ENGINEERING BY
TRENCO
A MiTek Affiliate

Trenco
818 Soundside Rd
Edenton, NC 27932

Re: P02236-24939
1037 Serenity

The truss drawing(s) referenced below have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by 84 Lumber 2383 (Dunn, NC).

Pages or sheets covered by this seal: I73305307 thru I73305354

My license renewal date for the state of North Carolina is December 31, 2025.

North Carolina COA: C-0844

May 8,2025

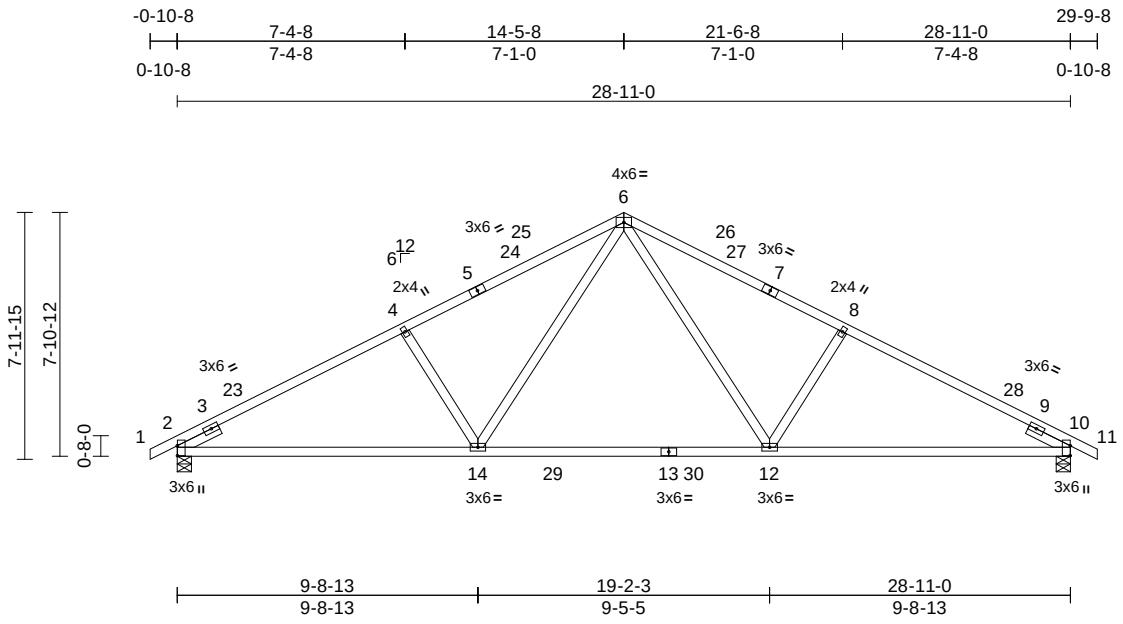
Gilbert, Eric

IMPORTANT NOTE: The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), which were given to MiTek or TRENCO. Any project specific information included is for MiTek's or TRENCO's customers file reference purpose only, and was not taken into account in the preparation of these designs. MiTek or TRENCO has not independently verified the applicability of the design parameters or the designs for any particular building. Before use, the building designer should verify applicability of design parameters and properly incorporate these designs into the overall building design per ANSI/TPI 1, Chapter 2.

Job	Truss	Truss Type	Qty	Ply	1037 Serenity	
P02236-24939	A01	Common	6	1	Job Reference (optional)	I73305307

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

Run: 9.13 S 8.83 Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 07 10:44:19 Page: 1
ID:7pw9M2gRrKMMYDn7Q9AwswzIytX-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:74.6

Plate Offsets (X, Y): [2:0-3-13,0-0-1], [10:0-3-13,0-0-1]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.69	Vert(LL)	-0.39	12-14	>886	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.82	Vert(CT)	-0.51	12-14	>679	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.32	Horz(CT)	0.06	10	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	5.0										Weight: 138 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2 *Except* 12-8,14-4:2x4 SP No.3
SLIDER Left 2x4 SP No.3 -- 1-6-0, Right 2x4 SP No.3 -- 1-6-0

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-4-9 oc purlins.
BOT CHORD Rigid ceiling directly applied or 8-5-2 oc bracing.

REACTIONS (size) 2=0-5-8, 10=0-5-8
Max Horiz 2=-128 (LC 17)
Max Uplift 2=-332 (LC 16), 10=-332 (LC 17)
Max Grav 2=1065 (LC 2), 10=1065 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/23, 2-4=-1676/507, 4-6=-1479/509, 6-8=-1479/509, 8-10=-1676/507, 10-11=0/23
BOT CHORD 2-14=-483/1429, 12-14=-213/974, 10-12=-368/1429
WEBS 6-12=-228/525, 8-12=-401/289, 6-14=-228/525, 4-14=-401/288

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=3.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 14-5-8, Exterior (2) 14-5-8 to 17-5-8, Interior (1) 17-5-8 to 29-9-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
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 11.5 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 5.0psf.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 332 lb uplift at joint 2 and 332 lb uplift at joint 10.

LOAD CASE(S) Standard

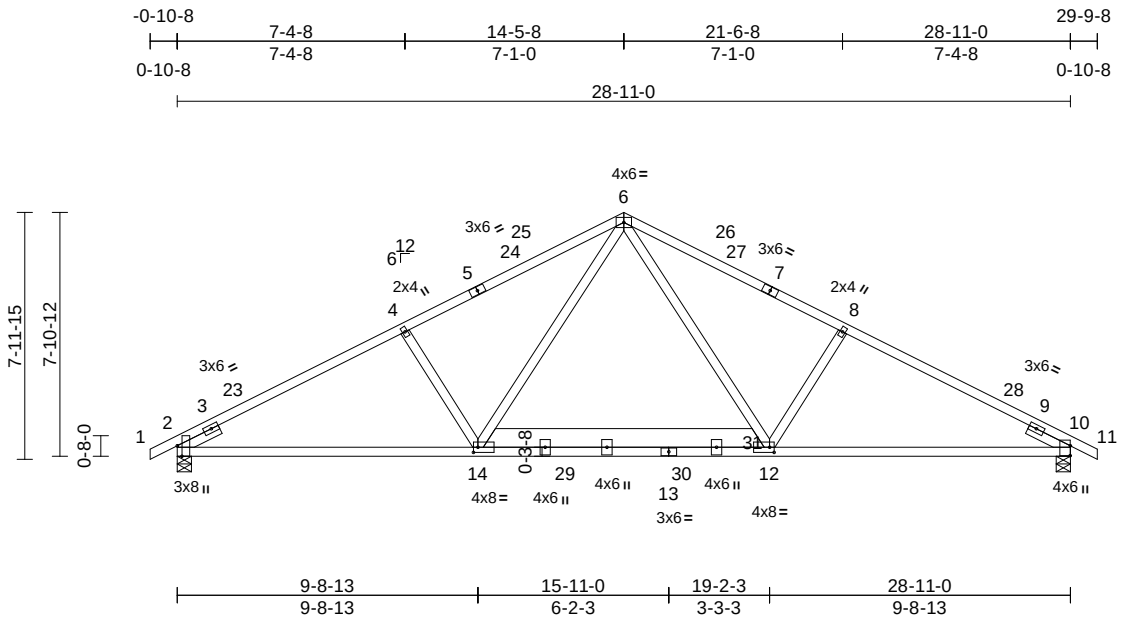
May 8,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1037 Serenity	
P02236-24939	A01H	Common	2	1	Job Reference (optional)	I73305308

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

Run: 9.13 S 8.83 Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 07 10:44:20 Page: 1
ID:Em88tevTnWghxZFSOoio1wzKaaq-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:74.6

Plate Offsets (X, Y): [2:0-4-1,Edge], [10:0-3-13,0-0-1], [12:0-1-12,0-2-0], [14:0-1-12,0-2-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.81	Vert(LL)	-0.13	14-17	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.66	Vert(CT)	-0.20	14-17	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.62	Horz(CT)	0.06	10	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	5.0										Weight: 166 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 14-12:2x8 SP DSS
WEBS 2x4 SP No.2 *Except* 12-8,14-4:2x4 SP No.3
SLIDER Left 2x4 SP No.3 -- 1-6-0, Right 2x4 SP No.3 -- 1-6-0

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 7-11-7 oc bracing.

REACTIONS (size) 2=0-5-8, 10=0-5-8
Max Horiz 2=-128 (LC 17)
Max Uplift 2=-368 (LC 16), 10=-380 (LC 17)
Max Grav 2=1159 (LC 2), 10=1191 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/23, 2-4=-1863/591, 4-6=-1667/593, 6-8=-1731/621, 8-10=-1928/619, 10-11=0/23
BOT CHORD 2-14=-548/1595, 12-14=-282/1150, 10-12=-466/1652
WEBS 6-12=-298/696, 8-12=-392/285, 6-14=-224/503, 4-14=-394/285

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=3.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 14-5-8, Exterior (2) 14-5-8 to 17-5-8, Interior (1) 17-5-8 to 29-9-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
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 11.5 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 5.0psf.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 368 lb uplift at joint 2 and 380 lb uplift at joint 10.

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-6=-43, 6-11=-43, 15-19=-10, 6-31=-40

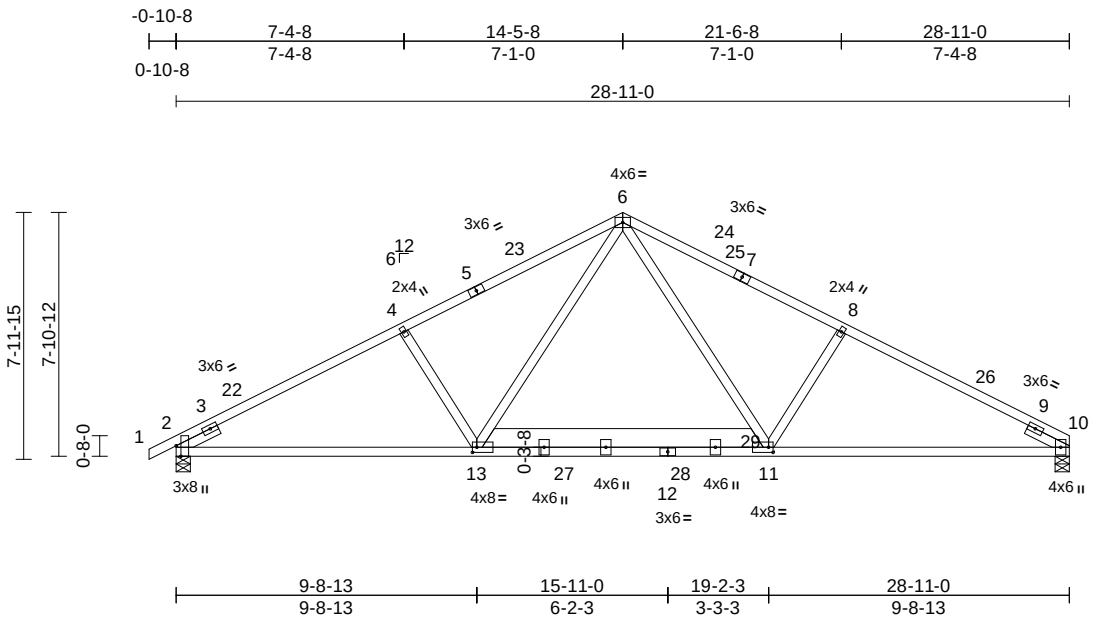
May 8,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1037 Serenity	
P02236-24939	A02H	Common	1	1	Job Reference (optional)	I73305309

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

Run: 9.13 S 8.83 Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 07 10:44:21 Page: 1
ID:zCbTMdhMOUnv83QsQpMzuezKaXD-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:74.6

Plate Offsets (X, Y): [2:0-4-1,Edge], [10:0-3-9,0-1-5], [11:0-1-12,0-2-0], [13:0-1-12,0-2-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.96	Vert(LL)	-0.13	13-16	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.73	Vert(CT)	-0.21	11-20	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.62	Horz(CT)	0.06	10	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	5.0										Weight: 164 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 13-11:2x8 SP DSS
WEBS 2x4 SP No.2 *Except* 11-8,13-4:2x4 SP No.3
SLIDER Left 2x4 SP No.3 -- 1-6-0, Right 2x4 SP No.3 -- 1-6-0

BRACING
TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied or 7-10-14 oc bracing.

REACTIONS (size) 2=0-5-8, 10=0-5-8
Max Horiz 2=135 (LC 20)
Max Uplift 2=-368 (LC 16), 10=-356 (LC 17)
Max Grav 2=1159 (LC 2), 10=1137 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/23, 2-4=-1864/590, 4-6=-1667/593, 6-8=-1734/634, 8-10=-1931/632
BOT CHORD 2-13=-555/1595, 11-13=-289/1151, 10-11=-482/1655
WEBS 6-11=-299/699, 8-11=-394/286, 6-13=-224/502, 4-13=-394/285

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=3.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 14-5-8, Exterior (2) 14-5-8 to 17-5-8, Interior (1) 17-5-8 to 28-11-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
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 11.5 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 5.0psf.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 368 lb uplift at joint 2 and 356 lb uplift at joint 10.

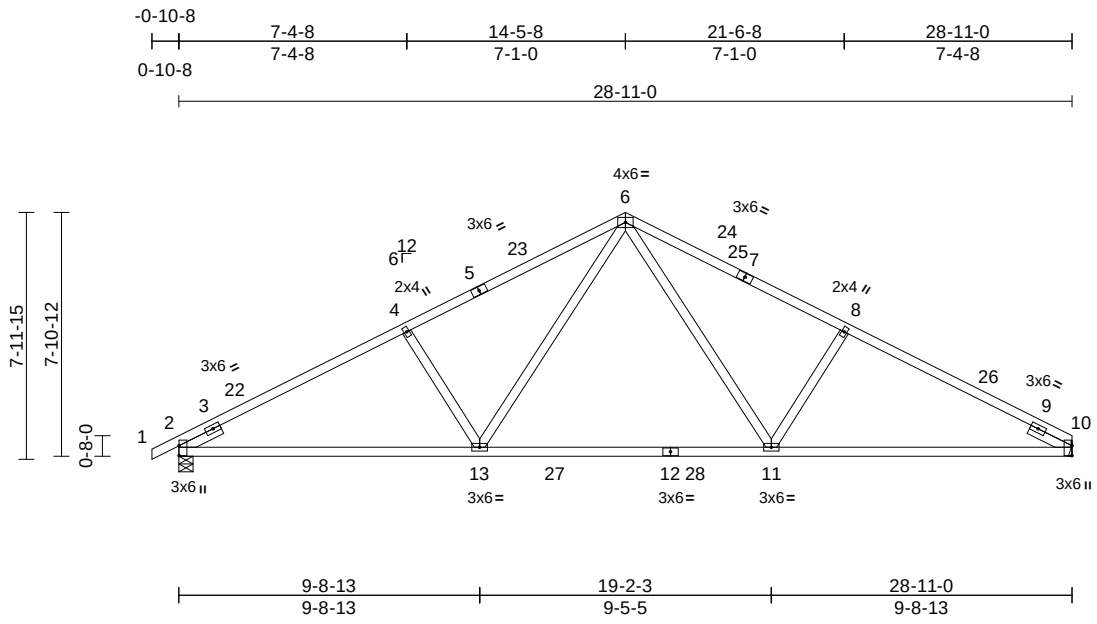
LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-6=-43, 6-10=-43, 14-18=-10, 6-29=-40

May 8,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1037 Serenity	
P02236-24939	A03	Common	2	1	Job Reference (optional)	I73305310

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 9.13 S 8.83 Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 07 10:44:21 Page: 1
ID:ZVfo7yaoKKwVIuWUhqYmgfzKayU-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:74.6

Plate Offsets (X, Y): [2:0-3-13,0-0-1], [10:0-3-13,0-0-1]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.69	Vert(LL)	-0.39	11-13	>886	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.82	Vert(CT)	-0.51	11-13	>681	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.33	Horz(CT)	0.06	10	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	5.0										Weight: 136 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2 *Except* 11-8,13-4:2x4 SP No.3
SLIDER Left 2x4 SP No.3 -- 1-6-0, Right 2x4 SP No.3 -- 1-6-0

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-3-7 oc purlins.
BOT CHORD Rigid ceiling directly applied or 8-4-7 oc bracing.

REACTIONS (size) 2=0-5-8, 10= Mechanical
Max Horiz 2=135 (LC 20)
Max Uplift 2=-332 (LC 16), 10=-308 (LC 17)
Max Grav 2=1065 (LC 2), 10=1011 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/23, 2-4=-1677/508, 4-6=-1480/509, 6-8=-1483/522, 8-10=-1681/521
BOT CHORD 2-13=-491/1431, 11-13=-220/976, 10-11=-383/1434
WEBS 6-11=-229/529, 8-11=-403/289, 6-13=-228/525, 4-13=-401/288

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=3.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 14-5-8, Exterior (2) 14-5-8 to 17-5-8, Interior (1) 17-5-8 to 28-11-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
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 11.5 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 5.0psf.
9) Refer to girder(s) for truss to truss connections.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 332 lb uplift at joint 2 and 308 lb uplift at joint 10.

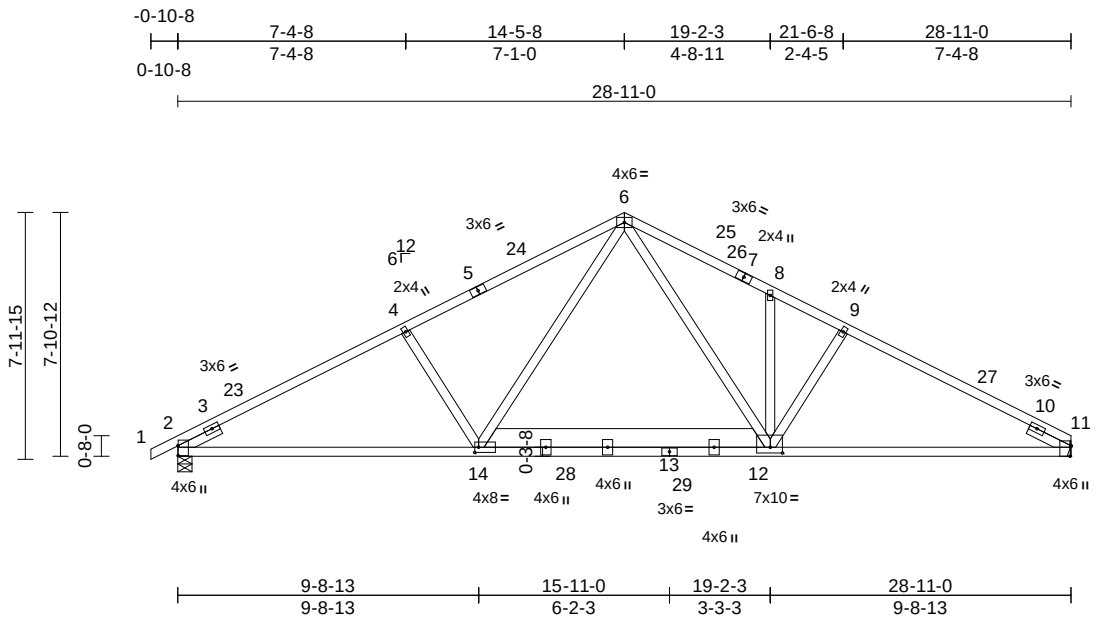
LOAD CASE(S) Standard

May 8,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1037 Serenity	
P02236-24939	A03H	Common	2	1	Job Reference (optional)	I73305311

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 9.13 S 8.83 Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 07 10:44:21 Page: 1
ID:ZVfo7yaoKKwVIuWUhqYmgfzKayU-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:74.6

Plate Offsets (X, Y): [2:0-3-13,0-0-1], [11:0-4-1,Edge], [12:0-4-12,0-2-4], [14:0-1-8,0-2-0]

Loading	(psf)	Spacing	2-3-8	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.99	Vert(LL)	-0.16	12-21	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.88	Vert(CT)	-0.27	12-21	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.62	Horz(CT)	0.07	11	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	5.0										Weight: 171 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.1 *Except* 6-7:2x4 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 14-12:2x8 SP DSS
WEBS 2x4 SP No.3 *Except* 12-6,14-6:2x4 SP No.2
SLIDER Left 2x4 SP No.3 -- 1-6-0, Right 2x4 SP No.3 -- 1-6-0

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-10-9 oc purlins.
BOT CHORD Rigid ceiling directly applied or 7-5-0 oc bracing.

