ENGINEERING BY
TRENCO
A MiTek Affiliate

Trenco
818 Soundside Rd
Edenton, NC 27932

Re: Q2400770
Value Build Homes - Webster

The truss drawing(s) referenced below have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by Carolina Structural Systems, LLC.

Pages or sheets covered by this seal: I64982859 thru I64982868

My license renewal date for the state of North Carolina is December 31, 2024.

North Carolina COA: C-0844

April 17,2024

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	Value Build Homes - Webster
Q2400770	A01	Common Supported Gable	2	1	I64982859 Job Reference (optional)

Carolina Structural Systems (Star, NC)), Ether, NC - 27247, Run: 8.73 S Apr 3 2024 Print: 8.730 S Apr 3 2024 MiTek Industries, Inc. Wed Apr 17 13:52:58 Page: 1
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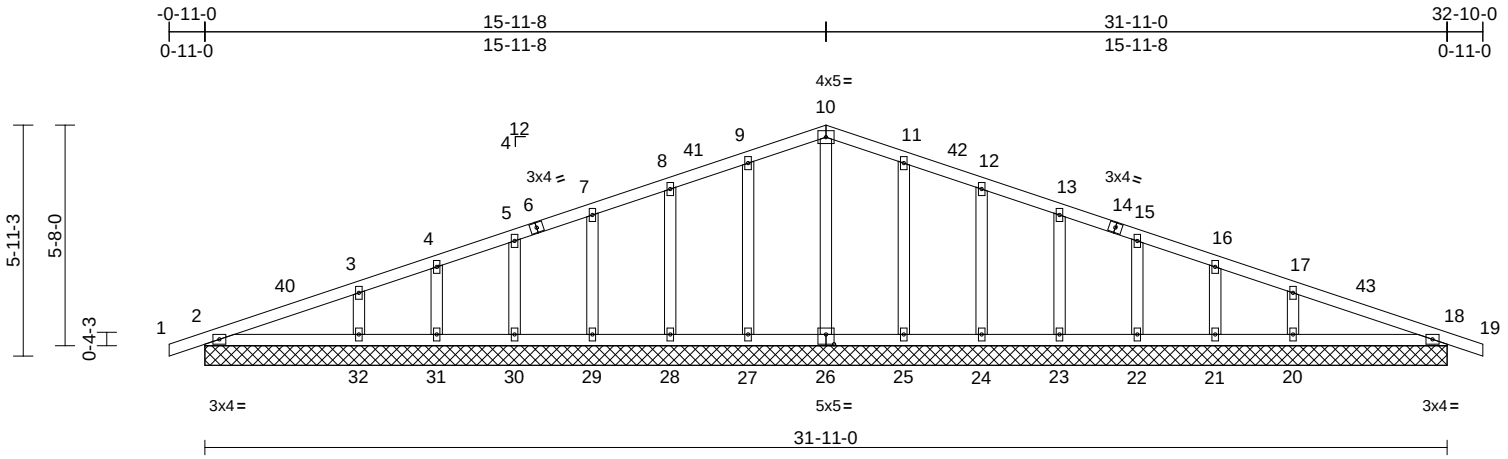

Scale = 1:59.2

Plate Offsets (X, Y): [26:0-2-8,0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.13	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.12	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00	18	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS							Weight: 158 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.
BOT CHORD Rigid ceiling directly applied.

REACTIONS (size) 2=31-11-0, 18=31-11-0, 20=31-11-0, 21=31-11-0, 22=31-11-0, 23=31-11-0, 24=31-11-0, 25=31-11-0, 26=31-11-0, 27=31-11-0, 28=31-11-0, 29=31-11-0, 30=31-11-0, 31=31-11-0, 32=31-11-0, 33=31-11-0, 37=31-11-0
Max Horiz 2=-55 (LC 10), 33=-55 (LC 10)
Max Uplift 2=-21 (LC 12), 18=-21 (LC 12), 20=-8 (LC 12), 21=-7 (LC 12), 22=-7 (LC 12), 23=-6 (LC 12), 24=-7 (LC 12), 25=-5 (LC 12), 27=-5 (LC 12), 28=-7 (LC 12), 29=-6 (LC 12), 30=-7 (LC 12), 31=-7 (LC 12), 32=-8 (LC 12), 33=-21 (LC 12), 37=-21 (LC 12)
Max Grav 2=198 (LC 1), 18=198 (LC 1), 20=308 (LC 22), 21=98 (LC 1), 22=176 (LC 1), 23=156 (LC 22), 24=160 (LC 1), 25=167 (LC 22), 26=144 (LC 1), 27=167 (LC 21), 28=160 (LC 1), 29=156 (LC 21), 30=176 (LC 1), 31=98 (LC 1), 32=308 (LC 21), 33=198 (LC 1), 37=198 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/17, 2-3=-56/46, 3-4=-58/37, 4-5=-45/57, 5-7=-43/84, 7-8=-44/109, 8-9=-53/135, 9-10=-62/160, 10-11=-62/161, 11-12=-53/137, 12-13=-44/111, 13-15=-36/86, 15-16=-32/59, 16-17=-43/39, 17-18=-49/27, 18-19=0/17
BOT CHORD 2-32=-13/67, 31-32=-13/67, 30-31=-13/67, 29-30=-13/67, 28-29=-13/67, 27-28=-13/67, 25-27=-13/67, 24-25=-13/67, 23-24=-13/67, 22-23=-13/67, 21-22=-13/67, 20-21=-13/67, 18-20=-13/67
WEBS 10-26=-104/0, 9-27=-127/102, 8-28=-120/65, 7-29=-118/56, 5-30=-128/61, 4-31=-85/46, 3-32=-208/101, 11-25=-127/103, 12-24=-120/65, 13-23=-118/56, 15-22=-128/61, 16-21=-85/46, 17-20=-208/101

