

RE: J0921-5768  
 Southern Touch / 1 Microtower Rd. / Lee Co.

Trenco  
 818 Soundside Rd  
 Edenton, NC 27932

**Site Information:**

Customer: Project Name: J0921-5768  
 Lot/Block: Model:  
 Address: Subdivision:  
 City: State:

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

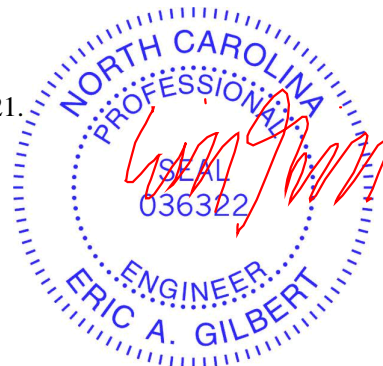
Design Code: IRC2015/TPI2014 Design Program: MiTek 20/20 8.4  
 Wind Code: N/A Wind Speed: N/A mph  
 Roof Load: N/A psf Floor Load: 55.0 psf

This package includes 12 individual, dated Truss Design Drawings and 0 Additional Drawings.

No.	Seal#	Truss Name	Date
1	E15971364	F1	7/23/2021
2	E15971365	F2	7/23/2021
3	E15971366	F2A	7/23/2021
4	E15971367	F3	7/23/2021
5	E15971368	F4	7/23/2021
6	E15971369	F5	7/23/2021
7	E15971370	F6	7/23/2021
8	E15971371	F6A	7/23/2021
9	E15971372	KW1	7/23/2021
10	E15971373	KW2	7/23/2021
11	E15971374	KW4	7/23/2021
12	E15971375	KW6	7/23/2021

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.



Job	Truss	Truss Type	Qty	Ply	Southern Touch / 1 Microtower Rd. / Lee Co.	E15971364
J0921-5768	F1	Floor	6	1	Job Reference (optional)	

Comtech, Inc., Fayetteville, NC - 28314,

8.430 s Jun 2 2021 MiTek Industries, Inc. Fri Jul 23 14:59:49 2021 Page 1  
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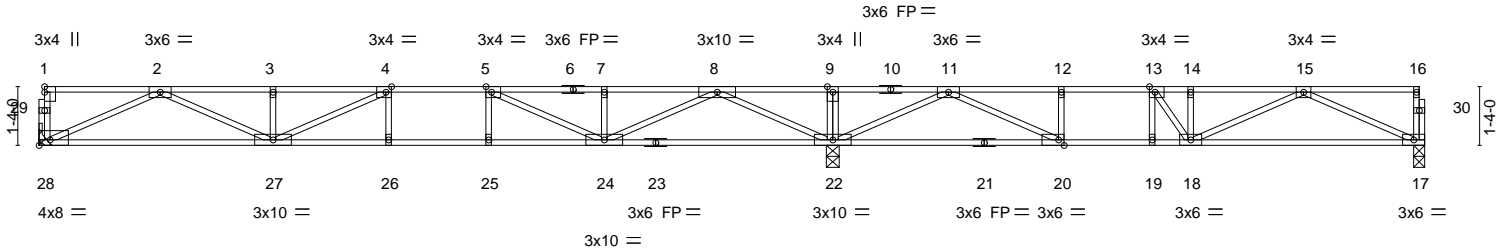


Plate Offsets (X,Y)--	[4:0-1-8,Edge], [5:0-1-8,Edge], [13:0-1-8,Edge], [20:0-1-8,Edge], [28:Edge,0-1-8]
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LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 40.0	Plate Grip DOL 1.00	TC 0.74	Vert(LL) -0.27 26-27 >809 480	MT20	244/190
TCDL 10.0	Lumber DOL 1.00	BC 0.70	Vert(CT) -0.35 26-27 >609 360		
BCLL 0.0	Rep Stress Incr NO	WB 0.76	Horz(CT) 0.05 17 n/a n/a		
BCDL 5.0	Code IRC2015/TPI2014	Matrix-S		Weight: 156 lb	FT = 20%F, 11%E

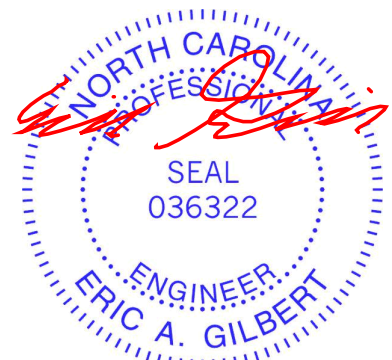
LUMBER-	BRACING-
TOP CHORD 2x4 SP No.1(flat)	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD 2x4 SP 2400F 2.0E(flat)	BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 2x4 SP No.3(flat)	

**REACTIONS.** (size) 28=Mechanical, 17=0-3-0, 22=0-3-8  
Max Grav 28=2429(LC 10), 17=653(LC 4), 22=1993(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 1-28=-1657/0, 2-3=-2727/0, 3-4=-2727/0, 4-5=-2965/0, 5-7=-2077/0, 7-8=-2077/0, 8-9=0/1705, 9-11=0/1705, 11-12=-1536/225, 12-13=-1536/225, 13-14=-1656/0, 14-15=-1656/0  
BOT CHORD 27-28=0/1724, 26-27=0/2965, 25-26=0/2965, 24-25=0/2965, 22-24=-186/685, 20-22=-776/672, 19-20=-225/1536, 18-19=-225/1536, 17-18=0/1158  
WEBS 9-22=-293/0, 2-28=-1803/0, 2-27=0/1110, 3-27=-318/0, 4-27=-450/135, 8-22=-2242/0, 8-24=0/1595, 7-24=-270/19, 5-24=-1154/0, 15-17=-1269/0, 15-18=-54/550, 14-18=-359/0, 11-22=-1735/0, 11-20=0/1225, 12-20=-376/0, 13-18=0/646, 13-19=-351/0

- NOTES-**
- Unbalanced floor live loads have been considered for this design.
  - All plates are 1.5x3 MT20 unless otherwise indicated.
  - Plates checked for a plus or minus 1 degree rotation about its center.
  - Refer to girder(s) for truss to truss connections.
  - 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.
  - CAUTION, Do not erect truss backwards.

