ENGINEERING BY TRENCO
A MiTek Affiliate

RE: J0321-1601
Ben Stout/Lot 29 Forest Ridge/Harnett

Trenco
818 Soundside Rd
Edenton, NC 27932

Site Information:

Customer: Project Name: J0321-1601
Lot/Block: Model:
Address: Subdivision:
City: State:

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

Design Code: IRC2015/TPI2014 Design Program: MiTek 20/20 8.3
Wind Code: N/A Wind Speed: N/A mph
Roof Load: N/A psf Floor Load: 55.0 psf

This package includes 10 individual, dated Truss Design Drawings and 0 Additional Drawings.

No.	Seal#	Truss Name	Date
1	E14497675	F01	3/12/2021
2	E14497676	F02	3/12/2021
3	E14497677	F02A	3/12/2021
4	E14497678	F03	3/12/2021
5	E14497679	F03A	3/12/2021
6	E14497680	F04	3/12/2021
7	E14497681	F05	3/12/2021
8	E14497682	FW01	3/12/2021
9	E14497683	FW02	3/12/2021
10	E14497684	FW03	3/12/2021

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

Truss Design Engineer's Name: Gilbert, Eric

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

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.

March 12, 2021

Gilbert, Eric

Job	Truss	Truss Type	Qty	Ply	Ben Stout/Lot 29 Forest Ridge/Harnett
J0321-1601	F01	Floor	5	1	E14497675
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s May 6 2020 MiTek Industries, Inc. Wed Jun 10 15:17:15 2020 Page 1
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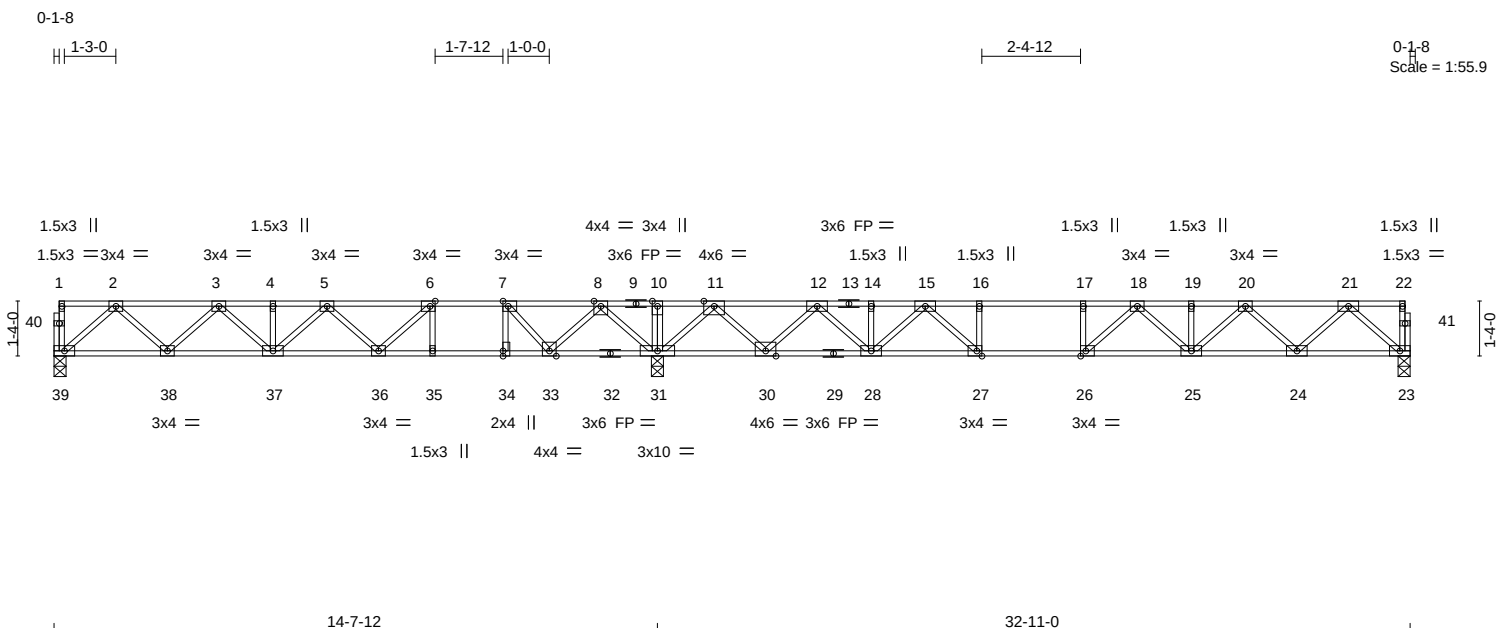

Plate Offsets (X,Y)-- [6:0-1-8,Edge], [7:0-1-8,Edge], [26:0-1-8,Edge], [27:0-1-8,Edge], [34:0-1-8,0-0-0]

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	0.85	Vert(LL)	-0.26	25-26	>828	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.93	Vert(CT)	-0.36	25-26	>613	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.57	Horz(CT)	0.05	23	n/a	n/a		
BCDL	5.0	Code IRC2015/TPI2014		Matrix-S							Weight: 172 lb	FT = 20%F, 11%E

LUMBER-
TOP CHORD 2x4 SP No.1(flat)
BOT CHORD 2x4 SP No.1(flat) *Except*
32-39: 2x4 SP 2400F 2.0E(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 2-2-0 oc bracing.

