

Trenco 818 Soundside Rd Edenton, NC 27932

Re: J0520-2323 Johnson Residence

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

Pages or sheets covered by this seal: E14889651 thru E14889655

My license renewal date for the state of North Carolina is December 31, 2020.

North Carolina COA: C-0844



September 22,2020

Strzyzewski, Marvin

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

Job	Truss	Truss Type	Qty	Ply	Johnson Residence
	==.			١.	E14889651
J0520-2323	F01	FLOOR	29	1	
					lJob Reference (optional)

Comtech, Inc,

Fayetteville, NC - 28314,

8.330 s Jul 22 2020 MiTek Industries, Inc. Mon Sep 21 14:27:35 2020 Page 1 ID:_smaQ1?UdcVWWBYRRChfG8zR929-fDW2KuHOOjl7TsVXcp51h7aAZ5u_mj5xu2aqFwybNIM

0-1-8

HI-3-0

1-8-0

0-1₇8 Scale: 1/4"=1'

CUT TWO TRUSSES ONLY AND HEADER TO ADJACENT TRUSSES. HEADER AND CONNECTION (BY OTHERS) TO CARRY REACTIONS SHOWN BELOW FOR JOINTS {27}.

LUMBER AND CONNECTOR PLATES (SHOWN DASHED) TO BE CUT CLEANLY AND ACCURATELY AND THE REMAINING PLATE(S) MUST BE FULLY EMBEDDED AND UNDISTURBED.

Structural wood sheathing directly applied or 6-0-0 oc purlins,

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

except end verticals.

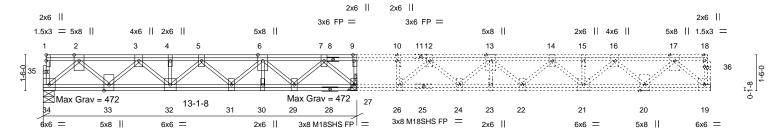


Plate Offsets (X,Y)				
LOADING (psf)	SPACING- 1-4-0	CSI.	DEFL. in (loc) I/defl L/d	PLATES GRIP
TCLL 40.0	Plate Grip DOL 1.00	TC 0.11	Vert(LL) -0.32 26-27 >999 480	MT20 244/190
TCDL 10.0	Lumber DOL 1.00	BC 0.28	Vert(CT) -0.43 26-27 >762 360	M18SHS 244/190
BCLL 0.0	Rep Stress Incr YES	WB 0.52	Horz(CT) 0.05 19 n/a n/a	
BCDL 5.0	Code IRC2015/TPI2014	Matrix-S		Weight: 227 lb FT = 20%F, 11%E

BRACING-

TOP CHORD

BOT CHORD

LUMBER-

TOP CHORD 2x4 SP 2400F 2 0F(flat) BOT CHORD 2x4 SP 2400F 2.0E(flat)

WFBS 2x4 SP No.3(flat)

REACTIONS. (size) 34=0-5-8, 19=0-5-8

Max Grav 34=1010(LC 1), 19=1010(LC 1)

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

2-3=-1846/0, 3-4=-3342/0, 4-5=-3342/0, 5-6=-4426/0, 6-7=-5154/0, 7-9=-5503/0, TOP CHORD

9-10=-5503/0, 10-12=-5503/0, 12-13=-5154/0, 13-14=-4426/0, 14-15=-3342/0,

15-16=-3342/0 16-17=-1846/0

BOT CHORD $33 - 34 = 0/1074,\ 32 - 33 = 0/2653,\ 31 - 32 = 0/3971,\ 30 - 31 = 0/4883,\ 29 - 30 = 0/4883,\ 27 - 29 = 0/5393,\ 31 - 32 = 0/2653,\ 31 - 32 = 0/3971,\ 30 - 31 = 0/4883,\ 29 - 30 = 0/4883,\ 27 - 29 = 0/5393,\ 31 - 32 = 0/3971,\ 30 - 31 = 0/4883,\ 20 - 30 = 0$

26-27=0/5503, 24-26=0/5393, 23-24=0/4883, 22-23=0/4883, 21-22=0/3971,

20-21=0/2653, 19-20=0/1074

WEBS 17-19=-1412/0, 2-34=-1412/0, 17-20=0/1094, 2-33=0/1094, 16-20=-1141/0

3-33=-1141/0, 16-21=0/952, 3-32=0/952, 14-21=-868/0, 5-32=-868/0, 14-22=0/644, 5-31=0/644, 13-22=-631/0, 6-31=-631/0, 13-24=0/376, 6-29=0/376, 12-24=-410/0,

7-29=-410/0, 12-26=-226/503, 7-27=-226/503

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) Required 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.



