MiTek®

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

73

RE: 3495474 - DELOACH RES.

MiTek, Inc.
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200

Site Information:
Customer Info: Giebeig Const. Project Name: Deloach Res. Model: Custom
Lot/Block: N/A Subdivision: N/A
Address: TBD SW Birley Ave., N/A
City: Columbia Cty State: FL

Name Address and License # of Structural Engineer of Record, If there is one, for the building.
Name: License #:
Address:
City: State:

General Truss Engineering Criteria & Design Loads (Individual Truss Design Drawings Show Special Loading Conditions):
Design Code: FBC2023/TPI2014 Design Program: MiTek 20/20 8.7
Wind Code: ASCE 7-22 Wind Speed: 130 mph
Roof Load: 37.0 psf Floor Load: N/A psf

This package includes 7 individual, Truss Design Drawings and 0 Additional Drawings.
With my seal affixed to this sheet, I hereby certify that I am the Truss Design Engineer and this index sheet conforms to 61G15-31.003, section 5 of the Florida Board of Professional Engineers Rules.

No.	Seal#	Truss Name	Date
1	T32965058	T01	2/19/24
2	T32965059	T01G	2/19/24
3	T32965060	T02	2/19/24
4	T32965061	T02G	2/19/24
5	T32965062	T03	2/19/24
6	T32965063	T04	2/19/24
7	T32965064	T04G	2/19/24

COLUMBIA COUNTY BUILDING DEPARTMENT
Received for FILE COPY
Code Compliance
PLANS EXAMINER

This item has been digitally signed and sealed by ORegan, Philip, PE on the date adjacent to the seal.
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The truss drawing(s) referenced above have been prepared by MiTek USA, Inc. under my direct supervision based on the parameters provided by Builders FirstSource-Lake City, FL.

Truss Design Engineer's Name: ORegan, Philip
My license renewal date for the state of Florida is February 28, 2025.

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.

PHILIP J. O'REGAN
LICENSE
No 58126
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

Philip J. O'Regan PE No.58126
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd. Chesterfield, MO 63017
Date:

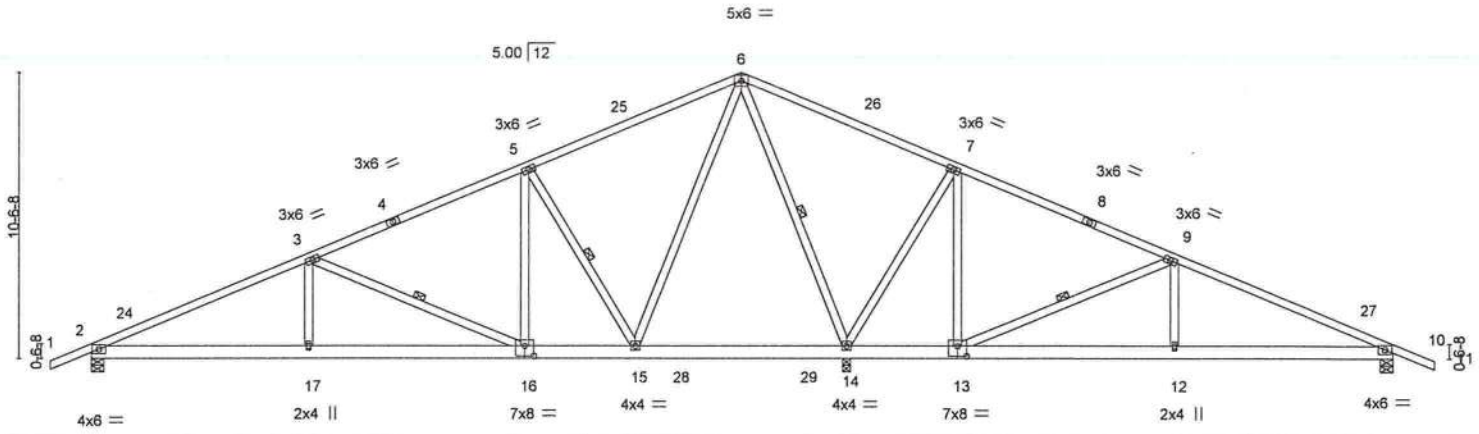
February 19,2024

Job	Truss	Truss Type	Qty	Ply	DELOACH RES.	T32965058
3495474	T01	Common	6	1	Job Reference (optional)	

Builders FirstSource (Lake City,FL), Lake City, FL - 32055, 8.730 s Jan 4 2024 MiTek Industries, Inc. Fri Feb 16 10:32:56 2024 Page 1
ID:s?32egl?RfELlkBvUzyqJyzbQiO-uzgupTxRaTqnGY9Qd6hS8bOuUxtrEs_a389Kl4zkb75

1-6-0	8-0-0	16-0-0	24-0-0	32-0-0	40-0-0	48-0-0	49-6-0
1-6-0	8-0-0	8-0-0	8-0-0	8-0-0	8-0-0	8-0-0	1-6-0

