

Job	Truss	Truss Type	Qty	Ply	Job Reference (optional)
MANDALYN PLAN	A1	Roof Special Supported Gable	1	1	

Builders FirstSource, Albemarle, NC 28001

Run: 8.240 s Apr 6 2019 Print: 8.240 s Apr 6 2019 MiTek Industries, Inc. Thu Jul 25 12:06:28 2019 Page 1  
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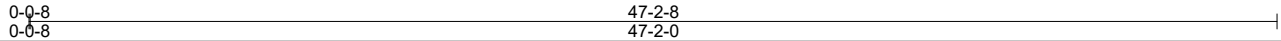
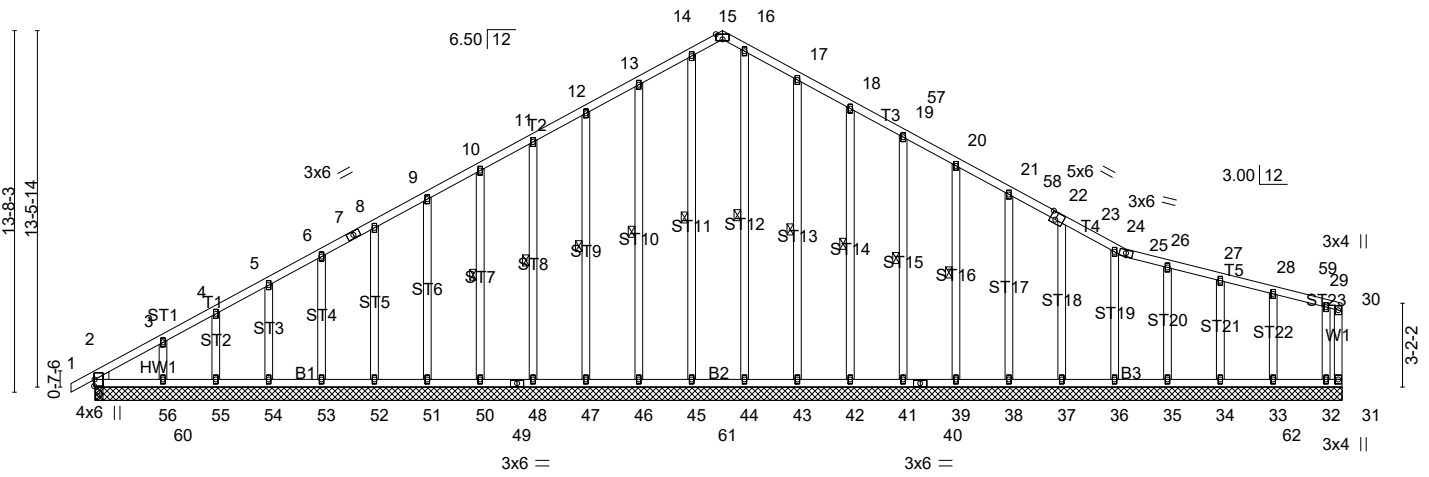
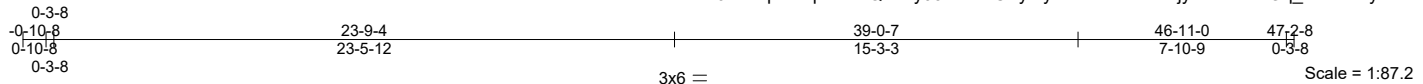


Plate Offsets (X, Y)-- [2:0-0-2,0-4-9], [2:0-0-1,0-0-2], [15:0-3-0,Edge], [22:0-0-0,0-1-12], [22:0-2-8,0-3-4], [23:0-2-0,0-0-0]

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.21	in (loc) l/defl L/d	MT20	244/190
Snow (Pf/Pg) 15.4/20.0	Plate Grip DOL 1.15	BC 0.05	Vert(LL) -0.00 2-56 >999 240		
TCDL 10.0	Lumber DOL 1.15	WB 0.15	Vert(CT) -0.00 2-56 >999 180		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-SH	Horz(CT) 0.00 31 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014			Weight: 393 lb	FT = 20%

**LUMBER-**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.3  
OTHERS 2x4 SP No.3  
WEDGE  
Left: 2x4 SP No.3

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
WEBS 1 Row at midpt 14-45, 13-46, 12-47, 11-48, 10-50, 16-44, 17-43, 18-42, 19-41, 20-39

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

**REACTIONS.** All bearings 47-2-0.  
(lb) - Max Horz 2=247(LC 16)  
Max Uplift All uplift 100 lb or less at joint(s) 31, 2, 46, 47, 48, 50, 51, 52, 53, 54, 55, 56, 43, 42, 41, 39, 38, 37, 36, 35, 34, 33 except 32=-140(LC 17)  
Max Grav All reactions 250 lb or less at joint(s) 31, 2, 2, 45, 46, 47, 48, 50, 51, 52, 53, 54, 55, 56, 44, 43, 42, 41, 39, 38, 37, 36, 35, 34, 33, 32

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-272/223, 10-11=-139/272, 11-12=-171/296, 12-13=-202/317, 13-14=-245/356, 14-15=-219/301, 15-16=-202/274, 16-17=-252/360, 17-18=-207/303, 18-57=-159/266, 19-57=-176/260

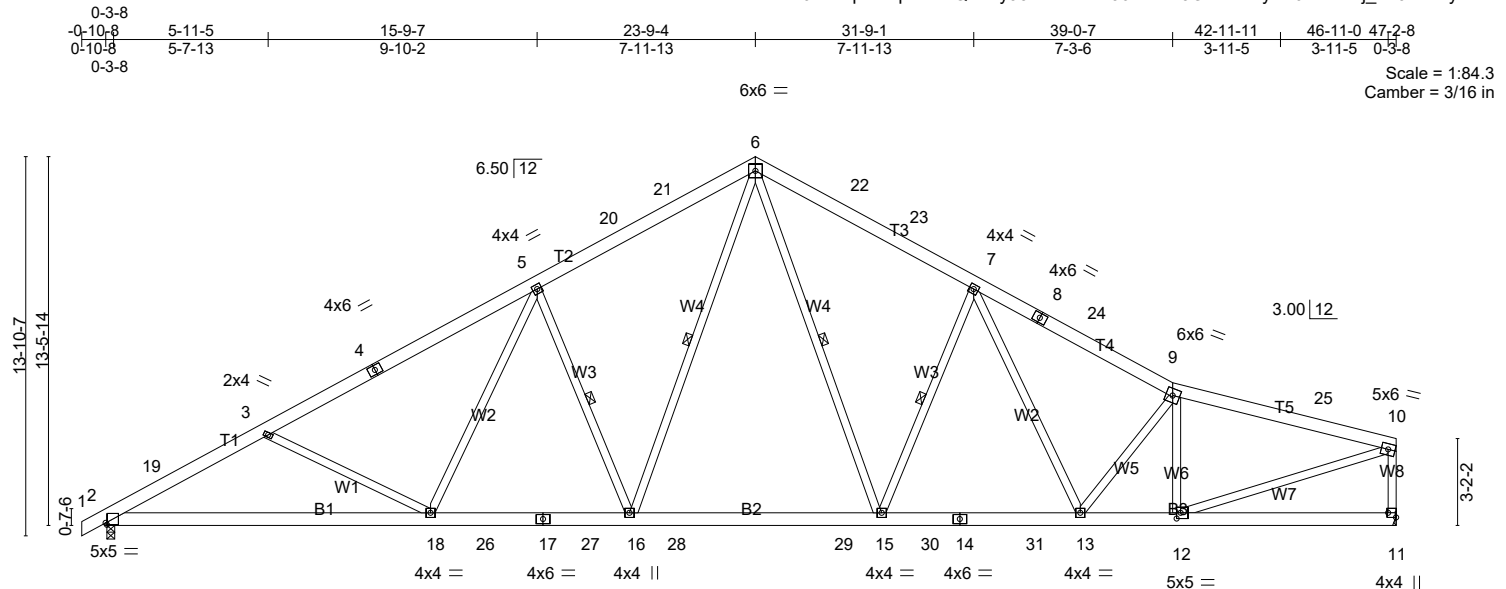
- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCCL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) -0-10-8 to 2-1-8, Exterior(2) 2-1-8 to 23-9-4, Corner(3) 23-9-4 to 26-7-4, Exterior(2) 26-7-4 to 47-0-12 zone; cantilever left and 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.
  - TCCL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow); Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10; Min. flat roof snow load governs.
  - Unbalanced snow loads have been considered for this design.
  - This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
  - 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) 31, 2, 46, 47, 48, 50, 51, 52, 53, 54, 55, 56, 43, 42, 41, 39, 38, 37, 36, 35, 34, 33 except (jt=lb) 32=140.
  - This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard

Job	Truss	Truss Type	Qty	Ply	Job Reference (optional)
MANDALYN PLAN	A2	Roof Special	2	1	

Builders FirstSource, Albemarle, NC 28001

Run: 8.240 s Apr 6 2019 Print: 8.240 s Apr 6 2019 MiTek Industries, Inc. Thu Jul 25 12:06:29 2019 Page 1  
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Scale = 1:84.3  
Camber = 3/16 in

0-0-8	11-10-10	23-9-4	35-7-14	39-0-7	47-2-8
0-0-8	11-10-2	11-10-10	11-10-10	3-4-9	8-2-1

Plate Offsets (X,Y)-- [2:0-0-9,0-0-14], [11:Edge,0-3-8], [12:0-1-12,0-2-8]					
<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof) 20.0	2-0-0	TC 0.78	in (loc) l/defl L/d	MT20	244/190
Snow (Pf/Pg) 15.4/20.0	Plate Grip DOL 1.15	BC 0.72	Vert(LL) -0.19 15-16 >999 240		
TCDL 10.0	Lumber DOL 1.15	WB 0.67	Vert(CT) -0.37 15-16 >999 180		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-SH	Horz(CT) 0.10 11 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014				Weight: 370 lb FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x6 SP No.2	TOP CHORD Structural wood sheathing directly applied or 3-6-13 oc purlins, except end verticals.
BOT CHORD 2x6 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.3 *Except* W7: 2x4 SP No.2	WEBS 1 Row at midpt 5-16, 7-15, 6-16, 6-15

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

**REACTIONS.** (lb/size) 2=1713/0-3-8 (min. 0-3-1), 11=1660/Mechanical  
Max Horz 2=246(LC 16)  
Max Uplift 2=-117(LC 16), 11=-102(LC 17)  
Max Grav 2=1939(LC 2), 11=1876(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-19=-3384/227, 3-19=-3267/257, 3-4=-3024/141, 4-5=-2908/175, 5-20=-2507/219,  
20-21=-2398/242, 6-21=-2389/260, 6-22=-2368/243, 22-23=-2384/222, 7-23=-2487/202,  
7-8=-2769/203, 8-24=-2839/182, 9-24=-2925/180, 9-25=-2739/144, 10-25=-2787/130,  
10-11=-1790/142  
BOT CHORD 2-18=-397/3045, 18-26=-176/2464, 17-26=-176/2464, 17-27=-176/2464, 16-27=-176/2464,  
16-28=-20/1807, 28-29=-20/1807, 15-29=-20/1807, 15-30=-34/2331, 14-30=-34/2331,  
14-31=-34/2331, 13-31=-34/2331, 12-13=-101/2683  
WEBS 9-12=-807/118, 10-12=-93/2741, 5-16=-815/269, 5-18=0/536, 3-18=-486/252,  
7-15=-737/264, 7-13=-49/457, 9-13=-405/111, 6-16=-172/1112, 6-15=-144/1022

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCCL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 0-10-8 to 2-1-8, Interior(1) 2-1-8 to 23-9-4, Exterior(2) 23-9-4 to 26-9-4, Interior(1) 26-9-4 to 47-0-12 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - TCCL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow); Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10; Min. flat roof snow load governs.
  - Unbalanced snow loads have been considered for this design.
  - This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - Refer to girder(s) for truss to truss connections.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 11=102.
  - One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
  - This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced Standard AISI/TPI 1.

