

Trenco 818 Soundside Rd Edenton, NC 27932

Re: 24095462F BCTH-22

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

Pages or sheets covered by this seal: I68234972 thru I68234983

My license renewal date for the state of North Carolina is December 31, 2024.

North Carolina COA: C-0844



September 17,2024

Gilbert, Eric

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.

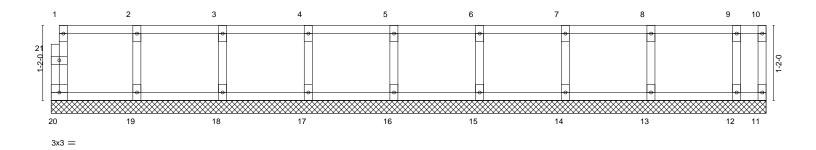
Job	Truss	Truss Type	Qty	Ply	BCTH-22
					168234972
24095462F	L3	Floor Supported Gable	1	1	
					Job Reference (optional)

Gastonia, NC - 28052, The Building Center,

8.820 s Aug 30 2024 MiTek Industries, Inc. Mon Sep 16 09:29:03 2024 Page 1 ID:zSBW3Sup3LWSAdyRsYeX6hyeAY4-DemZpNf6F3iSg5pi2zM9SHbPVqdcdkLqnVIw9Vyd5bE

0₁1₃8

Scale = 1:17.9



			11-1-8 11-1-8					
LOADING (psf) TCLL 40.0 TCDL 10.0 BCLL 0.0 BCDL 10.0	SPACING- 2-0-0 Plate Grip DOL 1.00 Lumber DOL 1.00 Rep Stress Incr YES Code IRC2015/TPI2014	CSI. TC 0.08 BC 0.02 WB 0.03 Matrix-R	DEFL. Vert(LL) Vert(CT) Horz(CT)	in (loc) n/a - n/a - 0.00 11	l/defl n/a n/a n/a	L/d 999 999 n/a	PLATES MT20 Weight: 48 lb	GRIP 244/190 FT = 20%F, 11%E

LUMBER-BRACING-

TOP CHORD 2x4 SP No.2(flat) 2x4 SP No.2(flat) **BOT CHORD WEBS**

2x4 SP No.3(flat) **OTHERS** 2x4 SP No.3(flat)

TOP CHORD BOT CHORD

except end verticals.

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

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

REACTIONS. All bearings 11-1-8.

(lb) - Max Grav All reactions 250 lb or less at joint(s) 20, 11, 19, 18, 17, 16, 15, 14, 13, 12

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) 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.
- 6) CAUTION, Do not erect truss backwards.



September 17,2024



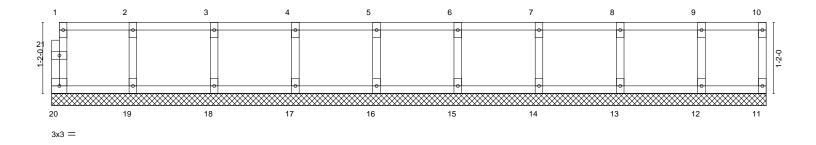
Job	Truss	Truss Type	Qty	Ply	BCTH-22
					168234973
24095462F	L2	Floor Supported Gable	1	1	
					Job Reference (optional)

Gastonia, NC - 28052, The Building Center,

8.820 s Aug 30 2024 MiTek Industries, Inc. Mon Sep 16 09:29:03 2024 Page 1 ID:zSBW3Sup3LWSAdyRsYeX6hyeAY4-DemZpNf6F3iSg5pi2zM9SHbPYqdcdkMqnVIw9Vyd5bE

0₁1₁8

Scale = 1:18.9



<u> </u>	11-8-12 11-8-12								
LOADING (psf) TCLL 40.0	SPACING- 2-0-0 Plate Grip DOL 1.00	CSI. TC 0.08	DEFL. Vert(LL)	in (loc) n/a -	l/defl L/d n/a 999	PLATES MT20	GRIP 244/190		
TCDL 10.0 BCLL 0.0	Lumber DOL 1.00 Rep Stress Incr YES	BC 0.02 WB 0.03	Vert(CT)	n/a -	n/a 999	WIZO	244/190		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-R	Horz(CT)	0.00 11	n/a n/a	Weight: 49 lb	FT = 20%F, 11%E		

LUMBER-BRACING-

TOP CHORD 2x4 SP No.2(flat) 2x4 SP No.2(flat) **BOT CHORD WEBS**

2x4 SP No.3(flat) **OTHERS** 2x4 SP No.3(flat)

Structural wood sheathing directly applied or 6-0-0 oc purlins, TOP CHORD except end verticals.

BOT CHORD

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

REACTIONS. All bearings 11-8-12.

(lb) - Max Grav All reactions 250 lb or less at joint(s) 20, 11, 19, 18, 17, 16, 15, 14, 13, 12

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) 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.
- 6) CAUTION, Do not erect truss backwards.