September 22,2020



Job Truss Truss Type Qty Johnson Residence E14889654 J0520-2323 F02-ADJ FLOOR Job Reference (optional)

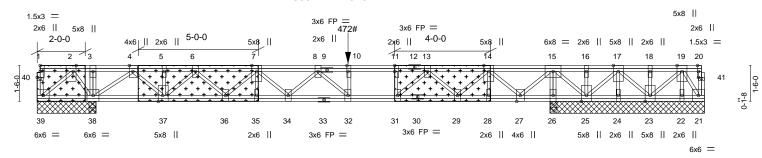
Comtech, Inc., Fayetteville, NC 28309, Mitel

8.330 e Sep 10 2020 MiTek Industries, Inc. Mon Sep 21 16:02:04 2020 Page 1 ID:_smaQ1?UdcVWWBYRRChfG8zR929-EsefJsJC8xYy3AJEphDj0xmj961j2NATfRHpNVybNF1

1-10-0

REPAIR: POINT LOAD ADDED TO THE TRUSS WHERE SHOWN.

ADJACENT TRUSS DESIGN.



ATTACH 3/4" PLYWOOD OR OSB GUSSET (23/32" RATED SHEATHING 48/24 EXP 1) TO EACH SIDE OF TRUSS WITH CONSTRUCTION QUALITY ADHESIVE AND ONE ROW OF (0.131" X 2.5") NAILS SPACED 2" O.C. FROM EACH FACE INTO EACH COVERED TRUSS MEMBER.

.. 24-4-8 25-8-8 23-0-8 24-3-0 25-7-0 26-11-0 21-7-0 23-7-12 24₁-11-12 26-3-12 27-11-0 0-1-8 1-5-8 0-7-4 0-1-8 0-7-4 0-7-41-0-0 2-4-0 2-5₁8 2-4-0 0-1-8

Plate Off	sets (X,Y)	[2:0-3-0,Edge], [4:0-3-0,Edge], [10:0-3-0,Edge], [11:0-3-0,0-0-0], [20:0-3-0,Edge], [27:0-3-0,Edge], [37:0-3-0,Edge], [40:0-1-8,0-0-8], [41:0-1-8,0-0-8]								
LOADIN	G (psf)	SPACING- 1-4-	·0 CSI .	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP	
TCLL	40.0	Plate Grip DOL 1.0	00 TC 0.25	Vert(LL)	-0.09 32-34	>999	480	MT20	244/190	
TCDL	10.0	Lumber DOL 1.0	00 BC 0.30	Vert(CT)	-0.13 32-34	>999	360			
BCLL	0.0	Rep Stress Incr N	O WB 0.91	Horz(CT)	0.01 26	n/a	n/a			
BCDL	5.0	Code IRC2015/TPI2014	Matrix-S					Weight: 237 lb	FT = 20%F, 11%E	

LUMBER-

BRACING-

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

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, [PSA]

except end verticals.

BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS. All bearings 6-5-8 except (jt=length) 39=2-5-8, 38=2-5-8, 38=2-5-8.

(lb) - Max Uplift All uplift 100 lb or less at joint(s) 24, 23, 25 except 39=-1343(LC 4), 21=-178(LC 4)

Max Grav All reactions 250 lb or less at joint(s) 24, 23, 22 except 38=2406(LC 1), 38=2406(LC 1), 26=1531(LC 4), 26=1530(LC 1)

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

TOP CHORD 2-3=0/2241, 3-4=0/2245, 4-5=0/392, 5-6=0/392, 6-7=-960/0, 7-8=-1961/0,

8-10=-2190/0, 10-11=-2190/0, 11-13=-2190/0, 13-14=-749/0, 14-15=0/725,

15-16=0/1057, 16-17=0/1057, 17-18=0/333, 18-19=0/333

38-39=-1459/0, 37-38=-1175/0, 36-37=0/395, 35-36=0/1514, 34-35=0/1514, 32-34=0/2245, 31-32=0/2190, 29-31=0/1425, 26-27=-1551/0, 25-26=-1552/0, BOT CHORD

