

Trenco
818 Soundside Rd
Edenton, NC 27932

Re: Q2402074
Value Build Homes - O'Quinn

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: I67896072 thru I67896092

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

North Carolina COA: C-0844



August 30, 2024

Tony Miller

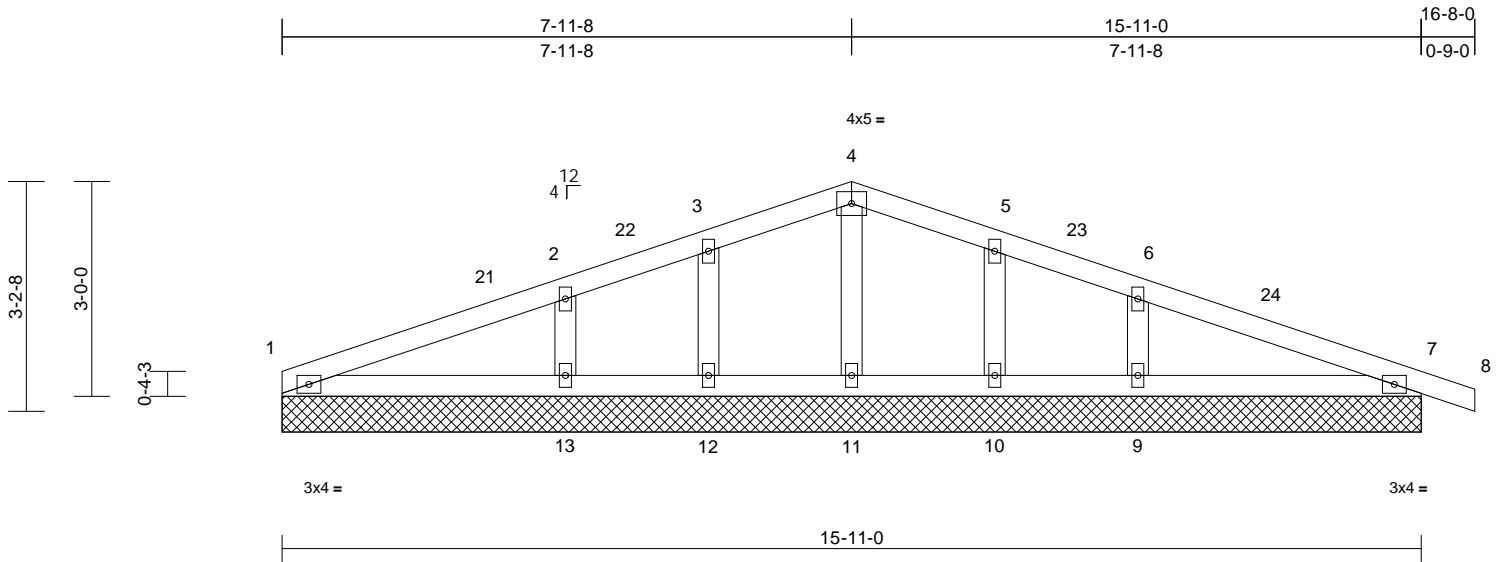
IMPORTANT NOTE: The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), which 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 Q2402074	Truss A01	Truss Type Common Supported Gable	Qty 1	Ply 1	Value Build Homes - O'Quinn Job Reference (optional)	167896072
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Carolina Structural Systems (Star, NC)), Ether, NC - 27247,

Run: 8.73 S Aug 15 2024 Print: 8.730 S Aug 15 2024 MiTek Industries, Inc. Thu Aug 29 11:40:47
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Page: 1



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	0.14	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.14	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.02	Horz(CT)	0.00	7	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS							Weight: 62 lb	FT = 20%

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

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

REACTIONS (size)
1=15-11-0, 7=15-11-0, 9=15-11-0,
10=15-11-0, 11=15-11-0,
12=15-11-0, 13=15-11-0,
14=15-11-0, 18=15-11-0
Max Horiz 1=-26 (LC 10), 14=-26 (LC 10)
Max Uplift 7=-21 (LC 12), 9=-9 (LC 12), 10=-6 (LC 12), 12=-4 (LC 12), 13=-13 (LC 12), 18=-21 (LC 12)
Max Grav 1=134 (LC 1), 7=183 (LC 1), 9=303 (LC 1), 10=98 (LC 22), 11=164 (LC 1), 12=94 (LC 21), 13=311 (LC 1), 14=134 (LC 1), 18=183 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-78/29, 2-3=-52/71, 3-4=-42/88, 4-5=-42/89, 5-6=-52/70, 6-7=-59/30, 7-8=0/14
BOT CHORD 1-13=-23/69, 12-13=0/34, 11-12=0/34, 10-11=0/34, 9-10=0/34, 7-9=0/48
WEBS 4-11=-110/23, 3-12=-86/91, 2-13=-207/123, 5-10=-88/92, 6-9=-203/103

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) 0-0-0 to 3-0-0, Exterior (2) 3-0-0 to 7-11-8, Corner (3) 7-11-8 to 10-11-8, Exterior (2) 10-11-8 to 16-8-0 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

- 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.
- All plates are 2x4 MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2'-0" oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3'-06"-00 tall by 2'-00"-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.2.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 21 lb uplift at joint 7, 4 lb uplift at joint 12, 13 lb uplift at joint 13, 6 lb uplift at joint 10, 9 lb uplift at joint 9 and 21 lb uplift at joint 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



August 30, 2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



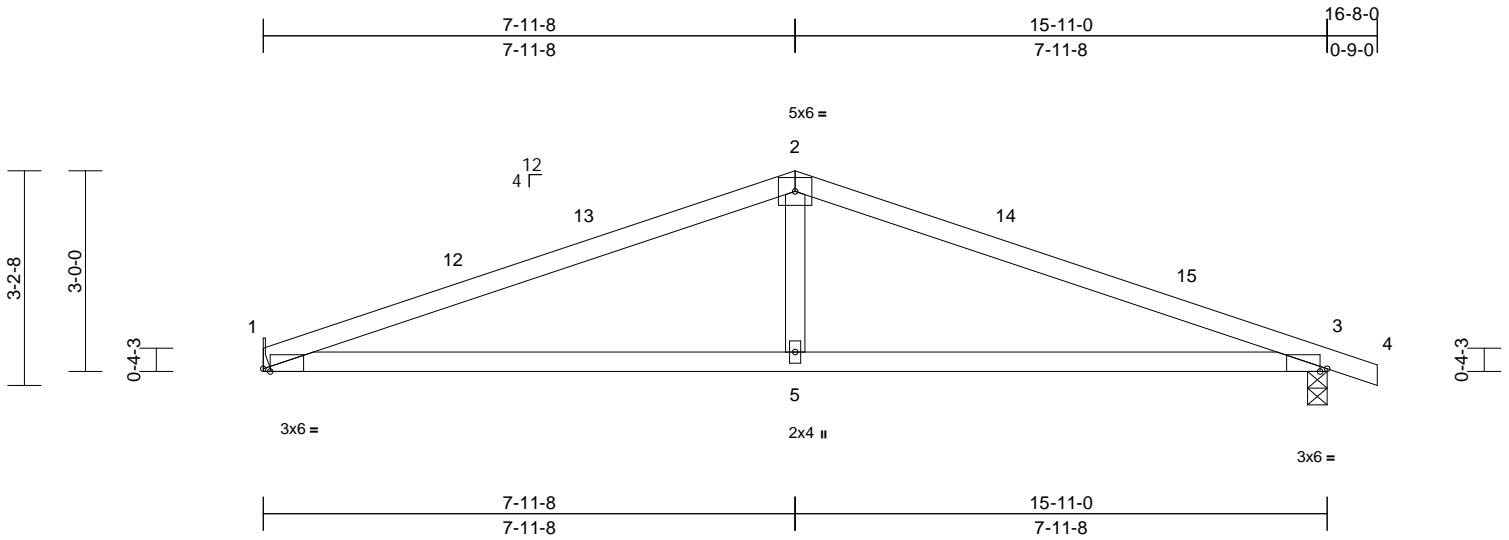
818 Soundside Road
Edenton, NC 27932

Job Q2402074	Truss A02	Truss Type Common	Qty 4	Ply 1	Value Build Homes - O'Quinn Job Reference (optional)	167896073
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Carolina Structural Systems (Star, NC)), Ether, NC - 27247,

Run: 8.73 S Aug 15 2024 Print: 8.730 S Aug 15 2024 MiTek Industries, Inc. Thu Aug 29 11:40:47
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Page: 1



Scale = 1:34.5
Plate Offsets (X, Y): [1:0-1-4,Edge], [3:0-1-4,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	0.74	Vert(LL)	-0.12	5-8	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.71	Vert(CT)	-0.24	5-8	>794	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.08	Horz(CT)	0.02	3	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS		Wind(LL)	0.06	5-8	>999	240	Weight: 54 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.
BOT CHORD Rigid ceiling directly applied.

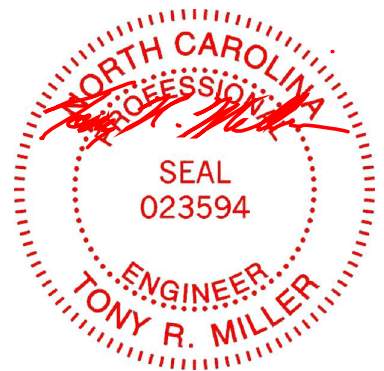
REACTIONS (size) 1= Mechanical, 3=0-3-8
Max Horiz 1=-27 (LC 10)
Max Uplift 1=-4 (LC 12), 3=-24 (LC 12)
Max Grav 1=636 (LC 1), 3=683 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-1211/114, 2-3=-1211/106, 3-4=0/14
BOT CHORD 1-5=-43/1107, 3-5=-43/1107
WEBS 2-5=0/358

- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 4 lb uplift at joint 1 and 24 lb uplift at joint 3.
- 8) 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

- NOTES**
- 1) Unbalanced roof live loads have been considered for this design.
 - 2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TC DL=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) 0-0-0 to 3-0-0, Interior (1) 3-0-0 to 7-11-8, Exterior (2) 7-11-8 to 10-11-8, Interior (1) 10-11-8 to 16-8-0 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.
 - 5) Bearings are assumed to be: , Joint 3 SP No.2 .
 - 6) Refer to girder(s) for truss to truss connections.



