ENGINEERING BY TRENCO
A MiTek Affiliate

RE: J0920-4183
Lot 9 Sierra Villas

Trenco
818 Soundside Rd
Edenton, NC 27932

Site Information:

Customer: Project Name: J0920-4183
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 8.1
Wind Code: N/A Wind Speed: N/A mph
Roof Load: N/A psf Floor Load: 55.0 psf

This package includes 8 individual, dated Truss Design Drawings and 0 Additional Drawings.

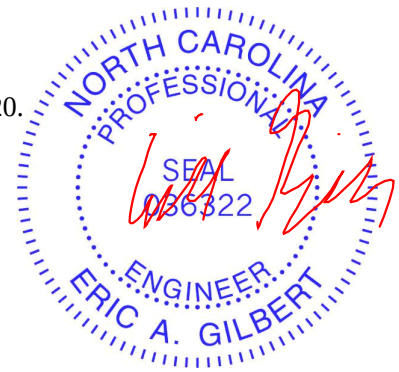
No.	Seal#	Truss Name	Date
1	E14133420	ET1	9/18/2020
2	E14133421	ET2	9/18/2020
3	E14133422	ET3	9/18/2020
4	E14133423	F1	9/18/2020
5	E14133424	F2	9/18/2020
6	E14133425	F3	9/18/2020
7	E14133426	F4	9/18/2020
8	E14133427	F5	9/18/2020

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, 2020.

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.

September 18, 2020

Gilbert, Eric

Job	Truss	Truss Type	Qty	Ply	Lot 9 Sierra Villas
J0920-4183	ET1	Floor Supported Gable	1	1	E14133420
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Feb 13 2020 MiTek Industries, Inc. Tue Mar 3 06:49:28 2020 Page 1
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0-1-8

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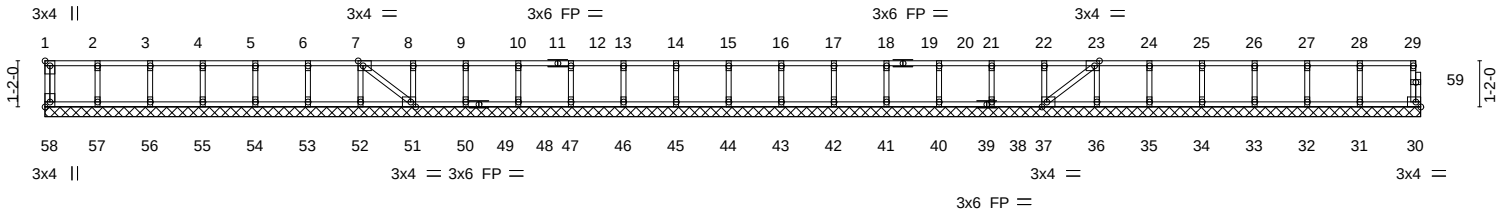

34-10-8
34-10-8

Plate Offsets (X,Y)-- [1:Edge,0-1-8], [7:0-1-8,Edge], [23:0-1-8,Edge], [37:0-1-8,Edge], [51:0-1-8,Edge], [58:Edge,0-1-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.07	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	37	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 147 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 6-0-0 oc bracing.

REACTIONS. All bearings 34-10-8.
(lb) - Max Grav All reactions 250 lb or less at joint(s) 58, 30, 57, 56, 55, 54, 53, 52, 51, 50, 48, 47, 46, 45, 44, 43, 42, 41, 40, 38, 37, 36, 35, 34, 33, 32, 31

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.
7) CAUTION, Do not erect truss backwards.