Job	Truss	Truss Type	Qty	Ply	Job Reference (optional)
MANDALYN PLAN	A2	Roof Special	2	1	

Builders FirstSource, Albemarle, NC 28001

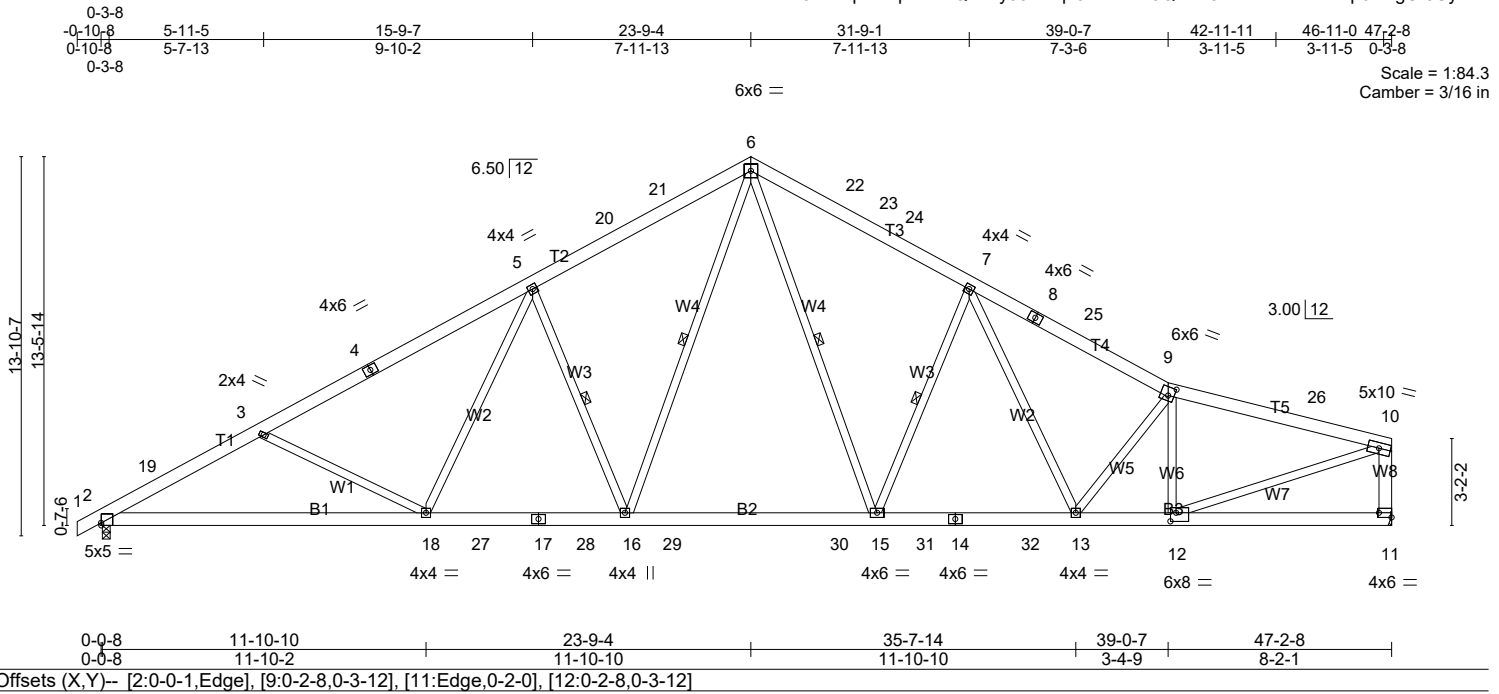
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**LOAD CASE(S)** Standard

Job	Truss	Truss Type	Qty	Ply	Job Reference (optional)
MANDALYN PLAN	A2A	ROOF SPECIAL	4	1	

Builders FirstSource, Albemarle, NC 28001

Run: 8.240 s Apr 6 2019 Print: 8.240 s Apr 6 2019 MiTek Industries, Inc. Thu Jul 25 12:06:30 2019 Page 1  
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0-0-8	11-10-10	23-9-4	35-7-14	39-0-7	47-2-8
0-0-8	11-10-2	11-10-10	11-10-10	3-4-9	8-2-1
Plate Offsets (X,Y)-- [2:0-0-1,Edge], [9:0-2-8,0-3-12], [11:Edge,0-2-0], [12:0-2-8,0-3-12]					
<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof) 20.0	2-0-0	TC 0.74	in (loc) l/defl L/d	MT20	244/190
Snow (Pf/Pg) 15.4/20.0	Plate Grip DOL 1.15	BC 0.87	Vert(LL) -0.22 15-16 >999 240		
TCDL 10.0	Lumber DOL 1.15	WB 0.95	Vert(CT) -0.43 15-16 >999 180		
BCLL 0.0 *	Rep Stress Incr NO	Matrix-SH	Horz(CT) 0.12 11 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014			Weight: 372 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x6 SP No.2 *Except* T5: 2x6 SP DSS	TOP CHORD Structural wood sheathing directly applied or 2-10-0 oc purlins, except end verticals.
BOT CHORD 2x6 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.3 *Except* W7: 2x4 SP No.2, W8: 2x6 SP No.2	WEBS 1 Row at midpt 5-16, 7-15, 6-16, 6-15
	MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 2=1928/0-3-8 (min. 0-3-7), 11=2597/Mechanical  
Max Horz 2=247(LC 16)  
Max Uplift 2=-144(LC 16), 11=-220(LC 17)  
Max Grav 2=2181(LC 2), 11=2935(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-19=-3866/282, 3-19=-3733/312, 3-4=-3474/197, 4-5=-3358/231, 5-20=-2951/284,  
20-21=-2841/307, 6-21=-2832/325, 6-22=-2999/356, 22-23=-3023/334, 23-24=-3029/332,  
7-24=-3220/327, 7-8=-3750/345, 8-25=-3920/341, 9-25=-4136/341, 9-26=-3996/307,  
10-26=-4133/307, 10-11=-2832/288  
BOT CHORD 2-18=-444/3434, 18-27=-226/2872, 17-27=-226/2872, 17-28=-226/2872, 16-28=-226/2872,  
16-29=-71/2221, 29-30=-71/2221, 15-30=-71/2221, 15-31=-170/3132, 14-31=-170/3132,  
14-32=-170/3132, 13-32=-170/3132, 12-13=-271/3915  
WEBS 9-12=-1219/170, 10-12=-255/3885, 5-16=-805/268, 5-18=0/527, 3-18=-468/250,  
7-15=-1353/333, 7-13=-89/823, 9-13=-803/158, 6-16=-171/1107, 6-15=-212/1588

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCCL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 0-10-8 to 2-1-8, Interior(1) 2-1-8 to 23-9-4, Exterior(2) 23-9-4 to 26-9-4, Interior(1) 26-9-4 to 46-11-12 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - TCCL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow); Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
  - Unbalanced snow loads have been considered for this design.
  - This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - Refer to girder(s) for truss to truss connections.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 11=220.
  - One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
  - This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced Standard ANSI ZPI 1.

Job	Truss	Truss Type	Qty	Ply	Job Reference (optional)
MANDALYN PLAN	A2A	ROOF SPECIAL	4	1	

Builders FirstSource, Albemarle, NC 28001

Run: 8.240 s Apr 6 2019 Print: 8.240 s Apr 6 2019 MiTek Industries, Inc. Thu Jul 25 12:06:30 2019 Page 2  
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**LOAD CASE(S)** Standard

1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15

Uniform Loads (plf)

Vert: 1-6=-51, 6-23=-51, 2-11=-20

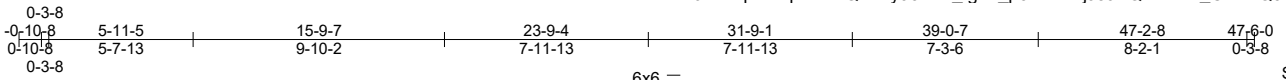
Trapezoidal Loads (plf)

Vert: 23=-99-to-9=-114, 9=-114-to-10=-125

Job	Truss	Truss Type	Qty	Ply	Job Reference (optional)
MANDALYN PLAN	A3	Roof Special	3	1	

Builders FirstSource, Albemarle, NC 28001

Run: 8.240 s Apr 6 2019 Print: 8.240 s Apr 6 2019 MiTek Industries, Inc. Thu Jul 25 12:06:31 2019 Page 1  
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Scale = 1:90.2  
Camber = 3/16 in

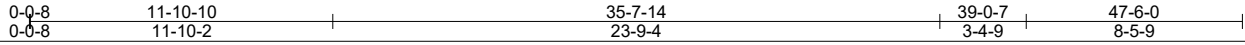
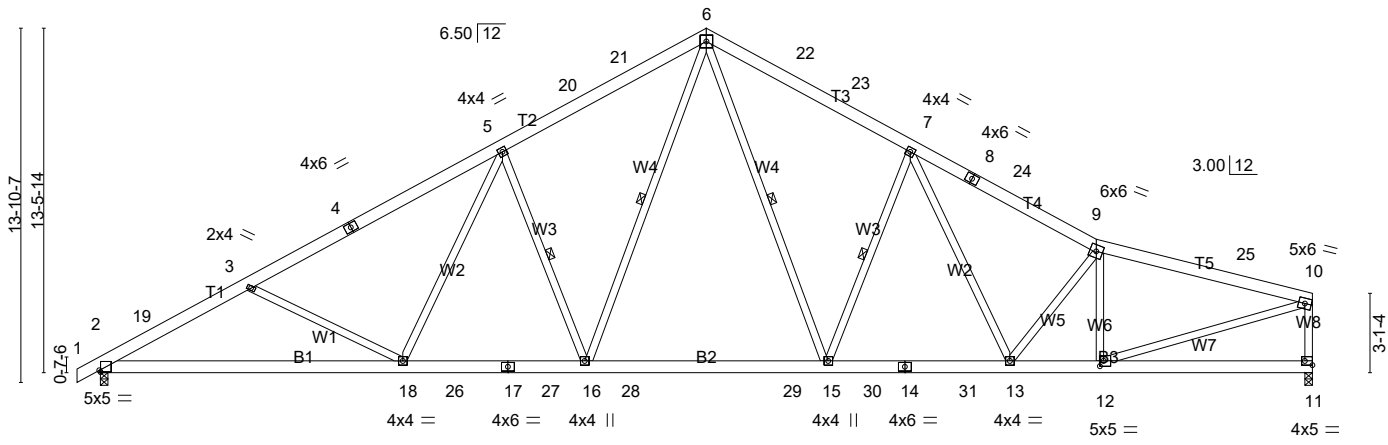


Plate Offsets (X,Y)-- [2:0-0-9,0-0-14], [11:Edge,0-2-0], [12:0-1-12,0-2-8]

