



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

RE: 2826595 - WCH - RUARK RES.

MiTek USA, Inc.
6904 Parke East Blvd.
Tampa, FL 33610-4115

Site Information:

Customer Info: Wade Custom Homes Project Name: Ruark Res. Model: Custom
Lot/Block: N/A Subdivision: N/A
Address: 232 SW Dana Glen, 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: FBC2020/TPI2014 Design Program: MiTek 20/20 8.4
Wind Code: ASCE 7-16 Wind Speed: 130 mph
Roof Load: 37.0 psf Floor Load: N/A psf

This package includes 6 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	T24280469	T01	6/10/21
2	T24280470	T01G	6/10/21
3	T24280471	T02	6/10/21
4	T24280472	T03	6/10/21
5	T24280473	T04	6/10/21
6	T24280474	T05	6/10/21

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, 2023.

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 PE No.58126
MiTek USA, Inc. FL Cert 6634
6904 Parke East Blvd. Tampa FL 33610
Date:

June 10,2021

Job 2826595	Truss T01	Truss Type Roof Special	Qty 9	Ply 1	WCH - RUARK RES. Job Reference (optional)	T24280469
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Builders FirstSource (Lake City, FL), Lake City, FL - 32055,

8.430 s May 12 2021 MiTek Industries, Inc. Wed Jun 9 11:35:45 2021 Page 1

ID:SC5g75JKMDJQcBmlDemikQz85nZ-Xwx9az49AfP6fUsCsRRigYnrrIM4DBVMvpPGaOz816S

1-0-0	6-2-5	11-11-5	18-6-0	25-2-7	30-0-1	34-6-2	39-2-13	45-0-0	46-0-0
1-0-0	6-2-5	5-9-0	6-6-11	6-8-7	4-9-10	4-6-0	4-8-11	5-9-3	1-0-0

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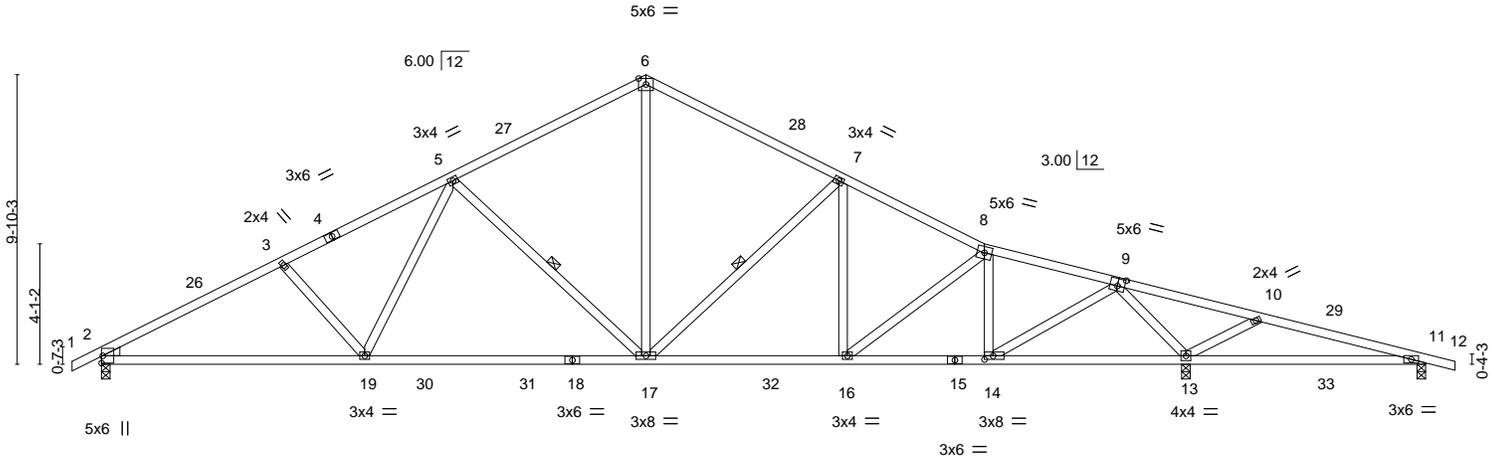


Plate Offsets (X,Y)-- [9:0-3-0-0-3-0], [14:0-3-8,0-1-8]

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	Plate Grip DOL 1.25	TC 0.61	in (loc) l/defl L/d	MT20	244/190
TCDL 7.0	Lumber DOL 1.25	BC 0.95	Vert(LL) 0.20 13-25 >499 240		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.67	Vert(CT) -0.58 17-19 >759 180		
BCDL 10.0	Code FBC2020/TPI2014	Matrix-MS	Horz(CT) 0.08 13 n/a n/a		
				Weight: 239 lb	FT = 20%

LUMBER-

TOP CHORD 2x4 SP No.2
 BOT CHORD 2x4 SP No.2 *Except*
 15-18: 2x4 SP M 31
 WEBS 2x4 SP No.3
 WEDGE
 Left: 2x4 SP No.3

BRACING-

TOP CHORD Structural wood sheathing directly applied or 3-3-3 oc purlins.
 BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.
 WEBS 1 Row at midpt 5-17, 7-17

REACTIONS.

