5-11=-523/0, 5-10=0/186, 6-10=-148/0, 6-9=-293/0, 7-9=0/248

NOTES

1) Unbalanced floor live loads have been considered for this design.
2) All plates are 3x5 MT20 unless otherwise indicated.
3) Refer to girder(s) for truss to truss connections.
4) One RT7A MiTek connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 14 and 11. This connection is for uplift only and does not consider lateral forces.
5) This truss is designed in accordance with the 2015 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

December 20,2021

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TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Tuscany Plan-2nd Floor
21120071-A	F207	Floor Supported Gable	1	1	I49330631
					Job Reference (optional)

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

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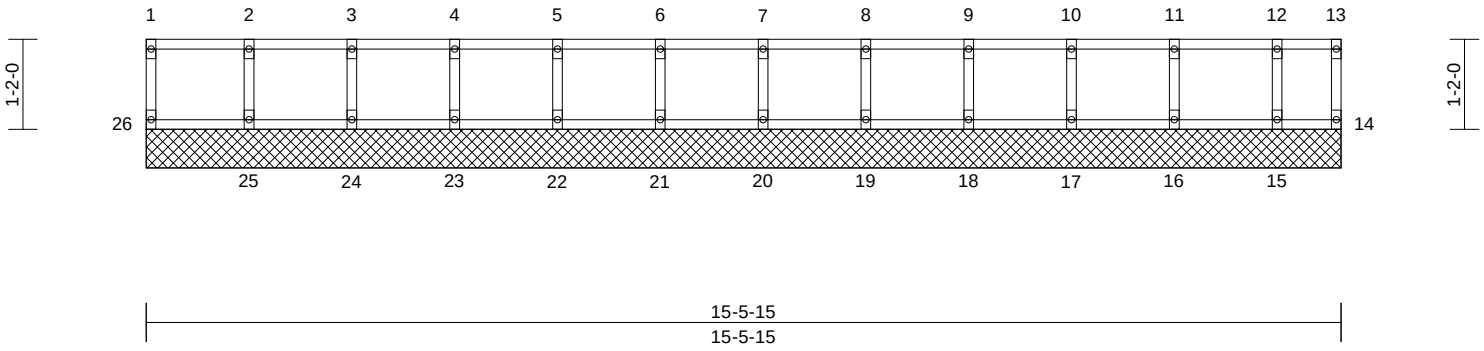


Scale = 1:29.9

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	14	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-R							Weight: 64 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 (lb/size) 14=34/15-5-15, 15=119/15-5-15, 16=152/15-5-15, 17=145/15-5-15, 18=147/15-5-15, 19=147/15-5-15, 20=147/15-5-15, 21=147/15-5-15, 22=147/15-5-15, 23=147/15-5-15, 24=145/15-5-15, 25=154/15-5-15, 26=60/15-5-15

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-26=-55/0, 13-14=-28/0, 1-2=-6/0, 2-3=-6/0, 3-4=-6/0, 4-5=-6/0, 5-6=-6/0, 6-7=-6/0, 7-8=-6/0, 8-9=-6/0, 9-10=-6/0, 10-11=-6/0, 11-12=-6/0, 12-13=-6/0
BOT CHORD	25-26=0/6, 24-25=0/6, 23-24=0/6, 22-23=0/6, 21-22=0/6, 20-21=0/6, 19-20=0/6, 18-19=0/6, 17-18=0/6, 16-17=0/6, 15-16=0/6, 14-15=0/6
WEBS	2-25=-140/0, 3-24=-132/0, 4-23=-134/0, 5-22=-133/0, 6-21=-133/0, 7-20=-133/0, 8-19=-133/0, 9-18=-134/0, 10-17=-132/0, 11-16=-138/0, 12-15=-112/0

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) N/A
6) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
7) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.