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.85	in (loc) l/defl L/d	MT20	244/190
Snow (Pf/Pg) 15.4/20.0	Plate Grip DOL 1.15	BC 0.73	Vert(LL) -0.21 15-16 >999 240		
TCDL 10.0	Lumber DOL 1.15	WB 0.69	Vert(CT) -0.40 15-16 >999 180		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-SH	Horz(CT) 0.10 11 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014			Weight: 372 lb	FT = 20%

**LUMBER-**  
TOP CHORD 2x6 SP No.2  
BOT CHORD 2x6 SP No.2  
WEBS 2x4 SP No.3 \*Except\*  
W7: 2x4 SP No.2

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 3-4-0 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
WEBS 1 Row at midpt 5-16, 7-15, 6-16, 6-15

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

**REACTIONS.** (lb/size) 2=1724/0-3-8 (min. 0-3-1), 11=1671/0-3-8 (min. 0-2-15)  
Max Horz 2=245(LC 16)  
Max Uplift 2=-117(LC 16), 11=-104(LC 17)  
Max Grav 2=1950(LC 2), 11=1888(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-19=-3407/227, 3-19=-3289/257, 3-4=-3048/142, 4-5=-2931/176, 5-20=-2548/222,  
20-21=-2439/245, 6-21=-2429/263, 6-22=-2420/247, 22-23=-2436/227, 7-23=-2538/206,  
7-8=-2839/209, 8-24=-2906/189, 9-24=-2995/186, 9-25=-2841/150, 10-25=-2891/134,  
10-11=-1798/145  
BOT CHORD 2-18=-396/3065, 18-26=-175/2487, 17-26=-175/2487, 17-27=-175/2487, 16-27=-175/2487,  
16-28=-19/1828, 28-29=-19/1828, 15-29=-19/1828, 15-30=-33/2376, 14-30=-33/2376,  
14-31=-33/2376, 13-31=-33/2376, 12-13=-105/2781  
WEBS 9-12=-772/122, 10-12=-94/2818, 5-16=-814/271, 5-18=0/530, 3-18=-486/252,  
7-15=-762/268, 7-13=-56/498, 9-13=-460/112, 6-16=-174/1125, 6-15=-148/1062

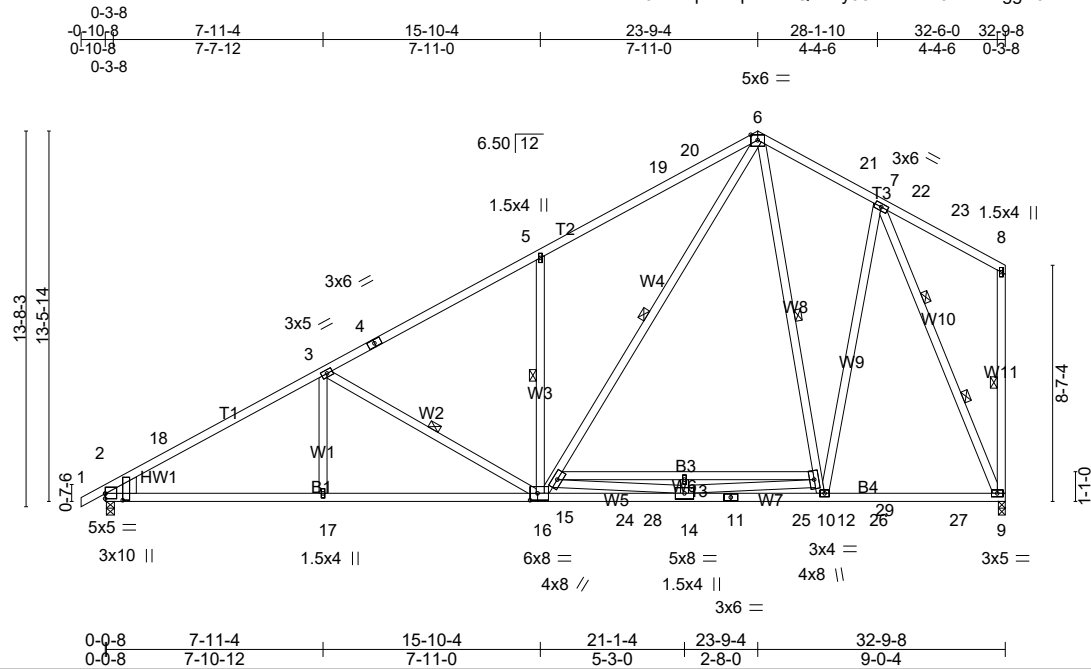
- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCCL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 0-10-8 to 2-1-8, Interior(1) 2-1-8 to 23-9-4, Exterior(2) 23-9-4 to 26-9-4, Interior(1) 26-9-4 to 47-4-4 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - TCCL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow); Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10; Min. flat roof snow load governs.
  - Unbalanced snow loads have been considered for this design.
  - This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 11. This connection is for uplift only and does not consider lateral forces.
  - This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard

Job	Truss	Truss Type	Qty	Ply	Job Reference (optional)
MANDALYN PLAN	A4	ROOF TRUSS	7	1	

Builders FirstSource, Albemarle, NC 28001

Run: 8.240 s Apr 6 2019 Print: 8.240 s Apr 6 2019 MiTek Industries, Inc. Thu Jul 25 12:06:32 2019 Page 1  
ID:ZBwJdEBqawKqNtDhrQxcly95Zd-mAR3n7?RsggB0rIvi1zf7k0YFgJH2bZK\_xzDNyY7r



Scale = 1:83.9  
Camber = 3/16 in

Plate Offsets (X,Y)-- [2:0-0-0,0-2-3], [2:0-2-14,0-7-10], [16:0-3-4,0-3-0]

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.98	in (loc) l/defl L/d	MT20	244/190
Snow (Pf/Pg) 15.4/20.0	Plate Grip DOL 1.15	BC 0.97	Vert(LL) -0.14 14-16 >999 240		
TCDL 10.0	Lumber DOL 1.15	WB 0.81	Vert(CT) -0.27 2-17 >999 180		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-SH	Horz(CT) 0.07 9 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014			Weight: 257 lb	FT = 20%

**LUMBER-**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.3  
WEDGE  
Left: 2x8 SP DSS

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing. Except:  
4-5-0 oc bracing: 12-15  
WEBS 1 Row at midpt 3-16, 5-16, 6-16, 6-10, 8-9  
2 Rows at 1/3 pts 7-9

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

**REACTIONS.** (lb/size) 2=1268/0-3-8 (min. 0-2-4), 9=1269/0-3-0 (min. 0-2-9)  
Max Horz2=349(LC 16)  
Max Uplift2=-47(LC 16), 9=-22(LC 16)  
Max Grav2=1434(LC 31), 9=1628(LC 31)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-18=-2335/7, 3-18=-2247/41, 3-4=-1759/2, 4-5=-1589/43, 5-19=-1801/195,  
19-20=-1691/196, 6-20=-1663/215, 6-21=-811/102, 7-21=-905/79  
BOT CHORD 2-17=-285/2024, 16-17=-285/2024, 16-24=0/584, 14-24=0/584, 11-14=-34/942,  
11-25=-34/942, 10-25=-34/942, 10-26=-12/610, 26-27=-12/610, 9-27=-12/610,  
15-28=-1409/0, 13-28=-1409/0, 13-29=-1409/0, 12-29=-1409/0  
WEBS 3-17=0/343, 3-16=-618/168, 5-16=-510/261, 15-16=-354/1371, 6-15=-220/1410,  
6-12=-419/155, 10-12=-584/73, 7-10=0/875, 7-9=-1570/32, 14-15=0/1482, 13-14=-279/0,  
12-14=0/1338

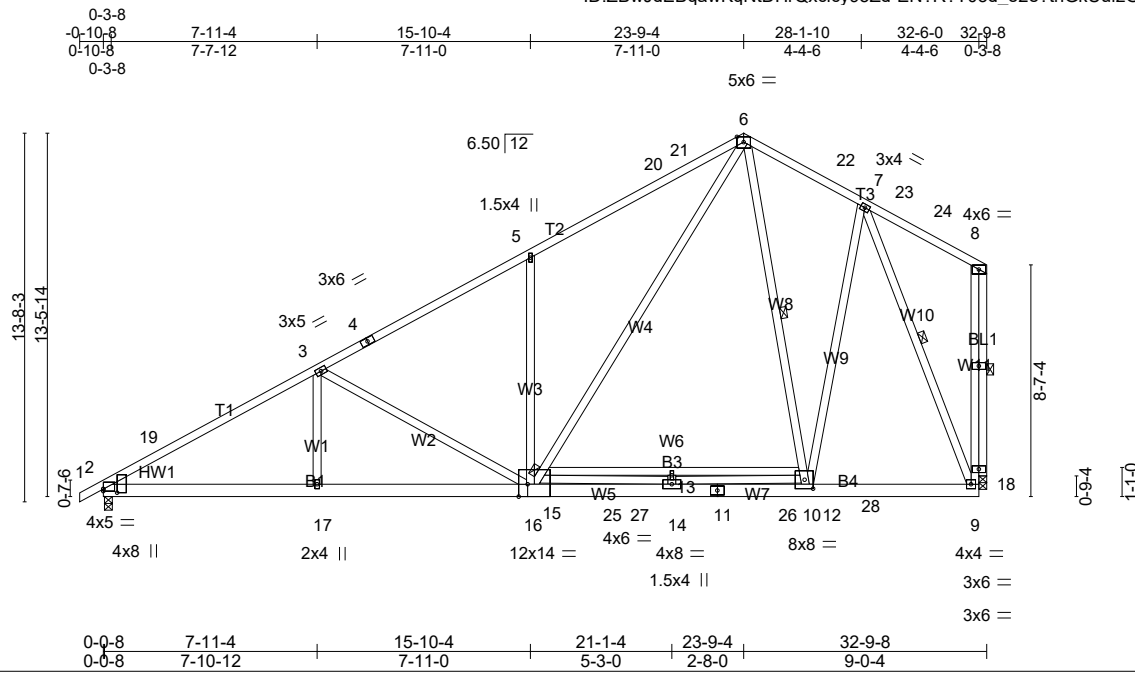
- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCCL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 0-10-8 to 2-4-14, Interior(1) 2-4-14 to 23-9-4, Exterior(2) 23-9-4 to 27-0-10, Interior(1) 27-0-10 to 32-7-12 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - TCCL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow); Lumber DOL=1.15 Plate DOL=1.15; Category II; Exp B; Partially Exp.; Ct=1.10
  - Unbalanced snow loads have been considered for this design.
  - This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 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 3-6-0 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) 2, 9.
  - This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - ATTIC SPACE SHOWN IS DESIGNED AS UNINHABITABLE.