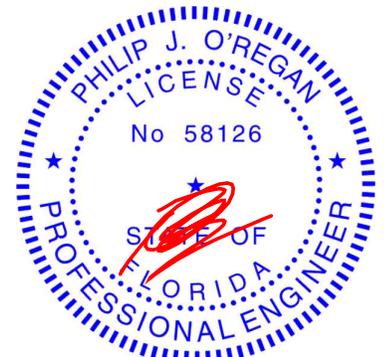
(size) 2=0-3-8, 13=0-3-8, 11=0-3-8
 Max Horz 2=146(LC 16)
 Max Uplift 2=-293(LC 12), 13=-437(LC 13), 11=-155(LC 9)
 Max Grav 2=1474(LC 2), 13=2227(LC 2), 11=111(LC 24)

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

TOP CHORD 2-3=-2496/615, 3-5=-2344/599, 5-6=-1594/490, 6-7=-1595/489, 7-8=-1919/515,
 8-9=-1700/395, 9-10=-274/1261, 10-11=-139/911
 BOT CHORD 2-19=-490/2173, 17-19=-345/1824, 16-17=-289/1687, 14-16=-268/1648, 13-14=-21/282,
 11-13=-828/150
 WEBS 5-19=-80/544, 5-17=-649/277, 6-17=-249/1092, 7-17=-483/229, 8-14=-633/239,
 9-14=-296/1573, 9-13=-2266/532, 10-13=-479/336

NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; 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 Exterior(2E) -1-0-0 to 3-6-0, Interior(1) 3-6-0 to 18-6-0, Exterior(2R) 18-6-0 to 23-0-0, Interior(1) 23-0-0 to 46-0-0 zone; porch right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
- 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, with BCDL = 10.0psf.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=293, 13=437, 11=155.



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 Date:

June 10, 2021

WARNING - 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 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, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



6904 Parke East Blvd.
 Tampa, FL 36610

Job	Truss	Truss Type	Qty	Ply	WCH - RUARK RES.	T24280470
2826595	T01G	GABLE	2	1		

Builders FirstSource (Lake City, FL), Lake City, FL - 32055, 8.430 s May 12 2021 MiTek Industries, Inc. Wed Jun 9 11:35:48 2021 Page 1

ID:SC5g75JKMDJQcBmIDemikQz85nZ-yVdLC_61TangWybnYa?PIBPS7yaoQdLpbndwBjz816P

-1-0-0	18-6-0	30-0-1	39-2-13	45-0-0	46-0-0
1-0-0	18-6-0	11-6-1	9-2-12	5-9-3	1-0-0