**LOAD CASE(S)** Standard  
1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 17-28=-10, 1-16=-100  
Concentrated Loads (lb)  
Vert: 1=-1550



July 23, 2021

Job	Truss	Truss Type	Qty	Ply	Southern Touch / 1 Microtower Rd. / Lee Co.	E15971365
J0921-5768	F2	Floor	5	1	Job Reference (optional)	

Comtech, Inc, Fayetteville, NC - 28314,

8.430 s Jun 2 2021 MiTek Industries, Inc. Fri Jul 23 14:59:49 2021 Page 1  
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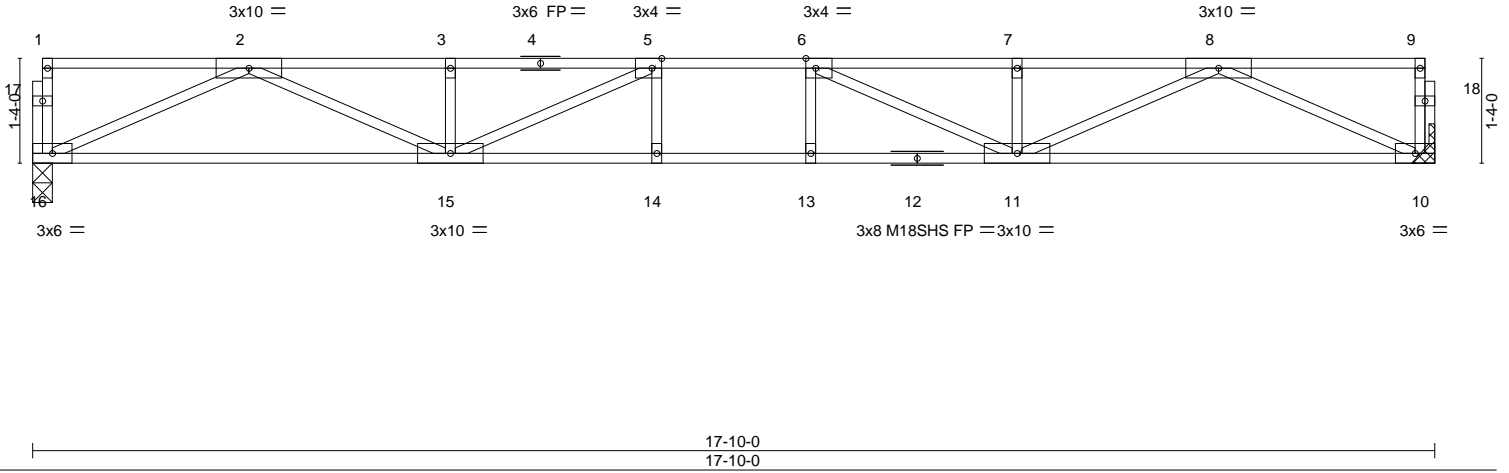
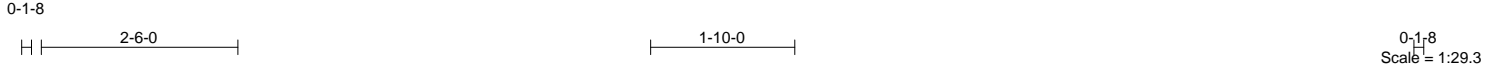


Plate Offsets (X,Y)-- [5:0-1-8,Edge], [6:0-1-8,Edge]

LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 40.0	Plate Grip DOL 1.00	TC 0.54	Vert(LL) -0.24	14-15	>875	480	MT20	244/190
TCDL 10.0	Lumber DOL 1.00	BC 0.84	Vert(CT) -0.33	13-14	>649	360	M18SHS	244/190
BCLL 0.0	Rep Stress Incr YES	WB 0.61	Horz(CT) 0.06	10	n/a	n/a		
BCDL 5.0	Code IRC2015/TPI2014	Matrix-S						
							Weight: 89 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 or 6-0-0 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 16=0-3-0, 10=Mechanical  
Max Grav 16=961(LC 1), 10=961(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-2980/0, 3-5=-2980/0, 5-6=-3497/0, 6-7=-2980/0, 7-8=-2980/0  
BOT CHORD 15-16=0/1818, 14-15=0/3497, 13-14=0/3497, 11-13=0/3497, 10-11=0/1818  
WEBS 2-16=-1995/0, 2-15=0/1285, 3-15=-302/0, 5-15=-833/0, 8-10=-1995/0, 8-11=0/1285,  
7-11=-302/0, 6-11=-833/0

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



July 23, 2021

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**  
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Southern Touch / 1 Microtower Rd. / Lee Co.	E15971366
J0921-5768	F2A	Floor Girder	1	1	Job Reference (optional)	