Scale = 1:81.8



8-0-0	16-0-0	20-1-4	27-10-12	32-0-0	40-0-0	48-0-0
8-0-0	8-0-0	4-1-4	7-9-8	4-1-4	8-0-0	8-0-0

Plate Offsets (X,Y)-- [13:0-4-0,0-4-8], [16:0-4-0,0-4-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.25	TC	0.80	Vert(LL)	-0.09	16-17	>999	240	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.40	Vert(CT)	-0.15	16-17	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	1.00	Horz(CT)	0.03	14	n/a	n/a		
BCDL	10.0	Code FBC2023/TPI2014		Matrix-MS							Weight: 302 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 4-3-1 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 6-14, 9-13, 5-15, 3-16

REACTIONS. (size) 2=0-5-8, 14=0-3-8, 10=0-5-8
Max Horz 2=-177(LC 13)
Max Uplift 2=-290(LC 12), 14=-503(LC 12), 10=-209(LC 13)
Max Grav 2=965(LC 27), 14=2539(LC 2), 10=609(LC 26)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1618/444, 3-5=-794/260, 5-6=-338/194, 6-7=-99/918, 7-9=-101/476, 9-10=-762/249
BOT CHORD 2-17=-489/1438, 16-17=-489/1438, 15-16=-194/692, 14-15=-206/291, 13-14=-414/201, 12-13=-132/636, 10-12=-132/636
WEBS 6-14=-1644/439, 7-14=-825/379, 7-13=-86/500, 9-13=-891/333, 9-12=0/373, 6-15=-311/1035, 5-15=-846/384, 5-16=-91/526, 3-16=-840/322, 3-17=0/349

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-22; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=20ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Zone3 -1-6-0 to 1-6-0, Zone1 1-6-0 to 24-0-0, Zone2 24-0-0 to 28-2-15, Zone1 28-2-15 to 49-6-0 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * 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, with BCDL = 10.0psf.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=290, 14=503, 10=209.

This item has been digitally signed and sealed by ORegan, Philip, PE on the date indicated here. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

Philip J. O'Regan PE No.58126
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd. Chesterfield, MO 63017
Date:

February 19,2024

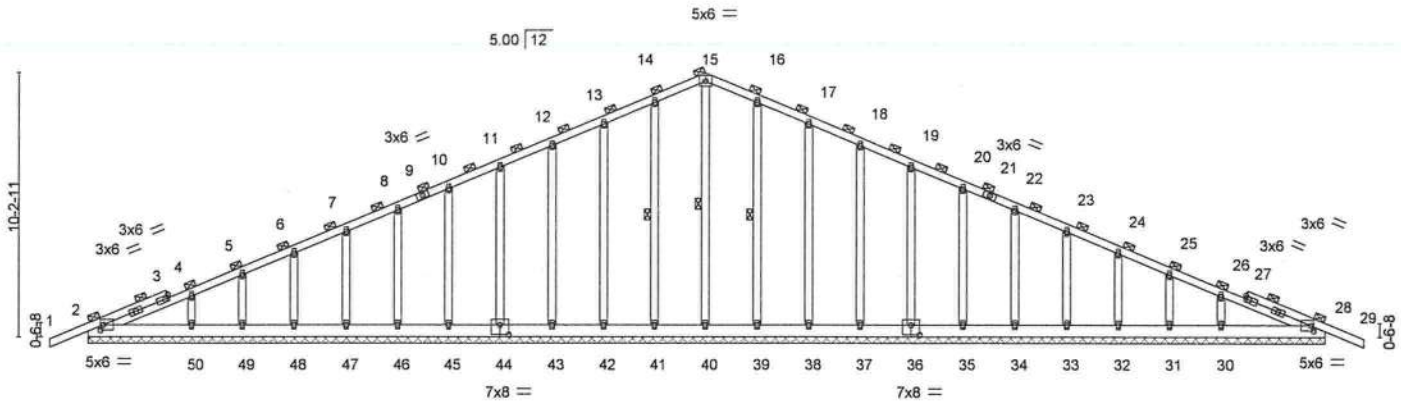
MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	DELOACH RES.
3495474	T01G	Common Supported Gable	1	1	T32965059
					Job Reference (optional)

Builders FirstSource (Lake City,FL), Lake City, FL - 32055, 8.730 s Jan 4 2024 MiTek Industries, Inc. Fri Feb 16 10:32:59 2024 Page 1
ID:s?32egl?RfELlkBvUzyqJyzbQiO-JYM1RV_JtODM7?u?IFE9mD0ZB8_6RQB0l6O_MPzkb72