**LOAD CASE(S)** Standard

Job	Truss	Truss Type	Qty	Ply	Job Reference (optional)
MANDALYN PLAN	A5-2	ROOF TRUSS	2	2	

Builders FirstSource, Albemarle, NC 28001

Run: 8.240 s Apr 6 2019 Print: 8.240 s Apr 6 2019 MiTek Industries, Inc. Thu Jul 25 12:06:33 2019 Page 1  
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Scale = 1:85.5  
Camber = 1/16 in

Plate Offsets (X,Y)-- [2:0-0-0,0-0-15], [2:0-1-10,0-6-3], [10:0-3-12,0-4-0], [16:0-4-0,Edge]

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	3-0-0	TC 0.88	in (loc) l/defl L/d	MT20	244/190
Snow (Pf/Pg) 15.4/20.0	Plate Grip DOL 1.15	BC 0.49	Vert(LL) -0.11 12-13 >999 240		
TCDL 10.0	Lumber DOL 1.15	WB 0.53	Vert(CT) -0.20 13-15 >999 180		
BCLL 0.0 *	Rep Stress Incr NO	Matrix-SH	Horz(CT) 0.03 18 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014			Weight: 583 lb	FT = 20%

**LUMBER-**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x6 SP No.2 \*Except\*  
B3: 2x4 SP No.2  
WEBS 2x4 SP No.3  
OTHERS 2x4 SP No.3  
WEDGE  
Left: 2x4 SP No.3

**BRACING-**  
TOP CHORD 2-0-0 oc purlins (5-7-14 max.), except end verticals  
(Switched from sheeted: Spacing > 2-0-0).  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing. Except:  
6-0-0 oc bracing: 12-15  
WEBS 1 Row at midpt 6-10, 7-9, 8-18

**REACTIONS.** (lb/size) 2=1904/0-3-8 (min. 0-1-11), 18=1875/0-3-8 (min. 0-1-8)  
Max Horz2=527(LC 16)  
Max Uplift2=-70(LC 16), 18=-34(LC 16)  
Max Grav2=2143(LC 2), 18=2265(LC 31)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-19=-3507/0, 3-19=-3366/64, 3-4=-2643/0, 4-5=-2388/52, 5-20=-2710/282,  
20-21=-2534/286, 6-21=-2500/312, 6-22=-1206/141, 7-22=-1321/107, 8-9=0/2093  
BOT CHORD 2-17=-430/3041, 16-17=-430/3041, 16-25=0/802, 14-25=0/802, 11-14=-60/1394,  
11-26=-60/1394, 10-26=-60/1394, 9-10=-22/913, 15-27=-1816/0, 13-27=-1816/0,  
13-28=-1816/0, 12-28=-1816/0  
WEBS 3-17=0/507, 3-16=-940/260, 5-16=-772/394, 15-16=-487/2116, 6-15=-320/2149,  
6-12=-614/234, 10-12=-858/139, 7-10=0/1195, 14-15=0/1987, 13-14=-428/0,  
12-14=0/1708, 7-9=-2140/35, 8-18=-2266/34

- NOTES-**
- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.  
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.  
Webs connected as follows: 2x4 - 1 row at 0-9-0 oc.
  - All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
  - Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCCL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 0-10-8 to 2-1-8, Interior(1) 2-1-8 to 23-9-4, Exterior(2) 23-9-4 to 26-9-4, Interior(1) 26-9-4 to 32-4-4 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - TCCL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow): Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
  - Unbalanced snow loads have been considered for this design.
  - This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.



Job	Truss	Truss Type	Qty	Ply	Job Reference (optional)
MANDALYN PLAN	A5-2	ROOF TRUSS	2	2	

Builders FirstSource, Albemarle, NC 28001

Run: 8.240 s Apr 6 2019 Print: 8.240 s Apr 6 2019 MiTek Industries, Inc. Thu Jul 25 12:06:33 2019 Page 2  
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**NOTES-**

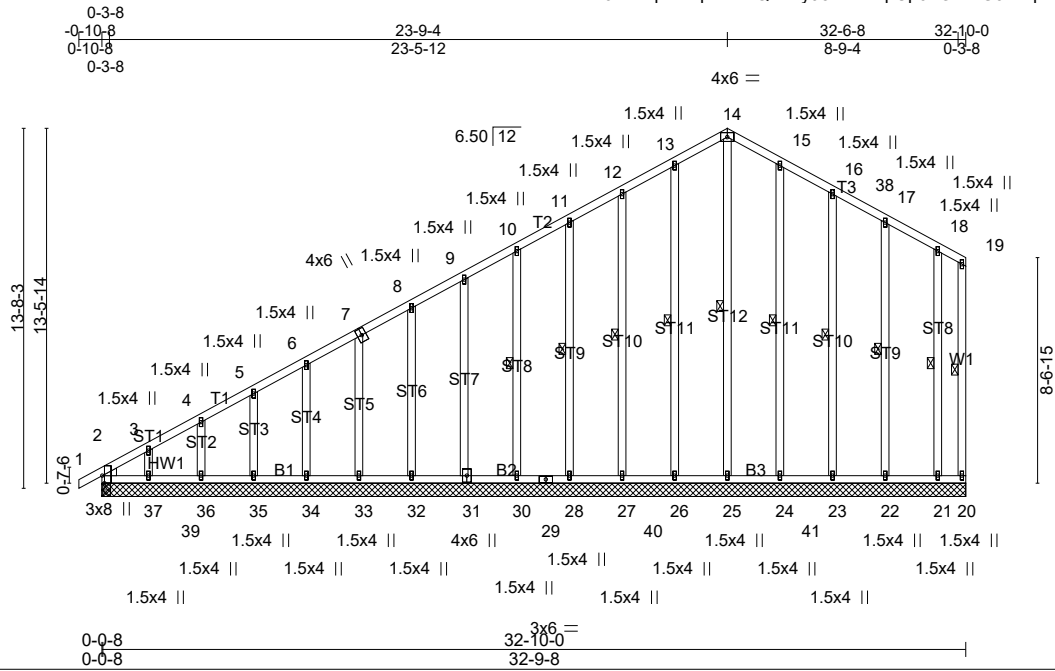
- 10) Bearing at joint(s) 18 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 18.
- 12) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- 14) ATTIC SPACE SHOWN IS DESIGNED AS UNINHABITABLE.

**LOAD CASE(S)** Standard

Job	Truss	Truss Type	Qty	Ply	Job Reference (optional)
MANDALYN PLAN	A6	GABLE	1	1	

Builders FirstSource, Albemarle, NC 28001

Run: 8.240 s Apr 6 2019 Print: 8.240 s Apr 6 2019 MiTek Industries, Inc. Thu Jul 25 12:06:34 2019 Page 1  
ID:ZBwJdEBqawKqNtDHRQxcly95Zd-iZZpCp0hOlwvG9SuqR?7CApaG3Bsl6YsoHS21FyuY7p



Scale = 1:87.6

Plate Offsets (X,Y)-- [2:0-0-1,0-0-2], [2:0-0-2,0-4-9], [2:0-3-8,Edge]

<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof) 20.0	2-0-0	TC 0.07	in (loc) l/defl L/d	MT20	244/190
Snow (Pf/Pg) 15.4/20.0	Plate Grip DOL 1.15	BC 0.03	Vert(LL) -0.00 32 >999 240		
TCDL 10.0	Lumber DOL 1.15	WB 0.14	Vert(CT) -0.00 32 >999 180		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-SH	Horz(CT) 0.00 20 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014			Weight: 305 lb	FT = 20%

**LUMBER-**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.3  
OTHERS 2x4 SP No.3  
WEDGE  
Left: 2x4 SP No.3

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
WEBS 1 Row at midpt 19-20, 14-25, 13-26, 12-27, 11-28, 10-30, 15-24, 16-23, 17-22, 18-21

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

**REACTIONS.** All bearings 32-10-0.  
(lb) - Max Horz 2=348(LC 16)  
Max Uplift All uplift 100 lb or less at joint(s) 20, 2, 26, 27, 28, 30, 31, 32, 33, 34, 35, 36, 37, 24, 23, 22, 21  
Max Grav All reactions 250 lb or less at joint(s) 20, 2, 25, 26, 27, 28, 30, 31, 32, 33, 34, 35, 36, 37, 24, 23, 22, 21

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-400/257, 3-4=-329/201, 4-5=-288/169

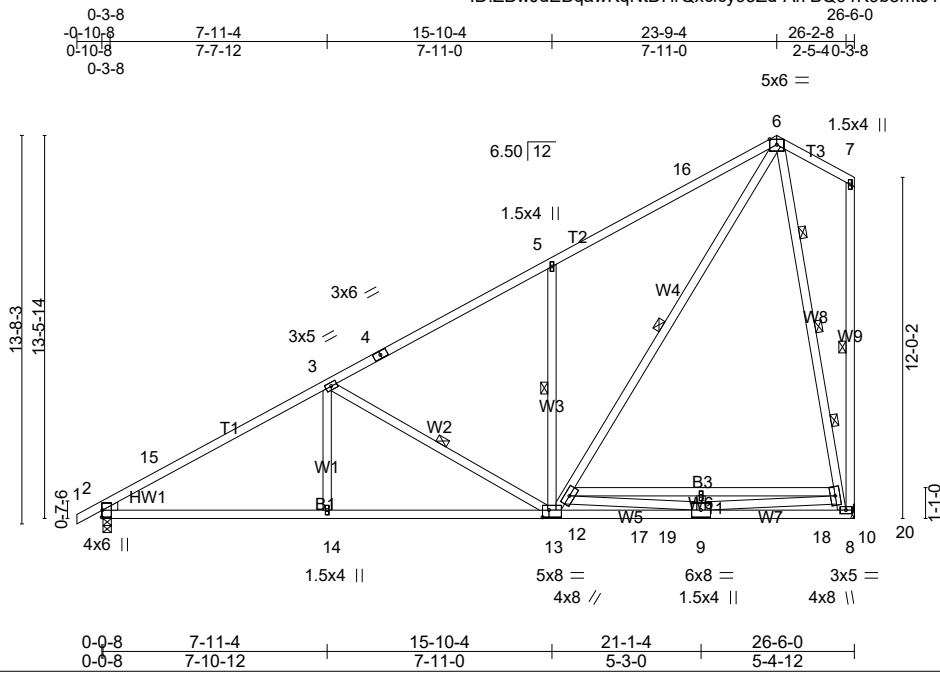
- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TC DL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) -0-10-8 to 2-1-8, Exterior(2) 2-1-8 to 23-9-4, Corner(3) 23-9-4 to 26-9-4, Exterior(2) 26-9-4 to 32-8-4 zone; cantilever left and 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.
  - TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow); Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
  - Unbalanced snow loads have been considered for this design.
  - This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
  - 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) 20, 2, 26, 27, 28, 30, 31, 32, 33, 34, 35, 36, 37, 24, 23, 22, 21.
  - This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard

Job	Truss	Truss Type	Qty	Ply	Job Reference (optional)
MANDALYN PLAN	A7	ROOF TRUSS	1	1	

Builders FirstSource, Albemarle, NC 28001

Run: 8.240 s Apr 6 2019 Print: 8.240 s Apr 6 2019 MiTek Industries, Inc. Thu Jul 25 12:06:35 2019 Page 1  
ID:ZBWJdEbqawKqNtDhrQxcicy95Zd-AI7BQ91K9b3mtJ14N9WMkOMyTLZUNY00xBcciyuY7o



Scale = 1:81.1  
Camber = 1/8 in

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

LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.91	Vert(LL) -0.13	8-9	>999	240	MT20	244/190
Snow (Pf/Pg) 15.4/20.0	Plate Grip DOL 1.15	BC 0.77	Vert(CT) -0.25	2-14	>999	180		
TCDL 10.0	Lumber DOL 1.15	WB 0.92	Horz(CT) 0.04	8	n/a	n/a		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-SH						
BCDL 10.0	Code IRC2015/TPI2014						Weight: 207 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

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:  
6-0-0 oc bracing: 9-13,  
3-9-0 oc bracing: 10-12  
WEBS  
1 Row at midpt 3-13, 5-13, 6-13, 7-8  
3 Rows at 1/4 pts 6-8

