

Truss Design



MITek USA, Inc.

7777 Greenback Lane
Suite 109
Citrus Heights, CA, 95610
Telephone 916/676-1900
Fax 916/676-1909

Re: 17029a

Ruth Bunkhouse Remodel / AP# 020-320-02

The truss drawing(s) referenced below have been prepared by MiTek USA, Inc. under my direct supervision based on the parameters provided by Thomas Home Center.

Pages or sheets covered by this seal: R47316204 thru R47316206

My license renewal date for the state of California is December 31, 2016.

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



May 12, 2016

Hernandez, Marcos

The seal on these drawings indicate acceptance of professional engineering responsibility solely for the truss components shown. The suitability and use of this component for any particular building is the responsibility of the building designer, per ANSI/TPI 1.

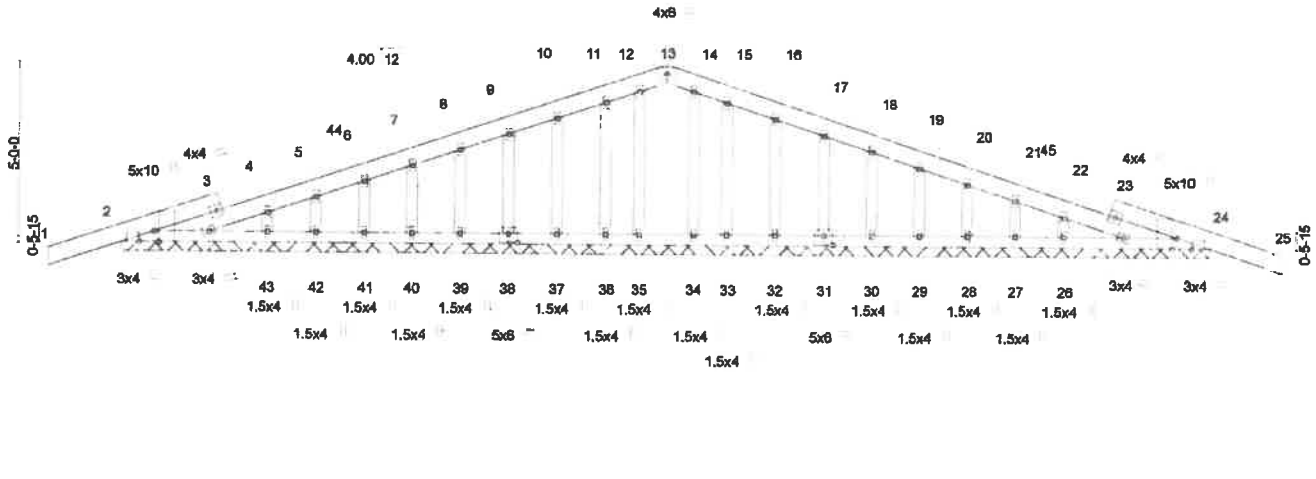


Plate Offsets (X,Y) - [2:0-3-9,Edge], [2:0-4-15,Edge], [24:0-3-9,Edge], [24:0-4-15,Edge], [31:0-3-0,0-3-0], [38:0-3-0,0-3-0]

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 60.0 (Roof Snow=60.0)	2-0-0 Plate Grip DOL 1.00 Lumber DOL 1.00 Rep Stress Incr NO Code IBC2012/TPI2007	TC 0.18 BC 0.09 WB 0.06 (Matrix)	in (loc) l/def L/d Vert(LL) 0.00 24 n/r 120 Vert(TL) -0.00 25 n/r 120 Horz(TL) 0.00 24 n/a n/a	MT20	220/185
TCDL 10.0				Weight: 186 lb	FT = 20%
BCLL 0.0					
BCDL 12.0					

LUMBER-
 TOP CHORD 2x8 DF SS G
 BOT CHORD 2x4 DF No.1 G
 OTHERS 2x4 DF Std G

BRACING-
 TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
 BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
 MITek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

REACTIONS. All bearings 30-0-0.
 (lb) - Max Horz 2=55(LC 12)
 Max Uplift All uplift 100 lb or less at joint(s) 27, 28, 29, 30, 31, 32, 33, 42, 41, 40, 39, 38, 37, 36 except
 2=112(LC 14), 24=112(LC 14)
 Max Grav All reactions 250 lb or less at joint(s) 35, 34, 27, 33, 42, 36 except 2=851(LC 19), 24=651(LC 20),
 26=471(LC 1), 28=281(LC 20), 29=289(LC 20), 30=290(LC 20), 31=290(LC 20), 32=291(LC 20), 43=471(LC 1),
 41=281(LC 19), 40=289(LC 19), 39=290(LC 19), 38=290(LC 19), 37=291(LC 19)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 22-26=378/95, 19-29=260/50, 18-30=257/50, 17-31=259/51, 16-32=258/55,
 4-43=378/96, 7-40=260/50, 8-39=257/50, 9-38=259/51, 10-37=258/55