March 3,2020

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

Job	Truss	Truss Type	Qty	Ply	Lot 9 Sierra Villas
J0920-4183	ET2	Floor Supported Gable	1	1	E14133421
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Feb 13 2020 MiTek Industries, Inc. Tue Mar 3 06:49:29 2020 Page 1
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0-1-8

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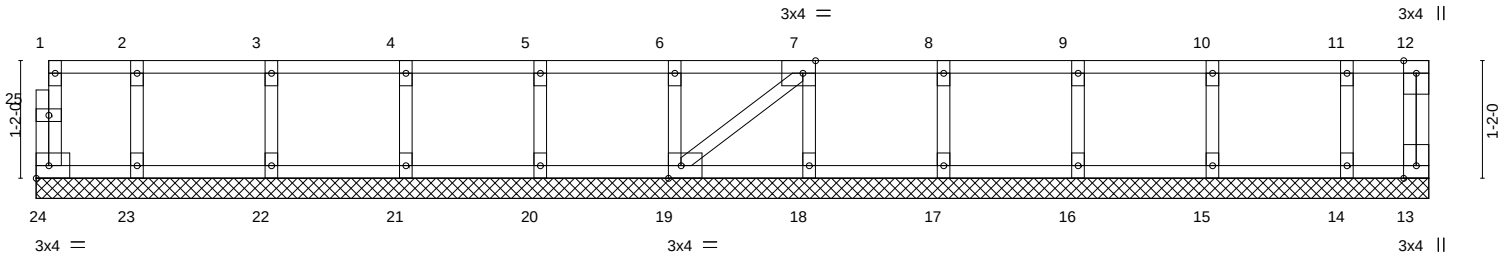

13-9-12
13-9-12

Plate Offsets (X,Y)-- [7:0-1-8,Edge], [19:0-1-8,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	0.06	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	13	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 62 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 13-9-12.
(lb) - Max Grav All reactions 250 lb or less at joint(s) 24, 13, 23, 22, 21, 20, 19, 18, 17, 16, 15, 14

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.
7) CAUTION, Do not erect truss backwards.

March 3,2020

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Job	Truss	Truss Type	Qty	Ply	Lot 9 Sierra Villas
J0920-4183	ET3	Floor Supported Gable	1	1	E14133422
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Feb 13 2020 MiTek Industries, Inc. Tue Mar 3 06:49:30 2020 Page 1
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0-1-8

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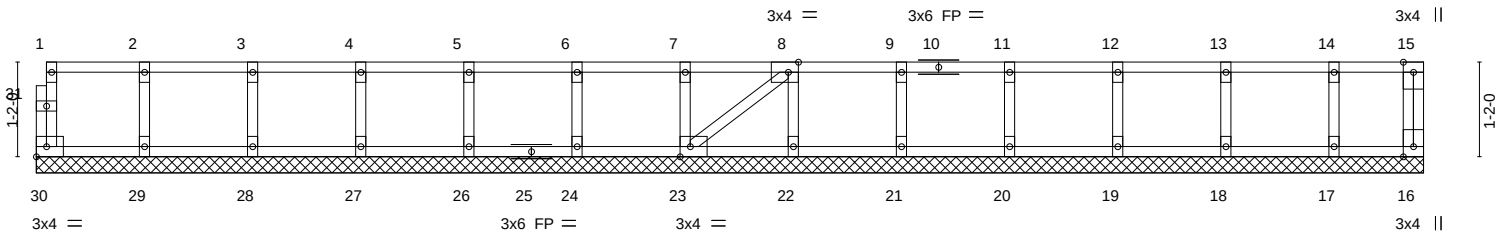

17-1-4
17-1-4

Plate Offsets (X,Y)-- [8:0-1-8,Edge], [23:0-1-8,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	0.06	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	16	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 74 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 17-1-4.
(lb) - Max Grav All reactions 250 lb or less at joint(s) 30, 16, 29, 28, 27, 26, 24, 23, 22, 21, 20, 19, 18, 17

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.
7) CAUTION, Do not erect truss backwards.