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=32ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Corner (3) -0-11-0 to 2-3-5, Exterior (2) 2-3-5 to 15-11-8, Corner (3) 15-11-8 to 19-1-13, Exterior (2) 19-1-13 to 32-10-0 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) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) All bearings are assumed to be SP No.2 .
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 21 lb uplift at joint 2, 21 lb uplift at joint 18, 5 lb uplift at joint 27, 7 lb uplift at joint 28, 6 lb uplift at joint 29, 7 lb uplift at joint 30, 7 lb uplift at joint 31, 8 lb uplift at joint 32, 5 lb uplift at joint 25, 7 lb uplift at joint 24, 6 lb uplift at joint 23, 7 lb uplift at joint 22, 7 lb uplift at joint 21, 8 lb uplift at joint 20, 21 lb uplift at joint 2 and 21 lb uplift at joint 18.
11) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard

April 17,2024

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

Job	Truss	Truss Type	Qty	Ply	Value Build Homes - Webster
Q2400770	A02	Common	9	1	I64982860 Job Reference (optional)

Carolina Structural Systems (Star, NC)), Ether, NC - 27247,

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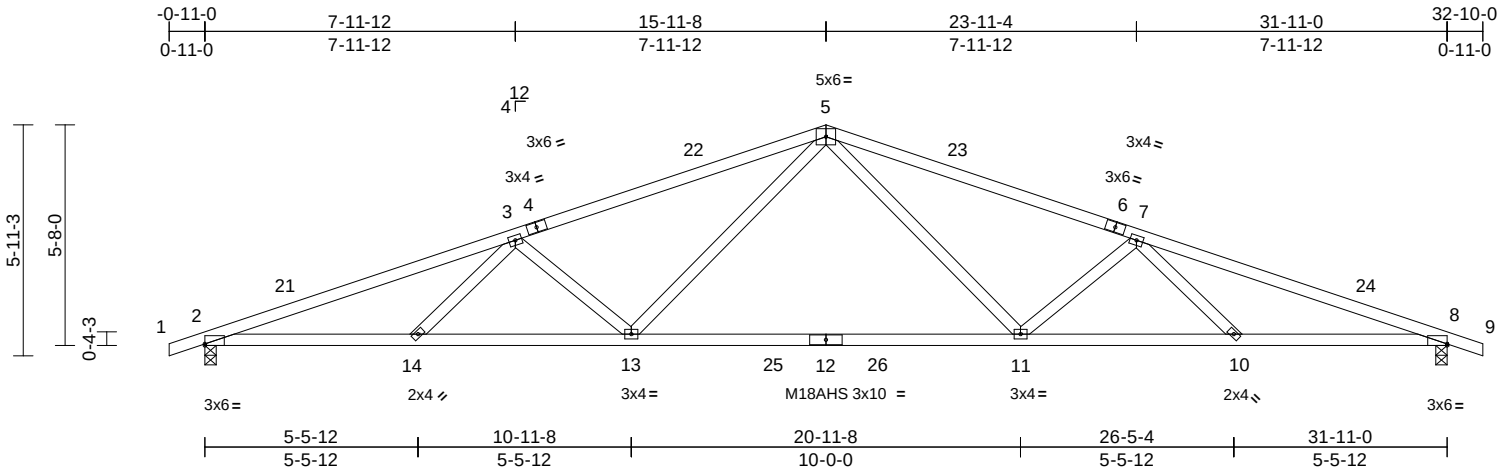

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Plate Offsets (X, Y): [2:Edge,0-0-8], [8:Edge,0-0-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.81	Vert(LL)	-0.32	11-13	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.73	Vert(CT)	-0.71	11-13	>542	240	M18AHS	186/179
BCLL	0.0*	Rep Stress Incr	YES	WB	0.34	Horz(CT)	0.11	8	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS		Wind(LL)	0.13	11-13	>999	240	Weight: 144 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.1
WEBS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied.

REACTIONS (size) 2=0-3-8, 8=0-3-8
Max Horiz 2=55 (LC 11)
Max Uplift 2=-32 (LC 12), 8=-32 (LC 12)
Max Grav 2=1332 (LC 1), 8=1332 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/17, 2-3=-3246/139, 3-5=-2677/153, 5-7=-2677/153, 7-8=-3246/139, 8-9=0/17
BOT CHORD 2-14=-67/3024, 13-14=-105/2923, 11-13=-33/1910, 10-11=-113/2923, 8-10=-75/3024
WEBS 3-14=0/229, 3-13=-642/132, 5-13=0/830, 5-11=0/830, 7-11=-642/132, 7-10=0/229

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=32ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) -0-11-0 to 2-3-5, Interior (1) 2-3-5 to 15-11-8, Exterior (2) 15-11-8 to 19-1-13, Interior (1) 19-1-13 to 32-10-0 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) All plates are MT20 plates unless otherwise indicated.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) All bearings are assumed to be SP No.1 .
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 32 lb uplift at joint 2 and 32 lb uplift at joint 8.
8) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard

April 17,2024

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

Job	Truss	Truss Type	Qty	Ply	Value Build Homes - Webster
Q2400770	A03	Common	9	1	I64982861
					Job Reference (optional)

Carolina Structural Systems (Star, NC)), Ether, NC - 27247,

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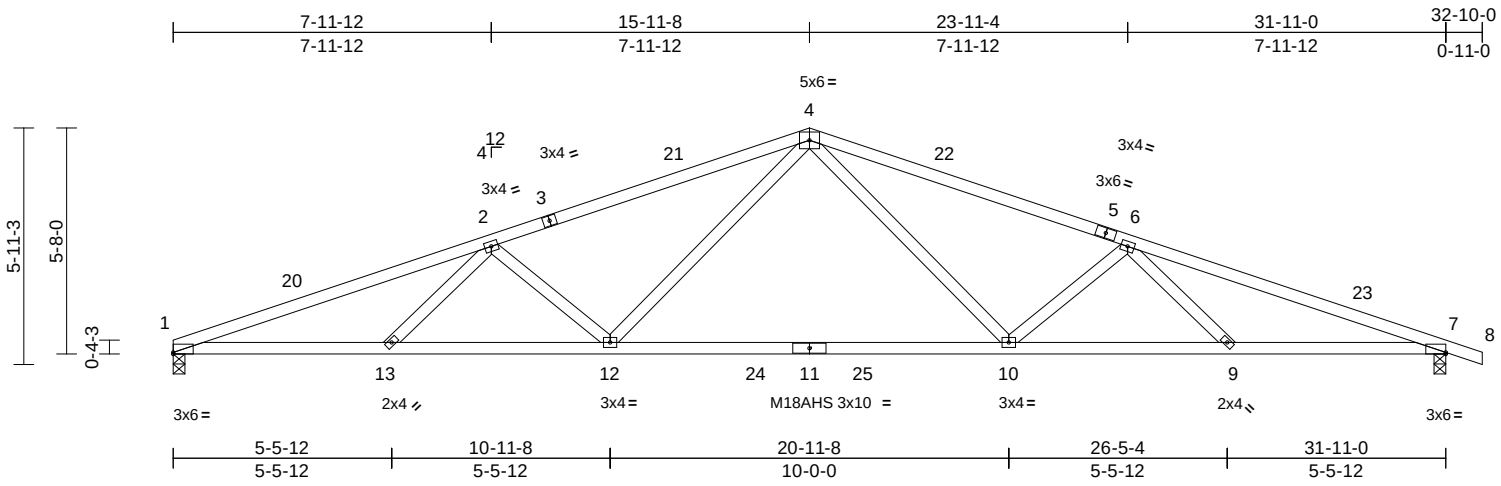

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Plate Offsets (X, Y): [1:Edge,0-0-8], [7:Edge,0-0-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.81	Vert(LL)	-0.32	10-12	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.73	Vert(CT)	-0.71	10-12	>541	240	M18AHS	186/179
BCLL	0.0*	Rep Stress Incr	YES	WB	0.35	Horz(CT)	0.11	7	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS		Wind(LL)	0.13	10-12	>999	240	Weight: 143 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.1
WEBS 2x4 SP No.3

BRACING

TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied.

REACTIONS (size) 1=0-3-8, 7=0-3-8
Max Horiz 1=-56 (LC 10)
Max Uplift 1=-9 (LC 12), 7=-33 (LC 12)
Max Grav 1=1276 (LC 1), 7=1332 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-3259/162, 2-4=-2682/163, 4-6=-2680/156, 6-7=-3248/141, 7-8=0/17
BOT CHORD 1-13=-89/3036, 12-13=-118/2931, 10-12=-38/1912, 9-10=-118/2925, 7-9=-80/3026
WEBS 2-13=0/231, 2-12=-648/133, 4-12=0/833, 4-10=0/830, 6-10=-642/132, 6-9=0/229

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=32ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) 0-0-0 to 3-2-5, Interior (1) 3-2-5 to 15-11-8, Exterior (2) 15-11-8 to 19-1-13, Interior (1) 19-1-13 to 32-10-0 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) All plates are MT20 plates unless otherwise indicated.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) All bearings are assumed to be SP No.1 .
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 9 lb uplift at joint 1 and 33 lb uplift at joint 7.
8) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard

April 17,2024

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

Job	Truss	Truss Type	Qty	Ply	Value Build Homes - Webster
Q2400770	A04	Common	6	1	I64982862
					Job Reference (optional)