- NOTES-**
- Wind: ASCE 7-10; Vult=110mph (3-second gust) Vasd=87mph; TCDL=4.2psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=2ft; Cat. II; Exp C; enclosed; MWFRS (directional) and C-C Exterior(2) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
 - TCLL: ASCE 7-10; Pf=60.0 psf (flat roof snow); Category II; Exp C; Partially Exp.; Ct=1.1
 - Unbalanced snow loads have been considered for this design.
 - This truss has been designed for greater of min roof live load of 20.0 psf or 1.00 times flat roof load of 60.0 psf on overhangs non-concurrent with other live loads.
 - All plates are 2x4 MT20 unless otherwise indicated.
 - Gable requires continuous bottom chord bearing.
 - Gable studs spaced at 1-4-0 oc.
 - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
 - A plate rating reduction of 20% has been applied for the green lumber members.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 27, 28, 29, 30, 31, 32, 33, 42, 41, 40, 39, 38, 37, 36 except (lb) 2=112, 24=112.
 - "Semi-rigid pitchbreaks including heels" Member end fixity model was used in the analysis and design of this truss.



May 12, 2016

Job 17028A	Truss NT01	Truss Type FINK	Qty 10	Ply 1	Ruth Bunkhouse Ramodel / AP# 020-320-02	R47316205
Thomas Home Center, McKinleyville, CA		Job Reference (optional) 7.840 s Apr 19 2016 Mitek Industries, Inc. Thu May 12 11:07:30 2016 Page 1 ID:08YseWAlmG8R2mUvJT97egzHWfy-w18vYUjqk7WM69W7aG9SjplLaFdpcvQRab8kSIJzHEOR				
-2-0-0	6-1-12	10-8-14	15-0-0	18-5-2	23-10-4	30-0-0
2-0-0	6-1-12	4-5-2	4-5-2	4-5-2	4-5-2	6-1-12
						2-0-0

Scale = 1:55.0

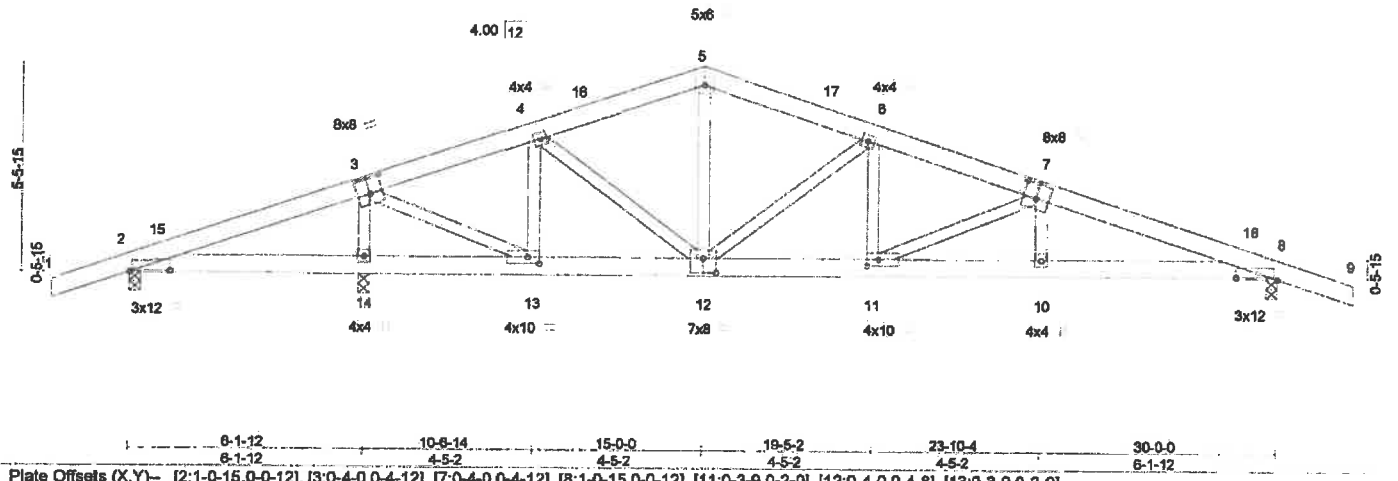


Plate Offsets (X,Y) - [2:1-0-15,0-0-12], [3:0-4-0,0-4-12], [7:0-4-0,0-4-12], [8:1-0-15,0-0-12], [11:0-3-9,0-2-0], [12:0-4-0,0-4-8], [13:0-3-9,0-2-0]