LOAD CASE(S) Standard

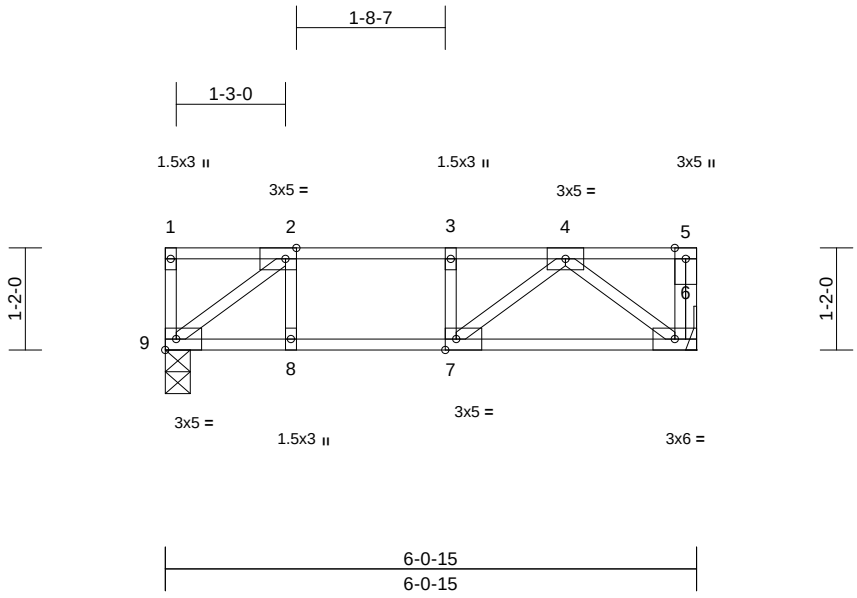
December 20,2021

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

Job	Truss	Truss Type	Qty	Ply	Tuscany Plan-2nd Floor
21120071-A	F208	Floor	2	1	I49330632
					Job Reference (optional)

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

Run: 8.53 S Dec 6 2021 Print: 8.530 S Dec 6 2021 MiTek Industries, Inc. Fri Dec 17 12:47:28
ID:GQU9znOT_reMutOSMvctH?y9G3h-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:26.4

Plate Offsets (X, Y): [2:0-1-8,Edge], [7:0-1-8,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.37	Vert(LL)	-0.04	6-7	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.36	Vert(CT)	-0.05	6-7	>999	240		
BCLL	0.0	Rep Stress Incr	YES	WB	0.12	Horz(CT)	0.00	6	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-SH							Weight: 32 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 (lb/size) 6=324/ Mechanical, 9=324/0-3-7

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-9=-41/32, 5-6=-51/0, 1-2=0/0, 2-3=-418/0, 3-4=-418/0, 4-5=0/0
BOT CHORD 8-9=0/418, 7-8=0/418, 6-7=0/334
WEBS 4-6=-418/0, 2-9=-524/0, 4-7=0/170, 2-8=0/82, 3-7=-89/0

NOTES
1) Unbalanced floor live loads have been considered for this design.
2) Refer to girder(s) for truss to truss connections.
3) One RT7A MiTek connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 9. This connection is for uplift only and does not consider lateral forces.
4) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
5) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.

LOAD CASE(S) Standard

December 20,2021

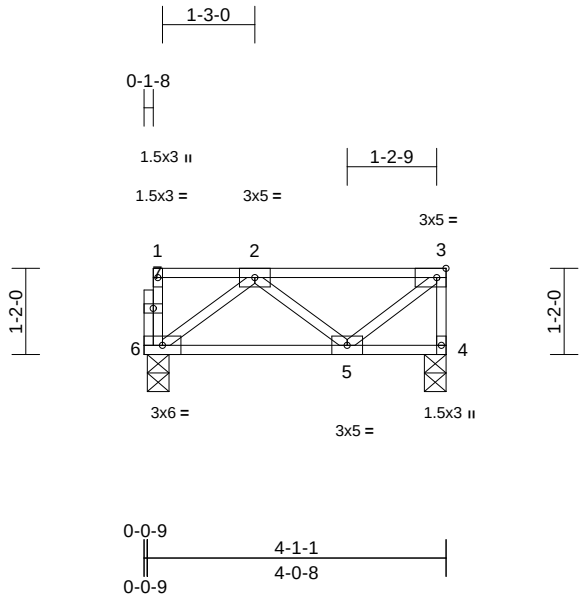
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Tuscany Plan-2nd Floor	I49330633
21120071-A	F211	Floor	1	1	Job Reference (optional)	

