ENGINEERING BY
TRENCO
A MiTek Affiliate

Trenco
818 Soundside Rd
Edenton, NC 27932

Re: Q-1901805-1
Phillips' Hip RF-Roof

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

Pages or sheets covered by this seal: E13608495 thru E13608523

My license renewal date for the state of North Carolina is December 31, 2019.

North Carolina COA: C-0844

October 8,2019

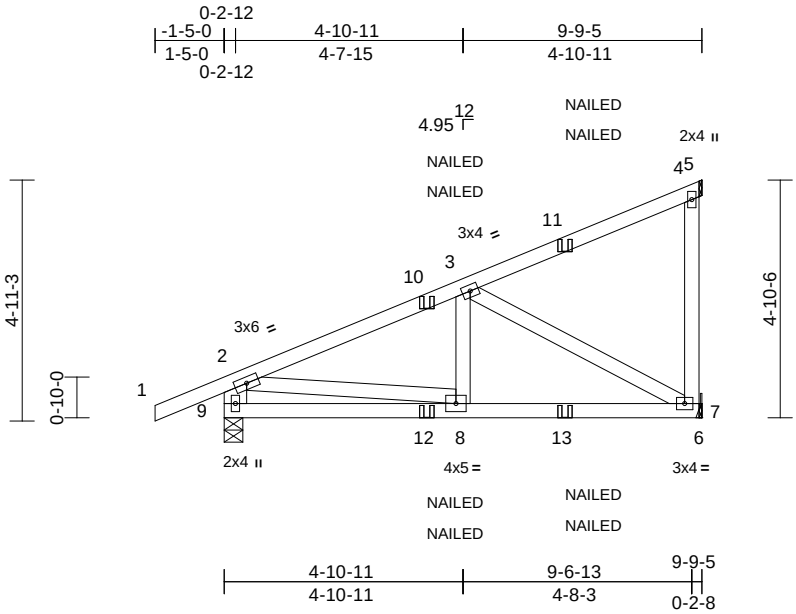
Gilbert, Eric

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

Job	Truss	Truss Type	Qty	Ply	Phillips' Hip RF-Roof
Q-1901805-1	H1	Diagonal Hip Girder	4	1	E13608495 Job Reference (optional)

Peak Truss Builders, LLC, New Hill, NC - 27562,

Run: 8.32 E Sep 21 2019 Print: 8.320 E Sep 21 2019 MiTek Industries, Inc. Mon Oct 07 15:10:40 ID:Zc90SDijIOKpocZoEFNgv4yX8pM-8iEkcRr8tNspG0UzJeGMFZJ?PWoOoGgeukpP9qyVmX?



Scale = 1:47.2

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.33	Vert(LL)	-0.01	7-8	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.26	Vert(CT)	-0.03	7-8	>999	180		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.30	Horz(CT)	0.00	7	n/a	n/a		
BCDL	10.0	Code	IBC2015/TPI2014	Matrix-MS							Weight: 57 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.1
BOT CHORD 2x4 SP No.1
WEBS 2x4 SP No.3 *Except* 9-2:2x6 SP No.2

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

REACTIONS (lb/size) 7=493/ Mechanical, 9=534/0-4-9
Max Horiz 9=149 (LC 19)
Max Uplift 7=-104 (LC 7), 9=-119 (LC 7)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-9=-493/141, 1-2=0/38, 2-10=-600/108, 3-10=-502/88, 3-11=-143/73, 4-11=-84/49, 4-5=-2/0, 4-7=-155/71
BOT CHORD 9-12=-125/110, 8-12=-125/110, 8-13=-149/504, 7-13=-149/504, 6-7=0/0
WEBS 2-8=-102/442, 3-8=0/123, 3-7=-547/147

NOTES
1) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; B=20ft; L=20ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) * 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.
3) All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 119 lb uplift at joint 9 and 104 lb uplift at joint 7.
6) This truss is designed in accordance with the 2015 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.
7) "NAILED" indicates 3-10d (0.148"x3") or 2-12d (0.148"x3.25") toe-nails per NDS guidlines.
8) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-60, 2-4=-60, 4-5=-20, 6-9=-20
Concentrated Loads (lb)
Vert: 10=-3 (F=-2, B=-2), 11=-88 (F=-44, B=-44), 12=-13 (F=-7, B=-7), 13=-68 (F=-34, B=-34)

October 8,2019

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 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, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

ENGINEERING BY TRENCO
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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Phillips' Hip RF-Roof	E13608496
Q-1901805-1	T1	Roof Special	8	1	Job Reference (optional)	

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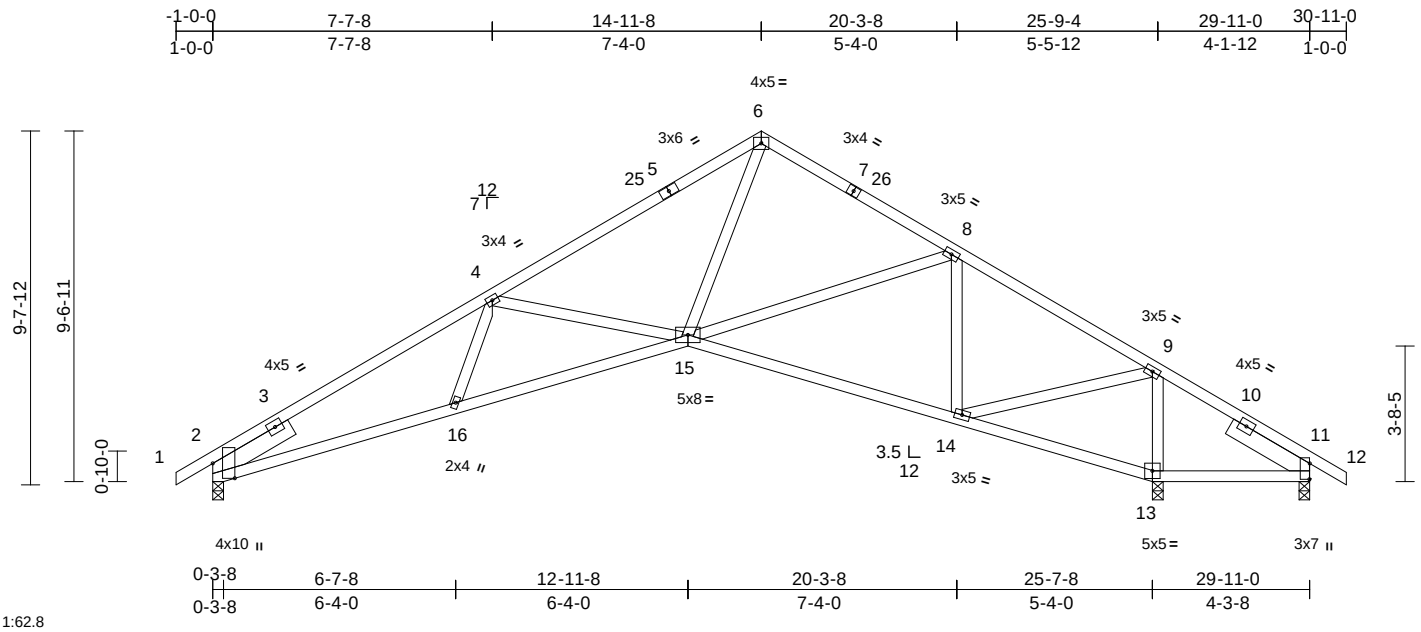


Scale = 1:62.8

Plate Offsets (X, Y): [2:0-4-14,Edge], [11:0-5-3,0-0-2]

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	0.74	Vert(LL)	-0.13	15-16	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.67	Vert(CT)	-0.29	15-16	>999	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.60	Horz(CT)	0.14	13	n/a	n/a		
BCDL	10.0	Code	IBC2015/TPI2014	Matrix-MS							Weight: 164 lb	FT = 20%

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

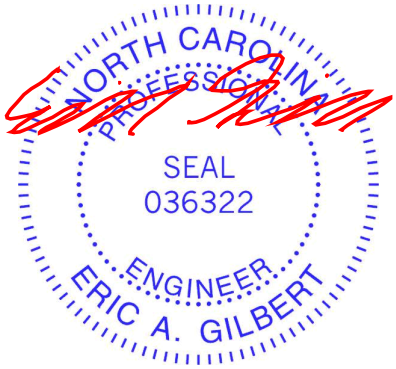
BRACING
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (lb/size) 2=976/0-3-8, 11=-419/0-3-8, 13=1957/0-3-8
Max Horiz 2=167 (LC 10)
Max Uplift 2=-162 (LC 11), 11=-444 (LC 20), 13=-143 (LC 11)
Max Grav 2=976 (LC 1), 11=-60 (LC 11), 13=1957 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/30, 2-3=-682/0, 3-4=-2064/268, 4-25=-1440/168, 5-25=-1309/170, 5-6=-1294/188, 6-7=-988/182, 7-26=-994/167, 8-26=-1073/153, 8-9=-670/170, 9-10=0/1089, 10-11=-45/74, 11-12=0/30
BOT CHORD 2-16=-124/1782, 15-16=-149/1778, 14-15=0/541, 13-14=-965/59, 11-13=-835/37
WEBS 4-16=0/106, 4-15=-587/253, 6-15=-46/844, 8-15=0/432, 8-14=-634/97, 9-14=-16/1457, 9-13=-1558/171

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; B=20ft; L=30ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 14-11-8, Exterior (2) 14-11-8 to 17-11-8, Interior (1) 17-11-8 to 30-11-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) * 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.
4) All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
5) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 162 lb uplift at joint 2, 143 lb uplift at joint 13 and 444 lb uplift at joint 11.
7) This truss is designed in accordance with the 2015 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



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Job	Truss	Truss Type	Qty	Ply	Phillips' Hip RF-Roof	E13608497
Q-1901805-1	T1A	Common	1	1	Job Reference (optional)	

Peak Truss Builders, LLC, New Hill, NC - 27562,

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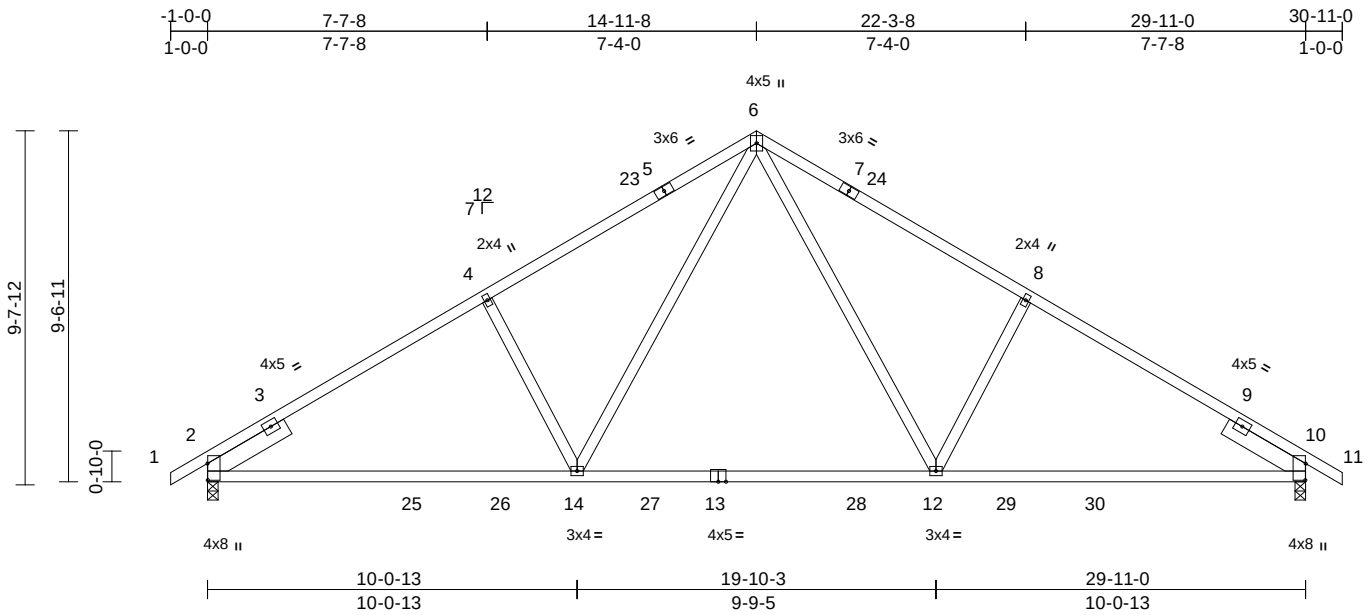

Scale = 1:62.8

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

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	0.63	Vert(LL)	-0.32	12-14	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.70	Vert(CT)	-0.49	12-14	>730	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.29	Horz(CT)	0.06	10	n/a	n/a		
BCDL	10.0	Code	IBC2015/TPI2014	Matrix-MS							Weight: 158 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD	Structural wood sheathing directly applied or 3-6-8 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 2=1257/0-3-8, 10=1257/0-3-8
Max Horiz 2=167 (LC 10)
Max Uplift 2=-182 (LC 11), 10=-182 (LC 11)
Max Grav 2=1291 (LC 16), 10=1291 (LC 17)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/30, 2-3=-656/0, 3-4=-1784/269, 4-23=-1661/305, 5-23=-1550/308, 5-6=-1538/326, 6-7=-1538/326, 7-24=-1550/308, 8-24=-1661/305, 8-9=-1784/269, 9-10=-538/0, 10-11=0/30
BOT CHORD	2-25=-168/1591, 25-26=-107/1591, 14-26=-107/1591, 14-27=0/1078, 13-27=0/1078, 13-28=0/1078, 12-28=0/1078, 12-29=-107/1468, 29-30=-107/1468, 10-30=-107/1468
WEBS	6-12=-90/746, 8-12=-388/219, 6-14=-90/746, 4-14=-388/219

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; B=20ft; L=30ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 14-11-8, Exterior (2) 14-11-8 to 17-11-8, Interior (1) 17-11-8 to 30-11-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) * 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.
4) All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 182 lb uplift at joint 2 and 182 lb uplift at joint 10.
6) This truss is designed in accordance with the 2015 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

October 8,2019

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Job	Truss	Truss Type	Qty	Ply	Phillips' Hip RF-Roof
Q-1901805-1	T1B	Hip	1	1	E13608498
					Job Reference (optional)