Job	Truss	Truss Type	Qty	Ply	BCTH-22	٦
0.4005.4005		5			168234974	Į.
24095462F	L1	Floor Supported Gable	1	1	Job Reference (optional)	

Gastonia, NC - 28052, The Building Center,

0-<u>1</u>-8

8.820 s Aug 30 2024 MiTek Industries, Inc. Mon Sep 16 09:29:02 2024 Page 1 ID:zSBW3Sup3LWSAdyRsYeX6hyeAY4-ISCAb1eTUlab2xEVVFrwv32ElQINuH5gYrYMc3yd5bF

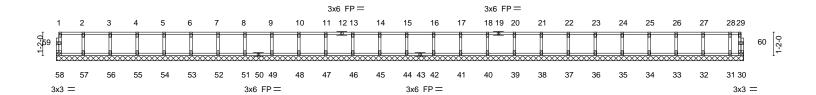
Structural wood sheathing directly applied or 6-0-0 oc purlins,

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

except end verticals.

0-11-8

Scale = 1:57.0



	34-0-0 34-0-0							
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 0.08	Vert(LL)	n/a -	n/a 9	99 MT20	244/190	
TCDL 10.0	Lumber DOL 1.00	BC 0.02	Vert(CT)	n/a -	n/a 9	99		
BCLL 0.0 BCDL 10.0	Rep Stress Incr YES Code IRC2015/TPI2014	WB 0.03 Matrix-R	Horz(CT)	0.00 30	n/a ı	n/a Weight: 140 lb	FT = 20%F, 11%E	

TOP CHORD

BOT CHORD

LUMBER-BRACING-

TOP CHORD 2x4 SP No.2(flat) 2x4 SP No.2(flat) BOT CHORD 2x4 SP No.3(flat) **WEBS OTHERS**

2x4 SP No.3(flat)

REACTIONS. All bearings 34-0-0.

(lb) - Max Grav All reactions 250 lb or less at joint(s) 58, 30, 57, 56, 55, 54, 53, 52, 51, 49, 48, 47, 46, 45, 44, 42, 41, 40, 39, 38, 37, 36, 35, 34, 33, 32, 31

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

NOTES-

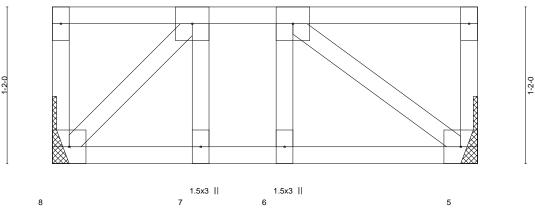
- 1) All plates are 1.5x3 MT20 unless otherwise indicated.
- 2) Gable requires continuous bottom chord bearing.
- 3) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- 4) Gable studs spaced at 1-4-0 oc.
- 5) Recommend 2x6 strongbacks, on edge, 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.



September 17,2024



Job Truss Truss Type Qty Ply BCTH-22 168234975 24095462F F9GR Floor Girder Job Reference (optional)
8.820 s Aug 30 2024 MiTek Industries, Inc. Mon Sep 16 09:29:02 2024 Page 1 The Building Center, Gastonia, NC - 28052, ID:zSBW3Sup3LWSAdyRsYeX6hyeAY4-ISCAb1eTUlab2xEVVFrwv32ALQBDuF4gYrYMc3yd5bF 0 - 11 - 00-6-0 1-3-0 3 4 1.5x3 || 1 1.5x3 II 2 3x3 = 3x3 = Scale = 1:8.6



BRACING-

TOP CHORD

BOT CHORD

TES

LOADING (psf)	SPACING- 2-0-0	CSI.	DEFL.	in	(loc)	I/defI	L/d	PLAT
TCLL 40.0	Plate Grip DOL 1.00	TC 0.36	Vert(LL)	-0.01	5-6	>999	360	MT20
TCDL 10.0	Lumber DOL 1.00	BC 0.48	Vert(CT)	-0.02	5-6	>999	240	
BCLL 0.0	Rep Stress Incr NO	WB 0.16	Horz(CT)	0.00	5	n/a	n/a	
BCDL 10.0	Code IRC2015/TPI2014	Matrix-S	, ,					Weigh

ght: 19 lb FT = 20%F, 11%E

GRIP 244/190

3x3 =

Structural wood sheathing directly applied or 3-2-0 oc purlins,

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

except end verticals.

LUMBER-

REACTIONS.

TOP CHORD 2x4 SP No.2(flat) 2x4 SP No.2(flat) BOT CHORD

2x4 SP No.3(flat) WEBS

> 8=Mechanical, 5=Mechanical Max Grav 8=453(LC 1), 5=511(LC 1)

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

3x3 =

TOP CHORD 2-3=-491/0

BOT CHORD 7-8=0/491, 6-7=0/491, 5-6=0/491

3-5=-616/0, 2-8=-694/0 **WEBS**

NOTES-

- 1) Unbalanced floor live loads have been considered for this design.
- 2) Refer to girder(s) for truss to truss connections.
- 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.
- 4) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 644 lb down at 1-10-4 on top chord. The design/selection of such connection device(s) is the responsibility of others.
- 5) 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: 5-8=-20, 1-4=-100 Concentrated Loads (lb) Vert: 3=-599(F)