1-6-0 | 24-0-0 | 48-0-0 | 49-6-0
1-6-0 | 24-0-0 | 24-0-0 | 1-6-0

Scale = 1:85.9



48-0-0
48-0-0

Plate Offsets (X,Y)-- [2:0-1-4,0-2-7], [28:0-1-4,0-2-7], [36:0-4-0,0-4-8], [44:0-4-0,0-4-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.25	TC	0.13	Vert(LL)	-0.00	29	n/r	120	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.05	Vert(CT)	-0.00	29	n/r	120		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.14	Horz(CT)	0.01	28	n/a	n/a		
BCDL	10.0	Code FBC2023/TPI2014		Matrix-S							Weight: 363 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
OTHERS 2x4 SP No.3

BRACING-
TOP CHORD 2-0-0 oc purlins (6-0-0 max.).
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 15-40, 14-41, 16-39

REACTIONS. All bearings 48-0-0.
(lb) - Max Horz 2=172(LC 16)
Max Uplift All uplift 100 lb or less at joint(s) 2, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 39, 38, 37, 36, 35, 34, 33, 32, 31, 30, 28
Max Grav All reactions 250 lb or less at joint(s) 2, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 39, 38, 37, 36, 35, 34, 33, 32, 31, 30, 28

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 14-15=-108/279, 15-16=-108/279

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-22; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=20ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Zone3 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) 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.
4) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
5) All plates are 2x4 MT20 unless otherwise indicated.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 2-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * 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.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 39, 38, 37, 36, 35, 34, 33, 32, 31, 30, 28.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

This item has been digitally signed and sealed by ORegan, Philip, PE on the date indicated here. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

Philip J. O'Regan PE No.58126
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd. Chesterfield, MO 63017
Date:

February 19,2024

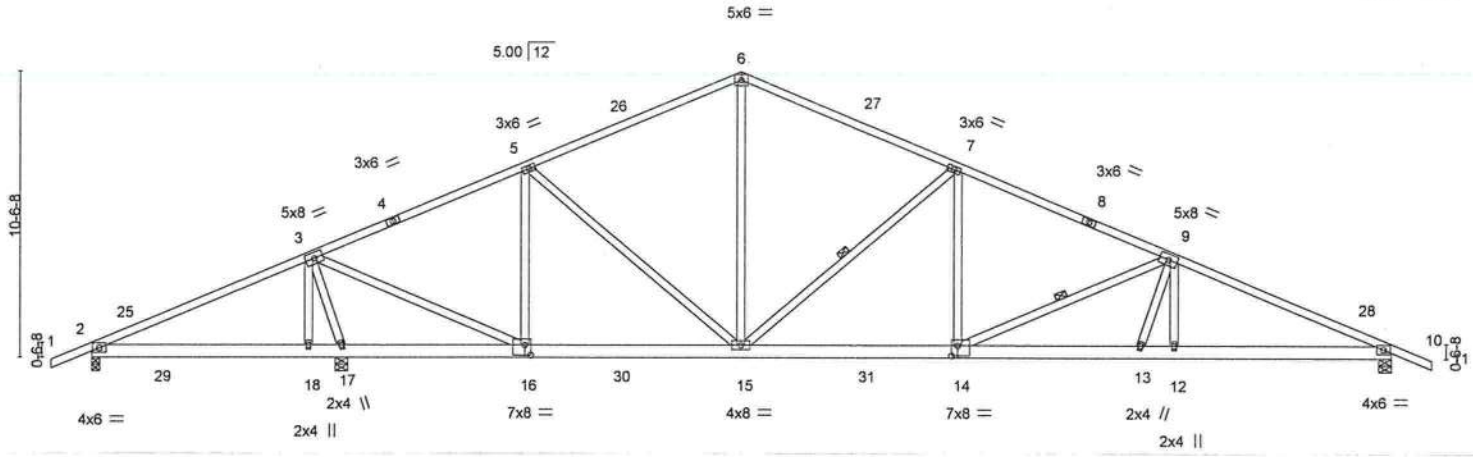
MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	DELOACH RES. T32965060
3495474	T02	Common	5	1	Job Reference (optional)

Builders FirstSource (Lake City,FL), Lake City, FL - 32055, 8.730 s Jan 4 2024 MiTek Industries, Inc. Fri Feb 16 10:33:01 2024 Page 1
ID:s?32egl?RfELlkBvUzyqJyzbQiO-FwTnsB?ZP0T4MJ2NPgGdre5msyX7v9DJCQt5QHzkb70

1-6-0	8-0-0	16-0-0	24-0-0	32-0-0	40-0-0	48-0-0	49-6-0
1-6-0	8-0-0	8-0-0	8-0-0	8-0-0	8-0-0	8-0-0	1-6-0

Scale = 1:81.8



8-0-0	9-2-12	16-0-0	24-0-0	32-0-0	38-9-4	40-0-0	48-0-0
8-0-0	1-2-12	6-9-4	8-0-0	8-0-0	6-9-4	1-2-12	8-0-0