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

**REACTIONS.** (lb/size) 2=1017/0-3-8 (min. 0-1-13), 8=1075/Mechanical  
Max Horz 2=413(LC 16)  
Max Uplift 2=-14(LC 16), 8=-89(LC 16)  
Max Grav 2=1147(LC 2), 8=1439(LC 31)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-15=-1742/0, 3-15=-1636/0, 3-4=-1111/0, 4-5=-941/0, 5-16=-1153/127,  
6-16=-1036/147  
BOT CHORD 2-14=-292/1455, 13-14=-292/1455, 9-18=-92/881, 8-18=-92/881, 12-19=-1820/0,  
11-19=-1820/0, 11-20=-1820/0, 10-20=-1820/0  
WEBS 3-14=0/345, 3-13=-641/171, 5-13=-508/260, 12-13=-359/1376, 6-12=-219/1501,  
6-10=-1100/234, 8-10=-1587/162, 9-12=0/1856, 9-11=-272/0, 9-10=0/1313

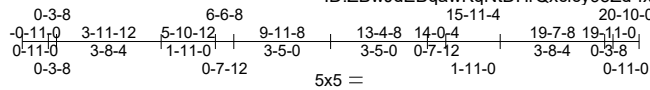
- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCCL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 0-10-8 to 2-1-8, Interior(1) 2-1-8 to 23-9-4, Exterior(2) 23-9-4 to 26-4-4 zone; cantilever left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - TCCL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow); Lumber DOL=1.15 Plate DOL=1.15; Category II; Exp B; Partially Exp.; Ct=1.10
  - Unbalanced snow loads have been considered for this design.
  - This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - Refer to girder(s) for truss to truss connections.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 8.
  - This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - ATTIC SPACE SHOWN IS DESIGNED AS UNINHABITABLE.

**LOAD CASE(S)** Standard

Job	Truss	Truss Type	Qty	Ply	Job Reference (optional)
MANDALYN PLAN	B1	GABLE	1	1	

Builders FirstSource, Albemarle, NC 28001

Run: 8.240 s Apr 6 2019 Print: 8.240 s Apr 6 2019 MiTek Industries, Inc. Thu Jul 25 12:06:36 2019 Page 1  
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Scale = 1:81.3  
Camber = 1/16 in

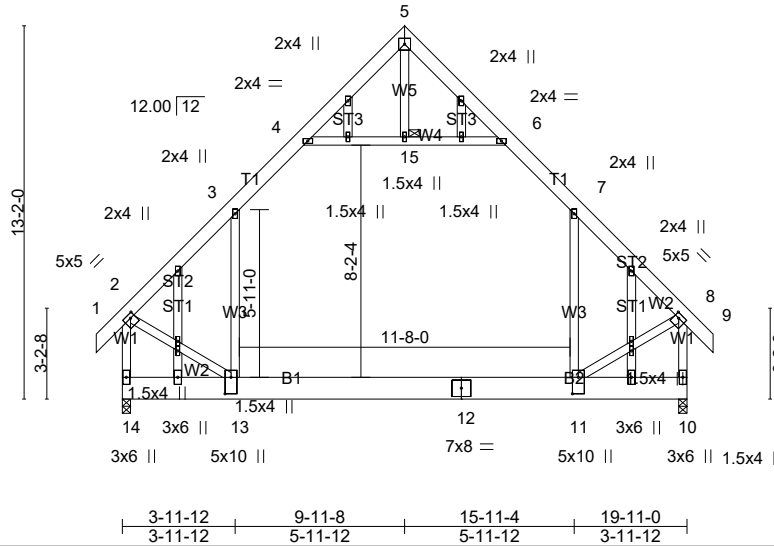


Plate Offsets (X,Y)-- [2:0-2-0,0-1-12], [8:0-2-0,0-1-12], [11:0-7-0,0-2-8], [13:0-7-0,0-2-8]

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.70	in (loc) l/defl L/d	MT20	244/190
Snow (Pf/Pg) 15.4/20.0	Plate Grip DOL 1.15	BC 0.79	Vert(LL) -0.20 11-13 >999 240		
TCDL 10.0	Lumber DOL 1.15	WB 0.34	Vert(CT) -0.29 11-13 >814 180		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-SH	Horz(CT) 0.01 10 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014		Attic -0.13 11-13 1079 360	Weight: 219 lb	FT = 20%

**LUMBER-**  
TOP CHORD 2x6 SP No.2  
BOT CHORD 2x10 SP No.2  
WEBS 2x4 SP No.3  
OTHERS 2x4 SP No.3

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 5-1-5 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
JOINTS 1 Brace at Jt(s): 15

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

**REACTIONS.** (lb/size) 14=933/0-3-8 (min. 0-2-1), 10=933/0-3-8 (min. 0-2-1)  
Max Horz 14=-229(LC 12)  
Max Grav 14=1304(LC 28), 10=1304(LC 27)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-1213/0, 3-4=-775/103, 6-7=-775/103, 7-8=-1213/0, 2-14=-1511/0, 8-10=-1510/0  
BOT CHORD 12-13=0/768, 11-12=0/768  
WEBS 7-11=-95/556, 3-13=-95/556, 4-15=-718/134, 6-15=-718/134, 2-13=0/904, 8-11=0/905

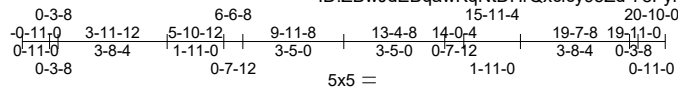
- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) -0-11-0 to 2-1-0, Exterior(2) 2-1-0 to 9-11-8, Corner(3) 9-11-8 to 12-11-8, Exterior(2) 12-11-8 to 20-10-0 zone; cantilever left and 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.
  - TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
  - This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
  - 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.
  - Ceiling dead load (5.0 psf) on member(s). 3-4, 6-7, 4-15, 6-15; Wall dead load (5.0psf) on member(s).7-11, 3-13
  - Bottom chord live load (40.0 psf) and additional bottom chord dead load (5.0 psf) applied only to room. 11-13
  - This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - Attic room checked for L/360 deflection.

**LOAD CASE(S)** Standard

Job	Truss	Truss Type	Qty	Ply	Job Reference (optional)
MANDALYN PLAN	B2	ATTIC	2	1	

Builders FirstSource, Albemarle, NC 28001

Run: 8.240 s Apr 6 2019 Print: 8.240 s Apr 6 2019 MiTek Industries, Inc. Thu Jul 25 12:06:37 2019 Page 1  
ID: ZBwJdEBqawKqNtDHRQxcicy95Zd-78Fyrr3ahDJU7dBTVaYqqpRygG0eyQAJUFGuiayuyY7m



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Camber = 1/16 in

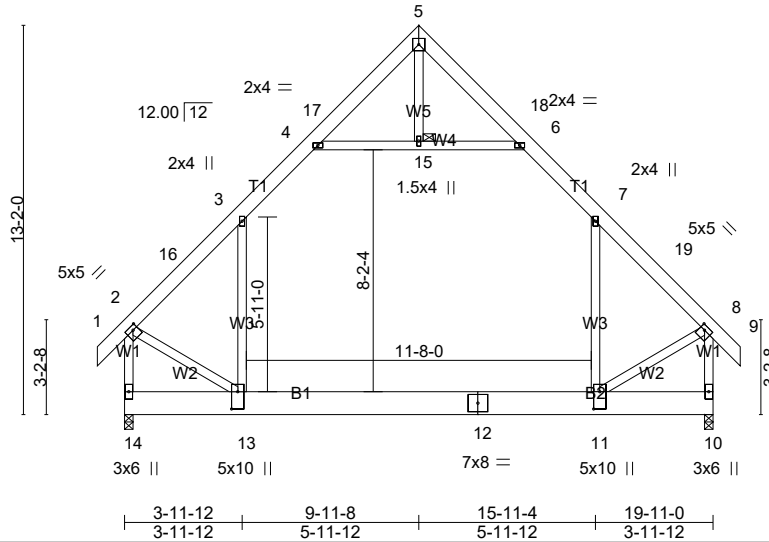


Plate Offsets (X,Y)-- [2:0-2-0,0-1-12], [8:0-2-0,0-1-12], [11:0-7-0,0-2-8], [13:0-7-0,0-2-8]

LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	I/defl	L/d	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.70	Vert(LL)	-0.20 11-13	>999	240	MT20	244/190
Snow (Pf/Pg) 15.4/20.0	Plate Grip DOL 1.15	BC 0.79	Vert(CT)	-0.29 11-13	>814	180		
TCDL 10.0	Lumber DOL 1.15	WB 0.34	Horz(CT)	0.01 10	n/a	n/a		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-SH	Attic	-0.13 11-13	1079	360		
BCDL 10.0	Code IRC2015/TPI2014						Weight: 204 lb	FT = 20%

**LUMBER-**  
TOP CHORD 2x6 SP No.2  
BOT CHORD 2x10 SP No.2  
WEBS 2x4 SP No.3

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 5-3-0 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
JOINTS 1 Brace at Jt(s): 15

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

**REACTIONS.** (lb/size) 14=933/0-3-8 (min. 0-2-1), 10=933/0-3-8 (min. 0-2-1)  
Max Horz 14=-229(LC 12)  
Max Grav 14=1304(LC 28), 10=1304(LC 27)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-16=-1213/0, 3-16=-1091/0, 3-4=-775/83, 6-7=-775/83, 7-19=-1091/0, 8-19=-1213/0,  
2-14=-1511/0, 8-10=-1510/0  
BOT CHORD 12-13=0/768, 11-12=0/768  
WEBS 7-11=-95/556, 3-13=-95/556, 4-15=-718/86, 6-15=-718/86, 2-13=0/904, 8-11=0/905

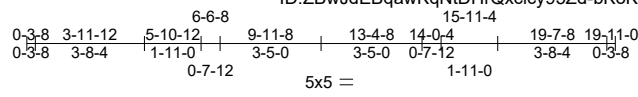
- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCCL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 0-11-0 to 2-1-0, Interior(1) 2-1-0 to 9-11-8, Exterior(2) 9-11-8 to 12-11-8, Interior(1) 12-11-8 to 20-10-0 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - TCCL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow): Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
  - This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - Ceiling dead load (5.0 psf) on member(s). 3-4, 6-7, 4-15, 6-15; Wall dead load (5.0psf) on member(s).7-11, 3-13
  - Bottom chord live load (40.0 psf) and additional bottom chord dead load (5.0 psf) applied only to room. 11-13
  - This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - Attic room checked for L/360 deflection.