September 17,2024



Job	Truss	Truss Type	Qty	Ply	BCTH-22
24095462F	Γο.	Floor	4	_	168234976
24095462F	F8	Floor	1	1	Job Reference (optional)

The Building Center, Gastonia, NC - 28052,

8.820 s Aug 30 2024 MiTek Industries, Inc. Mon Sep 16 09:29:01 2024 Page 1 ID:zSBW3Sup3LWSAdyRsYeX6hyeAY4-GGeoOhdrjRSlQnfJxYKhMsV0k1q39mTXJBpp4dyd5bG

10

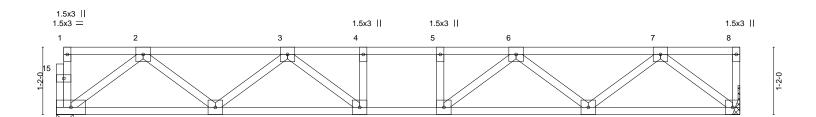
Structural wood sheathing directly applied or 6-0-0 oc purlins,

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

except end verticals.

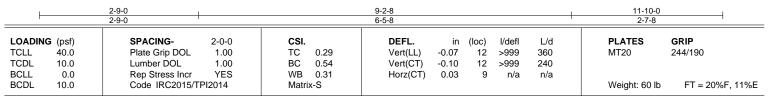
Scale = 1:19.9





11

12



TOP CHORD

BOT CHORD

LUMBER-BRACING-

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

3x6 =

REACTIONS. 14=0-3-8, 9=Mechanical

Max Grav 14=693(LC 1), 9=699(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown. TOP CHORD 2-3=-1338/0, 3-4=-1931/0, 4-5=-1931/0, 5-6=-1931/0, 6-7=-1314/0 **BOT CHORD** 13-14=0/842, 12-13=0/1760, 11-12=0/1931, 10-11=0/1746, 9-10=0/811

13

7-9=-1035/0, 2-14=-1054/0, 7-10=0/655, 2-13=0/645, 6-10=-563/0, 3-13=-550/0, 6-11=0/411, 3-12=0/398 **WEBS**

NOTES-

- 1) Unbalanced floor live loads have been considered for this design.
- 2) All plates are 3x3 MT20 unless otherwise indicated.
- 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.



September 17,2024



Job Truss Truss Type Qty Ply BCTH-22 168234977 24095462F F7GR Floor Girder

The Building Center, Gastonia, NC - 28052,

| Job Reference (optional) 8.820 s Aug 30 2024 MiTek Industries, Inc. Mon Sep 16 09:29:01 2024 Page 1 ID:zSBW3Sup3LWSAdyRsYeX6hyeAY4-GGeoOhdrjRSlQnfJxYKhMsVvJ1pw9jwXJBpp4dyd5bG

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

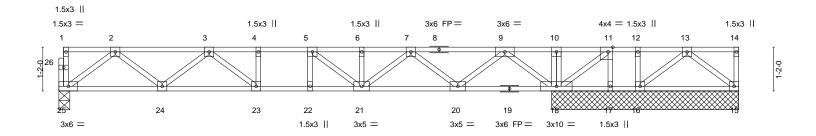
Rigid ceiling directly applied or 6-0-0 oc bracing.

except end verticals.

Scale = 1:30.7







	2-9-0	0	2-6-0		5-4-8			2-7			4-10-4	
	sets (X,Y)	[11:0-1-8,Edge]	2.0.0	CSI.		DEFL.	in	(100)	l/defl	I /d	PLATES	GRIP
TCLL TCDL BCLL	40.0 10.0 0.0	Plate Grip D Lumber DOL Rep Stress I	1.00	TC (0.76 0.61 0.47	Vert(LL) Vert(CT) Horz(CT)	in -0.07 -0.11 0.02	(loc) 23 23 18	>999 >999 n/a	L/d 360 240 n/a	MT20	244/190
BCDL	10.0)15/TPI2014	Matrix-		11012(01)	0.02	10	Π/α	II/a	Weight: 95 lb	FT = 20%F, 11%E

TOP CHORD

BOT CHORD

BRACING-LUMBER-

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

(size) 25=0-3-8, 15=4-11-12, 18=4-11-12, 16=4-11-12, 17=4-11-12

Max Uplift 15=-125(LC 1), 17=-824(LC 1)

Max Grav 25=666(LC 1), 18=2334(LC 1), 16=503(LC 1)

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

2-3=-1274/0, 3-4=-1786/0, 4-5=-1786/0, 5-6=-1499/0, 6-7=-1499/0, 7-9=-400/0, TOP CHORD

9-10=0/1937, 10-11=0/1937, 11-12=0/694, 12-13=0/694

BOT CHORD 24-25=0/808, 23-24=0/1664, 22-23=0/1786, 21-22=0/1786, 20-21=0/1074, 18-20=-331/0, 17-18=-694/0. 16-17=-694/0

2-25=-1011/0, 9-18=-2014/0, 2-24=0/607, 9-20=0/951, 3-24=-508/0, 7-20=-878/0,

3-23=-5/340, 7-21=0/542, 13-15=0/315, 11-18=-1534/0, 13-16=-571/0, 11-17=0/795,

5-21=-458/0

WEBS

REACTIONS.