Peak Truss Builders, LLC, New Hill, NC - 27562,

Run: 8.32 E Sep 21 2019 Print: 8.320 E Sep 21 2019 MiTek Industries, Inc. Mon Oct 07 15:10:44 Page: 1
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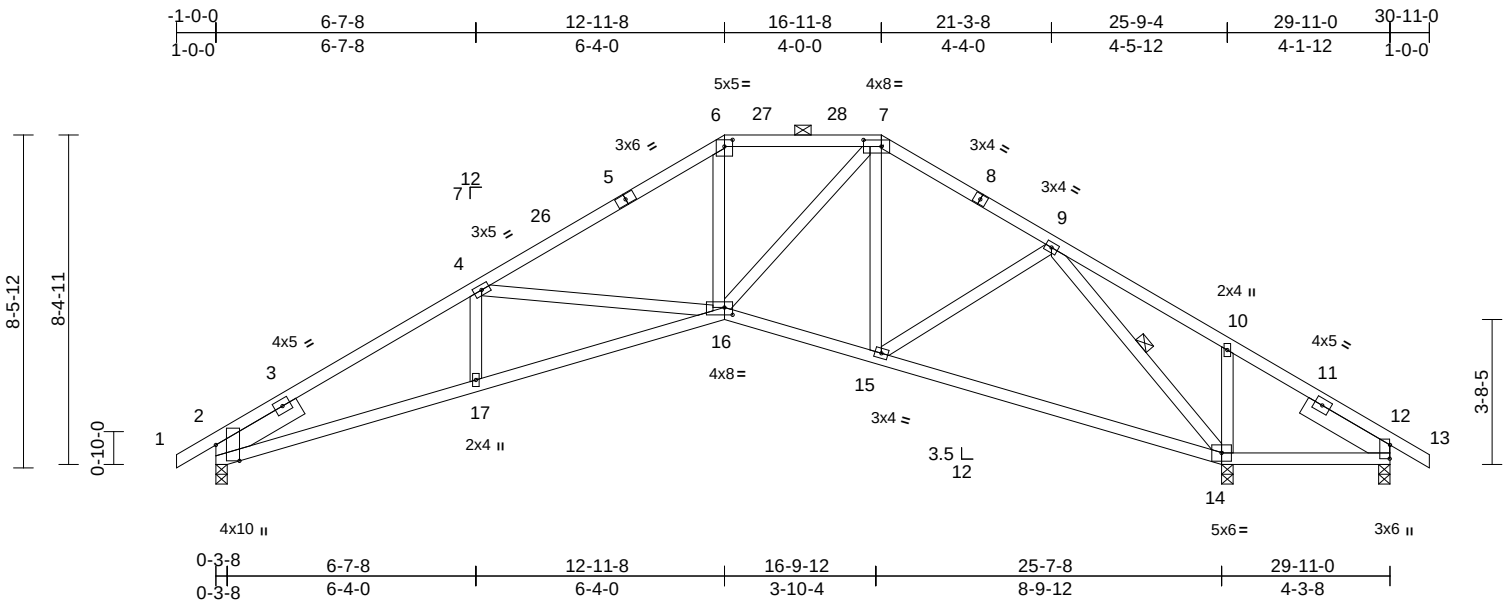

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Plate Offsets (X, Y): [2:0-4-14,Edge], [6:0-2-8,0-2-1], [7:0-5-8,0-2-0], [12:0-4-3,0-0-2], [16:0-2-8,0-2-4]

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	0.71	Vert(LL)	-0.13	16-17	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.69	Vert(CT)	-0.30	16-17	>999	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.56	Horz(CT)	0.16	14	n/a	n/a		
BCDL	10.0	Code	IBC2015/TPI2014	Matrix-MS							Weight: 169 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD	Structural wood sheathing directly applied or 2-10-9 oc purlins, except 2-0-0 oc purlins (5-6-4 max.): 6-7.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 12-14.
WEBS	1 Row at midpt 9-14

REACTIONS (lb/size) 2=989/0-3-8, 12=-340/0-3-8, 14=1864/0-3-8
Max Horiz 2=-146 (LC 9)
Max Uplift 2=-161 (LC 11), 12=-427 (LC 20), 14=-150 (LC 11)
Max Grav 2=989 (LC 1), 12=-54 (LC 11), 14=1864 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/30, 2-3=-679/14, 3-4=-2118/273, 4-26=-1528/150, 5-26=-1432/168, 5-6=-1412/185, 6-27=-1237/201, 27-28=-1237/201, 7-28=-1237/201, 7-8=-924/183, 8-9=-992/167, 9-10=0/910, 10-11=0/946, 11-12=-39/84, 12-13=0/30
BOT CHORD	2-17=-137/1823, 16-17=-140/1844, 15-16=0/827, 14-15=-17/428, 12-14=-720/59
WEBS	4-17=0/99, 4-16=-558/208, 6-16=0/395, 7-16=-23/683, 7-15=-274/23, 9-15=0/537, 9-14=-1808/99, 10-14=-371/144

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; B=20ft; L=30ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 12-11-8, Exterior (2) 12-11-8 to 21-3-8, Interior (1) 21-3-8 to 30-11-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
5) All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
6) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 161 lb uplift at joint 2, 150 lb uplift at joint 14 and 427 lb uplift at joint 12.
8) This truss is designed in accordance with the 2015 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.
9) 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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Job	Truss	Truss Type	Qty	Ply	Phillips' Hip RF-Roof
Q-1901805-1	T2	Hip	1	1	E13608499
					Job Reference (optional)

Peak Truss Builders, LLC, New Hill, NC - 27562,

Run: 8.32 E Sep 21 2019 Print: 8.320 E Sep 21 2019 MiTek Industries, Inc. Mon Oct 07 15:10:45 Page: 1

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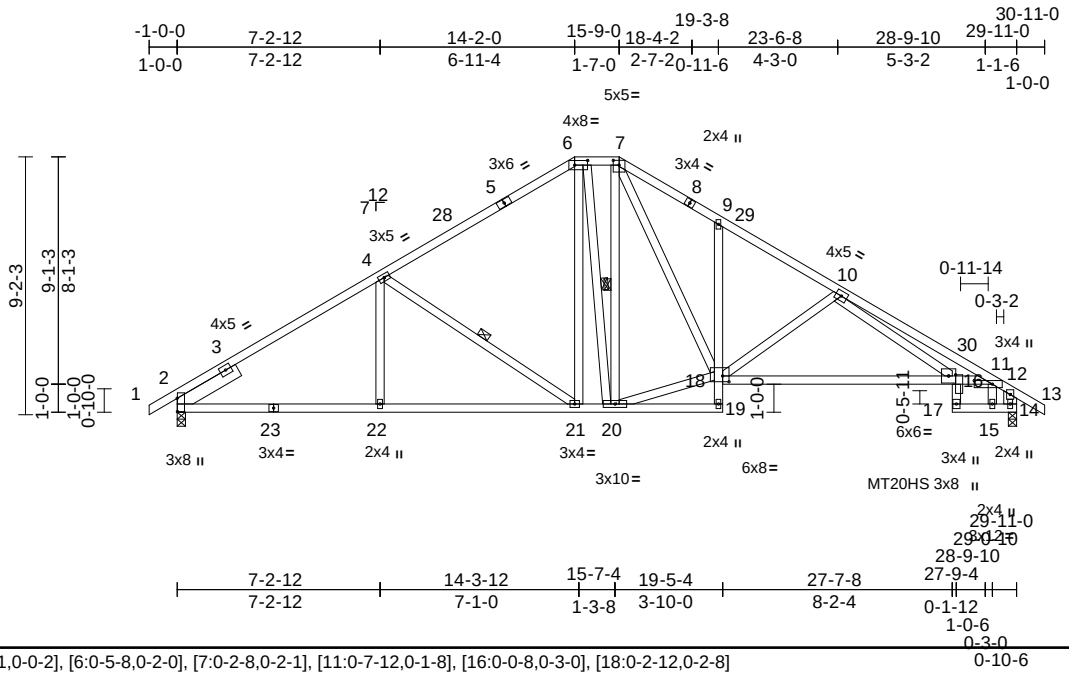

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Plate Offsets (X, Y): [2:0-5-11,0-0-2], [6:0-5-8,0-2-0], [7:0-2-8,0-2-1], [11:0-7-12,0-1-8], [16:0-0-8,0-3-0], [18:0-2-12,0-2-8]

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	0.57	Vert(LL)	-0.12	16-18	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.77	Vert(CT)	-0.35	16-18	>999	180	MT20HS	187/143
BCLL	0.0*	Rep Stress Incr	YES	WB	0.43	Horz(CT)	0.16	14	n/a	n/a		
BCDL	10.0	Code	IBC2015/TPI2014	Matrix-MS							Weight: 210 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.1

BOT CHORD 2x4 SP No.1 *Except* 19-9,16-17:2x4 SP No.3

WEBS 2x4 SP No.3 *Except* 14-12:2x6 SP No.2

SLIDER Left 2x6 SP No.2 -- 2-6-0

BRACING

TOP CHORD Structural wood sheathing directly applied or 3-1-8 oc purlins, except end verticals, and 2-0-0 oc purlins (5-11-12 max.): 6-7.

BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 19-20.

WEBS 1 Row at midpt 4-21, 6-20, 7-20

REACTIONS (lb/size) 2=1247/0-3-8, 14=1262/0-3-8
Max Horiz 2=173 (LC 10)
Max Uplift 2=-181 (LC 11), 14=-189 (LC 11)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/30, 2-3=-524/0, 3-4=-1716/252, 4-28=-1284/236, 5-28=-1172/243, 5-6=-1150/262, 6-7=-1002/271, 7-8=-1637/357, 8-9=-1693/337, 9-29=-1604/268, 10-29=-1720/244, 10-30=-2984/214, 11-30=-3037/184, 11-12=-624/121, 12-13=0/37, 12-14=-846/111

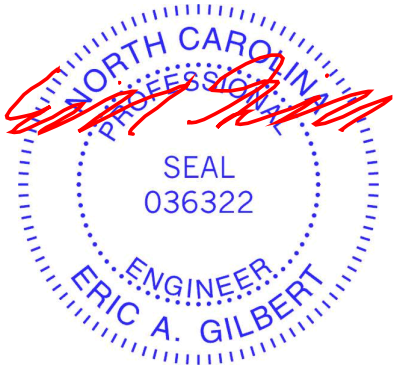
BOT CHORD 2-23=-119/1416, 22-23=-84/1416, 21-22=-84/1416, 20-21=0/1018, 19-20=-26/0, 18-19=0/34, 9-18=-225/134, 16-18=-127/1790, 11-16=-13/2330, 16-17=-14/242, 15-17=-45/247, 14-15=-49/271

WEBS 4-22=0/136, 4-21=-509/164, 6-21=-8/388, 6-20=-231/70, 7-20=-274/50, 18-20=0/1050, 7-18=-146/977, 10-18=-455/147, 10-16=0/994, 11-15=-619/115

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; B=20ft; L=30ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 14-2-0, Exterior (2) 14-2-0 to 19-11-15, Interior (1) 19-11-15 to 30-11-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) All plates are MT20 plates unless otherwise indicated.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 181 lb uplift at joint 2 and 189 lb uplift at joint 14.
8) This truss is designed in accordance with the 2015 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.
9) 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



October 8,2019

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.

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

Job	Truss	Truss Type	Qty	Ply	Phillips' Hip RF-Roof
Q-1901805-1	T2A	Hip	1	1	E13608500
					Job Reference (optional)

Peak Truss Builders, LLC, New Hill, NC - 27562,

Run: 8.32 E Sep 21 2019 Print: 8.320 E Sep 21 2019 MiTek Industries, Inc. Mon Oct 07 15:10:45

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Page: 1

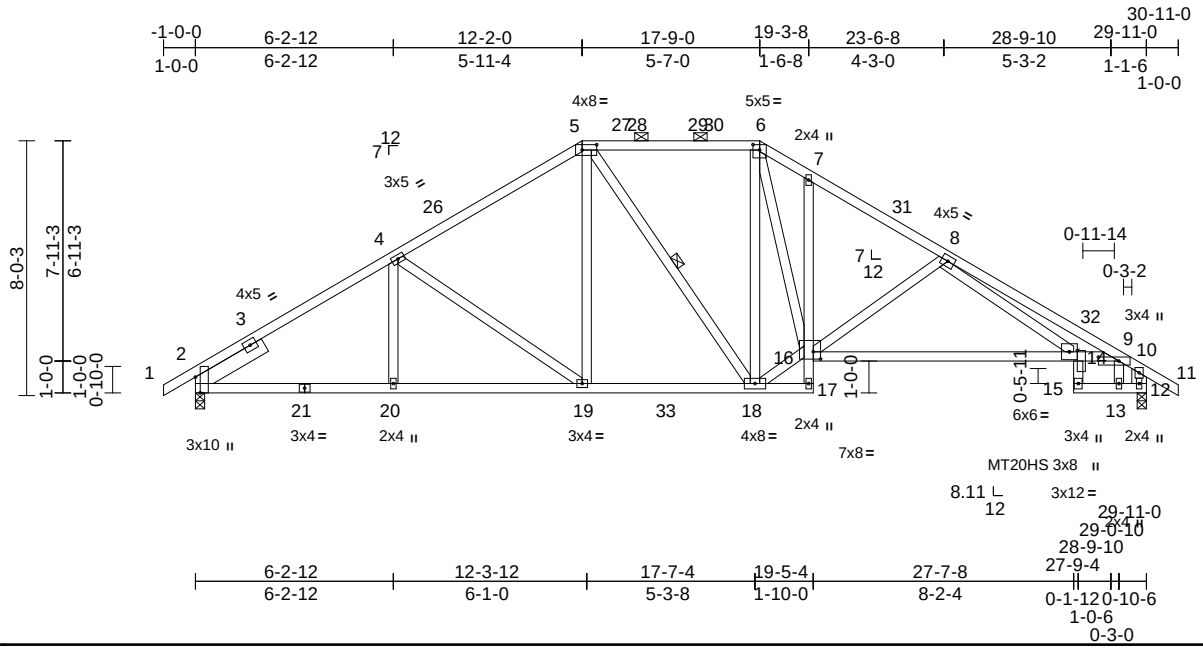

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Plate Offsets (X, Y): [2:0-5-15,Edge], [5:0-5-8,0-2-0], [6:0-2-8,0-2-1], [9:0-7-12,0-1-8], [14:0-0-8,0-3-0], [16:0-2-12,0-2-12]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.44	Vert(LL)	-0.12	14-16	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.76	Vert(CT)	-0.36	14-16	>993	180	MT20HS	187/143
BCLL	0.0*	Rep Stress Incr	YES	WB	0.66	Horz(CT)	0.16	12	n/a	n/a		
BCDL	10.0	Code	IBC2015/TPI2014	Matrix-MS							Weight: 198 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.1

BOT CHORD 2x4 SP No.1 *Except* 17-7,14-15:2x4 SP No.3

WEBS 2x4 SP No.3 *Except* 12-10:2x6 SP No.2

SLIDER Left 2x6 SP No.2 -- 2-6-0

BRACING

TOP CHORD Structural wood sheathing directly applied or 3-1-15 oc purlins, except end verticals, and 2-0-0 oc purlins (5-4-10 max.): 5-6.

BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 17-18,16-17.
10-0-0 oc bracing: 14-16

WEBS 1 Row at midpt 5-18

REACTIONS (lb/size) 2=1247/0-3-8, 12=1262/0-3-8
Max Horiz 2=152 (LC 10)
Max Uplift 2=-181 (LC 11), 12=-189 (LC 11)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/30, 2-3=-538/0, 3-4=-1725/249, 4-26=-1400/230, 5-26=-1310/262, 5-27=-1124/264, 27-28=-1124/264, 28-29=-1124/264, 29-30=-1124/264, 6-30=-1124/264, 6-7=-1616/318, 7-31=-1636/267, 8-31=-1717/243, 8-32=-2984/213, 9-32=-3036/183, 9-10=-623/121, 10-11=0/37, 10-12=-849/112

BOT CHORD 2-21=-97/1437, 20-21=-92/1437, 19-20=-92/1437, 19-33=0/1144, 18-33=0/1144, 17-18=-40/2, 16-17=-31/0, 7-16=-114/84, 14-16=-128/1793, 9-14=-13/2332, 14-15=-13/241, 13-15=-44/245, 12-13=-49/269

WEBS 4-20=0/103, 4-19=-378/134, 5-19=-3/393, 5-18=-139/109, 6-18=-578/16, 16-18=0/1316, 6-16=-100/1149, 8-16=-471/152, 8-14=0/990, 9-13=-616/114

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; B=20ft; L=30ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 12-2-0, Exterior (2) 12-2-0 to 16-4-15, Interior (1) 16-4-15 to 17-9-0, Exterior (2) 17-9-0 to 21-11-15, Interior (1) 21-11-15 to 30-11-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) All plates are MT20 plates unless otherwise indicated.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 181 lb uplift at joint 2 and 189 lb uplift at joint 12.
8) This truss is designed in accordance with the 2015 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.
9) 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

October 8,2019

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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, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

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

Job	Truss	Truss Type	Qty	Ply	Phillips' Hip RF-Roof
Q-1901805-1	T2B	Roof Special	1	1	E13608501
					Job Reference (optional)

Peak Truss Builders, LLC, New Hill, NC - 27562,

Run: 8.32 E Sep 21 2019 Print: 8.320 E Sep 21 2019 MiTek Industries, Inc. Mon Oct 07 15:10:46

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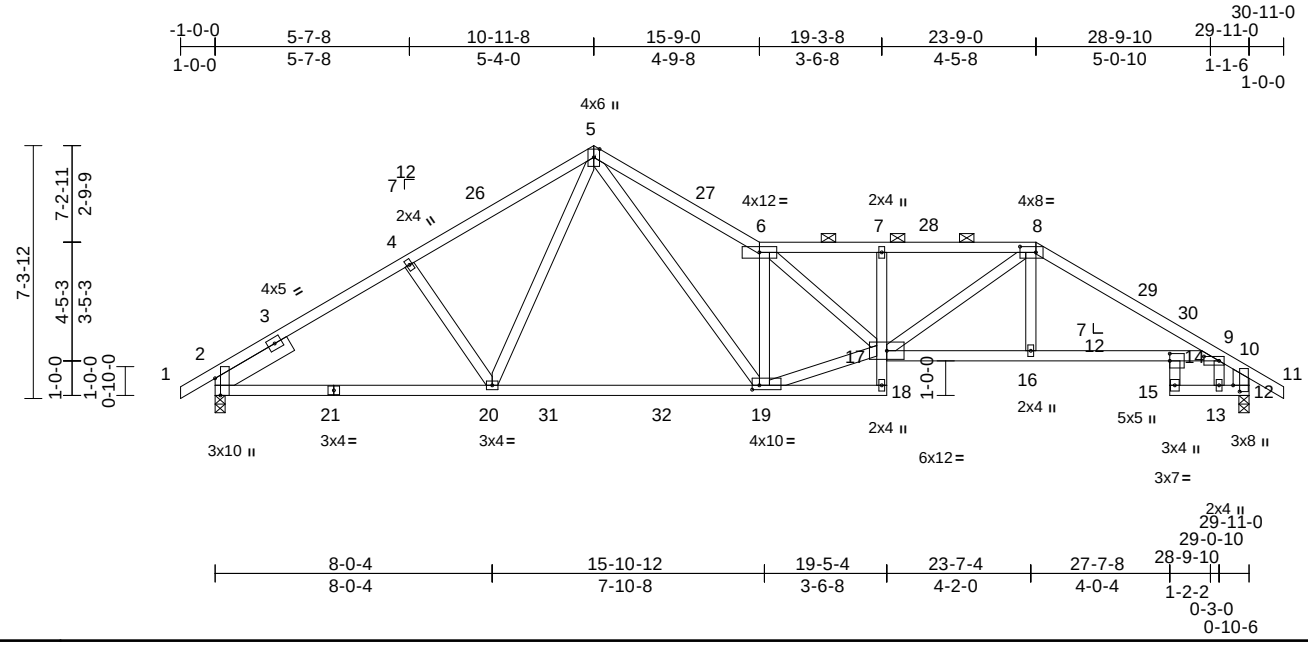

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Plate Offsets (X, Y): [2:0-5-15,Edge], [8:0-5-8,0-2-0], [9:0-5-4,0-1-8], [12:0-2-3,0-2-4], [14:0-2-8,Edge], [19:0-2-8,0-1-8]

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	0.56	Vert(LL)	-0.21	19-20	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.96	Vert(CT)	-0.41	19-20	>860	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.84	Horz(CT)	0.19	12	n/a	n/a		
BCDL	10.0	Code	IBC2015/TPI2014	Matrix-MS							Weight: 173 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.1

BOT CHORD 2x4 SP No.1 *Except* 18-7,14-15:2x4 SP No.3, 17-9:2x4 SP DSS

WEBS 2x4 SP No.3 *Except* 12-10:2x6 SP No.2

SLIDER Left 2x6 SP No.2 -- 2-6-0

BRACING

TOP CHORD Structural wood sheathing directly applied or 3-4-9 oc purlins, except end verticals, and 2-0-0 oc purlins (3-9-13 max.): 6-8.

BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 17-18
2-2-0 oc bracing: 14-15.
10-0-0 oc bracing: 14-16

REACTIONS (lb/size) 2=1247/0-3-8, 12=1262/0-3-8
Max Horiz 2=139 (LC 10)
Max Uplift 2=-181 (LC 11), 12=-189 (LC 11)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/30, 2-3=-515/0, 3-4=-1727/261, 4-26=-1605/267, 5-26=-1527/285, 5-27=-2521/447, 6-27=-2585/429, 6-7=-2517/349, 7-28=-2540/352, 8-28=-2540/352, 8-29=-2165/265, 29-30=-2172/247, 9-30=-2220/236, 9-10=-694/114, 10-11=0/37, 10-12=-834/119

BOT CHORD 2-21=-107/1453, 20-21=-107/1453, 20-31=-13/1188, 31-32=-13/1188, 19-32=-13/1188, 18-19=-28/166, 17-18=-16/24, 7-17=-238/105, 16-17=-98/1887, 14-16=-100/1873, 9-14=-68/1537, 14-15=-13/214, 13-15=-32/336, 12-13=-36/360

WEBS 4-20=-239/149, 5-20=-30/408, 5-19=-261/1710, 6-19=-1846/332, 17-19=-130/2034, 6-17=-53/540, 8-17=-109/798, 8-16=0/307, 9-13=-604/106

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; B=20ft; L=30ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 10-11-8, Exterior (2) 10-11-8 to 13-11-8, Interior (1) 13-11-8 to 23-9-0, Exterior (2) 23-9-0 to 26-9-0, Interior (1) 26-9-0 to 30-11-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
5) All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 181 lb uplift at joint 2 and 189 lb uplift at joint 12.
7) This truss is designed in accordance with the 2015 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.
8) 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

October 8,2019

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

Job	Truss	Truss Type	Qty	Ply	Phillips' Hip RF-Roof	
Q-1901805-1	T2C	Roof Special	1	1	Job Reference (optional)	E13608502

Peak Truss Builders, LLC, New Hill, NC - 27562,

Run: 8.32 E Sep 21 2019 Print: 8.320 E Sep 21 2019 MiTek Industries, Inc. Mon Oct 07 15:10:47

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Page: 1

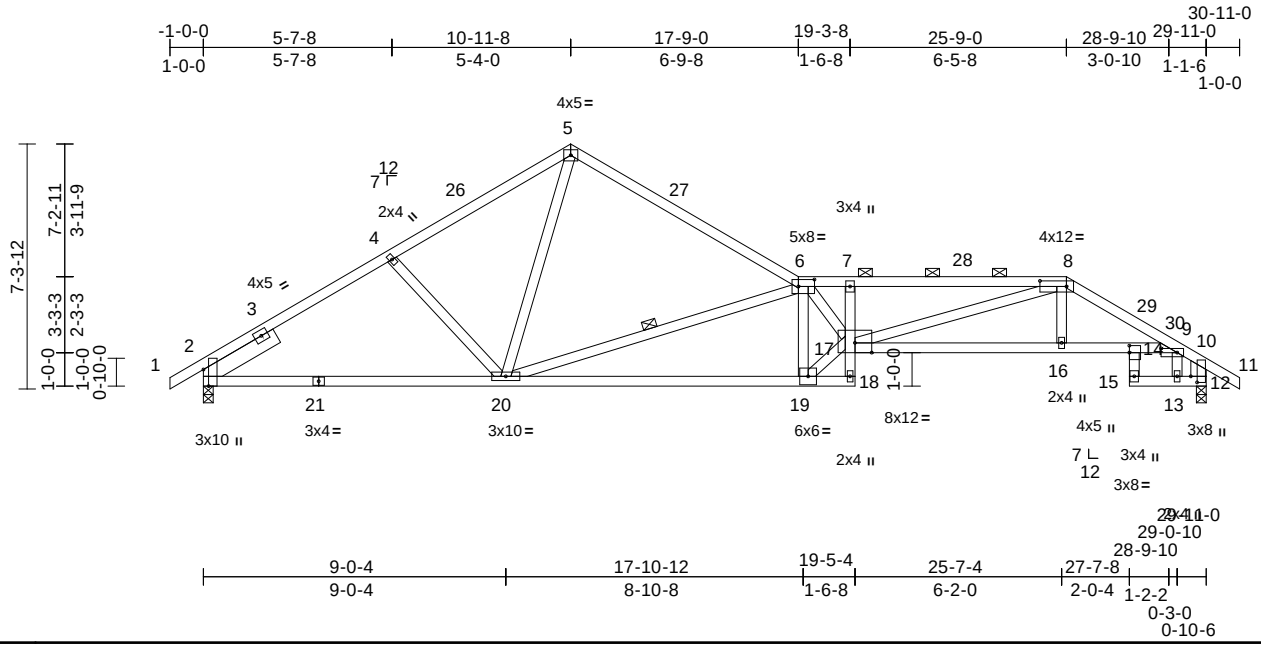

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Plate Offsets (X, Y): [2:0-5-15,Edge], [6:0-5-12,0-2-8], [8:0-9-8,0-2-0], [9:0-5-12,0-1-8], [12:0-2-3,0-2-4], [14:0-2-8,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.66	Vert(LL)	-0.25	18	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.92	Vert(CT)	-0.54	19-20	>664	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.93	Horz(CT)	0.19	12	n/a	n/a		
BCDL	10.0	Code	IBC2015/TPI2014	Matrix-MS							Weight: 165 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.1 *Except* 6-8:2x4 SP DSS

BOT CHORD 2x4 SP No.1 *Except* 18-7,14-15:2x4 SP No.3

WEBS 2x4 SP No.3 *Except* 19-17:2x4 SP No.2, 12-10:2x6 SP No.2

SLIDER Left 2x6 SP No.2 -- 2-6-0

BRACING

TOP CHORD Structural wood sheathing directly applied or 3-7-9 oc purlins, except end verticals, and 2-0-0 oc purlins (2-10-4 max.): 6-8.

BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 17-18.
10-0-0 oc bracing: 14-16

WEBS 1 Row at midpt 6-20

REACTIONS (lb/size) 2=1247/0-3-8, 12=1262/0-3-8
Max Horiz 2=139 (LC 10)
Max Uplift 2=-181 (LC 11), 12=-189 (LC 11)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/30, 2-3=-536/0, 3-4=-1718/265, 4-26=-1565/249, 5-26=-1492/267, 5-27=-1160/225, 6-27=-1274/205, 6-7=-3973/500, 7-28=-4093/521, 8-28=-4093/521, 8-29=-2471/271, 29-30=-2492/257, 9-30=-2497/252, 9-10=-679/110, 10-11=0/37, 10-12=-872/151

BOT CHORD 2-21=-121/1422, 20-21=-109/1422, 19-20=-272/2903, 18-19=-63/225, 17-18=-56/0, 7-17=-198/136, 16-17=-131/2170, 14-16=-135/2146, 9-14=-125/1848, 14-15=-2/207, 13-15=-11/298, 12-13=-13/320

WEBS 4-20=-246/143, 5-20=-98/989, 6-20=-1992/304, 6-19=-1722/266, 17-19=-242/3190, 6-17=-187/1875, 8-17=-277/2011, 8-16=0/319, 9-13=-560/63

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; B=20ft; L=30ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 10-11-8, Exterior (2) 10-11-8 to 13-11-8, Interior (1) 13-11-8 to 25-9-0, Exterior (2) 25-9-0 to 28-9-0, Interior (1) 28-9-0 to 30-11-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
5) All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 181 lb uplift at joint 2 and 189 lb uplift at joint 12.
7) This truss is designed in accordance with the 2015 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.
8) 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

October 8,2019

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

Job	Truss	Truss Type	Qty	Ply	Phillips' Hip RF-Roof
Q-1901805-1	T2D	Roof Special	1	1	E13608503
					Job Reference (optional)

Peak Truss Builders, LLC, New Hill, NC - 27562,

Run: 8.32 E Sep 21 2019 Print: 8.320 E Sep 21 2019 MiTek Industries, Inc. Mon Oct 07 15:10:47 Page: 1
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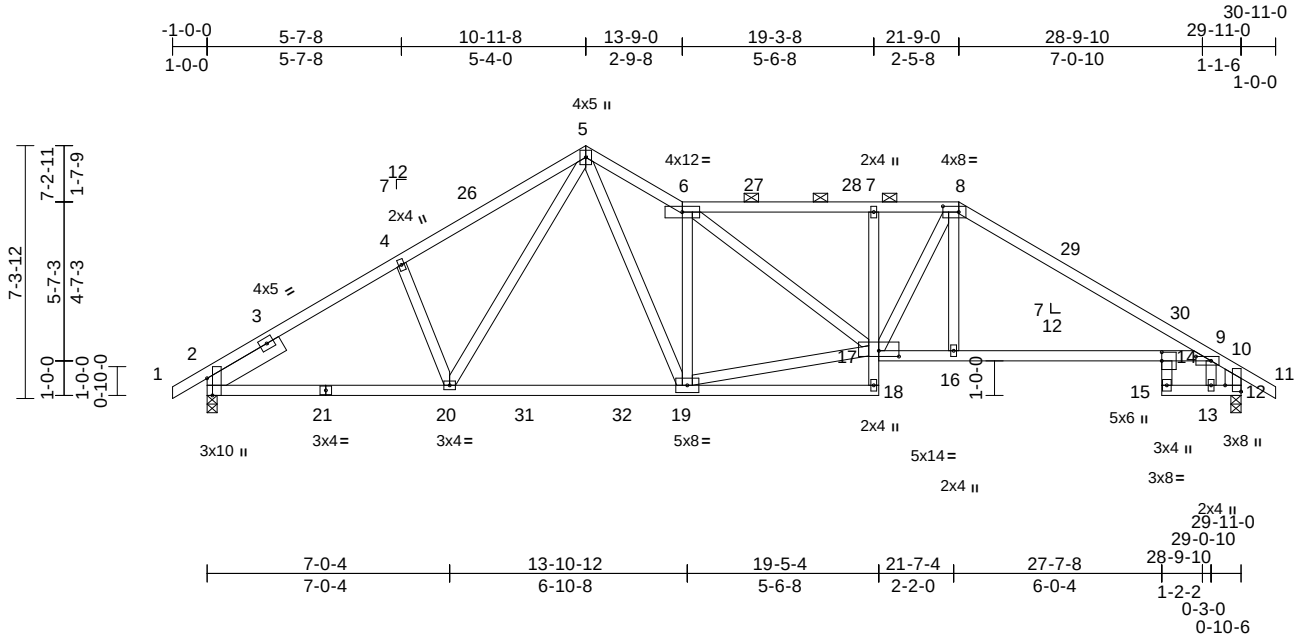

Scale = 1:66.7

Plate Offsets (X, Y): [2:0-5-15,Edge], [8:0-5-8,0-2-0], [9:0-5-4,0-1-8], [12:Edge,0-5-8], [14:0-3-0,Edge], [17:0-7-0,0-2-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.60	Vert(LL)	-0.21	14-16	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.82	Vert(CT)	-0.46	14-16	>774	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.75	Horz(CT)	0.24	12	n/a	n/a		
BCDL	10.0	Code	IBC2015/TPI2014	Matrix-MS							Weight: 182 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.1 *Except* 8-11:2x4 SP DSS
BOT CHORD 2x4 SP No.1 *Except* 18-7:2x4 SP No.3, 17-9:2x4 SP DSS, 14-15:2x4 SP No.2
WEBS 2x4 SP No.3 *Except* 12-10:2x6 SP No.2
SLIDER Left 2x6 SP No.2 -- 2-6-0

BRACING

TOP CHORD Structural wood sheathing directly applied or 3-8-8 oc purlins, except end verticals, and 2-0-0 oc purlins (4-1-1 max.): 6-8.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing. Except:
10-0-0 oc bracing: 14-16