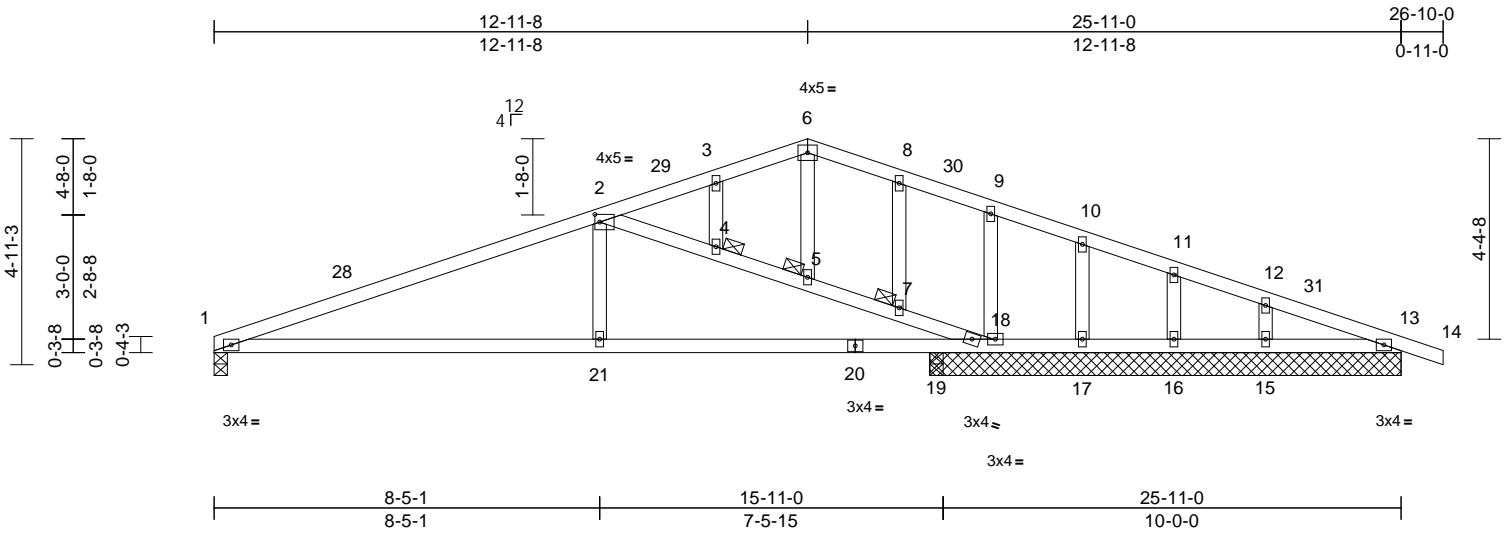
August 30, 2024

Job Q2402074	Truss B01	Truss Type Common Structural Gable	Qty 1	Ply 1	Value Build Homes - O'Quinn Job Reference (optional)	167896074
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Carolina Structural Systems (Star, NC), Ether, NC - 27247,

Run: 8.73 S Aug 15 2024 Print: 8.730 S Aug 15 2024 MiTek Industries, Inc. Thu Aug 29 11:40:48
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Page: 1



Scale = 1:50.3

Plate Offsets (X, Y): [2:0-1-4,0-2-0], [18:0-3-4,0-3-4]

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	0.65	Vert(LL)	-0.12	21-24	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.71	Vert(CT)	-0.28	21-24	>672	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.07	Horz(CT)	0.03	25	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS		Wind(LL)	0.08	21-24	>999	240	Weight: 119 lb	FT = 20%

LUMBER

- TOP CHORD 2x4 SP No.2
- BOT CHORD 2x4 SP No.2
- WEBS 2x4 SP No.2
- OTHERS 2x4 SP No.2

BRACING

- TOP CHORD Structural wood sheathing directly applied.
- BOT CHORD Rigid ceiling directly applied.
- JOINTS 1 Brace at Jt(s): 5, 4, 7

REACTIONS (size)

- 1=0-3-8, 13=10-3-8, 15=10-3-8, 16=10-3-8, 17=10-3-8, 18=10-3-8, 19=0-3-8, 25=10-3-8
- Max Horiz 1=-42 (LC 10)
- Max Uplift 1=-11 (LC 12), 13=-21 (LC 12), 15=-3 (LC 12), 16=-11 (LC 12), 18=-88 (LC 12), 25=-21 (LC 12)
- Max Grav 1=662 (LC 1), 13=209 (LC 1), 15=214 (LC 22), 16=154 (LC 1), 17=103 (LC 22), 18=544 (LC 1), 19=327 (LC 3), 25=209 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

- TOP CHORD 1-2=-1264/112, 2-3=-205/93, 3-6=-170/109, 6-8=-170/113, 8-9=-188/101, 9-10=-155/78, 10-11=-173/63, 11-12=-172/45, 12-13=-162/26, 13-14=0/17, 2-4=-1055/58, 4-5=-1070/65, 5-7=-1078/59, 7-18=-1091/67
- BOT CHORD 1-21=-41/1159, 19-21=-41/1159, 18-19=-41/1159, 17-18=0/144, 16-17=0/144, 15-16=0/144, 13-15=0/144
- WEBS 5-6=-25/3, 3-4=-48/26, 7-8=-72/27, 9-18=-213/61, 10-17=-77/25, 11-16=-119/34, 12-15=-147/39, 2-21=0/327

NOTES

- 1) Unbalanced roof live loads have been considered for this design.

- 2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TC DL=6.0psf; BC DL=6.0psf; h=25ft; B=45ft; L=26ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) 0-0-0 to 3-0-0, Interior (1) 3-0-0 to 12-11-8, Exterior (2) 12-11-8 to 15-11-8, Interior (1) 15-11-8 to 26-10-0 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 studs spaced at 2'-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 11 lb uplift at joint 1, 21 lb uplift at joint 13, 88 lb uplift at joint 18, 11 lb uplift at joint 16, 3 lb uplift at joint 15 and 21 lb uplift at joint 13.
- 10) 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.
- 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



August 30, 2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



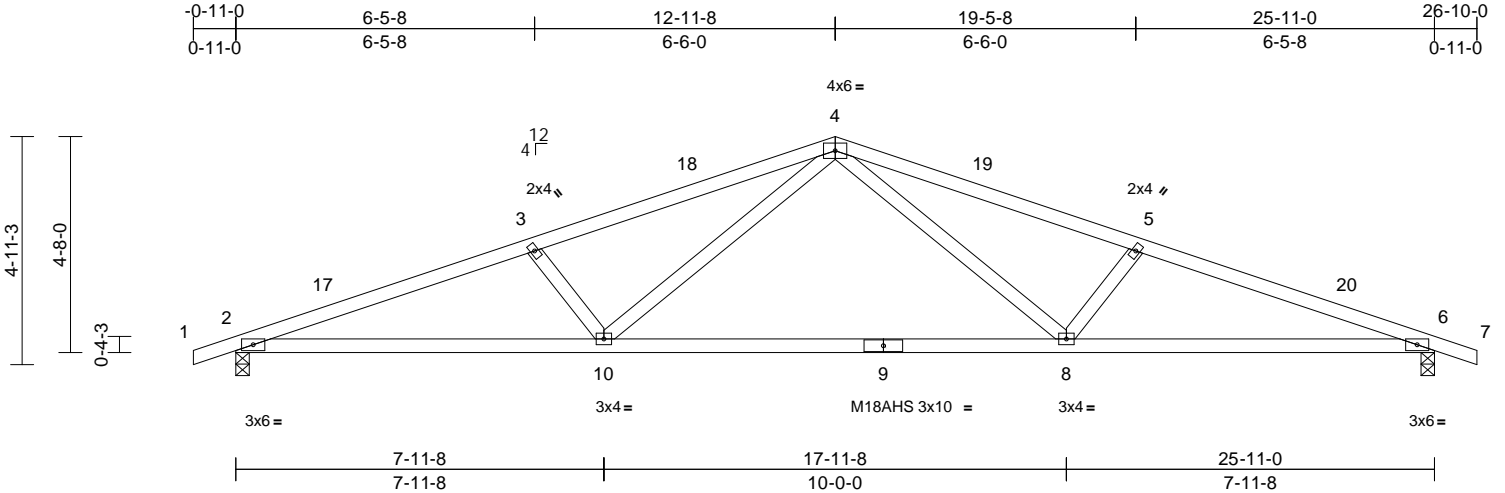
818 Soundside Road
Edenton, NC 27932

Job Q2402074	Truss B02	Truss Type Common	Qty 4	Ply 1	Value Build Homes - O'Quinn Job Reference (optional)	167896075
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Carolina Structural Systems (Star, NC)), Ether, NC - 27247,

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Page: 1



Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.46	Vert(LL)	-0.25	8-10	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.91	Vert(CT)	-0.57	8-10	>547	240	M18AHS	186/179
BCLL	0.0*	Rep Stress Incr	YES	WB	0.20	Horz(CT)	0.08	6	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS		Wind(LL)	0.09	8-10	>999	240		Weight: 109 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.
BOT CHORD Rigid ceiling directly applied.

REACTIONS (size) 2=0-3-8, 6=0-3-8
Max Horiz 2=42 (LC 11)
Max Uplift 2=-30 (LC 12), 6=-30 (LC 12)
Max Grav 2=1092 (LC 1), 6=1092 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/17, 2-3=-2542/138, 3-4=-2321/127,
4-5=-2321/127, 5-6=-2542/138, 6-7=0/17
BOT CHORD 2-10=-77/2381, 8-10=-35/1542, 6-8=-85/2381
WEBS 4-8=0/818, 5-8=-423/117, 4-10=0/818,
3-10=-423/117

- NOTES**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-10; Vult=120mph (3-second gust)
Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;
B=45ft; L=26ft; 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 12-11-8, Exterior (2) 12-11-8 to 15-11-8, Interior (1) 15-11-8 to 26-10-0 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
 - All plates are MT20 plates unless otherwise indicated.
 - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
 - All bearings are assumed to be SP No.2.

- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 30 lb uplift at joint 2 and 30 lb uplift at joint 6.
 - 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



August 30, 2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.
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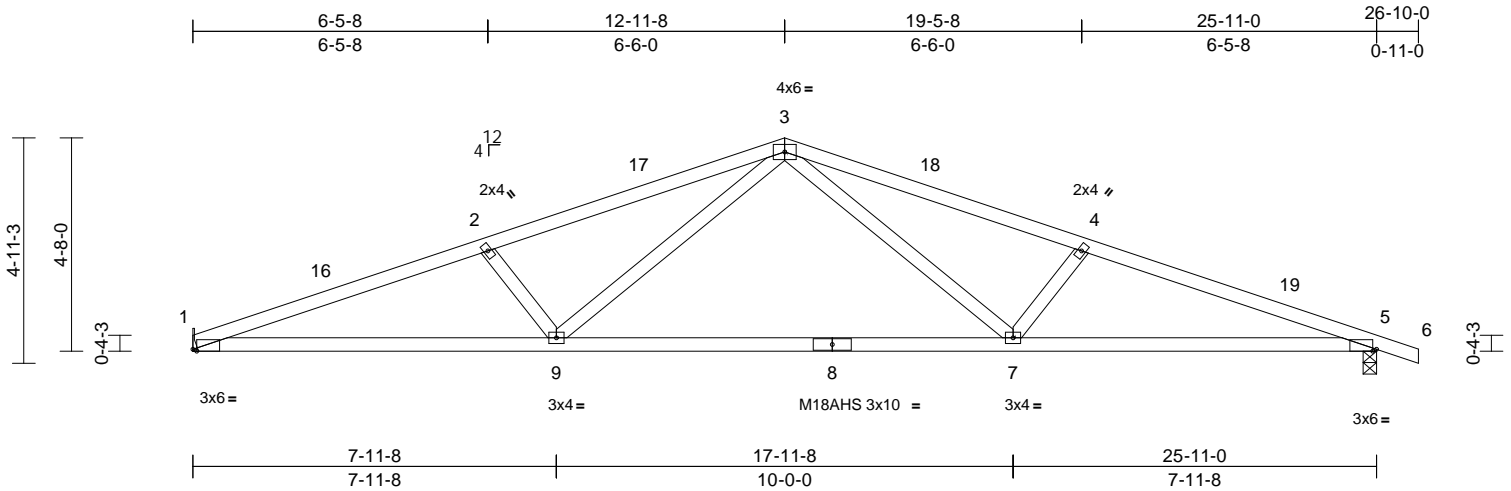
818 Soundside Road
Edenton, NC 27932

Job Q2402074	Truss B03	Truss Type Common	Qty 6	Ply 1	Value Build Homes - O'Quinn Job Reference (optional)	167896076
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Carolina Structural Systems (Star, NC)), Ether, NC - 27247,

Run: 8.73 S Aug 15 2024 Print: 8.730 S Aug 15 2024 MiTek Industries, Inc. Thu Aug 29 11:40:48
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Page: 1



Scale = 1:50.5

Plate Offsets (X, Y): [1:0-1-0,Edge], [5:0-1-0,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	0.46	Vert(LL)	-0.25	7-9	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.91	Vert(CT)	-0.57	7-9	>547	240	M18AHS	186/179
BCLL	0.0*	Rep Stress Incr	YES	WB	0.20	Horz(CT)	0.08	5	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS		Wind(LL)	0.08	7-9	>999	240	Weight: 107 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.
BOT CHORD Rigid ceiling directly applied.