March 3,2020

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Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 9 Sierra Villas
J0920-4183	F1	Floor	9	1	E14133423
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Feb 13 2020 MiTek Industries, Inc. Tue Mar 3 06:49:31 2020 Page 1
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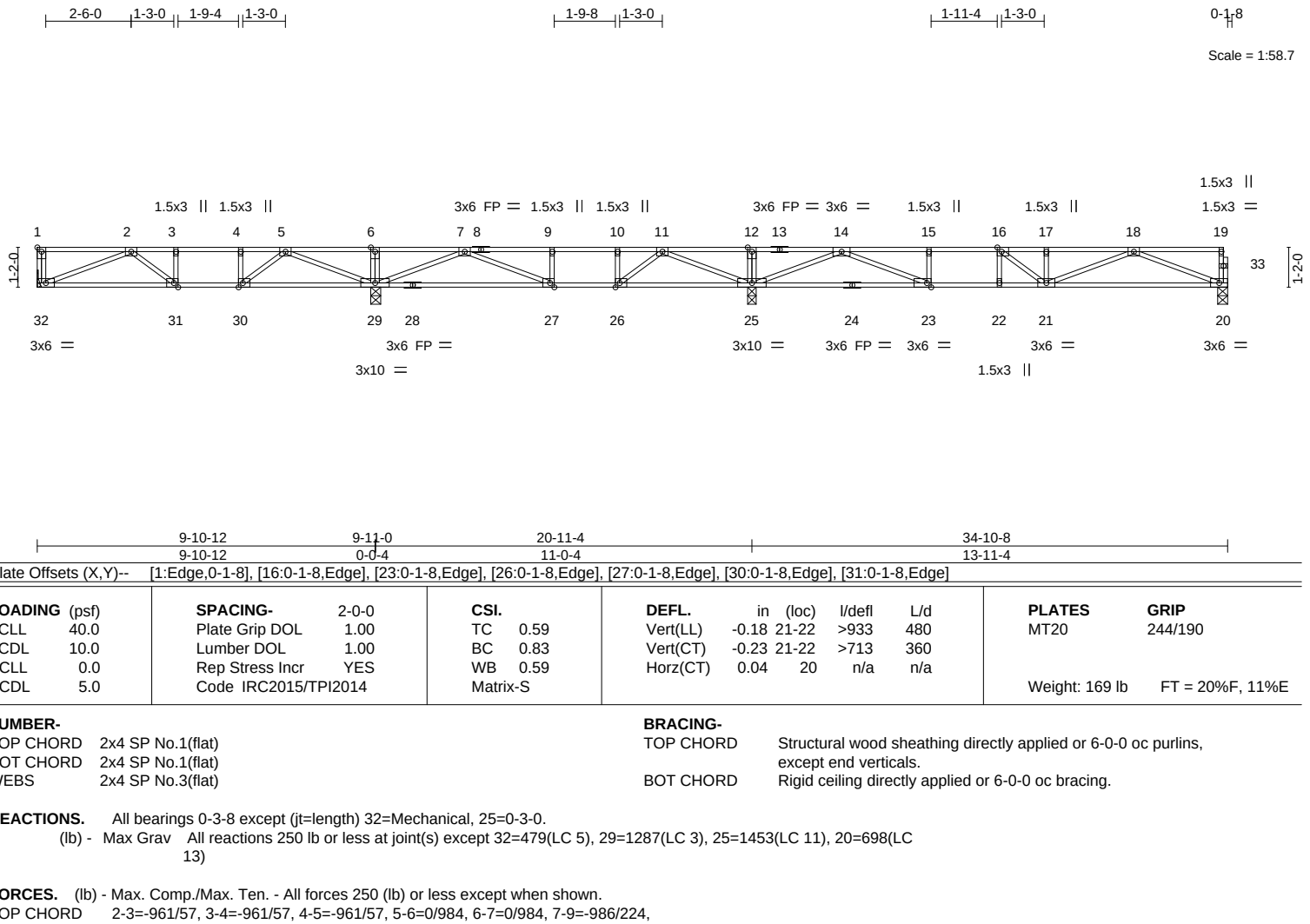

Plate Offsets (X,Y)-- [1:Edge,0-1-8], [16:0-1-8,Edge], [23:0-1-8,Edge], [26:0-1-8,Edge], [27:0-1-8,Edge], [30:0-1-8,Edge], [31:0-1-8,Edge]