Scale = 1:78.5

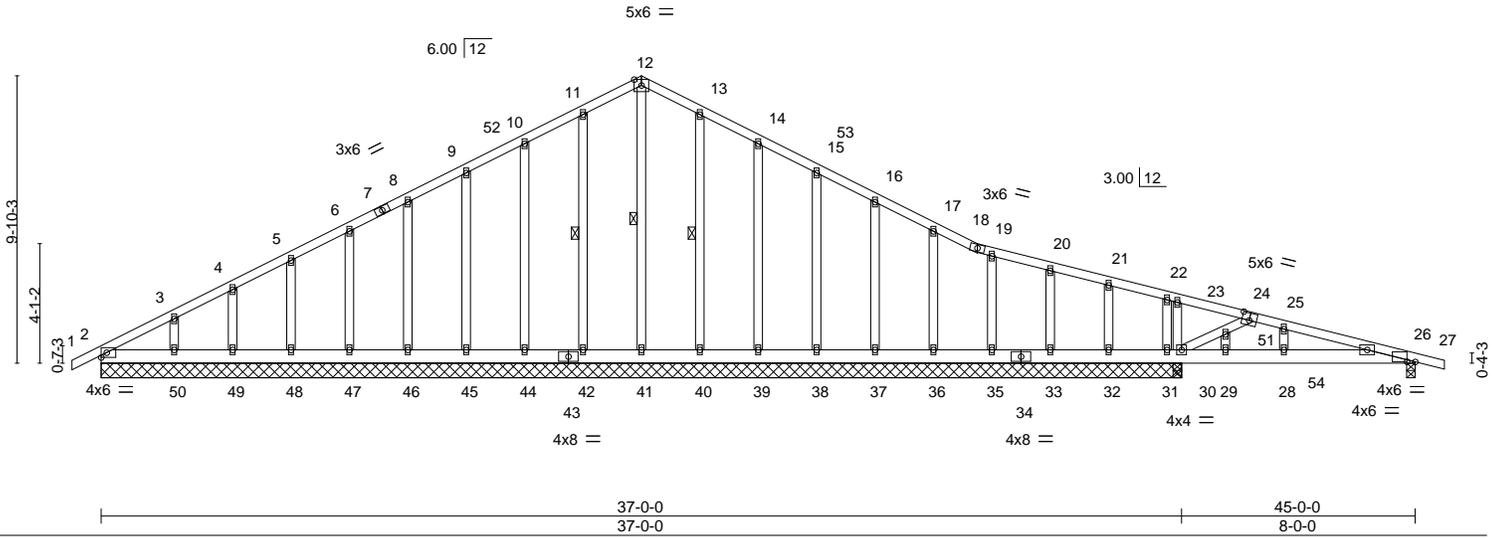


Plate Offsets (X,Y)-- [24:0-3-0,0-3-0], [26:0-3-6,0-0-1]

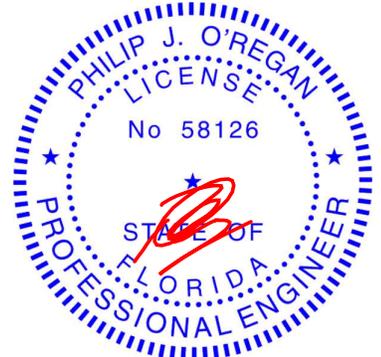
LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	Plate Grip DOL 1.25	TC 0.22	Vert(LL) 0.03 26-28 >999 240	MT20	244/190
TCDL 7.0	Lumber DOL 1.25	BC 0.18	Vert(CT) -0.04 26-28 >999 180		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.28	Horz(CT) 0.01 26 n/a n/a		
BCDL 10.0	Code FBC2020/TPI2014	Matrix-S			
				Weight: 319 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD 2x6 SP No.2	BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing. Except:
WEBS 2x4 SP No.3	10-0-0 oc bracing: 29-30,28-29,26-28.
OTHERS 2x4 SP No.3	WEBS 1 Row at midpt 12-41, 11-42, 13-40

REACTIONS. All bearings 37-0-0 except (jt=length) 26=0-3-8.
 (lb) - Max Horz 2=145(LC 12)
 Max Uplift All uplift 100 lb or less at joint(s) 2, 42, 44, 45, 46, 47, 48, 49, 50, 40, 39, 38, 37, 36, 35, 33, 32 except 31=379(LC 1), 26=168(LC 9), 30=377(LC 9)
 Max Grav All reactions 250 lb or less at joint(s) 2, 41, 42, 44, 45, 46, 47, 48, 49, 50, 40, 39, 38, 37, 36, 35, 33, 32, 31 except 26=334(LC 1), 30=780(LC 1), 30=780(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD 24-25=-297/211, 25-26=-344/222
 BOT CHORD 29-30=-178/301, 28-29=-178/301, 26-28=-178/301
 WEBS 30-51=-390/420, 24-51=-354/373

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-16; 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 Corner(3E) -1-0-0 to 3-6-0, Exterior(2N) 3-6-0 to 18-6-0, Corner(3R) 18-6-0 to 23-0-0, Exterior(2N) 23-0-0 to 46-0-0 zone; porch right exposed;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.
 - Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
 - All plates are 2x4 MT20 unless otherwise indicated.
 - Gable studs spaced at 2-0-0 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.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 42, 44, 45, 46, 47, 48, 49, 50, 40, 39, 38, 37, 36, 35, 33, 32 except (jt=lb) 31=379, 26=168, 30=377.



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 Date:

June 10,2021

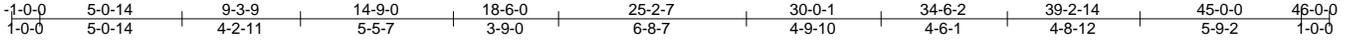
WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.
 Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, 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 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, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



Job 2826595	Truss T02	Truss Type Roof Special	Qty 1	Ply 1	WCH - RUARK RES. Job Reference (optional)	T24280471
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Builders FirstSource (Lake City, FL), Lake City, FL - 32055, 8.430 s May 12 2021 MiTek Industries, Inc. Wed Jun 9 11:35:50 2021 Page 1