Plate Offsets (X,Y)-- [14:0-2-12,0-4-8], [16:0-2-12,0-4-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.25	TC	0.69	Vert(LL)	-0.18	13-14	>999	240	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.59	Vert(CT)	-0.31	13-14	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.87	Horz(CT)	0.06	10	n/a	n/a		
BCDL	10.0	Code FBC2023/TPI2014		Matrix-MS							Weight: 302 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 2-9-9 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 7-15, 9-14

REACTIONS. (size) 2=0-3-8, 17=0-5-8, 10=0-5-8
Max Horz 2=-177(LC 13)
Max Uplift 2=-167(LC 8), 17=-508(LC 12), 10=-431(LC 13)
Max Grav 2=327(LC 25), 17=2233(LC 2), 10=1581(LC 2)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-70/391, 3-5=-1258/313, 5-6=-1524/453, 6-7=-1525/430, 7-9=-2368/619, 9-10=-3098/794
BOT CHORD 2-18=-337/248, 17-18=-339/247, 16-17=-989/373, 15-16=-223/1098, 14-15=-348/2127, 13-14=-621/2835, 12-13=-633/2799, 10-12=-633/2801
WEBS 6-15=-172/795, 7-15=-1045/410, 7-14=-76/626, 9-14=-776/299, 5-15=-74/409, 5-16=-722/217, 3-16=-395/2282, 3-17=-2159/597

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-22; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=20ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Zone3 -1-6-0 to 1-6-0, Zone1 1-6-0 to 24-0-0, Zone2 24-0-0 to 28-2-15, Zone1 28-2-15 to 49-6-0 zone; porch left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * 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, with BCDL = 10.0psf.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=167, 17=508, 10=431.

This item has been digitally signed and sealed by ORegan, Philip, PE on the date indicated here. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

Philip J. O'Regan PE No.58126
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd. Chesterfield, MO 63017
Date:

February 19,2024

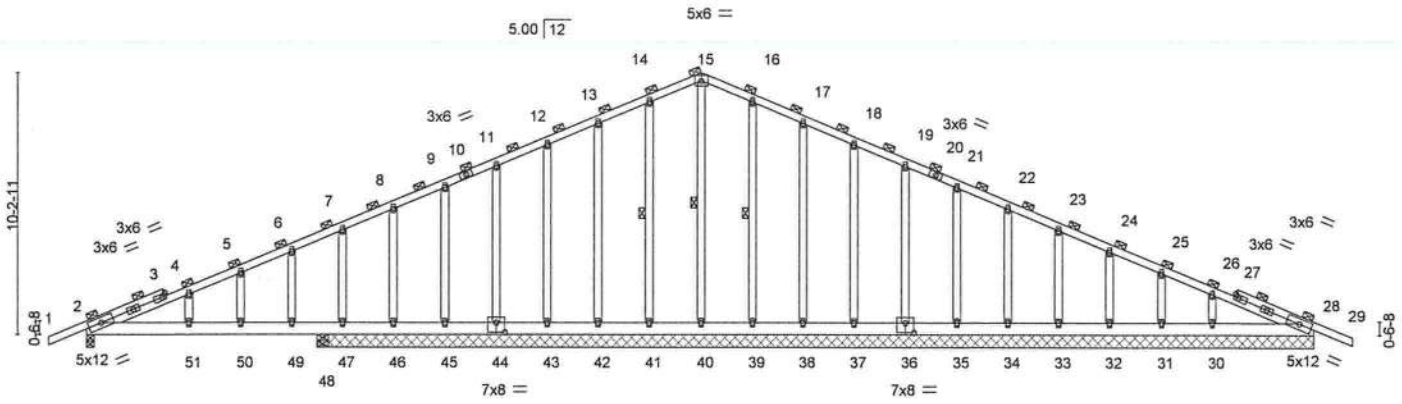
MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	DELOACH RES. T32965061
3495474	T02G	Common Supported Gable	1	1	Job Reference (optional)

Builders FirstSource (Lake City,FL), Lake City, FL - 32055, 8.730 s Jan 4 2024 MiTek Industries, Inc. Fri Feb 16 10:33:03 2024 Page 1
ID:s?32egI?RfELlkBvUzyqJyzbQiO-BJbYHs1qxdjobcBmX4J5x3ACTIEMNEBcgkMBVAzkb7_

1-6-0 | 24-0-0 | 48-0-0 | 49-6-0
1-6-0 | 24-0-0 | 24-0-0 | 1-6-0

Scale = 1:86.6



9-0-0 | 48-0-0
9-0-0 | 39-0-0

Plate Offsets (X,Y)-- [36:0-4-0,0-4-8], [44:0-4-0,0-4-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.25	TC	0.30	Vert(LL)	0.09	51	>999	240	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.54	Vert(CT)	-0.13	51	>847	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.14	Horz(CT)	0.01	28	n/a	n/a		
BCDL	10.0	Code FBC2023/TPI2014		Matrix-S							Weight: 363 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
OTHERS 2x4 SP No.3