REACTIONS

(size) 1= Mechanical, 5=0-3-8
Max Horiz 1=-43 (LC 10)
Max Uplift 1=-7 (LC 12), 5=-31 (LC 12)
Max Grav 1=1036 (LC 1), 5=1093 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-2552/153, 2-3=-2330/143,
3-4=-2324/132, 4-5=-2545/143, 5-6=0/17
BOT CHORD 1-9=-91/2391, 7-9=-41/1545, 5-7=-91/2384
WEBS 3-7=0/817, 4-7=-423/118, 3-9=0/825,
2-9=-427/118

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=120mph (3-second gust)
Vasd=95mph; TC DL=6.0psf; BCDL=6.0psf; h=25ft;
B=45ft; L=26ft; eave=4ft; Cat. II; Exp B; Enclosed;
MWFRS (directional) and C-C Exterior (2) 0-0-0 to 3-0-0,
Interior (1) 3-0-0 to 12-11-8, Exterior (2) 12-11-8 to
15-11-8, Interior (1) 15-11-8 to 26-10-0 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
- All plates are MT20 plates unless otherwise indicated.
- This truss has been designed for a 10.0 psf bottom
chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf
on the bottom chord in all areas where a rectangle
3-06-00 tall by 2-00-00 wide will fit between the bottom
chord and any other members.

- Bearings are assumed to be: , Joint 5 SP No.2 .
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to
bearing plate capable of withstanding 7 lb uplift at joint 1
and 31 lb uplift at joint 5.
- 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



August 30, 2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



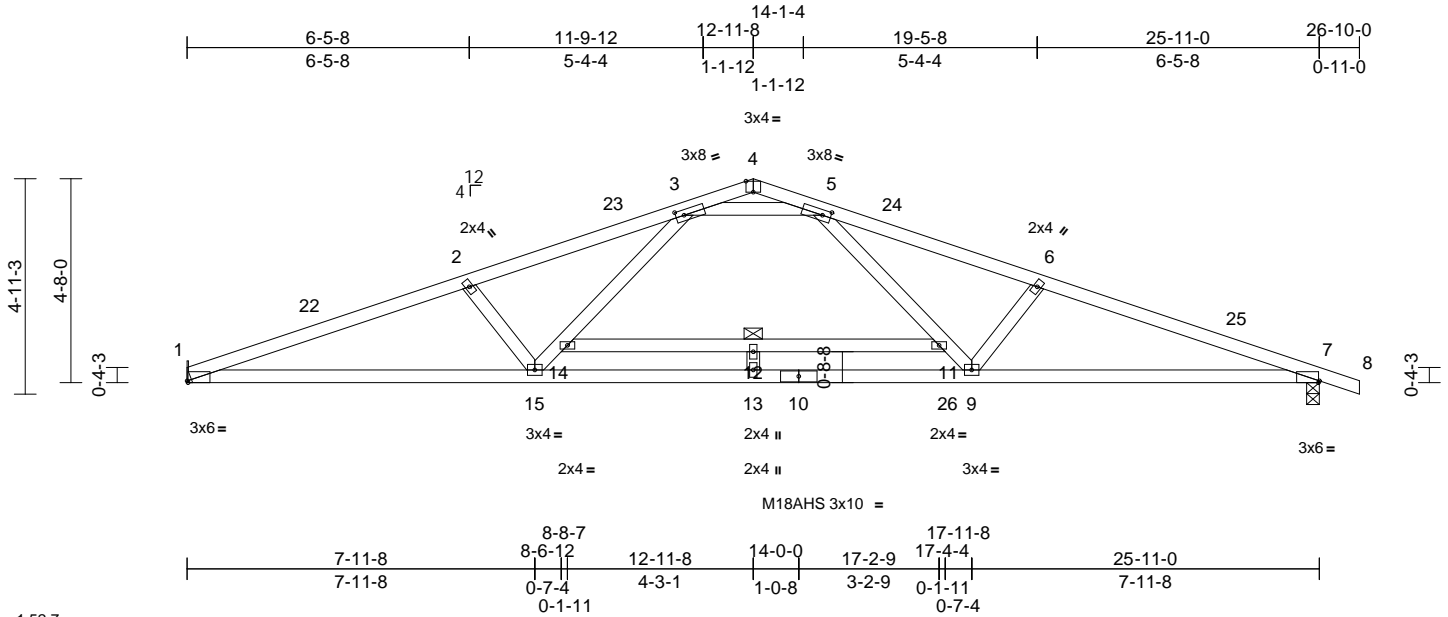
818 Soundside Road
Edenton, NC 27932

Job Q2402074	Truss B05	Truss Type Common	Qty 1	Ply 1	Value Build Homes - O'Quinn Job Reference (optional)	167896078
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Carolina Structural Systems (Star, NC), Ether, NC - 27247,

Run: 8.73 S Aug 15 2024 Print: 8.730 S Aug 15 2024 MiTek Industries, Inc. Thu Aug 29 11:40:48
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Page: 1



Scale = 1:52.7

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

Loading	(psf)	Spacing	2-1-8	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.73	Vert(LL)	-0.34	12-14	>914	360	MT20 244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.80	Vert(CT)	-0.80	12-14	>390	240	M18AHS 186/179
BCLL	0.0*	Rep Stress Incr	NO	WB	0.37	Horz(CT)	0.07	7	n/a	n/a	
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS		Wind(LL)	0.08	15-18	>999	240	Weight: 122 lb FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP DSS *Except* 14-11:2x4 SP No.2
WEBS 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-8-13 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 1= Mechanical, 7=0-3-8
Max Horiz 1=-46 (LC 10)
Max Grav 1=1220 (LC 1), 7=1281 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-3093/0, 2-3=-2865/0, 3-4=-121/11, 4-5=-122/9, 5-6=-2859/0, 6-7=-3085/0, 7-8=0/18
BOT CHORD 1-15=0/2885, 13-15=0/2164, 9-13=0/2164, 7-9=0/2877, 12-14=-143/0, 11-12=-143/0
WEBS 6-9=-437/114, 2-15=-441/116, 12-13=-77/0, 3-5=-1998/0, 14-15=0/808, 3-14=0/1012, 5-11=0/909, 9-11=0/800

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.
6) Bearings are assumed to be: , Joint 7 SP DSS .
7) Refer to girder(s) for truss to truss connections.
8) Load case(s) 1 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.00
Uniform Loads (lb/ft)
Vert: 1-4=-64, 4-8=-64, 16-19=-21, 11-14=-21
Concentrated Loads (lb)
Vert: 13=-50

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCCL=6.0psf; BCCL=6.0psf; h=25ft; B=45ft; L=26ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) 0-0-0 to 3-0-0, Interior (1) 3-0-0 to 12-11-8, Exterior (2) 12-11-8 to 15-11-8, Interior (1) 15-11-8 to 26-10-0 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.



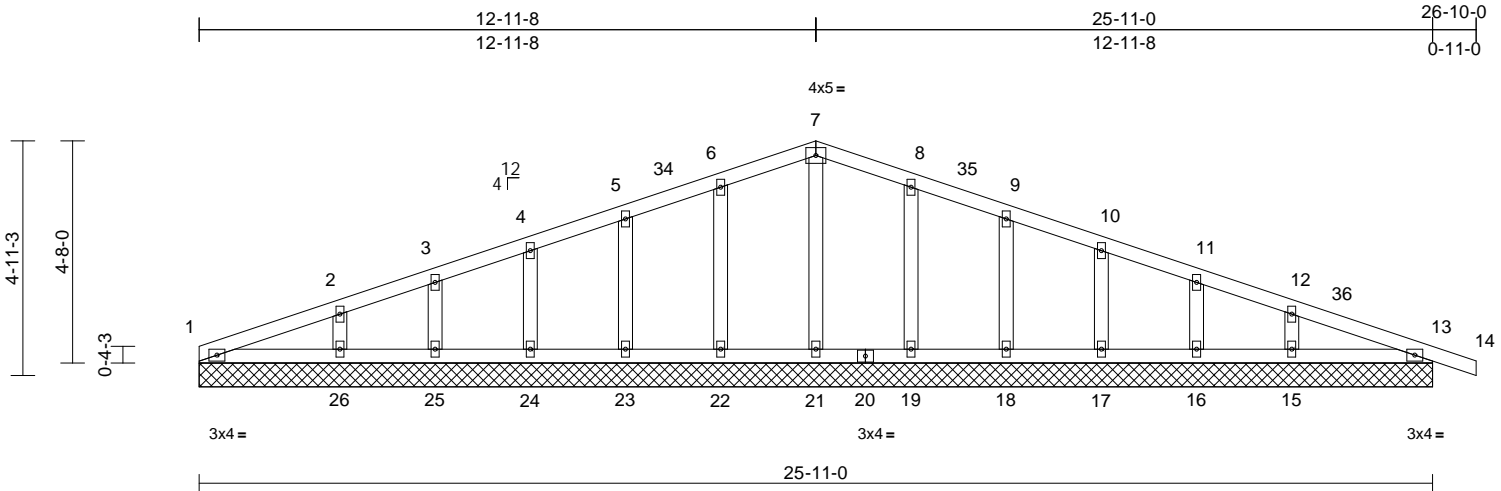
August 30, 2024

Job Q2402074	Truss B06	Truss Type Common Supported Gable	Qty 1	Ply 1	Value Build Homes - O'Quinn Job Reference (optional)	167896079
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Carolina Structural Systems (Star, NC)), Ether, NC - 27247,

Run: 8.73 S Aug 15 2024 Print: 8.730 S Aug 15 2024 MiTek Industries, Inc. Thu Aug 29 11:40:48
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Page: 1



Scale = 1:48.4

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	0.08	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.08	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.04	Horz(CT)	0.00	13	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS							Weight: 118 lb	FT = 20%

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

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

REACTIONS (size)
1=25-11-0, 13=25-11-0,
15=25-11-0, 16=25-11-0,
17=25-11-0, 18=25-11-0,
19=25-11-0, 21=25-11-0,
22=25-11-0, 23=25-11-0,
24=25-11-0, 25=25-11-0,
26=25-11-0, 27=25-11-0,
31=25-11-0
Max Horiz 1=-43 (LC 10), 27=-43 (LC 10)
Max Uplift 13=-23 (LC 12), 15=-4 (LC 12),
16=-8 (LC 12), 17=-6 (LC 12),
18=-7 (LC 12), 19=-6 (LC 12),
22=-6 (LC 12), 23=-7 (LC 12),
24=-7 (LC 12), 25=-5 (LC 12),
26=-11 (LC 12), 31=-23 (LC 12)
Max Grav 1=100 (LC 1), 13=166 (LC 1),
15=227 (LC 22), 16=137 (LC 1),
17=166 (LC 22), 18=158 (LC 1),
19=168 (LC 22), 21=147 (LC 1),
22=168 (LC 21), 23=157 (LC 1),
24=168 (LC 21), 25=131 (LC 1),
26=242 (LC 21), 27=100 (LC 1),
31=166 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-56/36, 2-3=-43/32, 3-4=-36/54,
4-5=-32/81, 5-6=-40/106, 6-7=-49/131,
7-8=-49/132, 8-9=-40/108, 9-10=-31/82,
10-11=-28/56, 11-12=-31/32, 12-13=-31/21,
13-14=0/17

BOT CHORD 1-26=-13/57, 25-26=-13/57, 24-25=-13/57,
23-24=-13/57, 22-23=-13/57, 21-22=-13/57,
19-21=-13/57, 18-19=-13/57, 17-18=-13/57,
16-17=-13/57, 15-16=-13/57, 13-15=-13/57
WEBS 7-21=107/0, 6-22=127/102, 5-23=-118/61,
4-24=-124/59, 3-25=-105/53, 2-26=-163/106,
8-19=-127/102, 9-18=-118/61,
10-17=-123/58, 11-16=-108/54,
12-15=-155/79

- NOTES**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=26ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Corner (3) 0-0-0 to 2-11-8, Exterior (2) 2-11-8 to 12-11-8, Corner (3) 12-11-8 to 15-11-8, Exterior (2) 15-11-8 to 26-10-0 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
 - 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.
 - All plates are 2x4 MT20 unless otherwise indicated.
 - Gable requires continuous bottom chord bearing.
 - Gable studs spaced at 2-0-0 oc.
 - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
 - All bearings are assumed to be SP No.2.