Comtech, Inc, Fayetteville, NC - 28314,

8.430 s Jun 2 2021 MiTek Industries, Inc. Fri Jul 23 14:59:50 2021 Page 1  
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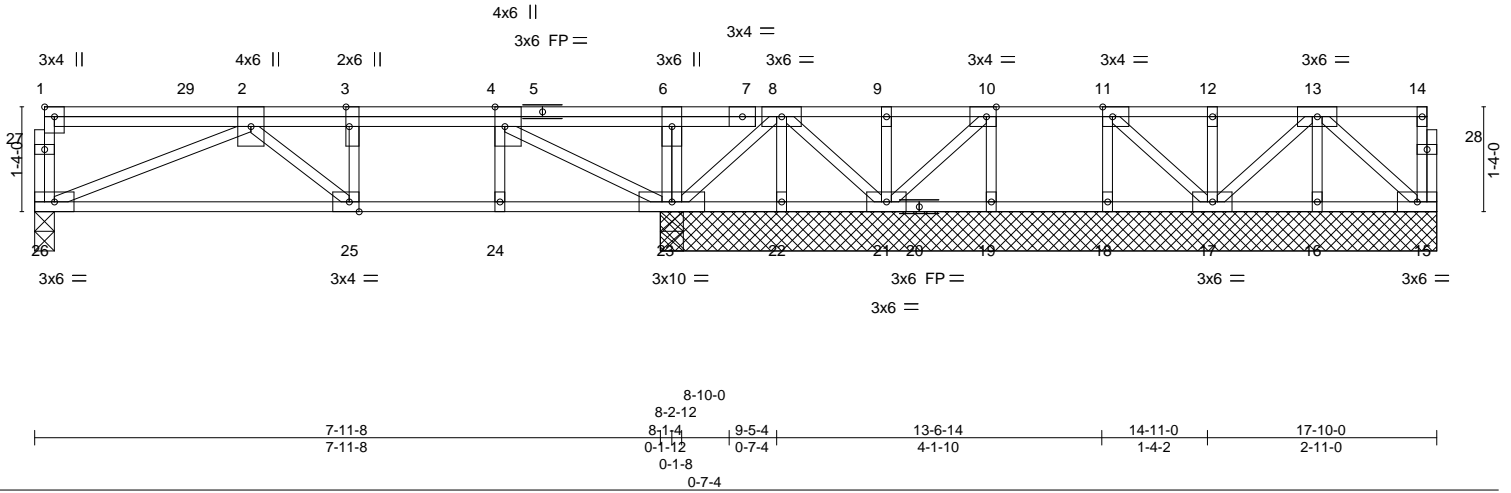
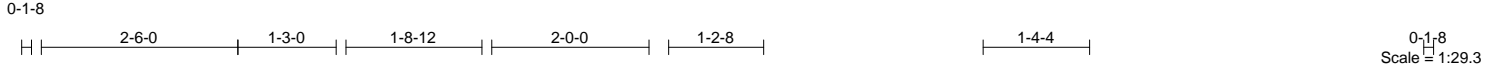


Plate Offsets (X,Y)-- [1:Edge,0-1-8], [3:0-3-0,Edge], [4:0-3-0,Edge], [10:0-1-8,Edge], [11:0-1-8,Edge], [25:0-1-8,Edge]

LOADING (psf)	SPACING-	CSL	DEFL.	PLATES	GRIP
TCLL 40.0	2-0-0	TC 0.19	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.00	BC 0.30	Vert(LL) -0.04 25-26 >999 480		
BCLL 0.0	Lumber DOL 1.00	WB 0.33	Vert(CT) -0.07 25-26 >999 360		
BCDL 5.0	Rep Stress Incr NO	Matrix-S	Horz(CT) 0.01 23 n/a n/a		
	Code IRC2015/TPI2014			Weight: 111 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 or 6-0-0 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

**REACTIONS.** All bearings 9-10-8 except (jt=length) 26=0-3-0.  
(lb) - Max Uplift All uplift 100 lb or less at joint(s) 22  
Max Grav All reactions 250 lb or less at joint(s) 15, 22, 21, 19, 16, 17, 18 except 23=883(LC 1), 23=883(LC 1), 26=553(LC 7)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-948/0, 3-4=-948/0  
BOT CHORD 25-26=0/947, 24-25=0/948, 23-24=0/948  
WEBS 2-26=-1026/0, 4-23=-1301/0

- NOTES-**
- Unbalanced floor live loads have been considered for this design.
  - All plates are 1.5x3 MT20 unless otherwise indicated.
  - Plates checked for a plus or minus 1 degree rotation about its center.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 22.
  - 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.
  - CAUTION, Do not erect truss backwards.
  - Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 153 lb down at 1-11-12, and 153 lb down at 3-11-12, and 309 lb down at 5-11-12 on top chord. The design/selection of such connection device(s) is the responsibility of others.
  - 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: 15-26=-10, 1-14=-100  
Concentrated Loads (lb)  
Vert: 4=-229(F) 3=-73(F) 29=-73(F)



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Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

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

Job	Truss	Truss Type	Qty	Ply	Southern Touch / 1 Microtower Rd. / Lee Co.	E15971367
J0921-5768	F3	Floor	2	1	Job Reference (optional)	

Comtech, Inc., Fayetteville, NC - 28314,

8.430 s Jun 2 2021 MiTek Industries, Inc. Fri Jul 23 14:59:51 2021 Page 1  
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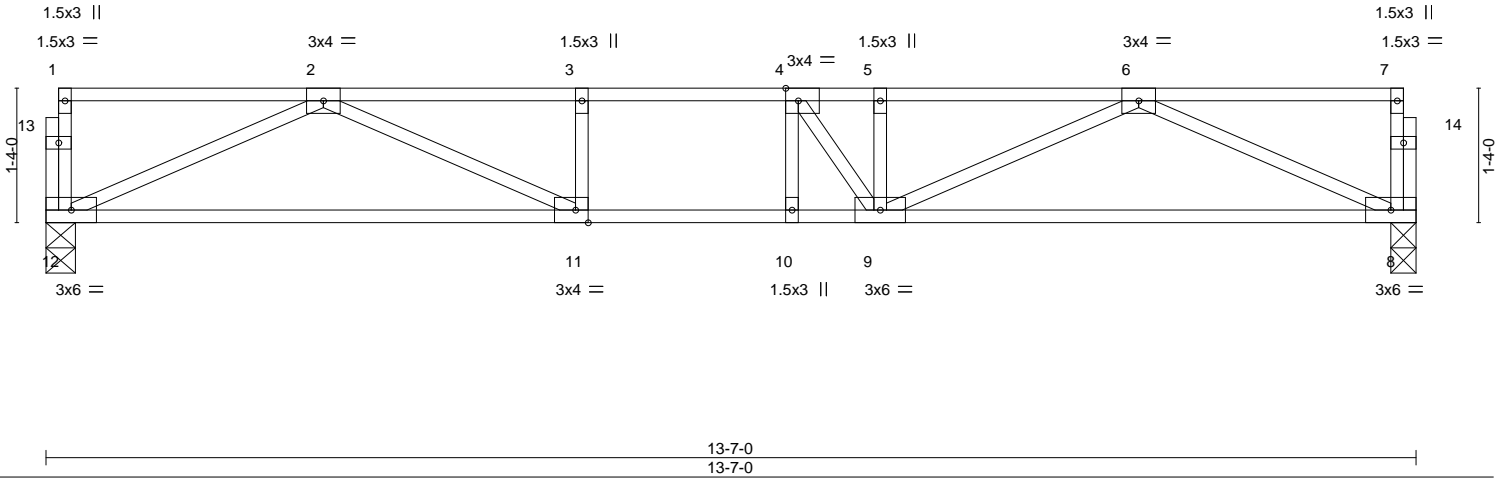
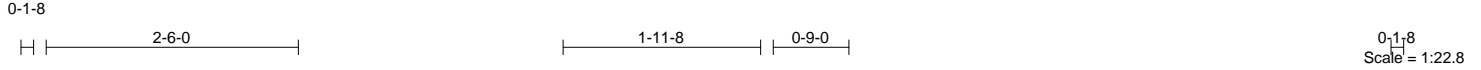