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	0.59	Vert(LL)	-0.18	21-22	>933	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.83	Vert(CT)	-0.23	21-22	>713	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.59	Horz(CT)	0.04	20	n/a	n/a		
BCDL	5.0	Code IRC2015/TPI2014		Matrix-S							Weight: 169 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 0-3-8 except (jt=length) 32=Mechanical, 25=0-3-0.
(lb) - Max Grav All reactions 250 lb or less at joint(s) except 32=479(LC 5), 29=1287(LC 3), 25=1453(LC 11), 20=698(LC 13)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-961/57, 3-4=-961/57, 4-5=-961/57, 5-6=0/984, 6-7=0/984, 7-9=-986/224, 9-10=-986/224, 10-11=-986/224, 11-12=0/984, 12-14=0/984, 14-15=-2040/0, 15-16=-2040/0, 16-17=-2146/0, 17-18=-2146/0
BOT CHORD 31-32=0/883, 30-31=-57/961, 29-30=-314/628, 27-29=-288/532, 26-27=-224/986, 25-26=-403/664, 23-25=0/986, 22-23=0/2040, 21-22=0/2040, 20-21=0/1452
WEBS 6-29=-291/0, 12-25=-308/0, 2-32=-949/0, 5-29=-1293/0, 5-30=0/638, 4-30=-322/0, 7-29=-1299/0, 11-25=-1232/0, 7-27=0/560, 11-26=0/540, 10-26=-267/0, 14-25=-1822/0, 14-23=0/1231, 15-23=-351/0, 18-20=-1556/0, 18-21=0/749, 17-21=-294/0, 16-21=-154/361

NOTES-
1) Unbalanced floor live loads have been considered for this design.
2) All plates are 3x4 MT20 unless otherwise indicated.
3) Plates checked for a plus or minus 1 degree rotation about its center.
4) Refer to girder(s) for truss to truss connections.
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.

March 3,2020

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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 9 Sierra Villas
J0920-4183	F2	Floor	3	1	E14133424
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Feb 13 2020 MiTek Industries, Inc. Tue Mar 3 06:49:32 2020 Page 1
ID:eaaJ9i3ZGlbZ85c5RTUGb9zA_ID-uYSJnF3HSSu8rdp4zYAvKyvw_GZ?e1QSVHDaGEzeiiX

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

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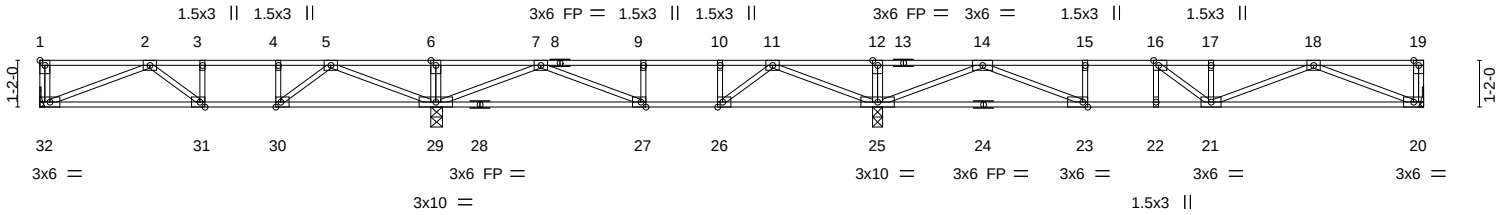

9-10-12 9-11-0 20-11-4 34-7-0
9-10-12 0-0-4 11-0-4 13-7-12

Plate Offsets (X,Y)-- [1:Edge,0-1-8], [16:0-1-8,Edge], [23:0-1-8,Edge], [26:0-1-8,Edge], [27:0-1-8,Edge], [30:0-1-8,Edge], [31:0-1-8,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	0.54	Vert(LL)	-0.15	21-22	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.74	Vert(CT)	-0.19	21-22	>847	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.56	Horz(CT)	0.04	20	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 168 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 Mechanical except (jt=length) 29=0-3-8, 25=0-3-0.
(lb) - Max Grav All reactions 250 lb or less at joint(s) except 32=479(LC 5), 29=1286(LC 3), 20=684(LC 13), 25=1445(LC 11)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-958/60, 3-4=-958/60, 4-5=-958/60, 5-6=0/991, 6-7=0/991, 7-9=-974/245, 9-10=-974/245, 10-11=-974/245, 11-12=0/1032, 12-14=0/1032, 14-15=-1927/0, 15-16=-1927/0, 16-17=-2046/0, 17-18=-2046/0
BOT CHORD 31-32=0/881, 30-31=-60/958, 29-30=-320/624, 27-29=-301/525, 26-27=-245/974, 25-26=-429/649, 23-25=-21/924, 22-23=0/1927, 21-22=0/1927, 20-21=0/1405
WEBS 6-29=-291/0, 12-25=-306/0, 2-32=-948/0, 5-29=-1294/0, 5-30=0/640, 4-30=-323/0, 7-29=-1294/0, 7-27=0/554, 11-25=-1241/0, 11-26=0/548, 10-26=-272/0, 18-20=-1512/0, 18-21=0/692, 17-21=-288/0, 14-25=-1794/0, 14-23=0/1179, 15-23=-333/0, 16-21=-135/380