REACTIONS. (size) 39=0-3-8, 31=0-3-8, 23=0-3-8
Max Grav 39=729(LC 3), 31=2075(LC 1), 23=885(LC 4)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1258/0, 3-4=-1912/0, 4-5=-1912/0, 5-6=-1948/210, 6-7=-1549/534, 7-8=-785/924, 8-10=0/1815, 10-11=0/1815, 11-12=-451/147, 12-14=-1906/0, 14-15=-1906/0, 15-16=-2899/0, 16-17=-2899/0, 17-18=-2899/0, 18-19=-2608/0, 19-20=-2608/0, 20-21=-1589/0
BOT CHORD 38-39=0/780, 37-38=0/1702, 36-37=-43/2104, 35-36=-534/1549, 34-35=-534/1549, 33-34=-534/1549, 31-33=-1251/121, 30-31=-777/0, 28-30=0/1274, 27-28=0/2408, 26-27=0/2899, 25-26=0/2863, 24-25=0/2203, 23-24=0/954
WEBS 2-39=-1036/0, 2-38=0/666, 3-38=-617/15, 3-37=-90/285, 5-37=-261/87, 5-36=-399/0, 6-36=0/836, 6-35=-549/0, 8-31=-1240/0, 8-33=0/1072, 7-33=-1379/0, 7-34=0/642, 21-23=-1268/0, 21-24=0/883, 20-24=-855/0, 20-25=0/550, 18-25=-347/0, 18-26=-224/328, 11-31=-1585/0, 11-30=0/1207, 12-30=-1170/0, 12-28=0/884, 15-28=-708/0, 15-27=0/875, 16-27=-436/0

NOTES-
1) Unbalanced floor live loads have been considered for this design.
2) All plates are 3x6 MT20 unless otherwise indicated.
3) Plates checked for a plus or minus 1 degree rotation about its center.
4) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
5) CAUTION, Do not erect truss backwards.

June 10,2020

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

Job	Truss	Truss Type	Qty	Ply	Ben Stout/Lot 29 Forest Ridge/Harnett
J0321-1601	F02	Floor	5	1	E14497676
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s May 6 2020 MiTek Industries, Inc. Wed Jun 10 15:17:16 2020 Page 1
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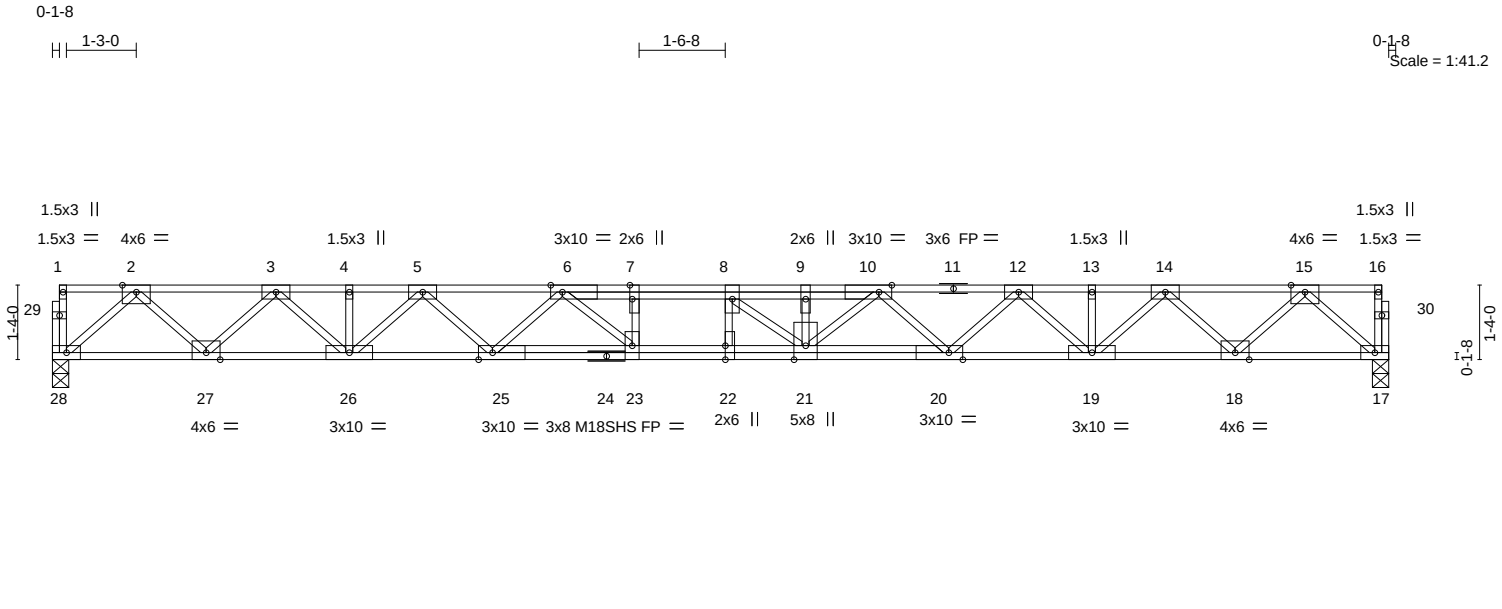

7-10-8	11-11-8	13-5-0	23-11-0
7-10-8	4-1-0	1-5-8	10-6-0

Plate Offsets (X,Y)-- [6:0-2-8,Edge], [7:0-3-0,Edge], [10:0-2-12,Edge], [20:0-3-0,Edge], [22:0-3-0,0-0-0], [25:0-3-0,Edge]

LOADING (psf)		**SPACING-**	1-7-3	**CSI.**		**DEFL.**	in	(loc)	l/defl	L/d	**PLATES**	**GRIP**
TCLL	40.0	Plate Grip DOL	1.00	TC	0.36	Vert(LL)	-0.37	22	>777	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.43	Vert(CT)	-0.50	22	>565	360	M18SHS	244/190
BCLL	0.0	Rep Stress Incr	YES	WB	0.56	Horz(CT)	0.08	17	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 145 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)

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) 28=0-3-8, 17=0-3-8
Max Grav 28=1036(LC 1), 17=1036(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1984/0, 3-4=-3483/0, 4-5=-3483/0, 5-6=-4883/0, 6-7=-5585/0, 7-8=-5585/0, 8-9=-5543/0, 9-10=-5543/0, 10-12=-4834/0, 12-13=-3493/0, 13-14=-3493/0, 14-15=-1984/0
BOT CHORD 27-28=0/1136, 26-27=0/2811, 25-26=0/4178, 23-25=0/5416, 22-23=0/5585, 21-22=0/5585, 20-21=0/5349, 19-20=0/4137, 18-19=0/2809, 17-18=0/1137
WEBS 2-28=-1511/0, 2-27=0/1180, 3-27=-1150/0, 3-26=0/914, 5-26=-943/0, 5-25=0/902, 6-25=-707/0, 6-23=-177/572, 7-23=-261/61, 15-17=-1511/0, 15-18=0/1178, 14-18=-1148/0, 14-19=0/930, 12-19=-874/0, 12-20=0/893, 10-20=-682/0, 10-21=0/356, 8-21=-487/336

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 3x6 MT20 unless otherwise indicated.
4) Plates checked for a plus or minus 1 degree rotation about its center.
5) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.