Plate Offsets (X,Y)-- [4:0-1-8,Edge], [11:0-1-8,Edge]

LOADING (psf)	SPACING-	CSL.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 40.0	Plate Grip DOL 1.00	TC 0.39	Vert(LL) -0.12	9-10	>999	480	MT20	244/190
TCDL 10.0	Lumber DOL 1.00	BC 0.65	Vert(CT) -0.18	11-12	>898	360		
BCLL 0.0	Rep Stress Incr YES	WB 0.40	Horz(CT) 0.03	8	n/a	n/a		
BCDL 5.0	Code IRC2015/TPI2014	Matrix-S					Weight: 69 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 or 6-0-0 oc purlins, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 12=0-3-8, 8=0-3-0  
 Max Grav 12=727(LC 1), 8=727(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-1986/0, 3-4=-1986/0, 4-5=-1966/0, 5-6=-1966/0  
 BOT CHORD 11-12=0/1315, 10-11=0/1986, 9-10=0/1986, 8-9=0/1318  
 WEBS 6-8=-1445/0, 6-9=0/716, 5-9=-263/76, 4-9=-385/240, 2-12=-1442/0, 2-11=0/793

- NOTES-**
- 1) Unbalanced floor live loads have been considered for this design.
  - 2) Plates checked for a plus or minus 1 degree rotation about its center.
  - 3) 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.



July 23, 2021

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 Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



818 Soundside Road  
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Southern Touch / 1 Microtower Rd. / Lee Co.	E15971368
J0921-5768	F4	Floor	5	1	Job Reference (optional)	

Comtech, Inc, Fayetteville, NC - 28314,

8.430 s Jun 2 2021 MiTek Industries, Inc. Fri Jul 23 14:59:52 2021 Page 1  
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0-1-8  
Scale = 1:22.3

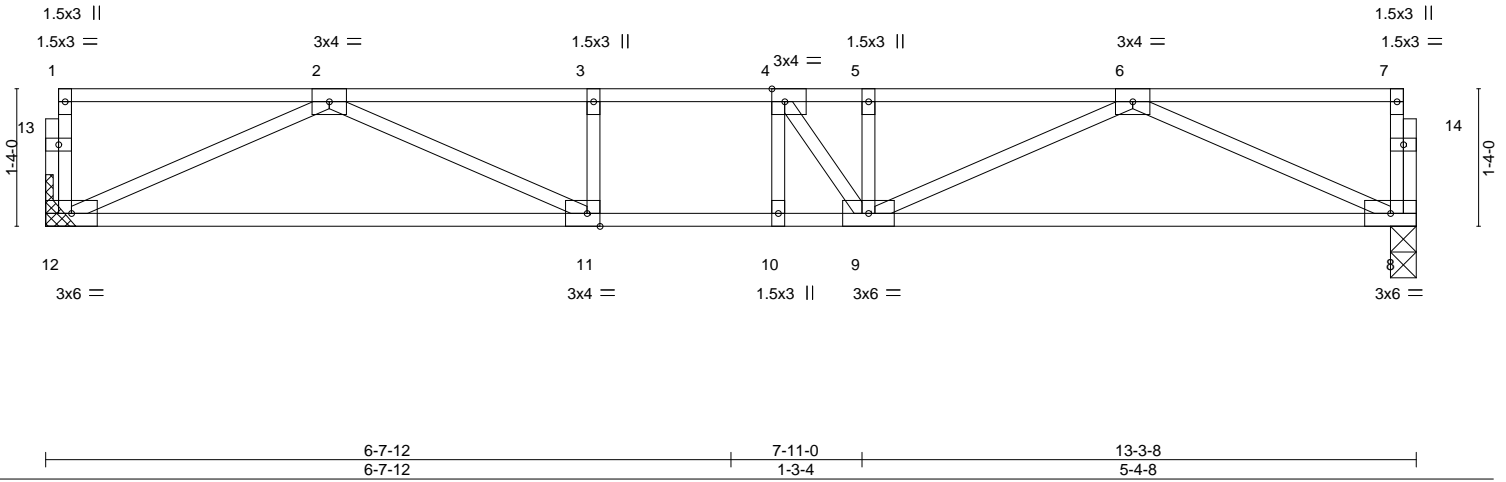


Plate Offsets (X,Y)-- [4:0-1-8,Edge], [11:0-1-8,Edge]