REACTIONS (lb/size) 2=1247/0-3-8, 12=1262/0-3-8
Max Horiz 2=139 (LC 10)
Max Uplift 2=-181 (LC 11), 12=-189 (LC 11)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/30, 2-3=-518/0, 3-4=-1729/255, 4-26=-1650/295, 5-26=-1571/313, 5-6=-1972/370, 6-27=-1851/298, 27-28=-1851/298, 7-28=-1851/298, 7-8=-1844/293, 8-29=-1941/258, 29-30=-1976/238, 9-30=-2051/218, 9-10=-721/125, 10-11=0/37, 10-12=-820/83
BOT CHORD 2-21=-103/1451, 20-21=-103/1451, 20-31=-10/1187, 31-32=-10/1187, 19-32=-10/1187, 18-19=0/187, 17-18=0/50, 7-17=-223/106, 16-17=-66/1719, 14-16=-67/1704, 9-14=-3/1329, 14-15=-27/215, 13-15=-64/375, 12-13=-71/400
WEBS 4-20=-239/157, 5-20=-74/400, 5-19=-192/1290, 6-19=-1330/272, 17-19=-85/1500, 6-17=-34/299, 8-17=-74/293, 8-16=0/426, 9-13=-619/157

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; B=20ft; L=30ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 10-11-8, Exterior (2) 10-11-8 to 13-9-0, Interior (1) 13-9-0 to 21-9-0, Exterior (2) 21-9-0 to 24-9-0, Interior (1) 24-9-0 to 30-11-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
5) All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 181 lb uplift at joint 2 and 189 lb uplift at joint 12.
7) This truss is designed in accordance with the 2015 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.
8) 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

October 8,2019

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 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, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

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

Job	Truss	Truss Type	Qty	Ply	Phillips' Hip RF-Roof
Q-1901805-1	T2E	Hip	1	1	E13608504
					Job Reference (optional)

Peak Truss Builders, LLC, New Hill, NC - 27562, Run: 8.32 E Sep 21 2019 Print: 8.320 E Sep 21 2019 MiTek Industries, Inc. Mon Oct 07 15:10:48 Page: 1

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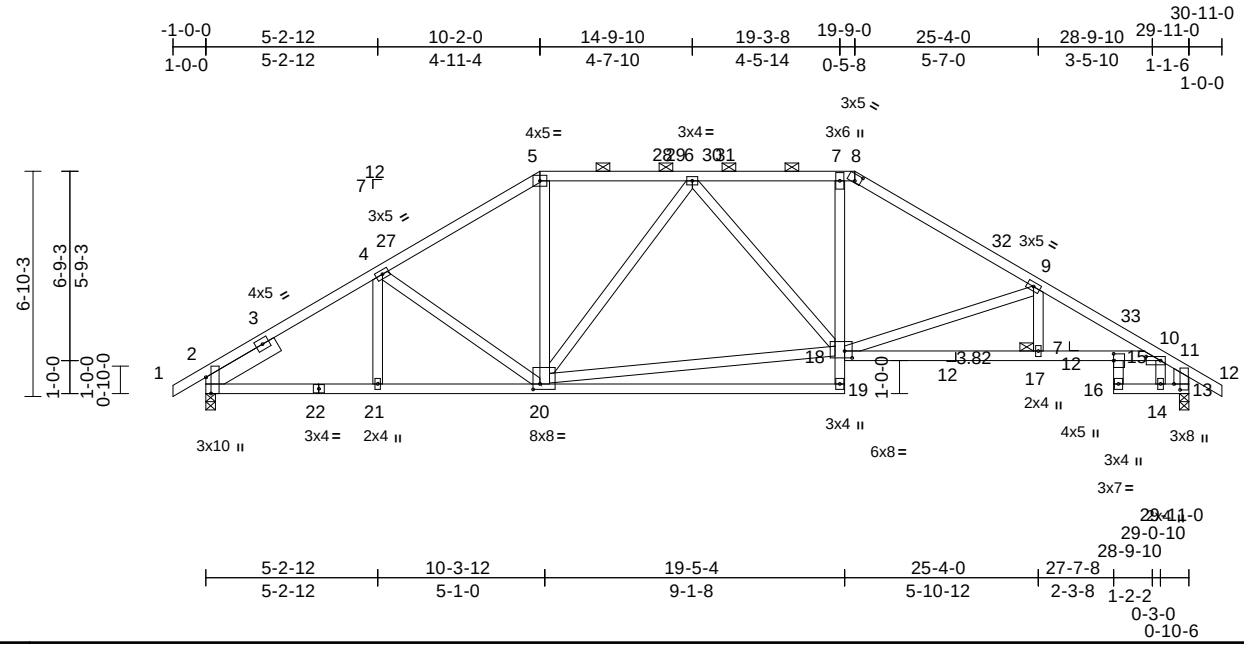

Scale = 1:70.1

Plate Offsets (X, Y): [2:0-5-15,Edge], [8:0-2-2,0-2-4], [10:0-5-4,0-1-8], [13:0-2-3,0-2-4], [15:0-2-8,Edge], [18:0-2-12,0-2-8], [20:0-2-8,0-2-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.38	Vert(LL)	-0.10	17-18	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.98	Vert(CT)	-0.31	19-20	>999	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.56	Horz(CT)	0.15	13	n/a	n/a		
BCDL	10.0	Code	IBC2015/TPI2014	Matrix-MS							Weight: 187 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.1

BOT CHORD 2x4 SP No.1 *Except* 19-7,15-16:2x4 SP No.3

WEBS 2x4 SP No.3 *Except* 13-11:2x6 SP No.2

SLIDER Left 2x6 SP No.2 -- 2-6-0

BRACING

TOP CHORD Structural wood sheathing directly applied or 3-7-8 oc purlins, except end verticals, and 2-0-0 oc purlins (4-9-10 max.): 5-8.

BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing. Except:
10-0-0 oc bracing: 17-18, 15-17

JOINTS 1 Brace at Jt(s): 17

REACTIONS (lb/size) 2=1247/0-3-8, 13=1262/0-3-8
Max Horiz 2=131 (LC 10)
Max Uplift 2=-181 (LC 11), 13=-189 (LC 11)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/30, 2-3=-560/17, 3-4=-1717/250, 4-27=-1521/225, 5-27=-1450/252, 5-28=-1256/251, 28-29=-1256/251, 6-29=-1256/251, 6-30=-1435/264, 30-31=-1435/264, 7-31=-1435/264, 7-8=-1429/262, 8-32=-1658/260, 9-32=-1739/229, 9-33=-2420/281, 10-33=-2444/266, 10-11=-684/110, 11-12=0/37, 11-13=-869/156

BOT CHORD 2-22=-103/1423, 21-22=-103/1423, 20-21=-103/1423, 19-20=0/135, 18-19=0/86, 7-18=-11/554, 17-18=-146/2101, 15-17=-146/2101, 10-15=-138/1796, 15-16=-1/206, 14-16=-8/305, 13-14=-10/327

WEBS 4-21=0/44, 4-20=-248/118, 5-20=-23/456, 6-20=-438/80, 18-20=-77/1341, 6-18=-164/52, 10-14=-561/58, 9-18=-714/136, 9-17=0/290

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; B=20ft; L=30ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 10-2-0, Exterior (2) 10-2-0 to 14-4-15, Interior (1) 14-4-15 to 19-9-0, Exterior (2) 19-9-0 to 23-11-15, Interior (1) 23-11-15 to 30-11-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
5) All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 181 lb uplift at joint 2 and 189 lb uplift at joint 13.
7) This truss is designed in accordance with the 2015 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.
8) 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

October 8,2019

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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, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

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

Job	Truss	Truss Type	Qty	Ply	Phillips' Hip RF-Roof	
Q-1901805-1	T3	Roof Special	1	1	Job Reference (optional)	E13608505

Peak Truss Builders, LLC, New Hill, NC - 27562,

Run: 8.32 E Sep 21 2019 Print: 8.320 E Sep 21 2019 MiTek Industries, Inc. Mon Oct 07 15:10:49 Page: 1

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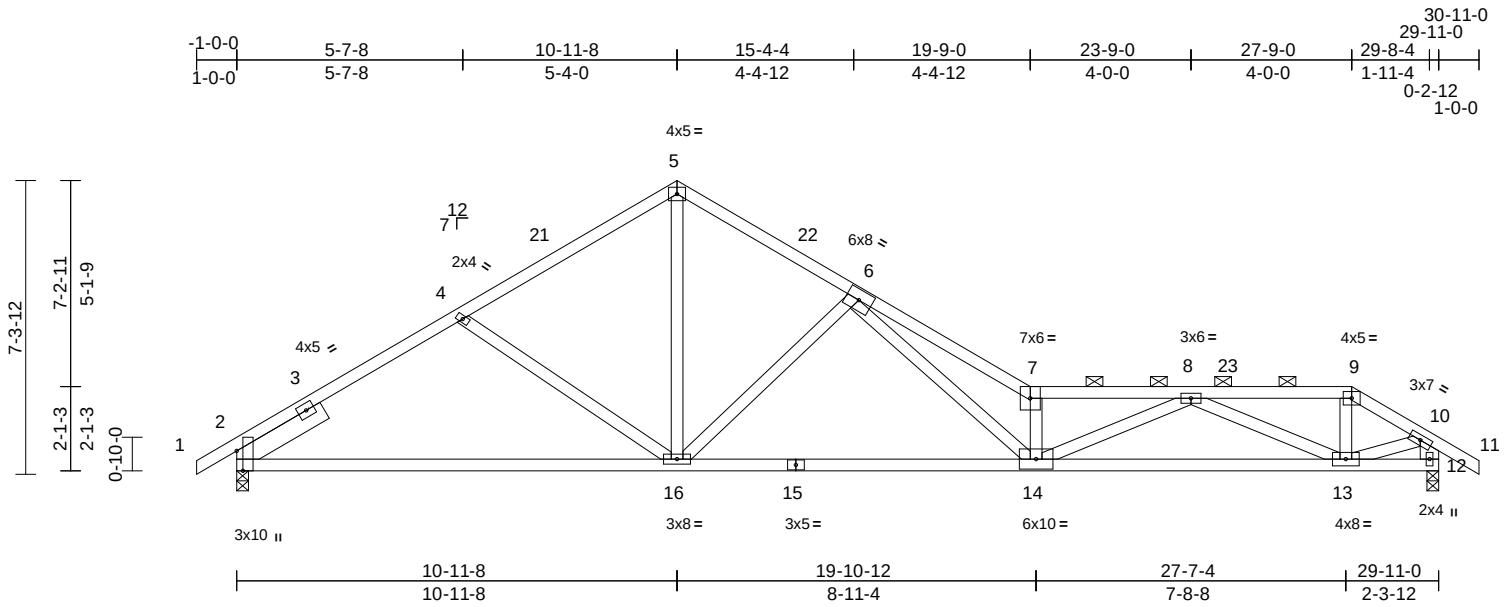

Scale = 1:57.3

Plate Offsets (X, Y): [2:0-5-15,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.62	Vert(LL)	-0.32	14-16	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.66	Vert(CT)	-0.66	14-16	>537	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.86	Horz(CT)	0.08	12	n/a	n/a		
BCDL	10.0	Code	IBC2015/TPI2014	Matrix-MS							Weight: 161 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.1
BOT CHORD 2x4 SP No.1
WEBS 2x4 SP No.3 *Except* 14-6:2x4 SP No.2, 12-10:2x6 SP No.2
SLIDER Left 2x6 SP No.2 -- 2-6-0

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-3-9 oc purlins, except end verticals, and 2-0-0 oc purlins (2-8-2 max.): 7-9.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 2=1247/0-3-8, 12=1262/0-3-8
Max Horiz 2=139 (LC 10)
Max Uplift 2=-181 (LC 11), 12=-189 (LC 11)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/30, 2-3=-650/0, 3-4=-1707/279, 4-21=-1493/230, 5-21=-1410/248, 5-22=-1410/257, 6-22=-1485/232, 6-7=-5239/684, 7-8=-4285/512, 8-23=-1304/156, 9-23=-1304/156, 9-10=-1498/164, 10-11=0/37, 10-12=-1274/176
BOT CHORD 2-16=-165/1419, 15-16=-174/2057, 14-15=-174/2057, 13-14=-353/3098, 12-13=0/80
WEBS 4-16=-287/150, 5-16=-136/1134, 6-16=-1155/250, 6-14=-396/3412, 7-14=-2791/412, 9-13=-23/597, 10-13=-96/1282, 8-14=-81/1311, 8-13=-1981/312

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; B=20ft; L=30ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 10-11-8, Exterior (2) 10-11-8 to 13-11-8, Interior (1) 13-11-8 to 27-9-0, Exterior (2) 27-9-0 to 30-11-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
5) All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 181 lb uplift at joint 2 and 189 lb uplift at joint 12.
7) This truss is designed in accordance with the 2015 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.
8) 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

October 8,2019

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ENGINEERING BY TRENCO
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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Phillips' Hip RF-Roof
Q-1901805-1	T3A	Hip	1	1	E13608506
					Job Reference (optional)

Peak Truss Builders, LLC, New Hill, NC - 27562,

Run: 8.32 E Sep 21 2019 Print: 8.320 E Sep 21 2019 MiTek Industries, Inc. Mon Oct 07 15:10:49 Page: 1
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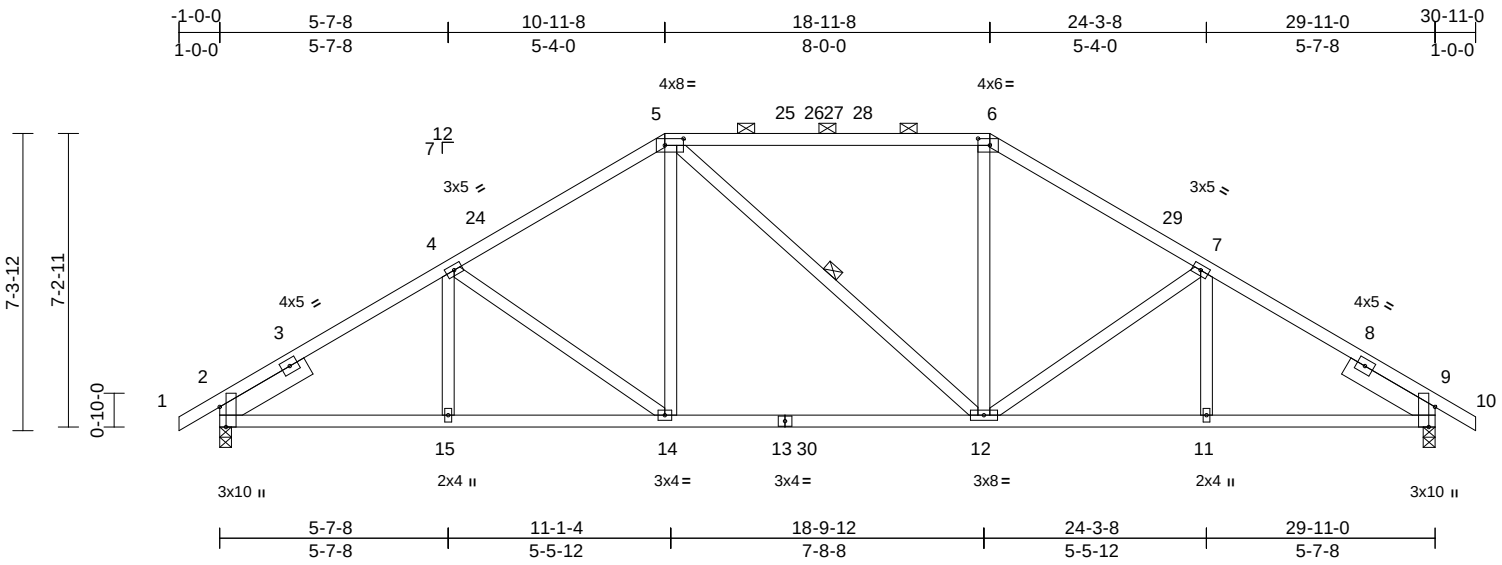