- 1) Unbalanced floor live loads have been considered for this design.
- 2) All plates are 3x3 MT20 unless otherwise indicated.
- 3) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 15=125, 17=824,
- 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.
- 6) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 491 lb down at 11-11-12 on top chord. The design/selection of such connection device(s) is the responsibility of others.
- 7) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard

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

Uniform Loads (plf)

Vert: 15-25=-20, 1-14=-100

Concentrated Loads (lb) Vert: 9=-411(B)



September 17,2024



WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 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/TP11 Quality Criteria and DSB-22 available from Truss Plate Institute (www.tpinst.org) and BCSI Building Component Safety Information available from the Structural Building Component Association (www.sbcacomponents.com)



Job	Truss	Truss Type	Qty	Ply	BCTH-22	٦
					168234978	3
24095462F	F6	Floor	2	1		
					Lob Reference (optional)	

The Building Center,

Gastonia, NC - 28052,

8.820 s Aug 30 2024 MiTek Industries, Inc. Mon Sep 16 09:29:00 2024 Page 1 ID:zSBW3Sup3LWSAdyRsYeX6hyeAY4-o34QAMdDy8Kupd47NqpSqeziwdNdQEzN5X3GYByd5bH

Structural wood sheathing directly applied or 2-2-0 oc purlins,

Rigid ceiling directly applied or 10-0-0 oc bracing, Except:

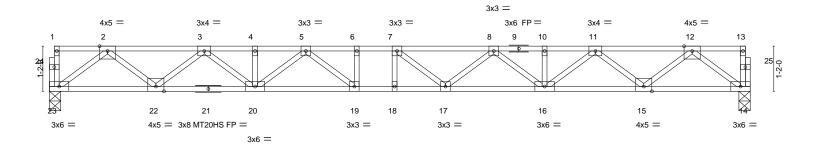
except end verticals.

2-2-0 oc bracing: 18-19,17-18.

0-1-8 H — 1-3-0

0-10-4

0-1-8 Scale = 1:29.8



	18-1-4 18-1-4								
LOADING (psf) TCLL 40.0	SPACING- 2-0-0 Plate Grip DOL 1.00	CSI. TC 0.87	DEFL. in (loc) I/defl L/d Vert(LL) -0.33 17-18 >650 360	PLATES GRIP MT20 244/190					
TCDL 10.0 BCLL 0.0 BCDL 10.0	Lumber DOL 1.00 Rep Stress Incr YES Code IRC2015/TPI2014	BC 1.00 WB 0.58 Matrix-S	Vert(CT) -0.49 17-18 >435 240 Horz(CT) 0.08 14 n/a n/a	MT20HS 187/143 Weight: 94 lb FT = 20%F, 11%E					

BOT CHORD

LUMBER-BRACING-TOP CHORD

2x4 SP No.2(flat) TOP CHORD 2x4 SP No.2(flat) *Except* BOT CHORD

14-21: 2x4 SP No.1(flat)

WEBS 2x4 SP No.3(flat)

(size) 23=0-3-8, 14=0-3-8

Max Grav 23=1065(LC 1), 14=1065(LC 1)

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

2-3=-2272/0, 3-4=-3776/0, 4-5=-3776/0, 5-6=-4556/0, 6-7=-4556/0, 7-8=-4461/0,

8-10=-3770/0, 10-11=-3770/0, 11-12=-2271/0

BOT CHORD $22 - 23 = 0/1331, \ 20 - 22 = 0/3140, \ 19 - 20 = 0/4244, \ 18 - 19 = 0/4556, \ 17 - 18 = 0/4556, \ 16 - 17 = 0/4277, \ 18 - 10/4277, \ 18 -$

15-16=0/3143, 14-15=0/1330

WFBS 12-14=-1666/0, 2-23=-1667/0, 12-15=0/1226, 2-22=0/1225, 11-15=-1135/0,

3-22=-1129/0, 11-16=0/800, 3-20=0/812, 8-16=-648/0, 5-20=-598/0, 8-17=0/395,

5-19=-14/627, 7-17=-389/181

NOTES-

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 1.5x3 MT20 unless otherwise indicated.
- 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.





Job	Truss	Truss Type	Qty	Ply	BCTH-22
					168234979
24095462F	F5	Floor	5	1	
					Job Reference (optional)

The Building Center, Gastonia, NC - 28052,

8.820 s Aug 30 2024 MiTek Industries, Inc. Mon Sep 16 09:29:00 2024 Page 1 ID:zSBW3Sup3LWSAdyRsYeX6hyeAY4-o34QAMdDy8Kupd47NqpSqezkAdPZQF7N5X3GYByd5bH

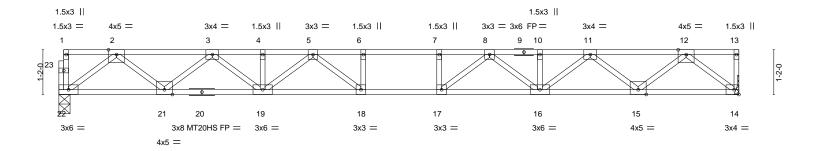


1-10-4 Scale = 1:30.0

Structural wood sheathing directly applied or 5-1-10 oc purlins,

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

except end verticals.