LOADING (psf)	SPACING-	CSI	DEFL.	in (loc)	l/def	L/d	PLATES	GRIP
TCLL 60.0	2-0-0	TC 0.40	Vert(LL)	-0.15	10-11	>999	MT20	220/185
(Roof Snow=60.0)	Plate Grip DOL 1.00	BC 0.52	Vert(TL)	-0.25	10-11	>999		
TCDL 10.0	Lumber DOL 1.00	WB 0.91	Horz(TL)	0.05	8	n/a		
BCLL 0.0 *	Rep Stress Incr NO	(Matrix)						
BCDL 12.0	Code IBC2012/TPI2007						Weight: 190 lb	FT = 20%

LUMBER-
TOP CHORD 2x6 DF SS G
BOT CHORD 2x8 DF SS G
WEBS 2x4 DF Std G "Except"
7-11,3-13: 2x4 DF No.1 G

BRACING-
TOP CHORD
BOT CHORD

Structural wood sheathing directly applied or 3-8-6 oc purlins.
Rigid ceiling directly applied or 6-0-0 oc bracing.

Mitek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

REACTIONS. (lb/size) 2=420/0-3-8, 14=2903/0-3-8, 8=2150/0-3-8
Max Horz 2=60(LC 13)
Max Uplift 2=163(LC 14), 14=196(LC 14), 8=183(LC 14)
Max Grav 2=534(LC 19), 14=2903(LC 1), 8=2269(LC 20)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-15=34/1039, 3-15=25/1139, 3-4=1661/138, 4-18=2048/195, 5-16=1950/203,
5-17=1950/197, 6-17=2050/189, 6-7=3428/242, 7-18=4417/258, 8-18=4582/243
BOT CHORD 2-14=1018/84, 13-14=945/77, 12-13=14/1433, 11-12=126/3133, 10-11=191/4174,
8-10=189/4177
WEBS 5-12=13/850, 6-12=1712/117, 6-11=0/612, 7-11=1154/72, 4-12=27/899,
4-13=1044/123, 3-13=100/2453, 3-14=2670/205

- NOTES-**
- Wind: ASCE 7-10; Vult=110mph (3-second gust) Vasd=87mph; TCDL=4.2psf; BCDD=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; enclosed; MWFRS (directional) and C-C Exterior(2) -2-0-0 to 1-0-0, Interior(1) 1-0-0 to 15-0-0, Exterior(2) 15-0-0 to 18-0-0 zone; porch left exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - TCLL: ASCE 7-10; Pf=60.0 psf (flat roof snow); Category II; Exp C; Partially Exp.; Ct=1.1
 - Unbalanced snow loads have been considered for this design.
 - This truss has been designed for greater of min roof live load of 20.0 psf or 1.00 times flat roof load of 60.0 psf on overhangs non-concurrent with other live loads.
 - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-8-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
 - A plate rating reduction of 20% has been applied for the green lumber members.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=tb) 2=163, 14=196, 8=183.
 - "Semi-rigid pitchbreaks including heels" Member end fixity model was used in the analysis and design of this truss.



May 12, 2016

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MI-7473 rev. 10/03/2015 BEFORE USE. Design void 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, D58-89 and SCS Building Component Safety Information available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



Job: 17029A Truss: NT02 Truss Type: FINK Qty: 7 Ply: 1 Ruth Bunkhouse Remodel / AP# 020-320-02 R47316206
 Thomas Home Center, McKinleyville, CA
 Job Reference (optional): 7.640 s Apr 19 2016 MITek Industries, Inc. Thu May 12 11:07:31 2016 Page 1
 ID:08YseWAlmG8R2mLhVT97egzHwY-ODilmqkSVReCkJ5C8_ghF1ukc17XetukqoU?HmzHEOQ
 -2-0-0 6-1-12 10-6-14 15-0-0 19-5-2 23-10-4 30-0-0 32-0-0
 2-0-0 6-1-12 4-5-2 4-5-2 4-5-2 8-1-12 2-0-0
 Scale = 1:55.9