REACTIONS (size) 2=0-5-8, 11= Mechanical
Max Horiz 2=155 (LC 20)
Max Uplift 2=-418 (LC 16), 11=-403 (LC 17)
Max Grav 2=1318 (LC 2), 11=1291 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/27, 2-4=-2116/669, 4-6=-1890/671, 6-8=-2036/759, 8-9=-2035/712, 9-11=-2274/737
BOT CHORD 2-14=-629/1811, 12-14=-328/1327, 11-12=-560/1943
WEBS 6-12=-404/950, 9-12=-286/223, 6-14=-248/535, 4-14=-454/330, 8-12=-214/136

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=3.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 14-5-8, Exterior (2) 14-5-8 to 17-5-8, Interior (1) 17-5-8 to 28-11-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
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 11.5 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 5.0psf.
9) Refer to girder(s) for truss to truss connections.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 418 lb uplift at joint 2 and 403 lb uplift at joint 11.
11) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-6=-49, 6-11=-49, 15-19=-11, 6-12=-40 (F)

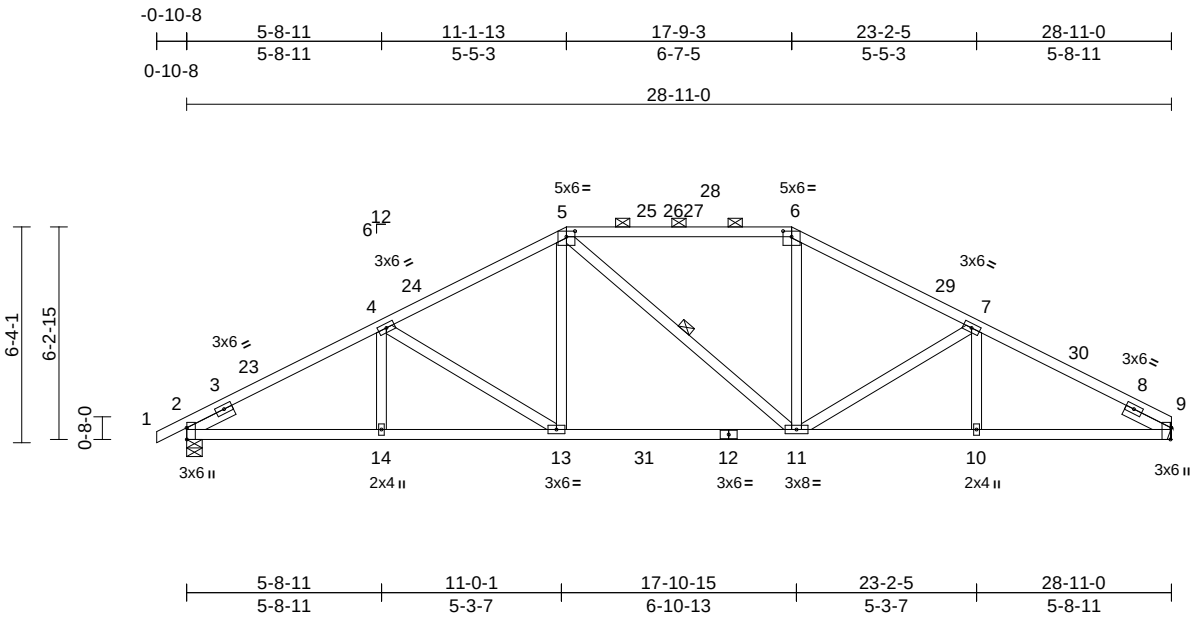
May 8,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1037 Serenity	
P02236-24939	A04	Hip	1	1	Job Reference (optional)	I73305312

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

Run: 9.13 S 8.83 Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 07 10:44:22 Page: 1
ID:SGvIyJdIOZRxnWpFwgciqVzKayQ-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:67.7

Plate Offsets (X, Y): [2:0-4-1,Edge], [5:0-3-0,0-2-0], [6:0-3-0,0-2-0], [9:0-4-1,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	1.00	Vert(LL)	-0.09	11-13	>999	240	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.68	Vert(CT)	-0.17	11-13	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.32	Horz(CT)	0.07	9	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	5.0										Weight: 152 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3 *Except* 11-5:2x4 SP No.2
SLIDER Left 2x4 SP No.3 -- 1-6-0, Right 2x4 SP No.3 -- 1-6-0

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-7-2 oc purlins, except 2-0-0 oc purlins (2-2-0 max.): 5-6.
BOT CHORD Rigid ceiling directly applied or 8-7-12 oc bracing.
WEBS 1 Row at midpt 5-11

REACTIONS (size) 2=0-5-8, 9= Mechanical
Max Horiz 2=108 (LC 20)
Max Uplift 2=-308 (LC 16), 9=-284 (LC 17)
Max Grav 2=1116 (LC 39), 9=1077 (LC 39)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/23, 2-4=-1772/570, 4-5=-1409/519, 5-6=-1191/510, 6-7=-1410/516, 7-9=-1776/569
BOT CHORD 2-14=-463/1514, 13-14=-463/1514, 11-13=-325/1190, 10-11=-454/1519, 9-10=-454/1519
WEBS 4-14=0/118, 4-13=-427/221, 5-13=-77/329, 5-11=-135/137, 6-11=-59/307, 7-11=-431/224, 7-10=0/119

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=3.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 11-1-13, Exterior (2) 11-1-13 to 15-4-12, Interior (1) 15-4-12 to 17-9-3, Exterior (2) 17-9-3 to 22-0-1, Interior (1) 22-0-1 to 28-11-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=16.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10, Lu=50-0-0
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 11.5 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) Provide adequate drainage to prevent water ponding.
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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 5.0psf.
10) Refer to girder(s) for truss to truss connections.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 284 lb uplift at joint 9 and 308 lb uplift at joint 2.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

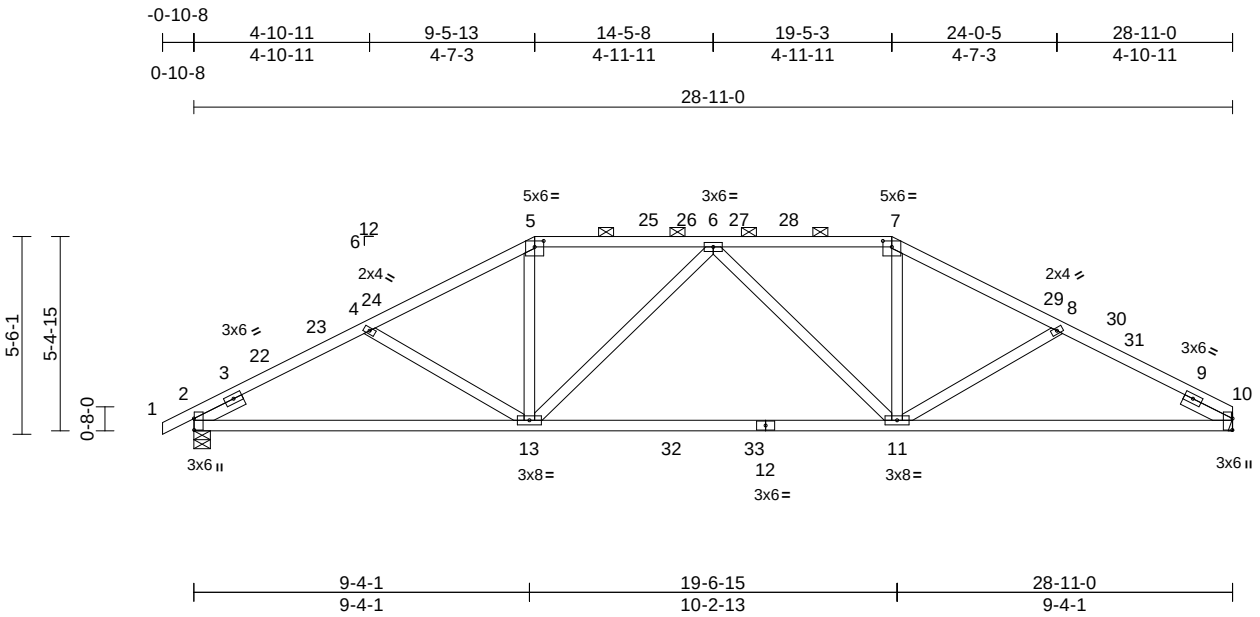
LOAD CASE(S) Standard

May 8,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1037 Serenity
P02236-24939	A05	Hip	1	1	I73305313 Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 9.13 S 8.83 Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 07 10:44:22 Page: 1
ID:K18pohgpSoxNF7709Whe_LzKayM-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:64.1

Plate Offsets (X, Y): [2:0-3-13,0-0-1], [5:0-3-0,0-2-0], [7:0-3-0,0-2-0], [10:0-3-13,0-0-1]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.58	Vert(LL)	-0.29	11-13	>999	240	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.80	Vert(CT)	-0.46	11-13	>762	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.30	Horz(CT)	0.07	10	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	5.0										Weight: 146 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3 *Except* 13-6,11-6:2x4 SP No.2
SLIDER Left 2x4 SP No.3 -- 1-6-0, Right 2x4 SP No.3 -- 1-6-0

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-5-15 oc purlins, except 2-0-0 oc purlins (4-11-5 max.): 5-7.
BOT CHORD Rigid ceiling directly applied or 8-3-8 oc bracing.

REACTIONS (size) 2=0-5-8, 10= Mechanical
Max Horiz 2=94 (LC 16)
Max Uplift 2=-293 (LC 16), 10=-269 (LC 17)
Max Grav 2=1065 (LC 2), 10=1011 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/30, 2-4=-1714/608, 4-5=-1502/534, 5-6=-1278/520, 6-7=-1280/517, 7-8=-1505/531, 8-10=-1720/606
BOT CHORD 2-13=-498/1472, 11-13=-427/1440, 10-11=-489/1478
WEBS 4-13=-318/199, 5-13=-95/383, 6-13=-326/166, 6-11=-324/166, 7-11=-101/384, 8-11=-325/201

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=3.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 9-5-13, Exterior (2) 9-5-13 to 13-8-12, Interior (1) 13-8-12 to 19-5-3, Exterior (2) 19-5-3 to 23-8-1, Interior (1) 23-8-1 to 28-11-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=16.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10, Lu=50-0-0
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 11.5 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) Provide adequate drainage to prevent water ponding.
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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 5.0psf.
10) Refer to girder(s) for truss to truss connections.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 269 lb uplift at joint 10 and 293 lb uplift at joint 2.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

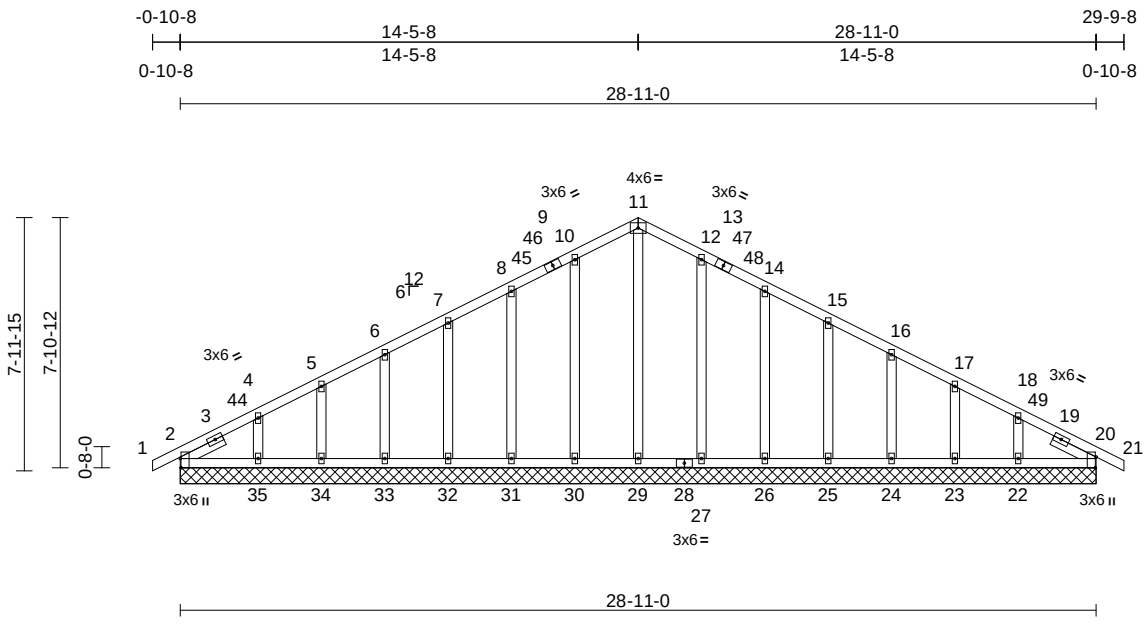
LOAD CASE(S) Standard

May 8,2025

ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1037 Serenity	
P02236-24939	AE01	Common Supported Gable	1	1	Job Reference (optional)	I73305314

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 9.13 S 8.83 Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 07 10:44:22 Page: 1
ID:WUvEx9lt9KiA1zVCJLVXguzKacJ-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



28-11-0

Scale = 1:72.7

Plate Offsets (X, Y): [2:0-3-8,Edge], [20:0-4-1,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.07	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.13	Horz(CT)	0.01	20	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	5.0										Weight: 178 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3 *Except* 29-11,30-10,27-12:2x4 SP No.2
SLIDER Left 2x4 SP No.3 -- 1-6-0, Right 2x4 SP No.3 -- 1-6-0

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=28-11-0, 20=28-11-0, 22=28-11-0, 23=28-11-0, 24=28-11-0, 25=28-11-0, 26=28-11-0, 27=28-11-0, 29=28-11-0, 30=28-11-0, 31=28-11-0, 32=28-11-0, 33=28-11-0, 34=28-11-0, 35=28-11-0
Max Horiz 2=-128 (LC 21)
Max Uplift 2=-41 (LC 17), 20=-17 (LC 13), 22=-112 (LC 17), 23=-61 (LC 17), 24=-76 (LC 17), 25=-72 (LC 17), 26=-75 (LC 17), 27=-71 (LC 17), 30=-73 (LC 16), 31=-74 (LC 16), 32=-72 (LC 16), 33=-76 (LC 16), 34=-58 (LC 16), 35=-122 (LC 16)
Max Grav 2=147 (LC 2), 20=147 (LC 2), 22=164 (LC 35), 23=133 (LC 2), 24=142 (LC 35), 25=140 (LC 35), 26=139 (LC 2), 27=154 (LC 24), 29=152 (LC 33), 30=154 (LC 23), 31=139 (LC 2), 32=140 (LC 34), 33=142 (LC 34), 34=133 (LC 2), 35=164 (LC 34)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/23, 2-4=-140/67, 4-5=-99/74, 5-6=-77/95, 6-7=-62/120, 7-8=-64/166, 8-10=-81/216, 10-11=-98/260, 11-12=-98/263, 12-14=-81/218, 14-15=-64/169, 15-16=-48/122, 16-17=-48/73, 17-18=-61/30, 18-20=-87/29, 20-21=0/23
BOT CHORD 2-35=-25/113, 34-35=-25/113, 33-34=-25/113, 32-33=-25/113, 31-32=-25/113, 30-31=-25/113, 29-30=-25/113, 27-29=-25/113, 26-27=-25/113, 25-26=-25/113, 24-25=-25/113, 23-24=-25/113, 22-23=-25/113, 20-22=-25/113
WEBS 11-29=-132/12, 10-30=-134/151, 8-31=-119/103, 7-32=-120/94, 6-33=-121/97, 5-34=-117/89, 4-35=-131/141, 12-27=-134/151, 14-26=-119/103, 15-25=-120/94, 16-24=-121/97, 17-23=-117/88, 18-22=-131/141

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=3.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner (3) -0-10-8 to 2-1-8, Exterior (2) 2-1-8 to 14-5-8, Corner (3) 14-5-8 to 17-5-8, Exterior (2) 17-5-8 to 29-9-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
7) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
8) All plates are 2x4 (||) MT20 unless otherwise indicated.
9) Gable requires continuous bottom chord bearing.
10) Gable studs spaced at 2-0-0 oc.
11) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
12) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.

May 8,2025

Continued on page 2

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 41 lb uplift at joint 2, 17 lb uplift at joint 20, 73 lb uplift at joint 30, 74 lb uplift at joint 31, 72 lb uplift at joint 32, 76 lb uplift at joint 33, 58 lb uplift at joint 34, 122 lb uplift at joint 35, 71 lb uplift at joint 27, 75 lb uplift at joint 26, 72 lb uplift at joint 25, 76 lb uplift at joint 24, 61 lb uplift at joint 23, 112 lb uplift at joint 22, 41 lb uplift at joint 2 and 17 lb uplift at joint 20.

LOAD CASE(S) Standard

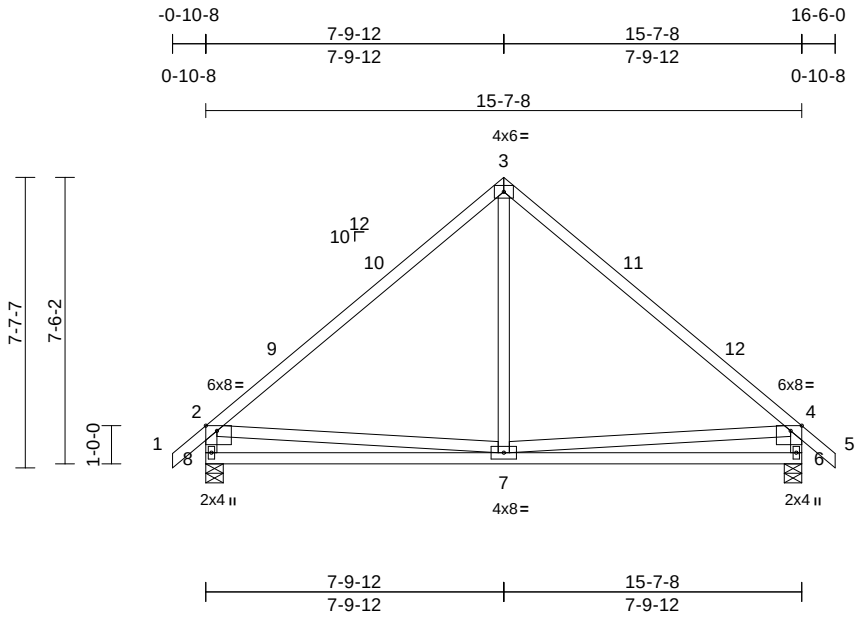
May 8,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1037 Serenity	
P02236-24939	B01	Common	1	1	Job Reference (optional)	I73305315

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

Run: 9.13 S 8.83 Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 07 10:44:23 Page: 1
ID:6fX3yWvWzCWOIU_oZdhcolzIxMP-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:60.4

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.76	Vert(LL)	-0.07	6-7	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.41	Vert(CT)	-0.10	6-7	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.30	Horz(CT)	0.01	6	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	5.0										Weight: 91 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 8-9-15 oc bracing.

REACTIONS (size) 6=0-5-8, 8=0-5-8
Max Horiz 8=-207 (LC 12)
Max Uplift 6=-173 (LC 15), 8=-173 (LC 14)
Max Grav 6=598 (LC 2), 8=598 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/39, 2-3=-567/178, 3-4=-567/178, 4-5=0/39, 2-8=-564/241, 4-6=-564/241
BOT CHORD 7-8=-446/595, 6-7=-355/510
WEBS 3-7=-7/254, 2-7=-288/423, 4-7=-292/427

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=3.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 7-9-12, Exterior (2) 7-9-12 to 10-9-12, Interior (1) 10-9-12 to 16-6-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
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 11.5 psf on overhangs non-concurrent with other live loads.
5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 173 lb uplift at joint 8 and 173 lb uplift at joint 6.

LOAD CASE(S) Standard

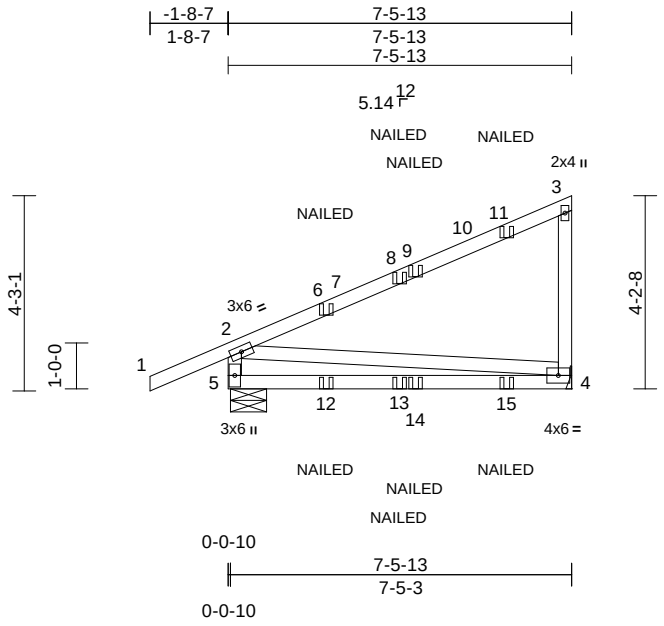
May 8,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1037 Serenity
P02236-24939	BCJ01	Jack-Closed	1	1	I73305316 Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

Run: 9.13 S 8.83 Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 07 10:44:23 Page: 1
ID:1QhkmTNl6QvnNRIPlTG00HzKayk-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:50.2

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.96	Vert(LL)	0.18	4-5	>468	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.66	Vert(CT)	-0.30	4-5	>289	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.12	Horz(CT)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	5.0										Weight: 43 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3 *Except* 4-2:2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied, except end verticals.
BOT CHORD Rigid ceiling directly applied or 9-5-3 oc bracing.