2-9-0	5-3-0	9-11-12	12-7-4	15-1-4	17-8-12
2-9-0	2-6-0	4-8-12	2-7-8	2-6-0	2-7-8
LOADING (psf) TCLL 40.0 TCDL 10.0 BCLL 0.0 BCDL 10.0	SPACING- 2-0-0 Plate Grip DOL 1.00 Lumber DOL 1.00 Rep Stress Incr YES Code IRC2015/TPI2014	CSI. DEFL. TC 0.73 Vert(LL) BC 0.87 Vert(CT WB 0.57 Horz(CT Matrix-S Horz(CT		360 MT 240 MT n/a	ATES GRIP 20 244/190 20HS 187/143 eight: 89 lb FT = 20%F, 11%E

TOP CHORD

BOT CHORD

LUMBER-BRACING-

2x4 SP No.2(flat) TOP CHORD BOT CHORD

2x4 SP No.2(flat) *Except* 14-20: 2x4 SP No.1(flat)

WEBS 2x4 SP No.3(flat)

> (size) 22=0-3-8, 14=Mechanical Max Grav 22=1046(LC 1), 14=1052(LC 1)

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

2-3=-2223/0, 3-4=-3688/0, 4-5=-3688/0, 5-6=-4386/0, 6-7=-4386/0, 7-8=-4386/0, TOP CHORD

8-10=-3662/0, 10-11=-3662/0, 11-12=-2179/0

BOT CHORD $21-22=0/1305,\ 19-21=0/3073,\ 18-19=0/4120,\ 17-18=0/4386,\ 16-17=0/4104,\ 15-16=0/3037,\ 18-19=0/4120,\ 17-18=0/4386,\ 18-19=0/4104,\ 18-1$

14-15=0/1253

12-14=-1600/0, 2-22=-1635/0, 12-15=0/1205, 2-21=0/1195, 11-15=-1117/0, WFBS

3-21=-1105/0, 11-16=0/798, 3-19=0/786, 8-16=-564/0, 5-19=-551/0, 8-17=-30/675,

5-18=-44/661, 6-18=-279/0, 7-17=-285/0

NOTES-

REACTIONS.

- 1) Unbalanced floor live loads have been considered for this design.
- 2) All plates are MT20 plates unless otherwise indicated.
- 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.



September 17,2024



Job Truss Truss Type Qty Ply BCTH-22 168234980 F4 24095462F Floor 3

The Building Center, Gastonia, NC - 28052,

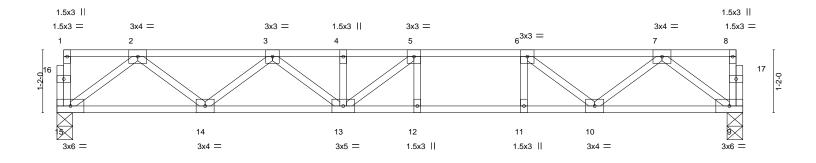
Job Reference (optional)
8.820 s Aug 30 2024 MiTek Industries, Inc. Mon Sep 16 09:28:59 2024 Page 1 ID:zSBW3Sup3LWSAdyRsYeX6hyeAY4-KtW2z0cbBqC1BTVxp7IDHRQaQD3LhrCEstKi0kyd5bl

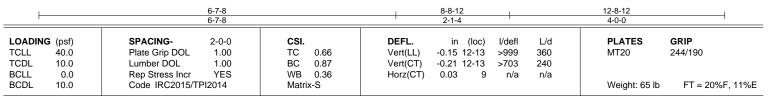
Structural wood sheathing directly applied or 6-0-0 oc purlins,

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

except end verticals.







TOP CHORD

BOT CHORD

LUMBER-BRACING-

TOP CHORD 2x4 SP No.2(flat) BOT CHORD 2x4 SP No.1(flat)

WEBS 2x4 SP No.3(flat)

REACTIONS. 15=0-3-8, 9=0-3-8 (size) Max Grav 15=743(LC 1), 9=743(LC 1)

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

TOP CHORD 2-3=-1458/0, 3-4=-2208/0, 4-5=-2208/0, 5-6=-2109/0, 6-7=-1464/0

BOT CHORD 14-15=0/906, 13-14=0/1948, 12-13=0/2109, 11-12=0/2109, 10-11=0/2109, 9-10=0/883

7-9=-1104/0, 2-15=-1135/0, 7-10=0/757, 2-14=0/718, 6-10=-824/0, 3-14=-638/0, 3-13=0/332, 5-13=-225/294, **WEBS**

6-11=0/252

NOTES-

- 1) Unbalanced floor live loads have been considered for this design.
- 2) 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.