Carolina Structural Systems (Star, NC)), Ether, NC - 27247,

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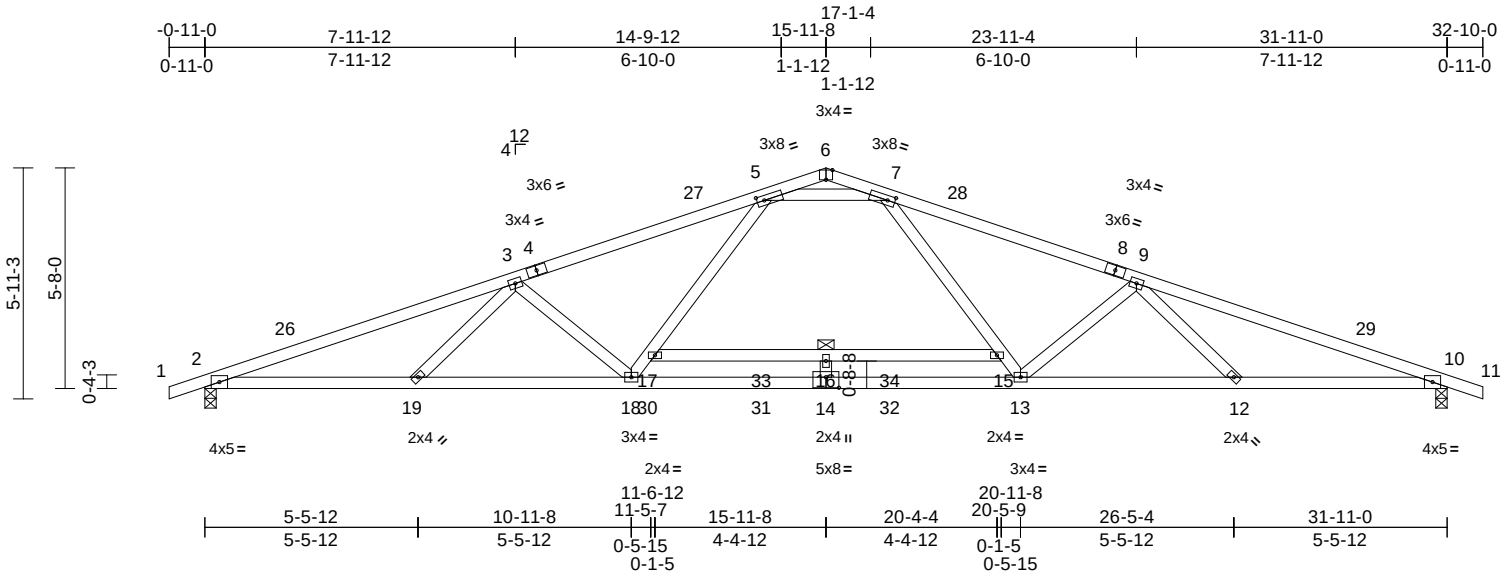

Scale = 1:59.2

Plate Offsets (X, Y): [5:0-2-4,0-1-8], [6:0-2-0,Edge], [7:0-2-4,0-1-8], [14:0-4-0,0-3-4]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.72	Vert(LL)	-0.39	16	>990	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.71	Vert(CT)	-0.85	16	>452	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.58	Horz(CT)	0.10	10	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS		Wind(LL)	0.12	14	>999	240	Weight: 159 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP DSS *Except* 15-17:2x4 SP No.2
WEBS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied.

REACTIONS (size) 2=0-3-8, 10=0-3-8
Max Horiz 2=55 (LC 11)
Max Grav 2=1423 (LC 1), 10=1423 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/17, 2-3=-3505/0, 3-5=-3008/0, 5-6=-119/3, 6-7=-110/3, 7-9=-3008/0, 9-10=-3505/0, 10-11=0/17
BOT CHORD 2-19=0/3265, 18-19=0/3173, 13-18=0/2374, 12-13=0/3173, 10-12=0/3265, 16-17=-106/0, 15-16=-106/0
WEBS 3-19=0/160, 3-18=-639/125, 9-13=-639/125, 9-12=0/185, 14-16=-103/0, 5-7=-2260/98, 17-18=0/763, 5-17=0/889, 7-15=0/920, 13-15=0/763

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=32ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) -0-11-0 to 2-3-5, Interior (1) 2-3-5 to 15-11-8, Exterior (2) 15-11-8 to 19-1-13, Interior (1) 19-1-13 to 32-10-0 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) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * 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 = 10.0psf.
5) All bearings are assumed to be SP DSS .
6) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
7) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard

April 17,2024

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

Job	Truss	Truss Type	Qty	Ply	Value Build Homes - Webster
Q2400770	B01	Common Supported Gable	1	1	I64982863 Job Reference (optional)

Carolina Structural Systems (Star, NC)), Ether, NC - 27247,

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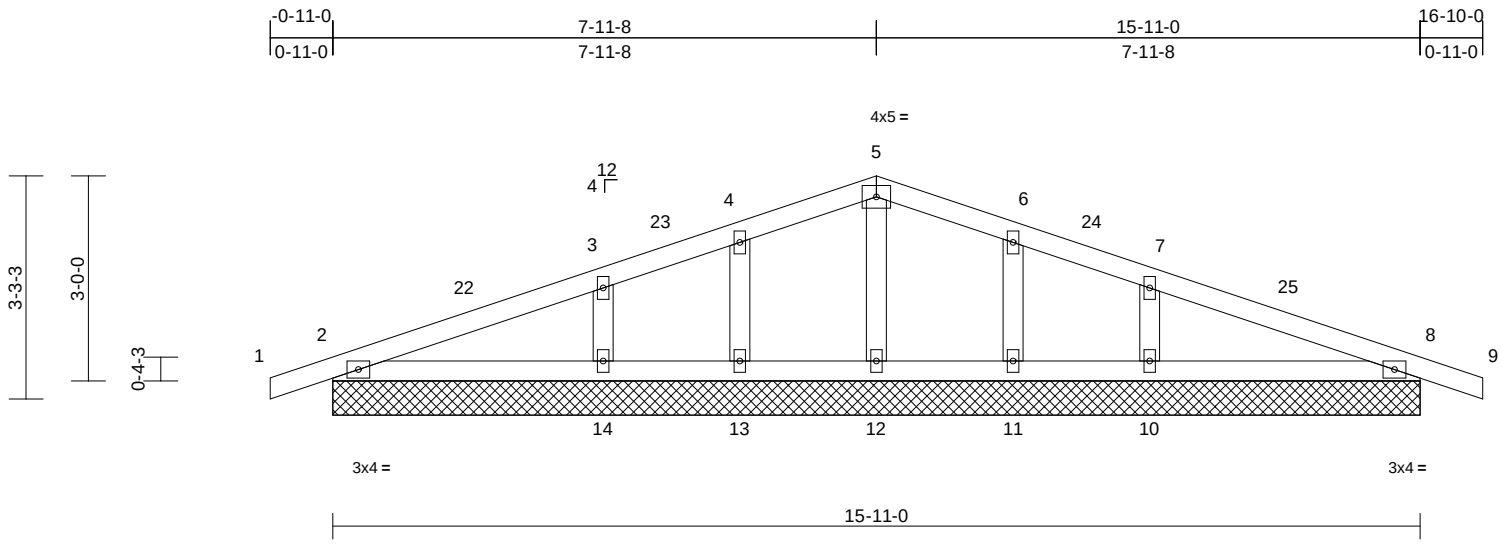