24-25=-625/0. 23-24=-625/0

WFBS 2-39=0/1916, 2-38=-1445/0, 4-38=-1345/0, 4-37=0/1137, 6-37=-1027/0, 6-36=0/800,

7-36=-766/0, 7-34=0/618, 8-34=-422/0, 10-32=-281/0, 15-27=0/1117, 14-27=-1200/0,

14-29=0/835, 13-29=-956/0, 13-31=0/1126, 11-31=-507/0, 15-25=0/665, 3-38=-254/0,

15-26=-1390/0, 17-25=-592/0, 17-23=0/401, 19-23=-297/0

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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 24, 23, 25 except (jt=lb) 39=1343, 21=178.
- 5) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 6) Magnitude of user added load(s) on this truss have been applied uniformly across all gravity load cases with no adjustments.
- 7) This truss has large uplift reaction(s) from gravity load case(s). Proper connection is required to secure truss against upward movement at the bearings. Building designer must provide for uplift reactions indicated.
- 8) 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.
- 9) CAUTION, Do not erect truss backwards.
- 10) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 472 lb down at 13-1-8 on top chord. The design/selection of such connection device(s) is the responsibility of others.
- 11) 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

September 22,2020

MARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MILES FREERING FREE MILES AND INCLUDED MILES FREERING FREE MILES AND INCLUDED MILES FREERING FREERING FREE MILES AND INCLUDED MILES AND INCLUDED MILES FREERING FREERI Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



Job	Truss	Truss Type	Qty	Ply	Johnson Residence	
10500 0000	F00 AD I	51.000	l.	١	E148896	54
J0520-2323	F02-ADJ	FLOOR	1	1	Job Reference (optional)	

Comtech, Inc., Fayetteville, NC 28309, Mitek

| Job Reference (optional)
8.330 e Sep 10 2020 MiTek Industries, Inc. Mon Sep 21 16:02:04 2020 Page 2
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LOAD CASE(S) Standard

1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00 Uniform Loads (plf)

Vert: 21-39=-7, 1-20=-67 Concentrated Loads (lb) Vert: 10=-472(F)



Job Truss Truss Type Qty Johnson Residence E14889651 J0520-2323 F01-ADJ FLOOR 29 Job Reference (optional)

Comtech, Inc., Fayetteville, NC 28309, Mitel

8.330 e Sep 10 2020 MiTek Industries, Inc. Mon Sep 21 16:08:01 2020 Page ID:_smaQ1?UdcVWWBYRRChfG8zR929-HYidFxe73dXIO25rEA7R_D3h01ppBvB0kUFCOJybN9S

6x6 =

Structural wood sheathing directly applied or 6-0-0 oc purlins,

5x8 Ш

0-1-8 H| 1-3-0

6x6 =

5x8 ||

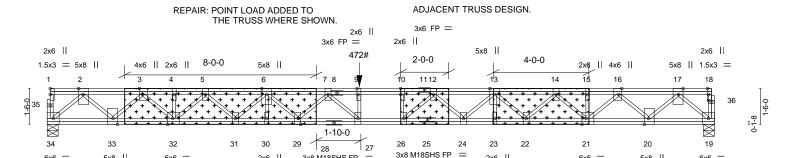
6x6 =

1-8-0

0-178 Scale: 1/4"=1"

6x6 =

[PSA]



=

2x6 II

except end verticals.

ATTACH 3/4" PLYWOOD OR OSB GUSSET (23/32" RATED SHEATHING 48/24 EXP 1) TO EACH SIDE OF TRUSS WITH CONSTRUCTION QUALITY ADHESIVE AND ONE ROW OF (0.131" X 2.5") NAILS SPACED 2" O.C. FROM EACH FACE INTO EACH COVERED TRUSS MEMBER.

2x6 II

27-11-0 27-11-0 Plate Offsets (X,Y)-- [2:0-3-0,Edge], [3:0-3-0,Edge], [9:0-3-0,Edge], [10:0-3-0,0-0-0], [16:0-3-0,Edge], [17:0-3-0,Edge], [18:0-3-0,Edge], [20:0-3-0,Edge], [21:0-2-0,Edge],

3x8 M18SHS FP

[29:0-3-0,Edge], [32:0-2-8,Edge], [33:0-3-0,Edge], [36:0-1-8,0-0-8]												
LOADING	G (psf)	SPACING-	1-4-0	CSI.		DEFL.	in	(loc)	I/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.32	Vert(LL)	-0.44	27	>747	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.52	Vert(CT)	-0.61	27	>543	360	M18SHS	244/190
BCLL	0.0	Rep Stress Incr	NO	WB	0.68	Horz(CT)	0.06	19	n/a	n/a		
BCDI	5.0	Code IRC2015/TI	212014	Matri	v-S	` ′					Weight: 227 lb	FT = 20%F 11%F