NOTES-
1) Unbalanced floor live loads have been considered for this design.
2) All plates are 3x4 MT20 unless otherwise indicated.
3) Plates checked for a plus or minus 1 degree rotation about its center.
4) Refer to girder(s) for truss to truss connections.
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.

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Job	Truss	Truss Type	Qty	Ply	Lot 9 Sierra Villas
J0920-4183	F3	Floor	1	1	E14133425
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Feb 13 2020 MiTek Industries, Inc. Tue Mar 3 06:49:34 2020 Page 1
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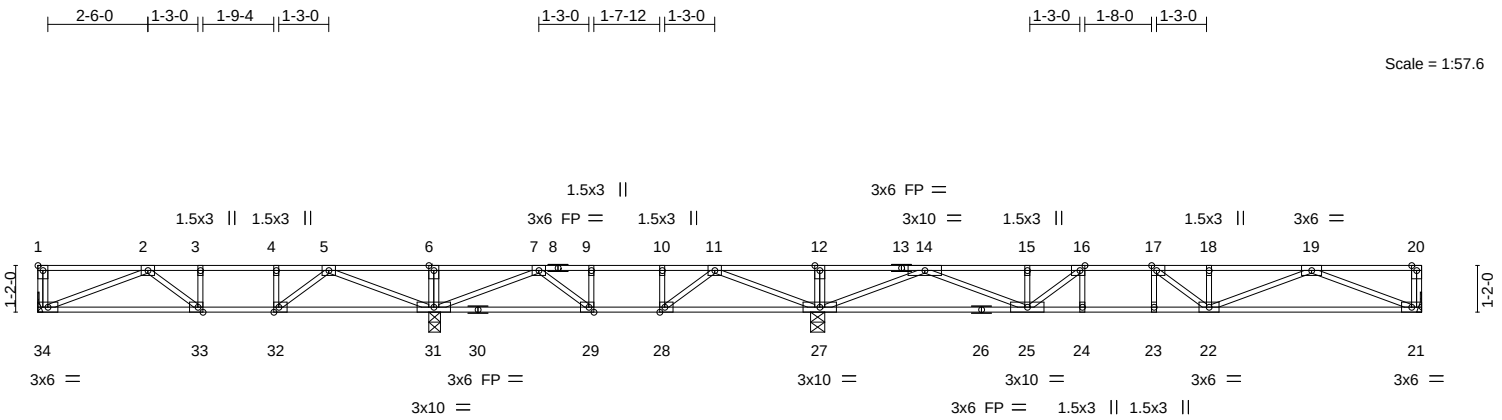

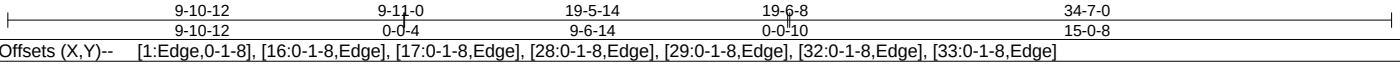

Plate Offsets (X,Y)-- [1:Edge,0-1-8], [16:0-1-8,Edge], [17:0-1-8,Edge], [28:0-1-8,Edge], [29:0-1-8,Edge], [32:0-1-8,Edge], [33:0-1-8,Edge]