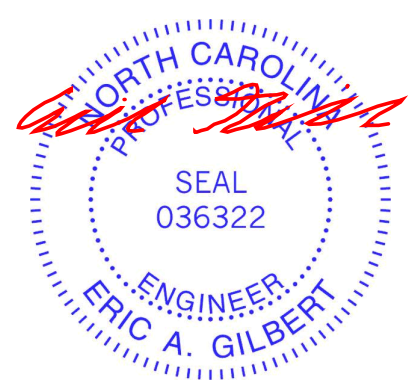
LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 40.0	Plate Grip DOL 1.00	TC 0.31	Vert(LL) -0.10	9-10	>999	480	MT20	244/190
TCDL 10.0	Lumber DOL 1.00	BC 0.58	Vert(CT) -0.16	11-12	>953	360		
BCLL 0.0	Rep Stress Incr YES	WB 0.39	Horz(CT) 0.03	8	n/a	n/a		
BCDL 5.0	Code IRC2015/TPI2014	Matrix-S					Weight: 68 lb	FT = 20%F, 11%E

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.1(flat)	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD 2x4 SP No.1(flat)	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.3(flat)	

**REACTIONS.** (size) 12=Mechanical, 8=0-3-0  
Max Grav 12=711(LC 1), 8=711(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-1908/0, 3-4=-1908/0, 4-5=-1897/0, 5-6=-1897/0  
BOT CHORD 11-12=0/1281, 10-11=0/1908, 9-10=0/1908, 8-9=0/1283  
WEBS 6-8=-1407/0, 6-9=0/679, 5-9=-259/61, 2-12=-1405/0, 2-11=0/738, 4-9=-348/244

- NOTES-**
- 1) Unbalanced floor live loads have been considered for this design.
  - 2) Plates checked for a plus or minus 1 degree rotation about its center.
  - 3) Refer to girder(s) for truss to truss connections.
  - 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.



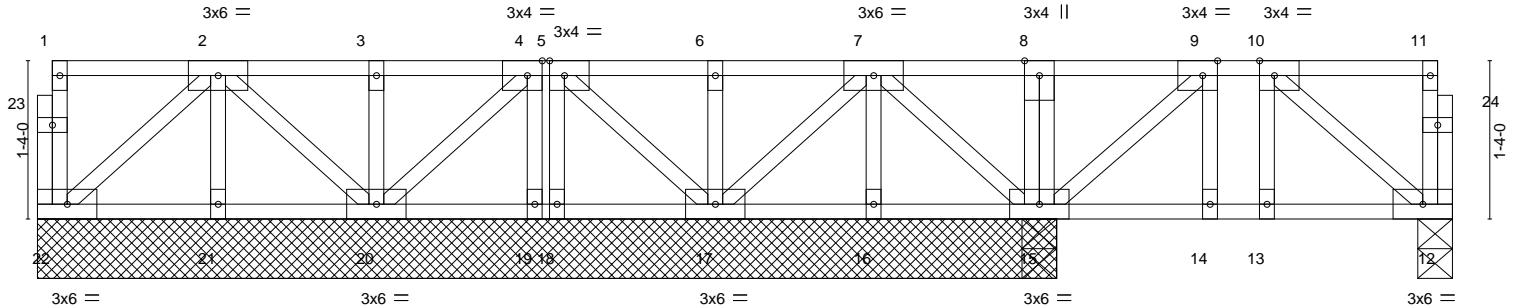
July 23, 2021



Job	Truss	Truss Type	Qty	Ply	Southern Touch / 1 Microtower Rd. / Lee Co.	E15971369
J0921-5768	F5	Floor	1	1	Job Reference (optional)	

Comtech, Inc, Fayetteville, NC - 28314,

8.430 s Jun 2 2021 MiTek Industries, Inc. Fri Jul 23 14:59:52 2021 Page 1  
ID:lwPOH6hK8Jeptt6SXqQJcym6C-9OZRwkvBWhQVhrgTZVy3cojRN0GQAyNbKnp15fyv8v5



2-11-0	4-3-0	4-3-6	4-11-6	5-7-12	8-5-4	8-7-0	11-11-0
2-11-0	1-4-0	0-0-6	0-8-0	0-8-6	2-9-8	0-1-12	3-4-0

Plate Offsets (X,Y)-- [4:0-1-8,Edge], [5:0-1-8,Edge], [9:0-1-8,Edge], [10:0-1-8,Edge]

LOADING (psf)	SPACING-	CSL	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 40.0	Plate Grip DOL 1.00	TC 0.18	Vert(LL) -0.00	13	>999	480	MT20	244/190
TCDL 10.0	Lumber DOL 1.00	BC 0.10	Vert(CT) -0.00	12-13	>999	360		
BCLL 0.0	Rep Stress Incr NO	WB 0.08	Horz(CT) -0.00	22	n/a	n/a		
BCDL 5.0	Code IRC2015/TPI2014	Matrix-S					Weight: 77 lb	FT = 20%F, 11%E

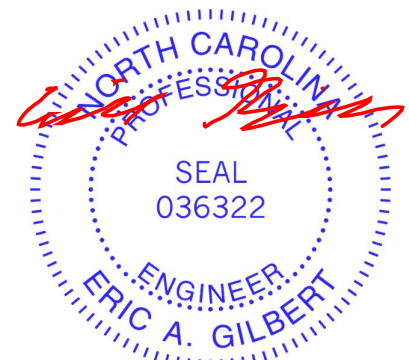
LUMBER-	BRACING-
TOP CHORD 2x4 SP No.1(flat)	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD 2x4 SP No.1(flat)	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 16-17,15-16.
WEBS 2x4 SP No.3(flat)	

**REACTIONS.** All bearings 8-7-0 except (jt=length) 12=0-3-8.  
(lb) - Max Grav All reactions 250 lb or less at joint(s) 22, 21, 16, 19, 18 except 12=323(LC 4), 20=365(LC 10), 17=376(LC 10), 15=581(LC 9), 15=564(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
WEBS 8-15=-305/0, 6-17=-272/0, 3-20=-263/0, 9-15=-342/0, 10-12=-303/0

- 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) 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.