**LOAD CASE(S)** Standard

Job	Truss	Truss Type	Qty	Ply	Job Reference (optional)
MANDALYN PLAN	B3	ATTIC	5	1	

Builders FirstSource, Albemarle, NC 28001

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Scale = 1:78.0  
 Camber = 1/16 in

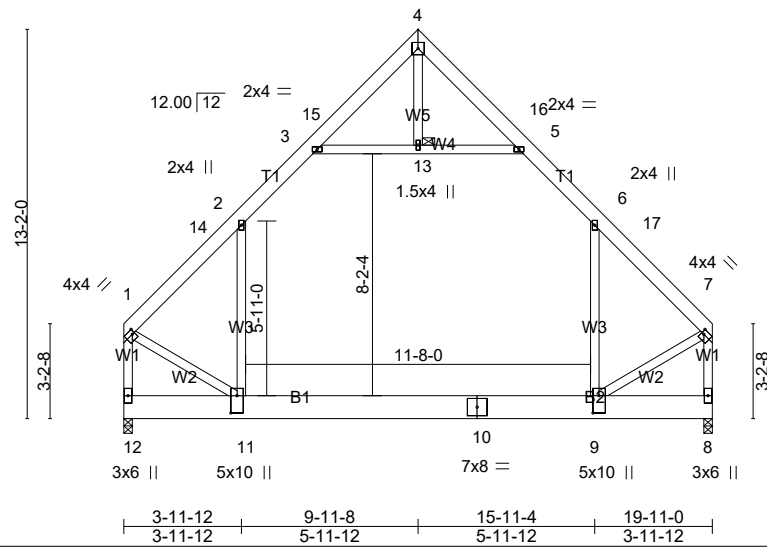


Plate Offsets (X,Y)-- [1:0-1-0,0-1-12], [7:0-1-0,0-1-12], [9:0-7-0,0-2-8], [11:0-7-0,0-2-8]										
<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in	(loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof) 20.0	Plate Grip DOL 1.15		TC 0.70	Vert(LL) -0.20	9-11	>999	240		MT20	244/190
Snow (Pf/Pg) 15.4/20.0	Lumber DOL 1.15		BC 0.79	Vert(CT) -0.29	9-11	>811	180			
TCDL 10.0	Rep Stress Incr YES		WB 0.34	Horz(CT) 0.01	8	n/a	n/a			
BCLL 0.0 *	Code IRC2015/TPI2014		Matrix-SH	Attic -0.13	9-11	1078	360			
BCDL 10.0									Weight: 198 lb	FT = 20%

**LUMBER-**  
 TOP CHORD 2x6 SP No.2  
 BOT CHORD 2x10 SP No.2  
 WEBS 2x4 SP No.3

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 5-2-7 oc purlins, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
 JOINTS 1 Brace at Jt(s): 13

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

**REACTIONS.** (lb/size) 12=880/0-3-8 (min. 0-2-0), 8=880/0-3-8 (min. 0-2-0)  
 Max Horz 12=207(LC 11)  
 Max Grav 12=1261(LC 27), 8=1261(LC 26)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-14=-1216/0, 2-14=-1094/0, 2-3=-777/79, 5-6=-777/79, 6-17=-1093/0, 7-17=-1215/0,  
 1-12=-1466/0, 7-8=-1466/0  
 BOT CHORD 10-11=0/761, 9-10=0/761  
 WEBS 6-9=-100/552, 2-11=-100/552, 3-13=-721/81, 5-13=-721/81, 1-11=0/899, 7-9=0/900

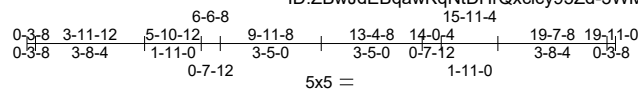
- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCCL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 0-1-9 to 3-1-9, Interior(1) 3-1-9 to 9-11-8, Exterior(2) 9-11-8 to 12-11-8, Interior(1) 12-11-8 to 19-9-7 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - TCCL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow); Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
  - 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.
  - Ceiling dead load (5.0 psf) on member(s). 2-3, 5-6, 3-13, 5-13; Wall dead load (5.0psf) on member(s).6-9, 2-11
  - Bottom chord live load (40.0 psf) and additional bottom chord dead load (5.0 psf) applied only to room. 9-11
  - This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - Attic room checked for L/360 deflection.

**LOAD CASE(S)** Standard

Job	Truss	Truss Type	Qty	Ply	Job Reference (optional)
MANDALYN PLAN	B4-2	ATTIC	1	2	

Builders FirstSource, Albemarle, NC 28001

Run: 8.240 s Apr 6 2019 Print: 8.240 s Apr 6 2019 MiTek Industries, Inc. Thu Jul 25 12:06:39 2019 Page 1  
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Scale = 1:78.0  
Camber = 3/16 in

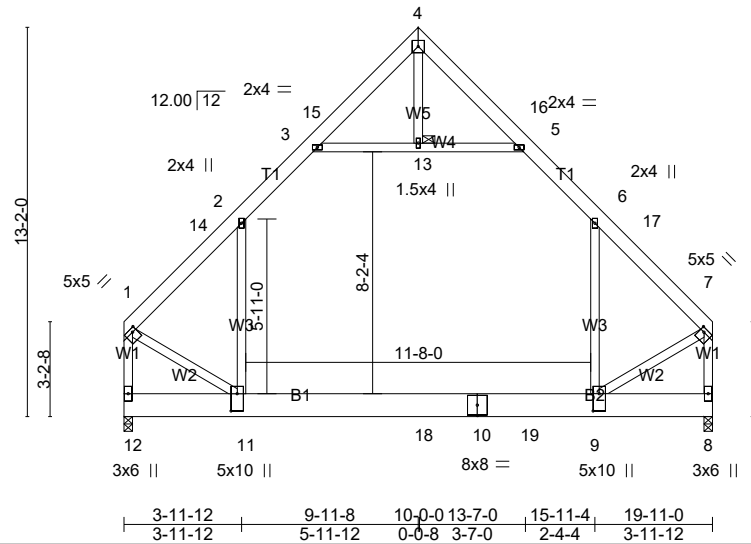


Plate Offsets (X,Y)-- [1:0-1-12,0-1-8], [7:0-1-12,0-1-8], [9:0-7-0,0-2-8], [11:0-7-0,0-2-8]

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	3-0-0	TC 0.83	in (loc) l/defl L/d	MT20	244/190
Snow (Pf/Pg) 15.4/20.0	Plate Grip DOL 1.15	BC 0.99	Vert(LL) -0.13 9-11 >999 240		
TCDL 10.0	Lumber DOL 1.15	WB 0.47	Vert(CT) -0.30 9-11 >774 180		
BCLL 0.0 *	Rep Stress Incr NO	Matrix-SH	Horz(CT) 0.01 8 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014		Attic -0.08 9-11 1693 360	Weight: 395 lb	FT = 20%

**LUMBER-**  
TOP CHORD 2x6 SP No.2  
BOT CHORD 2x10 SP DSS \*Except\*  
B2: 2x10 SP No.2  
WEBS 2x4 SP No.3

**BRACING-**  
TOP CHORD 2-0-0 oc purlins (6-0-0 max.), except end verticals  
(Switched from sheeted: Spacing > 2-0-0).  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
JOINTS 1 Brace at Jt(s): 4, 13, 1, 7

**REACTIONS.** (lb/size) 12=2678/0-3-8 (min. 0-2-9), 8=2828/0-3-8 (min. 0-2-11)  
Max Horz 12=311(LC 11)  
Max Grav 12=3250(LC 27), 8=3400(LC 26)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 1-14=-3122/0, 2-14=-2695/0, 2-3=-2148/0, 3-15=-674/0, 4-15=-577/29, 4-16=-566/0,  
5-16=-663/0, 5-6=-2131/0, 6-17=-2696/0, 7-17=-3123/0, 1-12=-3769/0, 7-8=-3772/0  
BOT CHORD 11-12=-293/357, 11-18=0/1915, 10-18=0/1915, 10-19=0/1915, 9-19=0/1915  
WEBS 6-9=-42/917, 2-11=-94/880, 3-13=-1777/0, 5-13=-1777/0, 1-11=0/2267, 7-9=0/2252

- NOTES-**
- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.  
Bottom chords connected as follows: 2x10 - 2 rows staggered at 0-9-0 oc.  
Webs connected as follows: 2x4 - 1 row at 0-9-0 oc.
  - All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
  - Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCCL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 0-1-9 to 3-1-9, Interior(1) 3-1-9 to 9-11-8, Exterior(2) 9-11-8 to 12-11-8, Interior(1) 12-11-8 to 19-9-7 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - TCCL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow); Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
  - 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.
  - Ceiling dead load (5.0 psf) on member(s). 2-3, 5-6, 3-13, 5-13; Wall dead load (5.0psf) on member(s).6-9, 2-11
  - Bottom chord live load (40.0 psf) and additional bottom chord dead load (5.0 psf) applied only to room. 9-11
  - This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
  - Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 500 lb down at 10-0-0, and 400 lb down at 13-7-0 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
  - Attic room checked for L/360 deflection.

**LOAD CASE(S)** Standard

Continued on page 2

Job	Truss	Truss Type	Qty	Ply	Job Reference (optional)
MANDALYN PLAN	B4-2	ATTIC	1	2	

Builders FirstSource, Albemarle, NC 28001

Run: 8.240 s Apr 6 2019 Print: 8.240 s Apr 6 2019 MiTek Industries, Inc. Thu Jul 25 12:06:39 2019 Page 2  
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**LOAD CASE(S)** Standard

1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15

Uniform Loads (plf)

Vert: 1-2=-176(F=-100), 2-3=-191(F=-100), 3-4=-176(F=-100), 4-5=-176(F=-100), 5-6=-191(F=-100), 6-7=-176(F=-100), 11-12=-30, 9-11=-45, 8-9=-30, 3-5=-15

Drag: 6-9=-15, 2-11=-15

Concentrated Loads (lb)

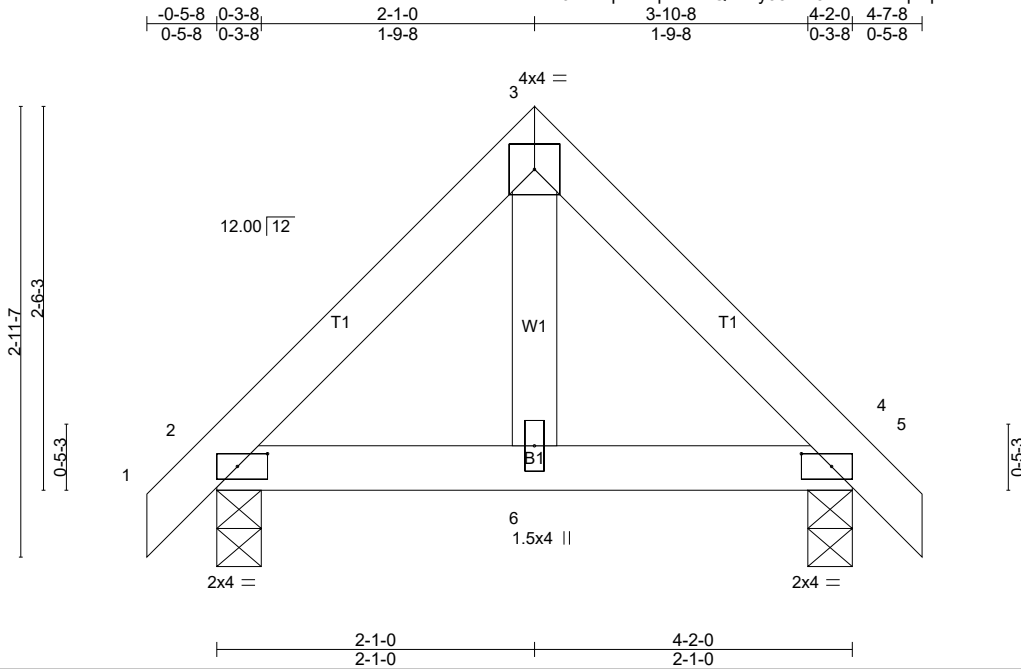
Vert: 18=-500(F) 19=-400(F)