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	0.54	Vert(LL)	-0.15	23	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.69	Vert(CT)	-0.21	23	>854	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.62	Horz(CT)	0.04	21	n/a	n/a		
BCDL	5.0	Code IRC2015/TPI2014		Matrix-S							Weight: 170 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 Mechanical except (jt=length) 31=0-3-8, 27=0-4-4.
(lb) - Max Grav All reactions 250 lb or less at joint(s) except 34=479(LC 5), 31=1136(LC 3), 27=1552(LC 11), 21=733(LC 5)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-960/0, 3-4=-960/0, 4-5=-960/0, 5-6=0/772, 6-7=0/772, 7-9=-651/558, 9-10=-651/558, 10-11=-651/558, 11-12=0/1433, 12-14=0/1433, 14-15=-1879/0, 15-16=-1879/0, 16-17=-2279/0, 17-18=-2283/0, 18-19=-2283/0
BOT CHORD 33-34=0/882, 32-33=0/960, 31-32=-149/626, 29-31=-483/498, 28-29=-558/651, 27-28=-791/406, 25-27=-113/718, 24-25=0/2279, 23-24=0/2279, 22-23=0/2279, 21-22=0/1528
WEBS 6-31=-303/0, 12-27=-295/0, 2-34=-949/0, 5-31=-1229/0, 5-32=0/575, 4-32=-289/0, 7-31=-963/2, 11-27=-1240/0, 11-28=0/529, 10-28=-268/0, 7-29=-96/263, 14-27=-2051/0, 14-25=0/1311, 19-21=-1644/0, 19-22=0/815, 18-22=-266/0, 17-22=-244/287, 16-25=-721/0

NOTES-
1) Unbalanced floor live loads have been considered for this design.
2) All plates are 3x4 MT20 unless otherwise indicated.
3) Plates checked for a plus or minus 1 degree rotation about its center.
4) Refer to girder(s) for truss to truss connections.
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.

March 3,2020

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TRENCO
A MiTek Affiliate
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Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 9 Sierra Villas
J0920-4183	F4	Floor	2	1	E14133426
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Feb 13 2020 MiTek Industries, Inc. Tue Mar 3 06:49:34 2020 Page 1
ID:eaaJ9i3ZGlbZ85c5RTUGb9zA_ID-qwa3Cx5X_48s5xzT4zDNPN_I24GG6vWlzbigL7zeiiV