BRACING-
TOP CHORD 2-0-0 oc purlins (6-0-0 max.).
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 15-40, 14-41, 16-39

REACTIONS. All bearings 39-0-0 except (jt=length) 2=0-3-8, 48=0-5-8.
(lb) - Max Horz 47=172(LC 16)
Max Uplift All uplift 100 lb or less at joint(s) 41, 42, 43, 44, 45, 46, 39, 38, 37, 36, 35, 34, 33, 32, 31, 30, 28 except 2=-141(LC 8), 47=-826(LC 1), 48=-633(LC 8)
Max Grav All reactions 250 lb or less at joint(s) 40, 41, 42, 43, 44, 45, 46, 39, 38, 37, 36, 35, 34, 33, 32, 31, 30, 28 except 2=355(LC 1), 47=426(LC 8), 48=1315(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 14-15=-101/256, 15-16=-101/256

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-22; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=20ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Zone3 zone; porch left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) 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.
4) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
5) All plates are 2x4 MT20 unless otherwise indicated.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * 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.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 41, 42, 43, 44, 45, 46, 39, 38, 37, 36, 35, 34, 33, 32, 31, 30, 28 except (jt=lb) 2=141, 47=826, 48=633.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

This item has been digitally signed and sealed by ORegan, Philip, PE on the date indicated here. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

Philip J. O'Regan PE No.58126
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd. Chesterfield, MO 63017
Date:

February 19,2024

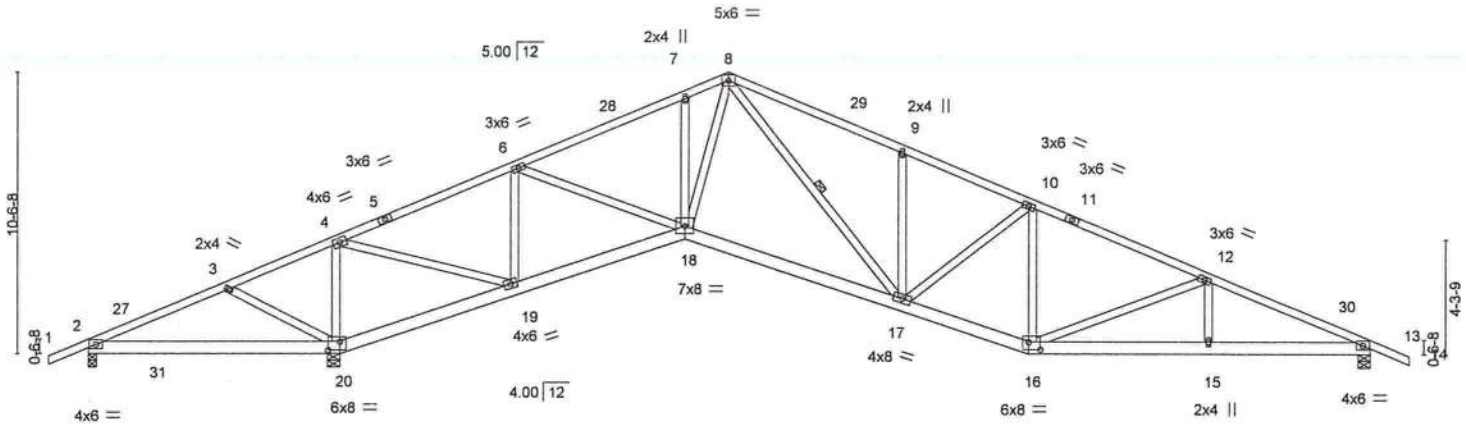
MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	DELOACH RES. T32965062
3495474	T03	Roof Special	3	1	Job Reference (optional)

Builders FirstSource (Lake City,FL), Lake City, FL - 32055, 8.730 s Jan 4 2024 MiTek Industries, Inc. Fri Feb 16 10:33:05 2024 Page 1
ID:s?32egI?RfELlkBvUzyqJyzbQiO-7ijlhY24TEzVrwL8eVLZ0UFSEZxfrzkv72rlY2zkb6y

1-6-0	5-3-5	9-5-8	16-0-0	22-4-4	24-0-0	30-6-0	35-3-0	42-0-0	48-0-0	49-6-0
1-6-0	5-3-5	4-2-3	6-6-8	6-4-4	1-7-12	6-6-0	4-9-0	6-9-0	6-0-0	1-6-0

Scale = 1:83.1



9-2-12	9-5-8	16-0-0	22-4-4	30-6-0	35-3-0	42-0-0	48-0-0
9-2-12	0-2-12	6-6-8	6-4-4	8-1-12	4-9-0	6-9-0	6-0-0