**LOAD CASE(S)** Standard  
1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 12-22=-10, 1-11=-200



July 23, 2021





Job	Truss	Truss Type	Qty	Ply	Southern Touch / 1 Microtower Rd. / Lee Co.	E15971371
J0921-5768	F6A	Floor	1	1	Job Reference (optional)	

Comtech, Inc, Fayetteville, NC - 28314,

8.430 s Jun 2 2021 MiTek Industries, Inc. Fri Jul 23 14:59:53 2021 Page 1  
ID:lwPOH6hK8Jeptt6SXqQOJcym6C-db7p74vpH\_YMJ?Fg7CTI8?Fc9QcqPILZRZad5yv8v4

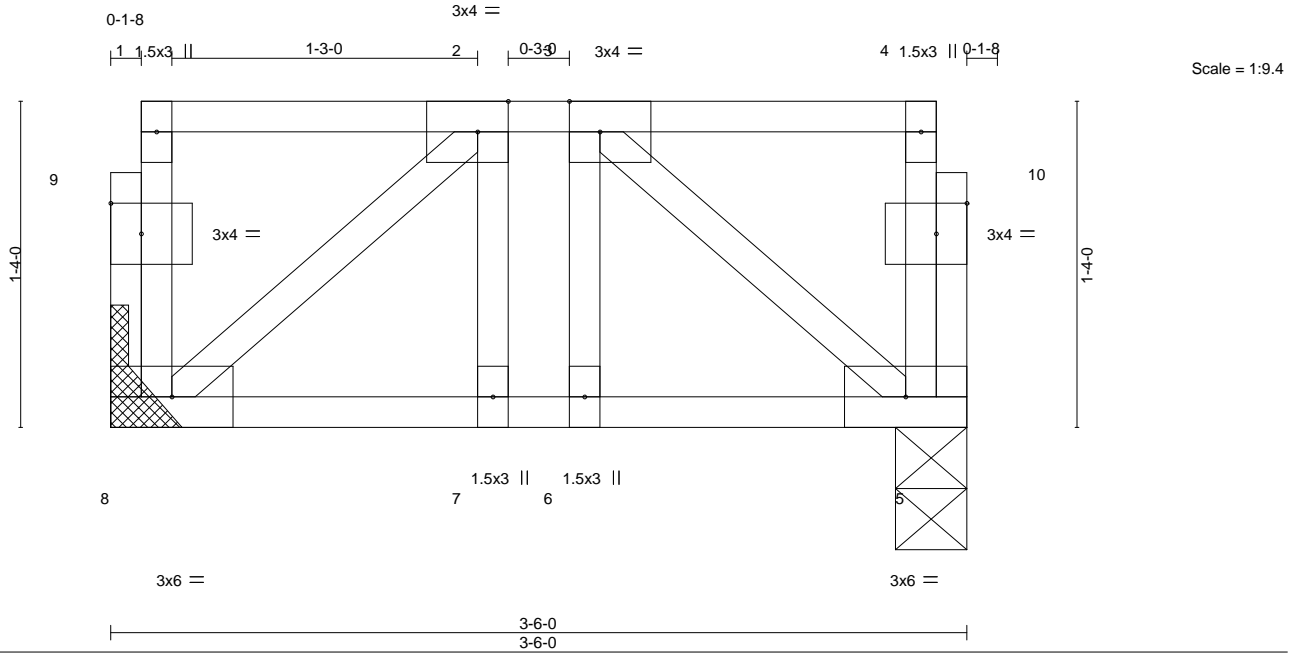


Plate Offsets (X,Y)-- [2:0-1-8,Edge], [3:0-1-8,Edge], [9:0-1-8,0-1-8], [10:0-1-8,0-1-8]

LOADING (psf)	SPACING-	CSL.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 40.0	Plate Grip DOL 1.00	TC 0.18	Vert(LL) -0.00	7-8	>999	480	MT20	244/190
TCDL 10.0	Lumber DOL 1.00	BC 0.09	Vert(CT) -0.00	7-8	>999	360		
BCLL 0.0	Rep Stress Incr NO	WB 0.08	Horz(CT) 0.00	5	n/a	n/a		
BCDL 5.0	Code IRC2015/TPI2014	Matrix-S					Weight: 24 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)

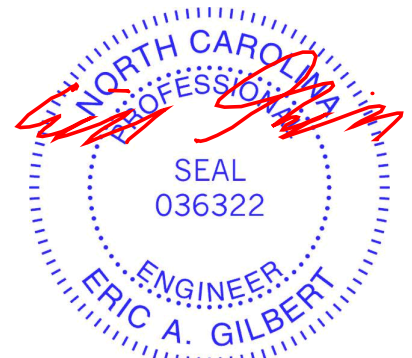
**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 3-6-0 oc purlins, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 8=Mechanical, 5=0-3-8  
 Max Grav 8=329(LC 1), 5=329(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-252/0  
 BOT CHORD 7-8=0/252, 6-7=0/252, 5-6=0/252  
 WEBS 2-8=-322/0, 3-5=-322/0

**NOTES-**  
 1) Unbalanced floor live loads have been considered for this design.  
 2) Plates checked for a plus or minus 1 degree rotation about its center.  
 3) Refer to girder(s) for truss to truss connections.  
 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.

**LOAD CASE(S)** Standard  
 1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00  
 Uniform Loads (plf)  
 Vert: 5-8=-10, 1-4=-200



July 23, 2021

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 Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



818 Soundside Road  
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Southern Touch / 1 Microtower Rd. / Lee Co.	E15971372
J0921-5768	KW1	GABLE	1	1	Job Reference (optional)	

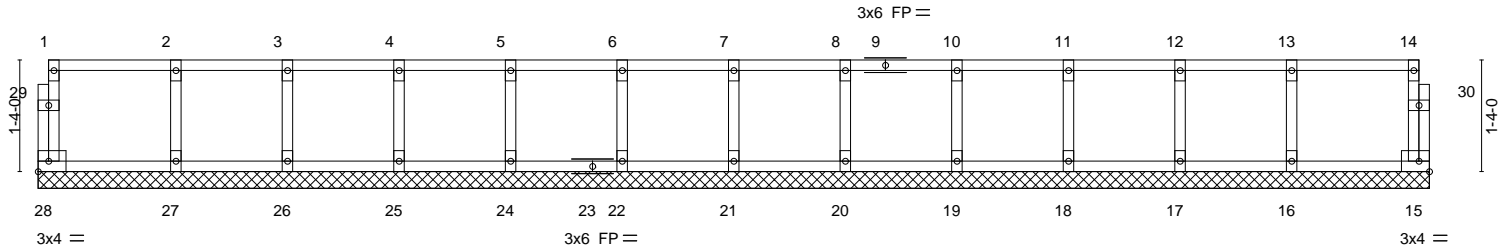
Comtech, Inc., Fayetteville, NC - 28314,

8.430 s Jun 2 2021 MiTek Industries, Inc. Fri Jul 23 14:59:54 2021 Page 1  
ID:IwPOH6hK8Jeptt6SXqQOJcym6C-5nhBKQwR2lgCw9qshw\_XhDooyzJtdun5I8AYyv8v3

0-1/8

0-1/8

Scale = 1:27.5



1-7-12	2-11-12	4-3-12	5-7-12	6-11-12	8-3-12	9-7-12	10-11-12	12-3-12	13-7-12	14-11-12	16-7-8
1-7-12	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	1-7-12

<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in	(loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 40.0	Plate Grip DOL	1.00	TC 0.12	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	15	n/a	n/a		
BCDL 5.0	Code IRC2015/TPI2014		Matrix-R						Weight: 73 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 16-7-8.

(lb) - Max Grav All reactions 250 lb or less at joint(s) 28, 15, 21, 22, 24, 25, 26, 27, 20, 19, 18, 17, 16

**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.



July 23, 2021

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**ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component**

**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Southern Touch / 1 Microtower Rd. / Lee Co.	E15971373
J0921-5768	KW2	GABLE	1	1	Job Reference (optional)	

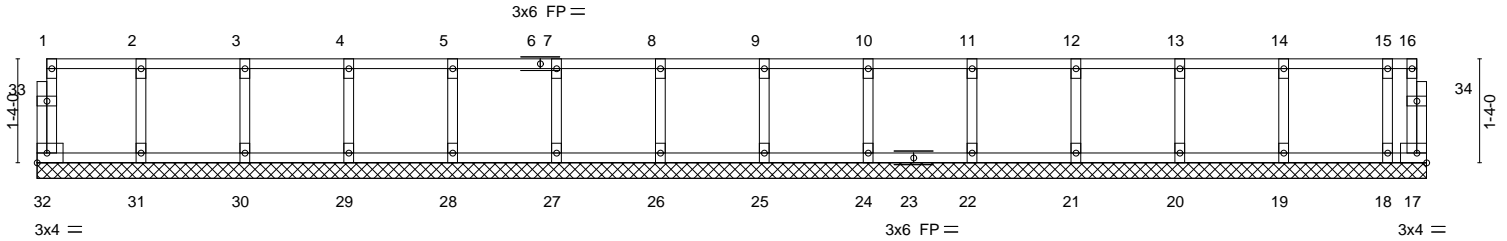
Comtech, Inc, Fayetteville, NC - 28314,

8.430 s Jun 2 2021 MiTek Industries, Inc. Fri Jul 23 14:59:55 2021 Page 1  
ID:lwPOH6hK8Jeptt6SXqQOJcyzm6C-ZzFZYmx3pco3YJP2FdWmEQL\_aDJVNKu20I2hi\_yv8v2

0-1,8

0-1,8

Scale = 1:29.6



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	17-10-0
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	0-6-0
<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in	(loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>			
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 0.02	Vert(CT) n/a	-	n/a	999						
BCLL 0.0	Rep Stress Incr YES		WB 0.03	Horz(CT) 0.00	17	n/a	n/a						
BCDL 5.0	Code IRC2015/TPI2014		Matrix-R						Weight: 80 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 17-10-0.  
(lb) - Max Grav All reactions 250 lb or less at joint(s) 32, 17, 31, 30, 29, 28, 27, 26, 25, 24, 22, 21, 20, 19, 18

**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.



July 23, 2021

Job	Truss	Truss Type	Qty	Ply	Southern Touch / 1 Microtower Rd. / Lee Co.	E15971374
J0921-5768	KW4	GABLE	1	1	Job Reference (optional)	

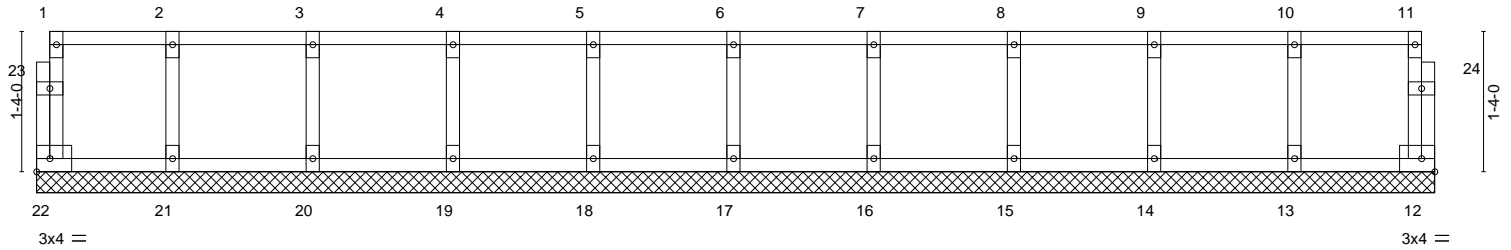
Comtech, Inc., Fayetteville, NC - 28314,

8.430 s Jun 2 2021 MiTek Industries, Inc. Fri Jul 23 14:59:55 2021 Page 1  
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0<sub>1</sub>8

0<sub>1</sub>8

Scale = 1:21.9



LOADING (psf)	SPACING-	CSI.	DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL 40.0	2-0-0	TC 0.06	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.00	BC 0.01	Vert(CT)	n/a	-	n/a	999		
BCLL 0.0	Lumber DOL 1.00	WB 0.03	Horz(CT)	0.00	12	n/a	n/a		
BCLD 5.0	Rep Stress Incr YES	Matrix-R							
	Code IRC2015/TPI2014							Weight: 60 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.**