REACTIONS (size) 4= Mechanical, 5=0-9-7
Max Horiz 5=170 (LC 13)
Max Uplift 4=-217 (LC 16), 5=-196 (LC 16)
Max Grav 4=282 (LC 2), 5=412 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-342/419, 1-2=0/44, 2-3=-183/107, 3-4=-208/261
BOT CHORD 4-5=-311/187
WEBS 2-4=-136/266

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=3.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner (3) -1-8-7 to 2-6-8, Exterior (2) 2-6-8 to 7-4-1 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
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 11.5 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Refer to girder(s) for truss to truss connections.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 196 lb uplift at joint 5 and 217 lb uplift at joint 4.
11) "NAILED" indicates 2-12d (0.148"x3.25") toe-nails per NDS guidlines.
12) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

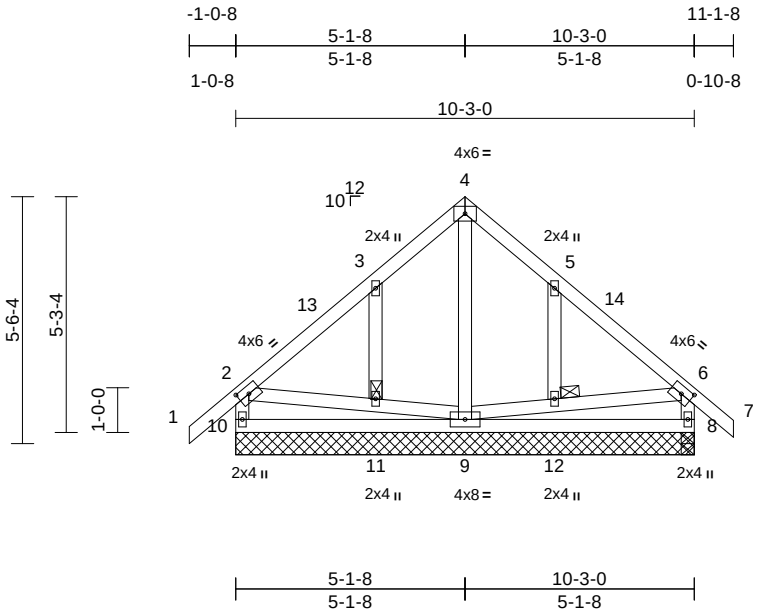
LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-43, 2-3=-43, 4-5=-10
Concentrated Loads (lb)
Vert: 11=-5 (B), 12=-4 (F), 14=-46 (F), 15=-3 (B)

May 8,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1037 Serenity	
P02236-24939	BE01	Common Supported Gable	1	1	Job Reference (optional)	I73305317

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 9.13 S 8.83 Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 07 10:44:23 Page: 1
ID:CLZ3sXkKfriHzblWPR?Q1QzKbBm-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:51.5

Plate Offsets (X, Y): [2:0-2-14,0-2-0], [6:0-2-14,0-2-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.31	Vert(LL)	-0.01	8-9	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.17	Vert(CT)	-0.02	9-10	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.28	Horz(CT)	0.00	8	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	5.0										Weight: 70 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.
JOINTS 1 Brace at Jt(s): 11, 12

REACTIONS (size) 8=10-3-0, 9=10-3-0, 10=10-3-0
Max Horiz 10=154 (LC 13)
Max Uplift 8=-43 (LC 15), 9=-157 (LC 14), 10=-48 (LC 14)
Max Grav 8=211 (LC 31), 9=424 (LC 2), 10=223 (LC 30)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/46, 2-3=-78/75, 3-4=-17/105, 4-5=-13/105, 5-6=-76/72, 6-7=0/39, 2-10=-200/106, 6-8=-188/95
BOT CHORD 9-10=-164/211, 8-9=-84/171
WEBS 4-9=-261/101, 2-11=-233/211, 9-11=-246/223, 3-11=-83/70, 5-12=-83/71, 9-12=-256/229, 6-12=-242/216

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=3.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -1-0-8 to 1-11-8, Interior (1) 1-11-8 to 5-1-8, Exterior (2) 5-1-8 to 8-1-8, Interior (1) 8-1-8 to 11-1-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
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 11.5 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
8) Gable studs spaced at 2-0-0 oc.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 48 lb uplift at joint 10, 43 lb uplift at joint 8 and 157 lb uplift at joint 9.

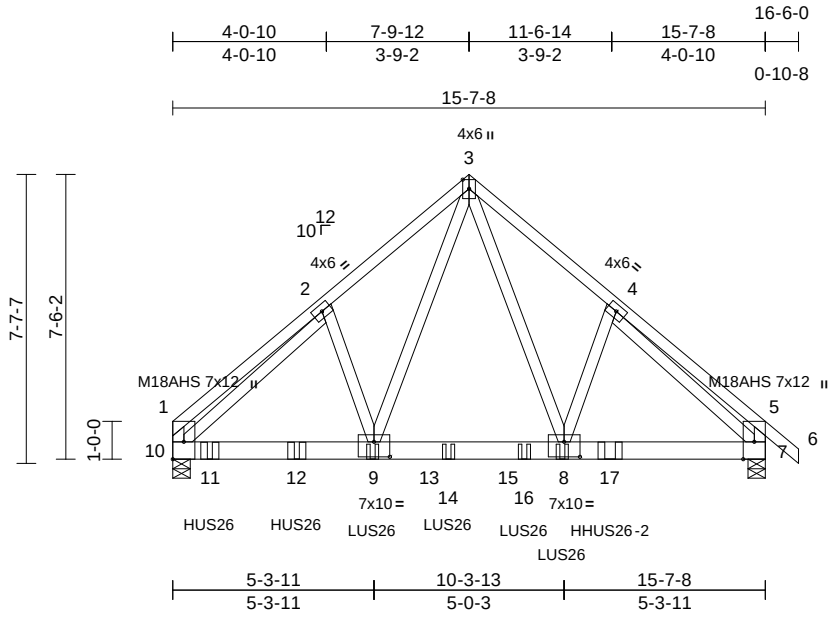
LOAD CASE(S) Standard

May 8,2025

ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1037 Serenity
P02236-24939	BG01	Common Girder	1	2	I73305318 Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 9.13 S 8.83 Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 07 10:44:24 Page: 1
ID:OwYUypsDwPqFYRmvX9S95VzKay7-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:60.8

Plate Offsets (X, Y): [1:Edge,0-3-8], [8:0-5-0,0-4-12], [9:0-5-0,0-4-12]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.81	Vert(LL)	-0.06	8-9	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.98	Vert(CT)	-0.11	8-9	>999	180	M18AHS	186/179
TCDL	10.0	Rep Stress Incr	NO	WB	0.58	Horz(CT)	0.03	7	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	5.0										Weight: 236 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.2 *Except* 8-4,9-2,10-2,7-4:2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-4-14 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 7=0-5-8, 10=0-5-8
Max Horiz 10=-197 (LC 8)
Max Uplift 7=-1709 (LC 11), 10=-1731 (LC 10)
Max Grav 7=4100 (LC 2), 10=5091 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-1580/592, 2-3=-4794/1768, 3-4=-4949/2075, 4-5=-1225/666, 5-6=0/39, 1-10=-1097/435, 5-7=-955/521
BOT CHORD 9-10=-1270/3567, 8-9=-960/2666, 7-8=-1418/3656
WEBS 3-8=-1652/3354, 4-8=-226/444, 3-9=-936/2956, 2-9=-183/353, 2-10=-3466/1188, 4-7=-4011/1447

NOTES
1) 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 0-6-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) 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.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=3.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
5) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
7) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
8) All plates are MT20 plates unless otherwise indicated.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 5.0psf.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 1731 lb uplift at joint 10 and 1709 lb uplift at joint 7.
12) Use Simpson Strong-Tie HUS26 (14-10d Girder, 4-10d Truss) or equivalent spaced at 2-3-8 oc max. starting at 0-11-12 from the left end to 3-3-4 to connect truss(es) to back face of bottom chord.
13) Use Simpson Strong-Tie LUS26 (4-10d Girder, 4-10d Truss) or equivalent spaced at 2-0-0 oc max. starting at 5-3-4 from the left end to 10-3-4 to connect truss(es) to back face of bottom chord.
14) Use Simpson Strong-Tie HHUS26-2 (14-10d Girder, 6-10d Truss) or equivalent at 11-6-6 from the left end to connect truss(es) to back face of bottom chord.
15) Fill all nail holes where hanger is in contact with lumber.

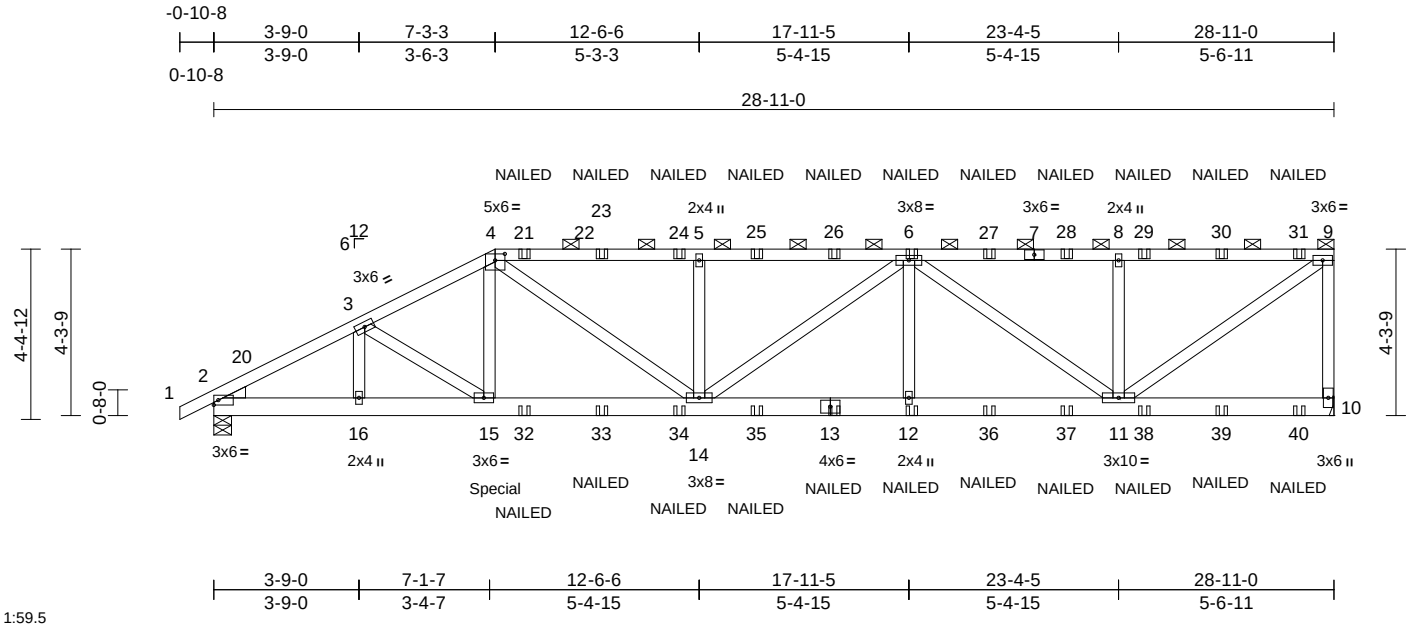
LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-3=-43, 3-5=-43, 5-6=-43, 7-10=-10
Concentrated Loads (lb)
Vert: 8=-985 (B), 9=-757 (B), 11=-969 (B), 12=-968 (B), 14=-757 (B), 16=-1067 (B), 17=-1557 (B)

May 8,2025

ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1037 Serenity
P02236-24939	BG02	Half Hip Girder	1	2	I73305319 Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 9.13 S 8.83 Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 07 10:44:25 Page: 1
ID:9w_fUwYv2PYxRRnv0i_321zKayX-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:59.5

Plate Offsets (X, Y): [4:0-3-0,0-2-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.26	Vert(LL)	0.12	12-14	>999	240	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.41	Vert(CT)	-0.13	12-14	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.27	Horz(CT)	0.03	10	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	5.0										Weight: 372 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3 *Except* 14-4,14-6,11-6,11-9:2x4 SP No.2
WEDGE Left: 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 4-9.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-5-8, 10= Mechanical
Max Horiz 2=159 (LC 11)
Max Uplift 2=-902 (LC 12), 10=-1102 (LC 9)
Max Grav 2=1514 (LC 2), 10=1573 (LC 41)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/30, 2-3=-2523/1552, 3-4=-2577/1722, 4-5=-2841/1998, 5-6=-2841/1998, 6-8=-1841/1272, 8-9=-1841/1272, 9-10=-1468/1004
BOT CHORD 2-16=-1477/2196, 15-16=-1477/2196, 14-15=-1611/2267, 12-14=-1953/2728, 11-12=-1953/2728, 10-11=-31/49
WEBS 3-16=-247/209, 3-15=-201/310, 4-15=-349/256, 4-14=-600/920, 5-14=-432/233, 6-14=-144/210, 6-12=-184/284, 6-11=-1139/813, 8-11=-441/240, 9-11=-1537/2198

NOTES

1) 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.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) 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.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=3.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
5) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=16.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10, Lu=50-0-0
6) Unbalanced snow loads have been considered for this design.
7) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
8) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
9) Provide adequate drainage to prevent water ponding.
10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
11) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
12) Refer to girder(s) for truss to truss connections.
13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 1102 lb uplift at joint 10 and 902 lb uplift at joint 2.
14) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
15) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidlines.
16) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 263 lb down and 229 lb up at 7-3-8 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)

May 8,2025

Continued on page 2

ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Vert: 1-4=-43, 4-9=-53, 10-17=-10

Concentrated Loads (lb)

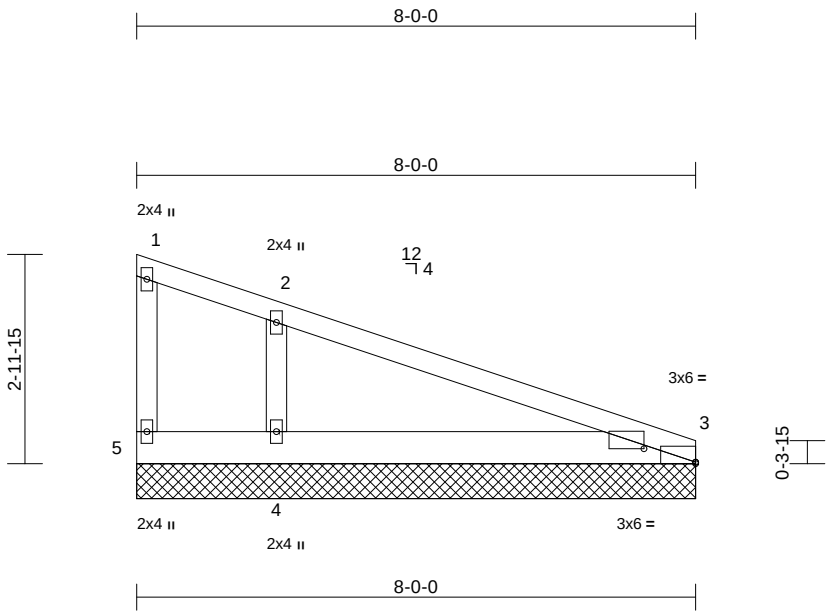
Vert: 13=-47 (B), 15=-211 (B), 12=-47 (B), 32=-47 (B), 33=-47 (B), 34=-47 (B), 35=-47 (B), 36=-47 (B), 37=-47 (B), 38=-47 (B), 39=-47 (B), 40=-49 (B)

May 8,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1037 Serenity
P02236-24939	BG03	Roof Special Girder	1	2	I73305320 Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 9.13 S 8.83 Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 07 10:44:25 Page: 1
ID:1HDN?9ZqHUFplDj5FPLg9QzIwz0-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:33

Plate Offsets (X, Y): [3:0-8-14,0-2-5], [3:Edge,0-0-4]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.15	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.13	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	NO	WB	0.03	Horiz(TL)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	5.0										Weight: 74 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x6 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.

REACTIONS (size) 3=8-0-0, 4=8-0-0, 5=8-0-0
Max Horiz 5=-109 (LC 8)
Max Uplift 3=-51 (LC 9), 4=-196 (LC 9), 5=-68 (LC 2)
Max Grav 3=169 (LC 2), 4=448 (LC 2), 5=38 (LC 9)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-5=-10/14, 1-2=-58/28, 2-3=-105/49
BOT CHORD	4-5=0/89, 3-4=0/95
WEBS	2-4=-272/161

NOTES

1) 2-ply truss to be connected together as follows:
Top chords connected with 10d (0.131"x3") nails as follows: 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected with 10d (0.131"x3") nails as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
2) 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.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=3.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
5) 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.
6) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
7) Unbalanced snow loads have been considered for this design.
8) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
9) Gable requires continuous bottom chord bearing.
10) Gable studs spaced at 2-0-0 oc.
11) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
12) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 68 lb uplift at joint 5, 51 lb uplift at joint 3 and 196 lb uplift at joint 4.
14) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 3.

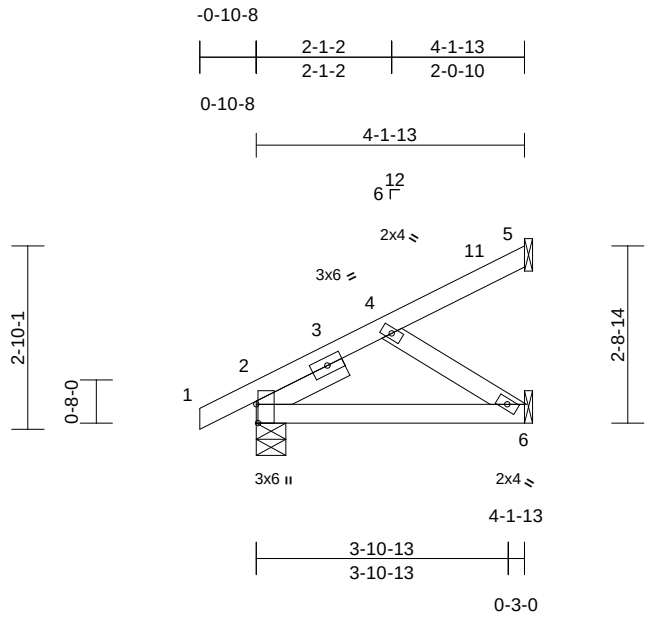
LOAD CASE(S) Standard

May 8,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1037 Serenity
P02236-24939	BJ01	Jack-Partial	1	1	I73305321 Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 9.13 S 8.83 Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 07 10:44:25 Page: 1
ID:9eSEw6KF2BPLuq_eWdB4sRzKayo-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:35.7

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.06	Vert(LL)	-0.01	6-9	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.09	Vert(CT)	-0.01	6-9	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.05	Horz(CT)	0.00	2	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	5.0										Weight: 21 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3
SLIDER Left 2x4 SP No.3 -- 1-6-0

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-1-13 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-5-8, 5= Mechanical, 6= Mechanical
Max Horiz 2=93 (LC 16)
Max Uplift 2=-54 (LC 16), 5=-38 (LC 16), 6=-40 (LC 16)
Max Grav 2=202 (LC 2), 5=54 (LC 2), 6=87 (LC 7)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/23, 2-4=-161/49, 4-5=-38/19
BOT CHORD 2-6=-131/112
WEBS 4-6=-131/153

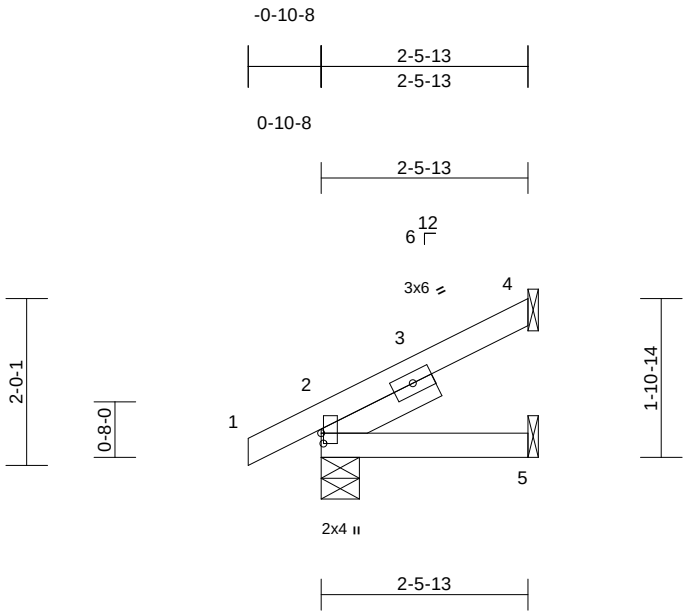
NOTES
1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=3.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-10-8 to 1-11-6, Interior (1) 1-11-6 to 4-1-1 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C 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 LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
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 11.5 psf on overhangs non-concurrent with other live loads.
5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 38 lb uplift at joint 5, 54 lb uplift at joint 2 and 40 lb uplift at joint 6.