TOP CHORD

BOT CHORD

LUMBER-**BRACING-**

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

Rigid ceiling directly applied or 10-0-0 oc bracing. (size) 34=0-5-8 (min. 0-1-8), 19=0-5-8 (min. 0-1-8)

Max Grav 34=1261(LC 1), 19=1231(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown TOP CHORD 2-3=-2357/0, 3-4=-4364/0, 4-5=-4364/0, 5-6=-5958/0, 6-7=-7238/0, 7-9=-7906/0,

9-10=-7906/0, 10-12=-7906/0, 12-13=-6937/0, 13-14=-5773/0, 14-15=-4240/0,

15-16=-4240/0, 16-17=-2295/0

BOT CHORD 33-34=0/1350, 32-33=0/3414, 31-32=0/5256, 30-31=0/6670, 29-30=0/6670, 27-29=0/7693,

 $26-27=0/7906,\ 24-26=0/7426,\ 23-24=0/6465,\ 22-23=0/6465,\ 21-22=0/5097,$

20-21=0/3321, 19-20=0/1316

WFBS 17-19=-1731/0, 2-34=-1775/0, 17-20=0/1387, 2-33=0/1428, 16-20=-1451/0,

3-33=-1494/0, 16-21=0/1269, 3-32=0/1312, 14-21=-1184/0, 5-32=-1232/0, 14-22=0/956, 5-31=0/993, 13-22=-957/0, 6-31=-983/0, 13-24=0/652, 6-29=0/786, 12-24=-765/0,

7-29=-717/0, 12-26=0/1014, 7-27=-85/644, 9-27=-466/0, 10-26=-457/0

NOTES-

WEBS

REACTIONS.

- 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) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 6) Magnitude of user added load(s) on this truss have been applied uniformly across all gravity load cases with no adjustments.
- 7) Required 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.
- 8) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 472 lb down at 13-1-8 on top chord. The design/selection of such connection device(s) is the responsibility of others.
- 9) 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: 19-34=-7, 1-18=-67

September 22,2020

MARNING - 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 in-juny and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANS/TP11 Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



Job	Truss	Truss Type	Qty	Ply	Johnson Residence	
J0520-2323	F01-ADJ	FLOOR	29	1	E148896	551

Comtech, Inc., Fayetteville, NC 28309, Mitek

| Job Reference (optional)

8.330 e Sep 10 2020 MiTek Industries, Inc. Mon Sep 21 16:08:01 2020 Page 2
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LOAD CASE(S) Standard Concentrated Loads (lb) Vert: 9=-472(F)

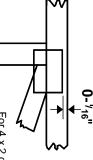


Symbols

PLATE LOCATION AND ORIENTATION



Center plate on joint unless x, y offsets are indicated.
Dimensions are in ft-in-sixteenths.
Apply plates to both sides of truss and fully embed teeth.



For 4 x 2 orientation, locate plates 0- ¹/16" from outside edge of truss.

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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



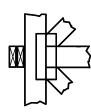
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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



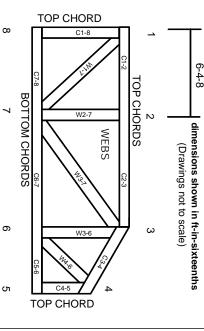
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only

Industry Standards:

National Design Specification for Metal Plate Connected Wood Truss Construction. Design Standard for Bracing.
Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

ANSI/TPI1: DSB-89:

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.

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

General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

- Damage or Personal Injury

 1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI
- 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.
- Never exceed the design loading shown and never stack materials on inadequately braced trusses.
- Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
- Cut members to bear tightly against each other
- 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.

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Design assumes trusses will be suitably protected from the environment in accord with ANSI/TPI 1.

7.

- Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
- Unless expressly noted, this design is not applicable for use with fire retardant, preservative treated, or green lumber.
- Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
- Plate type, size, orientation and location dimensions indicated are minimum plating requirements.
- Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
- Top chords must be sheathed or purlins provided at spacing indicated on design.
- Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted
- Connections not shown are the responsibility of others.
- Do not cut or alter truss member or plate without prior approval of an engineer.
- 17. Install and load vertically unless indicated otherwise.
- Use of green or treated lumber may pose unacceptable environmental, health or performance risks. Consult with project engineer before use.
- Review all portions of this design (front, back, words and pictures) before use. Reviewing pictures alone is not sufficient.
- 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.