Plate Offsets (X,Y)-- [16:0-5-4,0-3-8], [20:0-5-4,0-4-0]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.25	TC	0.67	Vert(LL)	-0.16	17	>999	240	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.49	Vert(CT)	-0.32	17-18	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.84	Horz(CT)	0.11	13	n/a	n/a		
BCDL	10.0	Code FBC2023/TPI2014		Matrix-MS							Weight: 306 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 2-11-8 oc purlins.
BOT CHORD Rigid ceiling directly applied or 5-8-6 oc bracing.
WEBS 1 Row at midpt 8-17

REACTIONS. (size) 2=0-3-8, 20=0-5-8, 13=0-5-8
Max Horz 2=-177(LC 13)
Max Uplift 2=-322(LC 26), 20=-647(LC 12), 13=-412(LC 13)
Max Grav 2=50(LC 13), 20=2592(LC 1), 13=1346(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-266/1311, 3-4=-368/1614, 4-6=-719/185, 6-7=-1795/365, 7-8=-1740/435, 8-9=-2102/713, 9-10=-2081/608, 10-12=-2105/641, 12-13=-2623/766
BOT CHORD 2-20=-1150/371, 19-20=-1620/487, 18-19=-128/656, 17-18=-134/1514, 16-17=-432/1991, 15-16=-629/2371, 13-15=-629/2371
WEBS 3-20=-337/182, 4-20=-1725/491, 4-19=-437/2193, 6-19=-1181/304, 6-18=-135/1061, 7-18=-252/170, 8-18=-195/685, 8-17=-499/852, 9-17=-317/220, 10-16=-310/69, 12-16=-539/235

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-22; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=20ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Zone3 -1-6-0 to 1-6-0, Zone1 1-6-0 to 24-0-0, Zone2 24-0-0 to 28-2-15, Zone1 28-2-15 to 49-6-0 zone; porch left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * 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.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=322, 20=647, 13=412.

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Philip J. O'Regan PE No.58126
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd. Chesterfield, MO 63017
Date:

February 19,2024

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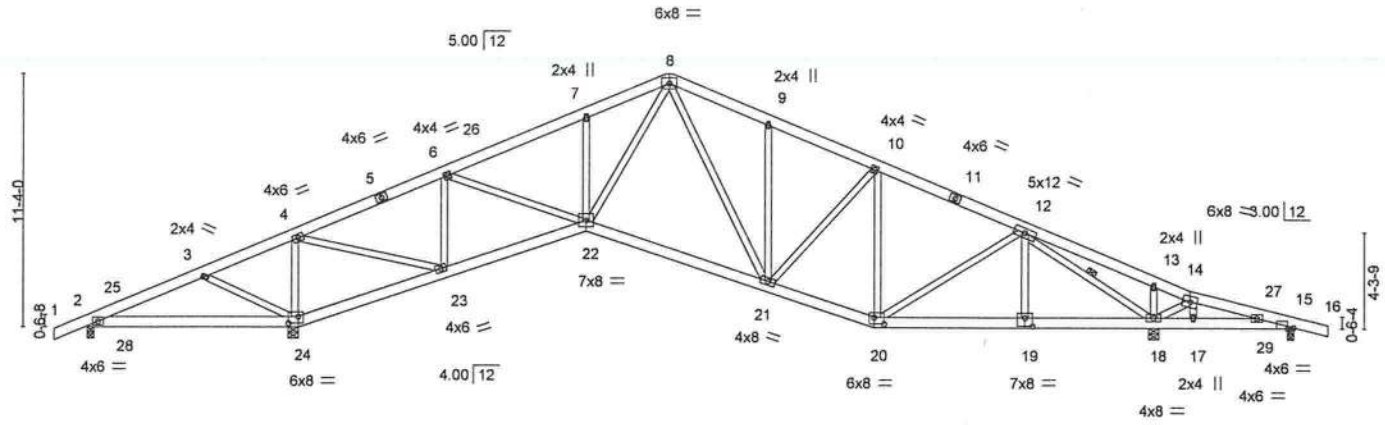
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	DELOACH RES.	T32965063
3495474	T04	Roof Special	14	1	Job Reference (optional)	

Builders FirstSource (Lake City,FL), Lake City, FL - 32055, 8.730 s Jan 4 2024 MiTek Industries, Inc. Fri Feb 16 10:33:07 2024 Page 1
ID:s?32egI?RfELlkBvUzyqJyzbQiO-44r26E4K?sDD4EVXmwN15vLtbMeIJtgCbMKPdxzkb6w

1-6-0	5-3-5	9-5-8	16-0-0	22-4-4	26-0-10	30-6-0	35-3-0	42-0-0	47-9-4	49-5-0	54-0-0	55-6-0
1-6-0	5-3-5	4-2-3	6-6-8	6-4-4	3-8-6	4-5-6	4-9-0	6-9-0	5-9-4	1-7-12	4-7-0	1-6-0