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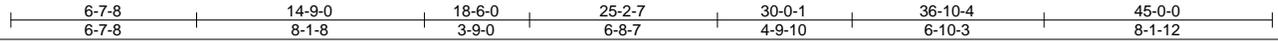
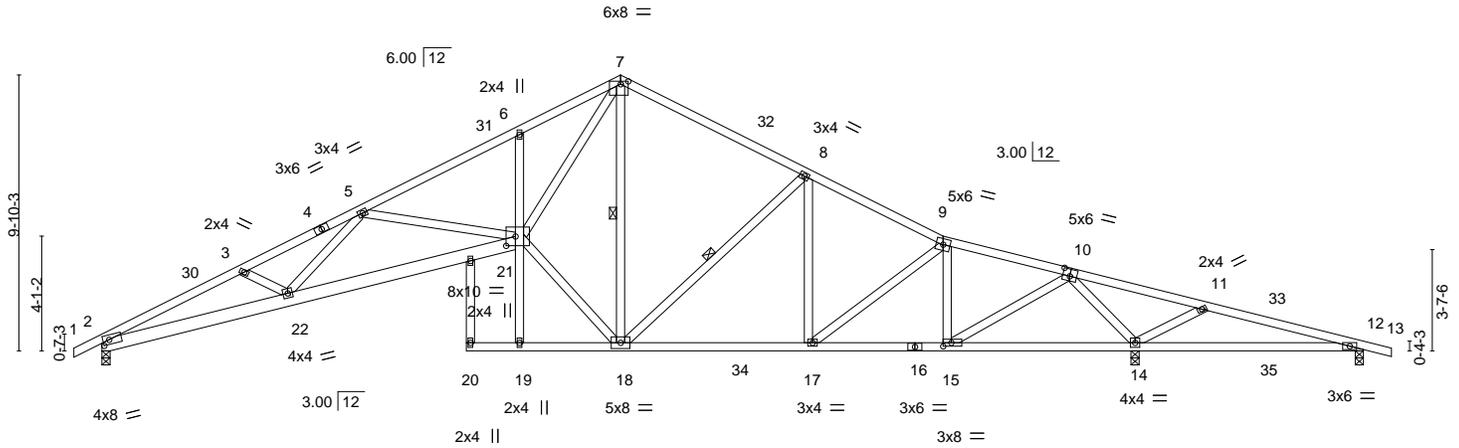


Plate Offsets (X,Y)-- [2:0-2-11,0-2-0], [7:0-3-4,0-1-4], [10:0-3-0,0-3-0], [15:0-3-8,0-1-8], [21:0-4-0,0-4-0]

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	Plate Grip DOL 1.25	TC 0.81	Vert(LL) -0.39 20 >999 240	MT20	244/190
TCDL 7.0	Lumber DOL 1.25	BC 0.59	Vert(CT) -0.69 20 >640 180		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.76	Horz(CT) 0.33 14 n/a n/a		
BCDL 10.0	Code FBC2020/TPI2014	Matrix-MS			
				Weight: 275 lb	FT = 20%

LUMBER-

TOP CHORD 2x4 SP No.2
 BOT CHORD 2x4 SP No.2 *Except*
 2-21: 2x6 SP M 26, 6-19: 2x4 SP No.3
 WEBS 2x4 SP No.3 *Except*
 7-21: 2x4 SP No.2

BRACING-

TOP CHORD Structural wood sheathing directly applied or 2-2-12 oc purlins.
 BOT CHORD Rigid ceiling directly applied or 4-3-0 oc bracing. Except:
 10-0-0 oc bracing: 19-21
 WEBS 1 Row at midpt 7-18, 8-18

REACTIONS.

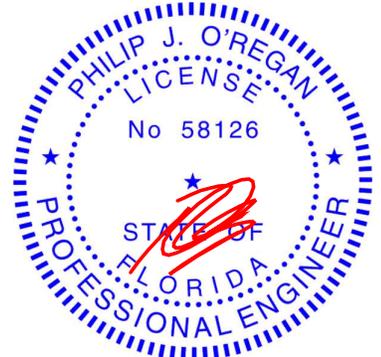
(size) 2=0-3-8, 14=0-3-8, 12=0-3-8
 Max Horz 2=146(LC 16)
 Max Uplift 2=-279(LC 12), 14=-441(LC 13), 12=-263(LC 20)
 Max Grav 2=1437(LC 2), 14=2474(LC 2), 12=54(LC 12)

FORCES.

(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD 2-3=-4310/950, 3-5=-4172/904, 5-6=-3416/730, 6-7=-3332/811, 7-8=-1494/465,
 8-9=-1748/471, 9-10=-1351/325, 10-11=-406/2037, 11-12=-268/1652
 BOT CHORD 2-22=-857/3907, 21-22=-732/3690, 17-18=-251/1534, 15-17=-204/1315, 14-15=-330/99,
 12-14=-1558/274
 WEBS 5-22=-28/315, 5-21=-581/281, 18-21=-175/1816, 7-21=-573/3217, 7-18=-904/127,
 8-18=-424/221, 9-17=-60/297, 9-15=-782/258, 10-15=-336/1825, 10-14=-2571/581,
 11-14=-498/341

NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; 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 Exterior(2E) -1-0-0 to 3-6-0, Interior(1) 3-6-0 to 18-6-0, Exterior(2R) 18-6-0 to 23-0-0, Interior(1) 23-0-0 to 46-0-0 zone; porch right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
- 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, with BCDL = 10.0psf.
- Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=279, 14=441, 12=263.