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Loading	(psf)	Spacing	1-11-4	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.13	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.12	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.04	Horz(CT)	0.00	8	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS							Weight: 64 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.
BOT CHORD Rigid ceiling directly applied.

REACTIONS (size) 2=15-11-0, 8=15-11-0, 10=15-11-0, 11=15-11-0, 12=15-11-0, 13=15-11-0, 14=15-11-0, 15=15-11-0, 19=15-11-0
Max Horiz 2=-26 (LC 10), 15=-26 (LC 10)
Max Uplift 2=-27 (LC 12), 8=-27 (LC 12), 10=-7 (LC 12), 11=-7 (LC 12), 13=-7 (LC 12), 14=-7 (LC 12), 15=-27 (LC 12), 19=-27 (LC 12)
Max Grav 2=195 (LC 1), 8=195 (LC 1), 10=298 (LC 1), 11=101 (LC 22), 12=162 (LC 1), 13=101 (LC 21), 14=298 (LC 1), 15=195 (LC 1), 19=195 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/17, 2-3=-50/29, 3-4=-51/68, 4-5=-42/88, 5-6=-42/89, 6-7=-51/69, 7-8=-50/31, 8-9=0/17
BOT CHORD 2-14=0/41, 13-14=0/36, 12-13=0/36, 11-12=0/36, 10-11=0/36, 8-10=0/39
WEBS 5-12=-109/22, 4-13=-89/92, 3-14=-201/98, 6-11=-89/92, 7-10=-201/98

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Corner (3) -0-11-0 to 2-1-0, Exterior (2) 2-1-0 to 7-11-8, Corner (3) 7-11-8 to 10-11-8, Exterior (2) 10-11-8 to 16-10-0 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) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) All bearings are assumed to be SP No.2 .
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 27 lb uplift at joint 2, 27 lb uplift at joint 8, 7 lb uplift at joint 13, 7 lb uplift at joint 14, 7 lb uplift at joint 11, 7 lb uplift at joint 10, 27 lb uplift at joint 2 and 27 lb uplift at joint 8.
11) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 2, 15.
12) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
13) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard

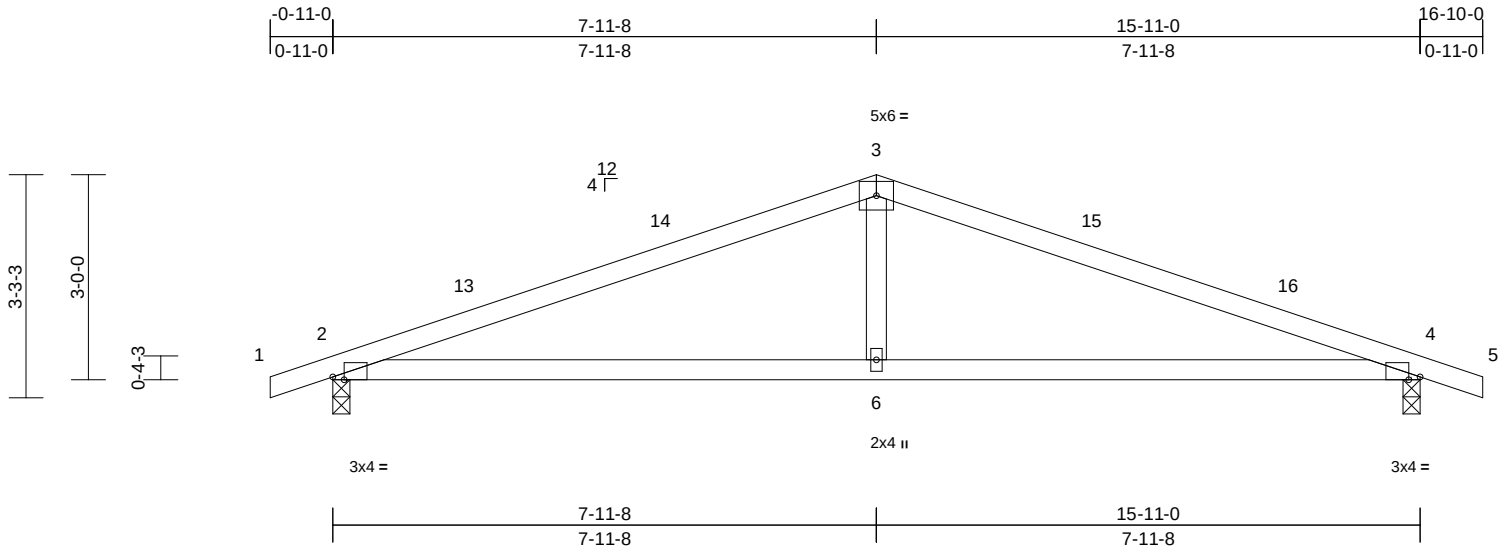
April 17,2024

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

Job	Truss	Truss Type	Qty	Ply	Value Build Homes - Webster
Q2400770	B02	Common	2	1	I64982864 Job Reference (optional)

Carolina Structural Systems (Star, NC)), Ether, NC - 27247,

Run: 8.73 S Apr 3 2024 Print: 8.730 S Apr 3 2024 MiTek Industries, Inc. Wed Apr 17 13:53:00 ID:D8ltDwacLJBjkzrsMoy270zQf8D-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:33.7

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.72	Vert(LL)	-0.12	6-12	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.69	Vert(CT)	-0.23	6-12	>821	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.14	Horz(CT)	0.02	4	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS		Wind(LL)	0.16	6-12	>999	240	Weight: 55 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.
BOT CHORD Rigid ceiling directly applied.

REACTIONS (size) 2=0-3-0, 4=0-3-0
Max Horiz 2=-26 (LC 10)
Max Uplift 2=-163 (LC 12), 4=-163 (LC 12)
Max Grav 2=692 (LC 1), 4=692 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/17, 2-3=-1202/728, 3-4=-1202/728, 4-5=0/17
BOT CHORD 2-6=-630/1098, 4-6=-630/1098
WEBS 3-6=-276/357

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) -0-11-0 to 2-1-0, Interior (1) 2-1-0 to 7-11-8, Exterior (2) 7-11-8 to 10-11-8, Interior (1) 10-11-8 to 16-10-0 zone; cantilever left and right exposed ; end vertical left and right exposed; porch left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * 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.
5) All bearings are assumed to be SP No.2 .
6) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 2.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 163 lb uplift at joint 2 and 163 lb uplift at joint 4.
8) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard

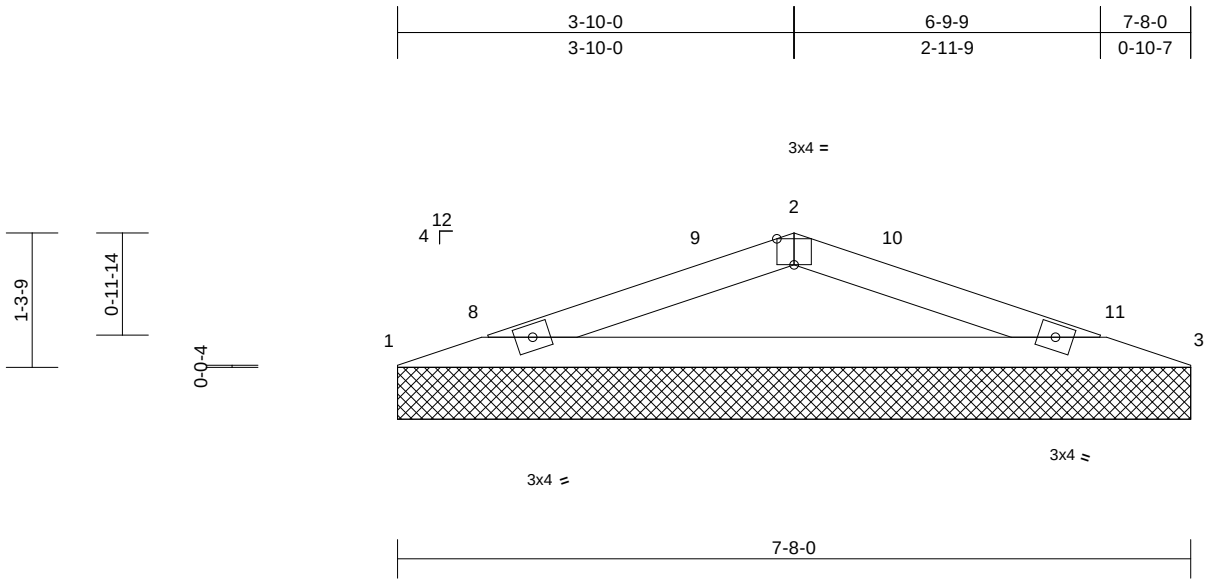
April 17,2024

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

Job	Truss	Truss Type	Qty	Ply	Value Build Homes - Webster
Q2400770	V02	Valley	1	1	I64982866
					Job Reference (optional)

Carolina Structural Systems (Star, NC)), Ether, NC - 27247,

Run: 8.73 S Apr 3 2024 Print: 8.730 S Apr 3 2024 MiTek Industries, Inc. Wed Apr 17 13:53:00 Page: 1
ID:JWxg4QJdufT_7cPMe4g6GGzQfHc-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:22.3

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.48	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.35	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.02	3	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS							Weight: 21 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied.