Scale = 1:56.7

Plate Offsets (X, Y): [2:0-5-15,Edge], [5:0-5-8,0-2-0], [6:0-3-8,0-2-0], [9:0-5-15,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.98	Vert(LL)	-0.10	12-14	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.49	Vert(CT)	-0.22	12-14	>999	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.25	Horz(CT)	0.07	9	n/a	n/a		
BCDL	10.0	Code	IBC2015/TPI2014	Matrix-MS							Weight: 174 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD	Structural wood sheathing directly applied or 4-1-13 oc purlins, except 2-0-0 oc purlins (2-2-0 max.): 5-6.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	1 Row at midpt 5-12

REACTIONS (lb/size) 2=1257/0-3-8, 9=1257/0-3-8
Max Horiz 2=125 (LC 10)
Max Uplift 2=-182 (LC 11), 9=-182 (LC 11)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/30, 2-3=-540/7, 3-4=-1736/250, 4-24=-1492/233, 5-24=-1424/262, 5-25=-1234/264, 25-26=-1234/264, 26-27=-1234/264, 27-28=-1234/264, 6-28=-1234/264, 6-29=-1424/262, 7-29=-1493/233, 7-8=-1736/250, 8-9=-419/6, 9-10=0/30
BOT CHORD	2-15=-113/1457, 14-15=-113/1457, 13-14=-19/1260, 13-30=-19/1260, 12-30=-19/1260, 11-12=-113/1436, 9-11=-113/1436
WEBS	4-15=0/74, 4-14=-295/114, 5-14=0/390, 5-12=-130/125, 6-12=0/329, 7-12=-294/114, 7-11=0/74

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; B=20ft; L=30ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 10-11-8, Exterior (2) 10-11-8 to 15-2-7, Interior (1) 15-2-7 to 18-11-8, Exterior (2) 18-11-8 to 23-2-7, Interior (1) 23-2-7 to 30-11-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
5) All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 182 lb uplift at joint 2 and 182 lb uplift at joint 9.
7) This truss is designed in accordance with the 2015 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.
8) 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

October 8,2019

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

Job	Truss	Truss Type	Qty	Ply	Phillips' Hip RF-Roof	E13608507
Q-1901805-1	T3B	Roof Special Supported Gable	1	1	Job Reference (optional)	

Peak Truss Builders, LLC, New Hill, NC - 27562, Run: 8.32 E Sep 21 2019 Print: 8.320 E Sep 21 2019 MiTek Industries, Inc. Mon Oct 07 15:10:50 Page: 1
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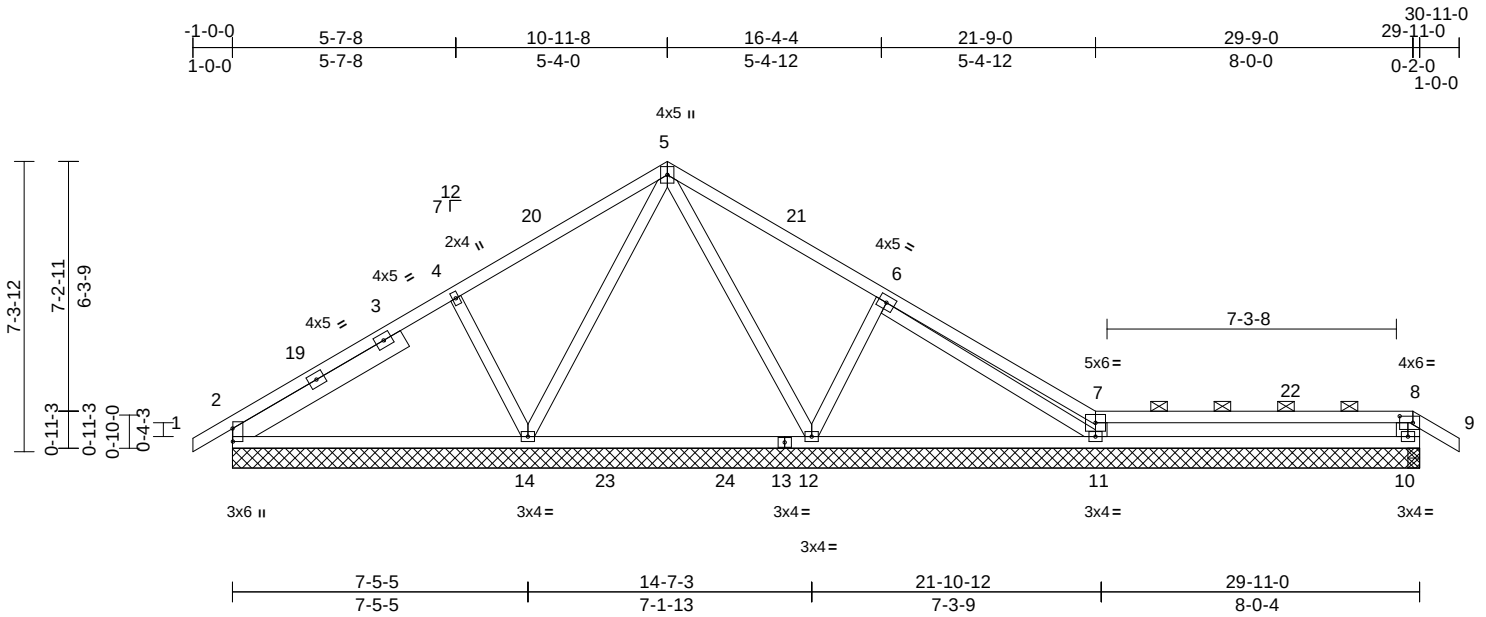

Scale = 1:58.1

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.81	Vert(LL)	-0.09	12-14	>988	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.29	Vert(CT)	-0.11	12-14	>748	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.24	Horz(CT)	0.01	2	n/a	n/a		
BCDL	10.0	Code	IBC2015/TPI2014	Matrix-MS							Weight: 155 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.1
BOT CHORD 2x4 SP No.1
WEBS 2x4 SP No.3
SLIDER Left 2x6 SP No.2 -- 5-0-0

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except 2-0-0 oc purlins (10-0-0 max.): 7-8.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 10-11.

REACTIONS (lb/size) 2=395/29-11-0, 10=354/29-11-0, 11=679/29-11-0, 12=564/29-11-0, 14=516/29-11-0, 15=395/29-11-0
Max Horiz 2=-126 (LC 9), 15=-126 (LC 9)
Max Uplift 2=-90 (LC 11), 10=-111 (LC 11), 11=-77 (LC 11), 12=-62 (LC 11), 14=-51 (LC 11), 15=-90 (LC 11)
Max Grav 2=395 (LC 1), 10=354 (LC 21), 11=679 (LC 1), 12=579 (LC 17), 14=560 (LC 16), 15=395 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/30, 2-19=-486/70, 3-19=-464/75, 3-4=-181/100, 4-20=-195/125, 5-20=-164/143, 5-21=-99/140, 6-21=-130/122, 6-7=-134/147, 7-22=-2/57, 8-22=-2/57, 8-9=0/36
BOT CHORD 2-14=0/232, 14-23=-8/123, 23-24=-8/123, 13-24=-8/123, 12-13=-8/123, 11-12=0/132, 10-11=-57/29
WEBS 4-14=-325/165, 5-14=-88/8, 5-12=-204/0, 6-12=-287/172, 6-11=-106/0, 7-11=-458/214, 8-10=-298/150

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; B=20ft; L=30ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 10-11-8, Exterior (2) 10-11-8 to 13-11-8, Interior (1) 13-11-8 to 29-9-0, Exterior (2) 29-9-0 to 30-11-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
5) All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 90 lb uplift at joint 2, 51 lb uplift at joint 14, 62 lb uplift at joint 12, 77 lb uplift at joint 11, 111 lb uplift at joint 10 and 90 lb uplift at joint 2.
7) This truss is designed in accordance with the 2015 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.
8) 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

October 8,2019

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

Job	Truss	Truss Type	Qty	Ply	Phillips' Hip RF-Roof
Q-1901805-1	T3C	Hip	1	1	E13608508
					Job Reference (optional)

Peak Truss Builders, LLC, New Hill, NC - 27562,

Run: 8.32 E Sep 21 2019 Print: 8.320 E Sep 21 2019 MiTek Industries, Inc. Mon Oct 07 15:10:50

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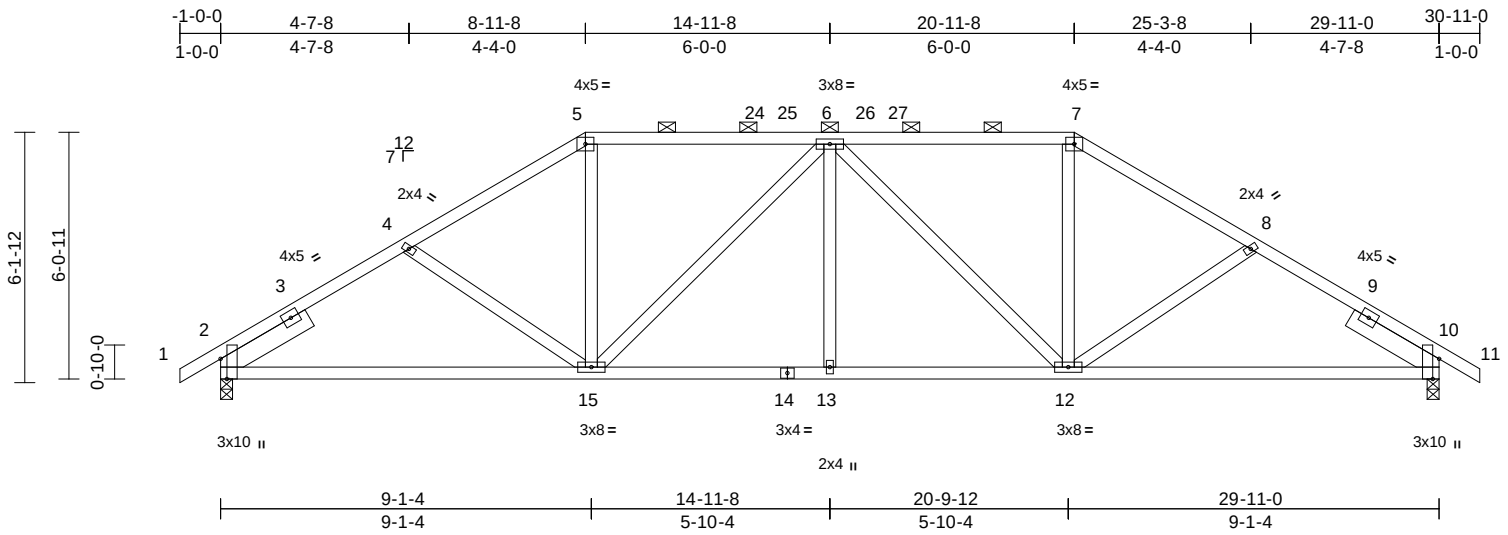

Scale = 1:56.6

Plate Offsets (X, Y): [2:0-5-15,Edge], [10:0-5-15,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.37	Vert(LL)	-0.08	12-13	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.50	Vert(CT)	-0.15	12-13	>999	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.56	Horz(CT)	0.07	10	n/a	n/a		
BCDL	10.0	Code	IBC2015/TPI2014	Matrix-MS							Weight: 172 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD	Structural wood sheathing directly applied or 4-3-4 oc purlins, except 2-0-0 oc purlins (5-1-3 max.): 5-7.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 2=1257/0-3-8, 10=1257/0-3-8
Max Horiz 2=104 (LC 10)
Max Uplift 2=-182 (LC 11), 10=-182 (LC 11)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/30, 2-3=-564/0, 3-4=-1725/271, 4-5=-1577/251, 5-24=-1333/250, 24-25=-1333/250, 6-25=-1333/250, 6-26=-1333/250, 26-27=-1333/250, 7-27=-1333/250, 7-8=-1577/251, 8-9=-1725/271, 9-10=-496/0, 10-11=0/30
BOT CHORD	2-15=-146/1429, 14-15=-91/1591, 13-14=-91/1591, 12-13=-91/1591, 10-12=-136/1429
WEBS	4-15=-174/110, 5-15=-13/464, 6-15=-442/65, 6-13=0/107, 6-12=-442/65, 7-12=-13/464, 8-12=-174/110

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; B=20ft; L=30ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 8-11-8, Exterior (2) 8-11-8 to 13-2-7, Interior (1) 13-2-7 to 20-11-8, Exterior (2) 20-11-8 to 25-5-2, Interior (1) 25-5-2 to 30-11-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
5) All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 182 lb uplift at joint 2 and 182 lb uplift at joint 10.
7) This truss is designed in accordance with the 2015 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.
8) 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

October 8,2019

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ENGINEERING BY TRENCO
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Job	Truss	Truss Type	Qty	Ply	Phillips' Hip RF-Roof	
Q-1901805-1	T3GRD	Hip Girder	1	2	Job Reference (optional)	E13608509

Peak Truss Builders, LLC, New Hill, NC - 27562,

Run: 8.32 E Sep 21 2019 Print: 8.320 E Sep 21 2019 MiTek Industries, Inc. Mon Oct 07 15:10:51 Page: 1
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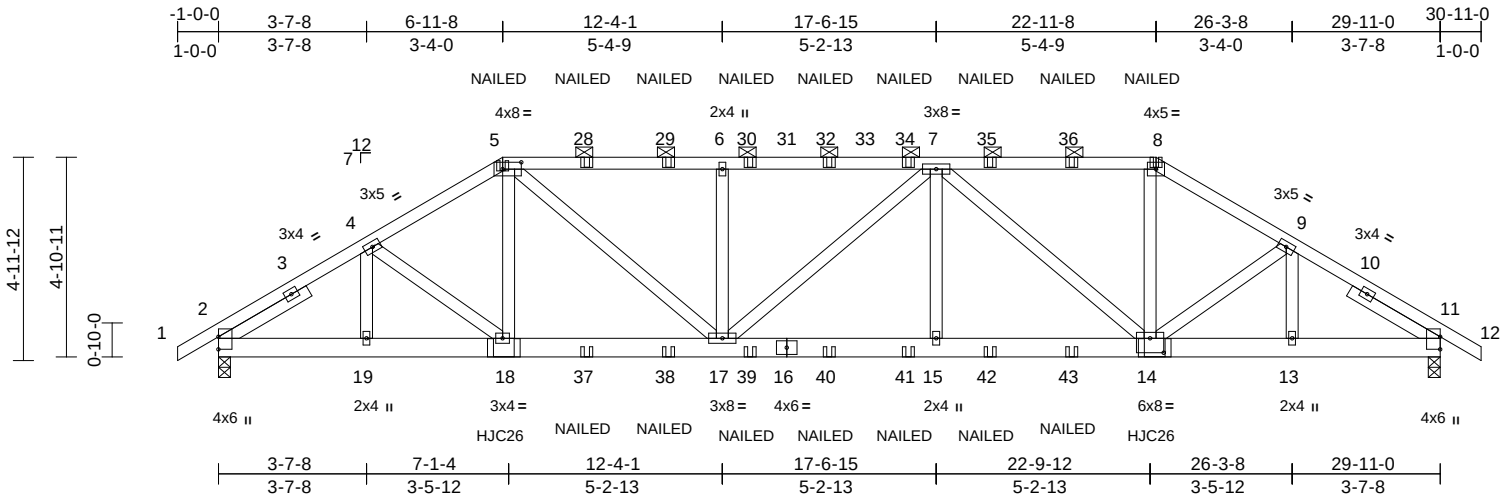

Scale = 1:56.4

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

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	0.39	Vert(LL)	-0.10	15-17	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.60	Vert(CT)	-0.19	15-17	>999	180		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.32	Horz(CT)	0.06	11	n/a	n/a		
BCDL	10.0	Code	IBC2015/TPI2014	Matrix-MS							Weight: 401 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except 2-0-0 oc purlins (5-9-13 max.): 5-8.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 2=2583/0-3-8, 11=2583/0-3-8
Max Horiz 2=-84 (LC 22)
Max Uplift 2=-498 (LC 7), 11=-498 (LC 7)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/30, 2-3=-2100/379, 3-4=-3804/736, 4-5=-4080/822, 5-28=-4652/947, 28-29=-4652/947, 6-29=-4652/947, 6-30=-4652/947, 30-31=-4652/947, 31-32=-4652/947, 32-33=-4652/947, 33-34=-4652/947, 7-34=-4652/947, 7-35=-3556/743, 35-36=-3556/743, 8-36=-3556/743, 8-9=-4075/819, 9-10=-3805/737, 10-11=-2060/379, 11-12=0/30
BOT CHORD	2-19=-544/3194, 18-19=-544/3194, 18-37=-575/3529, 37-38=-575/3529, 17-38=-575/3529, 17-39=-786/4659, 16-39=-786/4659, 16-40=-786/4659, 40-41=-786/4659, 15-41=-786/4659, 15-42=-786/4659, 42-43=-786/4659, 14-43=-786/4659, 13-14=-545/3194, 11-13=-545/3194
WEBS	4-19=-358/98, 4-18=-192/497, 5-18=-15/605, 5-17=-270/1514, 6-17=-672/323, 7-17=-49/32, 7-15=0/283, 7-14=-1503/276, 8-14=-189/1544, 9-14=-191/493, 9-13=-350/94

NOTES

1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; B=20ft; L=30ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
5) 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.
7) All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 498 lb uplift at joint 2 and 498 lb uplift at joint 11.
9) This truss is designed in accordance with the 2015 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
11) Use USP HJC26 (With 16-16d nails into Girder & 10d nails into Truss) or equivalent spaced at 15-11-4 oc max. starting at 6-11-14 from the left end to 22-11-2 to connect truss(es) to front face of bottom chord.
12) Fill all nail holes where hanger is in contact with lumber.
13) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidlines.