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

Run: 8.53 S Dec 6 2021 Print: 8.530 S Dec 6 2021 MiTek Industries, Inc. Fri Dec 17 12:47:28

ID:CJZ0WNfl7zX4kaCqXpR2KCy9FQ1-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:31.2

Plate Offsets (X, Y): [3:0-1-8,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	0.34	Vert(LL)	0.00	5-6	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.10	Vert(CT)	-0.01	5-6	>999	240		
BCLL	0.0	Rep Stress Incr	YES	WB	0.08	Horz(CT)	0.00	4	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-P							Weight: 23 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 4-1-1 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 4=214/0-3-8, 6=208/0-3-8

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-6=-21/0, 3-4=-212/0, 1-2=-1/0, 2-3=-133/0
BOT CHORD 5-6=0/233, 4-5=0/0
WEBS 2-6=-291/0, 2-5=-130/0, 3-5=0/172

NOTES

1) One RT7A MiTek connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 4 and 6. This connection is for uplift only and does not consider lateral forces.
2) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
3) 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.
4) CAUTION, Do not erect truss backwards.

LOAD CASE(S) Standard

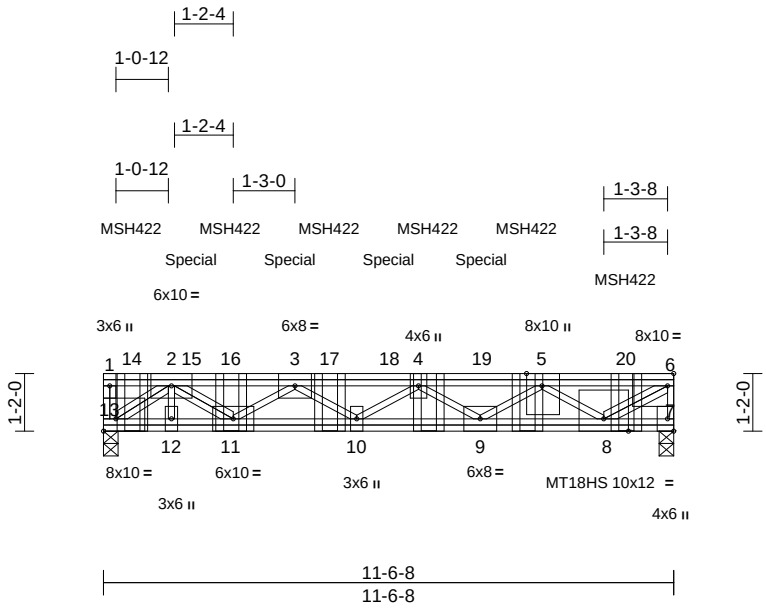
December 20,2021

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

Job	Truss	Truss Type	Qty	Ply	Tuscany Plan-2nd Floor
21120071-A	F212	Floor Girder	1	1	I49330634
					Job Reference (optional)

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

Run: 8.52 E Oct 22 2021 Print: 8.520 E Oct 22 2021 MiTek Industries, Inc. Mon Dec 20 09:40:59 Page: 1
ID:VfUf_ml8U7P54fEARo3i6gy9FPw-bVBuW7c?fO9asbZa6pnEGUjy71ZyS0oXEAOJ7Ty76Ro



Scale = 1:46.6

Plate Offsets (X, Y): [5:0-3-0,Edge], [6:0-1-8,Edge], [13:Edge,0-3-0]