REACTIONS (size) 1=7-8-0, 3=7-8-0
Max Horiz 1=10 (LC 11)
Max Uplift 1=-2 (LC 12), 3=-2 (LC 12)
Max Grav 1=307 (LC 1), 3=307 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-777/185, 2-3=-777/185
BOT CHORD 1-3=-165/727

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) 0-0-12 to 3-0-12, Interior (1) 3-0-12 to 3-10-12, Exterior (2) 3-10-12 to 6-10-12, Interior (1) 6-10-12 to 7-8-12 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) 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) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 4-0-0 oc.
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 .
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 2 lb uplift at joint 1 and 2 lb uplift at joint 3.
10) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard

April 17,2024

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

Job	Truss	Truss Type	Qty	Ply	Value Build Homes - Webster
Q2400770	V03	Valley	1	1	I64982867
					Job Reference (optional)

Carolina Structural Systems (Star, NC)), Ether, NC - 27247,

Run: 8.73 S Apr 3 2024 Print: 8.730 S Apr 3 2024 MiTek Industries, Inc. Wed Apr 17 13:53:00 Page: 1
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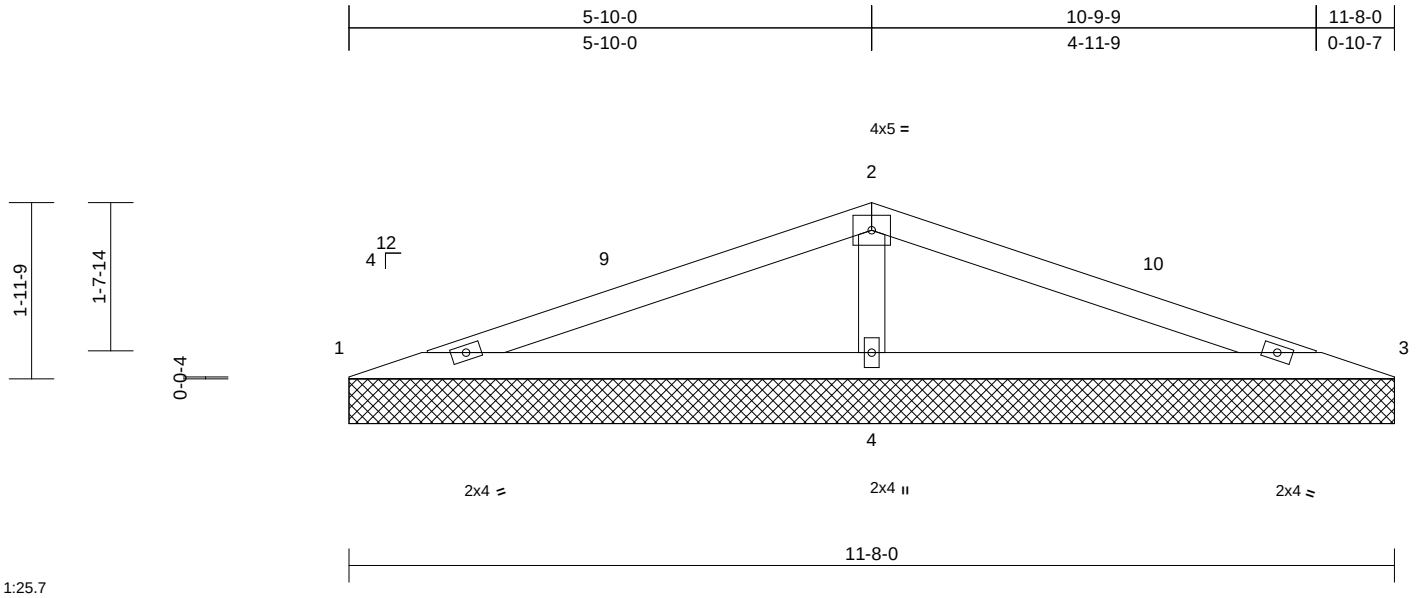

Scale = 1:25.7

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.33	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.33	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.12	Horiz(TL)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS							Weight: 35 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.
BOT CHORD Rigid ceiling directly applied.

REACTIONS (size) 1=11-8-0, 3=11-8-0, 4=11-8-0
Max Horiz 1=16 (LC 11)
Max Uplift 3=-1 (LC 9), 4=-7 (LC 12)
Max Grav 1=120 (LC 21), 3=120 (LC 22), 4=770 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-193/455, 2-3=-193/455
BOT CHORD 1-4=-383/177, 3-4=-383/177
WEBS 2-4=-577/129

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) 0-0-12 to 3-0-12, Interior (1) 3-0-12 to 5-10-12, Exterior (2) 5-10-12 to 8-10-12, Interior (1) 8-10-12 to 11-8-12 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) 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) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 4-0-0 oc.
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 .
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 1 lb uplift at joint 3 and 7 lb uplift at joint 4.
10) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard

April 17,2024

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

Job	Truss	Truss Type	Qty	Ply	Value Build Homes - Webster
Q2400770	V04	Valley	1	1	I64982868 Job Reference (optional)