June 10,2020

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Job	Truss	Truss Type	Qty	Ply	Ben Stout/Lot 29 Forest Ridge/Harnett
J0321-1601	F02A	GABLE	1	1	E14497677
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s May 6 2020 MiTek Industries, Inc. Wed Jun 10 15:17:18 2020 Page 1
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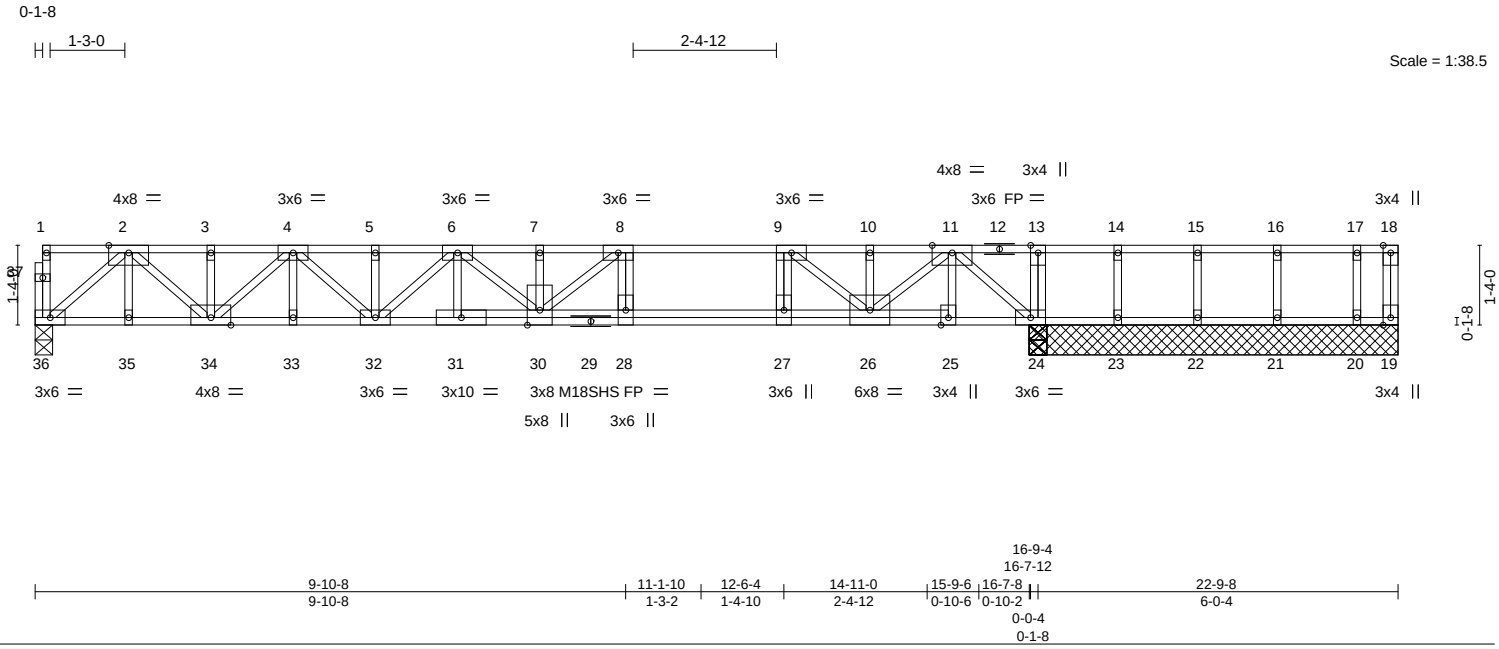

LOADING (psf)		SPACING-	1-7-3	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.58	Vert(LL)	-0.24	28-30	>816	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.80	Vert(CT)	-0.34	28-30	>594	360	M18SHS	244/190
BCLL	0.0	Rep Stress Incr	NO	WB	0.61	Horz(CT)	0.04	19	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 138 lb	FT = 20%F, 11%E

LUMBER-

TOP CHORD	2x4 SP No.1(flat) *Except* 1-12: 2x4 SP 2400F 2.0E(flat)
BOT CHORD	2x4 SP 2400F 2.0E(flat) *Except* 29-36: 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. All bearings 6-2-0 except (jt=length) 36=0-3-8.
(lb) - Max Grav All reactions 250 lb or less at joint(s) 19, 23, 22, 21, 20 except 36=1137(LC 1), 24=1322(LC 1), 24=1322(LC 1)

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

TOP CHORD	2-3=-2216/0, 3-4=-2216/0, 4-5=-3498/0, 5-6=-3498/0, 6-7=-4165/0, 7-8=-4165/0, 8-9=-3579/0, 9-10=-2156/0, 10-11=-2156/0
BOT CHORD	35-36=0/1255, 34-35=0/1255, 33-34=0/2960, 32-33=0/2960, 31-32=0/3809, 30-31=0/3816, 28-30=0/3579, 27-28=0/3579, 26-27=0/3579, 25-26=0/1173, 24-25=0/1173
WEBS	2-36=-1637/0, 2-34=0/1279, 4-34=-990/0, 4-32=0/716, 6-32=-414/0, 6-30=0/463, 8-30=0/749, 8-28=-514/0, 9-27=0/806, 9-26=-1820/0, 11-26=0/1279, 11-24=-1532/0

NOTES-
1) All plates are MT20 plates unless otherwise indicated.
2) All plates are 1.5x3 MT20 unless otherwise indicated.
3) Plates checked for a plus or minus 1 degree rotation about its center.
4) Gable studs spaced at 1-4-0 oc.
5) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
6) CAUTION, Do not erect truss backwards.
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 (plf)
Vert: 19-36=-58(B=-50), 1-18=-80