Scale = 1:99.2



9-2-12	9-5-8	16-0-0	22-4-4	30-6-0	35-3-0	42-0-0	47-9-4	49-5-0	54-0-0
9-2-12	0-2-12	6-6-8	6-4-4	8-1-12	4-9-0	6-9-0	5-9-4	1-7-12	4-7-0

Plate Offsets (X,Y)-- [15:0-3-6,Edge], [19:0-4-0,0-4-8], [20:0-5-4,0-3-8], [24:0-5-4,0-3-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.25	TC	0.36	Vert(LL)	-0.10	21-22	>999	240	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.35	Vert(CT)	-0.21	21-22	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.81	Horz(CT)	0.09	18	n/a	n/a		
BCDL	10.0	Code FBC2023/TPI2014		Matrix-S							Weight: 407 lb	FT = 20%

LUMBER-
TOP CHORD 2x6 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 5-2-4 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 12-18

REACTIONS. All bearings 0-3-8 except (jt=length) 24=0-5-8, 18=0-5-8.
(lb) - Max Horz 2=116(LC 16)
Max Uplift All uplift 100 lb or less at joint(s) except 2=-197(LC 26), 24=-323(LC 12), 15=-132(LC 9), 18=-241(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 2, 15 except 24=2423(LC 1), 18=1624(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-117/1034, 3-4=-197/1356, 4-6=-917/202, 6-7=-1911/371, 7-8=-1877/433, 8-9=-1626/461, 9-10=-1642/395, 10-12=-1604/375
BOT CHORD 2-24=-887/130, 23-24=-1361/302, 22-23=-72/844, 21-22=-60/1380, 20-21=-180/1507, 19-20=-170/1341, 18-19=-170/1341
WEBS 3-24=-355/161, 4-24=-1675/314, 4-23=-296/2121, 6-23=-1102/230, 6-22=-95/978, 7-22=-269/154, 8-22=-117/839, 8-21=-208/517, 10-20=-414/80, 12-18=-1851/350, 13-18=-334/119

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-22; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=20ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (envelope) interior zone and C-C Zone3 -1-6-0 to 1-6-0, Zone1 1-6-0 to 26-0-10, Zone2 26-0-10 to 30-6-0, Zone1 30-6-0 to 55-6-0 zone; porch left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * 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.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 197 lb uplift at joint 2, 323 lb uplift at joint 24, 132 lb uplift at joint 15 and 241 lb uplift at joint 18.

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16023 Swingley Ridge Rd. Chesterfield, MO 63017
Date:

February 19,2024

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Job	Truss	Truss Type	Qty	Ply	DELOACH RES.	T32965064
3495474	T04G	GABLE	2	1	Job Reference (optional)	

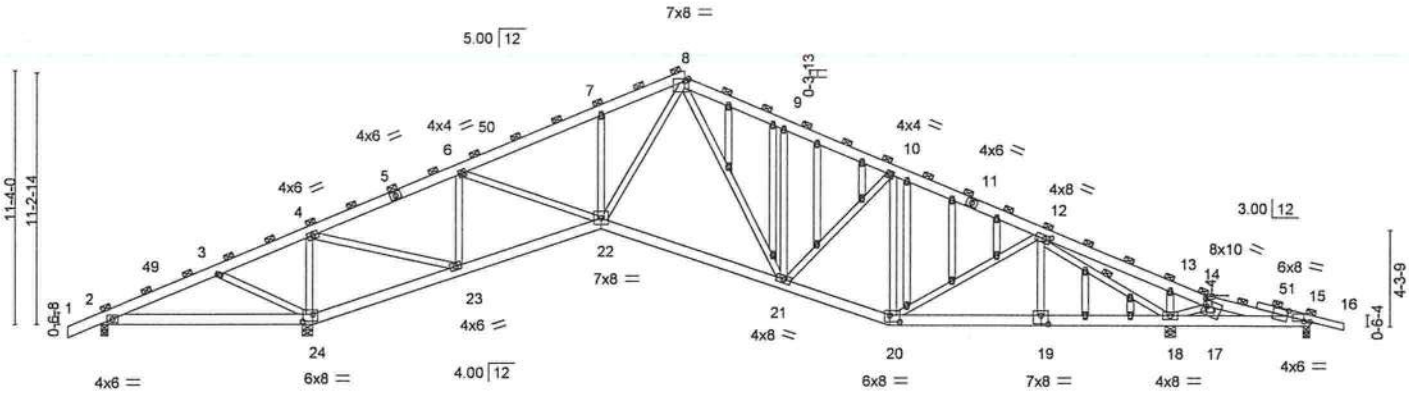
Builders FirstSource, Lake City, FL 32055

8.730 s Nov 16 2023 MiTek Industries, Inc. Mon Feb 19 06:19:34 2024 Page 1

ID:s?32egI?RfELIkBvUzyqJyzbQiO-S6C3T4NPVLCMr0KlbL?78AxHuqN8uOt3UKh7HEzjgQt

1-6-0	5-3-5	9-5-8	16-0-0	22-4-4	26-0-10	30-6-0	35-3-0	42-0-0	47-9-4	49-5-0	54-0-0	55-6-0
1-6-0	5-3-5	4-2-3	6-6-8	6-4-4	3-8-6	4-5-6	4-9-0	6-9-0	5-9-4	1-7-12	4-7-0	1-6-0

