

Trenco
818 Soundside Rd
Edenton, NC 27932

Re: 21020044-01
160 Crossings at ACC-Kessler A-Roof

The truss drawing(s) referenced below have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by Carter Components (Sanford, NC)).

Pages or sheets covered by this seal: I45094141 thru I45094165

My license renewal date for the state of North Carolina is December 31, 2021.

North Carolina COA: C-0844



March 8, 2021

Johnson, Andrew

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

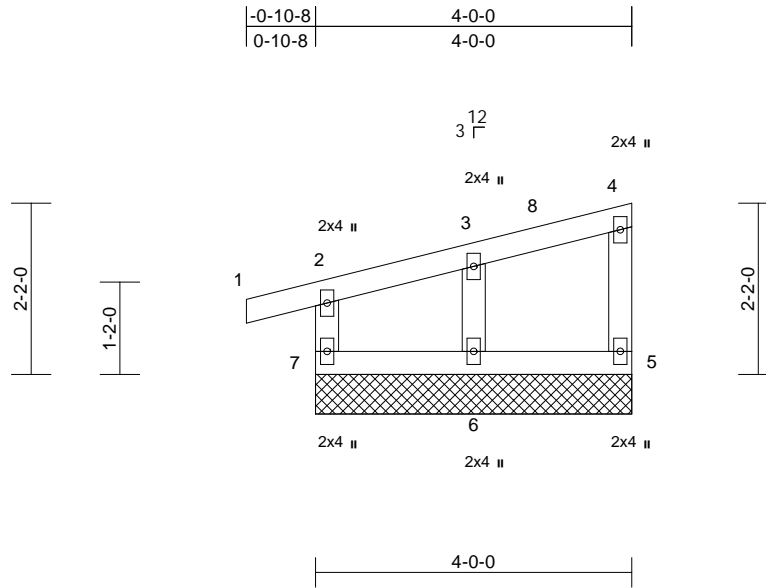
Job 21020044-01	Truss T3GE	Truss Type Monopitch Supported Gable	Qty 1	Ply 1	160 Crossings at ACC-Kessler A-Roof Job Reference (optional)	145094141
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.43 S Feb 12 2021 Print: 8.430 S Feb 12 2021 MiTek Industries, Inc. Mon Mar 08 11:42:33

Page: 1

ID: xgAp6L5?n01tuWo8jgtJIVzEbO5-Mock Me



Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.14	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.04	Horz(CT)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-R								
BCDL	10.0											
										Weight: 18 lb	FT = 20%	

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

BRACING
 TOP CHORD Structural wood sheathing directly applied or 4-0-0 oc purlins, except end verticals.
 BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

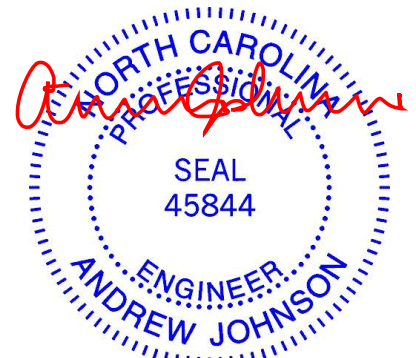
REACTIONS (size) 5=4-0-0, 6=4-0-0, 7=4-0-0
 Max Horiz 7=58 (LC 12)
 Max Uplift 5=-1 (LC 15), 6=-12 (LC 15), 7=-32 (LC 11)
 Max Grav 5=63 (LC 2), 6=154 (LC 2), 7=141 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
 TOP CHORD 2-7=-124/102, 1-2=0/19, 2-3=-60/40, 3-8=-35/27, 4-8=-30/30, 4-5=-48/42
 BOT CHORD 6-7=-37/36, 5-6=-37/36
 WEBS 3-6=-112/126

- NOTES**
- 1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
 - 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.

- 3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
- 6) Gable requires continuous bottom chord bearing.
- 7) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- 8) Gable studs spaced at 2-0-0 oc.
- 9) * This truss has been designed for a 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) One RT8A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 7, 5, and 6. This connection is for uplift only and does not consider lateral forces.

LOAD CASE(S) Standard



March 8, 2021

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 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, DSB-89 and BCSI Building Component

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



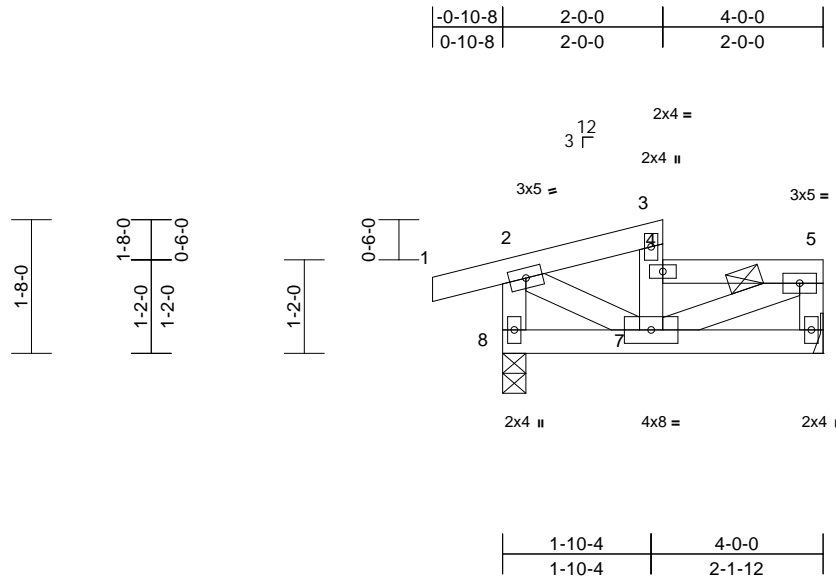
818 Soundside Road
 Edenton, NC 27932

Job 21020044-01	Truss T4	Truss Type Half Hip	Qty 5	Ply 1	160 Crossings at ACC-Kessler A-Roof Job Reference (optional)	145094143
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Carter Components (Sanford), Sanford, NC - 27332,

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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	0.14	Vert(LL)	0.00	7	>999	240	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	0.00	7	>999	180	
TCDL	10.0	Rep Stress Incr	YES	WB	0.05	Horz(CT)	0.00	6	n/a	n/a	
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MSH							
BCDL	10.0									Weight: 22 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins: 4-7, 4-5.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

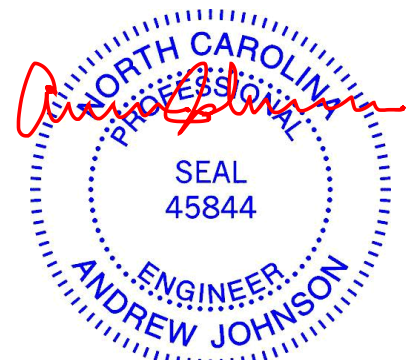
REACTIONS (size) 6= Mechanical, 8=0-3-8
Max Horiz 8=45 (LC 12)
Max Uplift 6=-11 (LC 12), 8=-31 (LC 11)
Max Grav 6=152 (LC 34), 8=235 (LC 35)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/19, 2-3=-108/45, 4-7=-73/71, 3-4=-31/25, 4-5=-138/90, 5-6=-128/91, 2-8=-212/131
BOT CHORD 7-8=90/71, 6-7=-25/30
WEBS 5-7=-95/128, 2-7=-32/102

- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- * 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.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 11 lb uplift at joint 6.
- One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 8. This connection is for uplift only and does not consider lateral forces.
- 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

- NOTES**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) -0-10-8 to 3-10-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
 - TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=18.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10, Lu=50-0-0
 - Unbalanced snow loads have been considered for this design.



March 8, 2021

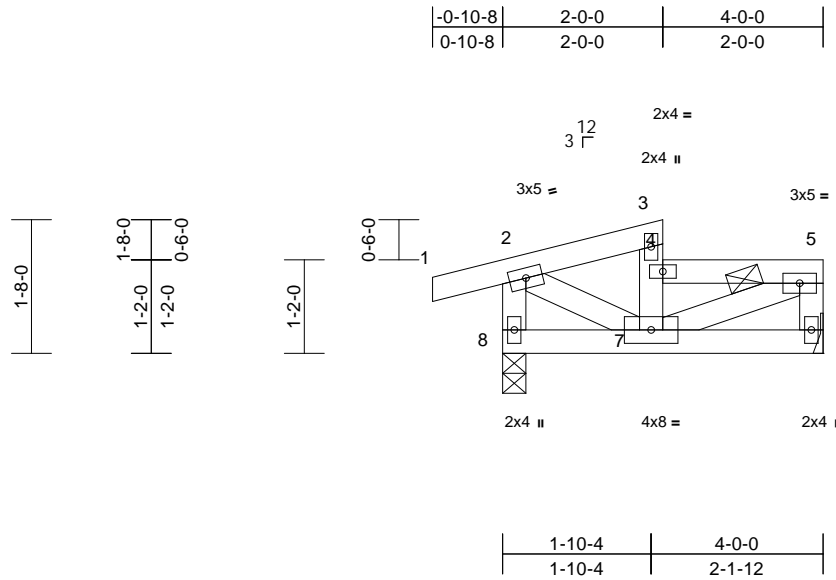
Job 21020044-01	Truss T4GR	Truss Type Half Hip Girder	Qty 1	Ply 2	160 Crossings at ACC-Kessler A-Roof Job Reference (optional)	145094144
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Carter Components (Sanford), Sanford, NC - 27332,

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Page: 1

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Scale = 1:28.8

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.07	Vert(LL)	0.00	7	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.01	Vert(CT)	0.00	7	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.03	Horz(CT)	0.00	6	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 44 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD Structural wood sheathing directly applied or 4-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins: 4-7, 4-5.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS

(size) 6= Mechanical, 8=0-3-8
Max Horiz 8=45 (LC 8)
Max Uplift 6=-11 (LC 8), 8=-31 (LC 7)
Max Grav 6=152 (LC 30), 8=235 (LC 31)

FORCES

(lb) - Maximum Compression/Maximum Tension

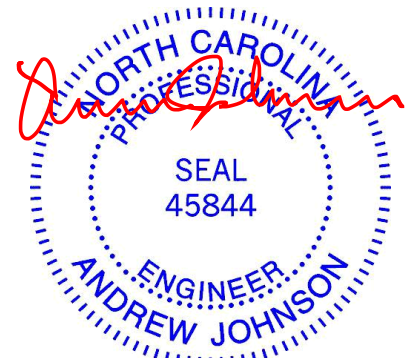
TOP CHORD 1-2=0/19, 2-3=-108/0, 4-7=-73/22, 3-4=-31/13, 4-5=-138/9, 5-6=-128/20, 2-8=-212/40
BOT CHORD 7-8=-36/19, 6-7=-7/26
WEBS 5-7=-14/125, 2-7=0/102

NOTES

- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
- All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
- Unbalanced roof live loads have been considered for this design.

- Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.33
- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=18.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; 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 13.9 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- * 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.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 11 lb uplift at joint 6.
- One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 8. This connection is for uplift only and does not consider lateral forces.
- 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



March 8, 2021

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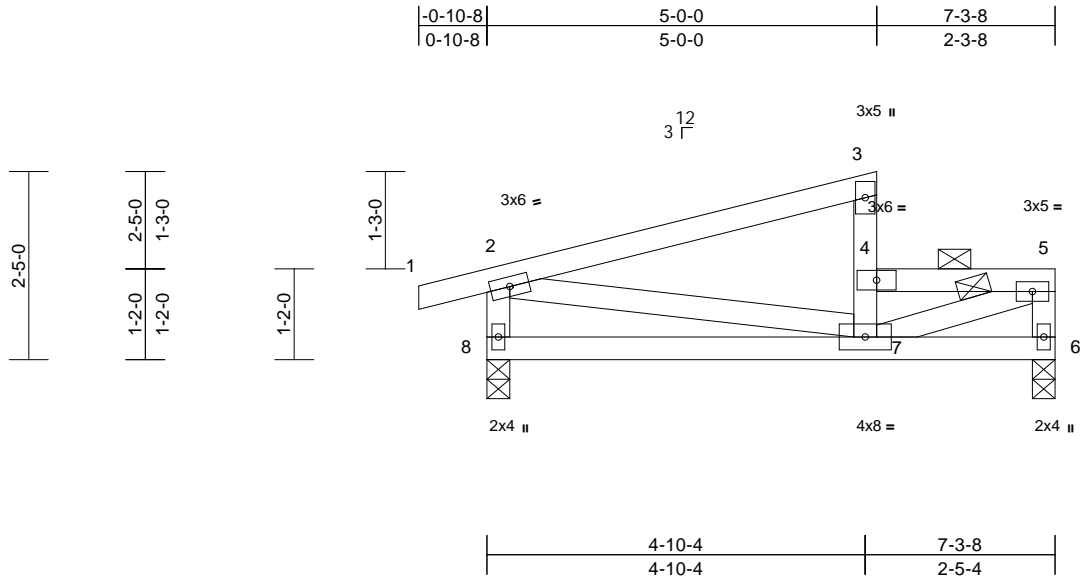
818 Soundside Road
Edenton, NC 27932

Job 21020044-01	Truss T5	Truss Type Half Hip	Qty 5	Ply 1	160 Crossings at ACC-Kessler A-Roof Job Reference (optional)	145094145
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Carter Components (Sanford), Sanford, NC - 27332,

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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	0.71	0.02	7-8	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.17	Vert(LL)	-0.05	7-8	>999	180	
TCDL	10.0	Rep Stress Incr	YES	WB	0.16	Vert(CT)	0.00	6	n/a	n/a	
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MSH		Horz(CT)					
BCDL	10.0									Weight: 38 lb	FT = 20%

LUMBER	
TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.3
BRACING	
TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 4-7, 4-5.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
REACTIONS	
(size)	6=0-3-8, 8=0-3-8
Max Horiz	8=72 (LC 12)
Max Uplift	6=-9 (LC 12), 8=-34 (LC 11)
Max Grav	6=276 (LC 2), 8=391 (LC 35)
FORCES	
(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=0/19, 2-3=-284/93, 4-7=-63/101, 3-4=-105/82, 4-5=-408/184, 5-6=-253/133, 2-8=-333/183
BOT CHORD	7-8=-214/197, 6-7=-34/43
WEBS	5-7=-186/398, 2-7=0/108

- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- * 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.
- One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 6 and 8. This connection is for uplift only and does not consider lateral forces.
- 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

- NOTES**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) -0-10-8 to 7-1-12 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
 - TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=18.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10, Lu=50-0-0
 - Unbalanced snow loads have been considered for this design.



March 8, 2021

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

ENGINEERING BY
TRENCO
A MiTek Affiliate

818 Soundside Road
Edenton, NC 27932

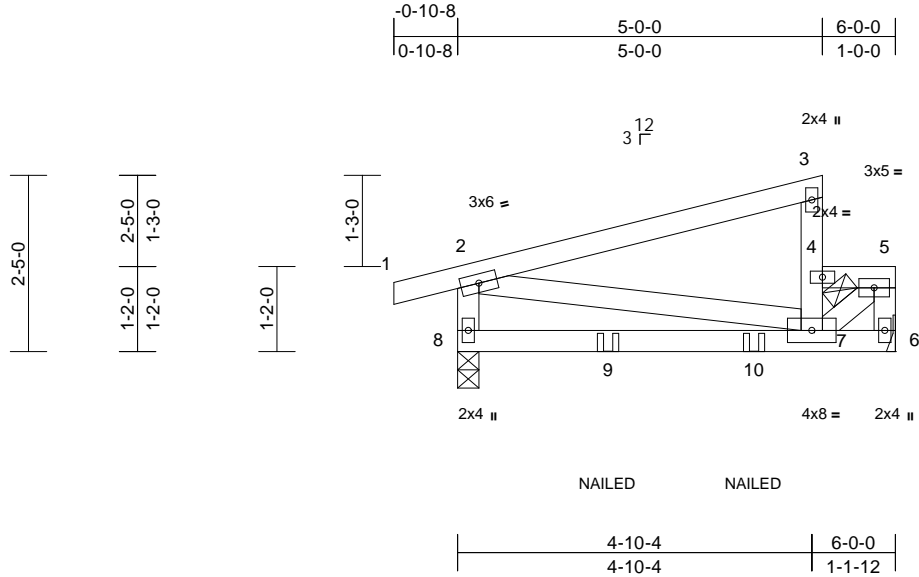
Job 21020044-01	Truss T6	Truss Type Half Hip Girder	Qty 1	Ply 1	160 Crossings at ACC-Kessler A-Roof Job Reference (optional)	I45094146
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.43 S Feb 12 2021 Print: 8.430 S Feb 12 2021 MiTek Industries, Inc. Mon Mar 08 11:42:35

Page: 1

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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	0.55	Vert(LL)	0.02	7-8	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.28	Vert(CT)	-0.04	7-8	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.13	Horz(CT)	0.00	6	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 32 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins: 4-7, 4-5.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 6= Mechanical, 8=0-3-8
Max Horiz 8=72 (LC 8)
Max Uplift 6=-55 (LC 11), 8=-69 (LC 7)
Max Grav 6=265 (LC 29), 8=396 (LC 31)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/19, 2-3=-226/39, 4-7=-51/66, 3-4=-117/45, 4-5=-236/62, 5-6=-306/69, 2-8=-308/72
BOT CHORD 8-9=-82/160, 9-10=-82/160, 7-10=-82/160, 6-7=-8/19
WEBS 5-7=-72/305, 2-7=0/75

- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- * 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.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 55 lb uplift at joint 6.
- One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 8. This connection is for uplift only and does not consider lateral forces.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidelines.
- In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-48, 2-3=-48, 4-5=-58, 6-8=-20
Concentrated Loads (lb)
Vert: 9=61 (F), 10=-33 (F)

- NOTES**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope); cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.33
 - TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=18.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10, Lu=50-0-0
 - Unbalanced snow loads have been considered for this design.



March 8, 2021

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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/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



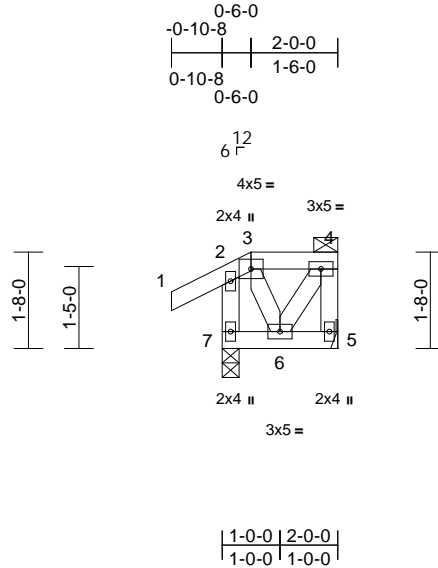
818 Soundside Road
Edenton, NC 27932

Job 21020044-01	Truss T7	Truss Type Half Hip	Qty 1	Ply 1	160 Crossings at ACC-Kessler A-Roof Job Reference (optional)	145094147
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.43 S Feb 12 2021 Print: 8.430 S Feb 12 2021 MiTek Industries, Inc. Mon Mar 08 11:42:35
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Page: 1



Scale = 1:39.8

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	0.10	Vert(LL)	0.00	6	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.02	Vert(CT)	0.00	6	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.02	Horz(CT)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MSH								
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

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins: 3-4.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 5= Mechanical, 7=0-3-8
Max Horiz 7=47 (LC 12)
Max Uplift 5=-22 (LC 12), 7=-16 (LC 11)
Max Grav 5=78 (LC 34), 7=171 (LC 35)

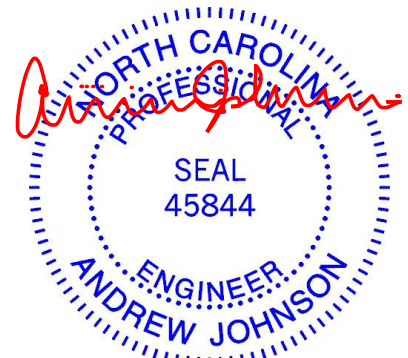
FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/39, 2-3=-35/36, 3-4=-12/20, 4-5=-65/79, 2-7=-167/118
BOT CHORD 6-7=-71/59, 5-6=-23/26
WEBS 3-6=-21/48, 4-6=-65/55

- Provide adequate drainage to prevent water ponding.
- * 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.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 22 lb uplift at joint 5.
- One RT8A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 7. This connection is for uplift only and does not consider lateral forces.
- 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

NOTES

- Wind: ASCE 7-10; Vult=130mph (3-second gust)
Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;
Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) -0-10-8 to 1-10-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=18.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; 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 13.9 psf on overhangs non-concurrent with other live loads.



March 8, 2021

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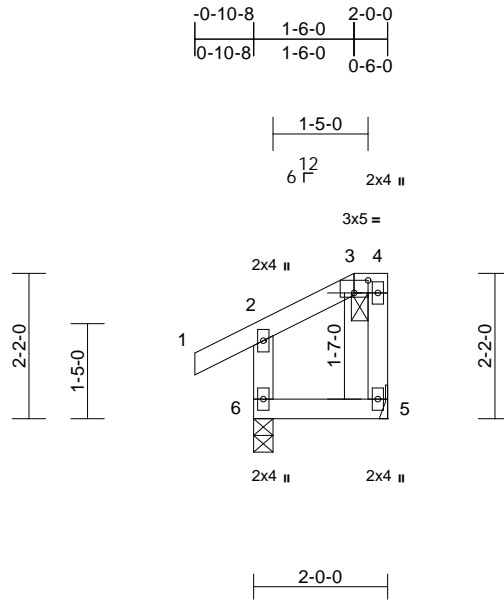
818 Soundside Road
Edenton, NC 27932

Job 21020044-01	Truss T8	Truss Type Half Hip	Qty 1	Ply 1	160 Crossings at ACC-Kessler A-Roof Job Reference (optional)	I45094148
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.43 S Feb 12 2021 Print: 8.430 S Feb 12 2021 MiTek Industries, Inc. Mon Mar 08 11:42:35
ID:t3laX07GJeHb7qyXq5wnqwzEbO3-Mock Me

Page: 1



Scale = 1:34.4
Plate Offsets (X, Y): [3:0-2-8,0-2-4]

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	0.15	Vert(LL)	0.00	5-6	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.07	Vert(CT)	0.00	5-6	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MR								
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 2-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins: 3-4.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 5= Mechanical, 6=0-3-8
Max Horiz 6=63 (LC 12)
Max Uplift 5=-33 (LC 12), 6=-11 (LC 11)
Max Grav 5=55 (LC 38), 6=199 (LC 35)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/39, 2-3=-50/32, 3-4=-27/40,
4-5=-56/78, 2-6=-179/111
BOT CHORD 5-6=-55/48

- 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 13.9 psf on overhangs non-concurrent with other live loads.
- 6) Provide adequate drainage to prevent water ponding.
- 7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 8) Refer to girder(s) for truss to truss connections.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 33 lb uplift at joint 5.
- 10) One RT8A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 6. This connection is for uplift only and does not consider lateral forces.
- 11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

NOTES

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) zone; cantilever left and right exposed ; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
- 3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=18.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10, Lu=50-0-0
- 4) Unbalanced snow loads have been considered for this design.



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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



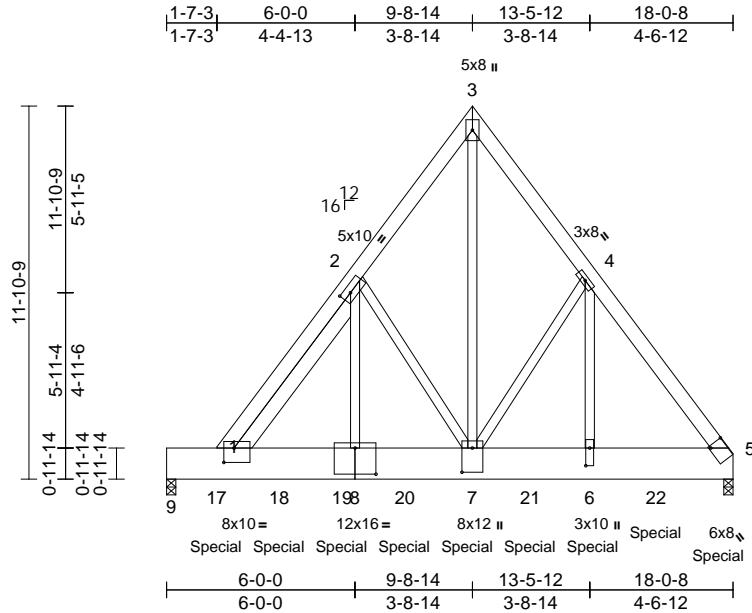
818 Soundside Road
Edenton, NC 27932

Job 21020044-01	Truss T2GR	Truss Type Roof Special Girder	Qty 1	Ply 2	160 Crossings at ACC-Kessler A-Roof Job Reference (optional)	I45094149
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.43 S Feb 12 2021 Print: 8.430 S Feb 12 2021 MiTek Industries, Inc. Mon Mar 08 11:42:31
ID:TNefWbLs0X_ZGWSZK6GEZizEerr-Mock Me

Page: 1



Scale = 1:73.4

Plate Offsets (X, Y): [1:0-3-14,0-5-8], [2:0-3-8,0-2-8], [5:0-0-15,0-5-4], [6:0-6-12,0-1-8], [7:0-9-4,0-4-0], [8:0-8-0,0-10-0]

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	0.41	Vert(LL)	-0.16	7-8	>999	240	MT20	137/130
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.71	Vert(CT)	-0.32	7-8	>658	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.69	Horz(CT)	0.01	5	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 399 lb	FT = 20%

LUMBER

TOP CHORD 2x6 SP No.2
 BOT CHORD 1.5 X 11.875 Kerto-S LVL 2.0E
 WEBS 2x4 SP No.2 *Except* 7-3:2x4 SP No.1

BRACING

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

REACTIONS (size) 5=0-3-8, 9=0-3-8

Max Horiz 9=198 (LC 6)
 Max Grav 5=8411 (LC 3), 9=7493 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-7104/0, 2-3=-5401/0, 3-4=-5403/0, 4-5=-6926/0
 BOT CHORD 9-17=-198/176, 1-17=-198/176, 1-18=0/4173, 18-19=0/4173, 8-19=0/4173, 8-20=0/4173, 7-20=0/4173, 7-21=0/4092, 6-21=0/4092, 6-22=0/4092, 5-22=0/4092
 WEBS 3-7=0/8322, 2-7=-1696/0, 4-7=-1546/0, 2-8=0/2731, 4-6=0/2434

NOTES

- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
 Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
 Bottom chords connected as follows: 2x12 - 3 rows staggered at 0-8-0 oc.
 Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
- All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
- Unbalanced roof live loads have been considered for this design.

- Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.33
- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
- Provide adequate drainage to prevent water ponding.
- * 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.
- Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1651 lb down at 1-7-4, 1641 lb down at 3-7-4, 1641 lb down at 5-7-4, 1641 lb down at 7-7-4, 1641 lb down at 9-7-4, 1641 lb down at 11-7-4, 1641 lb down at 13-7-4, and 1641 lb down at 15-7-4, and 1656 lb down at 17-7-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
 Uniform Loads (lb/ft)
 Vert: 3-12=-48, 3-4=-20, 4-15=-48, 9-10=-78, 1-10=-1, 1-5=-20
 Concentrated Loads (lb)
 Vert: 7=-1418 (B), 6=-1418 (B), 14=-1432 (B), 17=-1399 (B), 18=-1418 (B), 19=-1418 (B), 20=-1418 (B), 21=-1418 (B), 22=-1418 (B)



March 8, 2021

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818 Soundside Road
 Edenton, NC 27932

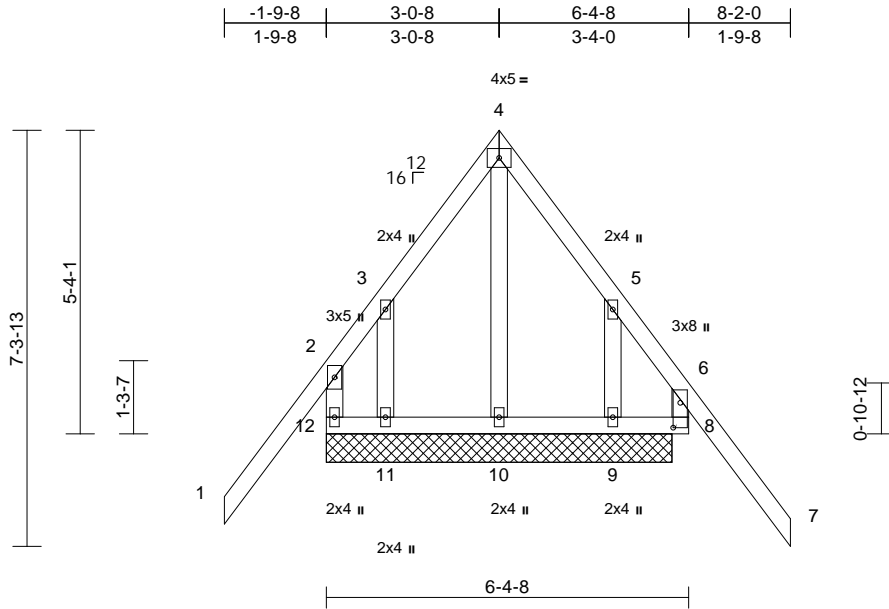
Job 21020044-01	Truss T2GE	Truss Type Common Structural Gable	Qty 1	Ply 1	160 Crossings at ACC-Kessler A-Roof Job Reference (optional)	I45094150
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.43 S Feb 12 2021 Print: 8.430 S Feb 12 2021 MiTek Industries, Inc. Mon Mar 08 11:42:30

Page: 1

ID:IFTVCrDyc8c7RqWRBIZfzNzEes0-Mock Me



Scale = 1:40.5

Plate Offsets (X, Y): [6:0-5-4,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.51	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.11	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.10	Horz(CT)	0.00	8	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MR								
BCDL	10.0											
										Weight: 50 lb	FT = 20%	

LUMBER

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

BRACING

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

REACTIONS (size) 8=6-1-0, 9=6-1-0, 10=6-1-0, 11=6-1-0, 12=6-1-0
 Max Horiz 12=170 (LC 11)
 Max Uplift 8=111 (LC 10), 9=84 (LC 9), 11=99 (LC 10), 12=85 (LC 9)
 Max Grav 8=209 (LC 30), 9=141 (LC 12), 10=263 (LC 2), 11=140 (LC 11), 12=195 (LC 29)

FORCES

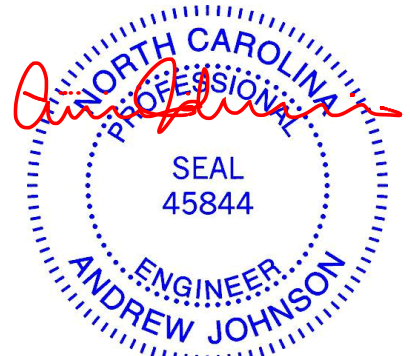
(lb) - Maximum Compression/Maximum Tension
 TOP CHORD 2-12=-228/254, 1-2=0/117, 2-3=-98/139, 3-4=-143/154, 4-5=-153/148, 5-6=-88/124, 6-7=0/117, 6-8=-181/225
 BOT CHORD 11-12=-159/188, 10-11=-159/188, 9-10=-159/188, 8-9=-159/188
 WEBS 4-10=-218/101, 3-11=-299/102, 5-9=-287/122

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33

- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
- Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- Gable studs spaced at 2-0-0 oc.
- * 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.
- One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 12, 8, 11, and 9. This connection is for uplift only and does not consider lateral forces.
- Non Standard bearing condition. Review required.

LOAD CASE(S) Standard



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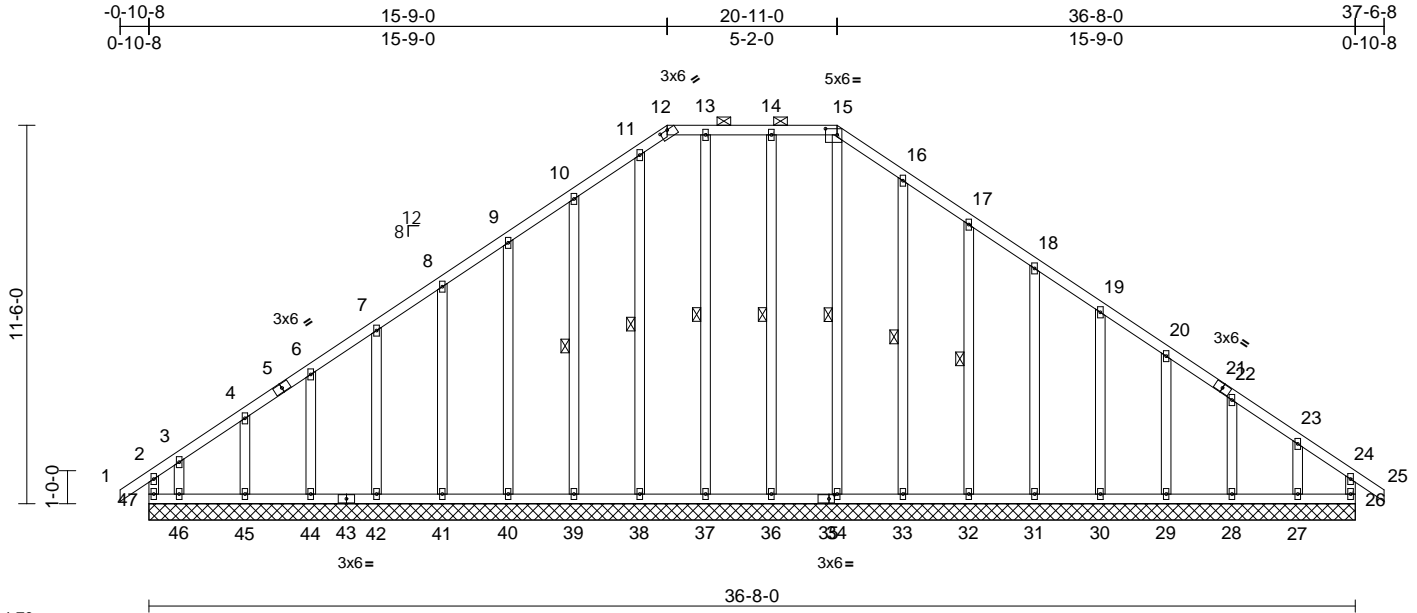
Job 21020044-01	Truss T1GE	Truss Type Piggyback Base Supported Gable	Qty 2	Ply 1	160 Crossings at ACC-Kessler A-Roof Job Reference (optional)	I45094151
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.43 S Feb 12 2021 Print: 8.430 S Feb 12 2021 MiTek Industries, Inc. Mon Mar 08 11:42:28

Page: 1

ID:3oyXuaJ_jcc_P27_fjzXx3Eeru-Mock Me



Scale = 1:70
Plate Offsets (X, Y): [12:0-3-0,0-0-2], [15:0-4-4,0-2-4], [35:0-2-0,0-1-8]

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	0.20	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.10	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.14	Horz(CT)	0.01	26	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-R								
BCDL	10.0											
											Weight: 299 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.2 *Except*
44-6,45-4,46-3,29-20,28-22,27-23:2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 12-15.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

WEBS 1 Row at midpt 15-34, 14-36, 13-37, 11-38, 10-39, 16-33, 17-32

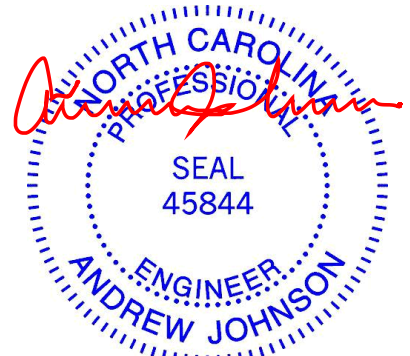
REACTIONS (size)
26=36-8-0, 27=36-8-0, 28=36-8-0, 29=36-8-0, 30=36-8-0, 31=36-8-0, 32=36-8-0, 33=36-8-0, 34=36-8-0, 36=36-8-0, 37=36-8-0, 38=36-8-0, 39=36-8-0, 40=36-8-0, 41=36-8-0, 42=36-8-0, 44=36-8-0, 45=36-8-0, 46=36-8-0, 47=36-8-0
Max Horiz 47=242 (LC 11)
Max Uplift 26=54 (LC 10), 27=93 (LC 14), 28=17 (LC 14), 29=33 (LC 14), 30=29 (LC 14), 31=29 (LC 14), 32=32 (LC 14), 33=28 (LC 14), 36=12 (LC 9), 39=45 (LC 13), 40=27 (LC 13), 41=30 (LC 13), 42=29 (LC 13), 44=32 (LC 13), 45=22 (LC 13), 46=198 (LC 10), 47=211 (LC 11)

Max Grav 26=164 (LC 25), 27=185 (LC 26), 28=166 (LC 30), 29=167 (LC 26), 30=166 (LC 26), 31=166 (LC 26), 32=166 (LC 26), 33=173 (LC 26), 34=156 (LC 28), 36=167 (LC 30), 37=159 (LC 2), 38=162 (LC 25), 39=167 (LC 25), 40=166 (LC 25), 41=166 (LC 25), 42=166 (LC 25), 44=166 (LC 25), 45=168 (LC 29), 46=253 (LC 11), 47=282 (LC 10)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-47=194/142, 1-2=0/43, 2-3=231/211, 3-4=160/159, 4-5=145/136, 5-6=125/142, 6-7=132/141, 7-8=120/140, 8-9=168/199, 9-10=215/255, 10-11=276/327, 11-12=255/299, 12-13=249/303, 13-14=249/303, 14-15=249/302, 15-16=287/339, 16-17=238/283, 17-18=188/222, 18-19=140/164, 19-20=91/106, 20-21=62/70, 21-22=71/58, 22-23=77/75, 23-24=122/107, 24-25=0/43, 24-26=-133/46
BOT CHORD 46-47=-105/123, 45-46=-105/123, 44-45=-105/123, 43-44=-105/123, 42-43=-105/123, 41-42=-105/123, 40-41=-105/123, 39-40=-105/123, 38-39=-105/123, 37-38=-105/123, 36-37=-105/123, 35-36=-105/123, 34-35=-105/123, 33-34=-105/123, 32-33=-105/123, 31-32=-105/123, 30-31=-105/123, 29-30=-105/123, 28-29=-105/123, 27-28=-105/123, 26-27=-105/123

WEBS 15-34=126/68, 14-36=127/65, 13-37=119/16, 11-38=122/10, 10-39=151/108, 9-40=126/78, 8-41=128/82, 7-42=128/82, 6-44=127/81, 4-45=130/83, 3-46=140/120, 16-33=132/77, 17-32=130/85, 18-31=127/81, 19-30=128/82, 20-29=128/82, 22-28=126/79, 23-27=153/109

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33



March 8, 2021

Continued on page 2

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 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, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	160 Crossings at ACC-Kessler A-Roof	I45094151
21020044-01	T1GE	Piggyback Base Supported Gable	2	1	Job Reference (optional)	

Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.43 S Feb 12 2021 Print: 8.430 S Feb 12 2021 MiTek Industries, Inc. Mon Mar 08 11:42:28
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Page: 2

- 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) TCLK: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=18.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10, Lu=50-0-0
- 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 13.9 psf on overhangs non-concurrent with other live loads.
- 6) Provide adequate drainage to prevent water ponding.
- 7) All plates are 2x4 MT20 unless otherwise indicated.
- 8) Gable requires continuous bottom chord bearing.
- 9) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- 10) Gable studs spaced at 2-0-0 oc.
- 11) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 12) One RT8A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 47, 26, 36, 39, 40, 41, 42, 44, 45, 46, 33, 32, 31, 30, 29, 28, and 27. This connection is for uplift only and does not consider lateral forces.
- 13) 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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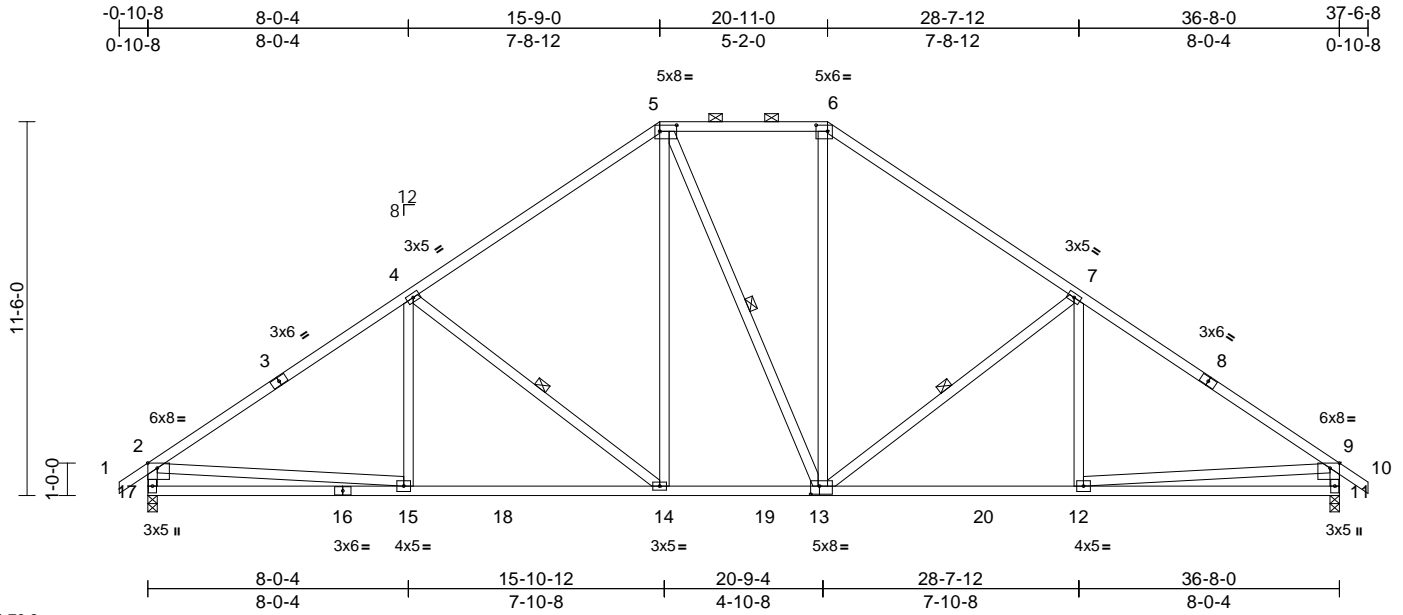
818 Soundside Road
Edenton, NC 27932

Job 21020044-01	Truss T1	Truss Type Piggyback Base	Qty 7	Ply 1	160 Crossings at ACC-Kessler A-Roof Job Reference (optional)	I45094152
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.43 S Feb 12 2021 Print: 8.430 S Feb 12 2021 MiTek Industries, Inc. Mon Mar 08 11:42:27
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Page: 1



Scale = 1:70.9

Plate Offsets (X, Y): [2:0-3-8,Edge], [5:0-6-4,0-2-4], [6:0-4-4,0-2-4], [9:0-3-8,Edge], [13:0-3-4,0-3-0]

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	0.95	Vert(LL)	-0.12	14-15	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.68	Vert(CT)	-0.25	14-15	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.30	Horz(CT)	0.06	11	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 242 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
 BOT CHORD 2x4 SP No.2
 WEBS 2x4 SP No.2 *Except* 17-2,11-9:2x4 SP No.3

BRACING

TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (5-2-6 max.): 5-6.
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
 WEBS 1 Row at midpt 4-14, 5-13, 7-13

REACTIONS

(size) 11=0-3-8, 17=0-3-8
 Max Horiz 17=242 (LC 11)
 Max Grav 11=1516 (LC 2), 17=1516 (LC 2)

FORCES

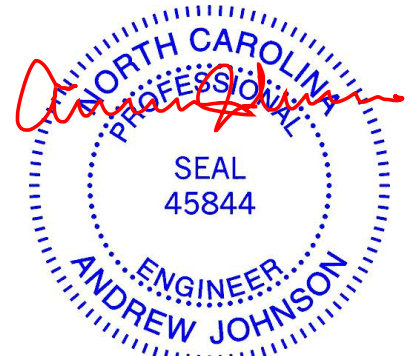
(lb) - Maximum Compression/Maximum Tension
 TOP CHORD 1-2=0/43, 2-3=-2001/334, 3-4=-1788/362, 4-5=-1549/403, 5-6=-1173/398, 6-7=-1546/402, 7-8=-1781/362, 8-9=-2001/334, 9-10=0/43, 2-17=-1443/321, 9-11=-1443/321
 BOT CHORD 16-17=-238/570, 15-16=-238/570, 15-18=-163/1707, 14-18=-163/1707, 14-19=0/1245, 13-19=0/1245, 13-20=-161/1560, 12-20=-161/1560, 11-12=-144/450
 WEBS 4-15=0/188, 4-14=-591/216, 5-14=-61/559, 5-13=-157/163, 6-13=-59/519, 7-13=-593/216, 7-12=0/190, 2-15=-18/1220, 9-12=-18/1223

NOTES

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

- 2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
- 3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=18.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10, Lu=50-0-0
- 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 13.9 psf on overhangs non-concurrent with other live loads.
- 5) Provide adequate drainage to prevent water ponding.
- 6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 7) 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



March 8, 2021

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 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 ANSITPI Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



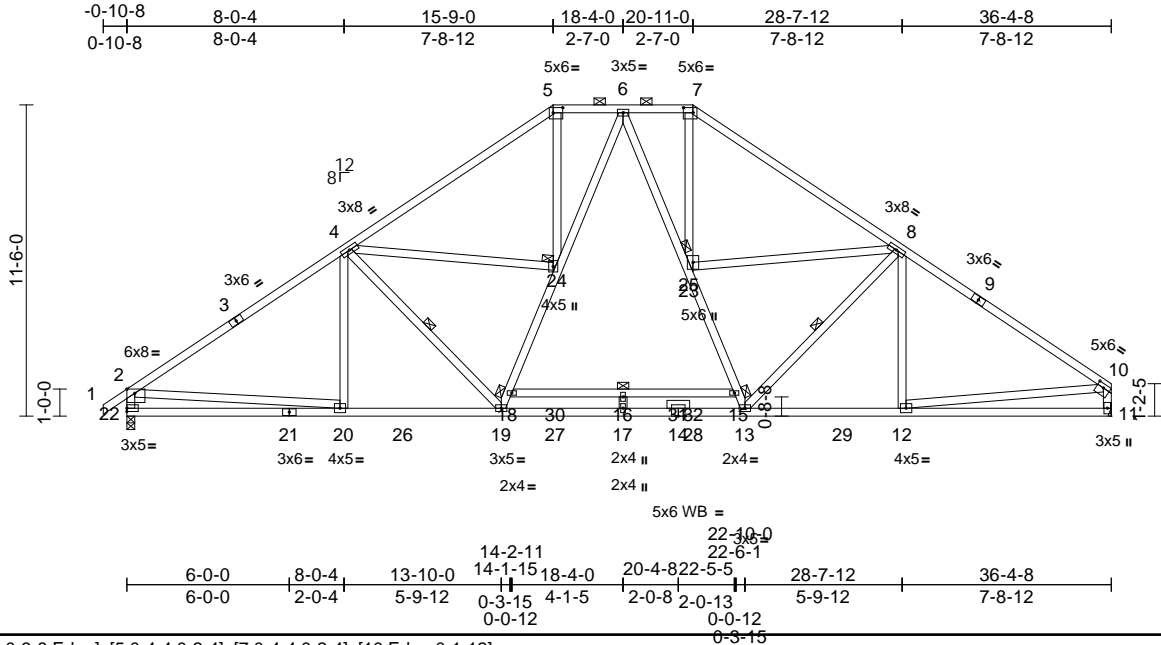
818 Soundside Road
Edenton, NC 27932

Job 21020044-01	Truss T1A	Truss Type Piggyback Base	Qty 9	Ply 1	160 Crossings at ACC-Kessler A-Roof Job Reference (optional)	I45094153
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.43 S Feb 12 2021 Print: 8.430 S Feb 12 2021 MiTek Industries, Inc. Mon Mar 08 11:42:27
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Page: 1



Scale = 1:85.1

Plate Offsets (X, Y): [2:0-3-8,Edge], [5:0-4-4,0-2-4], [7:0-4-4,0-2-4], [10:Edge,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	0.92	Vert(LL)	-0.32	16	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.78	Vert(CT)	-0.63	16	>691	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.40	Horz(CT)	0.05	11	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 274 lb	FT = 20%

- LUMBER**
- TOP CHORD 2x4 SP No.1 *Except* 5-7:2x4 SP No.2
 BOT CHORD 2x4 SP No.2 *Except* 14-11,21-14:2x4 SP 2400F 2.0E
- WEBS** 2x4 SP No.2 *Except* 11-10,17-16:2x4 SP No.3
- OTHERS** 2x4 SP No.3
- BRACING**
- TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (4-6-8 max.): 5-7.
- BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing. Except:
 6-0-0 oc bracing: 15-18
- WEBS** 1 Row at midpt 4-19, 8-13
- JOINTS** 1 Brace at Jt(s): 23, 24, 18, 15
- REACTIONS** (size) 11= Mechanical, 22=0-3-8
 Max Horiz 22=240 (LC 12)
 Max Grav 11=1729 (LC 26), 22=1784 (LC 25)
- FORCES** (lb) - Maximum Compression/Maximum Tension
- TOP CHORD 1-2=0/43, 2-3=-2404/293, 3-4=-2206/321, 4-5=-1942/368, 5-6=-1551/369, 6-7=-1531/366, 7-8=-1917/365, 8-9=-2138/313, 9-10=-2329/284, 2-22=-1697/296, 10-11=-1640/249
- BOT CHORD 21-22=-238/631, 20-21=-238/631, 20-26=-177/2047, 19-26=-177/2047, 19-27=-9/1614, 17-27=-9/1614, 14-17=-9/1614, 14-28=-9/1614, 13-28=-9/1614, 13-29=-171/1831, 12-29=-171/1831, 11-12=-71/253, 18-30=-48/0, 16-30=-48/0, 16-31=-48/0, 31-32=-48/0, 15-32=-48/0

- WEBS** 4-20=-43/84, 4-19=-314/216, 8-13=-260/214, 8-12=-114/94, 2-20=0/1505, 10-12=-100/1626, 18-19=-777/12, 18-24=-47/844, 6-24=-195/152, 6-23=-226/141, 15-23=-40/796, 13-15=-69/660, 23-25=-27/2, 7-23=-41/740, 5-24=-41/747, 16-17=-115/0, 4-24=-296/18, 8-25=-305/20

- NOTES**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
 - TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=18.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10, Lu=50-0-0
 - This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
 - Provide adequate drainage to prevent water ponding.
 - * 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.
 - Refer to girder(s) for truss to truss connections.
 - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

- Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 134 lb down and 25 lb up at 20-4-8, and 134 lb down and 25 lb up at 15-10-0 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
- LOAD CASE(S)** Standard
- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
 Uniform Loads (lb/ft)
 Vert: 1-2=-48, 2-5=-48, 5-7=-58, 7-10=-48, 11-22=-20, 15-18=-20
 Concentrated Loads (lb)
 Vert: 14=-125, 27=-125



March 8, 2021

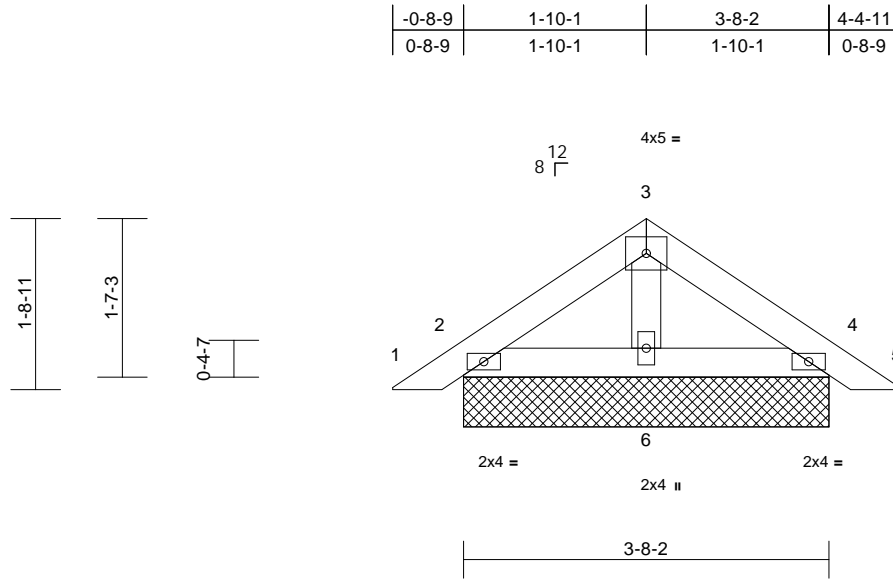
Job 21020044-01	Truss PB1GE	Truss Type Piggyback	Qty 2	Ply 1	160 Crossings at ACC-Kessler A-Roof Job Reference (optional)	145094154
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Carter Components (Sanford), Sanford, NC - 27332,

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Page: 1

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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	0.05	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.02	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.02	Horz(CT)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-P								
BCDL	10.0										Weight: 16 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 5-2-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

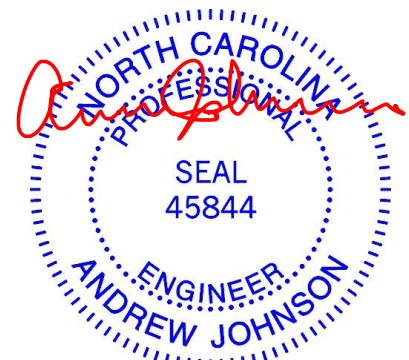
REACTIONS (size) 2=3-8-2, 4=3-8-2, 6=3-8-2
Max Horiz 2=30 (LC 12)
Max Uplift 2=-12 (LC 13), 4=-15 (LC 14)
Max Grav 2=110 (LC 2), 4=110 (LC 2), 6=129 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/17, 2-3=-53/29, 3-4=-51/30, 4-5=0/17
BOT CHORD 2-6=-7/24, 4-6=-7/24
WEBS 3-6=-83/26

- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2-0-0 oc.
- * 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 12 lb uplift at joint 2 and 15 lb uplift at joint 4.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard

- NOTES**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
 - Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
 - TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10



March 8, 2021

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

Job 21020044-01	Truss PB1	Truss Type Piggyback	Qty 16	Ply 1	160 Crossings at ACC-Kessler A-Roof Job Reference (optional)	145094155
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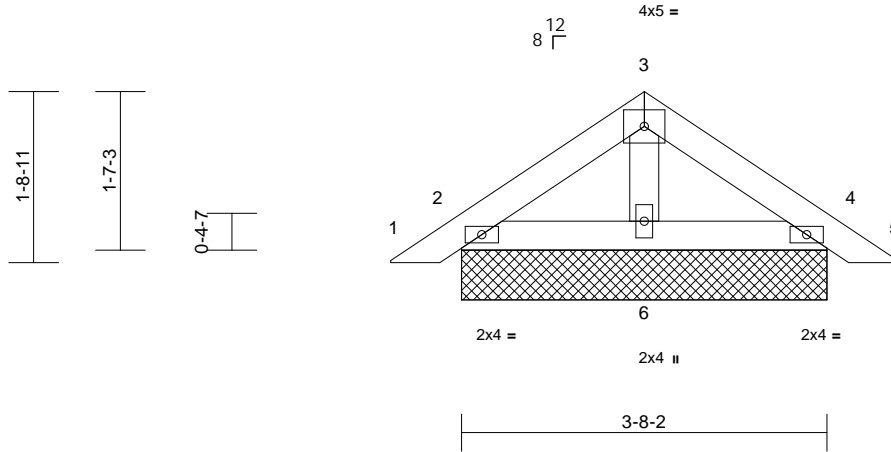
Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.43 S Feb 12 2021 Print: 8.430 S Feb 12 2021 MiTek Industries, Inc. Mon Mar 08 11:42:24

Page: 1

ID:q3v7?VCKrrUGpgxFda2Q4AzEes1-Mock Me

-0-8-9	1-10-1	3-8-2	4-4-11
0-8-9	1-10-1	1-10-1	0-8-9



Scale = 1:23.2

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	0.05	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.02	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.02	Horz(CT)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-P								
BCDL	10.0											
										Weight: 16 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 5-2-0 oc purlins.
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS

(size) 2=3-8-2, 4=3-8-2, 6=3-8-2
 Max Horiz 2=30 (LC 12)
 Max Uplift 2=-12 (LC 13), 4=-15 (LC 14)
 Max Grav 2=110 (LC 2), 4=110 (LC 2), 6=129 (LC 2)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/17, 2-3=-53/29, 3-4=-51/30, 4-5=0/17
 BOT CHORD 2-6=-7/24, 4-6=-7/24
 WEBS 3-6=-83/26

NOTES

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10

- 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 13.9 psf on overhangs non-concurrent with other live loads.
- 6) Gable requires continuous bottom chord bearing.
- 7) Gable studs spaced at 2-0-0 oc.
- 8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 12 lb uplift at joint 2 and 15 lb uplift at joint 4.
- 10) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard



March 8, 2021

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 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, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



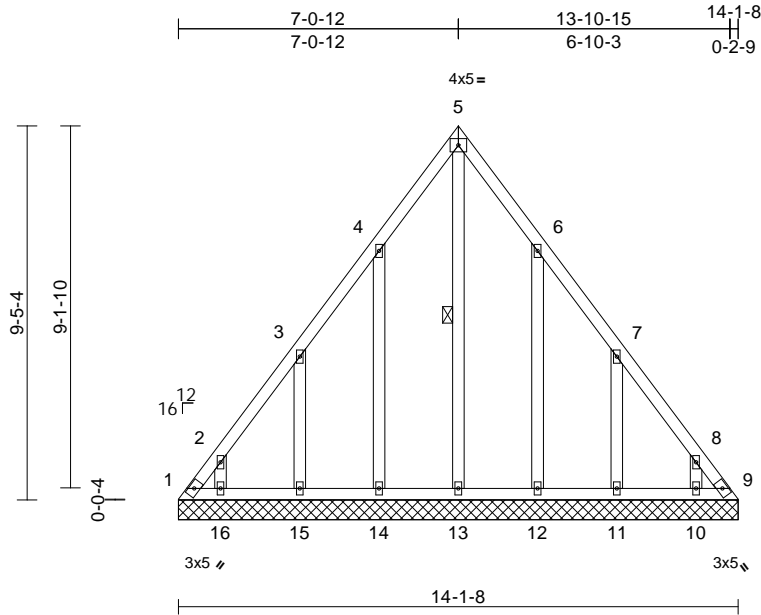
818 Soundside Road
 Edenton, NC 27932

Job 21020044-01	Truss V1	Truss Type Valley	Qty 1	Ply 1	160 Crossings at ACC-Kessler A-Roof Job Reference (optional)	145094156
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.43 S Feb 12 2021 Print: 8.430 S Feb 12 2021 MiTek Industries, Inc. Mon Mar 08 11:42:37
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Page: 1



Scale = 1:58.1

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	0.08	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.04	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.15	Horiz(TL)	0.00	9	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-SH								
BCDL	10.0										Weight: 99 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3 *Except* 13-5,14-4,12-6:2x4 SP No.2

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.
WEBS 1 Row at midpt 5-13

REACTIONS (size) 1=14-1-8, 9=14-1-8, 10=14-1-8, 11=14-1-8, 12=14-1-8, 13=14-1-8, 14=14-1-8, 15=14-1-8, 16=14-1-8
Max Horiz 1=-194 (LC 9)
Max Uplift 1=-151 (LC 11), 9=-125 (LC 12), 10=-84 (LC 14), 11=-106 (LC 14), 12=-102 (LC 14), 14=-103 (LC 13), 15=-105 (LC 13), 16=-84 (LC 13)
Max Grav 1=219 (LC 13), 9=207 (LC 14), 10=166 (LC 25), 11=203 (LC 25), 12=206 (LC 25), 13=152 (LC 14), 14=207 (LC 24), 15=202 (LC 24), 16=166 (LC 24)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-341/268, 2-3=-208/160, 3-4=-132/94, 4-5=-163/171, 5-6=-163/171, 6-7=-108/61, 7-8=-208/160, 8-9=-341/268
BOT CHORD 1-16=-160/211, 15-16=-160/211, 14-15=-160/211, 13-14=-160/211, 12-13=-160/211, 11-12=-160/211, 10-11=-160/211, 9-10=-160/211
WEBS 5-13=-203/133, 4-14=-217/194, 3-15=-227/207, 2-16=-176/157, 6-12=-217/194, 7-11=-227/207, 8-10=-176/157

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
- All plates are 2x4 MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2-0-0 oc.
- * This truss has been designed for a 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 151 lb uplift at joint 1 and 125 lb uplift at joint 9.
- One RT8A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 14, 15, 16, 12, 11, and 10. This connection is for uplift only and does not consider lateral forces.

LOAD CASE(S) Standard



March 8, 2021

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 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, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

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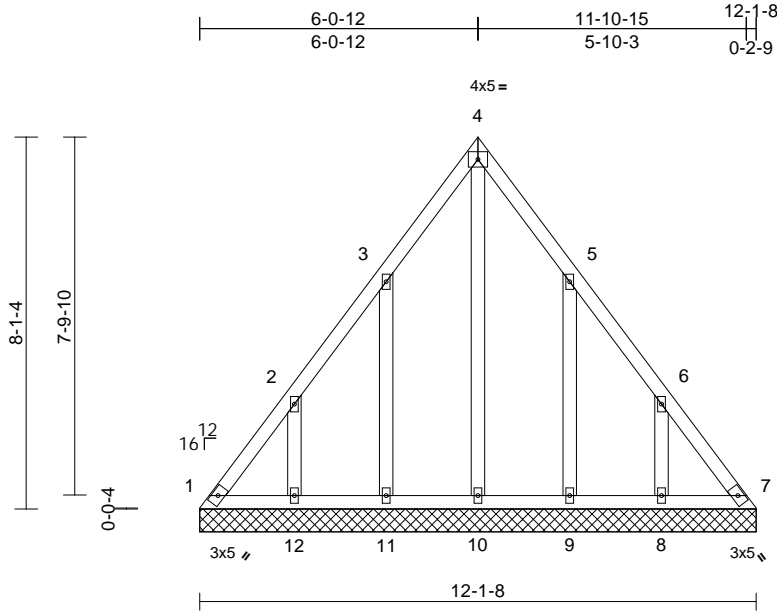
818 Soundside Road
Edenton, NC 27932

Job 21020044-01	Truss V2	Truss Type Valley	Qty 1	Ply 1	160 Crossings at ACC-Kessler A-Roof Job Reference (optional)	145094157
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Carter Components (Sanford), Sanford, NC - 27332,

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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	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	Horiz(TL)	0.00	7	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-SH							
BCDL	10.0									Weight: 79 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3 *Except* 10-4:2x4 SP No.2

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

REACTIONS (size)
1=12-1-8, 7=12-1-8, 8=12-1-8,
9=12-1-8, 10=12-1-8, 11=12-1-8,
12=12-1-8
Max Horiz 1=-165 (LC 9)
Max Uplift 1=-77 (LC 11), 7=-55 (LC 12),
8=-108 (LC 14), 9=-103 (LC 14),
11=-103 (LC 13), 12=-108 (LC 13)
Max Grav 1=153 (LC 13), 7=143 (LC 14),
8=209 (LC 25), 9=205 (LC 25),
10=127 (LC 27), 11=206 (LC 24),
12=208 (LC 24)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-236/182, 2-3=-128/95, 3-4=-143/147,
4-5=-143/147, 5-6=-108/67, 6-7=-236/182
BOT CHORD 1-12=-135/182, 11-12=-135/182,
10-11=-135/182, 9-10=-135/182,
8-9=-135/182, 7-8=-135/182
WEBS 4-10=-164/100, 3-11=-226/208,
2-12=-220/202, 5-9=-226/208, 6-8=-220/202

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

- Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
- All plates are 2x4 MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2-0-0 oc.
- * This truss has been designed for a 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 77 lb uplift at joint 1 and 55 lb uplift at joint 7.
- One RT8A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 11, 12, 9, and 8. This connection is for uplift only and does not consider lateral forces.

LOAD CASE(S) Standard



March 8, 2021

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



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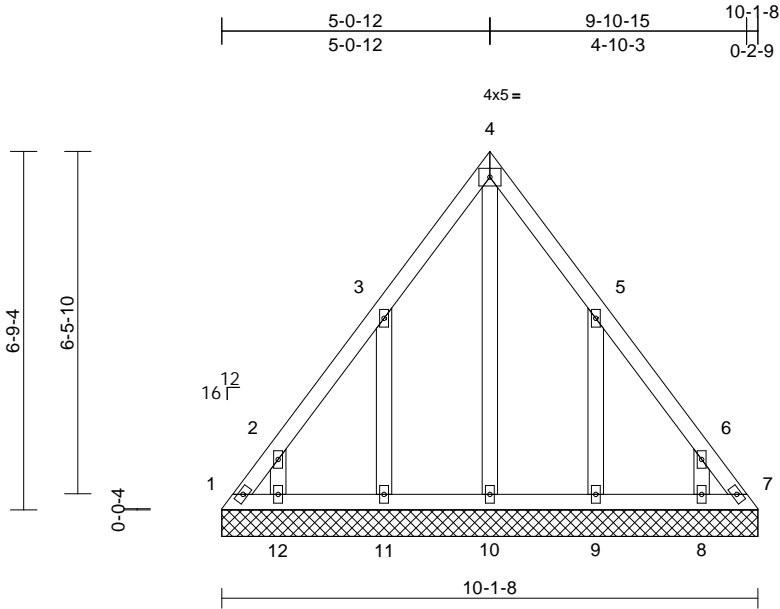
Job 21020044-01	Truss V3	Truss Type Valley	Qty 1	Ply 1	160 Crossings at ACC-Kessler A-Roof Job Reference (optional)	145094158
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Carter Components (Sanford), Sanford, NC - 27332,

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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	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	Horiz(TL)	0.00	7	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-SH							
BCDL	10.0									Weight: 61 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
 BOT CHORD 2x4 SP No.2
 OTHERS 2x4 SP No.3 *Except* 10-4:2x4 SP No.2

BRACING

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

REACTIONS

(size) 1=10-1-8, 7=10-1-8, 8=10-1-8,
 9=10-1-8, 10=10-1-8, 11=10-1-8,
 12=10-1-8
 Max Horiz 1=-137 (LC 9)
 Max Uplift 1=-100 (LC 11), 7=-82 (LC 12),
 8=-85 (LC 14), 9=-109 (LC 14),
 11=-109 (LC 13), 12=-84 (LC 13)
 Max Grav 1=148 (LC 13), 7=140 (LC 14),
 8=163 (LC 25), 9=215 (LC 25),
 10=115 (LC 27), 11=215 (LC 24),
 12=163 (LC 24)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-243/185, 2-3=-123/97, 3-4=-124/125,
 4-5=-124/125, 5-6=-106/75, 6-7=-243/185
 BOT CHORD 1-12=-109/151, 11-12=-109/151,
 10-11=-109/151, 9-10=-109/151,
 8-9=-109/151, 7-8=-109/151
 WEBS 4-10=-127/71, 3-11=-240/226,
 2-12=-186/177, 5-9=-240/226, 6-8=-186/177

NOTES

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

- Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
- All plates are 2x4 MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2-0-0 oc.
- * This truss has been designed for a 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 1 and 82 lb uplift at joint 7.
- One RT8A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 11, 12, 9, and 8. This connection is for uplift only and does not consider lateral forces.

LOAD CASE(S) Standard



March 8, 2021

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

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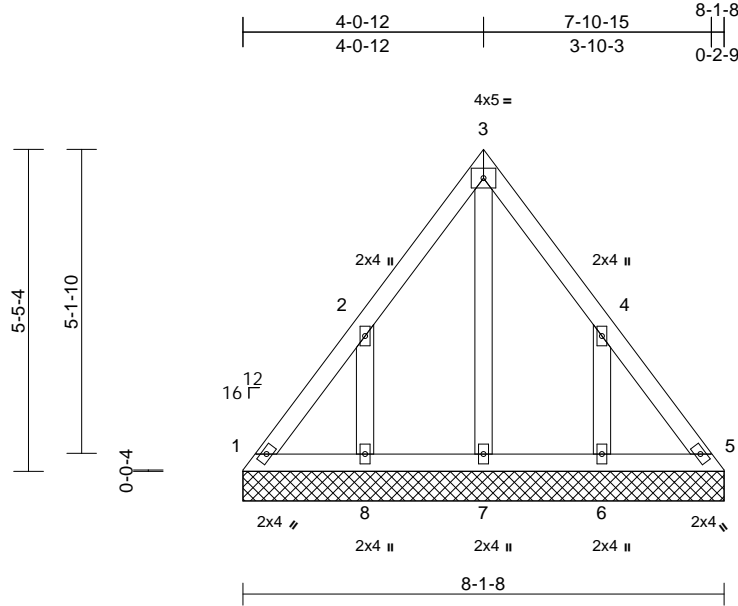
Job 21020044-01	Truss V4	Truss Type Valley	Qty 1	Ply 1	160 Crossings at ACC-Kessler A-Roof Job Reference (optional)	145094159
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.43 S Feb 12 2021 Print: 8.430 S Feb 12 2021 MiTek Industries, Inc. Mon Mar 08 11:42:39

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Scale = 1:38.9

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	0.09	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.03	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.08	Horiz(TL)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-P								
BCDL	10.0											
											Weight: 45 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

(size) 1=8-1-8, 5=8-1-8, 6=8-1-8, 7=8-1-8, 8=8-1-8
Max Horiz 1=108 (LC 10)
Max Uplift 1=-31 (LC 11), 5=-17 (LC 12), 6=-121 (LC 14), 8=-121 (LC 13)
Max Grav 1=105 (LC 25), 5=95 (LC 27), 6=229 (LC 25), 7=100 (LC 27), 8=229 (LC 24)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-147/114, 2-3=-103/97, 3-4=-103/97, 4-5=-147/114
BOT CHORD 1-8=-88/125, 7-8=-88/125, 6-7=-88/125, 5-6=-88/125
WEBS 3-7=-93/48, 2-8=-272/264, 4-6=-272/264

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.

- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2-0-0 oc.
- * 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 31 lb uplift at joint 1 and 17 lb uplift at joint 5.
- One RT8A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 8 and 6. This connection is for uplift only and does not consider lateral forces.

LOAD CASE(S) Standard



March 8, 2021

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Edenton, NC 27932

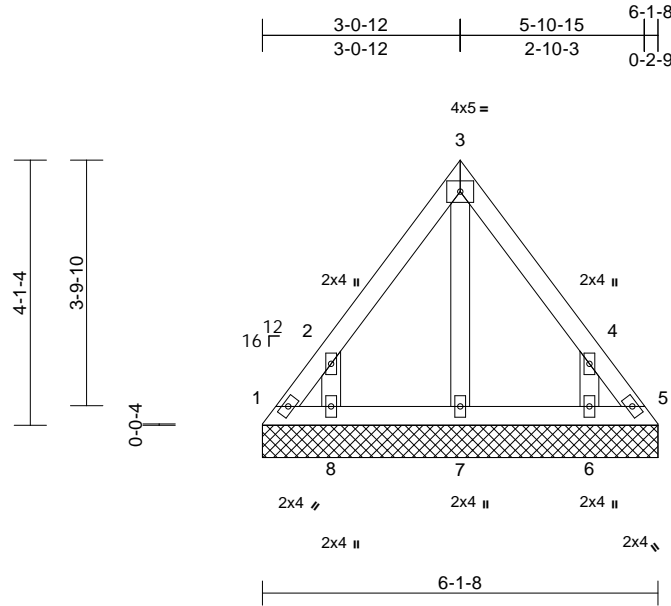
Job 21020044-01	Truss V5	Truss Type Valley	Qty 1	Ply 1	160 Crossings at ACC-Kessler A-Roof Job Reference (optional)	145094160
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Carter Components (Sanford), Sanford, NC - 27332,

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Page: 1

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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	0.08	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.02	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.07	Horiz(TL)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-P								
BCDL	10.0											
											Weight: 31 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.

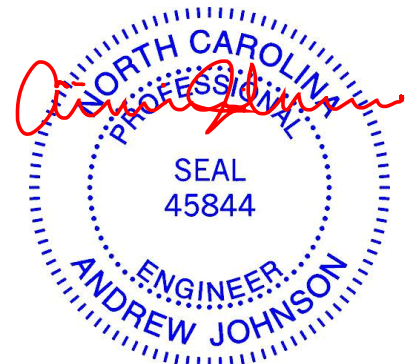
REACTIONS (size) 1=6-1-8, 5=6-1-8, 6=6-1-8, 7=6-1-8, 8=6-1-8
Max Horiz 1=-80 (LC 9)
Max Uplift 1=-60 (LC 11), 5=-50 (LC 12), 6=-106 (LC 14), 8=-106 (LC 13)
Max Grav 1=87 (LC 13), 5=82 (LC 14), 6=194 (LC 25), 7=94 (LC 27), 8=194 (LC 24)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-149/113, 2-3=-95/69, 3-4=-86/69, 4-5=-149/113
BOT CHORD 1-8=-57/87, 7-8=-57/87, 6-7=-57/87, 5-6=-57/87
WEBS 3-7=-52/6, 2-8=-242/243, 4-6=-242/243

- NOTES**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
 - Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.

- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2-0-0 oc.
- * 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 60 lb uplift at joint 1 and 50 lb uplift at joint 5.
- One RT8A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 8 and 6. This connection is for uplift only and does not consider lateral forces.

LOAD CASE(S) Standard



March 8, 2021

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 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, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

ENGINEERING BY
TRENCO
A MiTek Affiliate

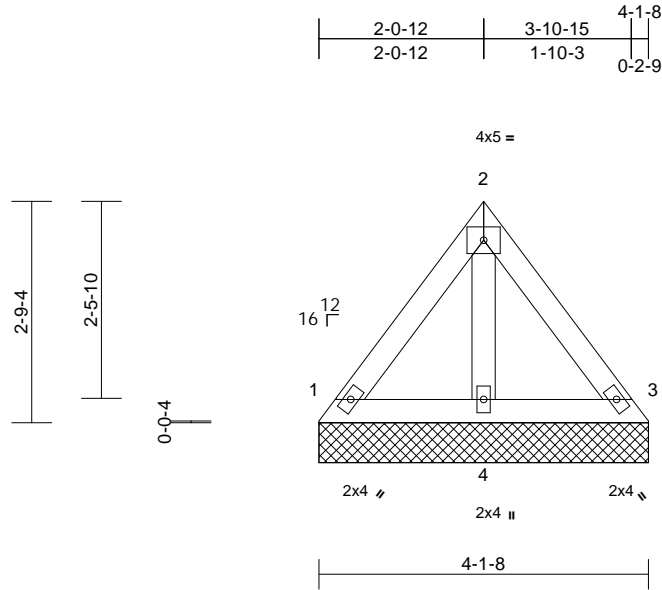
818 Soundside Road
Edenton, NC 27932

Job 21020044-01	Truss V6	Truss Type Valley	Qty 1	Ply 1	160 Crossings at ACC-Kessler A-Roof Job Reference (optional)	I45094161
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.43 S Feb 12 2021 Print: 8.430 S Feb 12 2021 MiTek Industries, Inc. Mon Mar 08 11:42:41
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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	0.09	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.02	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.01	Horiz(TL)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-P								
BCDL	10.0											
											Weight: 18 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 4-1-14 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=4-1-8, 3=4-1-8, 4=4-1-8
Max Horiz 1=51 (LC 10)
Max Uplift 1=-13 (LC 14), 3=-10 (LC 13)
Max Grav 1=92 (LC 2), 3=92 (LC 2), 4=101 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-76/35, 2-3=-70/35
BOT CHORD 1-4=-21/41, 3-4=-21/41
WEBS 2-4=-56/20

- Gable requires continuous bottom chord bearing.
 - Gable studs spaced at 2-0-0 oc.
 - * 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 13 lb uplift at joint 1 and 10 lb uplift at joint 3.
- LOAD CASE(S)** Standard

- NOTES**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
 - Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
 - TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10



March 8, 2021

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 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, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



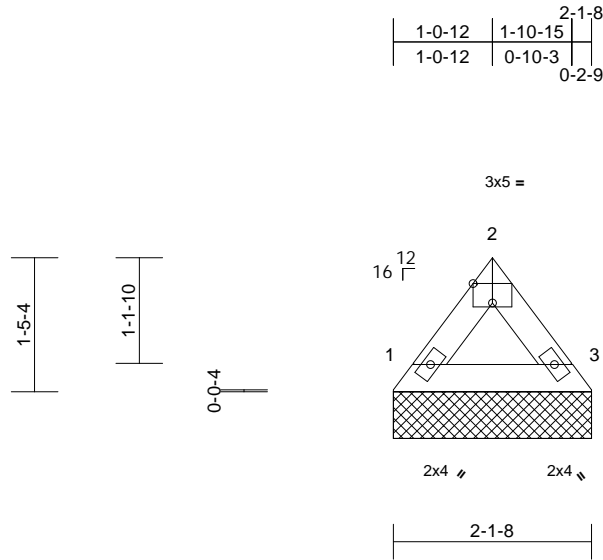
818 Soundside Road
Edenton, NC 27932

Job 21020044-01	Truss V7	Truss Type Valley	Qty 1	Ply 1	160 Crossings at ACC-Kessler A-Roof Job Reference (optional)	145094162
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.43 S Feb 12 2021 Print: 8.430 S Feb 12 2021 MiTek Industries, Inc. Mon Mar 08 11:42:42
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Page: 1



Scale = 1:24.7

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

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	0.02	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.02	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-P								
BCDL	10.0										Weight: 7 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-1-14 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=2-1-8, 3=2-1-8

Max Horiz 1=22 (LC 12)
Max Grav 1=63 (LC 2), 3=63 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-45/21, 2-3=-45/21
BOT CHORD 1-3=-6/23

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2-0-0 oc.

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.

LOAD CASE(S) Standard



March 8, 2021

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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/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



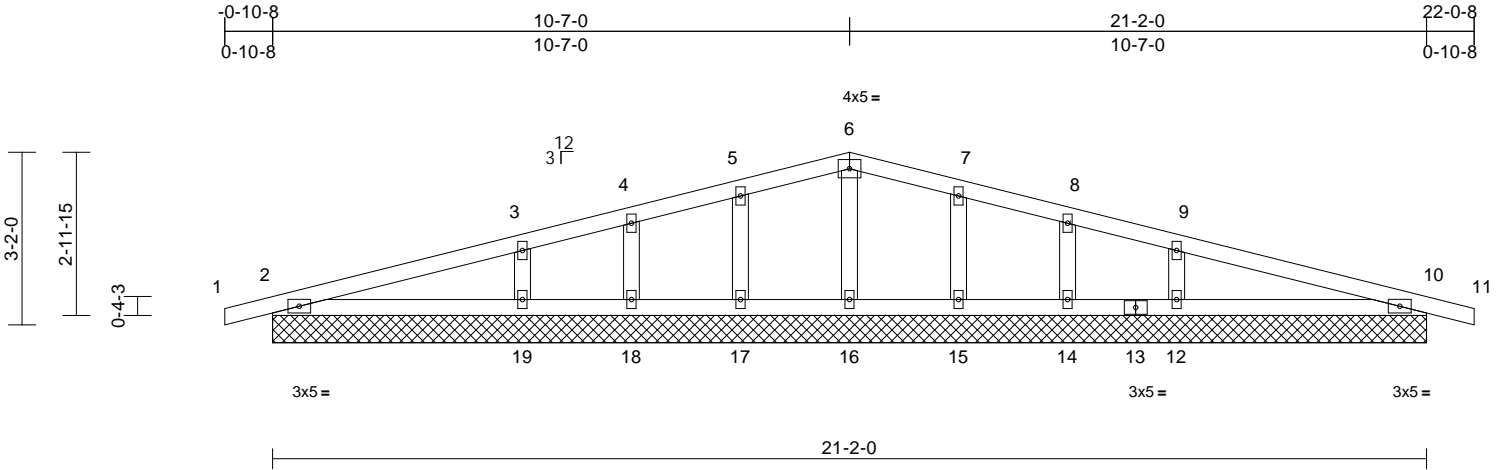
818 Soundside Road
Edenton, NC 27932

Job 21020044-01	Truss TG1GE	Truss Type Common Supported Gable	Qty 1	Ply 1	160 Crossings at ACC-Kessler A-Roof Job Reference (optional)	145094164
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.43 S Feb 12 2021 Print: 8.430 S Feb 12 2021 MiTek Industries, Inc. Mon Mar 08 11:42:36
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Page: 1



Scale = 1:42.3

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	0.19	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.18	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.05	Horz(CT)	0.00	24	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 83 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 (size)	
	2=21-2-0, 10=21-2-0, 12=21-2-0, 14=21-2-0, 15=21-2-0, 16=21-2-0, 17=21-2-0, 18=21-2-0, 19=21-2-0, 20=21-2-0, 24=21-2-0
Max Horiz	2=-28 (LC 16), 20=-28 (LC 16)
Max Uplift	2=-28 (LC 11), 10=-31 (LC 12), 12=-20 (LC 16), 14=-6 (LC 12), 15=-12 (LC 16), 17=-12 (LC 15), 18=-6 (LC 11), 19=-21 (LC 15), 20=-28 (LC 11), 24=-31 (LC 12)
Max Grav	2=214 (LC 2), 10=214 (LC 2), 12=367 (LC 35), 14=64 (LC 23), 15=194 (LC 35), 16=126 (LC 2), 17=194 (LC 34), 18=64 (LC 22), 19=367 (LC 34), 20=214 (LC 2), 24=214 (LC 2)
FORCES (lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=0/16, 2-3=-86/24, 3-4=-48/49, 4-5=-36/65, 5-6=-48/89, 6-7=-48/89, 7-8=-36/66, 8-9=-48/48, 9-10=-37/17, 10-11=0/16
BOT CHORD	2-19=-2/74, 18-19=0/34, 17-18=0/34, 16-17=0/34, 15-16=0/34, 14-15=0/34, 13-14=0/34, 12-13=0/34, 10-12=0/34
WEBS	6-16=-92/14, 5-17=-143/75, 4-18=-64/47, 3-19=-242/116, 7-15=-143/75, 8-14=-64/47, 9-12=-242/116

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
- All plates are 2x4 MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2-0-0 oc.
- * This truss has been designed for a 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.
- One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2, 16, 17, 18, 19, 15, 14, 12, and 10. This connection is for uplift only and does not consider lateral forces.

LOAD CASE(S) Standard



March 8, 2021

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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/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

ENGINEERING BY
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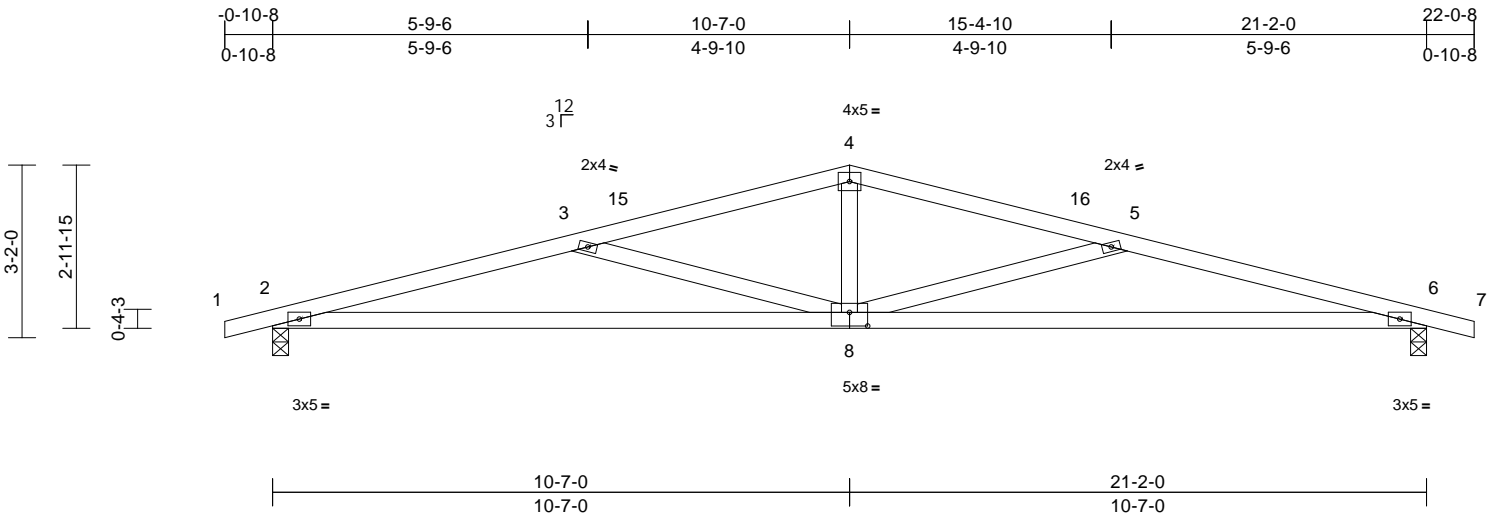
818 Soundside Road
Edenton, NC 27932

Job 21020044-01	Truss TG1	Truss Type Common	Qty 6	Ply 1	160 Crossings at ACC-Kessler A-Roof Job Reference (optional)	I45094165
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.43 S Feb 12 2021 Print: 8.430 S Feb 12 2021 MiTek Industries, Inc. Mon Mar 08 11:42:36
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Page: 1



Scale = 1:42.3

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.50	Vert(LL)	-0.15	8-14	>999	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.99	Vert(CT)	-0.41	8-11	>616	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.37	Horz(CT)	0.07	6	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 85 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD Structural wood sheathing directly applied or 3-1-3 oc purlins.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.

REACTIONS (size) 2=0-3-8, 6=0-3-8

Max Horiz 2=-28 (LC 20)
Max Uplift 2=-33 (LC 11), 6=-33 (LC 12)
Max Grav 2=899 (LC 2), 6=899 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/16, 2-3=-2497/653, 3-15=-1844/397, 4-15=-1803/409, 4-16=-1803/409, 5-16=-1844/397, 5-6=-2497/653, 6-7=0/16
BOT CHORD 2-8=-578/2409, 6-8=-583/2409
WEBS 4-8=-37/594, 5-8=-717/298, 3-8=-717/298

NOTES

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
- 3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10

- 4) Unbalanced snow loads have been considered for this design.
- 5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
- 6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 7) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 6. This connection is for uplift only and does not consider lateral forces.

LOAD CASE(S) Standard



March 8, 2021

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.

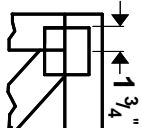
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall 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, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



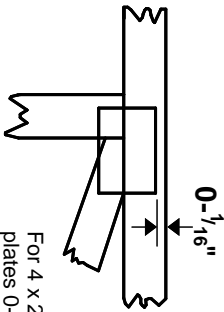
818 Soundside Road
Edenton, NC 27932

Symbols

PLATE LOCATION AND ORIENTATION



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



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



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

* Plate location details available in **MITek 20/20 software** or upon request.

PLATE SIZE

4 X 4

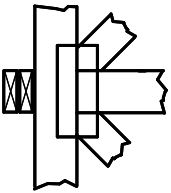
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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



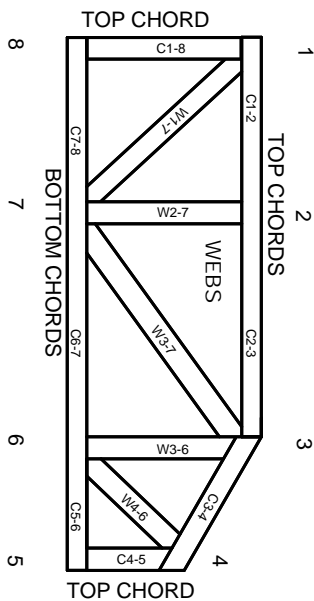
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TP1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-89: Design Standard for Bracing.
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

Numbering System

6-4-8
dimensions shown in ft-in-sixteenths
(Drawings not to scale)



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-1311, ESR-1352, ESR1988
ER-3907, ESR-2362, ESR-1397, ESR-3282

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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MITek Engineering Reference Sheet: Mill-7473 rev. 5/19/2020



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 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.