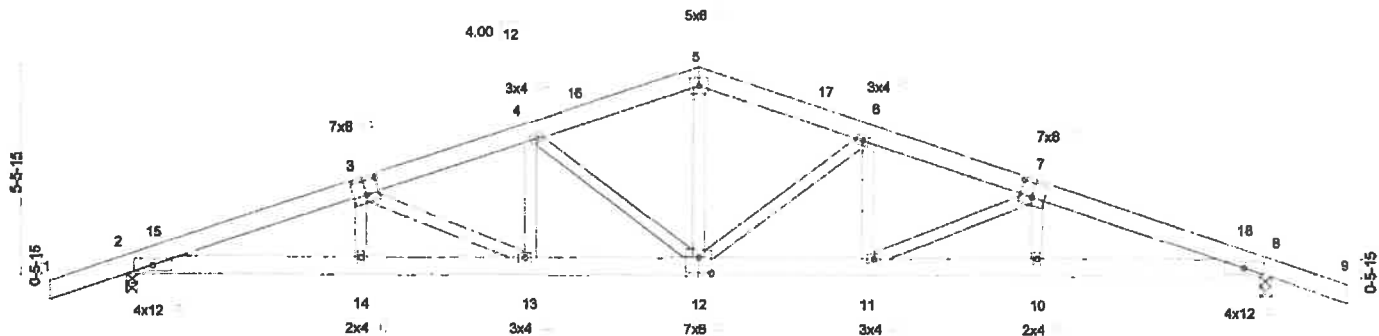


Plate Offsets (X,Y) - [3:0-4-0,0-4-8], [7:0-4-0,0-4-8], [12:0-4-0,0-4-8]

LOADING (psf)	SPACING-	2-0-0	CSI	DEFL.	in (loc)	Vdefl	L/d	PLATES	GRIP
TCLL 60.0	Plate Grip DOL 1.00		TC 0.49	Vert(LL) -0.27	12	>999	240	MT20	220/195
(Roof Snow=60.0)	Lumber DOL 1.00		BC 0.67	Vert(TL) -0.48	12-13	>750	180		
TCDL 10.0	Rep Stress Incr NO		WB 0.90	Horz(TL) 0.15	8	n/a	n/a		
BCLL 0.0	Code IBC2012/TPI2007		(Matrix)						
BCDL 12.0								Weight: 190 lb	FT = 20%

LUMBER-
 TOP CHORD 2x8 DF SS G
 BOT CHORD 2x6 DF SS G
 WEBS 2x4 DF Std G

BRACING-
 TOP CHORD Structural wood sheathing directly applied or 3-1-7 oc purlins.
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
 MITek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

REACTIONS. (lb/size) 2=2737/0-3-8, 8=2737/0-3-8
 Max Horz 2=60(LC 13)
 Max Uplift 2=210(LC 14), 8=210(LC 14)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-15=5939/341, 3-15=5790/356, 3-4=4954/344, 4-16=3885/298, 5-16=3789/306,
 5-17=3789/306, 6-17=3885/298, 6-7=4954/344, 7-18=5790/355, 8-18=5939/340
BOT CHORD 2-14=282/5476, 13-14=265/5474, 12-13=204/4809, 11-12=223/4809, 10-11=283/5473,
 8-10=281/5476
WEBS 5-12=74/1764, 6-12=1687/117, 6-11=0/591, 7-11=1088/67, 4-12=1687/117,
 4-13=0/591, 3-13=1088/68

- NOTES-**
- 1) Wind: ASCE 7-10; Vult=110mph (3-second gust) Vasd=87mph; TCDL=4.2psf; BCDL=6.0psf; h=26ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; enclosed; MWFRS (directional) and C-C Exterior(2) -2-0-0 to 1-0-0, Interior(1) 1-0-0 to 15-0-0, Exterior(2) 15-0-0 to 18-0-0 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - 2) TCLL: ASCE 7-10; Pf=60.0 psf (flat roof snow); Category II; Exp C; Partially Exp.; Ct=1.1
 - 3) Unbalanced snow loads have been considered for this design.
 - 4) This truss has been designed for greater of min roof live load of 20.0 psf or 1.00 times flat roof load of 60.0 psf on overhangs non-concurrent with other live loads.
 - 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - 6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
 - 7) A plate rating reduction of 20% has been applied for the green lumber members.
 - 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (ft=lb) 2=210, 8=210.
 - 9) "Semi-rigid pitchbreaks including heels" Member end fixity model was used in the analysis and design of this truss.