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	0.64	Vert(LL)	-0.13	9-10	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.54	Vert(CT)	-0.19	9-10	>727	240	MT18HS	244/190
BCLL	0.0	Rep Stress Incr	NO	WB	0.94	Horz(CT)	0.04	7	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-SH							Weight: 97 lb	FT = 20%F, 11%E

LUMBER
TOP CHORD 2x4 SP 2400F 2.0E(flat)
BOT CHORD 2x4 SP 2400F 2.0E(flat)
WEBS 2x4 SP No.3(flat) *Except* 13-1,13-2:2x4 SP 2400F 2.0E(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) 7=0-3-9, 13=0-3-8
Max Grav 7=2869 (LC 1), 13=3092 (LC 1)

FORCES (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-13=-373/0, 6-7=-2850/0, 2-15=-5812/0, 15-16=-5812/0, 3-16=-5812/0, 3-17=-8445/0, 17-18=-8445/0, 4-18=-8445/0, 4-19=-7639/0, 5-19=-7639/0, 5-20=-3213/0, 6-20=-3213/0
BOT CHORD 12-13=0/3683, 11-12=0/3683, 10-11=0/8095, 9-10=0/8797, 8-9=0/6473
WEBS 3-11=-2786/0, 3-10=0/435, 4-10=-436/0, 4-9=-1436/0, 5-9=0/1446, 5-8=-3969/0, 6-8=0/3947, 2-11=0/2696, 2-13=-4554/0

NOTES
1) All plates are MT20 plates unless otherwise indicated.
2) One RT7A MiTek connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 13 and 7. This connection is for uplift only and does not consider lateral forces.
3) 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.
4) Use MiTek MSH422 (With 10d nails into Girder & 6-10d nails into Truss) or equivalent spaced at 2-0-0 oc max. starting at 0-7-0 from the left end to 10-7-0 to connect truss(es) to back face of top chord.
5) Fill all nail holes where hanger is in contact with lumber.
6) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 58 lb down at 1-9-8, 58 lb down at 3-9-8, and 58 lb down at 5-9-8, and 58 lb down at 7-8-0 on top chord. The design/selection of such connection device(s) is the responsibility of others.
7) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00
Uniform Loads (lb/ft)
Vert: 7-13=-10, 1-6=-100
Concentrated Loads (lb)
Vert: 3=-58 (F), 4=-741 (B), 5=-741 (B), 14=-768 (B), 15=-58 (F), 16=-741 (B), 17=-741 (B), 18=-58 (F), 19=-58 (F), 20=-746 (B)

December 20,2021

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

Job	Truss	Truss Type	Qty	Ply	Tuscany Plan-2nd Floor
21120071-A	F213	Floor Girder	1	3	I49330635 Job Reference (optional)