September 17,2024



WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 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/TPII Quality Criteria and DSB-22 available from Truss Plate Institute (www.tpinst.org) and BCSI Building Component Safety Information available from the Structural Building Component Association (www.sbcacomponents.com)



Job Truss Truss Type Qty Ply BCTH-22 168234981 24095462F F3GR Floor Girder

The Building Center, Gastonia, NC - 28052,

Job Reference (optional) 8.820 s Aug 30 2024 MiTek Industries, Inc. Mon Sep 16 09:28:59 2024 Page 1 ID:zSBW3Sup3LWSAdyRsYeX6hyeAY4-KtW2z0cbBqC1BTVxp7IDHRQbZD7AhmoEstKi0kyd5bl

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

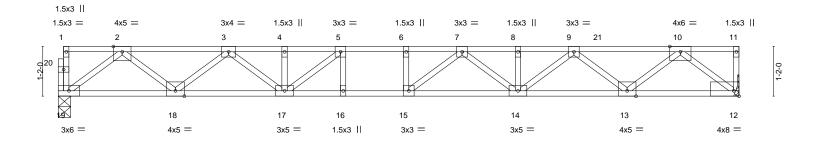
Rigid ceiling directly applied or 10-0-0 oc bracing.

except end verticals.



1-4-4

Scale = 1:27.0



	2-6-0	+	5-7-4		_	2-6-0		1-12 7-8
[12:Edge,0-1-8]								
SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
Plate Grip DOL	1.00	TC 0.59	Vert(LL)	-0.17 14-15	>999	360	MT20	244/190
Lumber DOL	1.00	BC 0.63	Vert(CT)	-0.34 14-15	>554	240		
Rep Stress Incr	NO	WB 0.64	Horz(CT)	0.06 12	n/a	n/a		
Code IRC2015/T	PI2014	Matrix-S					Weight: 82 lb	FT = 20%F, 11%E
	[12:Edge,0-1-8] SPACING- Plate Grip DOL Lumber DOL Rep Stress Incr	0 2-6-0 [12:Edge,0-1-8] SPACING- 2-0-0 Plate Grip DOL 1.00 Lumber DOL 1.00	2-6-0 [12:Edge,0-1-8] SPACING- 2-0-0 CSI. Plate Grip DOL 1.00 TC 0.59 Lumber DOL 1.00 BC 0.63 Rep Stress Incr NO WB 0.64	2-6-0 5-7-4	2-6-0 5-7-4	2-6-0 5-7-4	2-6-0 5-7-4 2-6-0	2-6-0 5-7-4 2-6-0 2-7-4 2-7-4 2-6-0 2-7-4 2-7-

TOP CHORD

BOT CHORD

LUMBER-**BRACING-**

TOP CHORD 2x4 SP DSS(flat) **BOT CHORD** 2x4 SP DSS(flat)

2x4 SP No.3(flat) (size) 19=0-3-8, 12=Mechanical

REACTIONS. Max Grav 19=1044(LC 1), 12=1865(LC 1)

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

2-3=-2222/0, 3-4=-3648/0, 4-5=-3648/0, 5-6=-4266/0, 6-7=-4266/0, 7-8=-4184/0, TOP CHORD

8-9=-4184/0, 9-10=-3056/0 BOT CHORD $18-19=0/1303,\ 17-18=0/3062,\ 16-17=0/4266,\ 15-16=0/4266,\ 14-15=0/4385,\ 13-14=0/3924,$

12-13=0/2134

10-12=-2725/0. 2-19=-1632/0. 10-13=0/1200. 2-18=0/1196. 9-13=-1129/0. 3-18=-1094/0. 9-14=0/333, 3-17=0/747, 7-14=-257/0, 5-17=-993/0, 7-15=-423/152

NOTES-

WFBS

WEBS

- 1) Unbalanced floor live loads have been considered for this design.
- 2) Refer to girder(s) for truss to truss connections.
- 3) Load case(s) 1, 2, 3, 4, 5, 6 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.
- 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.
- CAUTION, Do not erect truss backwards.
- 6) 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: 12-19=-20, 1-21=-100, 11-21=-420(F=-320)

2) Dead: Lumber Increase=1.00, Plate Increase=1.00

Uniform Loads (plf)

Vert: 12-19=-20, 1-21=-100, 11-21=-420(F=-320)

3) 1st chase Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00 Uniform Loads (plf)

Vert: 12-19=-20, 1-6=-100, 6-21=-20, 11-21=-340(F=-320)

4) 2nd chase Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00 Uniform Loads (plf)

Vert: 12-19=-20, 1-5=-20, 5-21=-100, 11-21=-420(F=-320)

September 17,2024

Continued on page 2

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 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/TP11 Quality Criteria and DSB-22 available from Truss Plate Institute (www.tpinst.org) and BCSI Building Component Safety Information available from the Structural Building Component Association (www.sbcacomponents.com)



Job Truss Truss Type Qty Ply BCTH-22 168234981 F3GR Floor Girder 24095462F

The Building Center,

Gastonia, NC - 28052,

Job Reference (optional)