June 10,2020

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Job	Truss	Truss Type	Qty	Ply	Ben Stout/Lot 29 Forest Ridge/Harnett
J0321-1601	F03	FLOOR	3	1	E14497678
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s May 6 2020 MiTek Industries, Inc. Wed Jun 10 15:17:20 2020 Page 1
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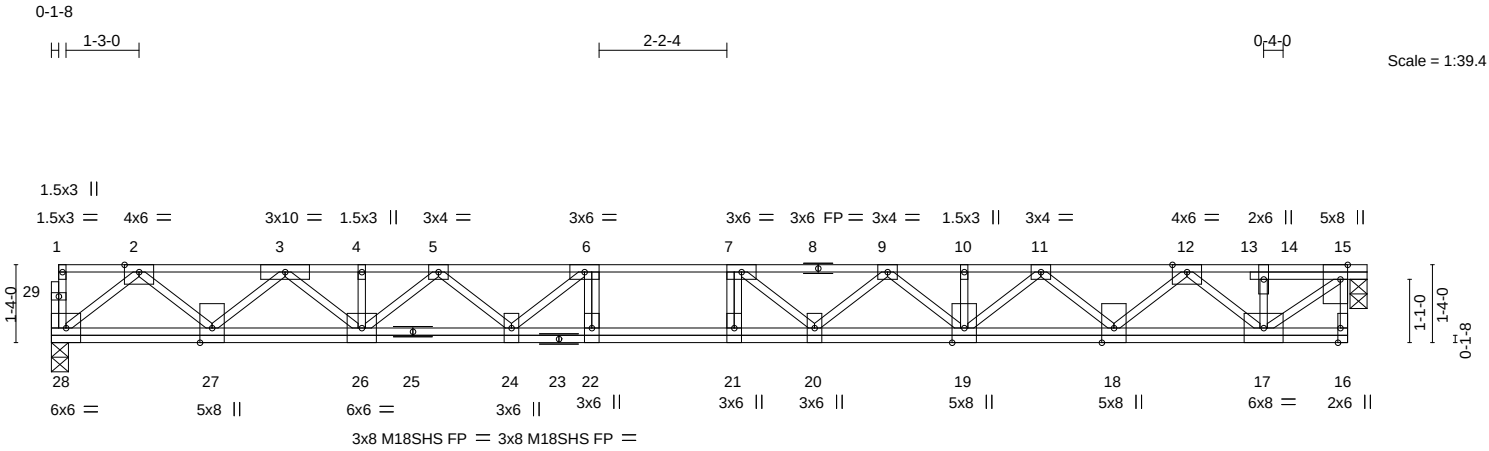

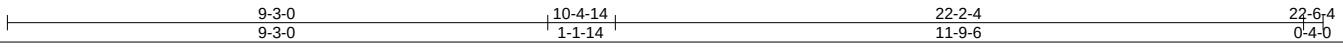

Plate Offsets (X,Y)-- [15:0-3-0,Edge], [16:0-3-0,Edge]

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	0.48	Vert(LL)	-0.35	21	>760	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.46	Vert(CT)	-0.48	21	>552	360	M18SHS	244/190
BCLL	0.0	Rep Stress Incr	YES	WB	0.83	Horz(CT)	-0.03	15	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 151 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)

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) 28=0-3-8, 15=0-3-8
Max Grav 28=1207(LC 1), 15=1207(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2336/0, 3-4=-4101/0, 4-5=-4101/0, 5-6=-5170/0, 6-7=-5684/0, 7-9=-5524/0, 9-10=-4768/0, 10-11=-4768/0, 11-12=-3345/0, 12-14=-1370/0, 14-15=-1370/0
BOT CHORD 27-28=0/1397, 26-27=0/3326, 24-26=0/4774, 22-24=0/5684, 21-22=0/5684, 20-21=0/5684, 19-20=0/5293, 18-19=0/4171, 17-18=0/2490
WEBS 15-17=0/1744, 2-28=-1766/0, 2-27=0/1277, 3-27=-1343/0, 3-26=0/1029, 12-17=-1488/0, 12-18=0/1160, 11-18=-1121/0, 11-19=0/791, 9-19=-697/0, 9-20=0/464, 5-26=-894/0, 5-24=0/615, 6-24=-989/0, 7-20=-676/267, 7-21=-391/260, 6-22=-214/438

NOTES-
1) Unbalanced floor live loads have been considered for this design.
2) All plates are MT20 plates unless otherwise indicated.
3) Plates checked for a plus or minus 1 degree rotation about its center.
4) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
5) Gap between inside of top chord bearing and first diagonal or vertical web shall not exceed 0.500in.
6) CAUTION, Do not erect truss backwards.

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J0321-1601	F03A	Floor	1	1	E14497679
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s May 6 2020 MiTek Industries, Inc. Wed Jun 10 15:17:21 2020 Page 1
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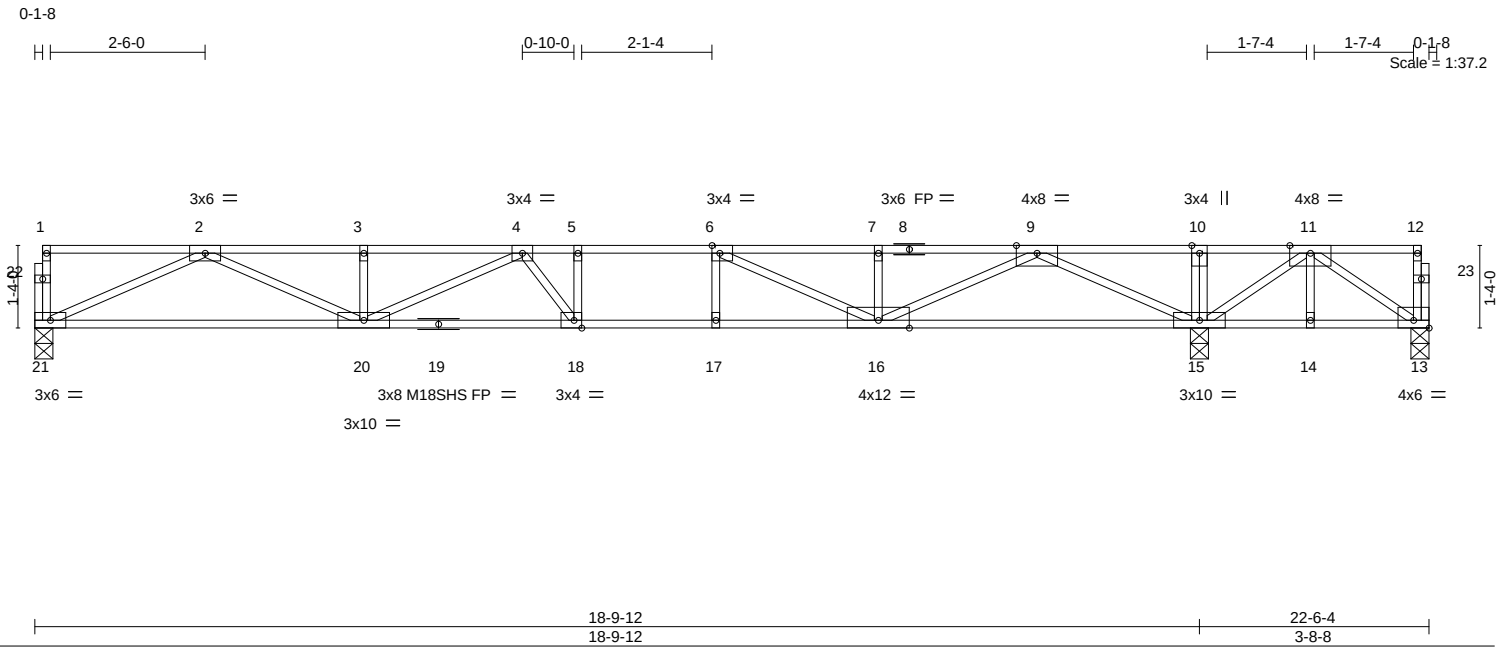