LOAD CASE(S) Standard

1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-5=-60, 5-8=-60, 8-12=-60, 20-24=-20
Concentrated Loads (lb)

October 8,2019

Continued on page 2

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Vert: 5=-121 (F), 8=-121 (F), 18=-535 (F), 14=-535 (F), 28=-121 (F), 29=-121 (F), 30=-121 (F), 32=-121 (F), 34=-121 (F), 35=-121 (F), 36=-121 (F), 37=-70 (F), 38=-70 (F), 39=-70 (F), 40=-70 (F), 41=-70 (F), 42=-70 (F), 43=-70 (F)

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

Job	Truss	Truss Type	Qty	Ply	Phillips' Hip RF-Roof	
Q-1901805-1	T4	Common	6	1	Job Reference (optional)	E13608510

Peak Truss Builders, LLC, New Hill, NC - 27562,

Run: 8.32 E Sep 21 2019 Print: 8.320 E Sep 21 2019 MiTek Industries, Inc. Mon Oct 07 15:10:52

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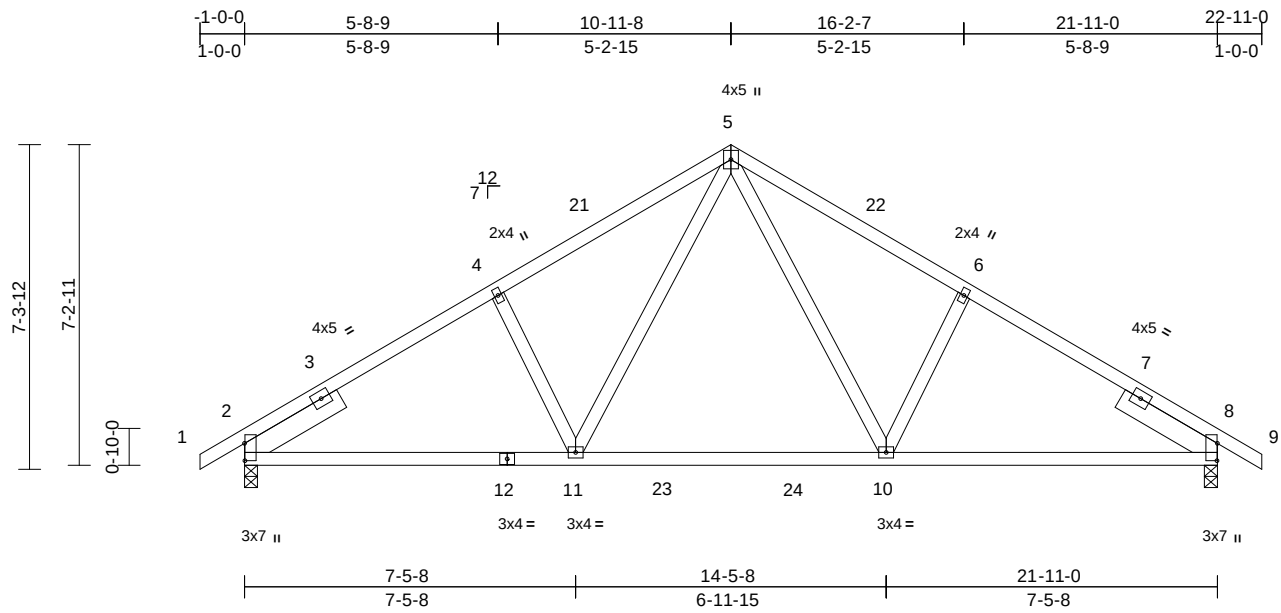

Scale = 1:51.9

Plate Offsets (X, Y): [2:0-4-11,0-0-2], [8:0-4-11,0-0-2]

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	0.27	Vert(LL)	-0.11	10-11	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.38	Vert(CT)	-0.17	10-11	>999	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.17	Horz(CT)	0.03	8	n/a	n/a		
BCDL	10.0	Code	IBC2015/TPI2014	Matrix-MS							Weight: 120 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD Structural wood sheathing directly applied or 5-6-11 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 2=937/0-3-8, 8=937/0-3-8
Max Horiz 2=-125 (LC 9)
Max Uplift 2=-143 (LC 11), 8=-143 (LC 11)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/30, 2-3=-412/0, 3-4=-1188/191, 4-21=-1094/218, 5-21=-1013/237, 5-22=-1013/237, 6-22=-1094/218, 6-7=-1188/191, 7-8=-389/0, 8-9=0/30
BOT CHORD 2-12=-90/1023, 11-12=-63/1023, 11-23=0/713, 23-24=0/713, 10-24=0/713, 8-10=-63/979
WEBS 5-10=-65/456, 6-10=-264/157, 5-11=-65/456, 4-11=-264/157

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; B=20ft; L=22ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 10-11-8, Exterior (2) 10-11-8 to 13-11-8, Interior (1) 13-11-8 to 22-11-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) * 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.
4) All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 143 lb uplift at joint 2 and 143 lb uplift at joint 8.
6) This truss is designed in accordance with the 2015 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

October 8,2019

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ENGINEERING BY TRENCO
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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Phillips' Hip RF-Roof
Q-1901805-1	T4A	Hip	1	1	E13608511
					Job Reference (optional)

Peak Truss Builders, LLC, New Hill, NC - 27562,

Run: 8.32 E Sep 21 2019 Print: 8.320 E Sep 21 2019 MiTek Industries, Inc. Mon Oct 07 15:10:53 Page: 1
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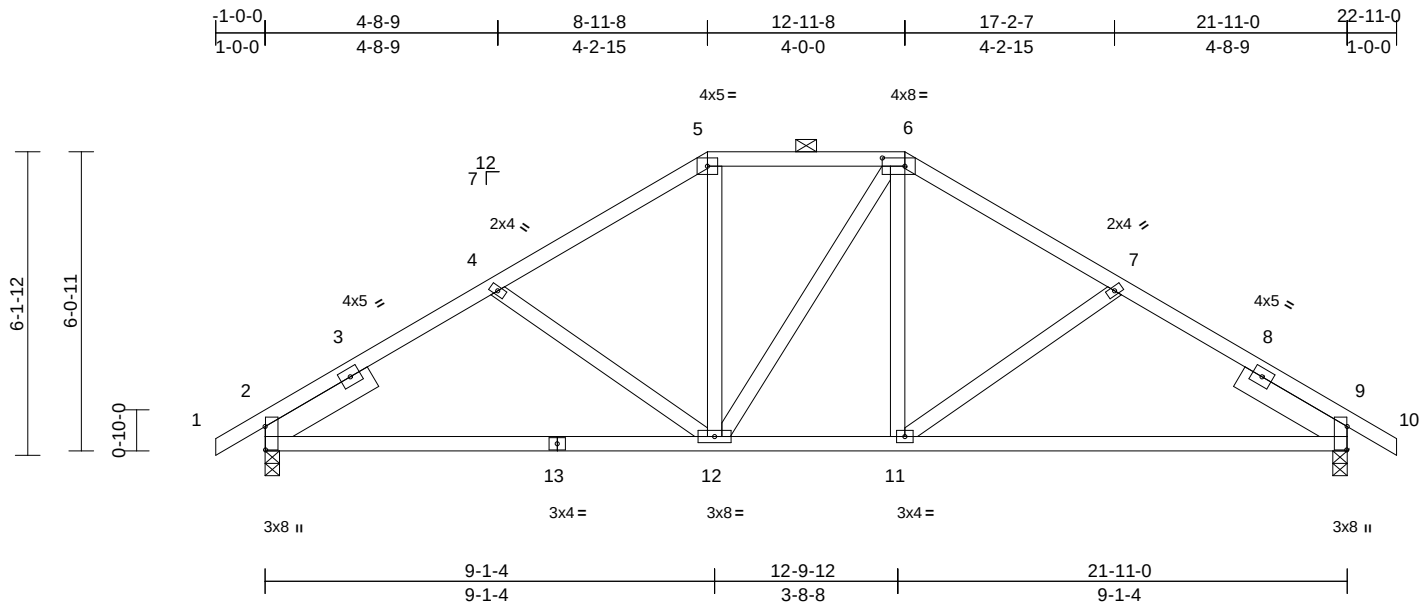

Scale = 1:46.7

Plate Offsets (X, Y): [2:0-5-11,0-0-2], [6:0-5-8,0-2-0], [9:0-5-11,0-0-2]

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	0.19	Vert(LL)	-0.04	11-12	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.39	Vert(CT)	-0.11	11-20	>999	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.13	Horz(CT)	0.03	9	n/a	n/a		
BCDL	10.0	Code	IBC2015/TPI2014	Matrix-MS							Weight: 126 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD	Structural wood sheathing directly applied or 5-7-6 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 5-6.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 2=937/0-3-8, 9=937/0-3-8
Max Horiz 2=-104 (LC 9)
Max Uplift 2=-143 (LC 11), 9=-143 (LC 11)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/30, 2-3=-522/0, 3-4=-1179/205, 4-5=-1014/183, 5-6=-823/189, 6-7=-1014/183, 7-8=-1179/206, 8-9=-511/0, 9-10=0/30
BOT CHORD	2-13=-122/981, 12-13=-80/981, 11-12=0/822, 9-11=-80/981
WEBS	4-12=-218/118, 5-12=0/241, 6-12=-92/94, 6-11=0/241, 7-11=-218/118

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; B=20ft; L=22ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 8-11-8, Exterior (2) 8-11-8 to 17-4-1, Interior (1) 17-4-1 to 22-11-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
5) All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 143 lb uplift at joint 2 and 143 lb uplift at joint 9.
7) This truss is designed in accordance with the 2015 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.
8) 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

October 8,2019

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.
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ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Phillips' Hip RF-Roof	
Q-1901805-1	T4GRD	Hip Girder	1	2	Job Reference (optional)	E13608512

Peak Truss Builders, LLC, New Hill, NC - 27562,

Run: 8.32 E Sep 21 2019 Print: 8.320 E Sep 21 2019 MiTek Industries, Inc. Mon Oct 07 15:10:54

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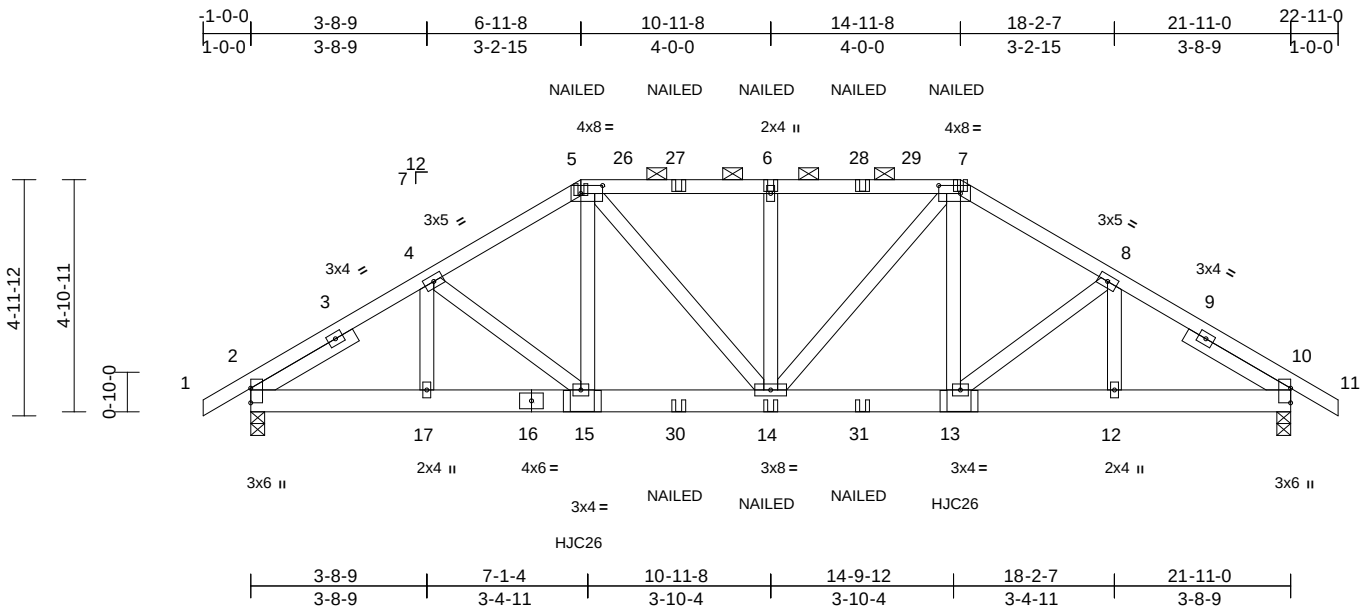
Page: 1



Scale = 1:48.6

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.16	Vert(LL)	-0.04	14	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.43	Vert(CT)	-0.07	14	>999	180		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.13	Horz(CT)	0.03	10	n/a	n/a		
BCDL	10.0	Code	IBC2015/TPI2014	Matrix-MS							Weight: 303 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 5-7.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 2=1880/0-3-8, 10=1880/0-3-8
Max Horiz 2=84 (LC 23)
Max Uplift 2=-372 (LC 7), 10=-372 (LC 7)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/30, 2-3=-1491/267, 3-4=-2697/538, 4-5=-2804/600, 5-26=-2735/605, 26-27=-2735/605, 6-27=-2735/605, 6-28=-2735/605, 28-29=-2735/605, 7-29=-2735/605, 7-8=-2804/600, 8-9=-2697/538, 9-10=-1470/267, 10-11=0/30
BOT CHORD	2-17=-377/2267, 16-17=-377/2267, 15-16=-377/2267, 15-30=-379/2418, 14-30=-379/2418, 14-31=-379/2418, 13-31=-379/2418, 12-13=-377/2267, 10-12=-377/2267
WEBS	4-17=-213/83, 4-15=-189/278, 5-15=-54/646, 5-14=-105/533, 6-14=-534/263, 7-14=-105/533, 7-13=-54/646, 8-13=-189/278, 8-12=-213/83

NOTES

1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; B=20ft; L=22ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
5) 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.
7) All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 372 lb uplift at joint 2 and 372 lb uplift at joint 10.
9) This truss is designed in accordance with the 2015 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
11) Use USP HJC26 (With 16-16d nails into Girder & 10d nails into Truss) or equivalent spaced at 7-11-4 oc max. starting at 6-11-14 from the left end to 14-11-2 to connect truss(es) to front face of bottom chord.
12) Fill all nail holes where hanger is in contact with lumber.
13) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidlines.