Philip J. O'Regan PE No.58126
 MiTek USA, Inc. FL Cert 6634
 6904 Parke East Blvd. Tampa FL 33610
 Date:

June 10, 2021

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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 ANSITPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

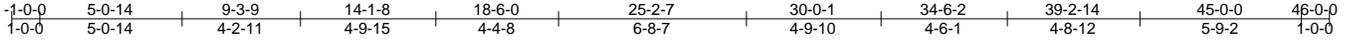


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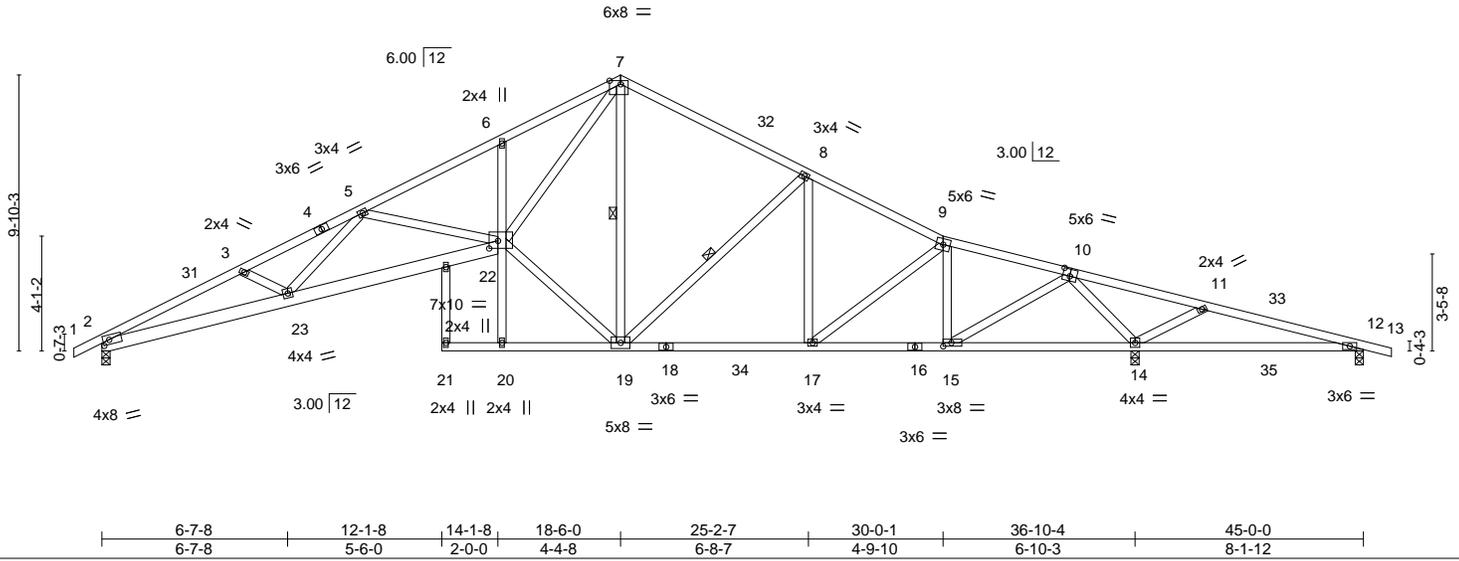
Job 2826595	Truss T03	Truss Type Roof Special	Qty 2	Ply 1	WCH - RUARK RES. Job Reference (optional)	T24280472
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Builders FirstSource (Lake City, FL), Lake City, FL - 32055, 8.430 s May 12 2021 MiTek Industries, Inc. Wed Jun 9 11:35:51 2021 Page 1

ID:SC5g75JKMDjQcBmlDemikQz85nZ-M4lQq09wIV9FNPJMDiY6wp1qGAUBdtcFHlsao2z816M



Scale = 1:81.8



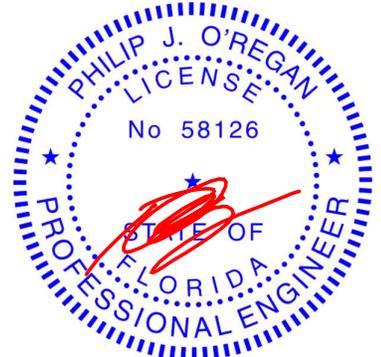
LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	Plate Grip DOL 1.25	TC 0.80	Vert(LL) -0.40 21 >999 240	MT20	244/190
TCDL 7.0	Lumber DOL 1.25	BC 0.59	Vert(CT) -0.71 21 >623 180		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.76	Horz(CT) 0.32 14 n/a n/a		
BCDL 10.0	Code FBC2020/TPI2014	Matrix-MS		Weight: 274 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 2-2-14 oc purlins.
BOT CHORD 2x4 SP No.2 *Except*	BOT CHORD Rigid ceiling directly applied or 4-3-6 oc bracing. Except:
WEBS 2x4 SP No.3 *Except*	WEBS 1 Row at midpt 7-19, 8-19
7-22: 2x4 SP No.2	