8.820 s Aug 30 2024 MiTek Industries, Inc. Mon Sep 16 09:28:59 2024 Page 2
ID:zSBW3Sup3LWSAdyRsYeX6hyeAY4-KtW2z0cbBqC1BTVxp7IDHRQbZD7AhmoEstKi0kyd5bI

LOAD CASE(S) Standard

5) 3rd chase Dead: Lumber Increase=1.00, Plate Increase=1.00 Uniform Loads (plf)

Vert: 12-19=-20, 1-6=-100, 6-21=-20, 11-21=-340(F=-320)

6) 4th chase Dead: Lumber Increase=1.00, Plate Increase=1.00 Uniform Loads (plf)

Vert: 12-19=-20, 1-5=-20, 5-21=-100, 11-21=-420(F=-320)



818 Soundside Road Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	BCTH-22	٦
<u>-</u>			_		I68234982	.
24095462F	F2	Floor	5	1		
					Job Reference (optional)	

The Building Center, Gastonia, NC - 28052,

8.820 s Aug 30 2024 MiTek Industries, Inc. Mon Sep 16 09:28:58 2024 Page 1 ID:zSBW3Sup3LWSAdyRsYeX6hyeAY4-shygmgbzQW4AZKwkGPn_IDtR7pkkyMr4dDa9Tlyd5bJ

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

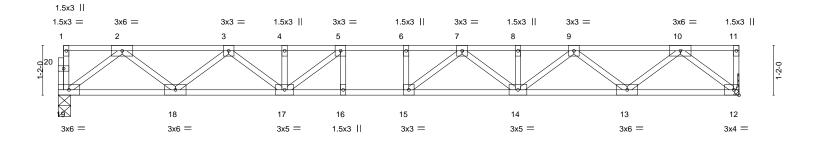
Rigid ceiling directly applied or 10-0-0 oc bracing.

except end verticals.



1-4-4

Scale = 1:27.0



2-9-0	5-3-0	10-10-4	13-4-4	15-11-12
2-9-0	2-6-0	5-7-4	2-6-0	2-7-8
LOADING (psf) TCLL 40.0 TCDL 10.0 BCLL 0.0 BCDL 10.0	SPACING- 2-0-0 Plate Grip DOL 1.00 Lumber DOL 1.00 Rep Stress Incr YES Code IRC2015/TPI2014	CSI. DEFL. in (ll TC 0.57 Vert(LL) -0.21 14- BC 0.77 Vert(CT) -0.32 14- WB 0.50 Horz(CT) 0.06 Matrix-S Horz(CT) 0.06		PLATES GRIP MT20 244/190 Weight: 82 lb FT = 20%F, 11%E

TOP CHORD

BOT CHORD

LUMBER-BRACING-

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

19=0-3-8, 12=Mechanical

Max Grav 19=941(LC 1), 12=947(LC 1)

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

TOP CHORD 2-3=-1963/0, 3-4=-3153/0, 4-5=-3153/0, 5-6=-3545/0, 6-7=-3545/0, 7-8=-3152/0, 8-9=-3152/0, 9-10=-1921/0 **BOT CHORD** 18-19=0/1168, 17-18=0/2682, 16-17=0/3545, 15-16=0/3545, 14-15=0/3460, 13-14=0/2657, 12-13=0/1121 $10-12=-1431/0,\,2-19=-1463/0,\,10-13=0/1041,\,2-18=0/1034,\,9-13=-958/0,\,3-18=-936/0,\,9-14=0/631,\,3-17=0/601,\,3-17=0$ **WEBS**

7-14=-394/0, 5-17=-711/0, 7-15=-159/412

NOTES-

REACTIONS.

- 1) Unbalanced floor live loads have been considered for this design.
- 2) Refer to girder(s) for truss to truss connections.
- 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.
- 4) CAUTION, Do not erect truss backwards.



September 17,2024



Job Truss Truss Type Qty Ply BCTH-22 168234983 F1 Floor 24095462F

The Building Center, Gastonia, NC - 28052,

Job Reference (optional) 8.820 s Aug 30 2024 MiTek Industries, Inc. Mon Sep 16 09:28:58 2024 Page 1 ID:zSBW3Sup3LWSAdyRsYeX6hyeAY4-shygmgbzQW4AZKwkGPn_IDtNkph9yIG4dDa9Tlyd5bJ

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

Rigid ceiling directly applied or 2-2-0 oc bracing.

except end verticals.