LOAD CASE(S) Standard

1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-5=-60, 5-7=-60, 7-11=-60, 18-22=-20
Concentrated Loads (lb)
Vert: 5=-121 (F), 7=-121 (F), 15=-535 (F), 14=-70 (F), 6=-121 (F), 13=-535 (F), 27=-121 (F), 28=-121 (F), 30=-70 (F), 31=-70 (F)

October 8,2019

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

Job	Truss	Truss Type	Qty	Ply	Phillips' Hip RF-Roof	
Q-1901805-1	T5	Jack-Open	14	1	Job Reference (optional)	E13608513

Peak Truss Builders, LLC, New Hill, NC - 27562,

Run: 8.32 E Sep 21 2019 Print: 8.320 E Sep 21 2019 MiTek Industries, Inc. Mon Oct 07 15:10:55

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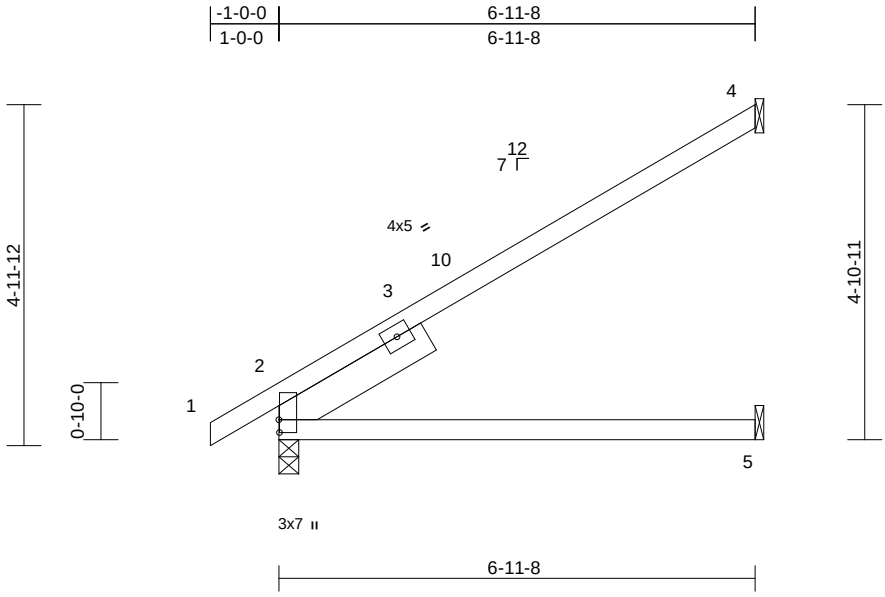

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Plate Offsets (X, Y): [2:0-2-4,0-0-2]

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	0.56	Vert(LL)	0.12	5-8	>680	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.42	Vert(CT)	-0.21	5-8	>404	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.06	2	n/a	n/a		
BCDL	10.0	Code	IBC2015/TPI2014	Matrix-MP							Weight: 30 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.1
BOT CHORD 2x4 SP No.1
SLIDER Left 2x6 SP No.2 -- 2-6-0

BRACING

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

REACTIONS (lb/size) 2=340/0-3-8, 4=181/ Mechanical, 5=90/ Mechanical
Max Horiz 2=164 (LC 11)
Max Uplift 2=-21 (LC 11), 4=-94 (LC 11)
Max Grav 2=340 (LC 1), 4=181 (LC 1), 5=91 (LC 16)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/30, 2-3=-279/60, 3-10=-75/49, 4-10=-66/85
BOT CHORD 2-5=-222/246

NOTES

1) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; B=20ft; L=20ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 6-10-12 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) * 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.
3) All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 94 lb uplift at joint 4 and 21 lb uplift at joint 2.
6) This truss is designed in accordance with the 2015 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

October 8,2019

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

Job	Truss	Truss Type	Qty	Ply	Phillips' Hip RF-Roof
Q-1901805-1	T6	Jack-Open	4	1	E13608514
					Job Reference (optional)

Peak Truss Builders, LLC, New Hill, NC - 27562,

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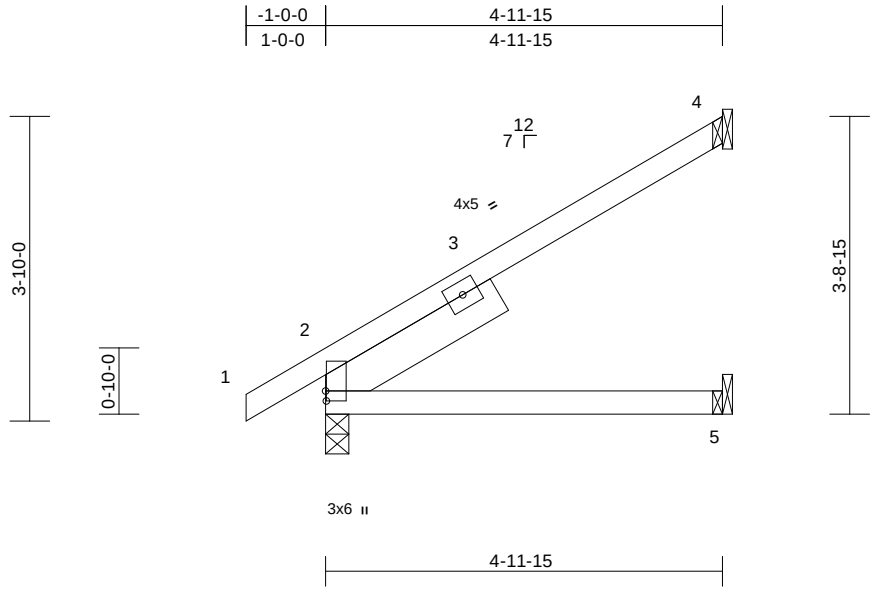

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Plate Offsets (X, Y): [2:0-1-8,0-0-2]

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	0.26	Vert(LL)	0.03	5-8	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.19	Vert(CT)	-0.05	5-8	>999	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.02	2	n/a	n/a		
BCDL	10.0	Code	IBC2015/TPI2014	Matrix-MP							Weight: 24 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.1
BOT CHORD 2x4 SP No.1
SLIDER Left 2x6 SP No.2 -- 2-6-0

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-11-15 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 2=263/0-3-8, 4=129/ Mechanical, 5=63/ Mechanical
Max Horiz 2=125 (LC 11)
Max Uplift 2=-23 (LC 11), 4=-68 (LC 11)
Max Grav 2=263 (LC 1), 4=129 (LC 16), 5=63 (LC 16)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/30, 2-3=-179/0, 3-4=-51/63
BOT CHORD 2-5=-131/137

NOTES
1) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; B=20ft; L=20ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 4-11-3 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) * 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.
3) All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 68 lb uplift at joint 4 and 23 lb uplift at joint 2.
6) This truss is designed in accordance with the 2015 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

October 8,2019

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ENGINEERING BY TRENCO
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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Phillips' Hip RF-Roof	
Q-1901805-1	T6A	Jack-Open	4	1	Job Reference (optional)	E13608515

Peak Truss Builders, LLC, New Hill, NC - 27562,

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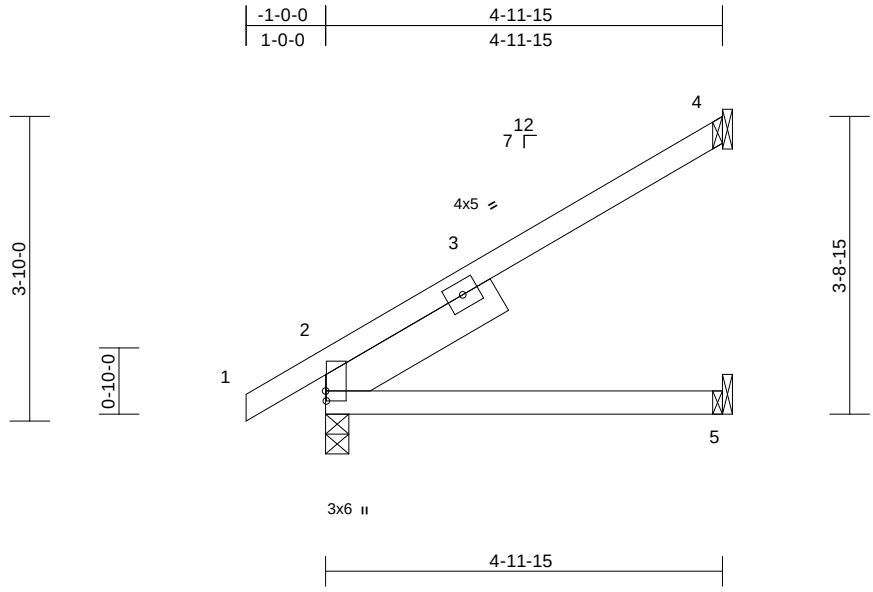

Scale = 1:29

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

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	0.26	Vert(LL)	0.03	5-8	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.19	Vert(CT)	-0.05	5-8	>999	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.02	2	n/a	n/a		
BCDL	10.0	Code	IBC2015/TPI2014	Matrix-MP							Weight: 24 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.1
BOT CHORD 2x4 SP No.1
SLIDER Left 2x6 SP No.2 -- 2-6-0

BRACING

TOP CHORD Structural wood sheathing directly applied or 4-11-15 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 2=263/0-3-8, 4=129/ Mechanical, 5=63/ Mechanical
Max Horiz 2=125 (LC 11)
Max Uplift 2=-23 (LC 11), 4=-68 (LC 11)
Max Grav 2=263 (LC 1), 4=129 (LC 16), 5=63 (LC 16)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/30, 2-3=-179/0, 3-4=-51/63
BOT CHORD 2-5=-131/137

NOTES

1) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; B=20ft; L=20ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 4-11-3 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) * 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.
3) All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 68 lb uplift at joint 4 and 23 lb uplift at joint 2.
6) This truss is designed in accordance with the 2015 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

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ENGINEERING BY TRENCO
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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Phillips' Hip RF-Roof
Q-1901805-1	T7	Jack-Open	4	1	E13608516
					Job Reference (optional)

Peak Truss Builders, LLC, New Hill, NC - 27562,

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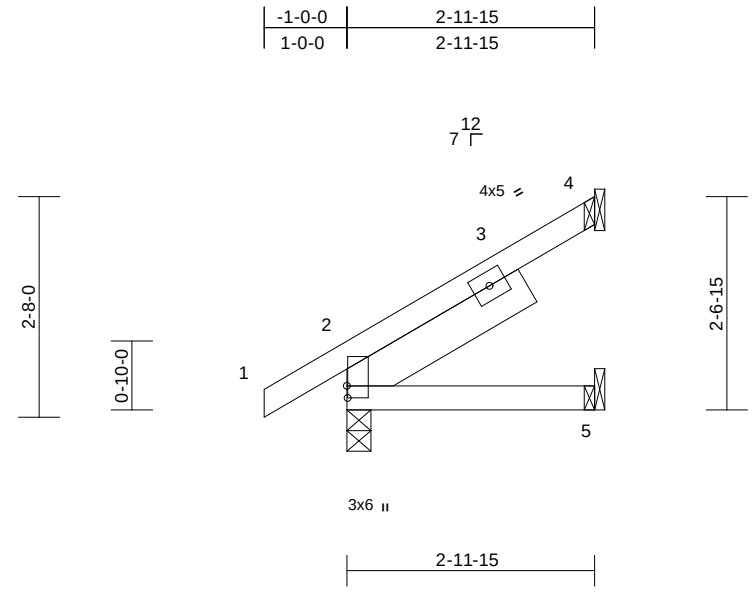

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Plate Offsets (X, Y): [2:0-1-12,0-0-2]

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	0.08	Vert(LL)	0.00	5-8	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	0.00	5-8	>999	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	2	n/a	n/a		
BCDL	10.0	Code	IBC2015/TPI2014	Matrix-MP							Weight: 17 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.1
BOT CHORD 2x4 SP No.1
SLIDER Left 2x6 SP No.2 -- 2-6-0

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-11-15 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 2=188/0-3-8, 4=75/ Mechanical, 5=32/ Mechanical
Max Horiz 2=85 (LC 11)
Max Uplift 2=-26 (LC 11), 4=-42 (LC 11)
Max Grav 2=188 (LC 1), 4=77 (LC 16), 5=33 (LC 16)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/30, 2-3=-145/37, 3-4=-31/41
BOT CHORD 2-5=-48/48

NOTES
1) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; B=20ft; L=20ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 2-11-3 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) * 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.
3) All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 42 lb uplift at joint 4 and 26 lb uplift at joint 2.
6) This truss is designed in accordance with the 2015 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

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TRENCO
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Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Phillips' Hip RF-Roof
Q-1901805-1	T7A	Jack-Open	4	1	E13608517
					Job Reference (optional)

Peak Truss Builders, LLC, New Hill, NC - 27562,

Run: 8.32 E Sep 21 2019 Print: 8.320 E Sep 21 2019 MiTek Industries, Inc. Mon Oct 07 15:10:57 Page: 1
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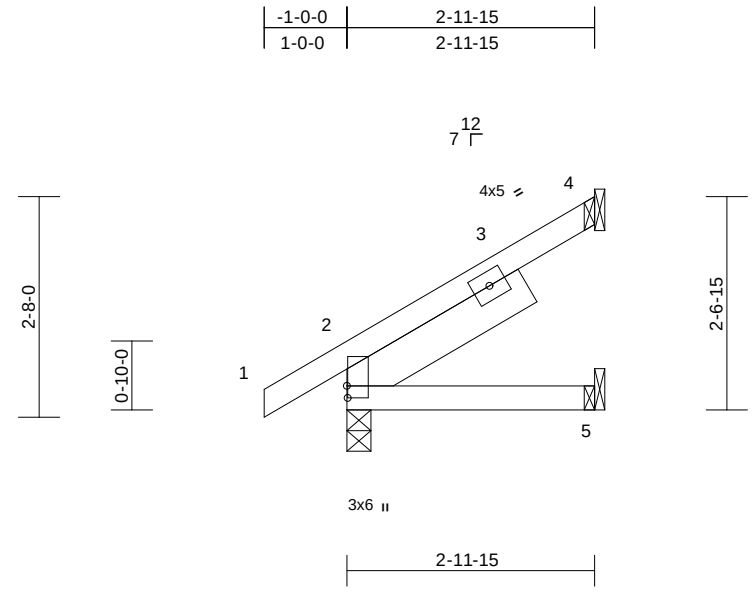

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Plate Offsets (X, Y): [2:0-1-12,0-0-2]

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	0.08	Vert(LL)	0.00	5-8	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	0.00	5-8	>999	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	2	n/a	n/a		
BCDL	10.0	Code	IBC2015/TPI2014	Matrix-MP							Weight: 17 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.1
BOT CHORD 2x4 SP No.1
SLIDER Left 2x6 SP No.2 -- 2-6-0