10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 23 lb uplift at joint 13, 6 lb uplift at joint 22, 7 lb uplift at joint 23, 7 lb uplift at joint 24, 5 lb uplift at joint 25, 11 lb uplift at joint 26, 6 lb uplift at joint 19, 7 lb uplift at joint 18, 6 lb uplift at joint 17, 8 lb uplift at joint 16, 4 lb uplift at joint 15 and 23 lb uplift at joint 13.

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



August 30, 2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



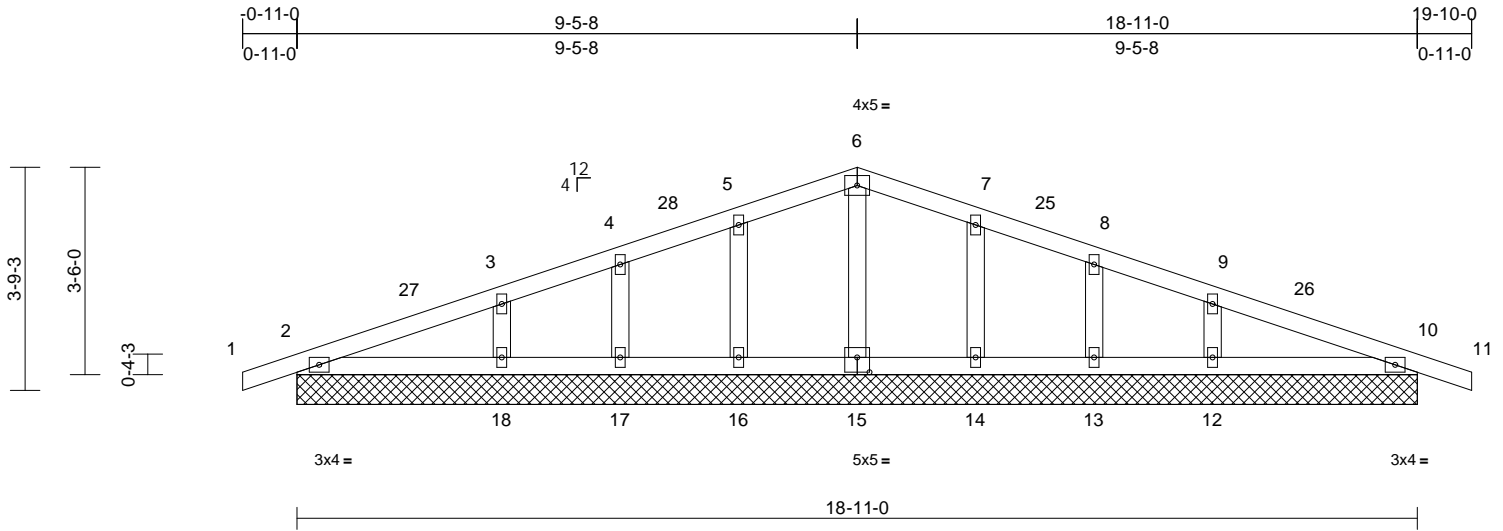
818 Soundside Road
Edenton, NC 27932

Job Q2402074	Truss C01	Truss Type Common Supported Gable	Qty 1	Ply 1	Value Build Homes - O'Quinn Job Reference (optional)	167896080
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Carolina Structural Systems (Star, NC), Ether, NC - 27247,

Run: 8.73 S Aug 15 2024 Print: 8.730 S Aug 15 2024 MiTek Industries, Inc. Thu Aug 29 11:40:48
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Page: 1



Scale = 1:38.9
Plate Offsets (X, Y): [15:0-2-8,0-3-0]

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	0.10	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.09	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.02	Horz(CT)	0.00	10	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS							Weight: 80 lb	FT = 20%

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

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

REACTIONS (size)
2=18-11-0, 10=18-11-0,
12=18-11-0, 13=18-11-0,
14=18-11-0, 15=18-11-0,
16=18-11-0, 17=18-11-0,
18=18-11-0, 19=18-11-0,
22=18-11-0
Max Horiz 2=-30 (LC 10), 22=-30 (LC 10)
Max Uplift 2=-25 (LC 12), 10=-25 (LC 12),
12=-5 (LC 12), 13=-7 (LC 12),
14=-6 (LC 12), 16=-6 (LC 12),
17=-7 (LC 12), 18=-5 (LC 12),
19=-25 (LC 12), 22=-25 (LC 12)
Max Grav 2=177 (LC 1), 10=177 (LC 1),
12=258 (LC 22), 13=114 (LC 1),
14=173 (LC 22), 15=135 (LC 1),
16=173 (LC 21), 17=114 (LC 1),
18=258 (LC 21), 19=177 (LC 1),
22=177 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 6-7=-41/99, 7-8=-31/74, 8-9=-38/52,
9-10=-39/21, 10-11=0/17, 1-2=0/17,
2-3=-41/29, 3-4=-40/51, 4-5=-31/72,
5-6=-41/97
BOT CHORD 2-18=-4/42, 17-18=-4/42, 16-17=-4/42,
14-16=-4/42, 13-14=-4/42, 12-13=-4/42,
10-12=-4/42
WEBS 6-15=-98/8, 7-14=-129/102, 8-13=-94/52,
9-12=-175/84, 5-16=-129/102, 4-17=-94/52,
3-18=-175/84

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCCL=6.0psf; BCCL=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 9-5-8, Corner (3) 9-5-8 to 12-5-8, Exterior (2) 12-5-8 to 19-10-0 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
- 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.
- All plates are 2x4 MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2'-0" oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3'-06"-00 tall by 2'-00"-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.2.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 25 lb uplift at joint 10, 25 lb uplift at joint 2, 6 lb uplift at joint 14, 7 lb uplift at joint 13, 5 lb uplift at joint 12, 6 lb uplift at joint 16, 7 lb uplift at joint 17, 5 lb uplift at joint 18, 25 lb uplift at joint 10 and 25 lb uplift at joint 2.
- Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 10, 19.
- 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



August 30, 2024

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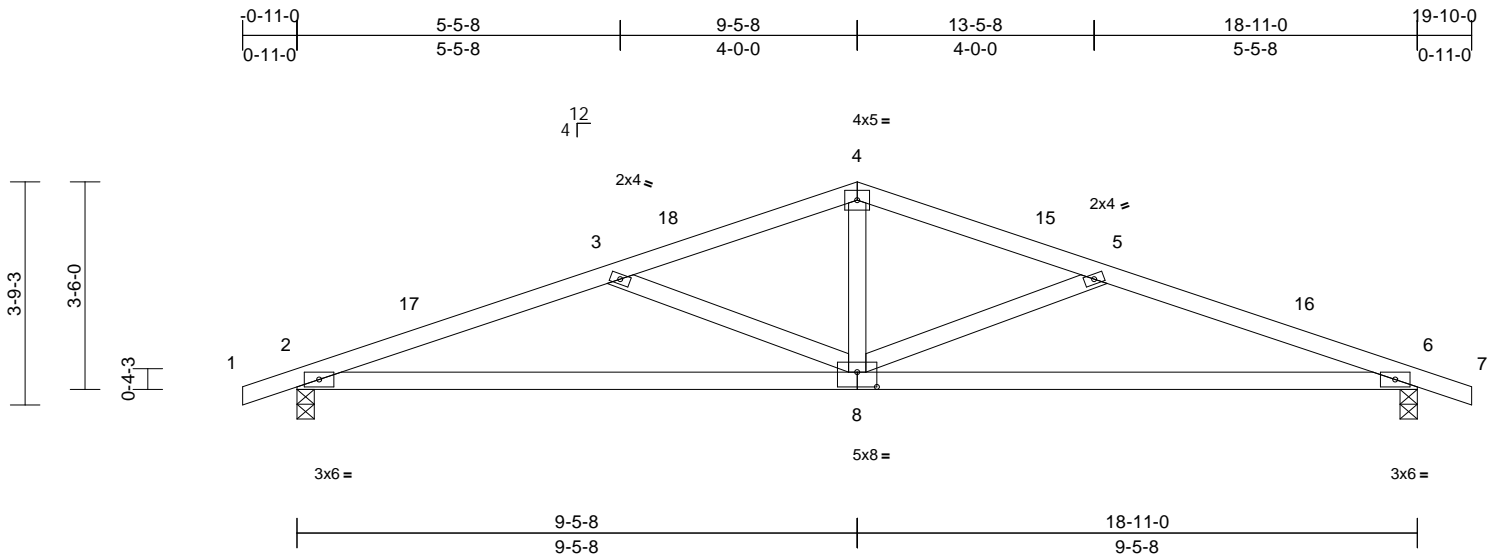
818 Soundside Road
Edenton, NC 27932

Job Q2402074	Truss C02	Truss Type Common	Qty 1	Ply 1	Value Build Homes - O'Quinn Job Reference (optional)	167896081
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Carolina Structural Systems (Star, NC), Ether, NC - 27247,

Run: 8.73 S Aug 15 2024 Print: 8.730 S Aug 15 2024 MiTek Industries, Inc. Thu Aug 29 11:40:48
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Page: 1



Scale = 1:38.9

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

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	0.40	Vert(LL)	-0.13	8-11	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.84	Vert(CT)	-0.29	8-11	>778	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.16	Horz(CT)	0.04	6	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS		Wind(LL)	0.04	8-11	>999	240	Weight: 78 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.
BOT CHORD Rigid ceiling directly applied.

REACTIONS

(size) 2=0-3-8, 6=0-3-8
Max Horiz 2=-31 (LC 10)
Max Uplift 2=-28 (LC 12), 6=-28 (LC 12)
Max Grav 2=812 (LC 1), 6=812 (LC 1)

FORCES

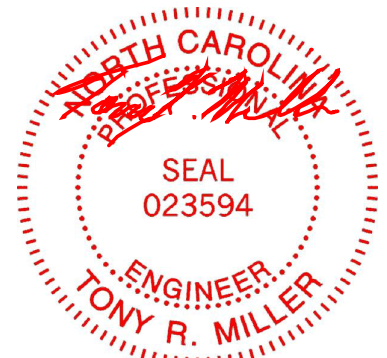
(lb) - Maximum Compression/Maximum Tension
TOP CHORD 4-5=-1286/85, 5-6=-1705/141, 6-7=0/17,
1-2=0/17, 2-3=-1705/141, 3-4=-1286/85
BOT CHORD 2-6=-90/1598
WEBS 4-8=0/577, 3-8=-478/105, 5-8=-478/105

NOTES

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TC DL=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 9-5-8, Exterior (2) 9-5-8 to 12-5-8, Interior (1) 12-5-8 to 19-10-0 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.
- 5) All bearings are assumed to be SP No.2.

- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 28 lb uplift at joint 6 and 28 lb uplift at joint 2.
- 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



August 30, 2024

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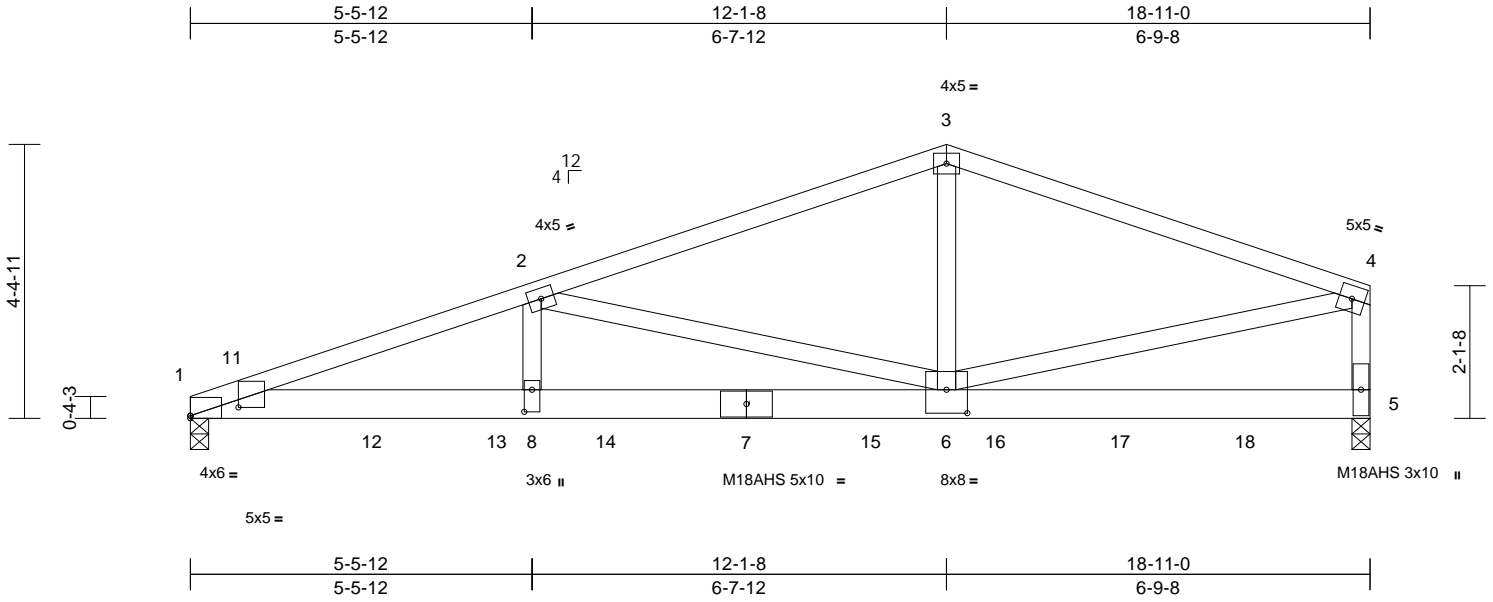
818 Soundside Road
Edenton, NC 27932

Job Q2402074	Truss C03	Truss Type Common Girder	Qty 1	Ply 3	Value Build Homes - O'Quinn Job Reference (optional)	167896082
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Carolina Structural Systems (Star, NC), Ether, NC - 27247,

Run: 8.73 S Aug 15 2024 Print: 8.730 S Aug 15 2024 MiTek Industries, Inc. Thu Aug 29 11:40:49
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Page: 1



Scale = 1:36.9

Plate Offsets (X, Y): [1:Edge,0-0-8], [1:0-9-4,0-1-10], [6:0-4-0,0-4-8], [8:0-4-4,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.78	Vert(LL)	-0.15	6-8	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.67	Vert(CT)	-0.33	6-8	>690	240	M18AHS	186/179
BCLL	0.0*	Rep Stress Incr	NO	WB	0.56	Horz(CT)	0.05	5	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS		Wind(LL)	0.05	8-10	>999	240	Weight: 310 lb	FT = 20%

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

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

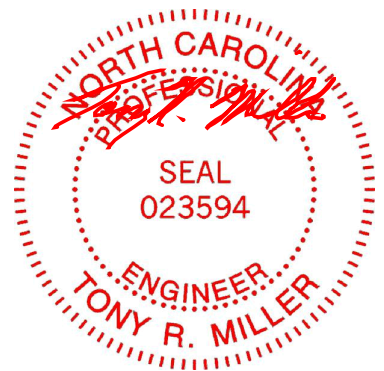
REACTIONS (size) 1=0-3-8, 5=0-3-8
Max Horiz 1=73 (LC 7)
Max Grav 1=5852 (LC 1), 5=5546 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-14227/0, 2-3=-7528/0, 3-4=-7532/0, 4-5=-4365/0
BOT CHORD 1-8=0/13435, 6-8=0/13435, 5-6=0/426
WEBS 3-6=0/4362, 4-6=0/6898, 2-6=-6598/0, 2-8=0/3418

NOTES
1) 3-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-4-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-5-0 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=120mph (3-second gust)
Vasd=95mph; TC DL=6.0psf; BC DL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional); cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
5) All plates are MT20 plates unless otherwise indicated.
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 DSS .
9) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1017 lb down and 19 lb up at 0-11-0, 1016 lb down and 19 lb up at 2-11-0, 1016 lb down and 19 lb up at 4-11-0, 1130 lb down at 6-8-0, 1199 lb down at 8-11-0, 1130 lb down at 10-11-0, 1130 lb down at 12-11-0, and 1130 lb down at 14-11-0, and 1130 lb down at 16-11-0 on bottom chord. The design/selection of such connection device (s) is the responsibility of others.

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.00
Uniform Loads (lb/ft)
Vert: 1-3=-60, 3-4=-60, 1-5=-20
Concentrated Loads (lb)
Vert: 7=-1199 (F), 11=-1017 (F), 12=-1016 (F), 13=-1016 (F), 14=-1130 (F), 15=-1130 (F), 16=-1130 (F), 17=-1130 (F), 18=-1130 (F)



August 30, 2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPH Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

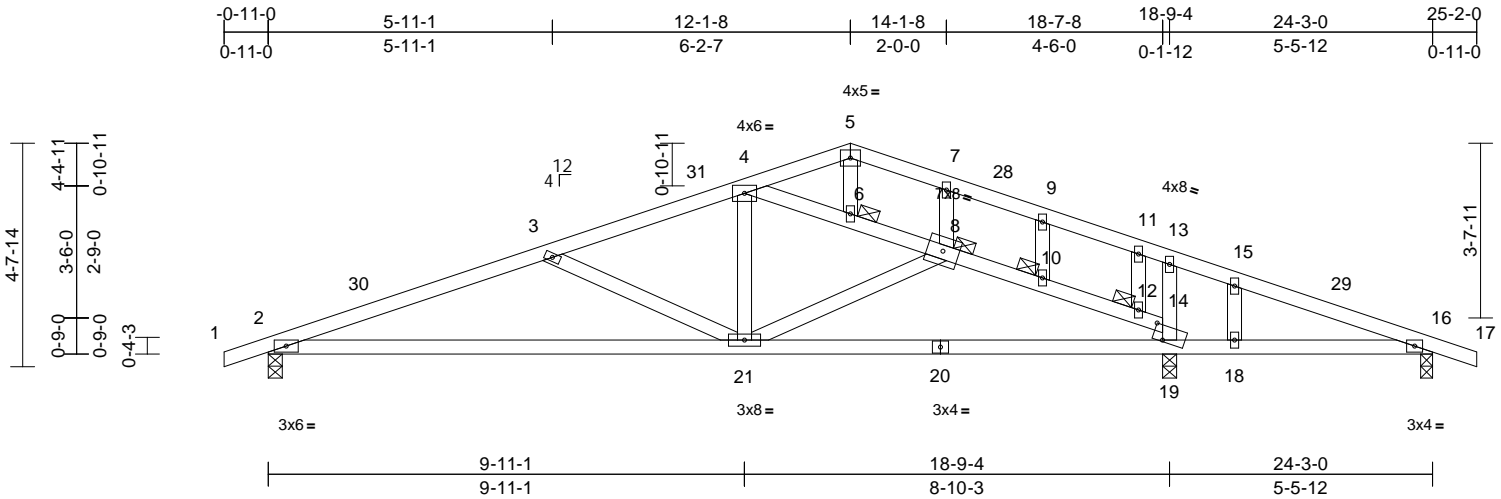
ENGINEERING BY
TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job Q2402074	Truss D01	Truss Type Common Structural Gable	Qty 1	Ply 1	Value Build Homes - O'Quinn Job Reference (optional)	167896083
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Carolina Structural Systems (Star, NC), Ether, NC - 27247,

Run: 8.73 S Aug 15 2024 Print: 8.730 S Aug 15 2024 MiTek Industries, Inc. Thu Aug 29 11:40:49
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Page: 1



Scale = 1:48

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

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	0.46	Vert(LL)	-0.16	21-27	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.83	Vert(CT)	-0.37	21-27	>612	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.63	Horz(CT)	0.05	16	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS		Wind(LL)	0.06	21-27	>999	240	Weight: 120 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied.
JOINTS 1 Brace at Jt(s): 6, 10, 12, 8

REACTIONS

(size) 2=0-3-8, 16=0-3-0, 19=0-3-8
Max Horiz 2=38 (LC 11)
Max Uplift 2=-25 (LC 12), 16=-60 (LC 12), 19=-63 (LC 12)
Max Grav 2=821 (LC 1), 16=405 (LC 1), 19=760 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 5-7=-418/76, 7-9=-431/58, 9-11=-451/46, 11-13=-504/59, 13-15=-571/0, 15-16=-624/49, 16-17=0/17, 1-2=0/17, 2-3=-1715/108, 3-4=-1285/60, 4-5=-433/81, 4-6=-826/19, 6-8=-801/18, 8-10=-852/58, 10-12=-873/64, 12-14=-832/43
BOT CHORD 2-21=-50/1607, 19-21=-19/1207, 18-19=0/571, 16-18=-37/571
WEBS 5-6=-7/79, 7-8=-102/49, 9-10=-64/19, 11-12=-67/128, 15-18=-69/0, 4-21=0/446, 14-19=-581/189, 13-14=-381/218, 3-21=-479/91, 8-21=-110/98

NOTES

1) Unbalanced roof live loads have been considered for this design.

- Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TC DL=6.0psf; BC DL=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 12-1-8, Exterior (2) 12-1-8 to 15-1-8, Interior (1) 15-1-8 to 25-2-0 zone; cantilever left and right exposed; end vertical left and right exposed; porch right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- All plates are 2x4 MT20 unless otherwise indicated.
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.2.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 60 lb uplift at joint 16, 25 lb uplift at joint 2 and 63 lb uplift at joint 19.
- 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.
- 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



August 30, 2024

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Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



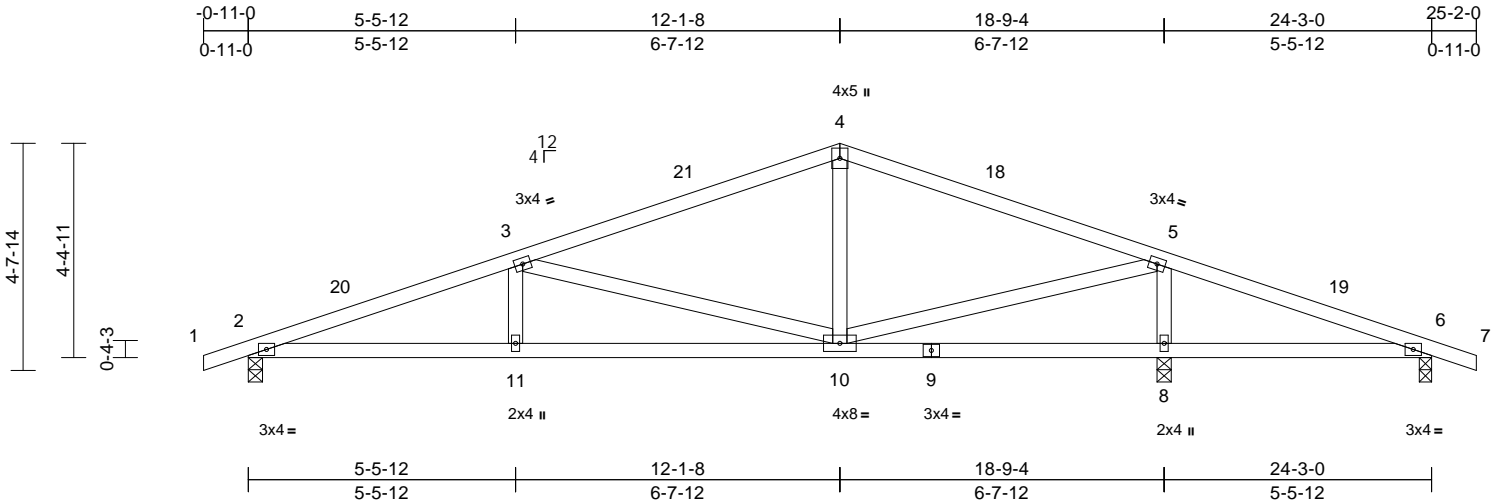
818 Soundside Road
Edenton, NC 27932

Job Q2402074	Truss D02	Truss Type Common	Qty 2	Ply 1	Value Build Homes - O'Quinn Job Reference (optional)	167896084
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Carolina Structural Systems (Star, NC)), Ether, NC - 27247,

Run: 8.73 S Aug 15 2024 Print: 8.730 S Aug 15 2024 MiTek Industries, Inc. Thu Aug 29 11:40:49
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Scale = 1:47.2

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.51	Vert(LL)	-0.06	10-11	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.52	Vert(CT)	-0.15	10-11	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.72	Horz(CT)	0.03	8	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS		Wind(LL)	0.04	10-11	>999	240	Weight: 107 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.
BOT CHORD Rigid ceiling directly applied.