LOAD CASE(S) Standard

May 8,2025

ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1037 Serenity
P02236-24939	BJ02	Jack-Open	1	1	I73305322 Job Reference (optional)



Scale = 1:27.7

Plate Offsets (X, Y): [2:0-1-8,0-0-5]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.06	Vert(LL)	0.00	5-8	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	0.00	5-8	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	5.0										Weight: 12 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
SLIDER Left 2x4 SP No.3 -- 1-6-0

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-5-13 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-5-8, 4= Mechanical, 5= Mechanical
Max Horiz 2=61 (LC 16)
Max Uplift 2=-41 (LC 16), 4=-42 (LC 16), 5=-6 (LC 16)
Max Grav 2=147 (LC 2), 4=56 (LC 2), 5=32 (LC 7)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/23, 2-4=-44/20
BOT CHORD 2-5=-61/39

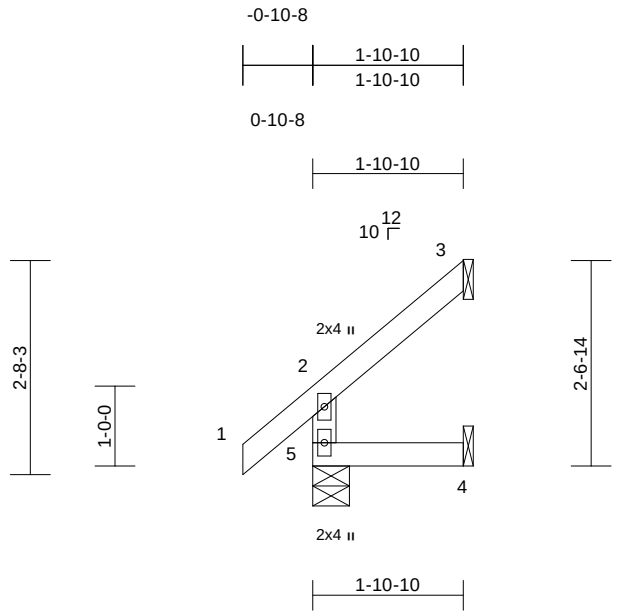
NOTES
1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=3.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
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 11.5 psf on overhangs non-concurrent with other live loads.
5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 42 lb uplift at joint 4, 41 lb uplift at joint 2 and 6 lb uplift at joint 5.

LOAD CASE(S) Standard

May 8,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1037 Serenity
P02236-24939	BJ03	Jack-Open	1	1	I73305323 Job Reference (optional)



Scale = 1:28.8

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.14	Vert(LL)	0.00	4-5	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.07	Vert(CT)	0.00	4-5	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MR								
BCDL	5.0										Weight: 9 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 1-10-10 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 3= Mechanical, 4= Mechanical, 5=0-5-8
Max Horiz 5=73 (LC 14)
Max Uplift 3=-53 (LC 14), 4=-14 (LC 14), 5=-7 (LC 14)
Max Grav 3=48 (LC 26), 4=24 (LC 5), 5=140 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-129/66, 1-2=0/39, 2-3=-54/42
BOT CHORD 4-5=0/0

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=3.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
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 11.5 psf on overhangs non-concurrent with other live loads.
5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 7 lb uplift at joint 5, 14 lb uplift at joint 4 and 53 lb uplift at joint 3.

LOAD CASE(S) Standard

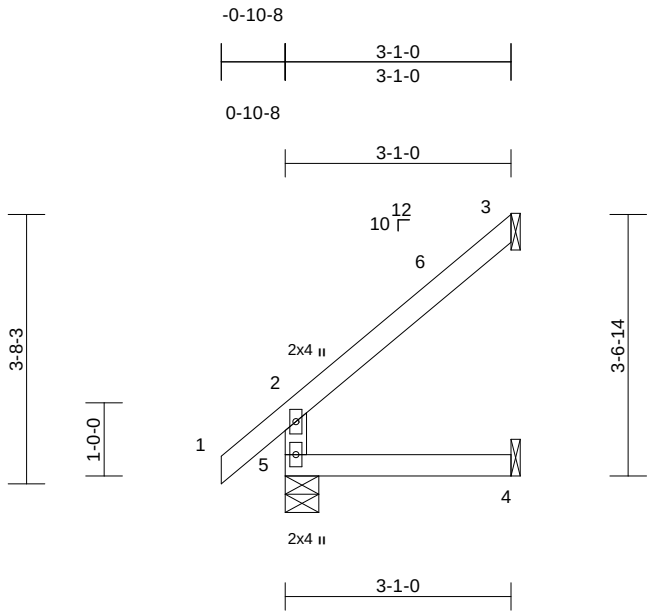
May 8,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1037 Serenity
P02236-24939	BJ04	Jack-Open	1	1	I73305324 Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

Run: 9.13 S 8.83 Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 07 10:44:26 Page: 1
ID:9eSEw6KF2BPLuq_eWdB4sRzKayo-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:31.5

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.23	Vert(LL)	0.01	4-5	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.15	Vert(CT)	-0.01	4-5	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	-0.01	3	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MR								
BCDL	5.0										Weight: 13 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 3-1-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 3= Mechanical, 4= Mechanical, 5=0-5-8
Max Horiz 5=110 (LC 14)
Max Uplift 3=-85 (LC 14), 4=-14 (LC 14), 5=-5 (LC 14)
Max Grav 3=87 (LC 26), 4=41 (LC 5), 5=173 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-162/73, 1-2=0/39, 2-3=-85/66
BOT CHORD 4-5=0/0

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=3.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 3-0-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
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 11.5 psf on overhangs non-concurrent with other live loads.
5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 5 lb uplift at joint 5, 85 lb uplift at joint 3 and 14 lb uplift at joint 4.

LOAD CASE(S) Standard

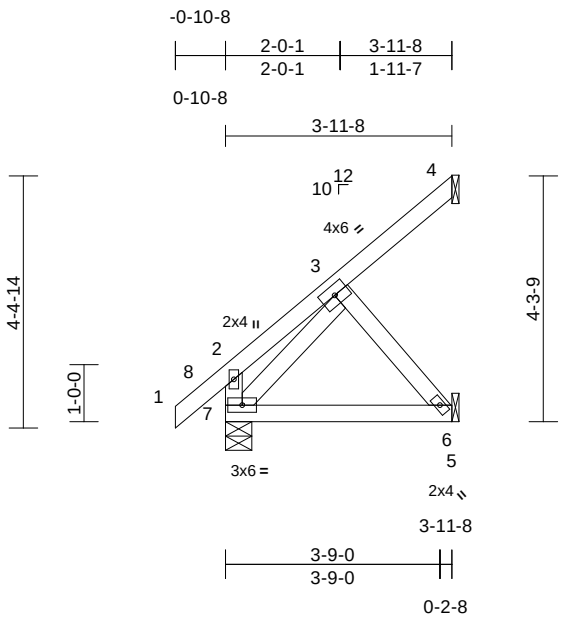
May 8,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1037 Serenity
P02236-24939	BJ05	Jack-Open	11	1	I73305325 Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

Run: 9.13 S 8.83 Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 07 10:44:26 Page: 1
ID:dr0c7SLtpVXCW_Zq4LiJOfzKayn-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:40.3

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.09	Vert(LL)	-0.01	6-7	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.13	Vert(CT)	-0.02	6-7	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.04	Horz(CT)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	5.0										Weight: 24 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 3-11-8 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 4= Mechanical, 6= Mechanical, 7=0-5-8
Max Horiz 7=138 (LC 14)
Max Uplift 4=-50 (LC 14), 6=-73 (LC 14), 7=-4 (LC 14)
Max Grav 4=58 (LC 26), 6=90 (LC 26), 7=200 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-7=-152/170, 1-2=0/39, 2-3=-95/112, 3-4=-56/39
BOT CHORD 6-7=-90/92, 5-6=0/0
WEBS 3-6=-138/135, 3-7=-150/85

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=3.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-10-8 to 1-10-8, Interior (1) 1-10-8 to 3-10-12 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
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 11.5 psf on overhangs non-concurrent with other live loads.
5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 50 lb uplift at joint 4, 73 lb uplift at joint 6 and 4 lb uplift at joint 7.

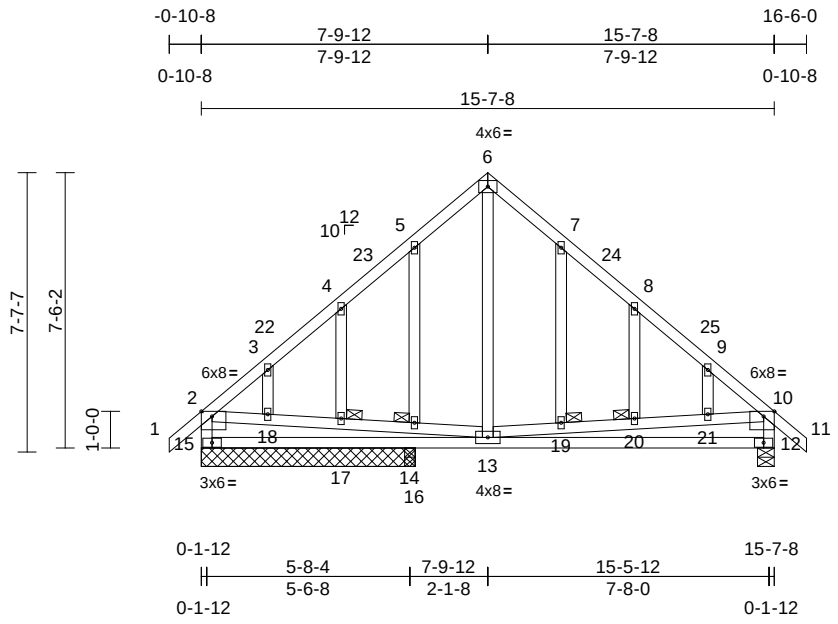
LOAD CASE(S) Standard

May 8,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1037 Serenity
P02236-24939	BSE01	Common Structural Gable	1	1	I73305326 Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 9.13 S 8.83 Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 07 10:44:26 Page: 1
ID:7dPmHzhMP3kZeyXfZ0GiAYzIxEx-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:62.8

Plate Offsets (X, Y): [2:0-3-8,Edge], [10:0-3-8,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.85	Vert(LL)	-0.09	12-13	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.35	Vert(CT)	-0.14	12-13	>845	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.44	Horz(CT)	0.01	12	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	5.0										Weight: 119 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2 *Except* 15-2,12-10:2x4 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 9-8-9 oc bracing.
JOINTS 1 Brace at Jt(s): 16, 17, 19, 20

REACTIONS (size) 12=0-5-8, 14=0-3-8, 15=5-10-0
Max Horiz 15=-207 (LC 12)
Max Uplift 12=-175 (LC 15), 15=-178 (LC 14)
Max Grav 12=581 (LC 2), 14=89 (LC 5), 15=567 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/39, 2-3=-527/148, 3-4=-416/139, 4-5=-412/186, 5-6=-368/195, 6-7=-369/195, 7-8=-411/188, 8-9=-416/142, 9-10=-526/149, 10-11=0/39, 2-15=-541/241, 10-12=-539/241
BOT CHORD 14-15=-361/494, 13-14=-361/494, 12-13=-266/425
WEBS 6-13=-75/195, 2-18=-202/332, 17-18=-199/330, 16-17=-207/336, 13-16=-213/345, 13-19=-241/348, 19-20=-234/338, 20-21=-228/332, 10-21=-231/335, 5-16=-31/40, 4-17=-132/104, 3-18=-56/68, 7-19=-34/41, 8-20=-132/104, 9-21=-57/70

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=3.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 7-9-12, Exterior (2) 7-9-12 to 10-9-12, Interior (1) 10-9-12 to 16-6-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
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 11.5 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) All plates are 2x4 (||) MT20 unless otherwise indicated.
8) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
9) Gable studs spaced at 2-0-0 oc.
10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
11) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
12) Bearing at joint(s) 15, 12 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 178 lb uplift at joint 15 and 175 lb uplift at joint 12.

LOAD CASE(S) Standard

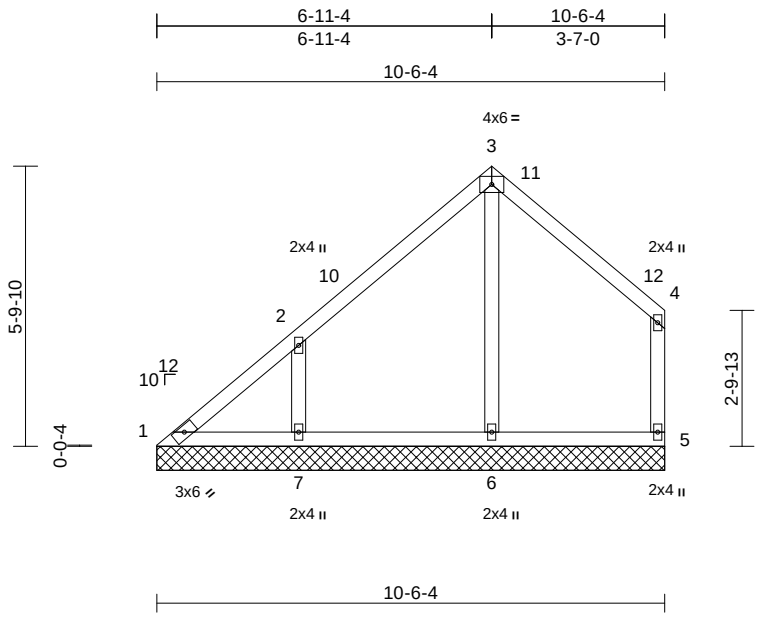
May 8,2025

ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1037 Serenity
P02236-24939	BV01	Valley	1	1	I73305327 Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

Run: 9.13 S 8.83 Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 07 10:44:26 Page: 1
ID:dr0c7SLtpVXCW_Zq4LiJOfzKayn-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:47.7

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.19	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.08	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.13	Horiz(TL)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	5.0										Weight: 50 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.

REACTIONS (size) 1=10-6-4, 5=10-6-4, 6=10-6-4, 7=10-6-4
Max Horiz 1=172 (LC 11)
Max Uplift 1=-69 (LC 10), 5=-86 (LC 15), 6=-65 (LC 11), 7=-213 (LC 14)
Max Grav 1=137 (LC 26), 5=160 (LC 26), 6=269 (LC 25), 7=316 (LC 25)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=-181/164, 2-3=-172/154, 3-4=-149/146, 4-5=-166/141
BOT CHORD	1-7=-76/117, 6-7=-39/47, 5-6=-39/47
WEBS	3-6=-232/91, 2-7=-287/231

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=3.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) 0-0-5 to 2-11-9, Interior (1) 2-11-9 to 6-11-9, Exterior (2) 6-11-9 to 9-11-9, Interior (1) 9-11-9 to 10-4-13 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 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 3-06-00 tall by 2-00-00 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 86 lb uplift at joint 5, 69 lb uplift at joint 1, 65 lb uplift at joint 6 and 213 lb uplift at joint 7.

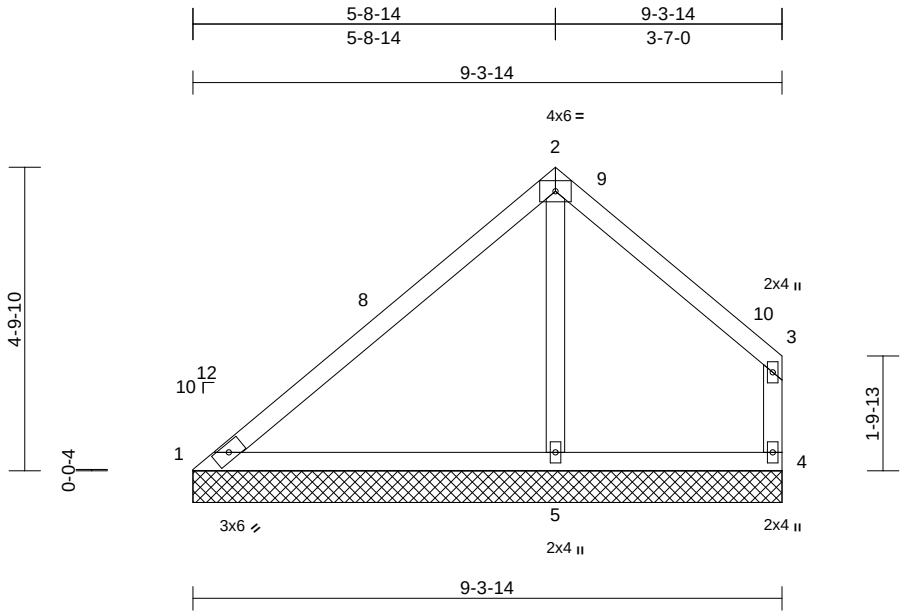
LOAD CASE(S) Standard

May 8,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1037 Serenity
P02236-24939	BV02	Valley	1	1	I73305328 Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 9.13 S 8.83 Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 07 10:44:27 Page: 1
ID:51a_LoMVaof38780e2DYxszKaym-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:36.5

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.36	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.40	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.13	Horiz(TL)	0.01	5	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	5.0										Weight: 40 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 6-0-0 oc bracing.

REACTIONS (size) 1=9-3-14, 4=9-3-14, 5=9-3-14
Max Horiz 1=134 (LC 11)
Max Uplift 1=-62 (LC 15), 4=-80 (LC 10), 5=-140 (LC 14)
Max Grav 1=183 (LC 26), 4=116 (LC 26), 5=457 (LC 25)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-231/168, 2-3=-93/112, 3-4=-122/104
BOT CHORD 1-5=-123/204, 4-5=-38/36
WEBS 2-5=-333/121

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=3.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) 0-0-5 to 3-0-5, Interior (1) 3-0-5 to 5-9-2, Exterior (2) 5-9-2 to 8-9-2, Interior (1) 8-9-2 to 9-2-6 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 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 3-06-00 tall by 2-00-00 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 80 lb uplift at joint 4, 62 lb uplift at joint 1 and 140 lb uplift at joint 5.

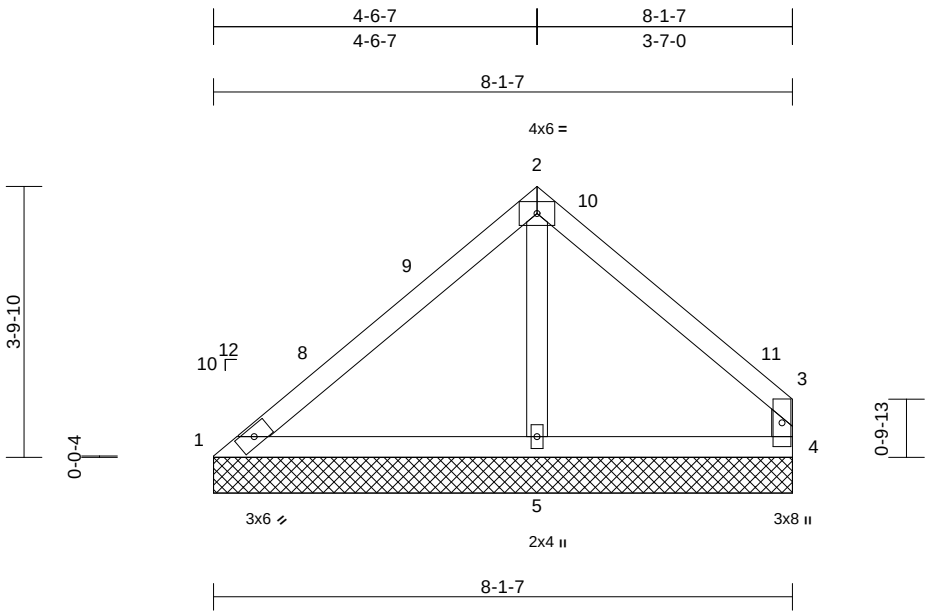
LOAD CASE(S) Standard

May 8,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1037 Serenity
P02236-24939	BV03	Valley	1	1	I73305329 Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 9.13 S 8.83 Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 07 10:44:27 Page: 1
ID:51a_LoMVaof38780e2DYxszKaym-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:32.3

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.25	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.29	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.06	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	5.0										Weight: 33 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.