18-9-12 | 22-6-4
18-9-12 | 3-8-8

Plate Offsets (X,Y)-- [6:0-1-8,Edge], [13:Edge,0-1-8], [18:0-1-8,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	0.64	Vert(LL)	-0.30	18-20	>750	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.93	Vert(CT)	-0.41	18-20	>552	360	M18SHS	244/190
BCLL	0.0	Rep Stress Incr	YES	WB	0.81	Horz(CT)	0.05	15	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 116 lb	FT = 20%F, 11%E

LUMBER-
TOP CHORD 2x4 SP No.1(flat) *Except* 1-8: 2x4 SP 2400F 2.0E(flat)
BOT CHORD 2x4 SP No.1(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 2-2-0 oc bracing.

REACTIONS. (size) 21=0-3-8, 15=0-3-8, 13=0-3-8
Max Uplift 13=-654(LC 3)
Max Grav 21=884(LC 3), 15=2074(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2657/0, 3-4=-2657/0, 4-5=-2805/0, 5-6=-2805/0, 6-7=-1667/0, 7-9=-1667/0, 9-10=0/2044, 10-11=0/2040
BOT CHORD 20-21=0/1656, 18-20=0/2971, 17-18=0/2805, 16-17=0/2805, 14-15=-1011/0, 13-14=-1011/0
WEBS 2-21=-1817/0, 2-20=0/1106, 9-15=-2385/0, 9-16=0/1710, 7-16=-261/45, 6-16=-1255/0, 4-20=-376/0, 4-18=-451/188, 5-18=-129/267, 11-15=-1383/0, 11-13=0/1221

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 1.5x3 MT20 unless otherwise indicated.
4) Plates checked for a plus or minus 1 degree rotation about its center.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 654 lb uplift at joint 13.
6) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
7) CAUTION, Do not erect truss backwards.

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Job	Truss	Truss Type	Qty	Ply	Ben Stout/Lot 29 Forest Ridge/Harnett
J0321-1601	F04	Floor	6	1	E14497680
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s May 6 2020 MiTek Industries, Inc. Wed Jun 10 15:17:22 2020 Page 1
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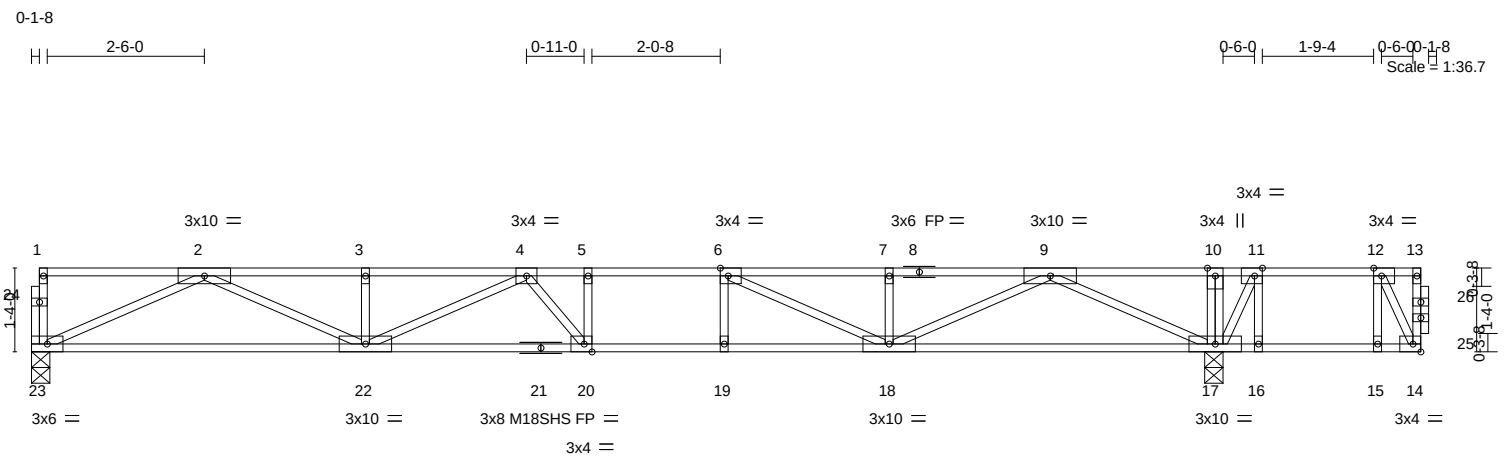

Plate Offsets (X,Y)-- [6:0-1-8,Edge], [11:0-1-8,Edge], [12:0-1-8,Edge], [20:0-1-8,Edge]

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	0.98	Vert(LL)	-0.33	20-22	>679	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.96	Vert(CT)	-0.45	20-22	>503	360	M18SHS	244/190
BCLL	0.0	Rep Stress Incr	YES	WB	0.71	Horz(CT)	0.07	17	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 114 lb	FT = 20%F, 11%E