REACTIONS

(size) 2=0-3-8, 6=0-3-0, 8=0-3-8
Max Horiz 2=-39 (LC 10)
Max Uplift 2=-29 (LC 12), 6=-73 (LC 12),
8=-51 (LC 12)
Max Grav 2=764 (LC 1), 6=175 (LC 22),
8=1156 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension

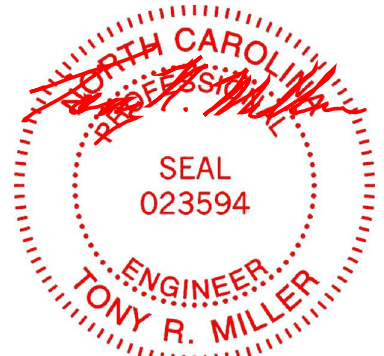
TOP CHORD 4-5=-818/85, 5-6=-23/330, 6-7=0/17,
1-2=0/17, 2-3=-1645/95, 3-4=-815/79
BOT CHORD 2-11=-44/1538, 10-11=-44/1538,
8-10=-261/13, 6-8=-261/13
WEBS 4-10=0/236, 5-8=-1005/125, 5-10=0/1004,
3-11=0/243, 3-10=-880/79

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=120mph (3-second gust)
Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;
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 12-1-8, Exterior (2) 12-1-8 to 15-1-8, Interior (1) 15-1-8 to 25-2-0 zone; cantilever left and right exposed; end vertical left and right exposed; porch right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.2 .
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 73 lb uplift at joint 6, 29 lb uplift at joint 2 and 51 lb uplift at joint 8.
- 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



August 30, 2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TP1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



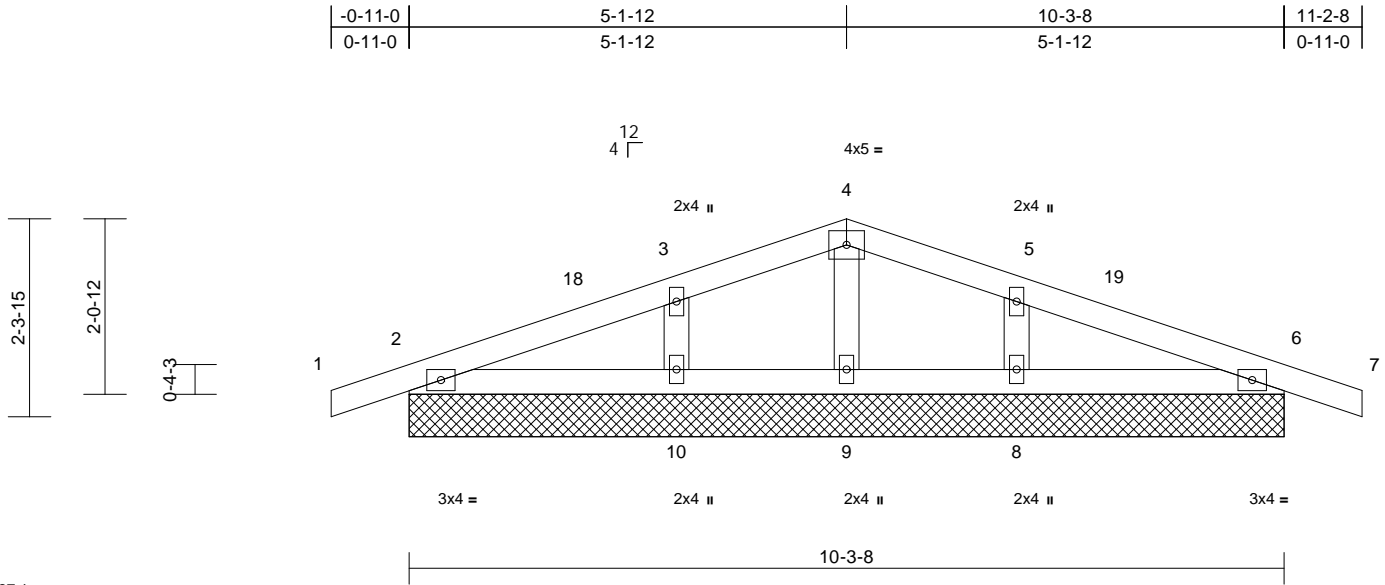
818 Soundside Road
Edenton, NC 27932

Job Q2402074	Truss E01	Truss Type Common Supported Gable	Qty 1	Ply 1	Value Build Homes - O'Quinn Job Reference (optional)	167896085
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Carolina Structural Systems (Star, NC)), Ether, NC - 27247,

Run: 8.73 S Aug 15 2024 Print: 8.730 S Aug 15 2024 MiTek Industries, Inc. Thu Aug 29 11:40:49
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Scale = 1:27.1

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	0.08	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.07	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.02	Horz(CT)	0.00	6	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS							Weight: 39 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS (size)

2=10-3-8, 6=10-3-8, 8=10-3-8,
9=10-3-8, 10=10-3-8, 11=10-3-8,
15=10-3-8

Max Horiz 2=-17 (LC 10), 11=-17 (LC 10)
Max Uplift 2=-29 (LC 12), 6=-29 (LC 12), 8=-4 (LC 12), 10=-4 (LC 12), 11=-29 (LC 12), 15=-29 (LC 12)
Max Grav 2=168 (LC 1), 6=168 (LC 1), 8=242 (LC 22), 9=86 (LC 1), 10=242 (LC 21), 11=168 (LC 1), 15=168 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/17, 2-3=-36/33, 3-4=-39/70, 4-5=-39/73, 5-6=-34/35, 6-7=0/17
BOT CHORD 2-10=0/32, 9-10=0/32, 8-9=0/32, 6-8=0/32
WEBS 4-9=-74/26, 3-10=-167/136, 5-8=-167/135

- 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.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2'-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3'-06-00 tall by 2'-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.2 .
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 29 lb uplift at joint 2, 29 lb uplift at joint 6, 4 lb uplift at joint 10, 4 lb uplift at joint 8, 29 lb uplift at joint 2 and 29 lb uplift at joint 6.
- 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

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TC DL=6.0psf; BC DL=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 5-1-12, Corner (3) 5-1-12 to 8-1-12, Exterior (2) 8-1-12 to 11-2-8 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



August 30, 2024

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ENGINEERING BY
TRENCO
A MiTek Affiliate

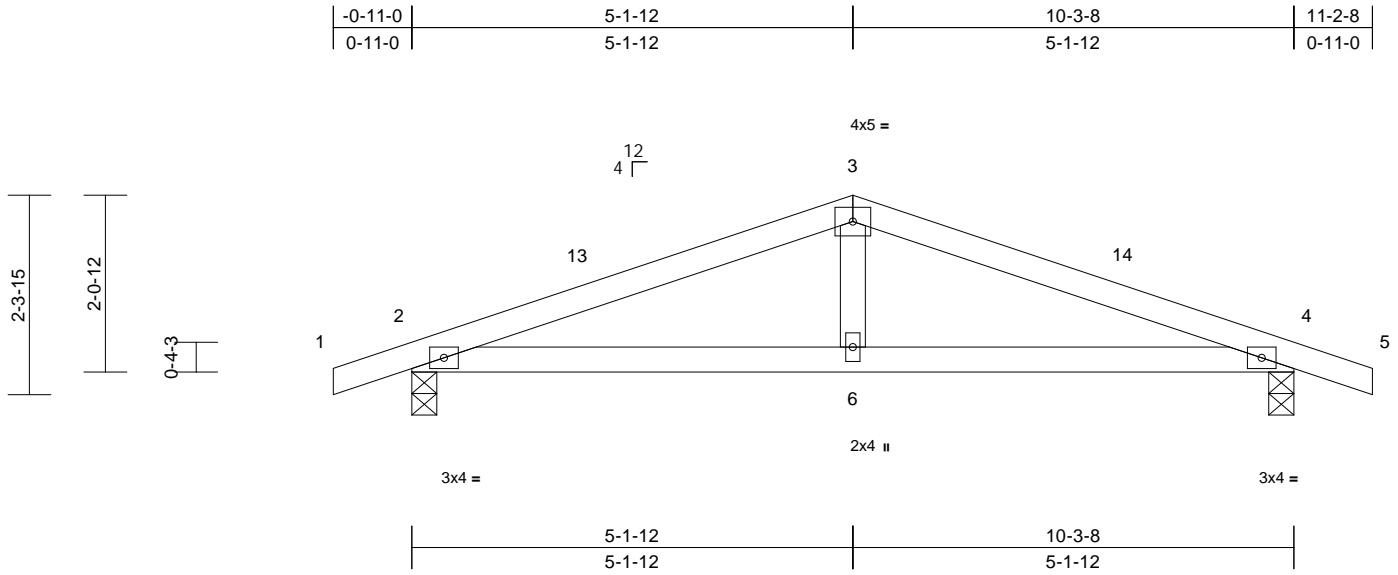
818 Soundside Road
Edenton, NC 27932

Job Q2402074	Truss E02	Truss Type Common	Qty 2	Ply 1	Value Build Homes - O'Quinn Job Reference (optional)	167896086
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Carolina Structural Systems (Star, NC)), Ether, NC - 27247,

Run: 8.73 S Aug 15 2024 Print: 8.730 S Aug 15 2024 MiTek Industries, Inc. Thu Aug 29 11:40:49
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Page: 1



Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.26	Vert(LL)	-0.02	6-12	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.32	Vert(CT)	-0.05	6-12	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.05	Horz(CT)	0.01	4	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS		Wind(LL)	0.01	6-9	>999	240	Weight: 37 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.
BOT CHORD Rigid ceiling directly applied.

REACTIONS

(size) 2=0-3-8, 4=0-3-8
Max Horiz 2=-18 (LC 10)
Max Uplift 2=-26 (LC 12), 4=-26 (LC 12)
Max Grav 2=467 (LC 1), 4=467 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension

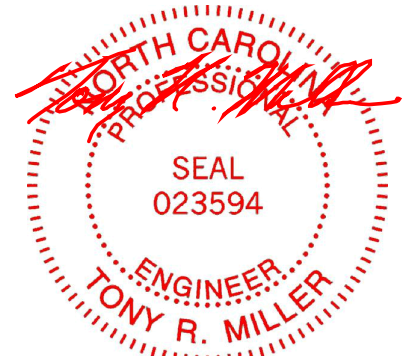
TOP CHORD 1-2=0/17, 2-3=-749/109, 3-4=-749/111, 4-5=0/17
BOT CHORD 2-6=-49/685, 4-6=-49/685
WEBS 3-6=0/224

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCCL=6.0psf; BCCL=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 5-1-12, Exterior (2) 5-1-12 to 8-1-12, Interior (1) 8-1-12 to 11-2-8 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
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.2.

- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 26 lb uplift at joint 2 and 26 lb uplift at joint 4.
- 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



August 30, 2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPH Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



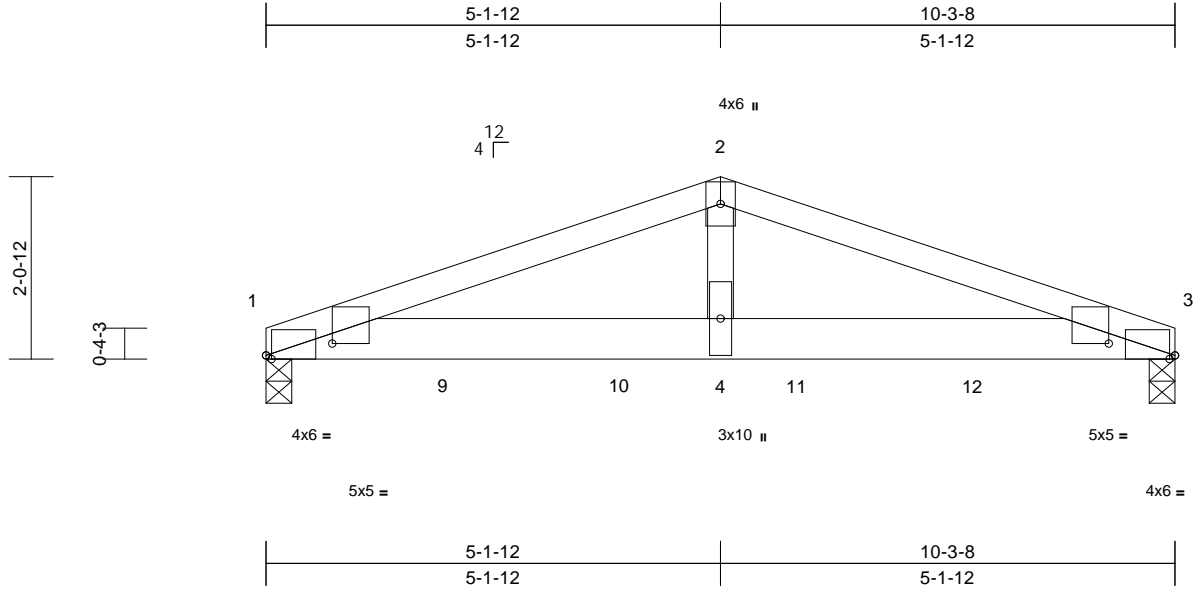
818 Soundside Road
Edenton, NC 27932

Job Q2402074	Truss E03	Truss Type Common Girder	Qty 1	Ply 1	Value Build Homes - O'Quinn Job Reference (optional)	167896087
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Carolina Structural Systems (Star, NC)), Ether, NC - 27247,

Run: 8.73 S Aug 15 2024 Print: 8.730 S Aug 15 2024 MiTek Industries, Inc. Thu Aug 29 11:40:49
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Page: 1



Scale = 1:26.1

Plate Offsets (X, Y): [1:0-0-12,Edge], [1:0-9-0,0-1-10], [3:0-0-12,Edge], [3:0-9-0,0-1-10]

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	0.73	Vert(LL)	-0.09	4-6	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.66	Vert(CT)	-0.17	4-6	>727	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.48	Horz(CT)	0.03	3	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS		Wind(LL)	0.05	4-6	>999	240	Weight: 42 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-4-15 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS

(size) 1=0-3-8, 3=0-3-8
Max Horiz 1=-15 (LC 6)
Max Uplift 1=-36 (LC 8), 3=-34 (LC 8)
Max Grav 1=1678 (LC 1), 3=1608 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-3626/94, 2-3=-3623/94
BOT CHORD 1-4=-56/3411, 3-4=-56/3411
WEBS 2-4=-7/1957

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=120mph (3-second gust)
Vasd=95mph; TC DL=6.0psf; BC DL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional); cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP DSS.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 36 lb uplift at joint 1 and 34 lb uplift at joint 3.

- Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 616 lb down and 16 lb up at 2-0-0, 616 lb down and 16 lb up at 4-0-0, and 616 lb down and 16 lb up at 6-0-0, and 616 lb down and 16 lb up at 8-0-0 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
- 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

- Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.00
Uniform Loads (lb/ft)
Vert: 1-2=-60, 2-3=-60, 1-3=-20
Concentrated Loads (lb)
Vert: 9=-616 (B), 10=-616 (B), 11=-616 (B), 12=-616 (B)



August 30, 2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

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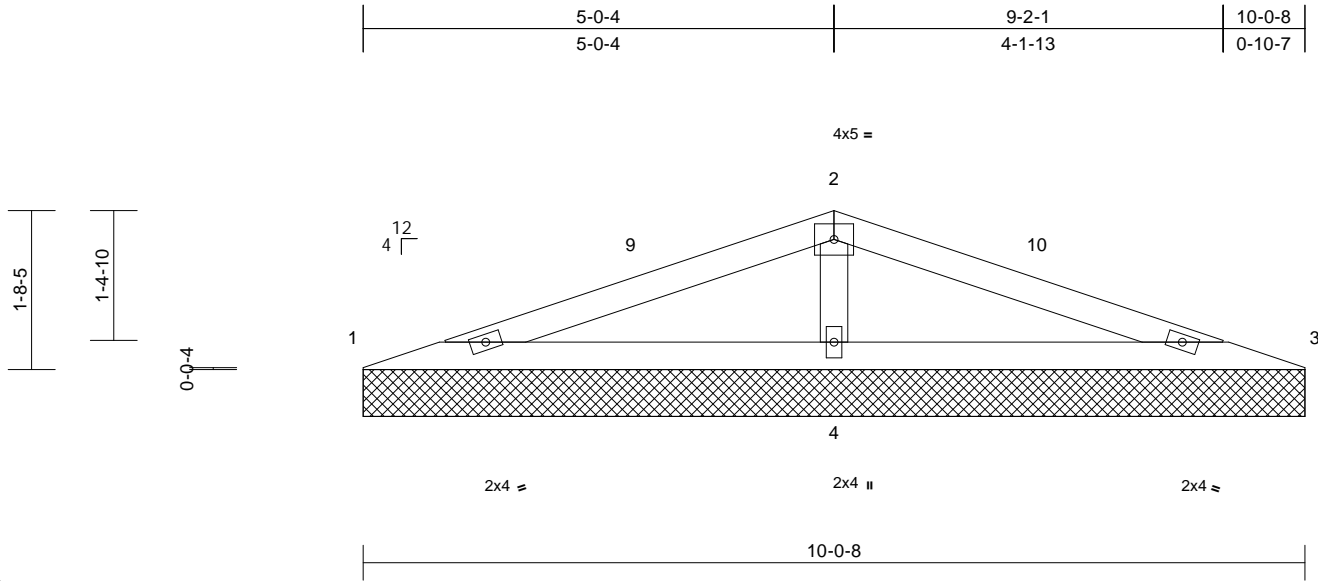
818 Soundside Road
Edenton, NC 27932

Job Q2402074	Truss V02	Truss Type Valley	Qty 1	Ply 1	Value Build Homes - O'Quinn Job Reference (optional)	167896089
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Carolina Structural Systems (Star, NC)), Ether, NC - 27247,

Run: 8.73 S Aug 15 2024 Print: 8.730 S Aug 15 2024 MiTek Industries, Inc. Thu Aug 29 11:40:49
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Page: 1



Scale = 1:24.6

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.24	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.25	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.06	Horiz(TL)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS							Weight: 30 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS

(size) 1=10-0-8, 3=10-0-8, 4=10-0-8
Max Horiz 1=-14 (LC 10)
Max Uplift 4=-5 (LC 12)
Max Grav 1=113 (LC 21), 3=113 (LC 22),
4=636 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-177/349, 2-3=-177/349
BOT CHORD 1-4=-291/162, 3-4=-291/162
WEBS 2-4=-464/121

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; 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 5-1-0, Exterior (2) 5-1-0 to 8-4-7, Interior (1) 8-4-7 to 10-1-4 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
- 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.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.2.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 5 lb uplift at joint 4.
- 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



August 30, 2024

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ENGINEERING BY
TRENCO
A MiTek Affiliate

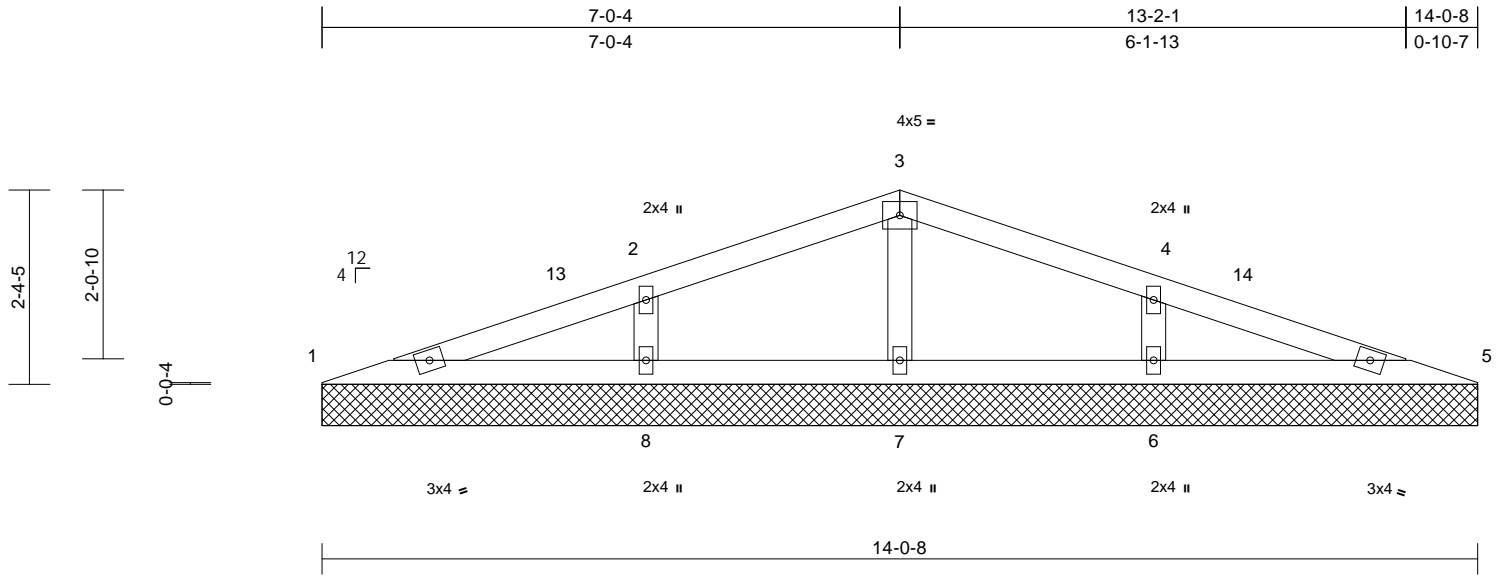
818 Soundside Road
Edenton, NC 27932

Job Q2402074	Truss V03	Truss Type Valley	Qty 1	Ply 1	Value Build Homes - O'Quinn Job Reference (optional)	167896090
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Carolina Structural Systems (Star, NC)), Ether, NC - 27247,

Run: 8.73 S Aug 15 2024 Print: 8.730 S Aug 15 2024 MiTek Industries, Inc. Thu Aug 29 11:40:49
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Page: 1



Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.17	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.12	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.03	Horiz(TL)	0.00	8	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS							Weight: 45 lb	FT = 20%

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

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

REACTIONS (size) 1=14-0-8, 5=14-0-8, 6=14-0-8, 7=14-0-8, 8=14-0-8
Max Horiz 1=20 (LC 11)
Max Uplift 6=13 (LC 12), 8=13 (LC 12)
Max Grav 1=107 (LC 21), 5=107 (LC 22), 6=330 (LC 22), 7=272 (LC 1), 8=330 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-167/154, 2-3=0/142, 3-4=0/142, 4-5=-167/154
BOT CHORD 1-8=-111/151, 7-8=-111/32, 6-7=-111/32, 5-6=-111/151
WEBS 2-8=-227/77, 4-6=-227/77, 3-7=-233/46

- Gable studs spaced at 4'-0" oc.
 - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3'-06"-00 tall by 2'-00"-00 wide will fit between the bottom chord and any other members.
 - All bearings are assumed to be SP No.2 .
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 13 lb uplift at joint 8 and 13 lb uplift at joint 6.
 - 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

- NOTES**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; 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 7-1-0, Exterior (2) 7-1-0 to 10-2-0, Interior (1) 10-2-0 to 14-1-4 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
 - 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.
 - Gable requires continuous bottom chord bearing.



August 30, 2024

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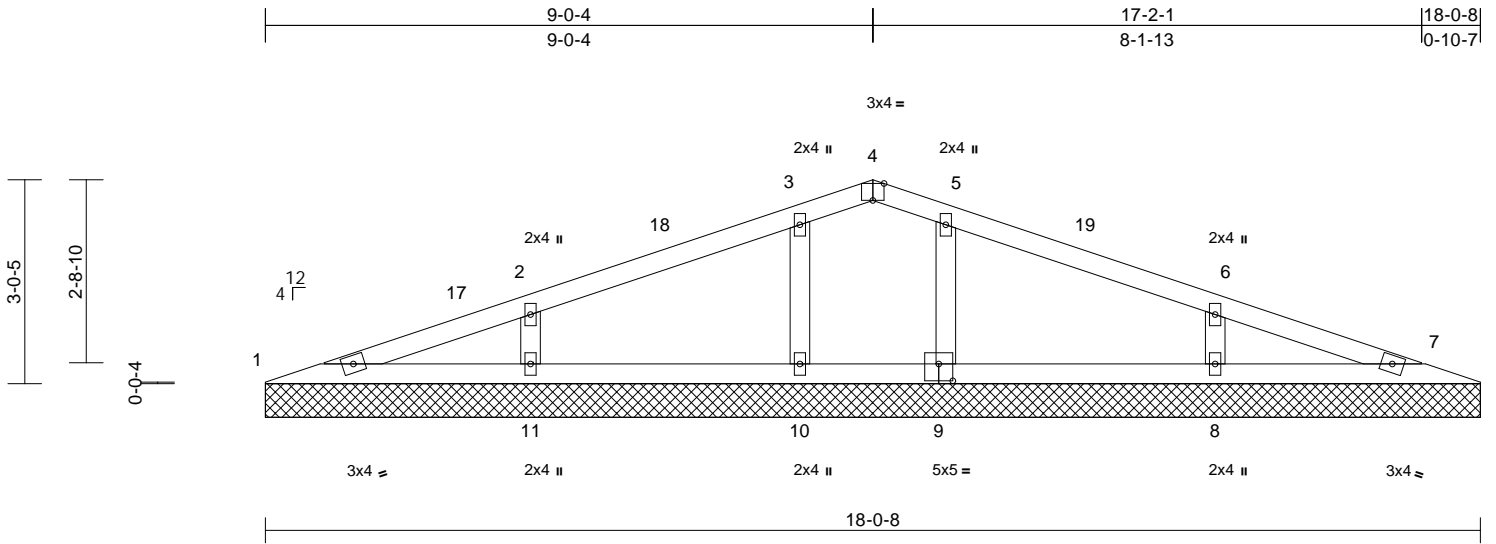
818 Soundside Road
Edenton, NC 27932

Job Q2402074	Truss V04	Truss Type Valley	Qty 1	Ply 1	Value Build Homes - O'Quinn Job Reference (optional)	167896091
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Carolina Structural Systems (Star, NC)), Ether, NC - 27247,

Run: 8.73 S Aug 15 2024 Print: 8.730 S Aug 15 2024 MiTek Industries, Inc. Thu Aug 29 11:40:49
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Page: 1



Scale = 1:34.2

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

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	0.26	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.15	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.04	Horiz(TL)	-0.01	7	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS							Weight: 61 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS (size)

1=18-0-8, 7=18-0-8, 8=18-0-8,
 9=18-0-8, 10=18-0-8, 11=18-0-8,
 16=18-0-8

Max Horiz 1=26 (LC 11)
 Max Uplift 7=-1 (LC 22), 8=-11 (LC 12),
 11=-15 (LC 12), 16=-1 (LC 22)

Max Grav 1=96 (LC 21), 8=364 (LC 22),
 9=288 (LC 22), 10=322 (LC 1),
 11=352 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-135/269, 2-3=-22/271, 3-4=0/208,
 4-5=0/211, 5-6=-9/257, 6-7=-55/259

BOT CHORD 1-11=-221/119, 10-11=-221/59, 8-10=-221/59,
 7-8=-210/58

WEBS 2-11=-245/76, 3-10=-263/76, 6-8=-248/83,
 5-9=-247/64

- 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.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.2 .
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 1 lb uplift at joint 7, 15 lb uplift at joint 11, 11 lb uplift at joint 8 and 1 lb uplift at joint 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

- NOTES**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TC DL=6.0psf; BCDL=6.0psf; h=25ft; 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 9-1-0, Exterior (2) 9-1-0 to 12-1-0, Interior (1) 12-1-0 to 17-3-3 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



August 30, 2024

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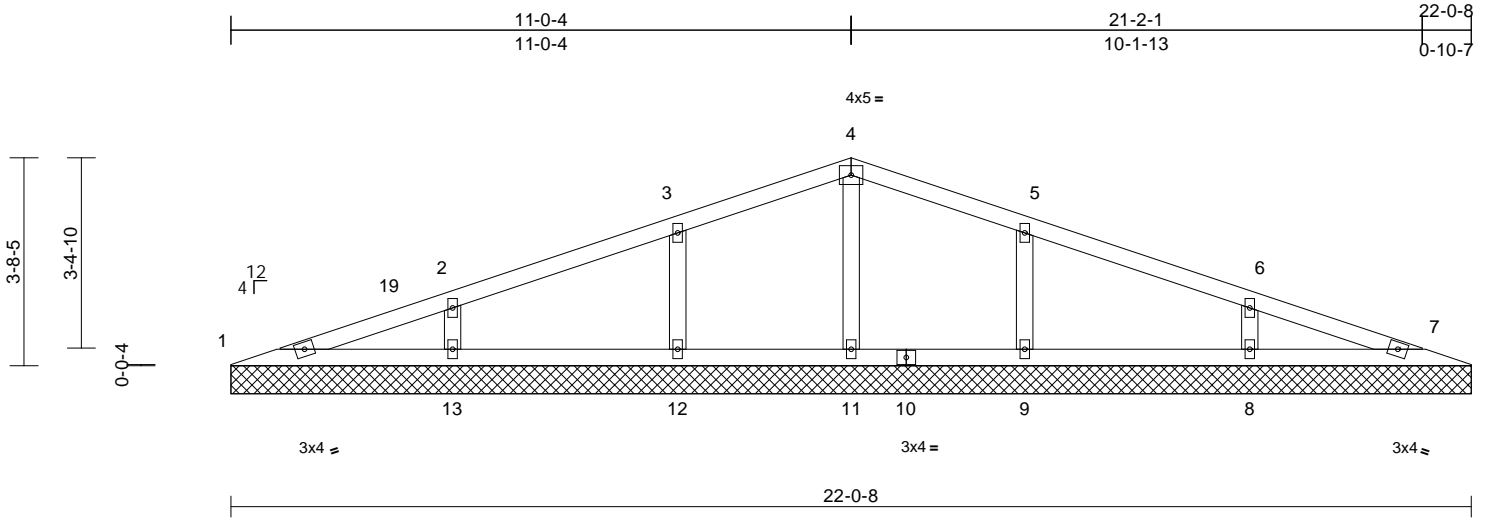
ENGINEERING BY
TRENCO
 A MiTek Affiliate
 818 Soundside Road
 Edenton, NC 27932

Job Q2402074	Truss V05	Truss Type Valley	Qty 1	Ply 1	Value Build Homes - O'Quinn Job Reference (optional)	167896092
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Carolina Structural Systems (Star, NC)), Ether, NC - 27247,

Run: 8.73 S Aug 15 2024 Print: 8.730 S Aug 15 2024 MiTek Industries, Inc. Thu Aug 29 11:40:50
ID:7_ytlCS?uTWJLJPdBNsm6OjynsH-RfC?PsB70Hq3NSgPqnL8w3uITXbGKwRCdoi7J4zJC?f

Page: 1



Scale = 1:40.9

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.26	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.15	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.06	Horiz(TL)	-0.01	7	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS							Weight: 78 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS

(size) 1=22-0-8, 7=22-0-8, 8=22-0-8,
9=22-0-8, 11=22-0-8, 12=22-0-8,
13=22-0-8, 18=22-0-8
Max Horiz 1=32 (LC 11)
Max Uplift 8=-11 (LC 12), 9=-14 (LC 12),
12=-13 (LC 12), 13=-13 (LC 12)
Max Grav 1=98 (LC 21), 8=362 (LC 22),
9=276 (LC 22), 11=359 (LC 1),
12=294 (LC 21), 13=349 (LC 21)

FORCES

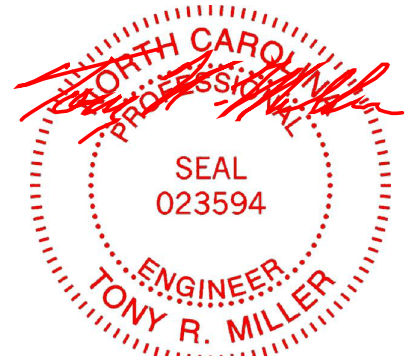
(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-141/256, 2-3=-19/257, 3-4=0/244,
4-5=0/245, 5-6=-6/254, 6-7=-52/258
BOT CHORD 1-13=-208/125, 12-13=-208/54,
11-12=-208/54, 9-11=-208/54, 8-9=-208/54,
7-8=-208/54
WEBS 2-13=-243/71, 3-12=-227/84, 6-8=-250/81,
5-9=-218/84, 4-11=-297/34

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCCL=6.0psf; BCDL=6.0psf; h=25ft; 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 11-1-0, Exterior (2) 11-1-0 to 14-2-0, Interior (1) 14-2-0 to 21-3-3 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

- 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.
- All plates are 2x4 MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.2.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 13 lb uplift at joint 13, 13 lb uplift at joint 12, 11 lb uplift at joint 8 and 14 lb uplift at joint 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



August 30, 2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

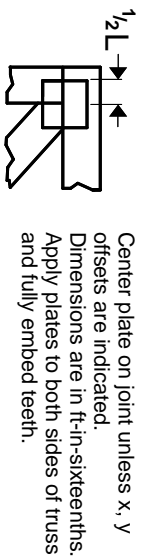
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



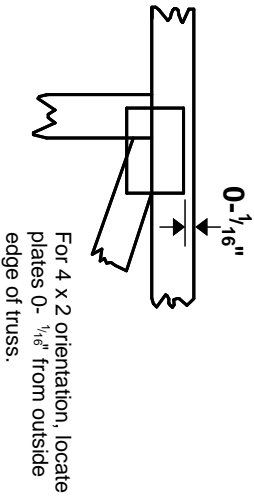
818 Soundside Road
Edenton, NC 27932

Symbols

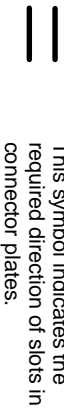
PLATE LOCATION AND ORIENTATION



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.

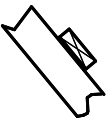
* Plate location details available in MITek software or upon request.

PLATE SIZE

4 X 4

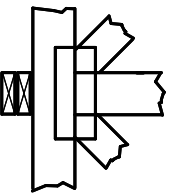
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

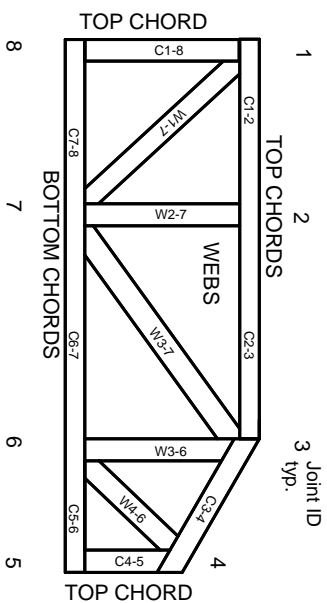


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TP1: 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/TP1 section 6.3. These truss designs rely on Lumber values established by others.

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General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability/bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative 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/TP1 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TP1 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/TP1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.

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MITek Engineering Reference Sheet: MIL-7473 rev. 1/2/2023