REACTIONS (size) 1=8-1-7, 4=8-1-7, 5=8-1-7
Max Horiz 1=97 (LC 11)
Max Uplift 1=-74 (LC 15), 4=-86 (LC 15), 5=-60 (LC 14)
Max Grav 1=149 (LC 26), 4=126 (LC 26), 5=326 (LC 25)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-188/122, 2-3=-91/93, 3-4=-137/113
BOT CHORD 1-5=-104/166, 4-5=-10/11
WEBS 2-5=-225/55

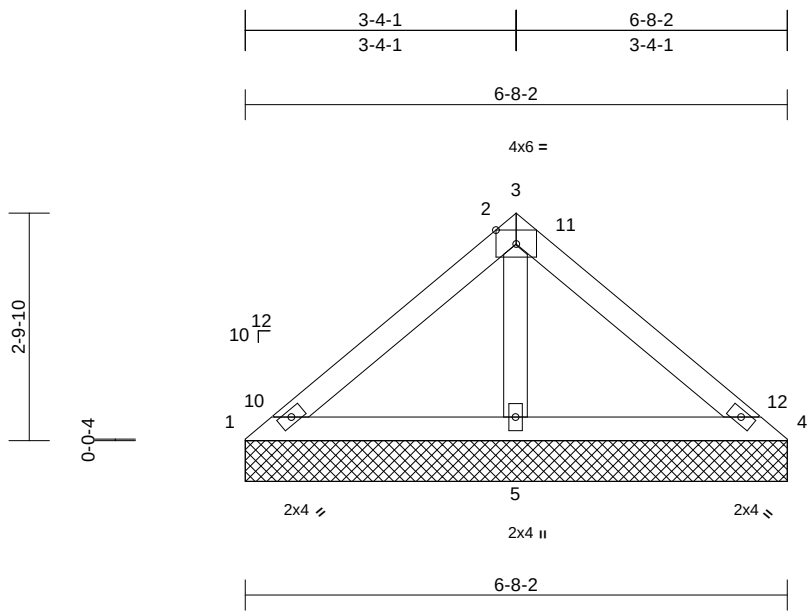
NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=3.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) 0-0-5 to 3-0-5, Interior (1) 3-0-5 to 4-6-12, Exterior (2) 4-6-12 to 7-6-12, Interior (1) 7-6-12 to 8-0-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 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 3-06-00 tall by 2-00-00 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 86 lb uplift at joint 4, 74 lb uplift at joint 1 and 60 lb uplift at joint 5.

LOAD CASE(S) Standard

May 8,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1037 Serenity
P02236-24939	BV04	Valley	1	1	I73305330 Job Reference (optional)



Scale = 1:28.4

Plate Offsets (X, Y): [3:0-3-0,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.13	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.14	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.07	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	5.0										Weight: 25 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 1=6-8-2, 4=6-8-2, 5=6-8-2
Max Horiz 1=-65 (LC 10)
Max Uplift 1=-1 (LC 30), 4=-18 (LC 29), 5=-168 (LC 14)
Max Grav 1=48 (LC 29), 4=66 (LC 30), 5=401 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-88/171, 2-3=-41/44, 3-4=-90/161
BOT CHORD 1-5=-146/126, 4-5=-158/133
WEBS 2-5=-308/192

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=3.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) 0-0-5 to 6-4-6, Interior (1) 6-4-6 to 6-8-6 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 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 3-06-00 tall by 2-00-00 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 1 lb uplift at joint 1, 18 lb uplift at joint 4 and 168 lb uplift at joint 5.

LOAD CASE(S) Standard

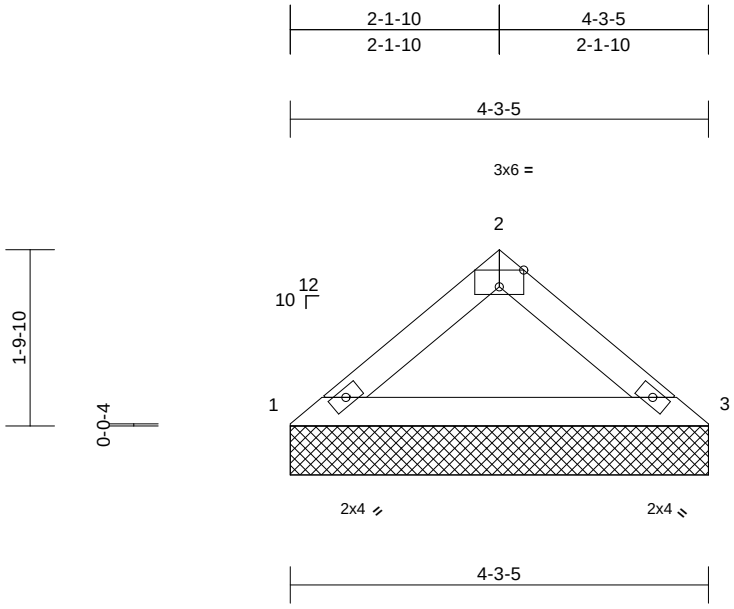
May 8,2025

ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1037 Serenity
P02236-24939	BV05	Valley	1	1	I73305331 Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

Run: 9.13 S 8.83 Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 07 10:44:27 Page: 1
ID:ZD8MY8N7L6nwlHjDCmknU4zKayl-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



Scale = 1:23.6

Plate Offsets (X, Y): [2:0-3-0,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.10	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.09	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	5.0										Weight: 13 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-3-5 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=4-3-5, 3=4-3-5
Max Horiz 1=-40 (LC 10)
Max Uplift 1=-43 (LC 14), 3=-43 (LC 15)
Max Grav 1=150 (LC 2), 3=150 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-203/83, 2-3=-203/83
BOT CHORD 1-3=-58/159

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=3.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 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 3-06-00 tall by 2-00-00 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 43 lb uplift at joint 1 and 43 lb uplift at joint 3.

LOAD CASE(S) Standard

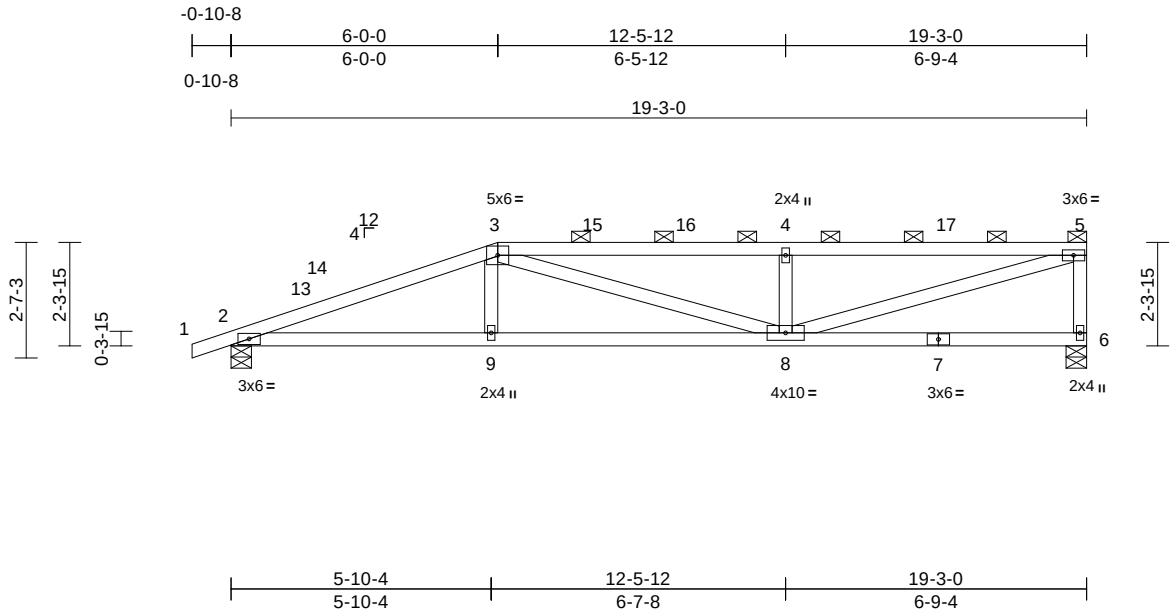
May 8,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1037 Serenity	
P02236-24939	P01	Half Hip	1	1	Job Reference (optional)	I73305332

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 9.13 S 8.83 Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 07 10:44:27 Page: 1

ID:lX?8j9mgri1M5RPYJQH5d9zKrYp-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:51.8

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.68	Vert(LL)	-0.10	8-9	>999	240	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.64	Vert(CT)	-0.18	8-9	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.49	Horz(CT)	0.03	6	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	5.0										Weight: 87 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3 *Except* 8-3,8-5:2x4 SP No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 4-1-3 oc purlins, except end verticals, and 2-0-0 oc purlins (3-7-11 max.): 3-5.
BOT CHORD Rigid ceiling directly applied or 7-8-4 oc bracing.

REACTIONS (size) 2=0-5-8, 6=0-5-8
Max Horiz 2=91 (LC 15)
Max Uplift 2=-293 (LC 12), 6=-255 (LC 12)
Max Grav 2=722 (LC 2), 6=720 (LC 35)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/19, 2-3=-1546/567, 3-4=-1635/612, 4-5=-1635/612, 5-6=-683/269
BOT CHORD 2-9=-552/1422, 8-9=-553/1415, 6-8=-44/73
WEBS 3-9=0/200, 4-8=-518/243, 3-8=-130/321, 5-8=-592/1634

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=3.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 6-0-0, Exterior (2) 6-0-0 to 10-2-15, Interior (1) 10-2-15 to 19-1-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=16.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10, Lu=50-0-0
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 11.5 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) Provide adequate drainage to prevent water ponding.
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 3-06-00 tall by 2-00-00 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 255 lb uplift at joint 6 and 293 lb uplift at joint 2.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

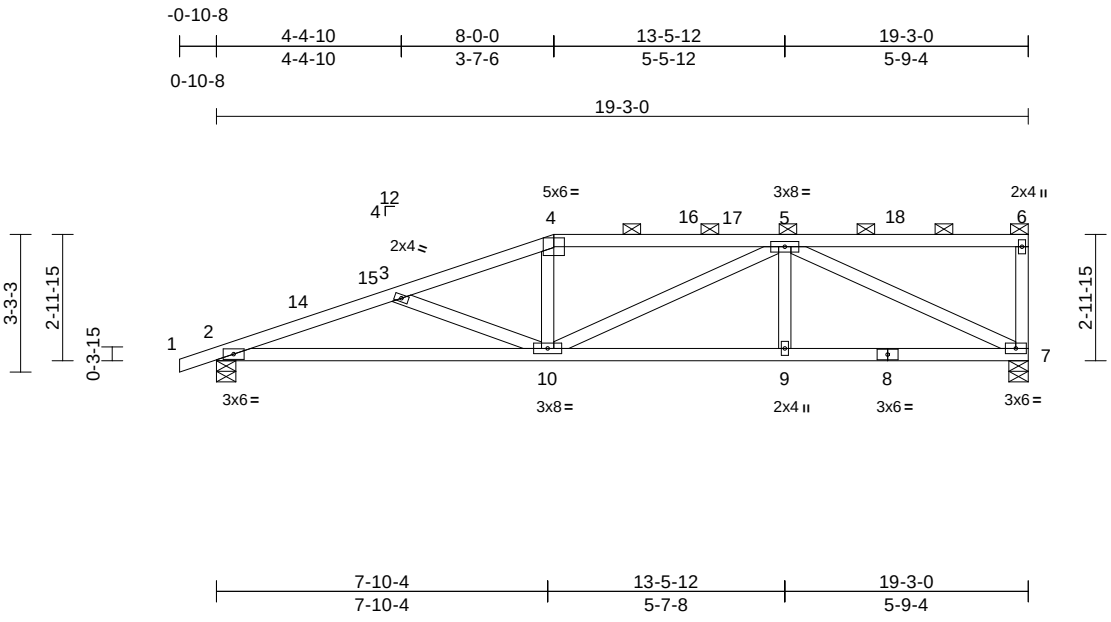
May 8,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1037 Serenity	
P02236-24939	P02	Half Hip	1	1	Job Reference (optional)	I73305333

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

Run: 9.13 S 8.83 Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 07 10:44:28 Page: 1
ID:X3UAOuthyA1D2g04n6QzxrzKrYh-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:54.6

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.50	Vert(LL)	-0.08	10-13	>999	240	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.49	Vert(CT)	-0.16	10-13	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.84	Horz(CT)	0.04	7	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	5.0										Weight: 93 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 4-4-8 oc purlins, except end verticals, and 2-0-0 oc purlins (5-0-2 max.): 4-6.
BOT CHORD Rigid ceiling directly applied or 7-3-7 oc bracing.

REACTIONS (size) 2=0-5-8, 7=0-5-8
Max Horiz 2=120 (LC 15)
Max Uplift 2=-292 (LC 12), 7=-257 (LC 12)
Max Grav 2=722 (LC 2), 7=689 (LC 35)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/19, 2-3=-1631/632, 3-4=-1292/486, 4-5=-1182/482, 5-6=-60/54, 6-7=-168/79
BOT CHORD 2-10=-660/1531, 9-10=-404/1054, 7-9=-404/1054
WEBS 4-10=-13/216, 5-9=0/167, 3-10=-450/213, 5-10=-88/253, 5-7=-1134/441

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=3.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 8-0-0, Exterior (2) 8-0-0 to 12-2-15, Interior (1) 12-2-15 to 19-1-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=16.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10, Lu=50-0-0
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 11.5 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) Provide adequate drainage to prevent water ponding.
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 3-06-00 tall by 2-00-00 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 257 lb uplift at joint 7 and 292 lb uplift at joint 2.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

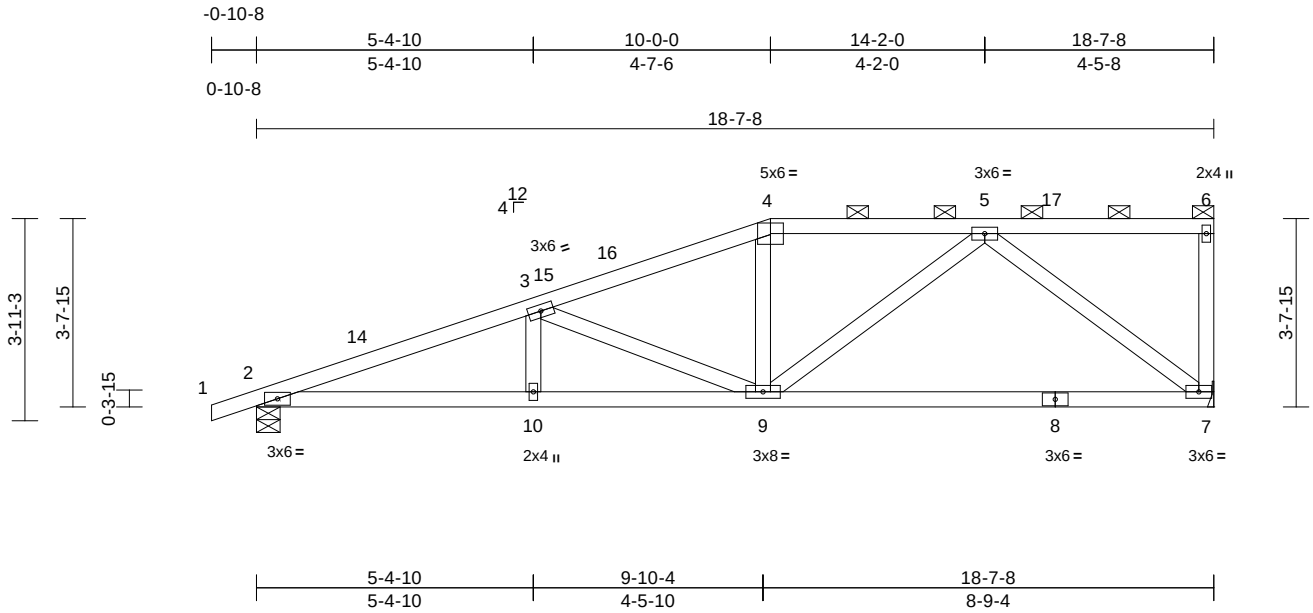
LOAD CASE(S) Standard

May 8,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1037 Serenity
P02236-24939	P03	Half Hip	1	1	I73305334
					Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 9.13 S 8.83 Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 07 10:44:28 Page: 1
ID:pPPpsHy4JJwDOl2Qh42cjJzKrYa-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:44.8

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.33	Vert(LL)	-0.20	7-9	>999	240	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.61	Vert(CT)	-0.31	7-9	>710	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.49	Horz(CT)	0.03	7	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	5.0										Weight: 91 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 4-6-3 oc purlins, except 2-0-0 oc purlins (5-11-6 max.): 4-6.
BOT CHORD Rigid ceiling directly applied or 7-6-6 oc bracing.

REACTIONS (size) 2=0-5-8, 7= Mechanical
Max Horiz 2=144 (LC 12)
Max Uplift 2=-275 (LC 12), 7=-257 (LC 12)
Max Grav 2=716 (LC 36), 7=646 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/19, 2-3=-1517/547, 3-4=-1020/357, 4-5=-917/362, 5-6=0/0
BOT CHORD 2-10=-607/1414, 9-10=-607/1414, 7-9=-284/649
WEBS 3-10=0/98, 4-9=0/161, 3-9=-623/273, 6-7=-117/58, 5-9=-107/400, 5-7=-824/361

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=3.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 10-0-0, Exterior (2) 10-0-0 to 14-2-0, Interior (1) 14-2-0 to 18-5-12 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=16.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10, Lu=50-0-0
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 11.5 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) Provide adequate drainage to prevent water ponding.
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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) Refer to girder(s) for truss to truss connections.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 275 lb uplift at joint 2 and 257 lb uplift at joint 7.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

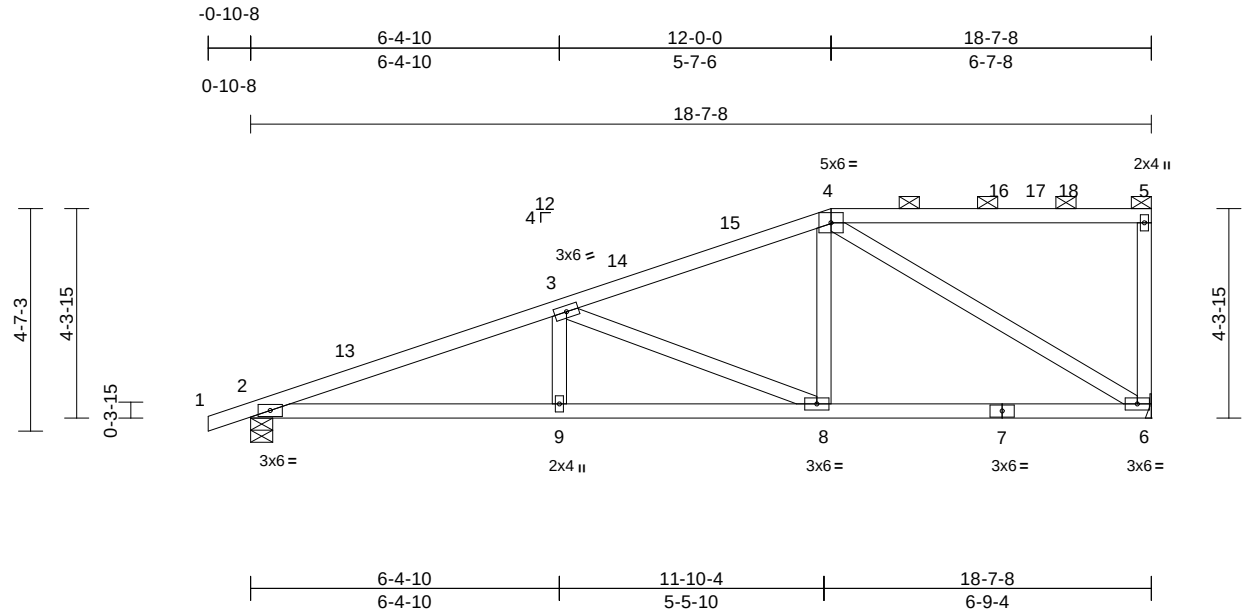
LOAD CASE(S) Standard

May 8,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1037 Serenity
P02236-24939	P04	Half Hip	1	1	I73305335
					Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 9.13 S 8.83 Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 07 10:44:28 Page: 1
ID:ZngQ?WPoS_oO14GqBBlbXKzKraa-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:47.6

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.87	Vert(LL)	-0.08	9-12	>999	240	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.62	Vert(CT)	-0.14	9-12	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.87	Horz(CT)	0.03	6	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	5.0										Weight: 91 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3 *Except* 6-4:2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-3-4 oc purlins, except 2-0-0 oc purlins (8-1-8 max.): 4-5.
BOT CHORD Rigid ceiling directly applied or 7-7-3 oc bracing.

REACTIONS (size) 2=0-5-8, 6= Mechanical
Max Horiz 2=170 (LC 12)
Max Uplift 2=-270 (LC 12), 6=-262 (LC 12)
Max Grav 2=750 (LC 36), 6=646 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/19, 2-3=-1513/502, 3-4=-818/282, 4-5=0/0
BOT CHORD 2-9=-583/1400, 8-9=-583/1400, 6-8=-295/711
WEBS 3-9=0/175, 4-8=-73/377, 3-8=-794/322, 5-6=-206/95, 4-6=-838/347

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=3.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 12-0-0, Exterior (2) 12-0-0 to 16-2-15, Interior (1) 16-2-15 to 18-5-12 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=16.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10, Lu=50-0-0
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 11.5 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) Provide adequate drainage to prevent water ponding.
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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) Refer to girder(s) for truss to truss connections.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 270 lb uplift at joint 2 and 262 lb uplift at joint 6.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

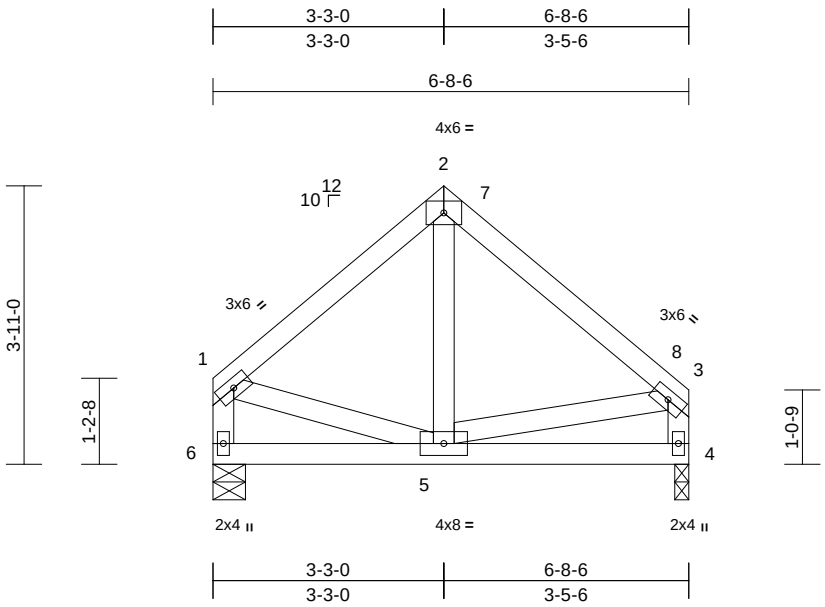
May 8,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1037 Serenity	
P02236-24939	P05	Common	5	1	Job Reference (optional)	I73305336

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

Run: 9.13 S 8.83 Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 07 10:44:28 Page: 1
ID:qyTg?vMPImCPTzfyhDfa6UzKrY2-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:32.4

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.21	Vert(LL)	-0.01	4-5	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.08	Vert(CT)	-0.01	4-5	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.04	Horz(CT)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	5.0										Weight: 39 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.

REACTIONS (size) 4=0-2-6, 6=0-5-8
Max Horiz 6=-100 (LC 12)
Max Uplift 4=-59 (LC 15), 6=-60 (LC 15)
Max Grav 4=224 (LC 2), 6=224 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-180/77, 2-3=-187/77, 1-6=-214/105, 3-4=-209/106
BOT CHORD 5-6=-93/92, 4-5=-15/16
WEBS 3-5=-27/123, 2-5=-21/72, 1-5=-25/123

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=3.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) 0-7-4 to 6-8-8, Interior (1) 6-8-8 to 7-0-2 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
4) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
7) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 4.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 60 lb uplift at joint 6 and 59 lb uplift at joint 4.

LOAD CASE(S) Standard

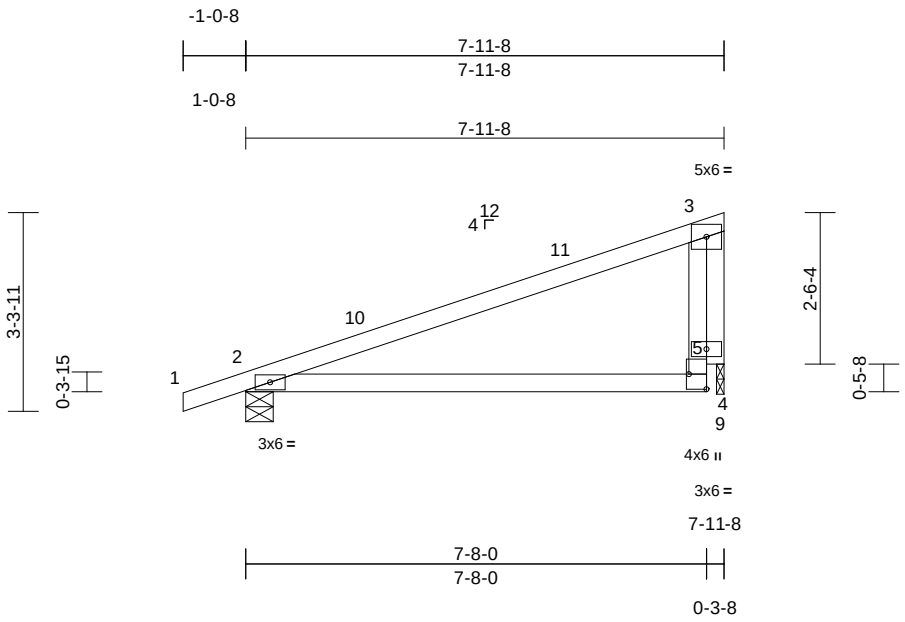
May 8,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1037 Serenity
P02236-24939	P06	Monopitch	4	1	I73305337
					Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

Run: 9.13 S 8.83 Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 07 10:44:29 Page: 1
ID:AZdQDYOE8B7lthXa?QDqsczKrZI-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:38.3

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.67	Vert(LL)	0.07	4-8	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.49	Vert(CT)	-0.12	4-8	>767	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	2	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MR								
BCDL	5.0										Weight: 32 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.

REACTIONS (size) 2=0-5-8, 9=0-1-8
Max Horiz 2=108 (LC 12)
Max Uplift 2=-140 (LC 12), 9=-109 (LC 16)
Max Grav 2=342 (LC 2), 9=247 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/20, 2-3=-254/53, 4-5=-1/129, 3-5=-103/143
BOT CHORD	2-4=-86/204
WEBS	3-9=-202/0

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=3.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -1-0-8 to 1-11-8, Interior (1) 1-11-8 to 7-6-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
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 11.5 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Bearing at joint(s) 9 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
10) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 9.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 140 lb uplift at joint 2 and 109 lb uplift at joint 9.

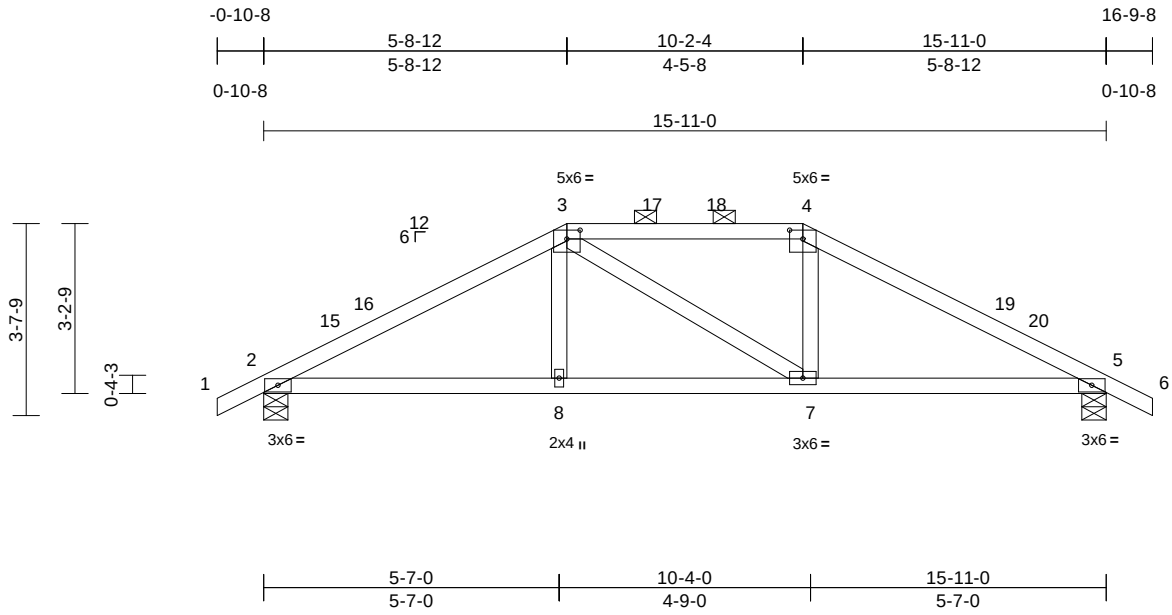
LOAD CASE(S) Standard

May 8,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1037 Serenity
P02236-24939	P07	Hip	1	1	I73305338 Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 9.13 S 8.83 Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 07 10:44:29 Page: 1
ID:HuMGtd_z6sH3hEJP5TLy9QzKcvC-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:43.5

Plate Offsets (X, Y): [3:0-3-0,0-2-0], [4:0-3-0,0-2-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.51	Vert(LL)	-0.05	8-11	>999	240	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.53	Vert(CT)	-0.09	8-11	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.02	5	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	5.0										Weight: 68 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 5-5-0 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 3-4.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-5-8, 5=0-5-8
Max Horiz 2=-55 (LC 21)
Max Uplift 2=-177 (LC 16), 5=-177 (LC 17)
Max Grav 2=639 (LC 39), 5=639 (LC 39)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/30, 2-3=-893/340, 3-4=-733/355, 4-5=-893/340, 5-6=0/30
BOT CHORD 2-8=-222/737, 7-8=-222/733, 5-7=-226/737
WEBS 3-8=0/165, 3-7=-104/105, 4-7=-4/165

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=3.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 5-8-12, Exterior (2) 5-8-12 to 14-5-3, Interior (1) 14-5-3 to 16-9-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=16.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10, Lu=50-0-0
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 11.5 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) Provide adequate drainage to prevent water ponding.
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 3-06-00 tall by 2-00-00 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 177 lb uplift at joint 2 and 177 lb uplift at joint 5.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

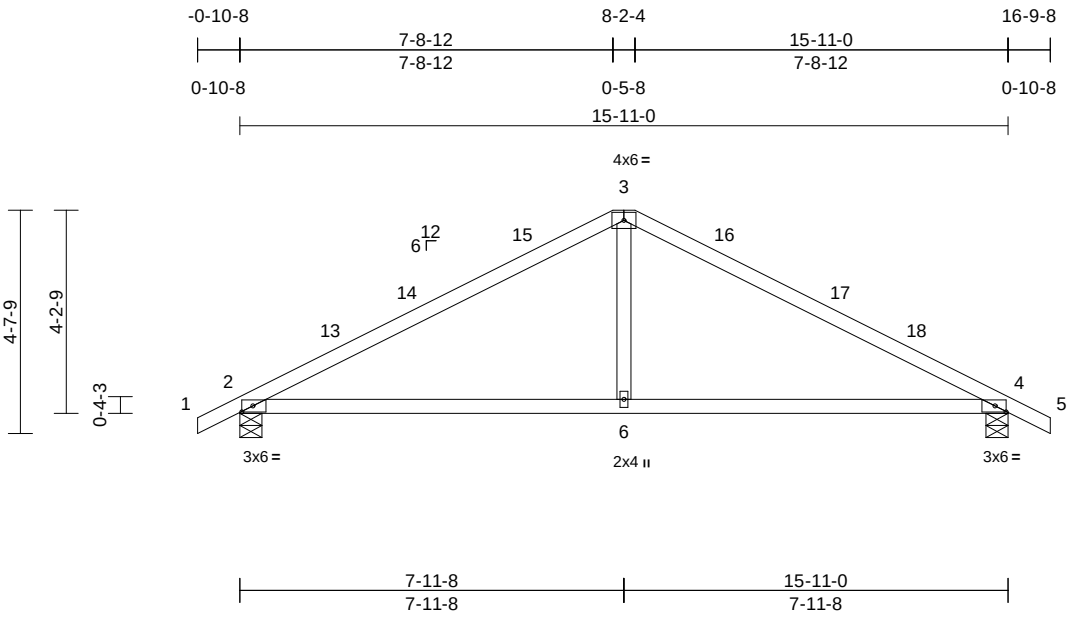
May 8,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1037 Serenity
P02236-24939	P08	Hip	1	1	I73305339
					Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

Run: 9.13 S 8.83 Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 07 10:44:29 Page: 1
ID:Lstel?_1ZMkH8_9MSOKQ1wzKctv-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:47.7

Plate Offsets (X, Y): [2:0-2-12,0-1-8], [4:0-2-12,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.87	Vert(LL)	0.13	6-9	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.74	Vert(CT)	-0.22	6-12	>880	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.11	Horz(CT)	0.01	4	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	5.0										Weight: 59 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 2-2-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-5-8, 4=0-5-8
Max Horiz 2=-73 (LC 17)
Max Uplift 2=-195 (LC 16), 4=-195 (LC 17)
Max Grav 2=610 (LC 2), 4=610 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/23, 2-3=-818/280, 3-4=-818/280, 4-5=0/23
BOT CHORD 2-6=-142/649, 4-6=-142/649
WEBS 3-6=-4/292

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=3.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 7-11-8, Exterior (2) 7-11-8 to 12-2-7, Interior (1) 12-2-7 to 16-9-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
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 11.5 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
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 3-06-00 tall by 2-00-00 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 195 lb uplift at joint 2 and 195 lb uplift at joint 4.

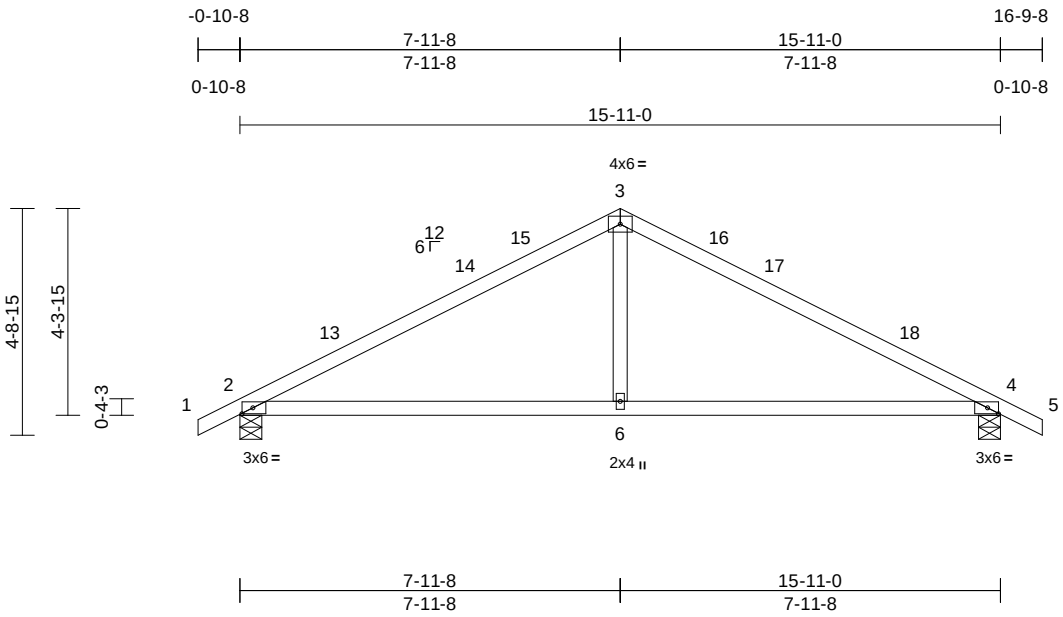
LOAD CASE(S) Standard

May 8,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1037 Serenity
P02236-24939	P09	Common	1	1	I73305340
					Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 9.13 S 8.83 Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 07 10:44:29 Page: 1
ID:2nUQOQ6ICR?sLXwH2VWmR1zKctl-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:48.2

Plate Offsets (X, Y): [2:0-2-12,0-1-8], [4:0-2-12,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.87	Vert(LL)	0.14	6-9	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.75	Vert(CT)	-0.22	6-12	>876	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.11	Horz(CT)	0.01	4	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	5.0										Weight: 59 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 2-2-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-5-8, 4=0-5-8
Max Horiz 2=-74 (LC 17)
Max Uplift 2=-195 (LC 16), 4=-195 (LC 17)
Max Grav 2=610 (LC 2), 4=610 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/23, 2-3=-812/262, 3-4=-812/262, 4-5=0/23
BOT CHORD 2-6=-140/641, 4-6=-140/641
WEBS 3-6=-2/293

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=3.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 7-11-8, Exterior (2) 7-11-8 to 10-11-8, Interior (1) 10-11-8 to 16-9-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
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 11.5 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
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 3-06-00 tall by 2-00-00 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 195 lb uplift at joint 2 and 195 lb uplift at joint 4.

LOAD CASE(S) Standard

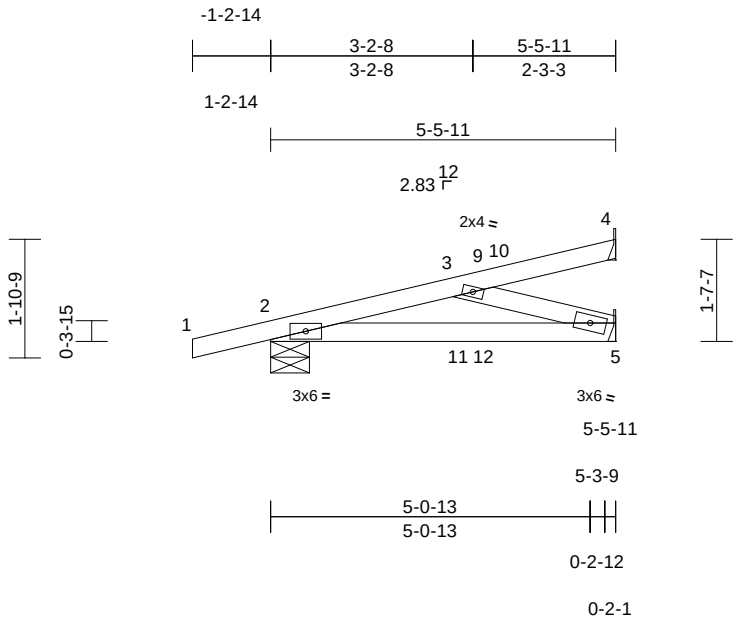
May 8,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1037 Serenity	
P02236-24939	PCJ01	Jack-Partial	1	1	Job Reference (optional)	I73305341

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

Run: 8.83 E Jan 17 2025 Print: 8.830 E Jan 17 2025 MiTek Industries, Inc. Wed May 07 16:07:55 Page: 1
ID:OU5YOBuu1HqjqDKWXbTz9lzKrZy-WOHSKqt_HhT37OMFvkDLS3Wff18Kfvc9KC?J2JzIrDJ



Scale = 1:23.6

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.16	Vert(LL)	-0.02	5-8	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.18	Vert(CT)	-0.03	5-8	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.10	Horz(CT)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	5.0										Weight: 22 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 5-5-11 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 2=208/0-7-6, 4=45/ Mechanical, 5=98/ Mechanical
Max Horiz 2=64 (LC 12)
Max Uplift 2=-137 (LC 12), 4=-39 (LC 12), 5=-45 (LC 16)
Max Grav 2=280 (LC 2), 4=63 (LC 2), 5=126 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/17, 2-3=-366/275, 3-9=-22/6, 9-10=-16/0, 4-10=-15/11
BOT CHORD 2-11=-321/356, 11-12=-321/356, 5-12=-321/356
WEBS 3-5=-369/333

NOTES
1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=3.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner (3) -1-2-14 to 2-10-11, Exterior (2) 2-10-11 to 5-4-15 zone; cantilever left and right exposed ; end vertical 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 LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum 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 11.5 psf on overhangs non-concurrent with other live loads.
5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
9) Refer to girder(s) for truss to truss connections.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 39 lb uplift at joint 4, 137 lb uplift at joint 2 and 45 lb uplift at joint 5.
11) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 5 lb down and 33 lb up at 2-11-10, and 8 lb down and 35 lb up at 3-4-9 on top chord, and 7 lb down and 8 lb up at 2-11-10, and 8 lb down and 10 lb up at 3-4-9 on bottom chord. The design/selection of such connection device (s) is the responsibility of others.
12) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-4=-43, 5-6=-10
Concentrated Loads (lb)
Vert: 11=-4 (B), 12=-5 (F)

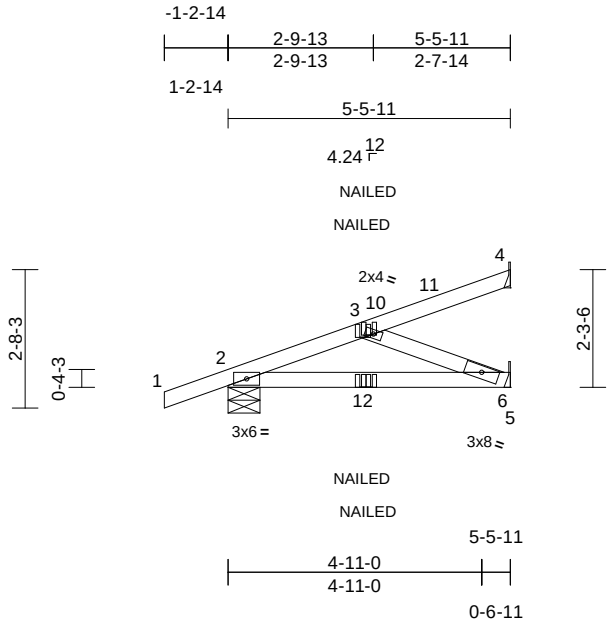
May 8,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1037 Serenity
P02236-24939	PCJ02	Jack-Partial	2	1	I73305342 Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

Run: 9.13 S 8.83 Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 07 10:44:30 Page: 1
ID:v6z57TIqIfD?zd1epiLquczKcw4-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



Scale = 1:44.7

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.14	Vert(LL)	-0.02	6-9	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.18	Vert(CT)	-0.03	6-9	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.09	Horz(CT)	0.00	6	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	5.0										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 5-5-11 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-7-6, 4= Mechanical, 6= Mechanical
Max Horiz 2=96 (LC 12)
Max Uplift 2=-128 (LC 12), 4=-47 (LC 36), 6=-43 (LC 16)
Max Grav 2=275 (LC 2), 4=70 (LC 2), 6=123 (LC 7)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/25, 2-3=-284/196, 3-4=-37/18
BOT CHORD 2-6=-273/264, 5-6=0/0
WEBS 3-6=-280/289

NOTES
1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=3.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner (3) -1-2-14 to 3-0-1, Exterior (2) 3-0-1 to 5-4-15 zone; cantilever left and right exposed ; end vertical 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 LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
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 11.5 psf on overhangs non-concurrent with other live loads.
5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 47 lb uplift at joint 4, 128 lb uplift at joint 2 and 43 lb uplift at joint 6.
10) "NAILED" indicates 3-10d (0.148"x3") or 2-12d (0.148"x3.25") toe-nails per NDS guidlines.
11) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-4=-43, 5-7=-10
Concentrated Loads (lb)
Vert: 12=-5 (F=-2, B=-3)

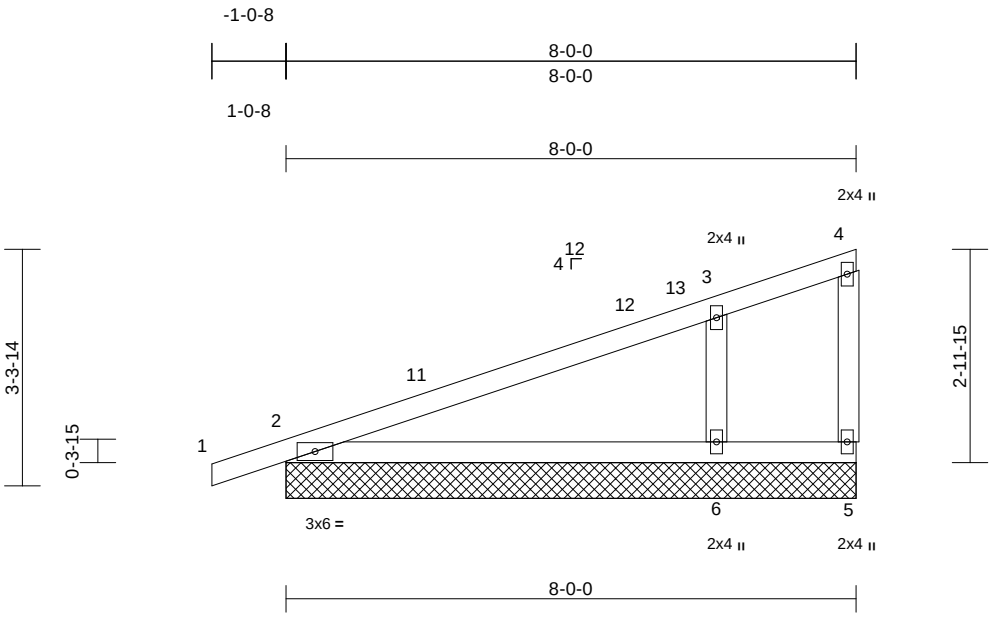
May 8,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1037 Serenity	
P02236-24939	PE01	Monopitch Supported Gable	1	1	Job Reference (optional)	I73305343

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

Run: 9.13 S 8.83 Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 07 10:44:30 Page: 1
ID:mlPGcPmAGoO7zWlgpufABXzKrR4-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:32.3

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.39	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.40	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.10	Horz(CT)	0.00	2	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	5.0										Weight: 32 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.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=8-0-0, 5=8-0-0, 6=8-0-0
Max Horiz 2=120 (LC 12)
Max Uplift 2=-96 (LC 12), 5=-8 (LC 2), 6=-175 (LC 16)
Max Grav 2=250 (LC 2), 5=60 (LC 7), 6=412 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/20, 2-3=-122/61, 3-4=-48/8
BOT CHORD	2-6=-58/76, 5-6=0/0
WEBS	4-5=-26/39, 3-6=-344/346

NOTES

1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=3.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner (3) -1-0-8 to 1-11-8, Exterior (2) 1-11-8 to 7-10-12 zone; cantilever left and right exposed ; end vertical 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 LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
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 11.5 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) Gable requires continuous bottom chord bearing.
8) Gable studs spaced at 2-0-0 oc.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 96 lb uplift at joint 2, 8 lb uplift at joint 5, 175 lb uplift at joint 6 and 96 lb uplift at joint 2.

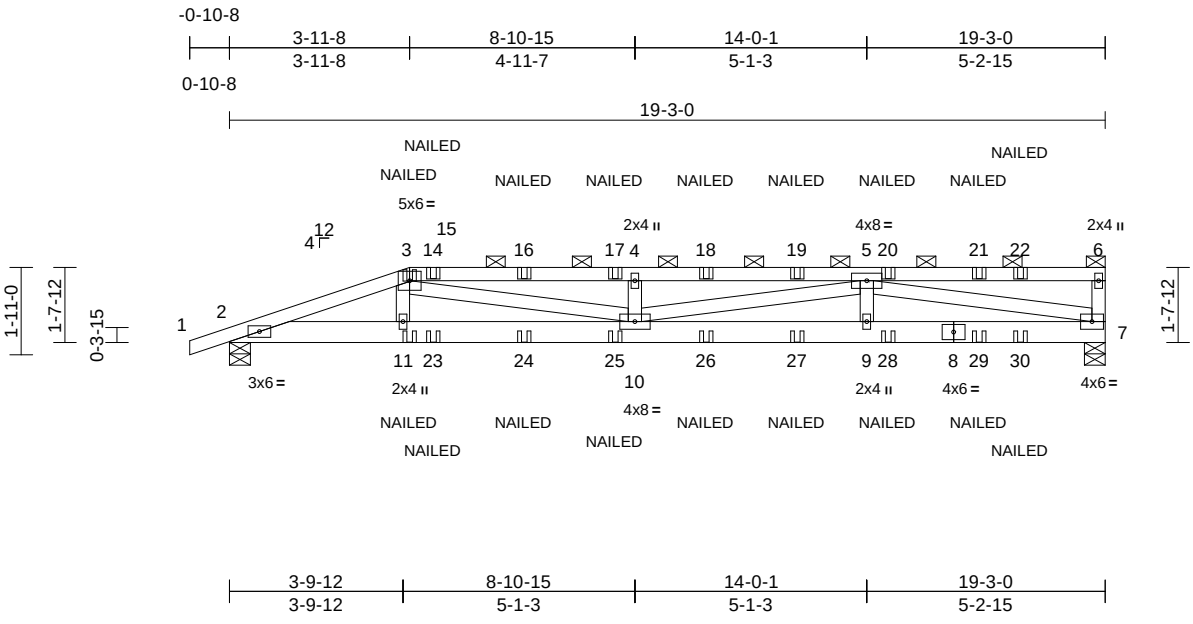
LOAD CASE(S) Standard

May 8,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1037 Serenity	
P02236-24939	PG01	Half Hip Girder	1	2	Job Reference (optional)	I73305344

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 9.13 S 8.83 Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 07 10:44:30 Page: 1
ID:90aZ4w_v8kranSx2?HcrURzKrZq-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:50.6

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.36	Vert(LL)	0.13	9-10	>999	240	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.41	Vert(CT)	-0.22	9-10	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.40	Horz(CT)	0.03	7	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	5.0										Weight: 205 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 3-6.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-5-8, 7=0-5-8
Max Horiz 2=61 (LC 9)
Max Uplift 2=-433 (LC 8), 7=-411 (LC 8)
Max Grav 2=1003 (LC 2), 7=976 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/19, 2-3=-2713/1123, 3-4=-3619/1537, 4-5=-3619/1537, 5-6=-179/92, 6-7=-188/103
BOT CHORD 2-11=-1058/2560, 10-11=-1049/2527, 9-10=-1238/2934, 7-9=-1238/2934
WEBS 3-11=-77/315, 3-10=-494/1189, 4-10=-394/222, 5-10=-294/706, 5-9=0/216, 5-7=-2840/1195

NOTES
1) 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.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) 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.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=3.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
5) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=16.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10, Lu=50-0-0
6) Unbalanced snow loads have been considered for this design.
7) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
8) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
9) Provide adequate drainage to prevent water ponding.
10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
11) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 411 lb uplift at joint 7 and 433 lb uplift at joint 2.
13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
14) "NAILED" indicates 3-10d (0.148"x3") or 2-12d (0.148"x3.25") toe-nails per NDS guidlines.

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-3=-43, 3-6=-53, 2-7=-10
Concentrated Loads (lb)
Vert: 11=-88 (F), 14=-19 (F), 16=-17 (F), 17=-17 (F), 18=-17 (F), 19=-17 (F), 20=-17 (F), 21=-17 (F), 22=-17 (F), 23=-21 (F), 24=-21 (F), 25=-21 (F), 26=-21 (F), 27=-21 (F), 28=-21 (F), 29=-21 (F), 30=-21 (F)

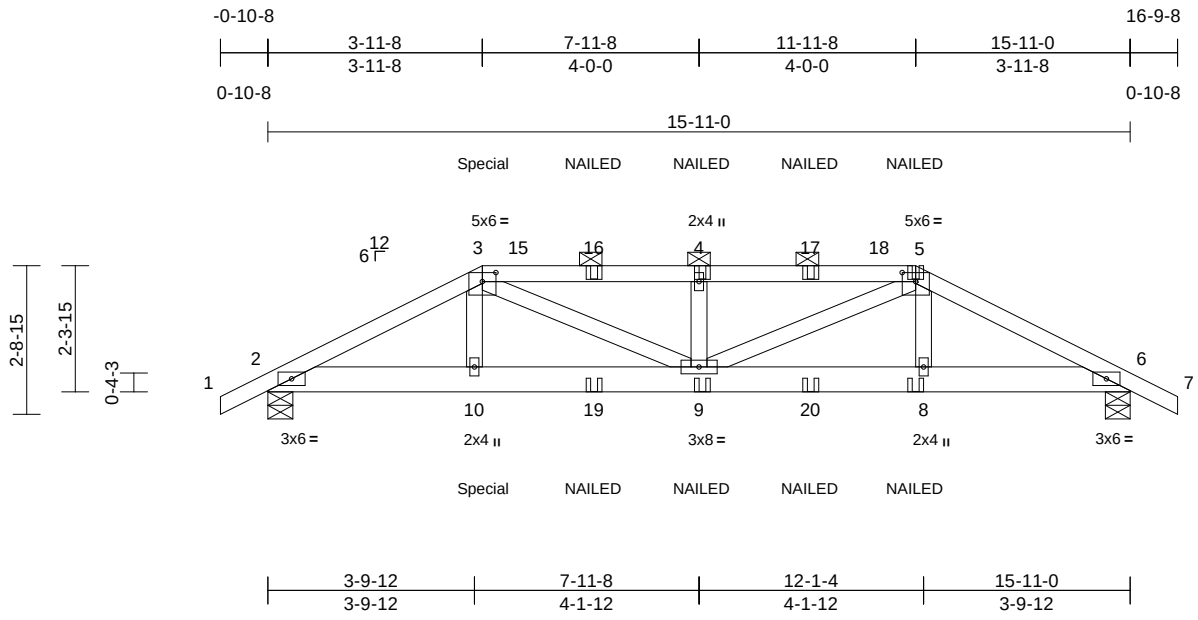
May 8,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1037 Serenity
P02236-24939	PG02	Hip Girder	1	**2**	I73305345 Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

Run: 9.13 S 8.83 Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 07 10:44:31 Page: 1
ID:CTukbtODep60Ji3_jgzTg4zKcvz-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:42.5

Plate Offsets (X, Y): [3:0-3-0,0-2-0], [5:0-3-0,0-2-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.15	Vert(LL)	0.03	9	>999	240	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.19	Vert(CT)	-0.05	9	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.11	Horz(CT)	0.01	6	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	5.0										Weight: 170 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 3-5.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-5-8, 6=0-5-8
Max Horiz 2=-41 (LC 17)
Max Uplift 2=-349 (LC 12), 6=-326 (LC 13)
Max Grav 2=849 (LC 2), 6=819 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/30, 2-3=-1553/653, 3-4=-1716/767, 4-5=-1716/767, 5-6=-1489/604, 6-7=0/30
BOT CHORD 2-10=-566/1353, 9-10=-561/1335, 8-9=-497/1279, 6-8=-501/1295
WEBS 3-10=-76/269, 3-9=-214/467, 4-9=-373/218, 5-9=-268/535, 5-8=-68/246

NOTES
1) 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.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) 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.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=3.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
5) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=16.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10, Lu=50-0-0
6) Unbalanced snow loads have been considered for this design.
7) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
8) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
9) Provide adequate drainage to prevent water ponding.
10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
11) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 349 lb uplift at joint 2 and 326 lb uplift at joint 6.
13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
14) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidlines.
15) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 74 lb down and 71 lb up at 3-11-8 on top chord, and 128 lb down and 61 lb up at 3-11-8 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-3=-43, 3-5=-53, 5-7=-43, 2-6=-10
Concentrated Loads (lb)
Vert: 10=-99 (B), 9=-19 (B), 3=-23 (B), 4=-18 (B), 8=-80 (B), 16=-18 (B), 17=-18 (B), 19=-19 (B), 20=-19 (B)

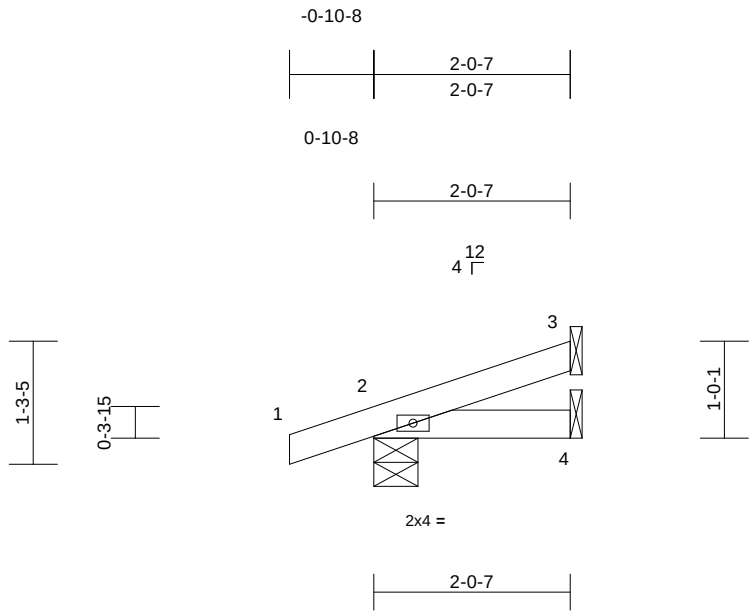
May 8,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1037 Serenity
P02236-24939	PJ01	Jack-Open	1	1	I73305346
					Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

Run: 9.13 S 8.83 Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 07 10:44:31 Page: 1
ID:9l28W6nE9Wi_Fr8nWCpsIszKra5-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:23.9

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.05	Vert(LL)	0.00	7	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	0.00	7	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	5.0										Weight: 8 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-0-7 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-5-8, 3= Mechanical, 4= Mechanical
Max Horiz 2=40 (LC 12)
Max Uplift 2=-71 (LC 12), 3=-22 (LC 16), 4=-3 (LC 16)
Max Grav 2=133 (LC 2), 3=40 (LC 2), 4=25 (LC 7)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/17, 2-3=-22/10
BOT CHORD 2-4=-7/23

NOTES
1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=3.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone; cantilever left and right exposed ; end vertical 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 LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
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 11.5 psf on overhangs non-concurrent with other live loads.
5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 22 lb uplift at joint 3, 71 lb uplift at joint 2 and 3 lb uplift at joint 4.

LOAD CASE(S) Standard

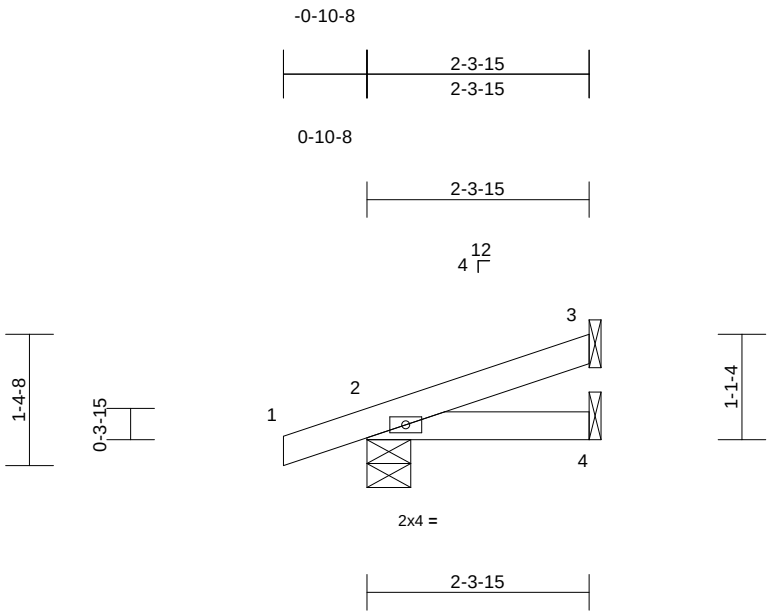
May 8,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1037 Serenity
P02236-24939	PJ02	Jack-Open	1	1	I73305347 Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

Run: 9.13 S 8.83 Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 07 10:44:31 Page: 1
ID:dxcWjSotwqqrt?jz3vK5q4zKra4-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:24.1

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.05	Vert(LL)	0.00	4-7	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	0.00	4-7	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	5.0										Weight: 9 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-3-15 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-5-8, 3= Mechanical, 4= Mechanical
Max Horiz 2=44 (LC 12)
Max Uplift 2=-73 (LC 12), 3=-27 (LC 16), 4=-3 (LC 16)
Max Grav 2=142 (LC 2), 3=48 (LC 2), 4=30 (LC 7)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/17, 2-3=-26/13
BOT CHORD 2-4=-12/28

NOTES
1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=3.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone; cantilever left and right exposed ; end vertical 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 LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
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 11.5 psf on overhangs non-concurrent with other live loads.
5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 27 lb uplift at joint 3, 73 lb uplift at joint 2 and 3 lb uplift at joint 4.