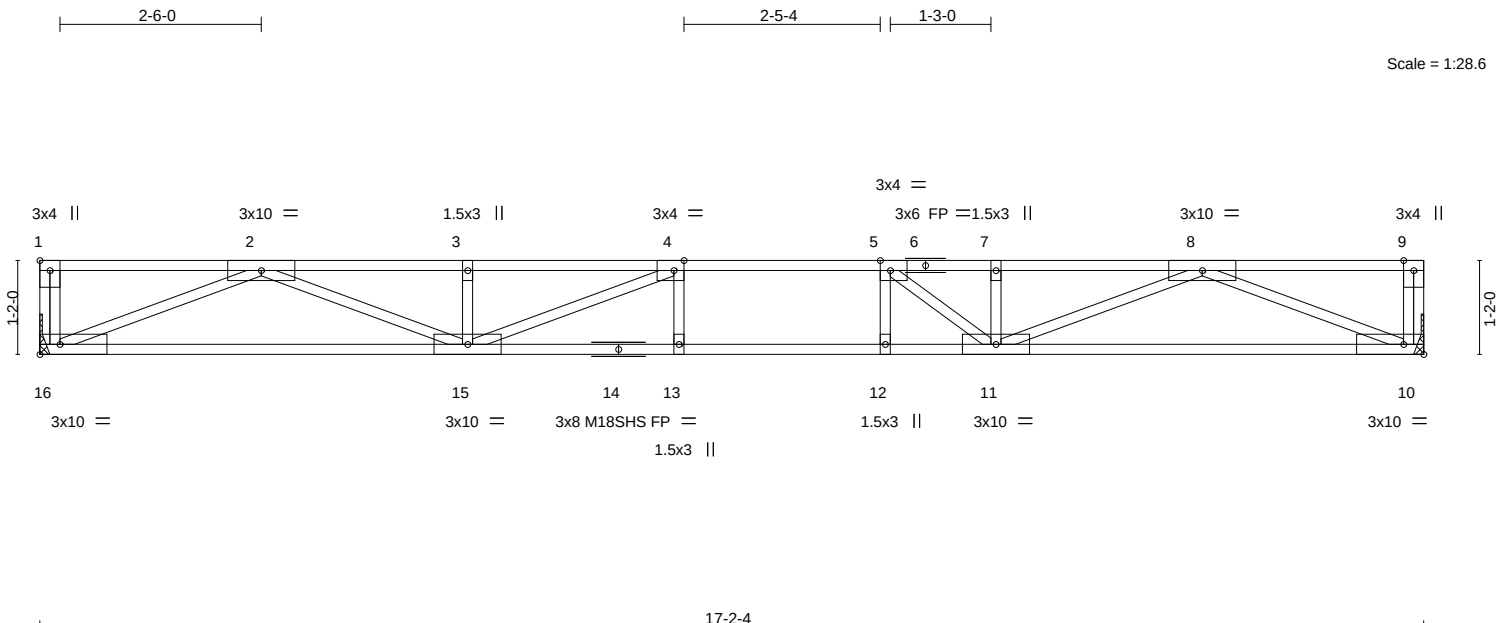

Plate Offsets (X,Y)-- [1:Edge,0-1-8], [4:0-1-8,Edge], [5:0-1-8,Edge]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.44	Vert(LL)	-0.28	13-15	>733	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.63	Vert(CT)	-0.37	13-15	>545	360	M18SHS	244/190
BCLL	0.0	Rep Stress Incr	YES	WB	0.65	Horz(CT)	0.05	10	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 84 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) 16=Mechanical, 10=Mechanical
Max Grav 16=932(LC 1), 10=932(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-3288/0, 3-4=-3288/0, 4-5=-3718/0, 5-7=-3234/0, 7-8=-3234/0
BOT CHORD 15-16=0/2020, 13-15=0/3718, 12-13=0/3718, 11-12=0/3718, 10-11=0/2024
WEBS 2-16=-2173/0, 2-15=0/1369, 3-15=-310/0, 8-10=-2178/0, 8-11=0/1306, 4-15=-812/0, 5-11=-909/0

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

March 3,2020

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

Job	Truss	Truss Type	Qty	Ply	Lot 9 Sierra Villas
J0920-4183	F5	Floor	3	1	E14133427
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Feb 13 2020 MiTek Industries, Inc. Tue Mar 3 06:49:35 2020 Page 1
ID:eaaJ9i3ZGlbZ85c5RTUGb9zA_ID-I67SPH69lNGji5XfegkcxaXTYTaCrPnvBFREtZzeiiU