Job	Truss	Truss Type	Qty	Ply	Job Reference (optional)
MANDALYN PLAN	D01	GABLE	7	1	

Builders FirstSource, Albemarle, NC 28001

Run: 8.240 s Apr 6 2019 Print: 8.240 s Apr 6 2019 MiTek Industries, Inc. Thu Jul 25 12:06:39 2019 Page 1  
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Scale = 1:15.1

Plate Offsets (X,Y)-- [2:0-2-6,0-1-0], [4:0-2-6,0-1-0]

LOADING (psf)	SPACING-	CSI.	DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.07	Vert(LL) -0.00	2	>999	240		MT20	244/190
Snow (Pf/Pg) 15.4/20.0	Plate Grip DOL 1.15	BC 0.04	Vert(CT) -0.00	6	>999	180			
TCDL 10.0	Lumber DOL 1.15	WB 0.04	Horz(CT) 0.00	4	n/a	n/a			
BCLL 0.0 *	Rep Stress Incr YES	Matrix-P							
BCDL 10.0	Code IRC2015/TPI2014							Weight: 20 lb	FT = 20%

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

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 4-2-0 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=168/0-3-8 (min. 0-1-8), 4=168/0-3-8 (min. 0-1-8)  
 Max Horz 2=-54(LC 12)  
 Max Uplift 2=-13(LC 14), 4=-13(LC 15)  
 Max Grav 2=191(LC 2), 4=191(LC 2)

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

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCCL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and 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.
  - TCCL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow); Lumber DOL=1.15 Plate DOL=1.15; Category II; Exp B; Partially Exp.; Ct=1.10
  - This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
  - 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 20.0 psf 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.
  - One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 4. This connection is for uplift only and does not consider lateral forces.
  - This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard

Job	Truss	Truss Type	Qty	Ply	Job Reference (optional)
MANDALYN PLAN	D01E	GABLE	1	1	

Builders FirstSource, Albemarle, NC 28001

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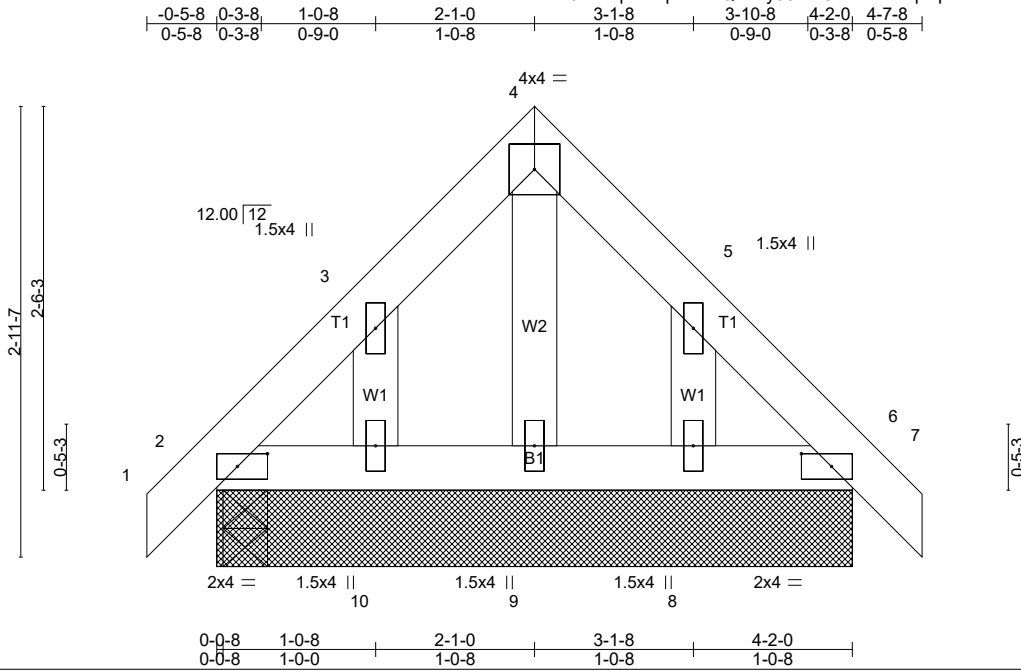


Plate Offsets (X,Y)-- [2:0-2-6,0-1-0], [6:0-2-6,0-1-0]

<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof) 20.0	2-0-0	TC 0.02	in (loc) l/defl L/d	MT20	244/190
Snow (Pf/Pg) 15.4/20.0	Plate Grip DOL 1.15	BC 0.01	Vert(LL) -0.00 2 >999 240		
TCDL 10.0	Lumber DOL 1.15	WB 0.02	Vert(CT) -0.00 2 >999 180		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-P	Horz(CT) 0.00 6 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014			Weight: 23 lb	FT = 20%

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

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 4-2-0 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.** All bearings 4-2-0.  
 (lb) - Max Horz 2=-54(LC 12)  
 Max Uplift All uplift 100 lb or less at joint(s) 2, 6, 10, 8  
 Max Grav All reactions 250 lb or less at joint(s) 2, 2, 6, 10, 8, 9

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

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCCL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and 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.
  - TCCL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow); Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
  - This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
  - 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, 6, 10, 8.
  - This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard

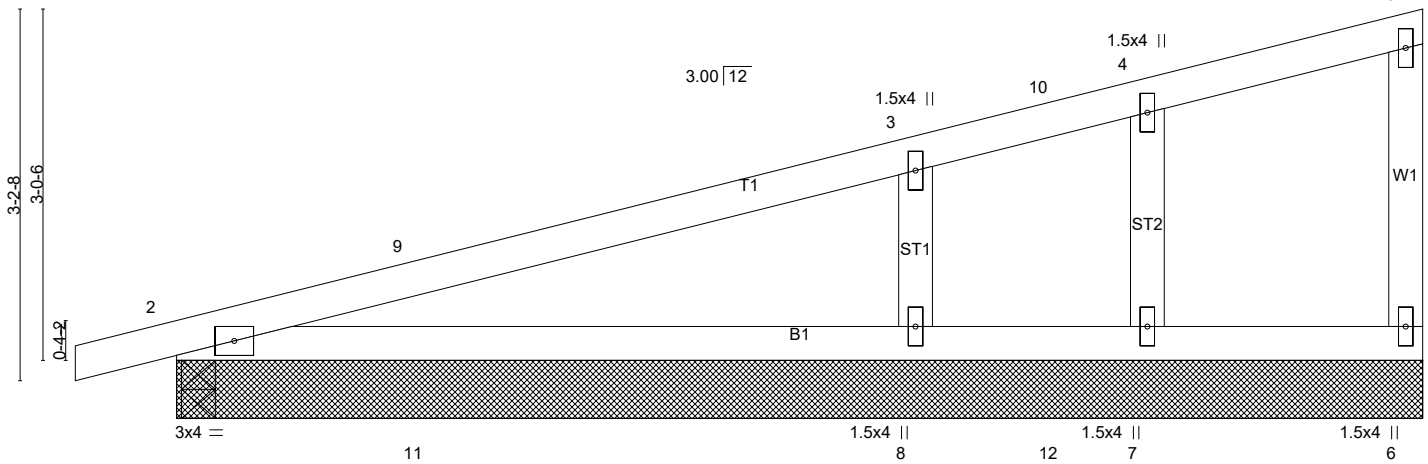
Job	Truss	Truss Type	Qty	Ply	Job Reference (optional)
MANDALYN PLAN	J1	Monopitch Supported Gable	1	1	

Builders FirstSource, Albemarle, NC 28001

Run: 8.240 s Apr 6 2019 Print: 8.240 s Apr 6 2019 MiTek Industries, Inc. Thu Jul 25 12:06:40 2019 Page 1  
 ID:ZBwJdEBqawKqNtDHRQxcly95Zd-Xjw4Ts5Sz8h2\_4v2Ai6XRR3VUU9E9rviADvMVvyyY7J



1.5x4 || Scale = 1:19.9



0-0-8  
0-0-8

<b>LOADING</b> (psf)		<b>SPACING-</b>	2-0-0	<b>CSI.</b>		<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.54	Vert(LL)	0.08	2-8	>959	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.35	Vert(CT)	-0.11	2-8	>726		
TCDL	10.0	Rep Stress Incr	YES	WB	0.08	Horz(CT)	0.00		n/a		
BCLL	0.0 *	Code IRC2015/TPI2014		Matrix-P							
BCDL	10.0									Weight: 42 lb	FT = 20%

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

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.  
 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.** All bearings 10-9-0.  
 (lb) - Max Horz 2=96(LC 12)  
 Max Uplift All uplift 100 lb or less at joint(s) 6, 2, 8, 7  
 Max Grav All reactions 250 lb or less at joint(s) 6, 2, 7 except 2=262(LC 2), 8=550(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 WEBS 3-8=-409/239

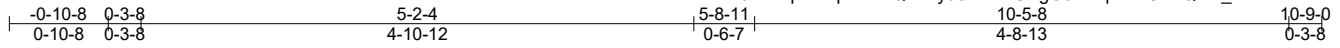
- NOTES-**
- 1) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) -0-10-8 to 2-1-8, Exterior(2) 2-1-8 to 10-7-4 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) 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.
  - 3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow); Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10; Min. flat roof snow load governs.
  - 4) Unbalanced snow loads have been considered for this design.
  - 5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
  - 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) 6, 2, 8, 7.
  - 10) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard

Job	Truss	Truss Type	Qty	Ply	Job Reference (optional)
MANDALYN PLAN	J2	Monopitch	6	1	

Builders FirstSource, Albemarle, NC 28001

Run: 8.240 s Apr 6 2019 Print: 8.240 s Apr 6 2019 MiTek Industries, Inc. Thu Jul 25 12:06:41 2019 Page 1  
 ID:ZBwJdEBqawKqNtDHRQxclcy95Zd-?vUSgC64kRpvbEUEkQdm\_fci4uVeuIHuPtew1LyuY71



1.5x4 || Scale = 1:20.4

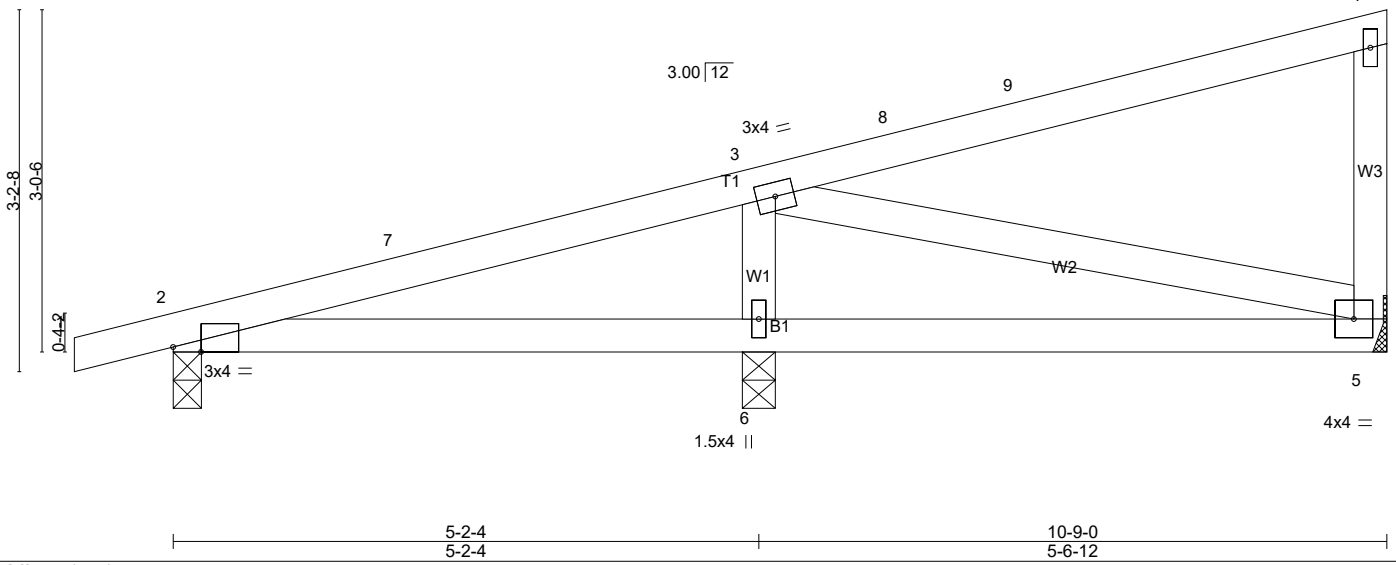


Plate Offsets (X,Y)-- [2:0-2-15,Edge]