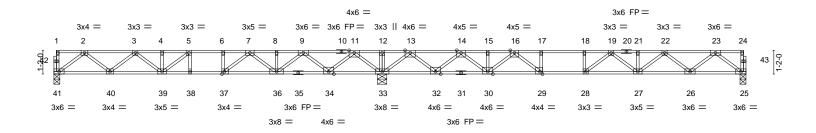
0-1-8

HI 1-3-0

1-6-0

2-0-0

0-1-8 Scale = 1:56.6



2-9-0	5-3-0 6-7-8 8-4-8 9-7-8 11-0-0	13-6-0 16-1-8	18-9-0 21-3-0 26-1-8	28-9-0 31-3-0 34-0-0
2-9-0	2-6-0 1-4-8 1-9-0 1-3-0 1-4-8	2-6-0 2-7-8	2-7-8 2-6-0 4-10-8	2-7-8 2-6-0 2-9-0
Plate Offsets (X,Y)	[29:0-1-8,Edge], [37:0-1-8,Edge]			
LOADING (psf)	SPACING- 2-0-0	CSI.	DEFL. in (loc) I/defl L/d	PLATES GRIP
TCLL 40.0	Plate Grip DOL 1.00	TC 0.79	Vert(LL) -0.23 27-28 >915 360	MT20 244/190
TCDL 10.0	Lumber DOL 1.00	BC 1.00	Vert(CT) -0.34 27-28 >622 240	
BCLL 0.0	Rep Stress Incr YES	WB 0.72	Horz(CT) 0.05 25 n/a n/a	
BCDL 10.0	Code IRC2015/TPI2014	Matrix-S		Weight: 172 lb FT = 20%F, 11%E

BRACING-

TOP CHORD

BOT CHORD

LUMBER-

BOT CHORD

2x4 SP No.2(flat) *Except* TOP CHORD

10-20: 2x4 SP DSS(flat) 2x4 SP No.2(flat) *Except*

25-31: 2x4 SP DSS(flat)

WEBS 2x4 SP No.3(flat)

REACTIONS. (size) 41=0-3-8, 33=0-5-8, 25=0-3-8

Max Grav 41=804(LC 3), 33=2454(LC 1), 25=922(LC 4)

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

2-3=-1615/0, 3-4=-2498/0, 4-5=-2498/0, 5-6=-2575/0, 6-7=-2575/0, 7-8=-1683/489, 8-9=-1683/489, 9-11=-78/1262, 11-12=0/3418, 12-13=0/3418, 13-14=-278/1186,

14-15=-2103/370, 15-16=-2103/370, 16-17=-3328/0, 17-18=-3328/0, 18-19=-3328/0, 19-21=-3082/0, 21-22=-3082/0, 22-23=-1908/0

40-41=0/988, 39-40=0/2175, 38-39=0/2575, 37-38=0/2575, 36-37=-200/2189,

BOT CHORD

34-36=-860/992, 33-34=-1961/0, 32-33=-1856/0, 30-32=-764/1298, 29-30=-57/2726, 28-29=0/3328, 27-28=0/3348, 26-27=0/2619, 25-26=0/1140

2-41=-1237/0, 11-33=-1829/0, 2-40=0/817, 11-34=0/1388, 3-40=-728/0, 9-34=-1302/0,

3-39=0/413, 9-36=0/1003, 5-39=-144/425, 7-36=-774/0, 23-25=-1428/0, 13-33=-1960/0, 23-26=0/1000, 13-32=0/1521, 22-26=-925/0, 14-32=-1428/0, 22-27=0/591, 14-30=0/1133,

19-27=-339/53, 16-30=-908/0, 19-28=-491/147, 16-29=0/1164, 17-29=-498/0,

6-37=-350/0. 7-37=0/880

NOTES-

WEBS

- 1) Unbalanced floor live loads have been considered for this design.
- 2) All plates are 1.5x3 MT20 unless otherwise indicated.
- 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.
- 4) CAUTION, Do not erect truss backwards.



September 17,2024



Symbols

PLATE LOCATION AND ORIENTATION



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



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

₹

connector plates. required direction of slots in This symbol indicates the

* Plate location details available in MiTek software or upon request

PLATE SIZE

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

LATERAL BRACING LOCATION



by text in the bracing section of the output. Use T or I bracing if indicated. ndicated by symbol shown and/or

BEARING



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

ANSI/TPI1: Industry Standards: National Design Specification for Metal

DSB-22:

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

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-1988, ESR-2362, ESR-2685, ESR-3282 ESR-4722, ESL-1388

Design General Notes

truss unless otherwise shown Trusses are designed for wind loads in the plane of the

established by others section 6.3 These truss designs rely on lumber values Lumber design values are in accordance with ANSI/TPI 1

© 2023 MiTek® All Rights Reserved

MiTek



MiTek Engineering Reference Sheet: MII-7473 rev. 1/2/2023

General Safety Notes

Damage or Personal Injury Failure to Follow Could Cause Property

- Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI
- Ņ 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

'n

- joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TPI 1. Place plates on each face of truss at each
- Design assumes trusses will be suitably protected from the environment in accord with ANSI/TPI 1.
- Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.

œ

- 9 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 camber for dead load deflection responsibility of truss fabricator. General practice is to
- 11. 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
- 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.
- 15. Connections not shown are the responsibility of others
- Do not cut or alter truss member or plate without prior approval of an engineer.
- Install and load vertically unless indicated otherwise.
- Use of green or treated lumber may pose unacceptable project engineer before use. environmental, health or performance risks. Consult with
- 19. Review all portions of this design (front, back, words is not sufficient. and pictures) before use. Reviewing pictures alone
- 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.