LOAD CASE(S) Standard

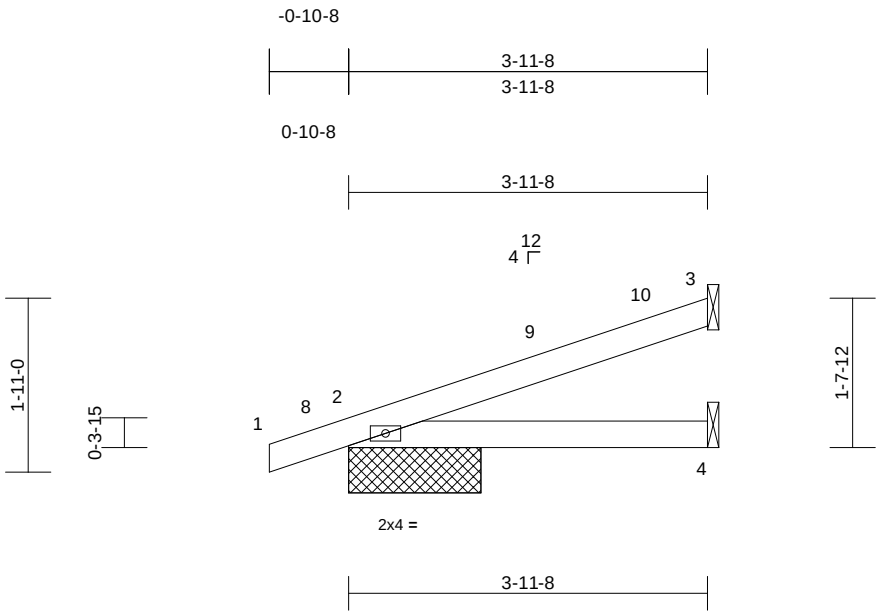
May 8,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1037 Serenity
P02236-24939	PJ03	Jack-Open	8	1	I73305348 Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

Run: 9.13 S 8.83 Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 07 10:44:31 Page: 1
ID:g?rmnacOM?Mqs0KgWoErxyzIwnL-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



Scale = 1:25.4

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.18	Vert(LL)	0.01	4-7	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.16	Vert(CT)	-0.02	4-7	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	2	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	5.0										Weight: 14 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-11-8 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=1-5-8, 3= Mechanical, 4= Mechanical
Max Horiz 2=65 (LC 12)
Max Uplift 2=-88 (LC 12), 3=-54 (LC 16), 4=-4 (LC 16)
Max Grav 2=195 (LC 2), 3=94 (LC 2), 4=54 (LC 7)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/17, 2-3=-57/24
BOT CHORD 2-4=-52/57

NOTES
1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=3.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 3-10-12 zone; cantilever left and right exposed ; end vertical 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 LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
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 11.5 psf on overhangs non-concurrent with other live loads.
5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 54 lb uplift at joint 3, 88 lb uplift at joint 2 and 4 lb uplift at joint 4.

LOAD CASE(S) Standard

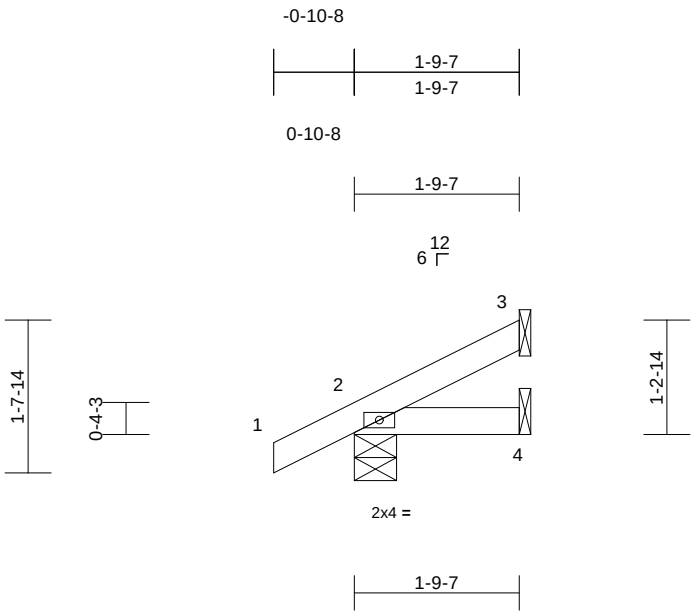
May 8,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1037 Serenity
P02236-24939	PJ05	Jack-Open	2	1	I73305349 Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

Run: 9.13 S 8.83 Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 07 10:44:32 Page: 1
ID:zksLioHam2zIkKtGiHIMpBzKcw6-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:25

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.05	Vert(LL)	0.00	7	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.02	Vert(CT)	0.00	4-7	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	5.0										Weight: 7 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 1-9-7 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-5-8, 3= Mechanical, 4= Mechanical
Max Horiz 2=49 (LC 16)
Max Uplift 2=-45 (LC 16), 3=-24 (LC 16), 4=-1 (LC 16)
Max Grav 2=128 (LC 2), 3=36 (LC 2), 4=23 (LC 7)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/23, 2-3=-30/14
BOT CHORD 2-4=-10/17

NOTES
1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=3.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone; cantilever left and right exposed ; end vertical 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 LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
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 11.5 psf on overhangs non-concurrent with other live loads.
5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 45 lb uplift at joint 2, 1 lb uplift at joint 4 and 24 lb uplift at joint 3.

LOAD CASE(S) Standard

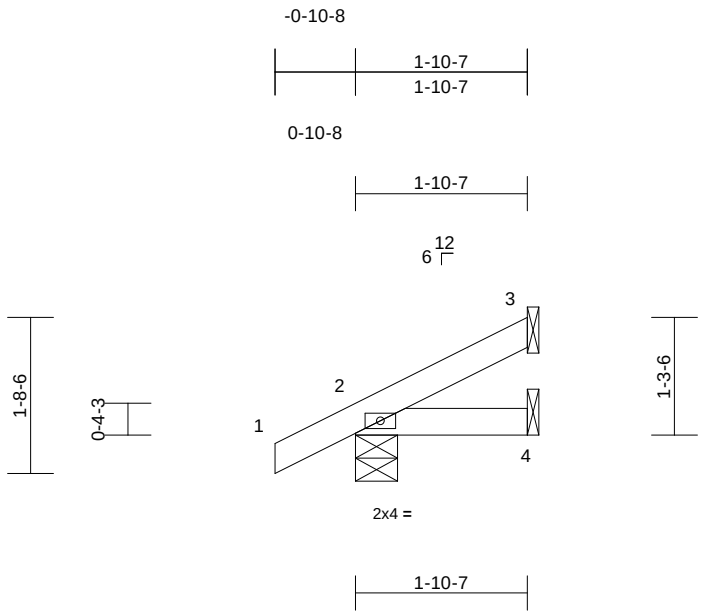
May 8,2025

ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1037 Serenity
P02236-24939	PJ06	Jack-Open	1	1	I73305350 Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

Run: 9.13 S 8.83 Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 07 10:44:32 Page: 1
ID:zksLioHam2zIkKtGiHIMpBzKcw6-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:25.1

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.05	Vert(LL)	0.00	4-7	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.02	Vert(CT)	0.00	4-7	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	5.0										Weight: 8 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 1-10-7 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-5-8, 3= Mechanical, 4= Mechanical
Max Horiz 2=50 (LC 16)
Max Uplift 2=-46 (LC 16), 3=-26 (LC 16), 4=-2 (LC 16)
Max Grav 2=130 (LC 2), 3=39 (LC 2), 4=24 (LC 7)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/23, 2-3=-30/14
BOT CHORD 2-4=-10/18

NOTES
1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=3.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone; cantilever left and right exposed ; end vertical 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 LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
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 11.5 psf on overhangs non-concurrent with other live loads.
5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 46 lb uplift at joint 2, 2 lb uplift at joint 4 and 26 lb uplift at joint 3.

LOAD CASE(S) Standard

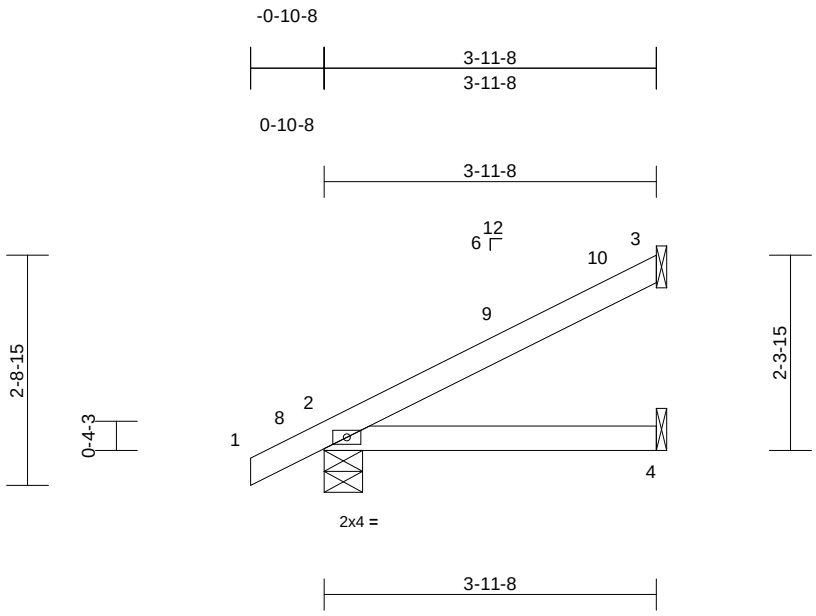
May 8,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1037 Serenity
P02236-24939	PJ07	Jack-Open	4	1	I73305351 Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

Run: 9.13 S 8.83 Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 07 10:44:32 Page: 1
ID:RwPjv8HCXL58LTSSF?pbMOzKcw5-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:27.5

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.19	Vert(LL)	0.01	4-7	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.15	Vert(CT)	-0.02	4-7	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	5.0										Weight: 14 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-11-8 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-5-8, 3= Mechanical, 4= Mechanical
Max Horiz 2=90 (LC 16)
Max Uplift 2=-59 (LC 16), 3=-64 (LC 16), 4=-4 (LC 16)
Max Grav 2=195 (LC 2), 3=96 (LC 2), 4=55 (LC 7)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/23, 2-3=-55/34
BOT CHORD 2-4=-47/45

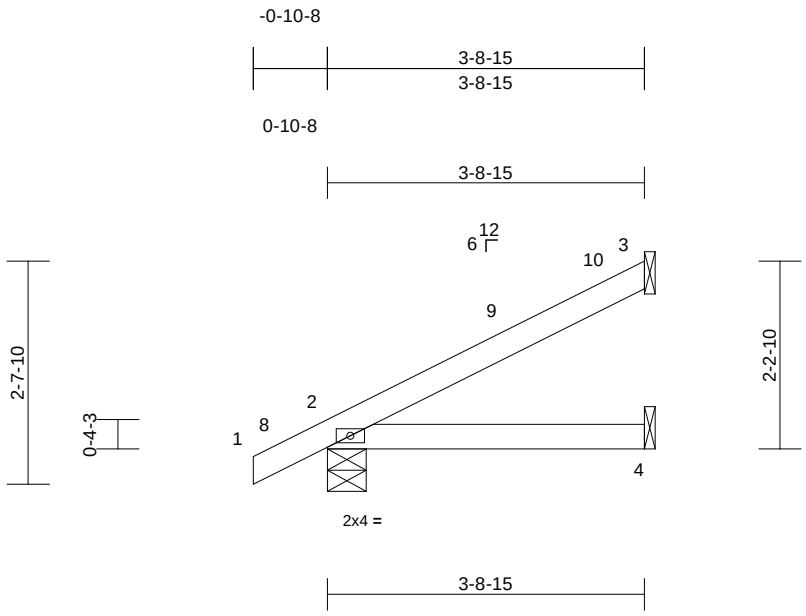
NOTES
1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=3.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 3-10-12 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C 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 LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
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 11.5 psf on overhangs non-concurrent with other live loads.
5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 64 lb uplift at joint 3, 59 lb uplift at joint 2 and 4 lb uplift at joint 4.

LOAD CASE(S) Standard

May 8,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1037 Serenity
P02236-24939	PJ08	Jack-Open	1	1	I73305352 Job Reference (optional)



Scale = 1:27.2

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.17	Vert(LL)	0.01	4-7	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.13	Vert(CT)	-0.01	4-7	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	5.0										Weight: 13 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-8-15 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-5-8, 3= Mechanical, 4= Mechanical
Max Horiz 2=86 (LC 16)
Max Uplift 2=-58 (LC 16), 3=-60 (LC 16), 4=-4 (LC 16)
Max Grav 2=188 (LC 2), 3=90 (LC 2), 4=52 (LC 7)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/23, 2-3=-52/32
BOT CHORD 2-4=-39/42

NOTES
1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=3.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 3-8-3 zone; cantilever left and right exposed ; end vertical 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 LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
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 11.5 psf on overhangs non-concurrent with other live loads.
5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 60 lb uplift at joint 3, 58 lb uplift at joint 2 and 4 lb uplift at joint 4.

LOAD CASE(S) Standard

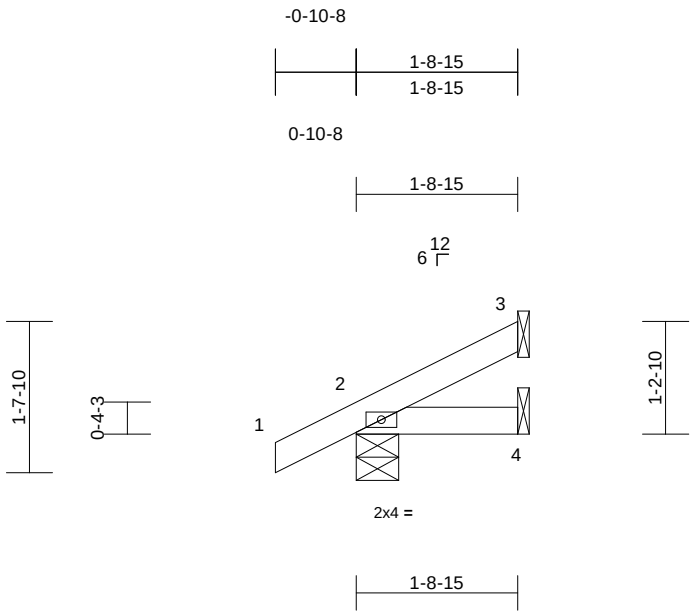
May 8,2025

ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1037 Serenity
P02236-24939	PJ09	Jack-Open	1	1	I73305353 Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

Run: 9.13 S 8.83 Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 07 10:44:32 Page: 1
ID:zksLioHam2zIkKtGiHIMpBzKcw6-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:24.9

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.05	Vert(LL)	0.00	7	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.02	Vert(CT)	0.00	4-7	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	5.0										Weight: 7 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 1-8-15 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-5-8, 3= Mechanical, 4= Mechanical
Max Horiz 2=48 (LC 16)
Max Uplift 2=-45 (LC 16), 3=-23 (LC 16), 4=-1 (LC 16)
Max Grav 2=126 (LC 2), 3=35 (LC 2), 4=22 (LC 7)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/23, 2-3=-29/13
BOT CHORD 2-4=-10/17

NOTES
1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=3.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone; cantilever left and right exposed ; end vertical 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 LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
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 11.5 psf on overhangs non-concurrent with other live loads.
5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 45 lb uplift at joint 2, 1 lb uplift at joint 4 and 23 lb uplift at joint 3.

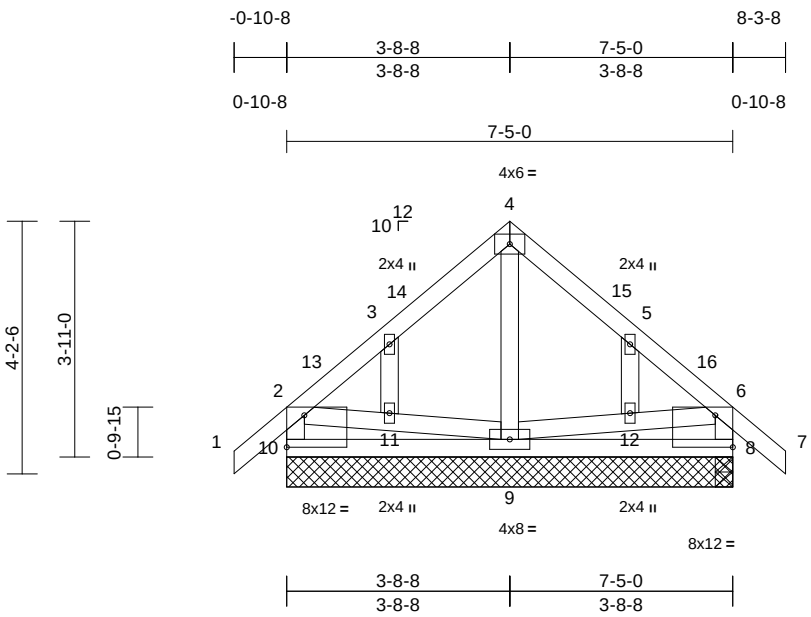
LOAD CASE(S) Standard

May 8,2025

ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1037 Serenity
P02236-24939	PSE01	Common Structural Gable	1	1	I73305354 Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 9.13 S 8.83 Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 07 10:44:32 Page: 1
ID:ItVdeRAN3rBgYWQtlsNqS6zKrYI-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:38.3

Plate Offsets (X, Y): [8:Edge,0-6-6], [10:Edge,0-6-6], [12:0-0-0,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.16	Vert(LL)	0.00	8-9	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.09	Vert(CT)	0.00	8-9	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.14	Horz(CT)	0.00	8	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	5.0										Weight: 49 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.

REACTIONS (size) 8=7-5-0, 9=7-5-0, 10=7-5-0
Max Horiz 10=-117 (LC 12)
Max Uplift 8=-60 (LC 15), 9=-73 (LC 14), 10=-58 (LC 14)
Max Grav 8=190 (LC 31), 9=245 (LC 2), 10=190 (LC 30)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/39, 2-3=-79/30, 3-4=-36/57, 4-5=-36/56, 5-6=-76/26, 6-7=0/39, 2-10=-174/116, 6-8=-174/116
BOT CHORD 9-10=-104/137, 8-9=-33/113
WEBS 4-9=-160/55, 2-11=-111/120, 9-11=-120/128, 9-12=-122/128, 6-12=-114/121, 3-11=-57/47, 5-12=-58/46

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=3.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 3-8-8, Exterior (2) 3-8-8 to 6-8-8, Interior (1) 6-8-8 to 8-3-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
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 11.5 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
8) Gable studs spaced at 2-0-0 oc.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 58 lb uplift at joint 10, 60 lb uplift at joint 8 and 73 lb uplift at joint 9.

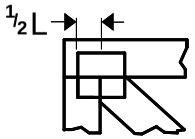
LOAD CASE(S) Standard

May 8,2025

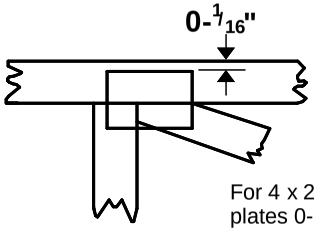
ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Symbols

PLATE LOCATION AND ORIENTATION



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



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

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

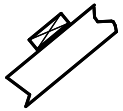
* Plate location details available in MiTek software or upon request.

PLATE SIZE

4 x 4

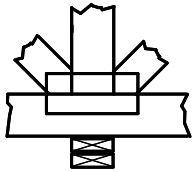
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



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

BEARING

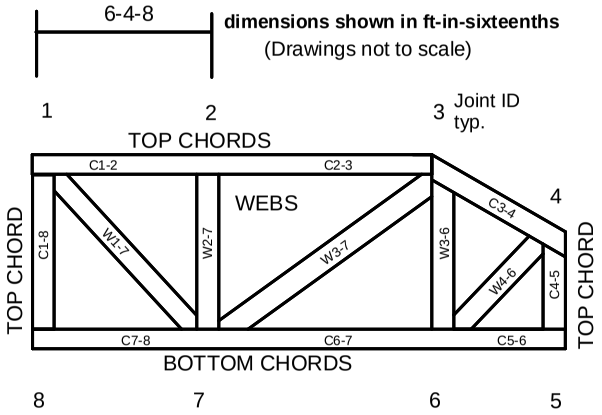


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-22: Design Standard for Bracing.
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses.

Numbering System



JOINTS ARE GENERALLY NUMBERED/LETTERED CLOCKWISE AROUND THE TRUSS STARTING AT THE JOINT FARTHEST TO THE LEFT.

CHORDS AND WEBS ARE IDENTIFIED BY END JOINT NUMBERS/LETTERS.

Product Code Approvals

ICC-ES Reports:

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

Design General Notes

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

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

MiTek®

ENGINEERING BY TRENCO
A MiTek Affiliate

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

General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative Tor I bracing should be considered.
3. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
4. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
5. Cut members to bear tightly against each other.
6. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TPI 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TPI 1.
8. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
9. Unless expressly noted, this design is not applicable for use with fire retardant, preservative treated, or green lumber.
10. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
11. Plate type, size, orientation and location dimensions indicated are minimum plating requirements.
12. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
13. Top chords must be sheathed or purlins provided at spacing indicated on design.
14. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
15. Connections not shown are the responsibility of others.
16. Do not cut or alter truss member or plate without prior approval of an engineer.
17. Install and load vertically unless indicated otherwise.
18. Use of green or treated lumber may pose unacceptable environmental, health or performance risks. Consult with project engineer before use.
19. Review all portions of this design (front, back, words and pictures) before use. Reviewing pictures alone is not sufficient.
20. Design assumes manufacture in accordance with ANSI/TPI 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.