LOADING (psf)	SPACING-	CSI.	DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.42	Vert(LL) -0.02	5-6	>999	240		MT20	244/190
Snow (Pf/Pg) 15.4/20.0	Plate Grip DOL 1.15	BC 0.28	Vert(CT) -0.05	5-6	>999	180			
TCDL 10.0	Lumber DOL 1.15	WB 0.08	Horz(CT) -0.00	5	n/a	n/a			
BCLL 0.0 *	Rep Stress Incr YES	Matrix-P							
BCDL 10.0	Code IRC2015/TPI2014							Weight: 47 lb	FT = 20%

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

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.  
 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) 5=151/Mechanical, 2=191/0-3-0 (min. 0-1-8), 6=450/0-3-8 (min. 0-1-8)  
 Max Horz 2=96(LC 12)  
 Max Uplift 5=-29(LC 12), 2=-39(LC 12), 6=-60(LC 16)  
 Max Grav 5=180(LC 23), 2=219(LC 2), 6=508(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 WEBS 3-6=-377/138

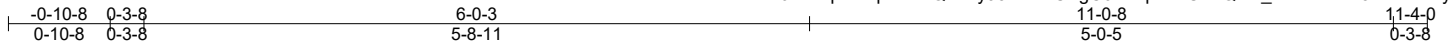
- NOTES-**
- 1) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 10-7-4 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) TCDL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10; Min. flat roof snow load governs.
  - 3) Unbalanced snow loads have been considered for this design.
  - 4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 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) Refer to girder(s) for truss to truss connections.
  - 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 5.
  - 9) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 6. This connection is for uplift only and does not consider lateral forces.
  - 10) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard

Job	Truss	Truss Type	Qty	Ply	Job Reference (optional)
MANDALYN PLAN	J3	MONOPITCH	3	1	

Builders FirstSource, Albemarle, NC 28001

Run: 8.240 s Apr 6 2019 Print: 8.240 s Apr 6 2019 MiTek Industries, Inc. Thu Jul 25 12:06:41 2019 Page 1  
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Scale = 1:19.8

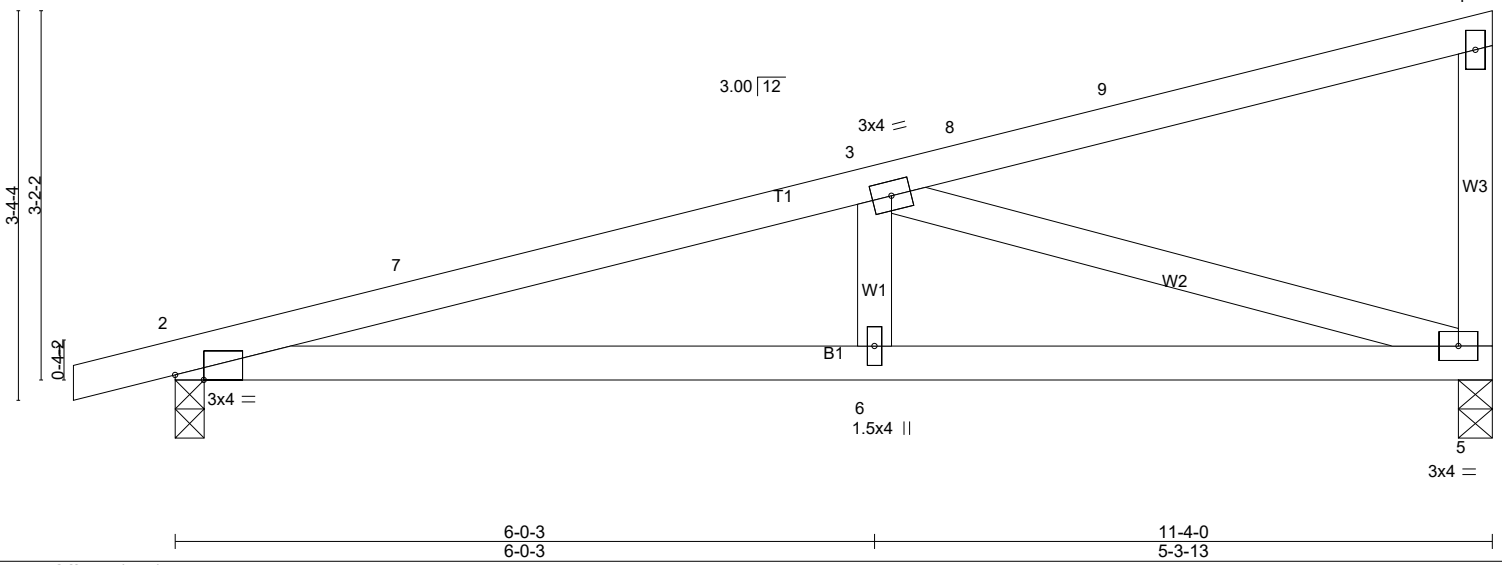


Plate Offsets (X,Y)-- [2:0-2-15,Edge]

<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	in	(loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof) 20.0	2-0-0	TC 0.40	Vert(LL) -0.04	2-6	>999	240		MT20	244/190
Snow (Pf/Pg) 15.4/20.0	Plate Grip DOL 1.15	BC 0.45	Vert(CT) -0.10	2-6	>999	180			
TCDL 10.0	Lumber DOL 1.15	WB 0.54	Horz(CT) 0.02	5	n/a	n/a			
BCLL 0.0 *	Rep Stress Incr YES	Matrix-SH							
BCDL 10.0	Code IRC2015/TPI2014							Weight: 49 lb	FT = 20%

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

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 5-4-4 oc purlins, except end verticals.  
 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) 5=389/0-3-8 (min. 0-1-8), 2=445/0-3-0 (min. 0-1-8)  
 Max Horz 2=101(LC 12)  
 Max Uplift 5=-61(LC 16), 2=-71(LC 2)  
 Max Grav 5=440(LC 2), 2=505(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-7=-998/59, 3-7=-958/71  
 BOT CHORD 2-6=-128/926, 5-6=-128/926  
 WEBS 3-6=0/253, 3-5=-942/131

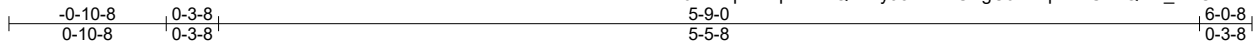
- NOTES-**
- 1) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 11-2-4 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10; Min. flat roof snow load governs.
  - 3) Unbalanced snow loads have been considered for this design.
  - 4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 5, 2.
  - 8) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard

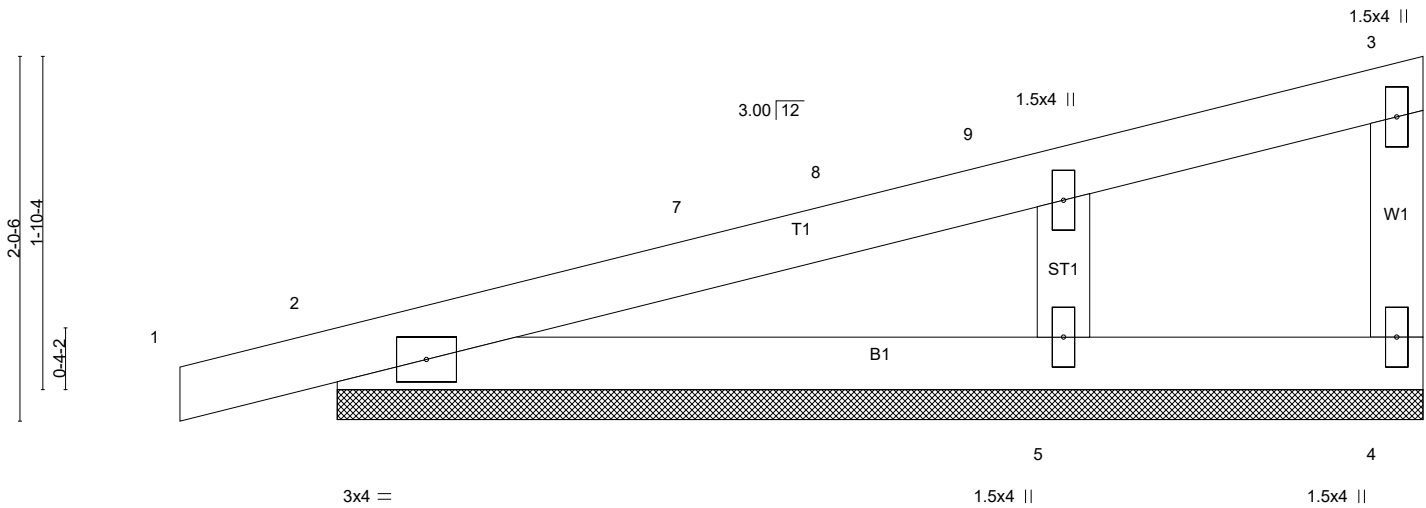
Job	Truss	Truss Type	Qty	Ply	Job Reference (optional)
MANDALYN PLAN	J4	GABLE	1	1	

Builders FirstSource, Albemarle, NC 28001

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Scale = 1:12.8



<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof) 20.0	2-0-0	TC 0.67	in (loc) l/defl L/d	MT20	244/190
Snow (Pf/Pg) 15.4/20.0	Plate Grip DOL 1.15	BC 0.13	Vert(LL) 0.06 1 n/r 120		
TCDL 10.0	Lumber DOL 1.15	WB 0.00	Vert(CT) 0.10 1 n/r 120		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-P	Horz(CT) 0.00 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014			Weight: 23 lb	FT = 20%

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

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.  
 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) 4=148/6-0-8 (min. 0-1-8), 2=230/6-0-8 (min. 0-1-8), 5=83/6-0-8 (min. 0-1-8)  
 Max Horz 2=58(LC 12)  
 Max Uplift 4=-66(LC 16), 2=-66(LC 12)  
 Max Grav 4=175(LC 2), 2=266(LC 2), 5=166(LC 7)

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

- NOTES-**
- 1) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) -0-10-8 to 2-1-8, Exterior(2) 2-1-8 to 5-10-12 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) 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.
  - 3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10; Min. flat roof snow load governs.
  - 4) Unbalanced snow loads have been considered for this design.
  - 5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
  - 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) 4, 2.
  - 11) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 2.
  - 12) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard