

RE: 2501-0741-A - Blake Pond Lot 00.0128 Roof

Trenco  
 818 Soundside Rd  
 Edenton, NC 27932

**Site Information:**

Project Customer: DRB Raleigh Project Name: Blake Pond Lot 00.0128  
 Lot/Block: 00.0128 Subdivision: Blake Pond  
 Model: Townsend  
 Address: 203 Great Smoky Place  
 City: Lillington State: NC

**General Truss Engineering Criteria & Design Loads (Individual Truss Design Drawings Show Special Loading Conditions):**

Design Code: IRC2021/TPI2014 Design Program: MiTek 20/20 8.8  
 Wind Code: ASCE 7-16 Design Method: MWFRS (Envelope)/C-C hybrid Wind ASCE 7-16  
 Wind Speed: 120 mph Floor Load: N/A psf  
 Roof Load: 40.0 psf Exposure Category: B  
 Mean Roof Height (feet): 25

No.	Seal#	Truss Name	Date
1	I70930161	G1G	1/23/25
2	I70930162	G1	1/23/25
3		P1G	1/23/25
4	I70930164	P1	1/23/25
5	I70930165	PB2	1/23/25
6	I70930166	PB1G	1/23/25
7	I70930167	PB1	1/23/25
8	I70930168	C1G	1/23/25
9	I70930169	C1	1/23/25
10	I70930170	G3G	1/23/25
11	I70930171	G3	1/23/25
12		B1G	1/23/25
13	I70930173	B1	1/23/25
14	I70930174	A1G	1/23/25
	I70930175	A1A	1/23/25
16	I70930176	A1SG	1/23/25
17	I70930177	A1	1/23/25
18	I70930178	A1P	1/23/25
19	I70930179	A1AG	1/23/25

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

Truss Design Engineer's Name: Gilbert, Eric  
 My license renewal date for the state of North Carolina is December 31, 2025.

**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.



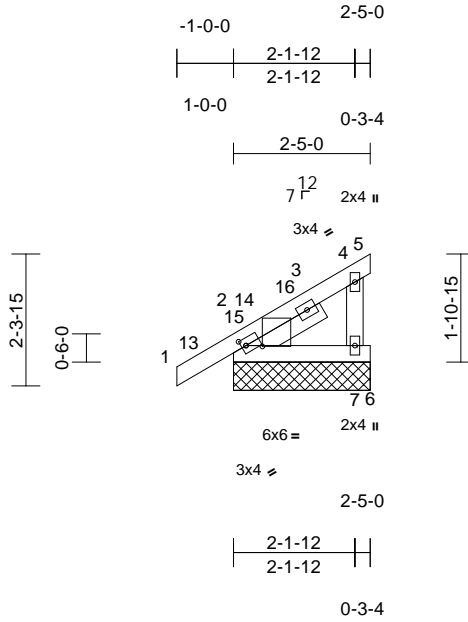
January 23, 2025

Job 2501-0741-A	Truss G1G	Truss Type Monopitch Supported Gable	Qty 3	Ply 1	Blake Pond Lot 00.0128 Roof Job Reference (optional)	170930161
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Structural, LLC, Thurmont, MD - 21788,

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Page: 1



Scale = 1:24.4  
Plate Offsets (X, Y): [2:0-0-15,0-1-8], [2:0-3-7,0-0-3]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.17	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.15	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.07	Horz(CT)	0.00	2	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0											
										Weight: 14 lb	FT = 20%	

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

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

**REACTIONS** (size) 2=2-5-0, 5=2-5-0, 6=2-5-0, 7=2-5-0  
Max Horiz 2=41 (LC 16)  
Max Uplift 5=-183 (LC 41), 6=-69 (LC 48), 7=-12 (LC 16)  
Max Grav 2=316 (LC 50), 5=29 (LC 42), 6=203 (LC 49), 7=485 (LC 41)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/41, 2-4=-217/83, 4-5=-95/23  
BOT CHORD 2-7=0/0, 6-7=0/0  
WEBS 4-7=-354/150

- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- Plates checked for a plus or minus 5 degree rotation about its center.
- 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 69 lb uplift at joint 6, 183 lb uplift at joint 5 and 12 lb uplift at joint 7.
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.

**LOAD CASE(S)** Standard

- NOTES**
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Corner (3E) 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.
  - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10



January 23, 2025

**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)

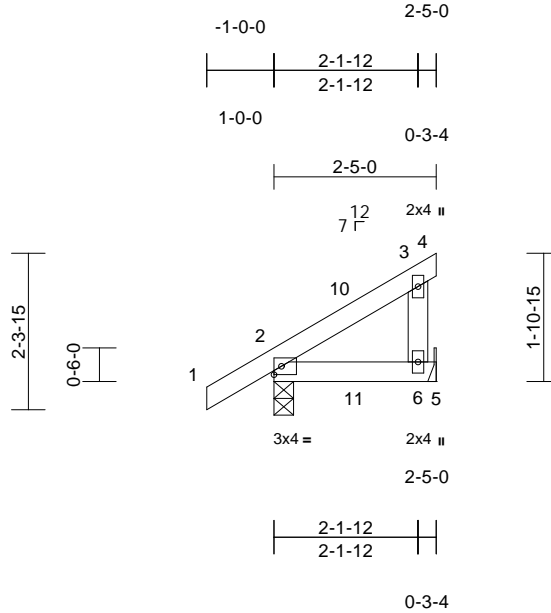
ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate  
818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Blake Pond Lot 00.0128 Roof	170930162
2501-0741-A	G1	Monopitch	27	1	Job Reference (optional)	

Structural, LLC, Thurmont, MD - 21788,

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Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.25	Vert(LL)	-0.01	6-9	>999	360	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.25	Vert(CT)	-0.01	6-9	>999	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.05	Horz(CT)	0.00	2	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP		Wind(LL)	0.00	6-9	>999	240		
BCDL	10.0										Weight: 12 lb	FT = 20%

**LUMBER**

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

**BRACING**

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

**REACTIONS**

(size) 2=0-3-8, 6= Mechanical  
 Max Horiz 2=40 (LC 16)  
 Max Uplift 6=-6 (LC 16)  
 Max Grav 2=320 (LC 40), 6=303 (LC 44)

**FORCES**

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/41, 2-3=-82/67, 3-4=-10/0  
 BOT CHORD 2-6=-45/64, 5-6=0/0  
 WEBS 3-6=-277/59

**NOTES**

- 1) Wind: ASCE 7-16; Vult=120mph (3-second gust)  
 Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 3) Unbalanced snow loads have been considered for this design.
- 4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- 5) Plates checked for a plus or minus 5 degree rotation about its center.

- 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) Bearings are assumed to be: Joint 2 SP No.2 .
- 9) Refer to girder(s) for truss to truss connections.
- 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 6 lb uplift at joint 6.
- 11) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.

**LOAD CASE(S)** Standard



January 23, 2025

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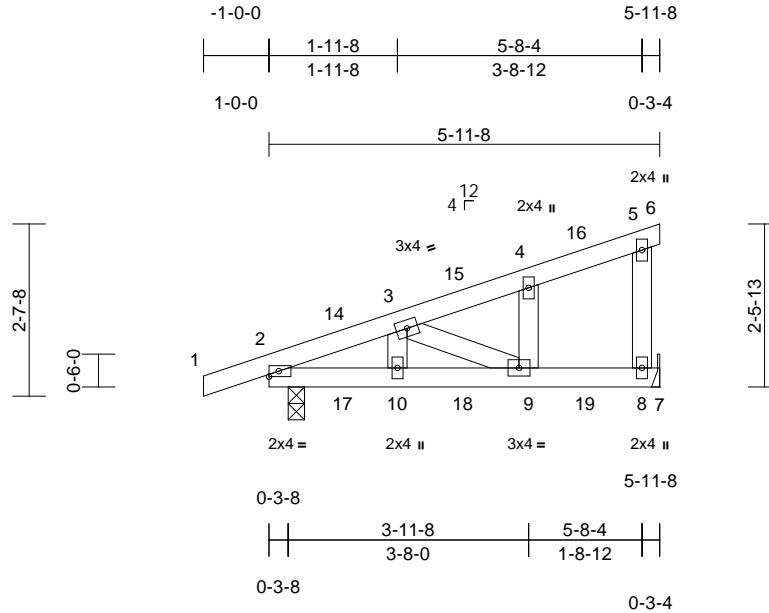
818 Soundside Road  
 Edenton, NC 27932

Job 2501-0741-A	Truss P1G	Truss Type Monopitch Supported Gable	Qty 6	Ply 1	Blake Pond Lot 00.0128 Roof Job Reference (optional)	170930163
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Structural, LLC, Thurmont, MD - 21788,

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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	1.15	TC	0.43	Vert(LL)	-0.06	9-10	>999	360	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.55	Vert(CT)	-0.08	9-10	>807	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.13	Horz(CT)	0.00	2	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.03	9-10	>999	240		
BCDL	10.0										Weight: 28 lb	FT = 20%

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

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

**REACTIONS** (size) 2=0-3-0, 8= Mechanical  
Max Horiz 2=54 (LC 12)  
Max Uplift 2=-7 (LC 12)  
Max Grav 2=388 (LC 40), 8=376 (LC 48)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/26, 2-3=-585/105, 3-4=-80/11, 4-5=-34/66, 5-6=-6/0  
BOT CHORD 2-10=-185/542, 9-10=-185/542, 8-9=0/0, 7-8=0/0  
WEBS 4-9=-41/209, 3-10=-13/329, 5-8=-313/84, 3-9=-589/201

- NOTES**
- 1) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-0-0 to 1-11-8, Interior (1) 1-11-8 to 5-11-8 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
  - 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10

- 4) Unbalanced snow loads have been considered for this design.
- 5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- 6) Plates checked for a plus or minus 5 degree rotation about its center.
- 7) Gable studs spaced at 2-0-0 oc.
- 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 9) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 10) Bearings are assumed to be: Joint 2 SP No.2 .
- 11) Refer to girder(s) for truss to truss connections.
- 12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 7 lb uplift at joint 2.
- 13) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- 14) 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



January 23, 2025

**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)

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**TRENCO**  
A MiTek Affiliate

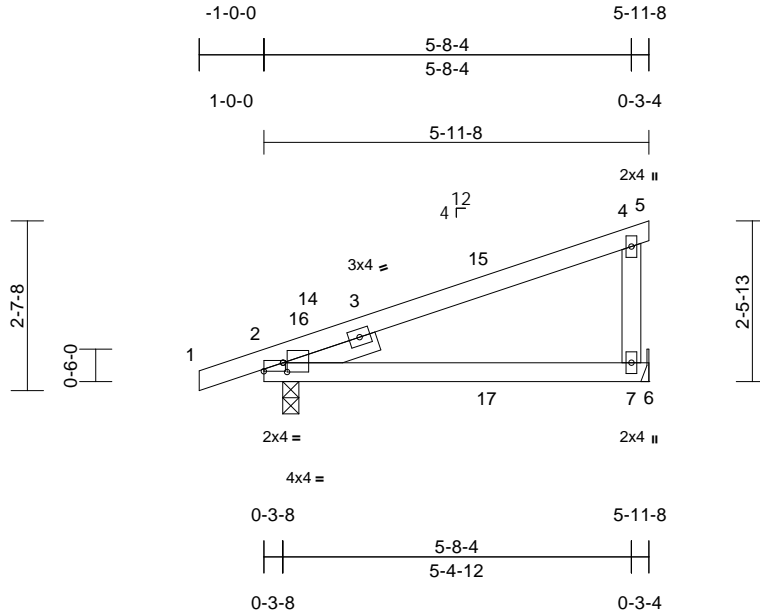
818 Soundside Road  
Edenton, NC 27932

Job 2501-0741-A	Truss P1	Truss Type Monopitch	Qty 27	Ply 1	Blake Pond Lot 00.0128 Roof Job Reference (optional)	170930164
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Page: 1



Scale = 1:23.8

Plate Offsets (X, Y): [2:0-0-12,0-1-12], [2:Edge,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	1.15	TC	0.70	Vert(LL)	-0.10	7-12	>650	360	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.76	Vert(CT)	-0.15	7-12	>470	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.01	2	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.06	7-12	>999	240		
BCDL	10.0										Weight: 25 lb	FT = 20%

**LUMBER**

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

**BRACING**

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

**REACTIONS**

- (size) 2=0-3-0, 7= Mechanical
- Max Horiz 2=54 (LC 12)
- Max Uplift 2=-53 (LC 12), 7=-37 (LC 12)
- Max Grav 2=419 (LC 40), 7=365 (LC 46)

**FORCES**

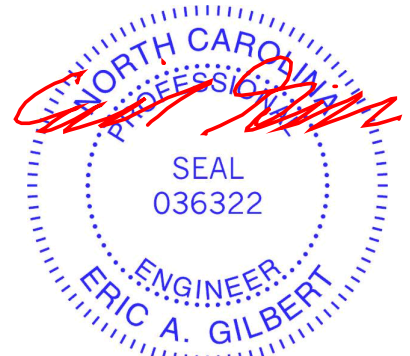
- (lb) - Maximum Compression/Maximum Tension
- TOP CHORD 1-2=0/26, 2-4=-473/166, 4-5=-6/0
- BOT CHORD 2-7=-109/72, 6-7=0/0
- WEBS 4-7=-310/126

**NOTES**

- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 5-11-8 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
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- Plates checked for a plus or minus 5 degree rotation about its center.

- 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 2 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 37 lb uplift at joint 7.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- 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



January 23, 2025

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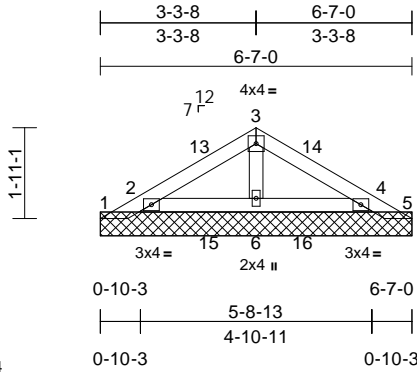
818 Soundside Road  
Edenton, NC 27932

Job 2501-0741-A	Truss PB2	Truss Type Piggyback	Qty 18	Ply 1	Blake Pond Lot 00.0128 Roof Job Reference (optional)	170930165
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Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Dec 4 2024 Print: 8.830 S Dec 4 2024 MiTek Industries, Inc. Wed Jan 22 08:23:46  
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Page: 1



Scale = 1:45.4

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.22	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.33	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.04	Horiz(TL)	0.00	10	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS								
BCDL	10.0											
										Weight: 20 lb	FT = 20%	

**LUMBER**

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

**BRACING**

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

**REACTIONS**

(size) 1=6-7-0, 2=6-7-0, 4=6-7-0, 5=6-7-0, 6=6-7-0  
Max Horiz 1=-28 (LC 12)  
Max Uplift 1=-151 (LC 46), 2=-5 (LC 16), 4=-8 (LC 17), 5=-149 (LC 47)  
Max Grav 1=232 (LC 44), 2=433 (LC 62), 4=420 (LC 60), 5=234 (LC 56), 6=338 (LC 63)

**FORCES**

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-32/88, 2-3=-123/52, 3-4=-123/51, 4-5=-12/87  
BOT CHORD 2-6=-55/44, 4-6=-56/44  
WEBS 3-6=-238/17

**NOTES**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 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.

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- Plates checked for a plus or minus 5 degree rotation about its center.
- 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.3 .
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 151 lb uplift at joint 1 and 149 lb uplift at joint 5.
- N/A

- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- 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.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

**LOAD CASE(S)** Standard



January 23, 2025

**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)



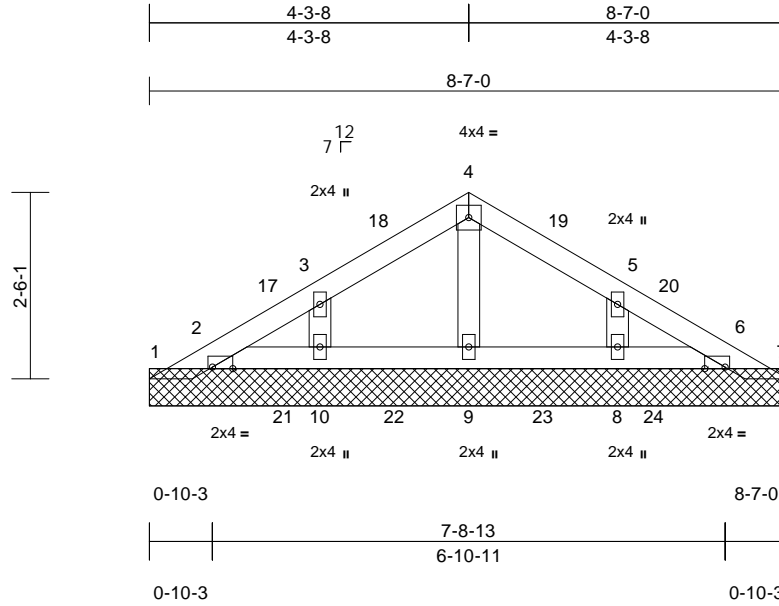
818 Soundside Road  
Edenton, NC 27932

Job 2501-0741-A	Truss PB1G	Truss Type Piggyback	Qty 6	Ply 1	Blake Pond Lot 00.0128 Roof Job Reference (optional)	170930166
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Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Dec 4 2024 Print: 8.830 S Dec 4 2024 MiTek Industries, Inc. Wed Jan 22 08:23:46  
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Page: 1



Scale = 1:21.6

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.21	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.31	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.05	Horiz(TL)	0.00	7	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS								
BCDL	10.0											
										Weight: 30 lb	FT = 20%	

**LUMBER**

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

**BRACING**

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

**REACTIONS** (size) 1=8-7-0, 2=8-7-0, 6=8-7-0, 7=8-7-0,  
8=8-7-0, 9=8-7-0, 10=8-7-0

Max Horiz 1=-37 (LC 14)

Max Uplift 1=-43 (LC 68), 2=-16 (LC 63),  
6=-27 (LC 64), 7=-42 (LC 66),  
8=-15 (LC 17), 10=-14 (LC 16)

Max Grav 1=259 (LC 44), 2=305 (LC 61),  
6=294 (LC 73), 7=260 (LC 60),  
8=332 (LC 71), 9=322 (LC 70),  
10=334 (LC 69)

**FORCES** (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-44/51, 2-3=-67/70, 3-4=-110/50,  
4-5=-110/50, 5-6=-67/70, 6-7=-15/33

BOT CHORD 2-10=-14/37, 9-10=-14/37, 8-9=-14/37,  
6-8=-14/37

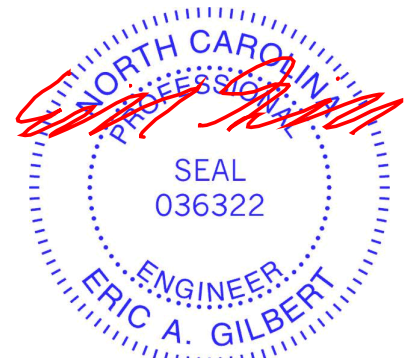
WEBS 4-9=-240/0, 3-10=-290/85, 5-8=-289/85

**NOTES**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-3-8 to 3-3-8, Interior (1) 3-3-8 to 4-3-8, Exterior(2R) 4-3-8 to 7-3-4, Interior (1) 7-3-4 to 8-3-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- Plates checked for a plus or minus 5 degree rotation about its center.
- 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.3 .
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 16 lb uplift at joint 2, 27 lb uplift at joint 6, 43 lb uplift at joint 1, 42 lb uplift at joint 7, 14 lb uplift at joint 10, 15 lb uplift at joint 8, 16 lb uplift at joint 2 and 27 lb uplift at joint 6.
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- 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.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

**LOAD CASE(S)** Standard



January 23, 2025

**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)



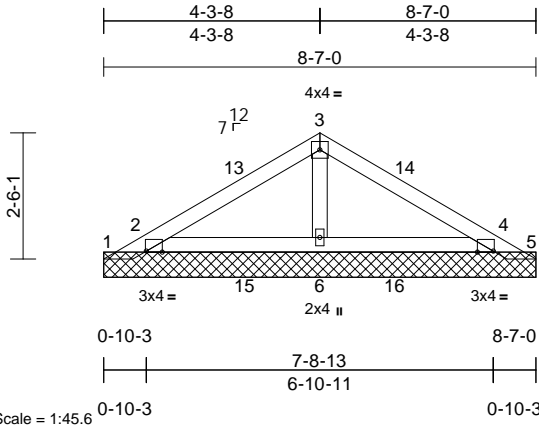
818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Blake Pond Lot 00.0128 Roof	170930167
2501-0741-A	PB1	Piggyback	27	1	Job Reference (optional)	

Structural, LLC, Thurmont, MD - 21788,

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Page: 1



Scale = 1:45.6

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.33	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.52	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.05	Horiz(TL)	0.00	10	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS								
BCDL	10.0											
										Weight: 28 lb	FT = 20%	

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

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

**REACTIONS** (size) 1=8-7-0, 2=8-7-0, 4=8-7-0, 5=8-7-0, 6=8-7-0  
Max Horiz 1=-37 (LC 12)  
Max Uplift 1=-274 (LC 46), 2=-19 (LC 16), 4=-20 (LC 17), 5=-272 (LC 47)  
Max Grav 1=194 (LC 44), 2=544 (LC 46), 4=531 (LC 47), 5=196 (LC 56), 6=366 (LC 63)

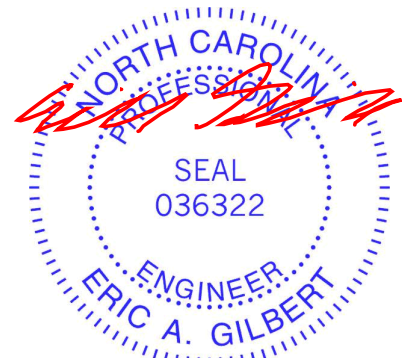
**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-43/150, 2-3=-139/133, 3-4=-139/131, 4-5=-28/149  
BOT CHORD 2-6=-123/47, 4-6=-124/47  
WEBS 3-6=-250/20

- NOTES**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-3-8 to 3-3-8, Interior (1) 3-3-8 to 4-3-8, Exterior(2R) 4-3-8 to 7-3-4, Interior (1) 7-3-4 to 8-3-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- Plates checked for a plus or minus 5 degree rotation about its center.
- 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.3 .
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 274 lb uplift at joint 1 and 272 lb uplift at joint 5.
- N/A

- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- 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.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

**LOAD CASE(S)** Standard



January 23, 2025

**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

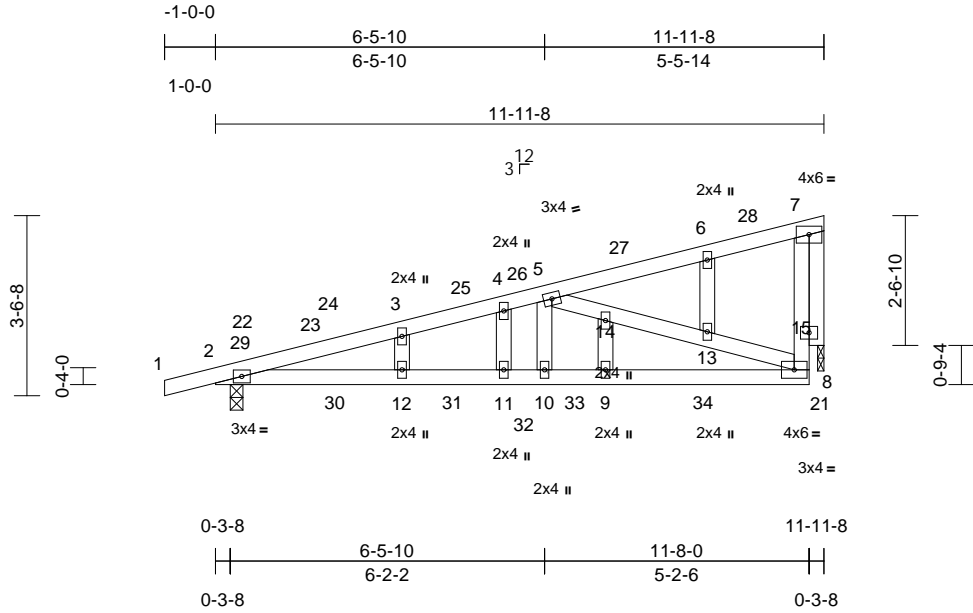


Job 2501-0741-A	Truss C1G	Truss Type Monopitch Supported Gable	Qty 2	Ply 1	Blake Pond Lot 00.0128 Roof Job Reference (optional)	170930168
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Structural, LLC, Thurmont, MD - 21788,

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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	1.15	TC	0.53	Vert(LL)	-0.10	12-20	>999	360	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.65	Vert(CT)	-0.15	12-20	>938	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.63	Horz(CT)	0.01	21	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.06	12	>999	240		
BCDL	10.0										Weight: 61 lb	FT = 20%

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

**BRACING**  
 TOP CHORD Structural wood sheathing directly applied, except end verticals.  
 BOT CHORD Rigid ceiling directly applied.

**REACTIONS** (size) 2=0-3-0, 21=0-1-8  
 Max Horiz 2=62 (LC 12)  
 Max Uplift 2=-91 (LC 12), 21=-75 (LC 12)  
 Max Grav 2=551 (LC 2), 21=473 (LC 23)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
 TOP CHORD 1-2=0/20, 2-3=-1016/340, 3-4=-994/351, 4-5=-970/356, 5-6=-133/13, 6-7=-124/29, 8-15=-171/459, 7-15=-171/459

BOT CHORD 2-12=-415/965, 11-12=-415/965, 10-11=-415/965, 9-10=-415/965, 8-9=-415/965

WEBS 5-10=-97/351, 5-14=-919/389, 13-14=-906/384, 8-13=-947/399, 6-13=-154/47, 9-14=-70/121, 4-11=-151/104, 3-12=-125/127, 7-21=-481/191

**NOTES**  
 1) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 11-6-4 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  
 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- Plates checked for a plus or minus 5 degree rotation about its center.
- 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.
- Bearings are assumed to be: Joint 2 SP No.2, Joint 21 SP No.3.
- Bearing at joint(s) 21 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- Provide mechanical connection (by others) of truss to bearing plate at joint(s) 21.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 21. This connection is for uplift only and does not consider lateral forces.
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- 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



January 23, 2025

**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)

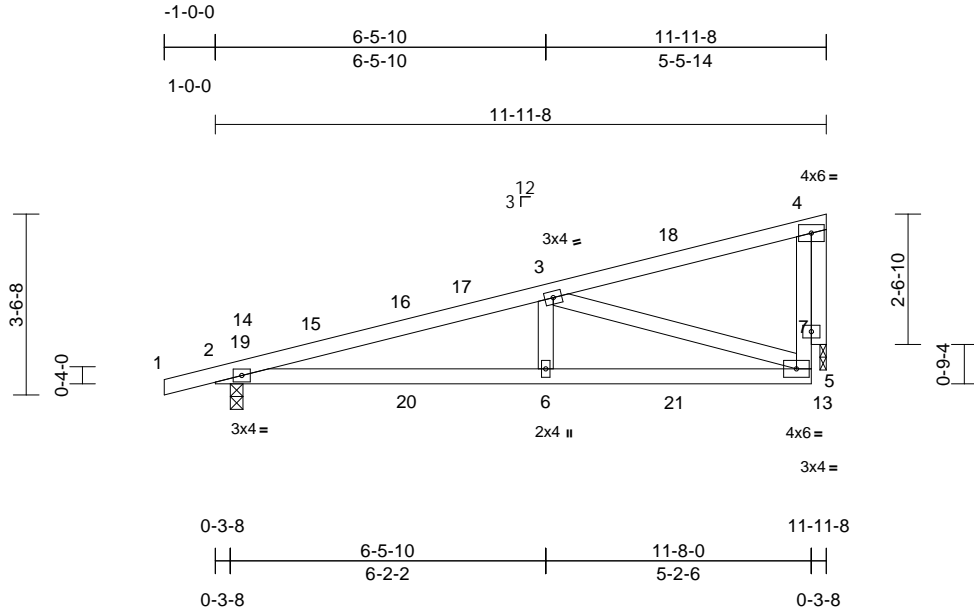
ENGINEERING BY  
**TRENCO**  
 A MiTek Affiliate  
 818 Soundside Road  
 Edenton, NC 27932

Job 2501-0741-A	Truss C1	Truss Type Monopitch	Qty 18	Ply 1	Blake Pond Lot 00.0128 Roof Job Reference (optional)	170930169
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Structural, LLC, Thurmont, MD - 21788,

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Page: 1



Scale = 1:39.4

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.66	Vert(LL)	-0.13	6-12	>999	360	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.87	Vert(CT)	-0.18	6-12	>799	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.50	Horz(CT)	0.02	13	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.05	6-12	>999	240		
BCDL	10.0										Weight: 54 lb	FT = 20%

**LUMBER**

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

**BRACING**

- TOP CHORD Structural wood sheathing directly applied, except end verticals.
- BOT CHORD Rigid ceiling directly applied.

**REACTIONS**

- (size) 2=0-3-0, 13=0-1-8
- Max Horiz 2=62 (LC 12)
- Max Uplift 2=-91 (LC 12), 13=-75 (LC 12)
- Max Grav 2=551 (LC 2), 13=473 (LC 23)

**FORCES**

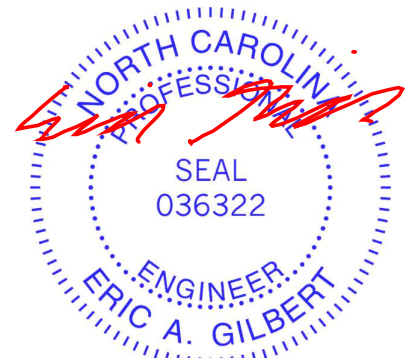
- (lb) - Maximum Compression/Maximum Tension
- TOP CHORD 1-2=0/20, 2-3=-1032/355, 3-4=-161/29, 5-7=-144/436, 4-7=-144/436
- BOT CHORD 2-6=-418/973, 5-6=-418/973
- WEBS 3-6=-64/360, 3-5=-914/387, 4-13=-482/191

**NOTES**

- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 11-6-4 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
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.

- Plates checked for a plus or minus 5 degree rotation about its center.
- 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 2 SP No.2 , Joint 13 SP No.3 .
- Bearing at joint(s) 13 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- Provide mechanical connection (by others) of truss to bearing plate at joint(s) 13.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 13. This connection is for uplift only and does not consider lateral forces.
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- 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



January 23, 2025

**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)



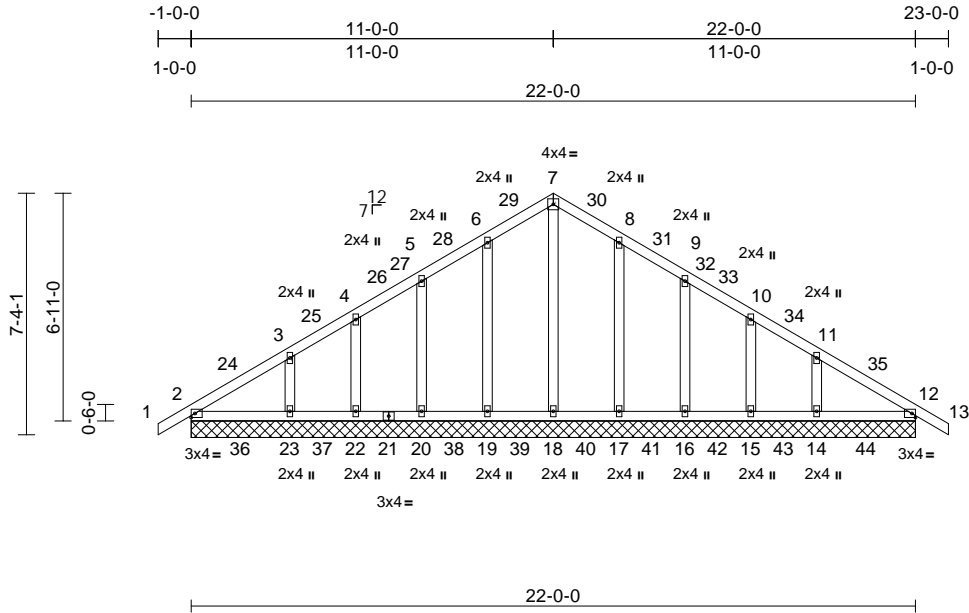
818 Soundside Road  
Edenton, NC 27932

Job 2501-0741-A	Truss G3G	Truss Type Common Supported Gable	Qty 1	Ply 1	Blake Pond Lot 00.0128 Roof Job Reference (optional)	170930170
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Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 E Dec 4 2024 Print: 8.830 E Dec 4 2024 MiTek Industries, Inc. Wed Jan 22 14:15:35  
ID:AYUSwGj7gmQHTGoMGsg82Xzt3UH-1AFdQ0suY5IYscAdK87DaWtWYJNUvufmgu0KfMzso4d

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	1.15	TC	0.33	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.33	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.20	Horz(CT)	0.00	12	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-S								
BCDL	10.0											
											Weight: 125 lb	FT = 20%

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

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

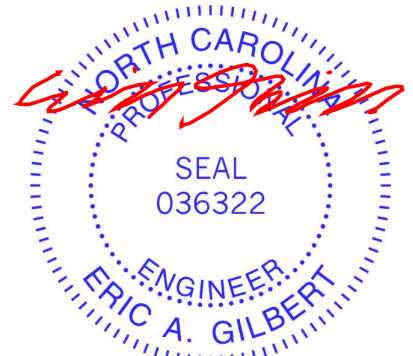
**REACTIONS** All bearings 22-0-0.  
(lb) - Max Horiz 2=112 (LC 14)  
Max Uplift All uplift 100 (lb) or less at joint(s)  
2, 14, 15, 16, 17, 19, 20, 22, 23  
Max Grav All reactions 250 (lb) or less at joint (s) except 2=330 (LC 50), 12=330 (LC 60), 14=370 (LC 79), 15=320 (LC 78), 16=336 (LC 77), 17=335 (LC 76), 18=325 (LC 75), 19=335 (LC 74), 20=336 (LC 73), 22=320 (LC 72), 23=370 (LC 71)

**FORCES** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
**WEBS** 6-19=-282/52, 5-20=-283/46, 4-22=-279/38, 3-23=-307/60, 8-17=-282/52, 9-16=-283/46, 10-15=-279/38, 11-14=-307/60

**NOTES**  
1) Unbalanced roof live loads have been considered for this design.  
2) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCCL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 11-0-0, Exterior(2R) 11-0-0 to 14-0-0, Interior (1) 14-0-0 to 23-0-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- Plates checked for a plus or minus 5 degree rotation about its center.
- 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint (s) 19, 20, 22, 23, 17, 16, 15, 14.
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.

**LOAD CASE(S)** Standard



January 23, 2025

**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)



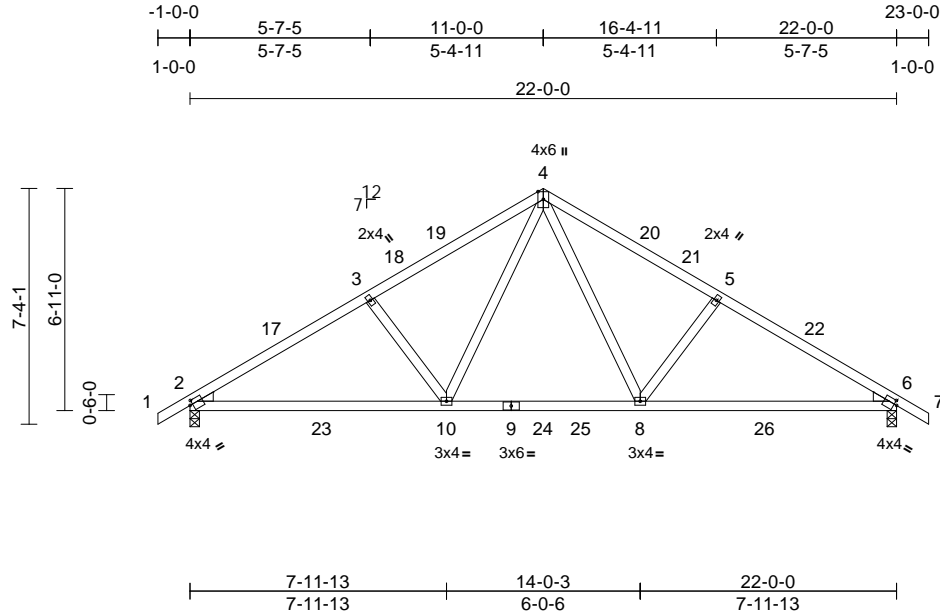
818 Soundside Road  
Edenton, NC 27932

Job 2501-0741-A	Truss G3	Truss Type Common	Qty 6	Ply 1	Blake Pond Lot 00.0128 Roof Job Reference (optional)	170930171
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Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Dec 4 2024 Print: 8.830 S Dec 4 2024 MiTek Industries, Inc. Wed Jan 22 08:23:45  
ID:MgfdE0r158ojz8TPgMj\_rzt3U6-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:64.6

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.65	Vert(LL)	-0.22	10-13	>999	360	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.55	Vert(CT)	-0.30	8-16	>880	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.22	Horz(CT)	0.02	6	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.02	10-13	>999	240		
BCDL	10.0										Weight: 109 lb	FT = 20%

**LUMBER**

- TOP CHORD 2x4 SP No.2
- BOT CHORD 2x4 SP SS
- WEBS 2x4 SP No.3
- WEDGE Left: 2x4 SP No.3  
Right: 2x4 SP No.3

**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=112 (LC 15)
- Max Grav 2=1041 (LC 34), 6=1041 (LC 35)

**FORCES**

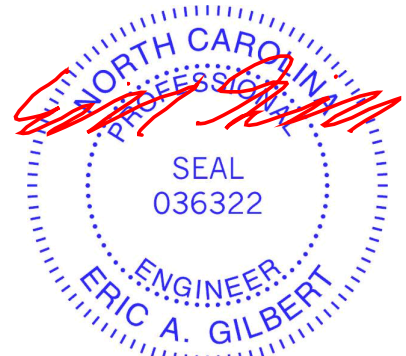
- (lb) - Maximum Compression/Maximum Tension
- TOP CHORD 1-2=0/41, 2-3=-1626/67, 3-4=-1459/91, 4-5=-1460/91, 5-6=-1626/67, 6-7=0/41
- BOT CHORD 2-10=-63/1338, 8-10=0/894, 6-8=-46/1340
- WEBS 4-8=-2/592, 5-8=-341/104, 4-10=-2/591, 3-10=-341/104

**NOTES**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 11-0-0, Exterior(2R) 11-0-0 to 14-0-0, Interior (1) 14-0-0 to 23-0-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.

- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- Plates checked for a plus or minus 5 degree rotation about its center.
- 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, with BCDL = 10.0psf.
- All bearings are assumed to be SP SS .
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- 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



January 23, 2025

**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)



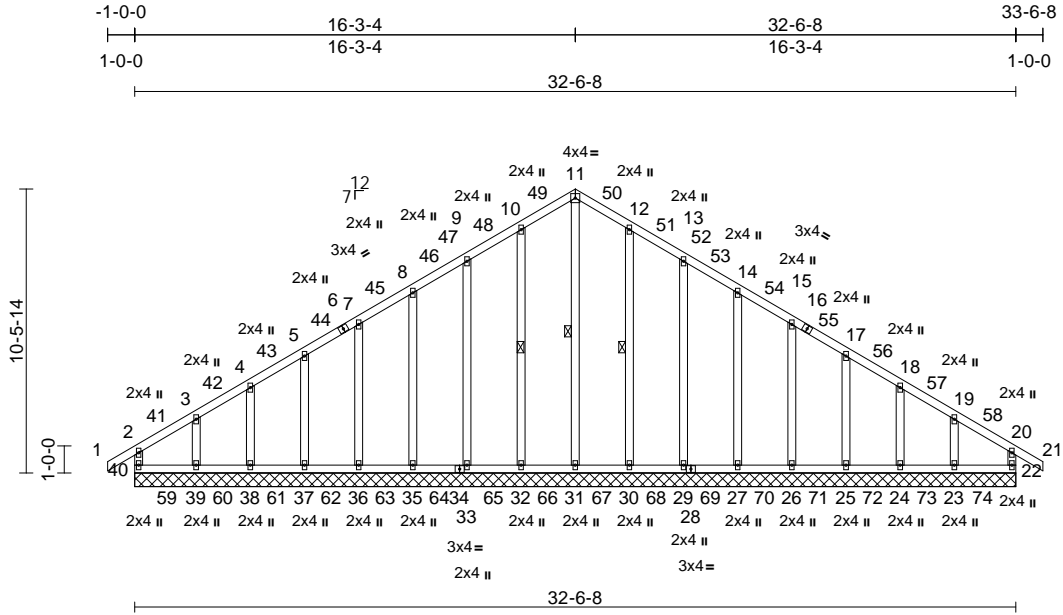
818 Soundside Road  
Edenton, NC 27932

Job 2501-0741-A	Truss B1G	Truss Type Common Supported Gable	Qty 3	Ply 1	Blake Pond Lot 00.0128 Roof Job Reference (optional)	170930172
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Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Dec 4 2024 Print: 8.830 S Dec 4 2024 MiTek Industries, Inc. Wed Jan 22 08:23:43  
ID:HvCmlLrgrE5CUJM9wBlm7y77VI-RfC?PsB70Hq3NSgPqnL8w3uITXBGKWrCDoi7J4zJC?f

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	1.15	TC	0.21	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.22	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.32	Horz(CT)	0.00	22	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS								
BCDL	10.0											
											Weight: 235 lb	FT = 20%

LUMBER	TOP CHORD	2-40=300/50, 1-2=0/47, 2-3=128/118, 3-4=100/92, 4-5=97/94, 5-7=88/99, 7-8=90/139, 8-9=112/179, 9-10=137/220, 10-11=156/254, 11-12=156/254, 12-13=137/220, 13-14=112/179, 14-15=90/139, 15-17=77/100, 17-18=79/69, 18-19=72/75, 19-20=97/77, 20-21=0/47, 20-22=300/32	4)
TOP CHORD	2x4 SP No.2	39-40=75/90, 38-39=75/90, 37-38=75/90, 36-37=75/90, 35-36=75/90, 33-35=75/90, 32-33=75/90, 31-32=75/90, 30-31=75/90, 29-30=75/90, 27-29=75/90, 26-27=75/90, 25-26=75/90, 24-25=75/90, 23-24=75/90, 22-23=75/90	TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
BOT CHORD	2x4 SP No.2	11-31=250/73, 10-32=273/40, 9-33=273/61, 8-35=275/54, 7-36=278/55, 5-37=281/56, 4-38=284/53, 3-39=287/78, 12-30=273/40, 13-29=273/61, 14-27=275/54, 15-26=278/55, 17-25=281/56, 18-24=284/52, 19-23=287/76	5) Unbalanced snow loads have been considered for this design.
WEBS	2x4 SP No.3		6) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
OTHERS	2x4 SP No.3		7) Plates checked for a plus or minus 5 degree rotation about its center.
BRACING			8) Gable requires continuous bottom chord bearing.
TOP CHORD	Structural wood sheathing directly applied, except end verticals.		9) Truss to be fully sheathed from one chord or securely braced against lateral movement (i.e. diagonal web).
BOT CHORD	Rigid ceiling directly applied.		10) Gable studs spaced at 2-0-0 oc.
WEBS	1 Row at midpt 11-31, 10-32, 12-30		11) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
REACTIONS	(size)		12) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
Max Horiz	40=179 (LC 14)		13) All bearings are assumed to be SP No.2 .
Max Uplift	22=25 (LC 13), 23=47 (LC 17), 25=13 (LC 17), 26=10 (LC 17), 27=10 (LC 17), 29=14 (LC 17), 30=1 (LC 17), 32=-2 (LC 16), 33=14 (LC 16), 35=10 (LC 16), 36=10 (LC 16), 37=13 (LC 16), 39=58 (LC 13), 40=57 (LC 12)		
Max Grav	22=321 (LC 109), 23=336 (LC 108), 24=332 (LC 107), 25=333 (LC 106), 26=333 (LC 105), 27=333 (LC 104), 29=333 (LC 103), 30=334 (LC 102), 31=328 (LC 101), 32=334 (LC 100), 33=323 (LC 99), 35=333 (LC 98), 36=333 (LC 97), 37=333 (LC 96), 38=332 (LC 95), 39=336 (LC 94), 40=321 (LC 93)		
FORCES	(lb) - Maximum Compression/Maximum Tension		
<p><b>NOTES</b></p> <p>1) Unbalanced roof live loads have been considered for this design.</p> <p>2) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Corner (3E) -1-0-0 to 2-3-4, Exterior(2N) 2-3-4 to 16-3-4, Corner (3R) 16-3-4 to 19-6-5, Exterior(2N) 19-6-5 to 33-6-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces &amp; MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60</p> <p>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.</p>			



January 23, 2025

Continued on page 2

**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)



Job	Truss	Truss Type	Qty	Ply	Blake Pond Lot 00.0128 Roof
2501-0741-A	B1G	Common Supported Gable	3	1	I70930172 Job Reference (optional)

Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Dec 4 2024 Print: 8.830 S Dec 4 2024 MiTek Industries, Inc. Wed Jan 22 08:23:43  
ID:HvCmLgrE5CUJM9wBIm7y77VI-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 2

- 14) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 57 lb uplift at joint 40, 25 lb uplift at joint 22, 2 lb uplift at joint 32, 14 lb uplift at joint 33, 10 lb uplift at joint 35, 10 lb uplift at joint 36, 13 lb uplift at joint 37, 58 lb uplift at joint 39, 1 lb uplift at joint 30, 14 lb uplift at joint 29, 10 lb uplift at joint 27, 10 lb uplift at joint 26, 13 lb uplift at joint 25 and 47 lb uplift at joint 23.
- 15) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- 16) 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

**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](http://www.tpinst.org)) and **BCSI Building Component Safety Information** available from the Structural Building Component Association ([www.sbcacomponents.com](http://www.sbcacomponents.com))



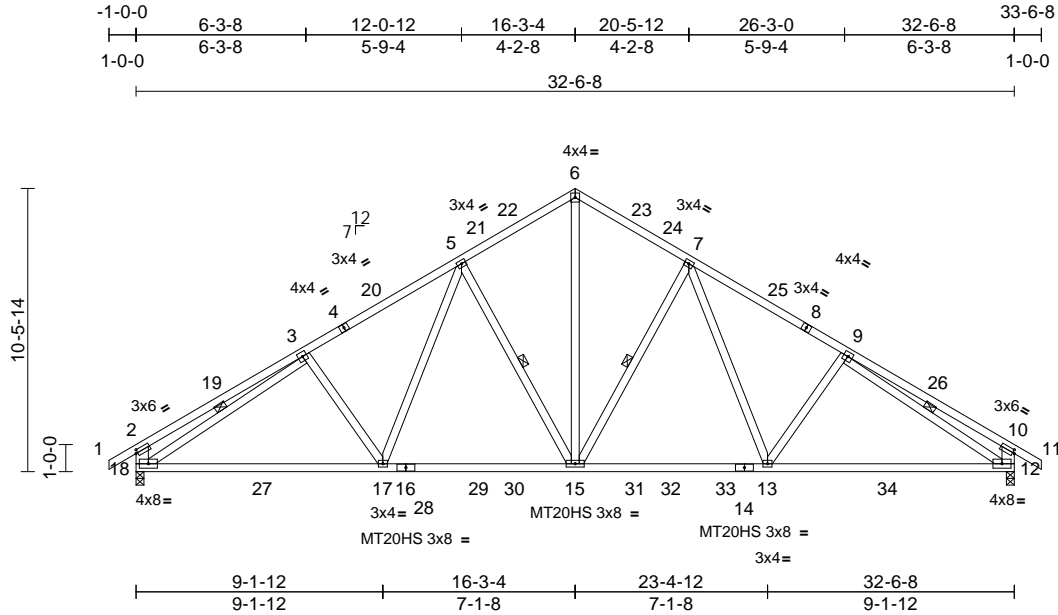
818 Soundside Road  
Edenton, NC 27932

Job 2501-0741-A	Truss B1	Truss Type Common	Qty 20	Ply 1	Blake Pond Lot 00.0128 Roof Job Reference (optional)	170930173
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Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Dec 4 2024 Print: 8.830 S Dec 4 2024 MiTek Industries, Inc. Wed Jan 22 08:23:42  
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Page: 1



Scale = 1:77.3

Plate Offsets (X, Y): [2:0-0-14,0-1-8], [10:0-0-14,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.68	Vert(LL)	-0.30	12-13	>999	360	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.64	Vert(CT)	-0.43	12-13	>896	240	MT20HS	187/143
TCDL	10.0	Rep Stress Incr	YES	WB	0.48	Horz(CT)	0.06	12	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.03	15-17	>999	240		
BCDL	10.0											
											Weight: 210 lb	FT = 20%

**LUMBER**

TOP CHORD 2x4 SP No.2  
 BOT CHORD 2x4 SP SS  
 WEBS 2x4 SP No.3 \*Except\* 18-2,12-10:2x6 SP No.2

**BRACING**

TOP CHORD Structural wood sheathing directly applied, except end verticals.  
 BOT CHORD Rigid ceiling directly applied.  
 WEBS 1 Row at midpt 5-15, 3-18, 7-15, 9-12

**REACTIONS**

(size) 12=0-3-8, 18=0-3-8  
 Max Horiz 18=180 (LC 14)  
 Max Grav 12=1530 (LC 35), 18=1530 (LC 34)

**FORCES**

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/51, 2-3=-715/73, 3-5=-2156/107, 5-6=-1643/148, 6-7=-1643/148, 7-9=-2156/107, 9-10=-715/73, 10-11=0/51, 2-18=-580/83, 10-12=-580/83  
 BOT CHORD 17-18=-6/1840, 15-17=0/1564, 13-15=0/1563, 12-13=0/1837  
 WEBS 6-15=-81/1367, 5-15=-617/94, 5-17=0/493, 3-17=-223/110, 3-18=-1635/37, 7-15=-617/94, 7-13=0/493, 9-13=-223/110, 9-12=-1634/37

**NOTES**

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-0-0 to 2-3-1, Interior (1) 2-3-1 to 16-3-4, Exterior(2R) 16-3-4 to 19-6-5, Interior (1) 19-6-5 to 33-6-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- 6) All plates are MT20 plates unless otherwise indicated.
- 7) Plates checked for a plus or minus 5 degree rotation about its center.
- 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 9) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 10) All bearings are assumed to be SP SS.
- 11) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- 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



January 23, 2025

**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)



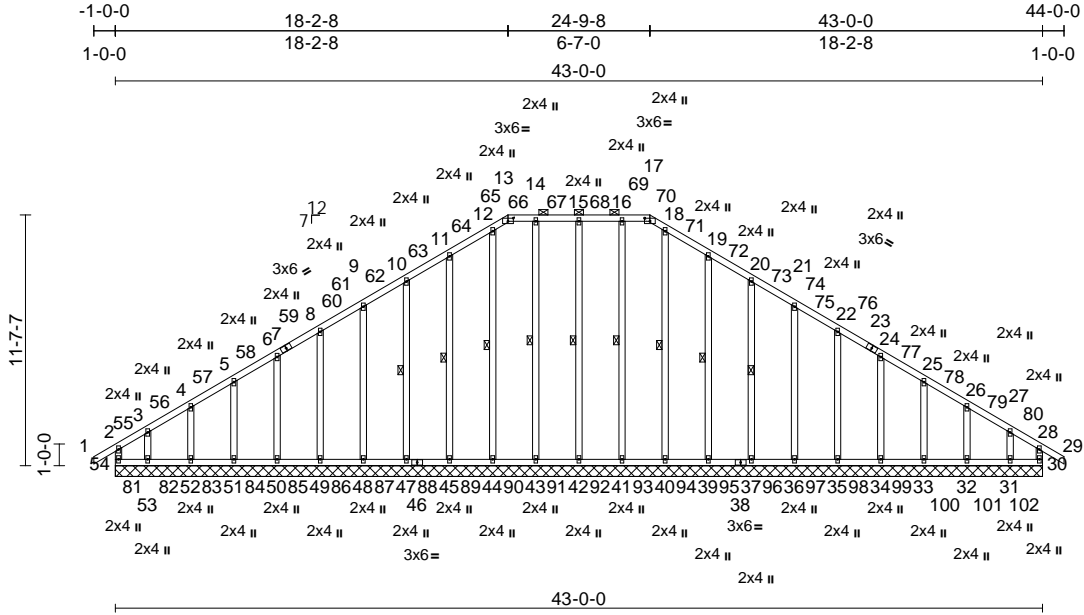
818 Soundside Road  
 Edenton, NC 27932

Job 2501-0741-A	Truss A1G	Truss Type Piggyback Base Supported Gable	Qty 3	Ply 1	Blake Pond Lot 00.0128 Roof Job Reference (optional)	170930174
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Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Dec 4 2024 Print: 8.830 S Dec 4 2024 MiTek Industries, Inc. Wed Jan 22 08:23:38  
ID:SZQnCKOvE3mpODlo3bVl5cy77V2-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKwKRCdoi7J4zJC?ft

Page: 1

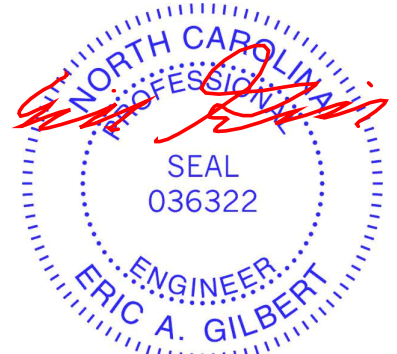


Scale = 1:91.2

Plate Offsets (X, Y): [13:0-3-0-0-1-12], [17:0-3-0-0-1-12]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	Horz(CT)	0.01	30	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS							
BCDL	10.0										
										Weight: 352 lb	FT = 20%

LUMBER	Max Grav	30=307 (LC 161), 31=313 (LC 160), 32=337 (LC 159), 33=332 (LC 158), 34=333 (LC 157), 35=333 (LC 156), 36=333 (LC 155), 37=333 (LC 154), 39=333 (LC 153), 40=333 (LC 152), 41=333 (LC 151), 42=333 (LC 150), 43=333 (LC 149), 44=333 (LC 148), 45=333 (LC 147), 47=333 (LC 146), 48=333 (LC 145), 49=333 (LC 144), 50=333 (LC 143), 51=332 (LC 142), 52=337 (LC 141), 53=313 (LC 140), 54=307 (LC 139)	BOT CHORD
TOP CHORD 2x4 SP No.2			53-54=-83/115, 52-53=-83/115, 51-52=-83/115, 50-51=-83/115, 49-50=-83/115, 48-49=-83/115, 47-48=-83/115, 45-47=-83/115, 44-45=-83/115, 43-44=-83/115, 42-43=-83/115, 41-42=-83/115, 40-41=-83/115, 39-40=-83/115, 37-39=-83/115, 36-37=-83/115, 35-36=-83/115, 34-35=-83/115, 33-34=-83/115, 32-33=-83/115, 31-32=-83/115, 30-31=-83/115
BOT CHORD 2x4 SP No.2			15-42=-264/58, 14-43=-263/9, 12-44=-264/1, 11-45=-269/70, 10-47=-271/54, 9-48=-274/55, 8-49=-276/55, 6-50=-279/55, 5-51=-282/56, 4-52=-287/55, 3-53=-273/81, 16-41=-263/7, 18-40=-264/0, 19-39=-269/70, 20-37=-271/54, 21-36=-274/55, 22-35=-276/55, 24-34=-279/55, 25-33=-282/56, 26-32=-287/54, 27-31=-273/78
WEBS 2x4 SP No.3			
OTHERS 2x4 SP No.3			
BRACING	FORCES	(lb) - Maximum Compression/Maximum Tension	NOTES
TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 13-17.	TOP CHORD	2-54=-293/74, 1-2=0/47, 2-3=-162/149, 3-4=-120/121, 4-5=-112/110, 5-6=-103/107, 6-8=-100/106, 8-9=-95/134, 9-10=-109/174, 10-11=-128/213, 11-12=-155/259, 12-13=-146/237, 13-14=-139/244, 14-15=-139/244, 15-16=-139/244, 16-17=-139/244, 17-18=-146/237, 18-19=-155/259, 19-20=-128/213, 20-21=-109/174, 21-22=-92/134, 22-24=-75/94, 24-25=-75/72, 25-26=-77/71, 26-27=-73/75, 27-28=-105/89, 28-29=0/47, 28-30=-293/34	
BOT CHORD Rigid ceiling directly applied.			
WEBS 1 Row at midpt 15-42, 14-43, 12-44, 11-45, 10-47, 16-41, 18-40, 19-39, 20-37			
REACTIONS (size)			
30=43-0-0, 31=43-0-0, 32=43-0-0, 33=43-0-0, 34=43-0-0, 35=43-0-0, 36=43-0-0, 37=43-0-0, 39=43-0-0, 40=43-0-0, 41=43-0-0, 42=43-0-0, 43=43-0-0, 44=43-0-0, 45=43-0-0, 47=43-0-0, 48=43-0-0, 49=43-0-0, 50=43-0-0, 51=43-0-0, 52=43-0-0, 53=43-0-0, 54=43-0-0			
Max Horiz 54=198 (LC 15)			
Max Uplift 30=44 (LC 13), 31=71 (LC 17), 32=-1 (LC 17), 33=-13 (LC 17), 34=-10 (LC 17), 35=-10 (LC 17), 36=-10 (LC 17), 37=-9 (LC 17), 39=-20 (LC 17), 42=-4 (LC 12), 45=-19 (LC 16), 47=-10 (LC 16), 48=-10 (LC 16), 49=-10 (LC 16), 50=-10 (LC 16), 51=-13 (LC 16), 53=98 (LC 13), 54=-99 (LC 12)			



January 23, 2025

Continued on page 2

**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 2501-0741-A	Truss A1G	Truss Type Piggyback Base Supported Gable	Qty 3	Ply 1	Blake Pond Lot 00.0128 Roof Job Reference (optional)	I70930174
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Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Dec 4 2024 Print: 8.830 S Dec 4 2024 MiTek Industries, Inc. Wed Jan 22 08:23:38  
ID:SZQnCKOvE3mpODlo3bVl5cy77V2-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrcDoi7J4zJC?f

Page: 2

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Corner (3E) -1-0-0 to 3-6-0, Exterior(2N) 3-6-0 to 18-2-8, Corner (3R) 18-2-8 to 22-6-2, Exterior(2N) 22-6-2 to 24-9-8, Corner(3R) 24-9-8 to 29-1-2, Exterior(2N) 29-1-2 to 44-0-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
- 5) Unbalanced snow loads have been considered for this design.
- 6) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- 7) Provide adequate drainage to prevent water ponding.
- 8) Plates checked for a plus or minus 5 degree rotation about its center.
- 9) Gable requires continuous bottom chord bearing.
- 10) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- 11) Gable studs spaced at 2-0-0 oc.
- 12) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 13) \* 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.
- 14) All bearings are assumed to be SP No.2 .
- 15) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 99 lb uplift at joint 54, 44 lb uplift at joint 30, 4 lb uplift at joint 42, 19 lb uplift at joint 45, 10 lb uplift at joint 47, 10 lb uplift at joint 48, 10 lb uplift at joint 49, 10 lb uplift at joint 50, 13 lb uplift at joint 51, 98 lb uplift at joint 53, 20 lb uplift at joint 39, 9 lb uplift at joint 37, 10 lb uplift at joint 36, 10 lb uplift at joint 35, 10 lb uplift at joint 34, 13 lb uplift at joint 33, 1 lb uplift at joint 32 and 71 lb uplift at joint 31.
- 16) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- 17) 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.
- 18) 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

**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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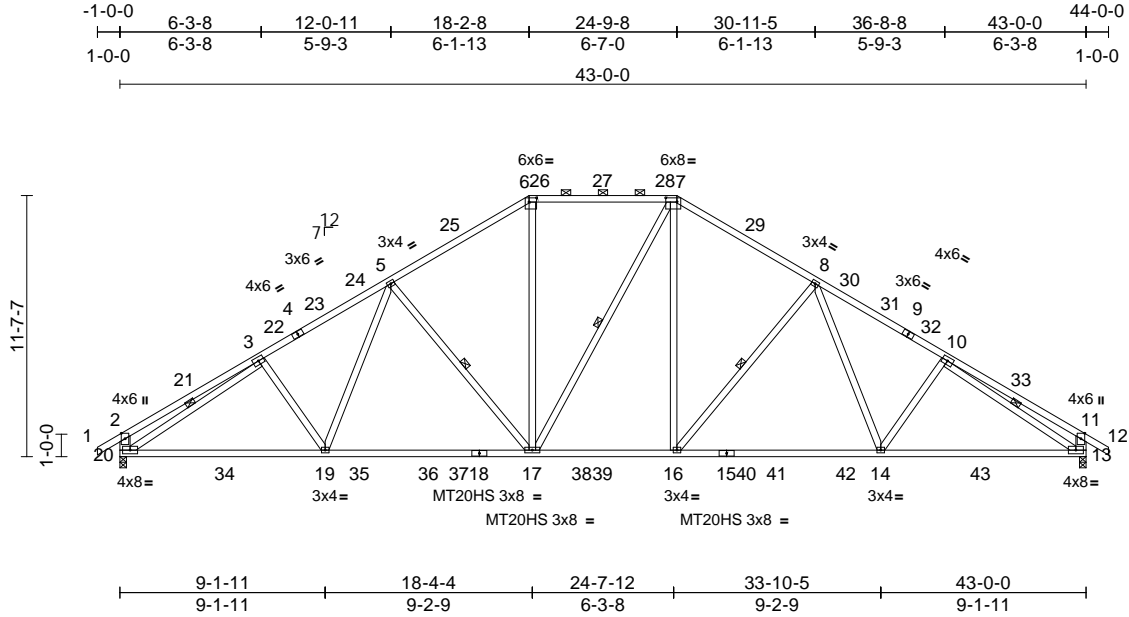
818 Soundside Road  
Edenton, NC 27932

Job 2501-0741-A	Truss A1A	Truss Type Piggyback Base	Qty 15	Ply 1	Blake Pond Lot 00.0128 Roof Job Reference (optional)	170930175
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Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Dec 4 2024 Print: 8.830 S Dec 4 2024 MiTek Industries, Inc. Wed Jan 22 08:23:35  
ID:P1eFugEplabtn\_eF9lljwNy77Ty-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?#

Page: 1



Scale = 1:93.7

Plate Offsets (X, Y): [6:0-4-0,0-2-4], [7:0-6-0,0-2-4]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.79	Vert(LL)	-0.39	14-16	>999	360	MT20	244/190
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.70	Vert(CT)	-0.60	14-16	>846	240	MT20HS	187/143
TCDL	10.0	Rep Stress Incr	YES	WB	0.79	Horz(CT)	0.13	13	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.05	17-19	>999	240		
BCDL	10.0											
											Weight: 283 lb	FT = 20%

- LUMBER**  
TOP CHORD 2x4 SP No.2 \*Except\* 6-7:2x4 SP SS  
BOT CHORD 2x4 SP SS  
WEBS 2x4 SP No.3 \*Except\* 17-7:2x4 SP No.2, 20-2,13-11:2x6 SP No.2
- BRACING**  
TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (4-5-6 max.): 6-7.  
BOT CHORD Rigid ceiling directly applied.  
WEBS 1 Row at midpt 5-17, 7-17, 8-16, 3-20, 10-13
- REACTIONS** (size) 13=0-3-8, 20=0-3-8  
Max Horiz 20=199 (LC 15)  
Max Grav 13=2124 (LC 59), 20=2121 (LC 57)
- FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/51, 2-3=-751/36, 3-5=-3258/0, 5-6=-2615/77, 6-7=-2175/102, 7-8=-2621/77, 8-10=-3264/0, 10-11=-752/36, 11-12=0/51, 2-20=-596/76, 11-13=-596/76  
BOT CHORD 19-20=0/2726, 17-19=0/2562, 16-17=0/2094, 14-16=0/2566, 13-14=0/2727  
WEBS 3-19=-178/112, 5-19=0/451, 5-17=-766/77, 6-17=0/915, 7-17=-182/185, 7-16=0/928, 8-16=-767/77, 8-14=0/451, 10-14=-178/113, 3-20=-2689/0, 10-13=-2694/0
- NOTES**  
1) Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-0-0 to 3-3-10, Interior (1) 3-3-10 to 18-2-8, Exterior(2R) 18-2-8 to 24-3-8, Interior (1) 24-3-8 to 24-9-8, Exterior(2R) 24-9-8 to 30-11-5, Interior (1) 30-11-5 to 44-0-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
  - Unbalanced snow loads have been considered for this design.
  - This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
  - Provide adequate drainage to prevent water ponding.
  - All plates are MT20 plates unless otherwise indicated.
  - Plates checked for a plus or minus 5 degree rotation about its center.
  - 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, with BCDL = 10.0psf.
  - All bearings are assumed to be SP SS.
  - This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
  - 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



January 23, 2025

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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/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)



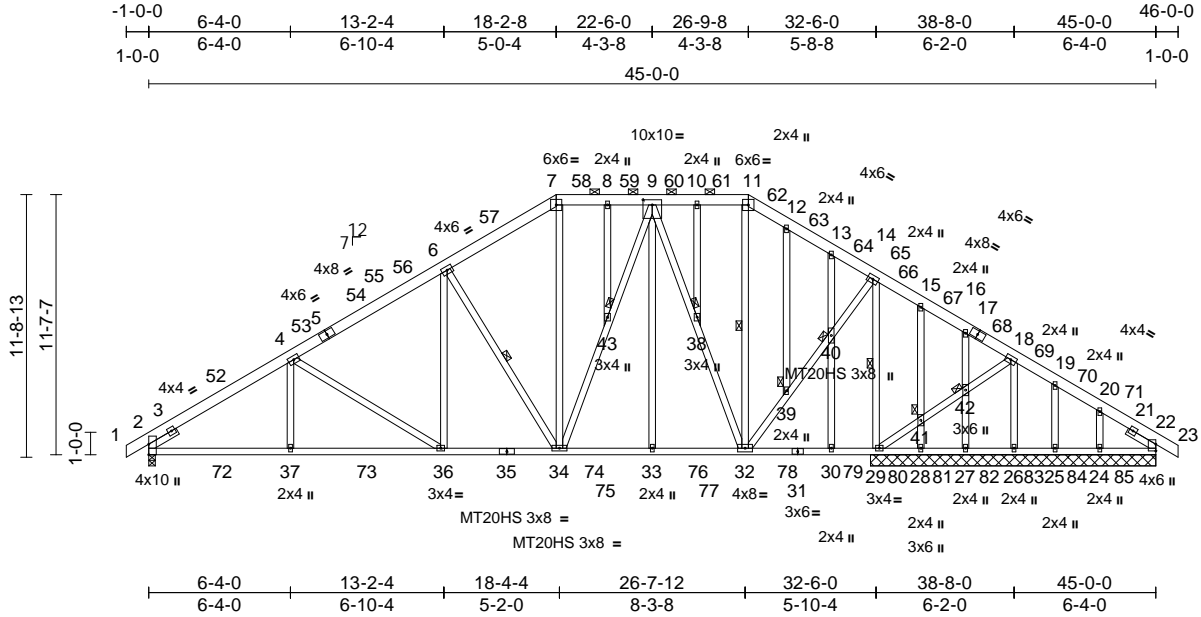
818 Soundside Road  
Edenton, NC 27932

Job 2501-0741-A	Truss A1SG	Truss Type Piggyback Base Structural Gable	Qty 3	Ply 1	Blake Pond Lot 00.0128 Roof Job Reference (optional)	170930176
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Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Dec 4 2024 Print: 8.830 S Dec 4 2024 MiTek Industries, Inc. Wed Jan 22 08:23:41  
ID:7AchL\_FR8mue7gn2XPWhAy771W-RfC?PsB70Hq3NSgPqnL8u3tXbGkWRcDoi7J4zJC7f

Page: 1



Scale = 1:94.2

Plate Offsets (X, Y): [9:0-5:0,0-2-12]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in (loc)	l/defl	L/d	PLATES	GRIP		
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.57	Vert(LL)	-0.18	36-37	>999	360	MT20	244/190
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.74	Vert(CT)	-0.28	36-37	>999	240	MT20HS	187/143
TCDL	10.0	Rep Stress Incr	YES	WB	0.60	Horz(CT)	0.05	29	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.03	36-37	>999	240		
BCDL	10.0											

Weight: 427 lb FT = 20%

**LUMBER**  
TOP CHORD 2x6 SP No.2  
BOT CHORD 2x4 SP SS \*Except\* 31-35:2x4 SP No.2  
WEBS 2x4 SP No.3  
OTHERS 2x4 SP No.3  
SLIDER Left 2x4 SP No.3 -- 1-6-0, Right 2x4 SP No.3 -- 1-6-0

**BRACING**  
TOP CHORD Structural wood sheathing directly applied, except  
2-0-0 oc purlins (6-0-0 max.): 7-11.  
BOT CHORD Rigid ceiling directly applied.  
WEBS 1 Row at midpt 11-32, 14-29, 6-34  
JOINTS 1 Brace at Jt(s): 38, 39, 40, 41, 42, 43

**REACTIONS** (size)  
2=0-3-8, 22=12-9-0, 24=12-9-0,  
25=12-9-0, 26=12-9-0, 27=12-9-0,  
28=12-9-0, 29=12-9-0  
Max Horiz 2=-180 (LC 14)  
Max Uplift 22=-22 (LC 64), 24=-21 (LC 17),  
25=-4 (LC 17), 26=-68 (LC 64),  
27=-17 (LC 17), 28=-31 (LC 127)  
Max Grav 2=1501 (LC 57), 22=261 (LC 85),  
24=371 (LC 133), 25=309 (LC 132),  
26=258 (LC 131), 27=318 (LC 130),  
28=323 (LC 129), 29=2059 (LC 51)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/41, 2-4=-2314/0, 4-6=-1891/47,  
6-7=-1392/114, 7-8=-1113/126,  
8-9=-1113/126, 9-10=-599/131,  
10-11=-599/131, 11-12=-660/127,  
12-13=-683/115, 13-14=-722/89,  
14-15=0/374, 15-16=0/408, 16-18=0/355,  
18-19=-41/169, 19-20=-24/140,  
20-22=-166/184, 22-23=0/41

**BOT CHORD** 2-37=-107/1886, 36-37=0/1886,  
34-36=0/1521, 33-34=0/827, 32-33=0/827,  
30-32=-327/67, 29-30=-327/67,  
28-29=-127/40, 27-28=-127/40,  
26-27=-127/40, 25-26=-127/40,  
24-25=-127/40, 22-24=-127/40  
**WEBS** 7-34=0/426, 11-32=-161/74, 9-38=-978/18,  
32-38=-916/18, 34-43=-12/635,  
9-43=-12/678, 18-26=-139/123,  
14-29=-1812/0, 29-41=-245/33,  
41-42=-242/33, 18-42=-246/33,  
32-39=0/1335, 39-40=0/1356, 14-40=0/1359,  
6-36=0/496, 4-37=0/357, 6-34=-957/52,  
4-36=-433/57, 9-33=0/322, 10-38=0/68,  
12-39=-35/4, 13-40=-99/150, 30-40=-99/169,  
15-41=-284/18, 28-41=-280/17,  
16-42=-222/43, 27-42=-222/43,  
19-25=-244/26, 20-24=-304/48, 8-43=-46/1

**NOTES**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-0-0 to 3-6-0, Interior (1) 3-6-0 to 18-2-8, Exterior(2R) 18-2-8 to 24-6-0, Interior (1) 24-6-0 to 26-9-8, Exterior(2R) 26-9-8 to 33-1-14, Interior (1) 33-1-14 to 46-0-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.
- Plates checked for a plus or minus 5 degree rotation about its center.
- 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, with BCDL = 10.0psf.
- All bearings are assumed to be SP SS .



Continued on page 2

**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	Truss	Truss Type	Qty	Ply	Blake Pond Lot 00.0128 Roof	I70930176
2501-0741-A	A1SG	Piggyback Base Structural Gable	3	1	Job Reference (optional)	

Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Dec 4 2024 Print: 8.830 S Dec 4 2024 MiTek Industries, Inc. Wed Jan 22 08:23:41  
ID:7AcHt\_FR8mue7gn2nXPWhAy771W-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 2

- 14) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 22, 26, 28, 27, 25, and 24. This connection is for uplift only and does not consider lateral forces.
- 15) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- 16) 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.
- 17) 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

**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](http://www.tpinst.org)) and **BCSI Building Component Safety Information** available from the Structural Building Component Association ([www.sbcacomponents.com](http://www.sbcacomponents.com))



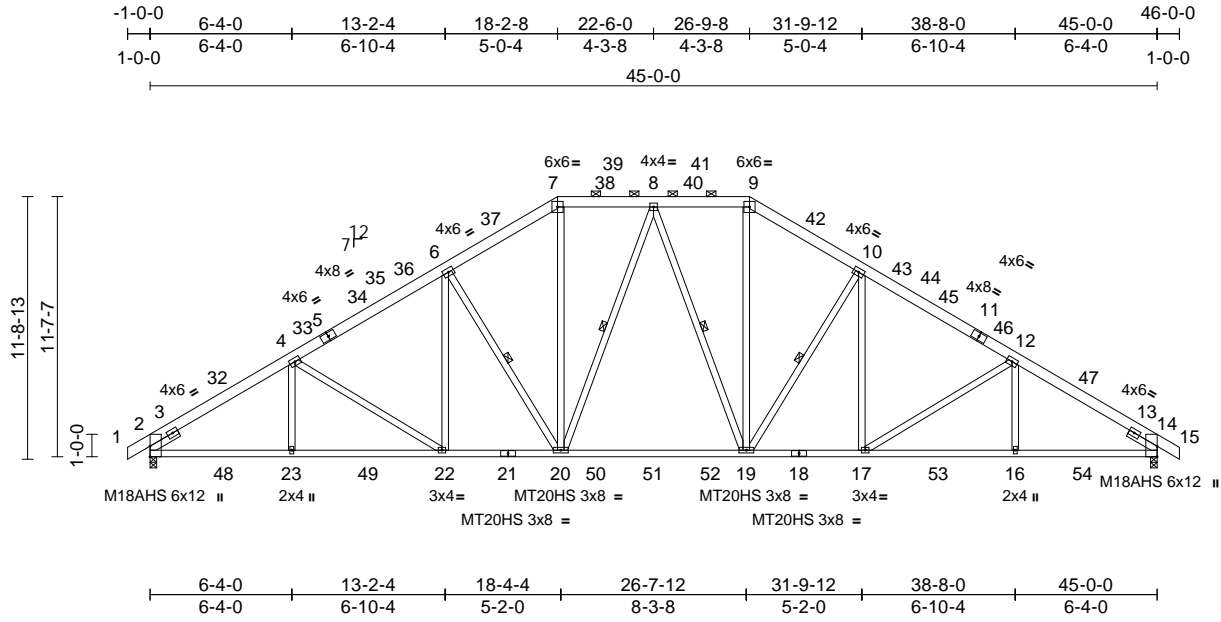
818 Soundside Road  
Edenton, NC 27932

Job 2501-0741-A	Truss A1	Truss Type Piggyback Base	Qty 6	Ply 1	Blake Pond Lot 00.0128 Roof Job Reference (optional)	170930177
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Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Dec 4 2024 Print: 8.830 S Dec 4 2024 MiTek Industries, Inc. Wed Jan 22 08:23:34  
 ID:IPeJ1GRD\_uw72hATbZue7My77Gm-RfC?PsB70Hq3NSgPqnL8w3uITXbGKwRcDoi7J4zJC7f

Page: 1



Scale = 1:94.2

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.99	Vert(LL)	-0.30	19-20	>999	360	MT20	244/190
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.61	Vert(CT)	-0.52	19-20	>999	240	M18AHS	186/179
TCDL	10.0	Rep Stress Incr	YES	WB	0.42	Horz(CT)	0.17	14	n/a	n/a	MT20HS	187/143
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.06	22-23	>999	240		
BCDL	10.0											Weight: 349 lb FT = 20%

**LUMBER**  
 TOP CHORD 2x6 SP No.2  
 BOT CHORD 2x4 SP SS  
 WEBS 2x4 SP No.3  
 SLIDER Left 2x4 SP No.3 -- 1-6-0, Right 2x4 SP No.3 -- 1-6-0

**BRACING**  
 TOP CHORD Structural wood sheathing directly applied, except 2-0-0 oc purlins (4-9-15 max.): 7-9.  
 BOT CHORD Rigid ceiling directly applied.  
 WEBS 1 Row at midpt 8-20, 8-19, 10-19, 6-20

**REACTIONS** (size) 2=0-3-8, 14=0-3-8  
 Max Horiz 2=-180 (LC 14)  
 Max Grav 2=2170 (LC 57), 14=2170 (LC 59)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
 TOP CHORD 1-2=0/41, 2-4=-3580/0, 4-6=-3245/14, 6-7=-2804/76, 7-8=-2341/93, 8-9=-2341/93, 9-10=-2804/76, 10-12=-3245/14, 12-14=-3580/0, 14-15=0/41  
 BOT CHORD 2-23=-60/2937, 22-23=0/2937, 20-22=0/2703, 19-20=0/2263, 17-19=0/2703, 16-17=0/2938, 14-16=0/2938  
 WEBS 7-20=0/1094, 8-20=-287/119, 8-19=-287/118, 9-19=0/1094, 12-16=0/344, 10-17=0/415, 12-17=-315/67, 10-19=-885/61, 4-23=0/344, 6-22=0/415, 4-22=-315/66, 6-20=-885/61

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

- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-0-0 to 3-6-0, Interior (1) 3-6-0 to 18-2-8, Exterior(2R) 18-2-8 to 24-6-14, Interior (1) 24-6-14 to 26-9-8, Exterior(2R) 26-9-8 to 33-1-14, Interior (1) 33-1-14 to 46-0-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.
- Plates checked for a plus or minus 5 degree rotation about its center.
- 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, with BCDL = 10.0psf.
- All bearings are assumed to be SP SS.
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- 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.

14) 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

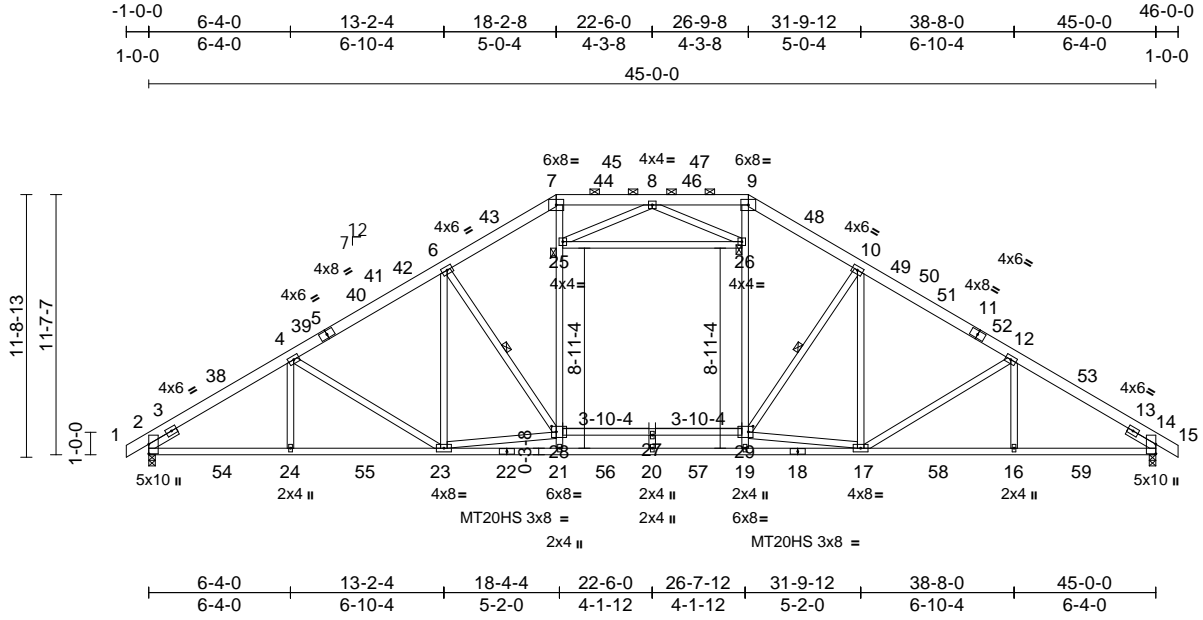


Job 2501-0741-A	Truss A1P	Truss Type Attic	Qty 21	Ply 1	Blake Pond Lot 00.0128 Roof Job Reference (optional)	170930178
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Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Dec 4 2024 Print: 8.830 S Dec 4 2024 MiTek Industries, Inc. Wed Jan 22 08:23:40  
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Page: 1



Scale = 1:94.2

Plate Offsets (X, Y): [28:0-2-8,0-3-0], [29:0-2-8,0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.93	Vert(LL)	-0.34	17-19	>999	360	MT20	244/190
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.88	Vert(CT)	-0.46	20	>999	240	MT20HS	187/143
TCDL	10.0	Rep Stress Incr	YES	WB	0.98	Horz(CT)	0.15	14	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.18	21-23	>999	240		
BCDL	10.0											

Weight: 365 lb FT = 20%

**LUMBER**  
TOP CHORD 2x6 SP No.2  
BOT CHORD 2x4 SP SS \*Except\* 22-18:2x4 SP No.2  
WEBS 2x4 SP No.3 \*Except\* 7-21,9-19,25-26:2x4 SP No.2  
SLIDER Left 2x4 SP No.3 -- 1-6-0, Right 2x4 SP No.3 -- 1-6-0

**BRACING**  
TOP CHORD Structural wood sheathing directly applied, except 2-0-0 oc purlins (5-2-13 max.): 7-9.  
BOT CHORD Rigid ceiling directly applied.  
WEBS 1 Row at midpt 6-28, 10-29  
JOINTS 1 Brace at Jt(s): 25, 26

**REACTIONS**  
(size) 2=0-3-8, 14=0-3-8  
Max Horiz 2=-180 (LC 14)  
Max Grav 2=1983 (LC 46), 14=1983 (LC 46)

**FORCES**  
(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/41, 2-4=-3038/0, 4-6=-2755/15, 6-7=-2374/73, 7-8=-1979/99, 8-9=-1979/99, 9-10=-2374/72, 10-12=-2755/15, 12-14=-3038/0, 14-15=0/41  
BOT CHORD 2-24=-60/2490, 23-24=0/2490, 21-23=0/1315, 20-21=0/1310, 19-20=0/1310, 17-19=0/1315, 16-17=0/2490, 14-16=0/2490  
WEBS 21-28=0/352, 25-28=0/842, 7-25=0/892, 19-29=0/352, 26-29=0/842, 9-26=0/892, 25-26=-61/461, 27-28=0/608, 27-29=0/608, 20-27=-6/95, 8-25=-464/120, 8-26=-464/121, 12-16=0/339, 10-17=0/335, 12-17=-304/62, 4-24=0/339, 6-23=0/335, 4-23=-304/62, 23-28=-59/999, 6-28=-687/82, 17-29=-35/999, 10-29=-694/86

**NOTES**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-0-0 to 3-6-0, Interior (1) 3-6-0 to 18-2-8, Exterior(2R) 18-2-8 to 24-6-14, Interior (1) 24-6-14 to 26-9-8, Exterior(2R) 26-9-8 to 33-1-14, Interior (1) 33-1-14 to 46-0-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.
- Plates checked for a plus or minus 5 degree rotation about its center.
- 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 SS .
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.

- 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.
  - Attic room checked for L/360 deflection.
- LOAD CASE(S)** Standard



January 23, 2025

**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)



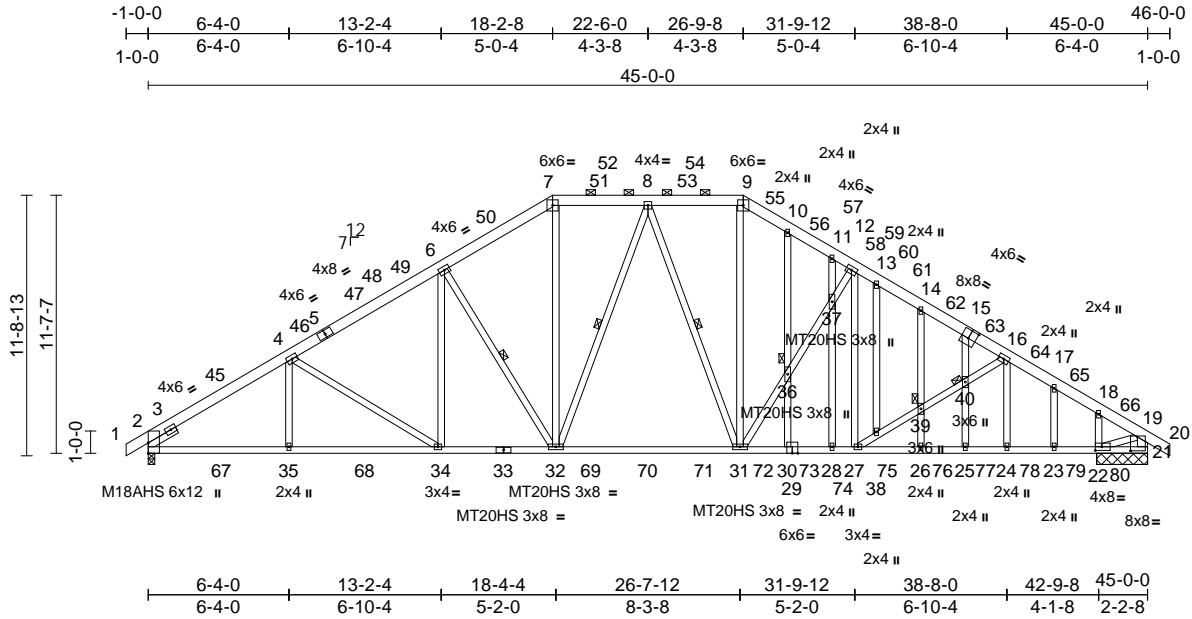
818 Soundside Road  
Edenton, NC 27932

Job 2501-0741-A	Truss A1AG	Truss Type Piggyback Base Structural Gable	Qty 3	Ply 1	Blake Pond Lot 00.0128 Roof Job Reference (optional)	170930179
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Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Dec 4 2024 Print: 8.830 S Dec 4 2024 MiTek Industries, Inc. Wed Jan 22 08:23:36  
ID:dmr4WS\_0\_wrYh3nGbfLV8y77CB-RfC?PsB70Hq3NSgPqnL8w3uTlXkGkWrCDoi7J4zJC7f

Page: 1



Scale = 1:94.2

Plate Offsets (X, Y): [15:0-4-0,0-4-8], [21:0-3-12,0-7-8], [22:0-3-8,0-2-0]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in (loc)	l/defl	L/d	PLATES	GRIP		
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.99	Vert(LL)	-0.28	31-32	>999	360	MT20	244/190
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.60	Vert(CT)	-0.49	31-32	>999	240	MT20HS	187/143
TCDL	10.0	Rep Stress Incr	YES	WB	0.67	Horz(CT)	0.14	21	n/a	n/a	M18AHS	186/179
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.06	25-26	>999	240		
BCDL	10.0											
											Weight: 410 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x6 SP No.2  
BOT CHORD 2x4 SP SS  
WEBS 2x4 SP No.3 \*Except\* 21-19:2x6 SP No.2, 22-19:2x4 SP No.2  
OTHERS 2x4 SP No.3  
SLIDER Left 2x4 SP No.3 -- 1-6-0

**BRACING**  
TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (4-10-4 max.): 7-9.  
BOT CHORD Rigid ceiling directly applied.  
WEBS 1 Row at midpt 8-31, 8-32, 6-32  
JOINTS 1 Brace at Jt(s): 36, 39, 40

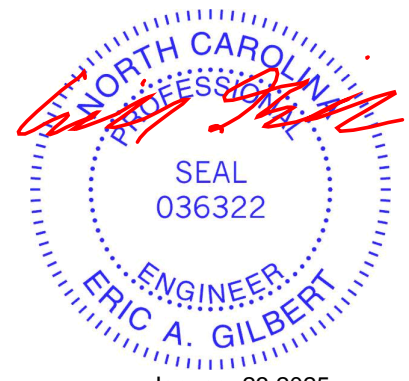
**REACTIONS** (size) 2=0-3-8, 21=2-3-8, 22=2-3-8  
Max Horiz 2=193 (LC 15)  
Max Uplift 22=245 (LC 45)  
Max Grav 2=2157 (LC 57), 21=2343 (LC 59), 22=188 (LC 113)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/41, 2-4=-3554/0, 4-6=-3217/11, 6-7=-2775/73, 7-8=-2316/90, 8-9=-2308/92, 9-10=-2664/75, 10-11=-2709/59, 11-12=-2769/35, 12-13=-2981/23, 13-14=-3088/16, 14-16=-3190/0, 16-17=-3444/0, 17-18=-3495/0, 18-19=-3256/0, 19-20=0/51, 19-21=-2596/0, 2-35=-65/2922, 34-35=0/2922, 32-34=0/2685, 31-32=0/2239, 30-31=0/2654, 28-30=0/2654, 27-28=0/2654, 26-27=0/2901, 25-26=0/2901, 24-25=0/2901, 23-24=0/2901, 22-23=0/2901, 21-22=-5/102

**WEBS**  
7-32=0/1079, 9-31=0/1093, 8-31=-282/119, 8-32=-284/118, 19-22=0/2988, 4-35=0/344, 6-34=0/416, 4-34=-315/67, 6-32=-887/61, 12-27=-4/324, 16-24=0/285, 27-38=-325/50, 38-39=-340/49, 39-40=-333/48, 16-40=-330/48, 31-36=-836/61, 36-37=-856/58, 12-37=-845/58, 10-36=-118/156, 30-36=-145/164, 11-37=-44/162, 28-37=-18/188, 13-38=0/58, 14-39=-72/164, 26-39=-14/229, 15-40=-90/155, 25-40=-52/177, 17-23=-53/192, 18-22=-557/25

**NOTES**  
1) Unbalanced roof live loads have been considered for this design.  
2) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-0-0 to 3-6-0, Interior (1) 3-6-0 to 18-2-8, Exterior(2R) 18-2-8 to 24-6-14, Interior (1) 24-6-14 to 26-9-8, Exterior(2R) 26-9-8 to 33-1-14, Interior (1) 33-1-14 to 46-0-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60  
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.  
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0  
5) Unbalanced snow loads have been considered for this design.  
6) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.

7) Provide adequate drainage to prevent water ponding.  
8) All plates are MT20 plates unless otherwise indicated.  
9) Plates checked for a plus or minus 5 degree rotation about its center.  
10) Gable studs spaced at 2-0-0 oc.  
11) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.  
12) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.  
13) All bearings are assumed to be SP SS .  
14) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 22. This connection is for uplift only and does not consider lateral forces.  
15) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.



Continued on page 2

**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)

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**TRENCO**  
A MiTek Affiliate  
818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Blake Pond Lot 00.0128 Roof
2501-0741-A	A1AG	Piggyback Base Structural Gable	3	1	I70930179 Job Reference (optional)

Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Dec 4 2024 Print: 8.830 S Dec 4 2024 MiTek Industries, Inc. Wed Jan 22 08:23:36  
ID:dmr4WS\_0\_wrYhj3nGbfLV8y77CB-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f

Page: 2

- 16) 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.
- 17) 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

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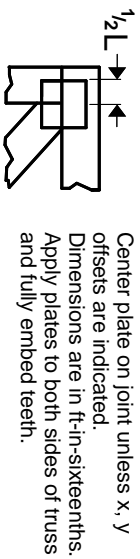


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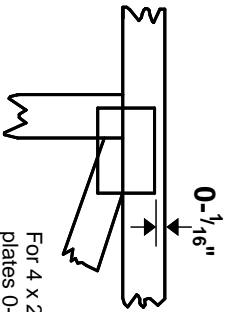


# Symbols

## 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.

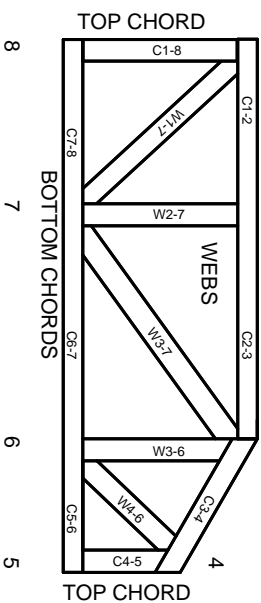
## Industry Standards:

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



1 TOP CHORDS  
2 Joint ID  
3 typ.



**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