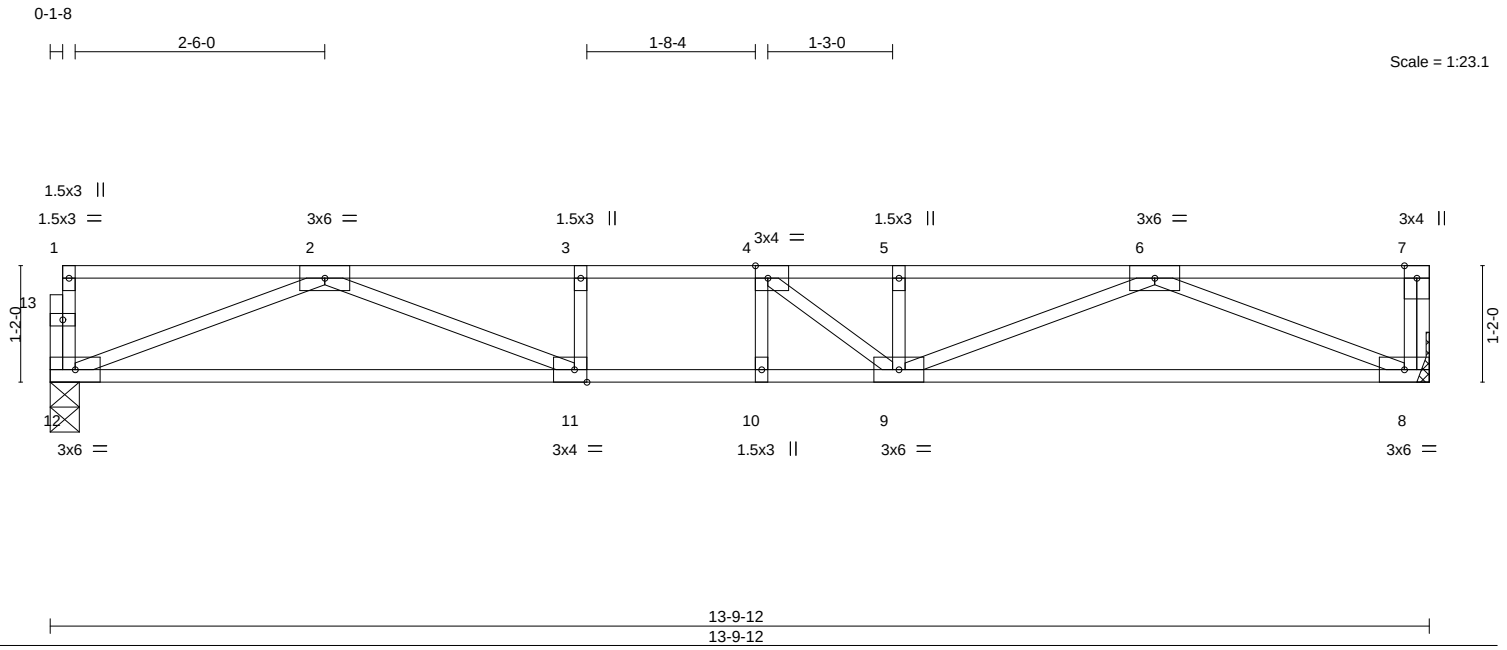

Plate Offsets (X,Y)-- [4:0-1-8,Edge], [11:0-1-8,Edge]

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	0.40	Vert(LL)	-0.15	9-10	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.71	Vert(CT)	-0.19	9-10	>835	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.46	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-
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=Mechanical
Max Grav 12=740(LC 1), 8=746(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2373/0, 3-4=-2373/0, 4-5=-2343/0, 5-6=-2343/0
BOT CHORD 11-12=0/1556, 10-11=0/2373, 9-10=0/2373, 8-9=0/1560
WEBS 2-12=-1667/0, 2-11=0/928, 3-11=-254/0, 6-8=-1678/0, 6-9=0/845, 5-9=-261/19, 4-9=-378/225

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.
5) CAUTION, Do not erect truss backwards.

March 3,2020

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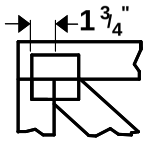
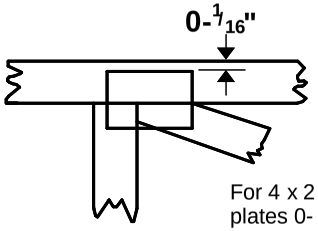
Symbols

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.

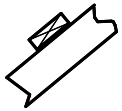
*** Plate location details available in MiTek 20/20 software or upon request.**

PLATE SIZE

4 x 4

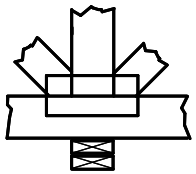
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

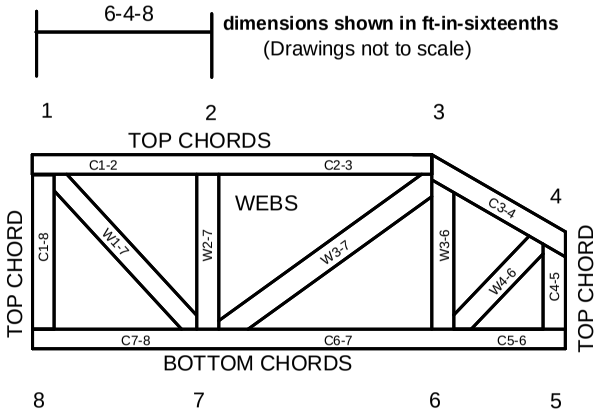


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

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.