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

Run: 8.52 E Oct 22 2021 Print: 8.520 E Oct 22 2021 MiTek Industries, Inc. Mon Dec 20 10:00:23
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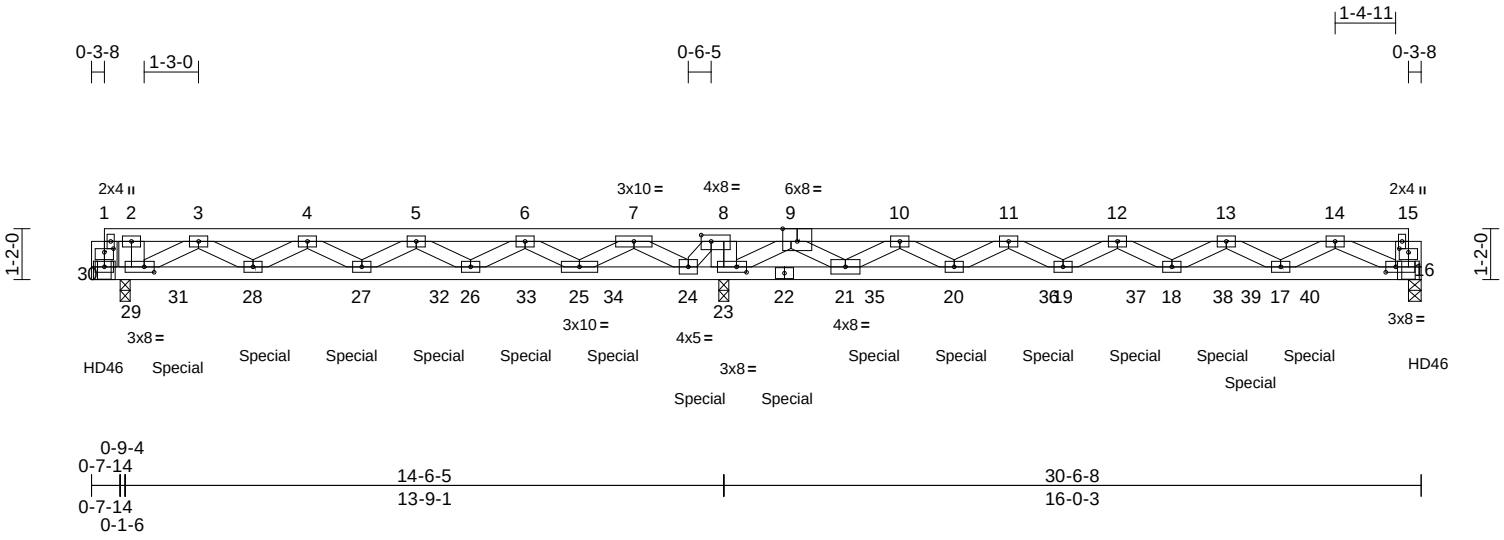


Scale = 1:52.9

Plate Offsets (X, Y): [1:0-2-8,0-1-0], [8:0-2-12,0-1-12], [9:0-4-0,Edge], [15:0-2-8,0-1-0], [16:0-2-12,0-1-8], [23:0-2-12,0-1-8], [29:0-2-12,0-1-8]

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	0.66	Vert(LL)	-0.14	18-19	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.49	Vert(CT)	-0.19	18-19	>999	240		
BCLL	0.0	Rep Stress Incr	NO	WB	0.95	Horz(CT)	0.03	16	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-SH							Weight: 430 lb	FT = 11%

LUMBER

TOP CHORD	2x4 SP 2400F 2.0E
BOT CHORD	2x4 SP 2400F 2.0E
WEBS	2x4 SP No.3
OTHERS	2x4 SP No.3

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=0-3-8, 23=0-2-12, 29=0-2-12
Max Grav 16=2460 (LC 1), 23=9018 (LC 1), 29=3399 (LC 6)

FORCES (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

TOP CHORD 3-4=-6006/0, 4-5=-7770/179, 5-6=-6125/573, 6-7=-695/1178, 7-8=0/9573, 8-9=0/13015, 9-10=-242/2585, 10-11=-4418/279, 11-12=-7955/0, 12-13=-8803/0, 13-14=-6276/0

BOT CHORD 29-31=0/3438, 28-31=0/3438, 27-28=-50/7068, 27-32=-343/7101, 26-32=-343/7101, 26-33=-835/3592, 25-33=-835/3592, 25-34=-4967/0, 24-34=-4967/0, 23-24=-13015/0, 22-23=-7124/0, 21-22=-7124/0, 21-35=-549/1303, 20-35=-549/1303, 20-36=-50/6347, 19-36=-50/6347, 19-37=0/8539, 18-37=0/8539, 18-38=0/7726, 38-39=0/7726, 17-39=0/7726, 17-40=0/3768, 16-40=0/3768