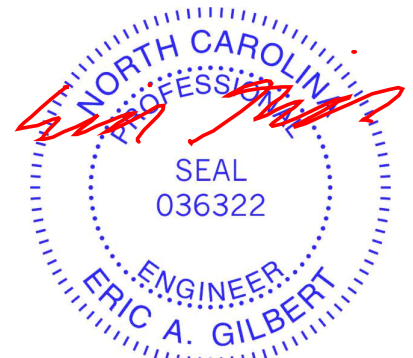
All bearings 13-3-8.  
(lb) - Max Grav All reactions 250 lb or less at joint(s) 22, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21

**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.



July 23, 2021

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Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



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Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Southern Touch / 1 Microtower Rd. / Lee Co.	E15971375
J0921-5768	KW6	GABLE	1	1	Job Reference (optional)	

Comtech, Inc, Fayetteville, NC - 28314,

8.430 s Jun 2 2021 MiTek Industries, Inc. Fri Jul 23 14:59:56 2021 Page 1  
 ID:IwPOH6hK8Jeptt6SXqQJcym6C-2Apxl6yhavwwATzFoL1?met8Fdf6n6BFPnEEQyv8v1

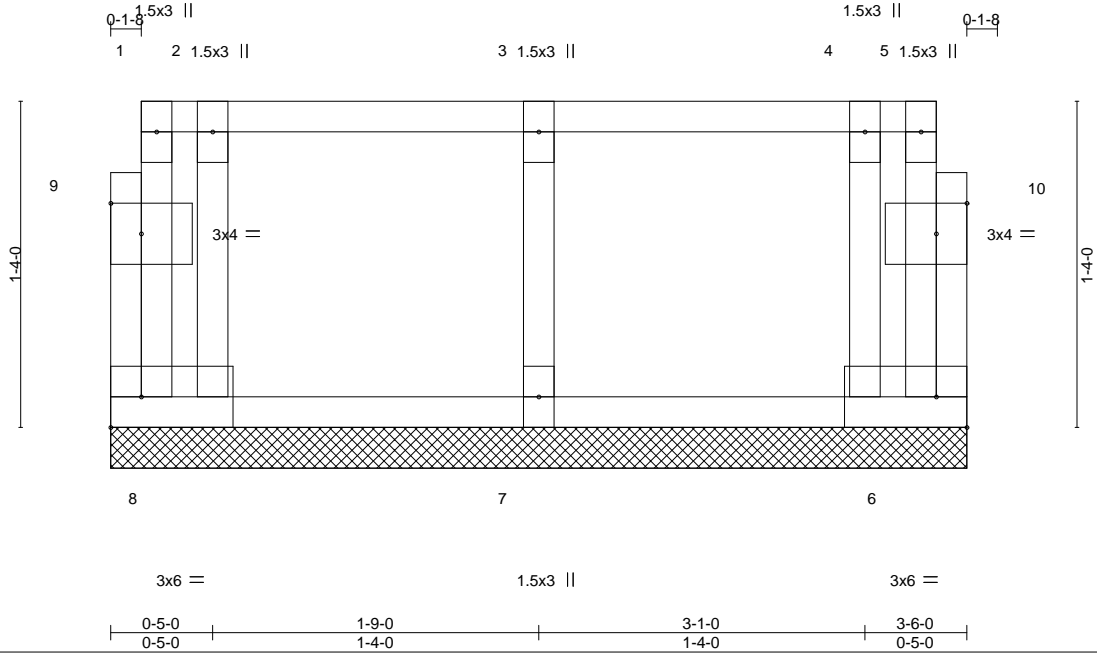


Plate Offsets (X,Y)-- [9:0-1-8,0-1-8], [10:0-1-8,0-1-8]

LOADING (psf)	SPACING-	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	6	n/a	n/a		
BCDL 5.0	Code IRC2015/TPI2014	Matrix-R					Weight: 21 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 3-6-0 oc purlins, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 8=3-6-0, 6=3-6-0, 7=3-6-0  
 Max Grav 8=91(LC 1), 6=91(LC 1), 7=161(LC 1)

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

- NOTES-**
- 1) Plates checked for a plus or minus 1 degree rotation about its center.
  - 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) 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.



July 23, 2021

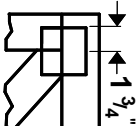
**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**  
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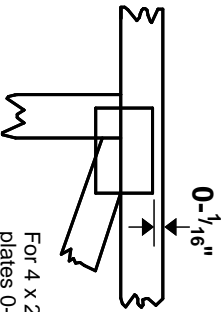
818 Soundside Road  
 Edenton, NC 27932

# 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 20/20 software** or upon request.

## PLATE SIZE

**4 X 4**

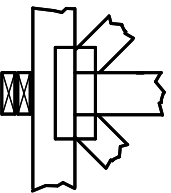
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

## 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



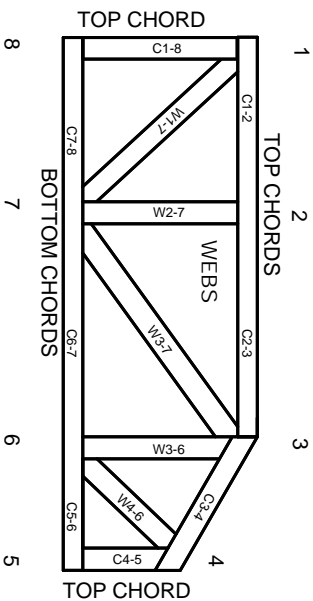
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

### Industry Standards:

ANSI/TP1: National Design Specification for Metal Plate Connected Wood Truss Construction.  
DSB-89: Design Standard for Bracing, Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate  
BCSI: Connected Wood Trusses.

# Numbering System

6-4-8  
dimensions shown in ft-in-sixteenths  
(Drawings not to scale)



**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/TP1 section 6.3 These truss designs rely on lumber values established by others.

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MITek Engineering Reference Sheet: Mill-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/TP1 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TP1 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/TP1 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.