May 12, 2016

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MB-7473 rev. 10/03/2016 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/TPI Quality Criteria, D58-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



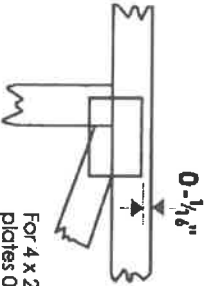
7777 Greenback Lane
 Suite 109
 Citrus Heights, CA 95610

Symbols

PLATE LOCATION AND ORIENTATION



Center plate on joint unless X, Y offsets are indicated. Dimensions are in fractions of sixteenths. Apply plates to both sides of truss and fully embed teeth.



For 4 x 2 orientation, locate plates 0-1/4" 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

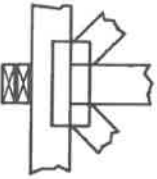
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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



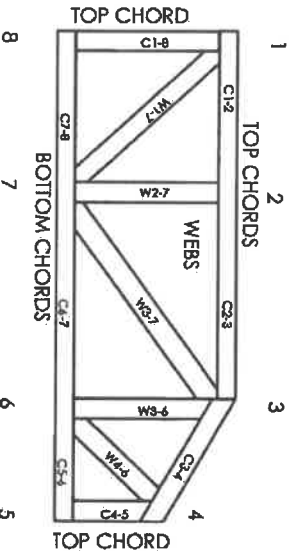
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

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

6-4-8 dimensions shown in fractions of 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, ESR-1988
 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.

© 2012 MITek® All Rights Reserved

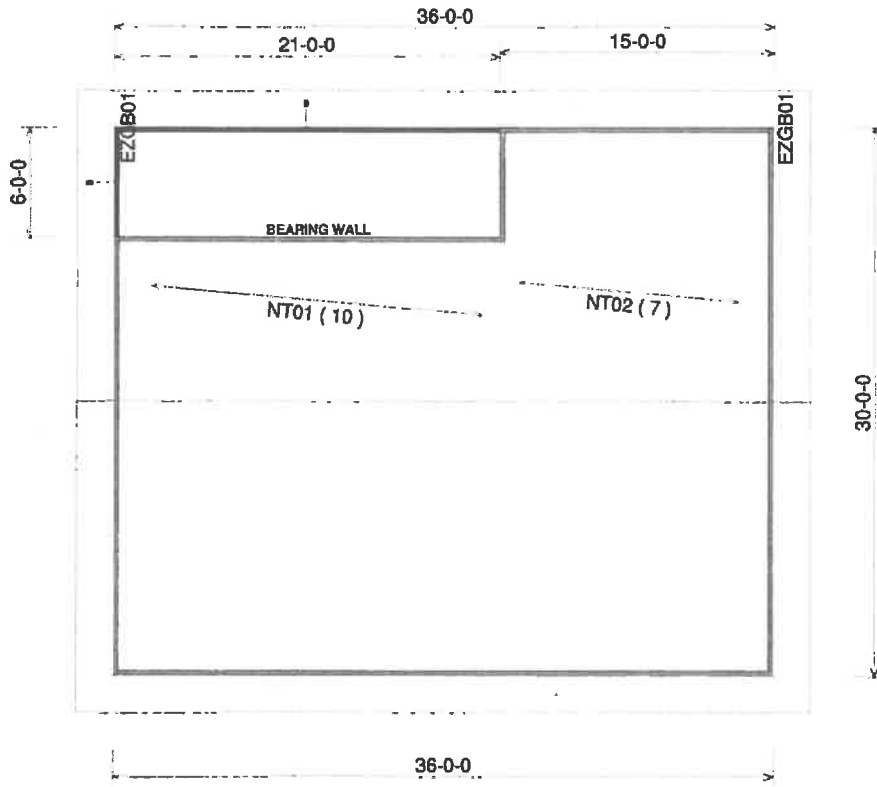


MITek Engineering Reference Sheet: Mill-7473 rev. 10/03/2015

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 braced themselves may require bracing, or alternative Tor1 bracing should be considered.
3. Never exceed the design loading shown and never stock 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 of 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 pulfins 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.



**ROOF TRUSS LAYOUT
60# SNOW LOAD**

Thomas Home Center
1685 Sutter Road
McKinleyville, Ca 95519

17029a
Humboldt Bay Muni. Water Dist.

License: CA-675225-BC61D26
OR-92821

Ruth Bunkhouse Remodel
Ruth Lake Road
Ruth, Ca.
AP#020-320-02

Phone: 707-839-3222
Fax: 707-839-4315
engineering@thomashomecenter.com

5/11/16 BL