Carolina Structural Systems (Star, NC)), Ether, NC - 27247,

Run: 8.73 S Apr 3 2024 Print: 8.730 S Apr 3 2024 MiTek Industries, Inc. Wed Apr 17 13:53:00 Page: 1
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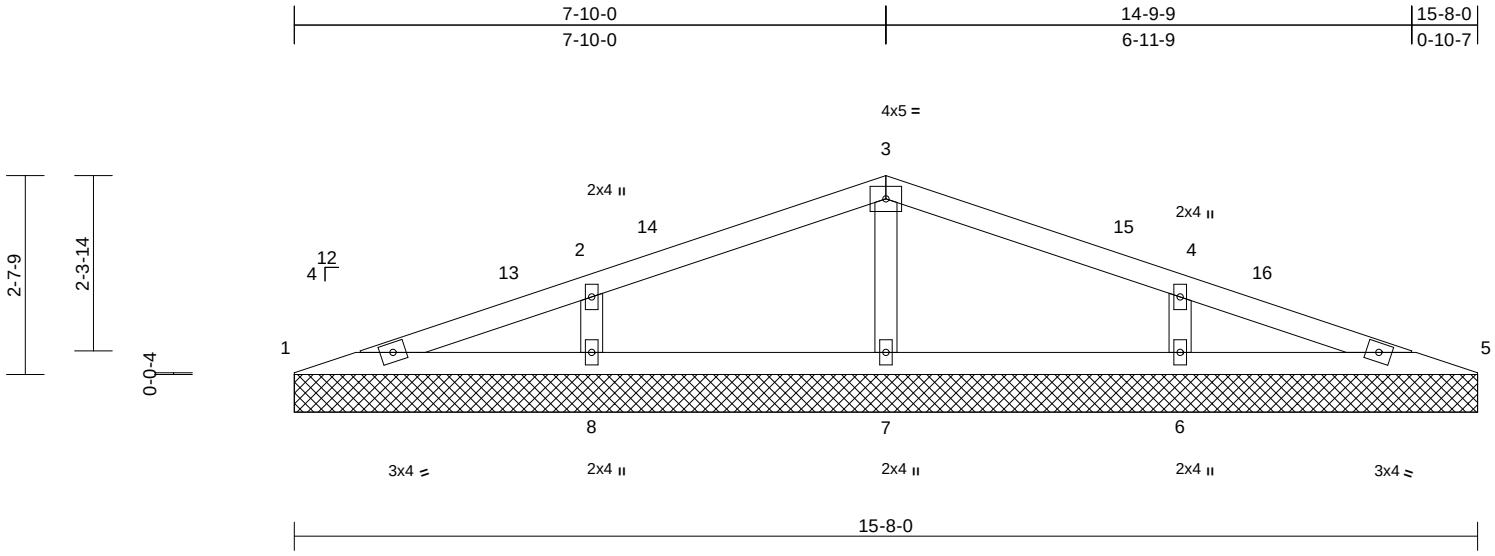


Scale = 1:30.5

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.20	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.11	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.06	Horiz(TL)	0.00	8	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS							Weight: 50 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.
BOT CHORD Rigid ceiling directly applied.

REACTIONS (size) 1=15-8-0, 5=15-8-0, 6=15-8-0, 7=15-8-0, 8=15-8-0
Max Horiz 1=22 (LC 11)
Max Uplift 6=-15 (LC 12), 8=-15 (LC 12)
Max Grav 1=107 (LC 21), 5=107 (LC 22), 6=361 (LC 22), 7=341 (LC 1), 8=361 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-171/129, 2-3=0/125, 3-4=0/125, 4-5=-171/129
BOT CHORD 1-8=-86/152, 7-8=-86/28, 6-7=-86/28, 5-6=-86/152
WEBS 2-8=-258/80, 4-6=-258/80, 3-7=-274/57

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) 0-0-12 to 3-0-12, Interior (1) 3-0-12 to 7-10-12, Exterior (2) 7-10-12 to 10-10-12, Interior (1) 10-10-12 to 15-8-12 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) 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) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 4-0-0 oc.
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 .
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 15 lb uplift at joint 8 and 15 lb uplift at joint 6.
10) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

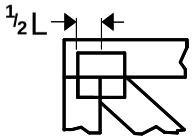
LOAD CASE(S) Standard

April 17,2024

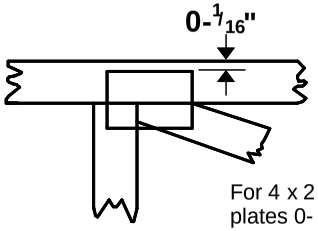
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

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.

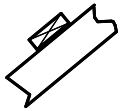
* Plate location details available in MiTek software or upon request.

PLATE SIZE

4 x 4

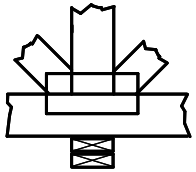
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

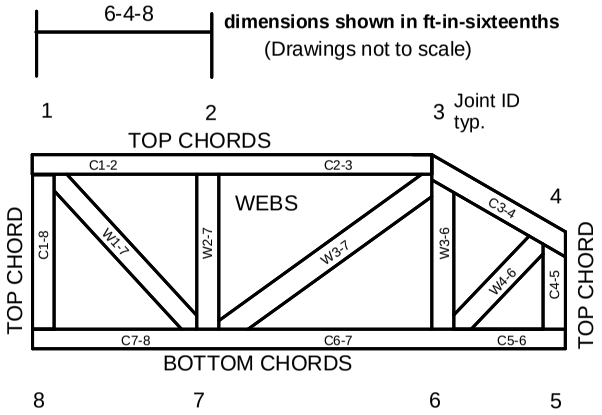


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

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.