REACTIONS. (size) 2=0-3-8, 14=0-3-8, 12=0-3-8
 Max Horz 2=146(LC 16)
 Max Uplift 2=-278(LC 12), 14=-441(LC 13), 12=-258(LC 20)
 Max Grav 2=1445(LC 2), 14=2470(LC 2), 12=53(LC 12)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD 2-3=-4324/946, 3-5=-4182/897, 5-6=-3526/745, 6-7=-3460/830, 7-8=-1500/463,
 8-9=-1756/469, 9-10=-1363/324, 10-11=-403/2018, 11-12=-266/1633
 BOT CHORD 2-23=-857/3919, 22-23=-722/3713, 17-19=-251/1542, 15-17=-204/1326, 14-15=-318/98,
 12-14=-1540/272
 WEBS 5-23=-37/289, 5-22=-506/249, 19-22=-158/1659, 7-22=-564/3111, 7-19=-665/106,
 8-19=-426/221, 9-17=-60/291, 9-15=-780/256, 10-15=-334/1821, 10-14=-2566/578,
 11-14=-497/341

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-16; 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 Exterior(2E) -1-0-0 to 3-6-0, Interior(1) 3-6-0 to 18-6-0, Exterior(2R) 18-6-0 to 23-0-0, Interior(1) 23-0-0 to 46-0-0 zone; porch right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
 - 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, with BCDL = 10.0psf.
 - Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (it=lb) 2=278, 14=441, 12=258.



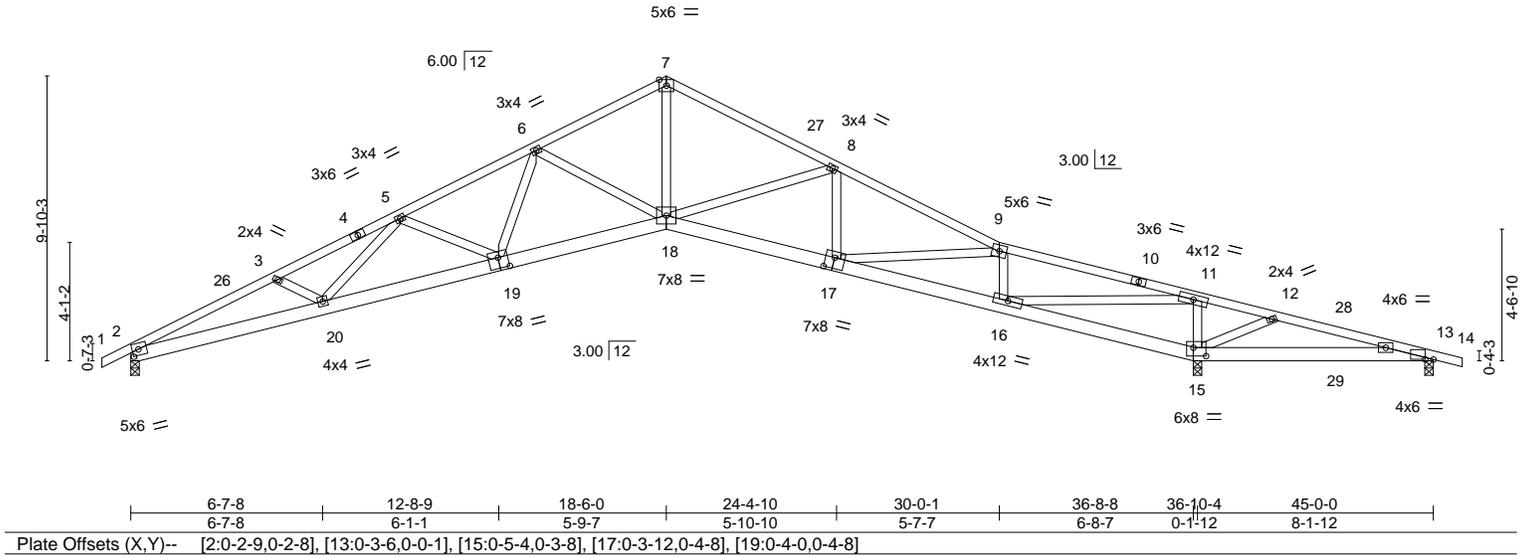
Philip J. O'Regan PE No.58126
 MiTek USA, Inc. FL Cert 6634
 6904 Parke East Blvd. Tampa FL 33610
 Date:

June 10,2021

Job	Truss	Truss Type	Qty	Ply	WCH - RUARK RES.	T24280473
2826595	T04	Roof Special	9	1		

Builders FirstSource (Lake City, FL), Lake City, FL - 32055, 8.430 s May 12 2021 MiTek Industries, Inc. Wed Jun 9 11:35:53 2021 Page 1
 ID:SC5g75JKMDjQcBmlDemikQz85nZ-ITQBFIAAH6PzcjTkK7aa?E77Iz4n5I2YI3Lhswz816K
 1-0-0 5-0-14 9-3-9 14-0-1 18-6-0 24-4-10 30-0-1 36-8-8 39-5-0 45-0-0 46-0-0
 1-0-0 5-0-14 4-2-11 4-8-7 4-5-15 5-10-9 5-7-7 6-8-7 2-8-8 5-7-0 1-0-0

Scale = 1:79.2



LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	2-0-0	TC 1.00	in (loc) l/defl L/d	MT20	244/190
TCDL 7.0	Plate Grip DOL 1.25	BC 0.96	Vert(LL) -0.32 18 >999 240		
BCLL 0.0 *	Lumber DOL 1.25	WB 0.89	Vert(CT) -0.61 18-19 >728 180		
BCDL 10.0	Rep Stress Incr YES	Matrix-MS	Horz(CT) 0.37 15 n/a n/a		
	Code FBC2020/TPI2014			Weight: 259 lb	FT = 20%

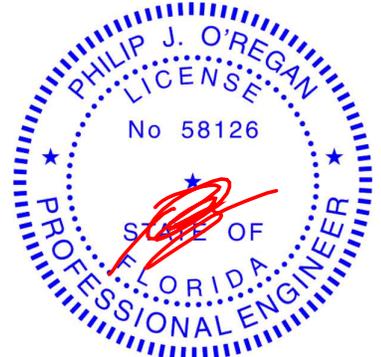
LUMBER-
 TOP CHORD 2x4 SP No.2
 BOT CHORD 2x6 SP No.2
 WEBS 2x4 SP No.3 *Except*
 11-16: 2x4 SP No.2

BRACING-
 TOP CHORD Structural wood sheathing directly applied.
 BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.

REACTIONS. (size) 15=0-3-8, 13=0-3-8, 2=0-3-8
 Max Horz 2=146(LC 16)
 Max Uplift 15=488(LC 13), 13=351(LC 20), 2=279(LC 12)
 Max Grav 15=2477(LC 1), 13=79(LC 12), 2=1263(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD 2-3=-3689/933, 3-5=-3497/885, 5-6=-3107/778, 6-7=-2279/562, 7-8=-2301/563,
 8-9=-2562/613, 9-11=-1441/331, 11-12=-638/2579, 12-13=-458/2324
 BOT CHORD 2-20=-868/3311, 19-20=-729/3170, 18-19=-498/2667, 17-18=-381/2313, 16-17=-235/1494,
 15-16=-2689/754, 13-15=-2221/470
 WEBS 5-19=-383/205, 6-19=-131/499, 6-18=-706/292, 7-18=-362/1727, 8-18=-404/259,
 9-17=-185/813, 9-16=-1161/357, 11-16=-871/3936, 11-15=-1499/390, 12-15=-276/240

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=101mph; TC DL=4.2psf; BCDL=3.0psf; h=20ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-0-0 to 3-6-0, Interior(1) 3-6-0 to 18-6-0, Exterior(2R) 18-6-0 to 23-0-0, Interior(1) 23-0-0 to 46-0-0 zone; porch right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
 - 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.
 - Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 15=488, 13=351, 2=279.



Philip J. O'Regan PE No.58126
 MiTek USA, Inc. FL Cert 6634
 6904 Parke East Blvd. Tampa FL 33610
 Date:

June 10, 2021

Job 2826595	Truss T05	Truss Type Common	Qty 3	Ply 1	WCH - RUARK RES. Job Reference (optional)	T24280474
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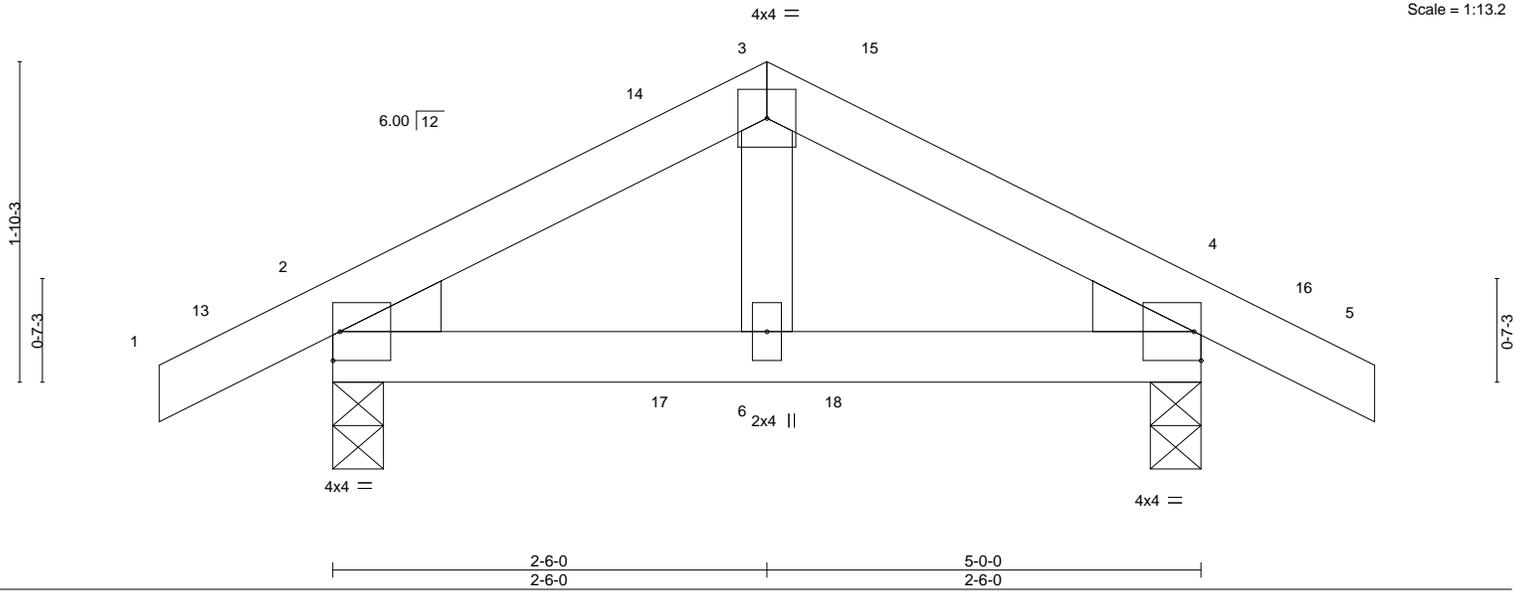
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Scale = 1:13.2



LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.11	in (loc) l/defl L/d	MT20	244/190
TCDL 7.0	Plate Grip DOL 1.25	BC 0.06	Vert(LL) -0.00 6 >999 240		
BCLL 0.0 *	Lumber DOL 1.25	WB 0.03	Vert(CT) -0.00 6 >999 180		
BCDL 10.0	Rep Stress Incr YES	Matrix-MP	Horz(CT) -0.00 2 n/a n/a		
	Code FBC2020/TPI2014			Weight: 23 lb	FT = 20%

LUMBER-

TOP CHORD 2x4 SP No.2
 BOT CHORD 2x4 SP No.2
 WEBS 2x4 SP No.3
 WEDGE

Left: 2x4 SP No.3 , Right: 2x4 SP No.3

BRACING-

TOP CHORD Structural wood sheathing directly applied or 5-0-0 oc purlins.
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS.

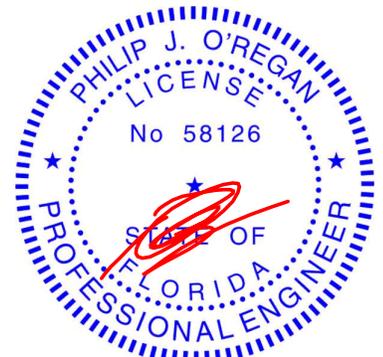
(size) 2=0-3-8, 4=0-3-8
 Max Horz 2=-26(LC 13)
 Max Uplift 2=-60(LC 12), 4=-60(LC 13)
 Max Grav 2=239(LC 1), 4=239(LC 1)

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

TOP CHORD 2-3=-181/321, 3-4=-181/321

NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; 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 Exterior(2E) -1-0-0 to 2-0-0, Interior(1) 2-0-0 to 2-6-0, Exterior(2R) 2-6-0 to 5-6-0, Interior(1) 5-6-0 to 6-0-0 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
- Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
- 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 4.



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 Date:

June 10,2021

WARNING - 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 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, DSB-89 and BCSI Building Component

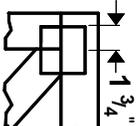
Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



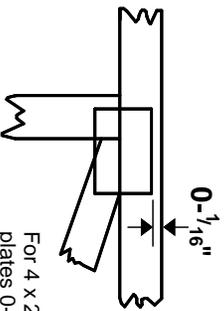
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 Tampa, FL 36610

Symbols

PLATE LOCATION AND ORIENTATION



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



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



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

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

PLATE SIZE

4 X 4

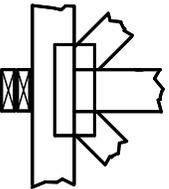
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



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

BEARING



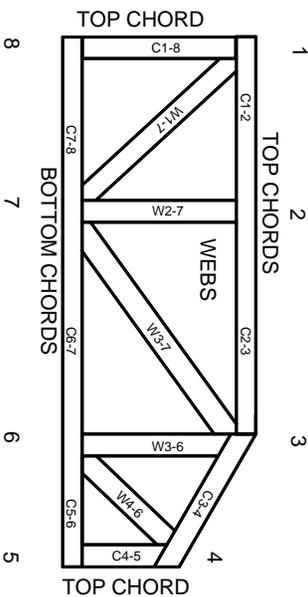
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TPI 1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-89: Design Standard for Bracing, 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 ft-in-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, 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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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 T or 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.



MITek Engineering Reference Sheet: Mill-7473 rev. 5/19/2020