LUMBER-
TOP CHORD 2x4 SP No.1(flat)
BOT CHORD 2x4 SP No.1(flat)
WEBS 2x4 SP No.3(flat)

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

REACTIONS. (size) 23=0-3-8, 17=0-3-8
Max Grav 23=1012(LC 3), 17=1415(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-3200/0, 3-4=-3200/0, 4-5=-3846/0, 5-6=-3846/0, 6-7=-3107/0, 7-9=-3107/0, 9-10=0/461, 10-11=0/464
BOT CHORD 22-23=0/1930, 20-22=0/3804, 19-20=0/3846, 18-19=0/3846, 17-18=0/1806
WEBS 2-23=-2119/0, 2-22=0/1403, 3-22=-253/0, 9-17=-2132/0, 9-18=0/1486, 7-18=-298/31, 6-18=-1134/0, 4-22=-669/0, 4-20=-334/482, 5-20=-290/167, 12-14=0/294, 11-17=-639/0

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 1.5x3 MT20 unless otherwise indicated.
4) Plates checked for a plus or minus 1 degree rotation about its center.
5) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
6) CAUTION, Do not erect truss backwards.

June 10,2020

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

Job	Truss	Truss Type	Qty	Ply	Ben Stout/Lot 29 Forest Ridge/Harnett
J0321-1601	F05	Floor	5	1	E14497681
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s May 6 2020 MiTek Industries, Inc. Wed Jun 10 15:17:22 2020 Page 1
ID:ikQyRsNXi14PrYc3UMF2QWzXTAO-x?WkoqcaOZAGvnzAk5Z0qdRNSDuRu2vuCEAbUIz7emh

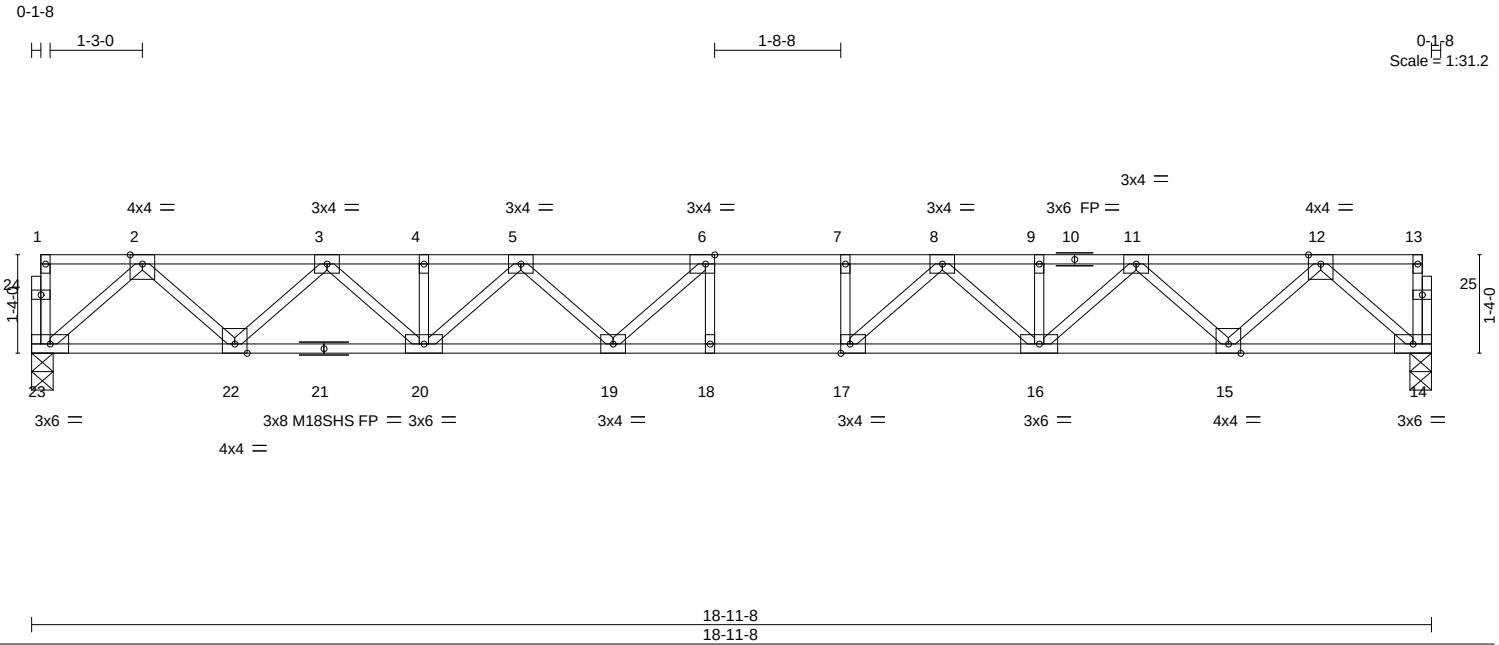

Plate Offsets (X,Y)-- [6:0-1-8,Edge], [17:0-1-8,Edge]

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	0.57	Vert(LL)	-0.27	18-19	>838	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.64	Vert(CT)	-0.37	18-19	>612	360	M18SHS	244/190
BCLL	0.0	Rep Stress Incr	YES	WB	0.52	Horz(CT)	0.06	14	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 100 lb	FT = 20%F, 11%E

LUMBER-
TOP CHORD 2x4 SP No.1(flat)
BOT CHORD 2x4 SP 2400F 2.0E(flat) *Except*
21-23: 2x4 SP No.1(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=0-3-8, 23=0-3-8
Max Grav 14=1023(LC 1), 23=1023(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1892/0, 3-4=-3178/0, 4-5=-3178/0, 5-6=-3824/0, 6-7=-3939/0, 7-8=-3939/0, 8-9=-3182/0, 9-11=-3182/0, 11-12=-1893/0
BOT CHORD 22-23=0/1112, 20-22=0/2641, 19-20=0/3644, 18-19=0/3939, 17-18=0/3939, 16-17=0/3613, 15-16=0/2637, 14-15=0/1113
WEBS 2-23=-1478/0, 2-22=0/1085, 3-22=-1042/0, 3-20=0/730, 5-20=-634/0, 5-19=0/402, 6-19=-470/171, 12-14=-1480/0, 12-15=0/1084, 11-15=-1035/0, 11-16=0/741, 8-16=-586/0, 8-17=0/699, 7-17=-284/0

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 1.5x3 MT20 unless otherwise indicated.
4) Plates checked for a plus or minus 1 degree rotation about its center.
5) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.