WEBS 2-29=-271/0, 8-23=-4414/0, 3-29=-3833/0, 3-28=-28/3135, 4-28=-1297/69, 4-27=-158/856, 5-27=-57/973, 5-26=-1346/0, 6-26=0/3246, 6-25=-3699/0, 7-25=0/5599, 7-24=-5622/0, 8-24=0/5041, 9-23=-6773/0, 9-21=0/6001, 10-21=-4287/0, 10-20=0/3802, 11-20=-2354/0, 11-19=0/1964, 12-19=-713/0, 12-18=-202/508, 13-18=-32/1314, 13-17=-1770/0, 14-17=0/3062, 14-16=-3983/0

NOTES

1) 3-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x4 - 2 rows staggered at 0-7-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) 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.
3) Unbalanced floor live loads have been considered for this design.
4) All plates are 3x5 MT20 unless otherwise indicated.
5) The Fabrication Tolerance at joint 22 = 11%
6) N/A
7) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 29, 23.
8) One RT7A MiTek connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 29, 23, and 16. This connection is for uplift only and does not consider lateral forces.
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.
11) Use MiTek HD46 (With 8-16d nails into Girder & 4-10d nails into Truss) or equivalent spaced at 29-11-8 oc max. starting at 0-3-8 from the left end to 30-3-0 to connect truss(es) to front face of bottom chord.
12) Fill all nail holes where hanger is in contact with lumber.
13) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 831 lb down at 2-0-0, 831 lb down at 4-0-0, 831 lb down at 6-0-0, 831 lb down at 8-0-0, 831 lb down at 10-0-0, 831 lb down at 12-0-0, 847 lb down at 14-0-0, 847 lb down at 16-0-0, 847 lb down at 18-0-0, 570 lb down at 20-0-0, 638 lb down at 22-0-0, 638 lb down at 24-0-0, 638 lb down at 26-0-0, and 267 lb down at 26-7-12, and 314 lb down at 28-0-0 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard

December 20,2021

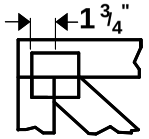
Continued on page 2

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

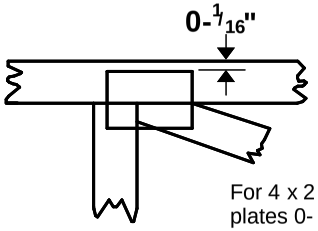
1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00
Uniform Loads (lb/ft)
Vert: 16-30=-10, 1-15=-100
Concentrated Loads (lb)
Vert: 30=-626 (F), 22=-847 (F), 28=-831 (F), 27=-831 (F), 24=-847 (F), 20=-570 (F), 16=-318 (F), 31=-831 (F), 32=-831 (F), 33=-831 (F), 34=-831 (F), 35=-847 (F), 36=-638 (F), 37=-638 (F), 38=-638 (F), 39=-267 (F), 40=-314 (F)

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.

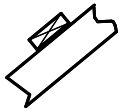
*** Plate location details available in MiTek 20/20 software or upon request.**

PLATE SIZE

4 x 4

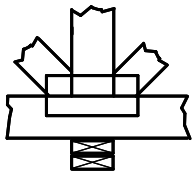
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

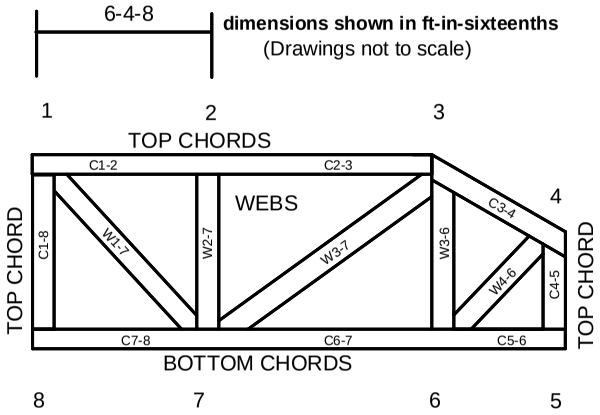


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-89: Design Standard for Bracing.
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing & 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-1311, ESR-1352, ESR1988
ER-3907, ESR-2362, ESR-1397, ESR-3282

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 Reference Sheet: MII-7473 rev. 5/19/2020

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.