Scale = 1:99.1



9-5-8	16-0-0	22-4-4	30-6-0	35-3-0	42-0-0	47-9-4	49-5-0	54-0-0
9-5-8	6-6-8	6-4-4	8-1-12	4-9-0	6-9-0	5-9-4	1-7-12	4-7-0

Plate Offsets (X,Y)-- [8:0-2-0,0-1-4], [12:0-3-6,0-2-0], [14:0-2-0,0-3-8], [15:1-0-4,0-3-0], [15:0-3-4,0-0-4], [19:0-4-0,0-4-8], [20:0-5-4,0-3-8], [24:0-5-4,0-3-12]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.25	TC	0.40	Vert(LL)	-0.10	21-22	>999	240	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.38	Vert(CT)	-0.22	21-22	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.81	Horz(CT)	0.09	18	n/a	n/a		
BCDL	10.0	Code	FBC2023/TPI2014	Matrix-MS							Weight: 447 lb	FT = 20%

LUMBER-

TOP CHORD	2x6 SP No.2 *Except* 15-16: 2x4 SP No.2
BOT CHORD	2x6 SP No.2
WEBS	2x4 SP No.3
OTHERS	2x4 SP No.3

BRACING-

TOP CHORD	2-0-0 oc purlins (5-2-5 max.).
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS	1 Row at midpt 12-18

REACTIONS. All bearings 0-3-8 except (jt=length) 24=0-5-8, 18=0-5-8.

(lb) - Max Horz 2=195(LC 12)

Max Uplift All uplift 100 lb or less at joint(s) except 15=-180(LC 9), 2=-202(LC 26), 24=-654(LC 12), 18=-466(LC 13)

Max Grav All reactions 250 lb or less at joint(s) 2 except 15=261(LC 26), 24=2439(LC 1), 18=1586(LC 1)

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

TOP CHORD	2-49=-259/963, 3-49=-253/1037, 3-4=-366/1380, 4-5=-906/228, 5-6=-825/239, 6-50=-1913/423, 7-50=-1781/425, 7-8=-1849/498, 8-9=-1728/606, 9-10=-1720/518, 10-11=-1625/533, 11-12=-1690/521
BOT CHORD	2-24=-888/240, 23-24=-1388/342, 22-23=-184/834, 21-22=-146/1412, 20-21=-285/1592, 19-20=-337/1481, 18-19=-337/1481
WEBS	3-24=-381/196, 4-24=-1674/515, 4-23=-470/2136, 6-23=-1111/316, 6-22=-96/990, 8-22=-230/766, 8-21=-370/594, 9-21=-275/181, 10-20=-403/87, 12-18=-1842/472, 13-18=-350/186

NOTES-

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-22; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=20ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C 49-5-0 to 55-6-0 zone; porch left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) 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.
4) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
5) All plates are 2x4 MT20 unless otherwise indicated.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * 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.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 180 lb uplift at joint 15, 202 lb uplift at joint 2, 654 lb uplift at joint 24 and 466 lb uplift at joint 18.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

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Date:

February 19,2024

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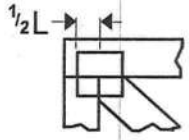
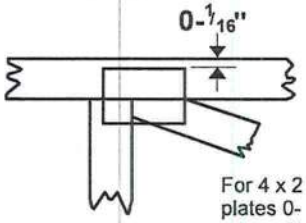
Symbols

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 software or upon request.

PLATE SIZE

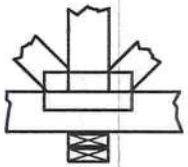
4 x 4

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

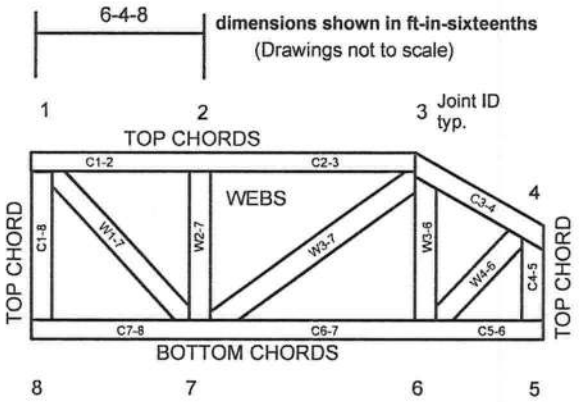


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-22: Design Standard for Bracing.
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing, Restraining & 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-1988, ESR-2362, ESR-2685, ESR-3282
ESR-4722, ESL-1388

Design General Notes

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®

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

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.