June 10,2020

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Job	Truss	Truss Type	Qty	Ply	Ben Stout/Lot 29 Forest Ridge/Harnett
J0321-1601	FW01	GABLE	1	1	E14497682
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s May 6 2020 MiTek Industries, Inc. Wed Jun 10 15:17:24 2020 Page 1
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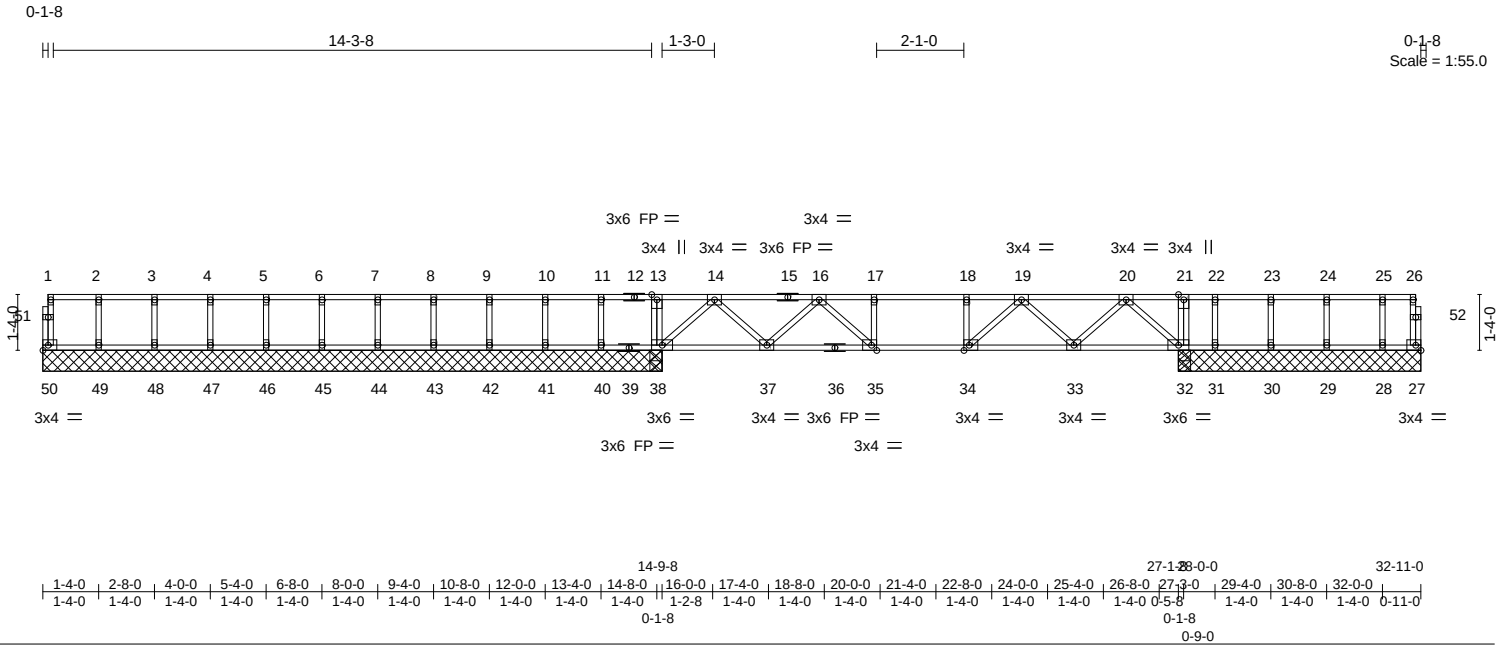

Plate Offsets (X,Y)-- [34:0-1-8,Edge], [35:0-1-8,Edge]

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	0.22	Vert(LL)	-0.06	34-35	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.32	Vert(CT)	-0.08	34-35	>999	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.28	Horz(CT)	0.02	27	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 155 lb	FT = 20%F, 11%E

LUMBER-

TOP CHORD	2x4 SP No.1(flat)
BOT CHORD	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. All bearings 14-9-8 except (jt=length) 27=5-9-8, 32=5-9-8, 32=5-9-8, 31=5-9-8, 30=5-9-8, 29=5-9-8, 28=5-9-8.
(lb) - Max Uplift All uplift 100 lb or less at joint(s) 40, 31
Max Grav All reactions 250 lb or less at joint(s) 27, 50, 49, 48, 47, 46, 45, 44, 43, 42, 41, 40, 31, 30, 29, 28 except 32=802(LC 4), 32=802(LC 1), 38=799(LC 1), 38=799(LC 1)

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

TOP CHORD	14-16=-1116/0, 16-17=-1727/0, 17-18=-1727/0, 18-19=-1727/0, 19-20=-1112/0
BOT CHORD	37-38=0/696, 35-37=0/1520, 34-35=0/1727, 33-34=0/1518, 32-33=0/691
WEBS	20-32=-920/0, 20-33=0/585, 19-33=-564/0, 19-34=0/285, 14-38=-926/0, 14-37=0/586, 16-37=-562/0, 16-35=0/282

NOTES-

1) Unbalanced floor live loads have been considered for this design.
2) All plates are 1.5x3 MT20 unless otherwise indicated.
3) Plates checked for a plus or minus 1 degree rotation about its center.
4) Gable studs spaced at 1-4-0 oc.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 40, 31.
6) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
7) CAUTION, Do not erect truss backwards.

June 10,2020

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

Job	Truss	Truss Type	Qty	Ply	Ben Stout/Lot 29 Forest Ridge/Harnett
J0321-1601	FW02	GABLE	1	1	E14497683
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s May 6 2020 MiTek Industries, Inc. Wed Jun 10 15:17:25 2020 Page 1
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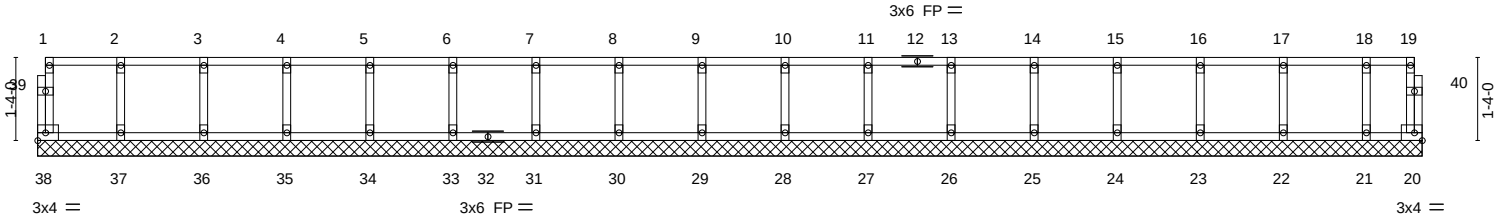

1-4-0	2-8-0	4-0-0	5-4-0	6-8-0	8-0-0	9-4-0	10-8-0	12-0-0	13-4-0	14-8-0	16-0-0	17-4-0	18-8-0	20-0-0	21-4-0	22-2-12
1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	0-10-12

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	0.06	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.01	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.03	Horz(CT)	0.00	20	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-R							Weight: 97 lb	FT = 20%F, 11%E

LUMBER-

TOP CHORD	2x4 SP No.1(flat)
BOT CHORD	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. All bearings 22-2-12.
(lb) - Max Grav All reactions 250 lb or less at joint(s) 38, 20, 37, 36, 35, 34, 33, 31, 30, 29, 28, 27, 26, 25, 24, 23, 22, 21

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

NOTES-
1) All plates are 1.5x3 MT20 unless otherwise indicated.
2) Plates checked for a plus or minus 1 degree rotation about its center.
3) Gable requires continuous bottom chord bearing.
4) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
5) Gable studs spaced at 1-4-0 oc.
6) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.

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Job	Truss	Truss Type	Qty	Ply	Ben Stout/Lot 29 Forest Ridge/Harnett
J0321-1601	FW03	GABLE	1	1	E14497684
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s May 6 2020 MiTek Industries, Inc. Wed Jun 10 15:17:26 2020 Page 1
ID:ikQyRsNXi14PrYc3UMF2QWzXTAO-qmmFdBf5RoghOOHxzxey_TbBVqO9q_TU6s8od4z7emd

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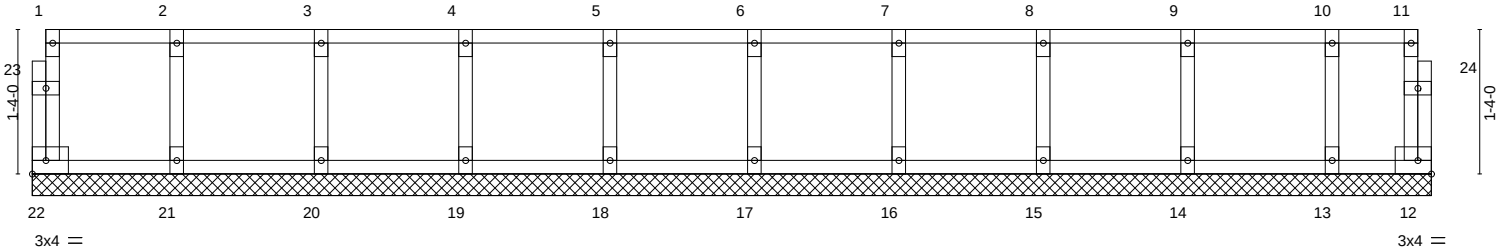

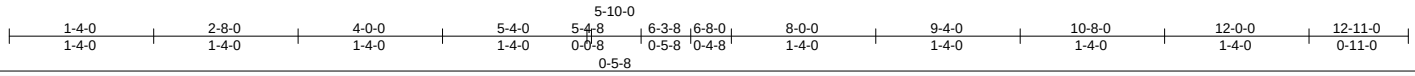

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.06	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.01	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.03	Horz(CT)	0.00	12	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-R							Weight: 58 lb	FT = 20%F, 11%E

LUMBER-

TOP CHORD	2x4 SP No.1(flat)
BOT CHORD	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. All bearings 12-11-0.
(lb) - Max Grav All reactions 250 lb or less at joint(s) 22, 12, 21, 20, 19, 18, 17, 16, 15, 14, 13

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

NOTES-
1) All plates are 1.5x3 MT20 unless otherwise indicated.
2) Plates checked for a plus or minus 1 degree rotation about its center.
3) Gable requires continuous bottom chord bearing.
4) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
5) Gable studs spaced at 1-4-0 oc.
6) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.

June 10,2020

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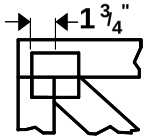
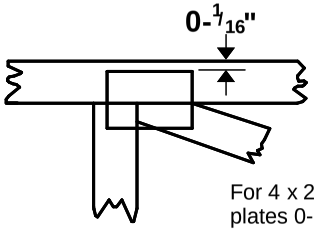
Symbols

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.

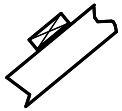
*** Plate location details available in MiTek 20/20 software or upon request.**

PLATE SIZE

4 x 4

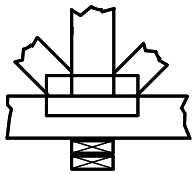
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

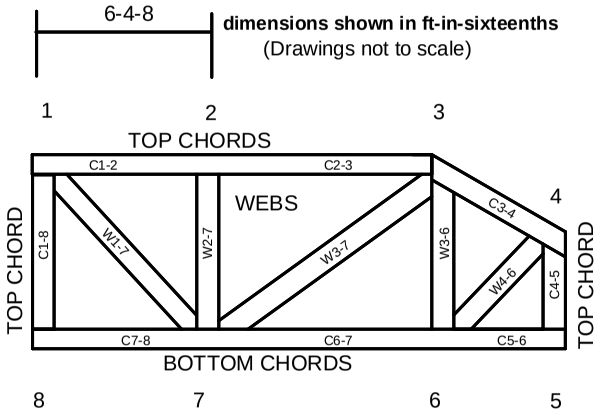


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

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
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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.