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-11-15 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 2=188/0-3-8, 4=75/ Mechanical, 5=32/ Mechanical
Max Horiz 2=85 (LC 11)
Max Uplift 2=-26 (LC 11), 4=-42 (LC 11)
Max Grav 2=188 (LC 1), 4=77 (LC 16), 5=33 (LC 16)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/30, 2-3=-145/37, 3-4=-31/41
BOT CHORD 2-5=-48/48

NOTES
1) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; B=20ft; L=20ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 2-11-3 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) * 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.
3) All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 42 lb uplift at joint 4 and 26 lb uplift at joint 2.
6) This truss is designed in accordance with the 2015 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

October 8,2019

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.
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ENGINEERING BY
TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Phillips' Hip RF-Roof	E13608518
Q-1901805-1	V1	Valley	1	1	Job Reference (optional)	

Peak Truss Builders, LLC, New Hill, NC - 27562,

Run: 8.32 E Sep 21 2019 Print: 8.320 E Sep 21 2019 MiTek Industries, Inc. Mon Oct 07 15:10:57 Page: 1
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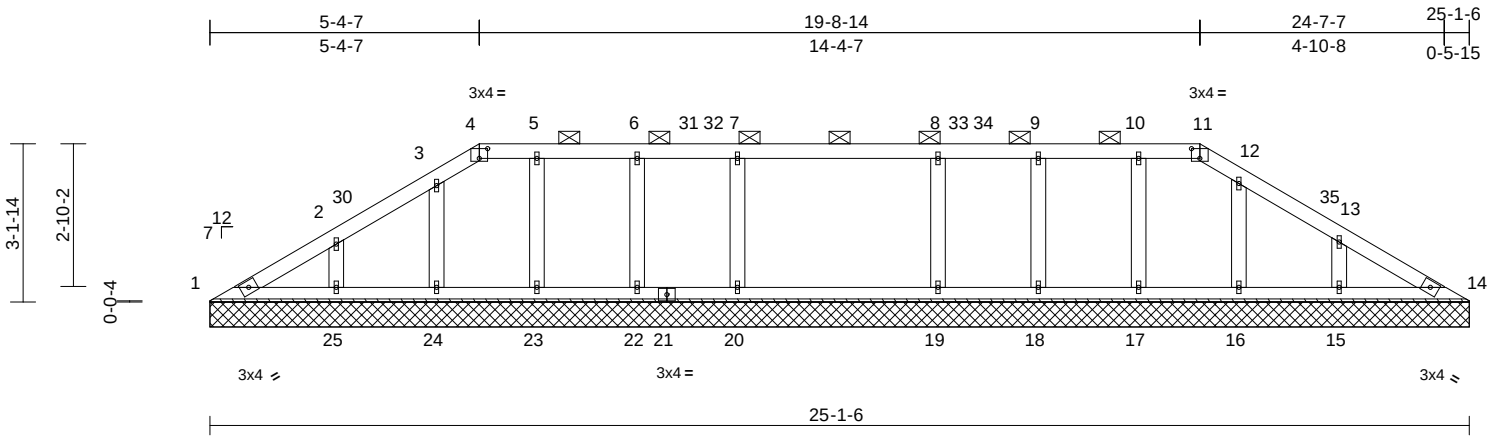

Scale = 1:45.9

Plate Offsets (X, Y): [4:0-2-0,0-2-5], [11:0-2-0,0-2-5]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.11	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.05	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.05	Horiz(TL)	0.00	14	n/a	n/a		
BCDL	10.0	Code	IBC2015/TPI2014	Matrix-MS							Weight: 108 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 4-11.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (lb/size) 1=82/25-1-6, 14=84/25-1-6, 15=215/25-1-6, 16=142/25-1-6, 17=176/25-1-6, 18=111/25-1-6, 19=278/25-1-6, 20=278/25-1-6, 22=111/25-1-6, 23=176/25-1-6, 24=144/25-1-6, 25=210/25-1-6
Max Horiz 1=-54 (LC 9)
Max Uplift 15=-52 (LC 11), 16=-16 (LC 11), 17=-13 (LC 8), 18=-18 (LC 11), 19=-34 (LC 8), 20=-34 (LC 7), 22=-18 (LC 11), 23=-9 (LC 7), 24=-18 (LC 11), 25=-51 (LC 11)
Max Grav 1=83 (LC 20), 14=85 (LC 21), 15=216 (LC 21), 16=142 (LC 1), 17=176 (LC 1), 18=113 (LC 20), 19=278 (LC 21), 20=278 (LC 20), 22=113 (LC 21), 23=176 (LC 1), 24=144 (LC 1), 25=211 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-102/60, 2-30=-42/16, 3-30=-25/42, 3-4=-41/51, 4-5=-32/51, 5-6=-32/51, 6-31=-32/51, 31-32=-32/51, 7-32=-32/51, 7-8=-32/51, 8-33=-32/51, 33-34=-32/51, 9-34=-32/51, 9-10=-32/51, 10-11=-32/51, 11-12=-41/52, 12-35=-8/30, 13-35=-33/16, 13-14=-31/46
BOT CHORD 1-25=-46/94, 24-25=-46/51, 23-24=-46/51, 22-23=-46/51, 21-22=-46/51, 20-21=-46/51, 19-20=-46/51, 18-19=-46/51, 17-18=-46/51, 16-17=-46/51, 15-16=-46/51, 14-15=-46/51
WEBS 7-20=-208/76, 6-22=-86/37, 5-23=-130/36, 3-24=-114/43, 2-25=-138/69, 8-19=-208/76, 9-18=-86/36, 10-17=-130/39, 12-16=-113/41, 13-15=-140/70

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; B=20ft; L=25ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) 0-0-7 to 3-0-7, Interior (1) 3-0-7 to 5-4-14, Exterior (2) 5-4-14 to 9-7-13, Interior (1) 9-7-13 to 19-9-5, Exterior (2) 19-9-5 to 24-1-4, Interior (1) 24-1-4 to 25-1-13 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Provide adequate drainage to prevent water ponding.
5) All plates are 1x3 MT20 unless otherwise indicated.
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) All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 34 lb uplift at joint 20, 18 lb uplift at joint 22, 9 lb uplift at joint 23, 18 lb uplift at joint 24, 51 lb uplift at joint 25, 34 lb uplift at joint 19, 18 lb uplift at joint 18, 13 lb uplift at joint 17, 16 lb uplift at joint 16 and 52 lb uplift at joint 15.
11) This truss is designed in accordance with the 2015 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

October 8,2019

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

Job	Truss	Truss Type	Qty	Ply	Phillips' Hip RF-Roof	
Q-1901805-1	V2	Valley	1	1	Job Reference (optional)	E13608519

Peak Truss Builders, LLC, New Hill, NC - 27562,

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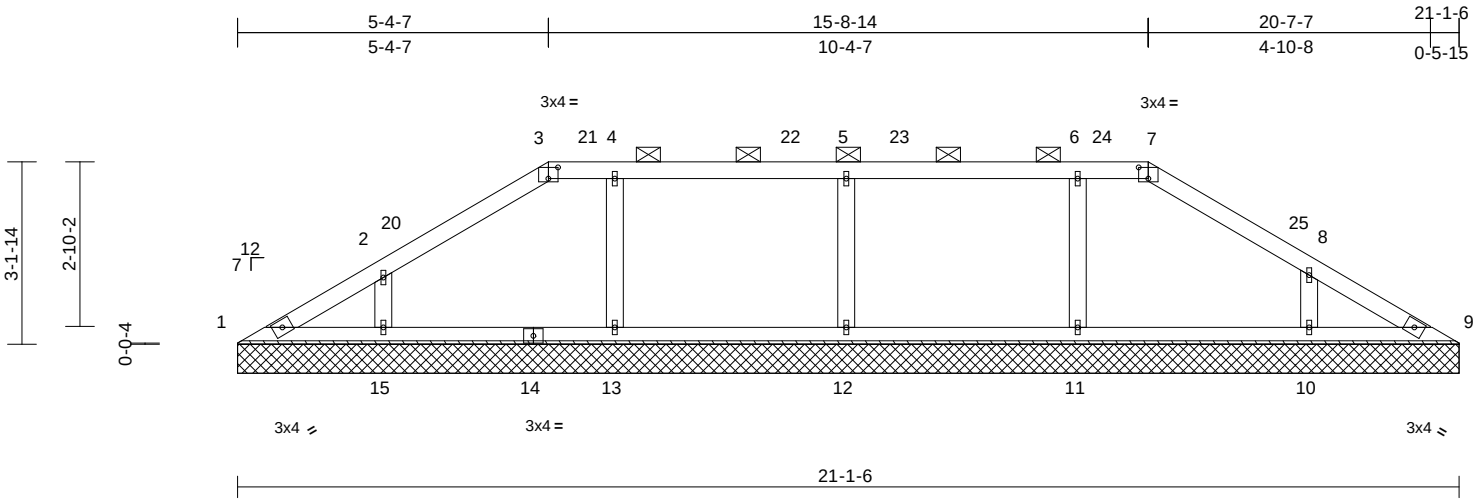

Scale = 1:39.8

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.14	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.06	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.06	Horiz(TL)	0.00	9	n/a	n/a		
BCDL	10.0	Code	IBC2015/TPI2014	Matrix-MS							Weight: 78 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 3-7.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 1=100/21-1-6, 9=103/21-1-6, 10=288/21-1-6, 11=293/21-1-6, 12=326/21-1-6, 13=293/21-1-6, 15=286/21-1-6
Max Horiz 1=-54 (LC 9)
Max Uplift 1=-4 (LC 11), 9=-5 (LC 11), 10=-59 (LC 11), 11=-17 (LC 11), 12=-49 (LC 7), 13=-17 (LC 11), 15=-60 (LC 11)
Max Grav 1=100 (LC 1), 9=103 (LC 1), 10=289 (LC 21), 11=307 (LC 21), 12=330 (LC 21), 13=307 (LC 20), 15=287 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-138/25, 2-20=-131/45, 3-20=-83/60, 3-21=-89/70, 4-21=-89/70, 4-22=-89/70, 5-22=-89/70, 5-23=-89/70, 6-23=-89/70, 6-24=-89/70, 7-24=-89/70, 7-25=-83/61, 8-25=-131/46, 8-9=-79/12
BOT CHORD 1-15=0/120, 14-15=0/72, 13-14=0/72, 12-13=0/72, 11-12=0/72, 10-11=0/72, 9-10=0/72
WEBS 5-12=-250/96, 4-13=-226/67, 2-15=-205/98, 6-11=-226/67, 8-10=-205/96

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; B=20ft; L=21ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) 0-0-7 to 3-0-7, Interior (1) 3-0-7 to 5-4-14, Exterior (2) 5-4-14 to 9-7-13, Interior (1) 9-7-13 to 15-9-5, Exterior (2) 15-9-5 to 20-1-4, Interior (1) 20-1-4 to 21-1-13 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Provide adequate drainage to prevent water ponding.
5) All plates are 1x3 MT20 unless otherwise indicated.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 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) All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 4 lb uplift at joint 1, 5 lb uplift at joint 9, 49 lb uplift at joint 12, 17 lb uplift at joint 13, 60 lb uplift at joint 15, 17 lb uplift at joint 11 and 59 lb uplift at joint 10.
11) This truss is designed in accordance with the 2015 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

October 8,2019

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ENGINEERING BY TRENCO
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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Phillips' Hip RF-Roof
Q-1901805-1	V3	Valley	1	1	E13608520
					Job Reference (optional)

Peak Truss Builders, LLC, New Hill, NC - 27562,

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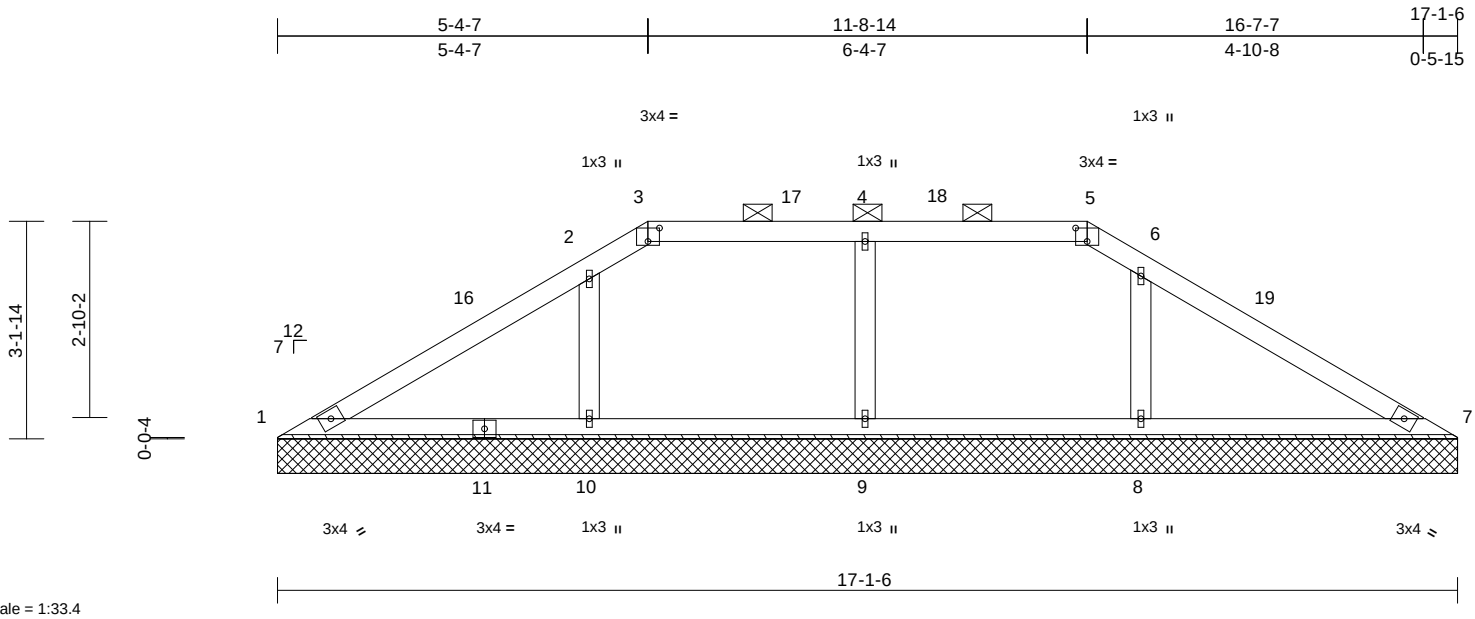

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Plate Offsets (X, Y): [3:0-2-0,0-2-5], [5:0-2-0,0-2-5]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.19	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.15	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.07	Horiz(TL)	0.00	7	n/a	n/a		
BCDL	10.0	Code	IBC2015/TPI2014	Matrix-MS							Weight: 62 lb	FT = 20%

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

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

REACTIONS (lb/size) 1=107/17-1-6, 7=110/17-1-6, 8=427/17-1-6, 9=301/17-1-6, 10=423/17-1-6
Max Horiz 1=-54 (LC 9)
Max Uplift 8=-75 (LC 11), 9=-35 (LC 8), 10=-75 (LC 11)
Max Grav 1=131 (LC 20), 7=133 (LC 21), 8=427 (LC 1), 9=307 (LC 20), 10=423 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-16=-182/137, 2-16=-40/160, 2-3=-39/58, 3-17=0/71, 4-17=0/71, 4-18=0/71, 5-18=0/71, 5-6=-37/59, 6-19=-39/159, 7-19=-51/136
BOT CHORD 1-11=-149/153, 10-11=-149/83, 9-10=-149/83, 8-9=-149/83, 7-8=-149/83
WEBS 4-9=-244/83, 2-10=-302/110, 6-8=-304/110

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; B=20ft; L=20ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) 0-0-7 to 3-0-7, Interior (1) 3-0-7 to 5-4-14, Exterior (2) 5-4-14 to 9-7-13, Interior (1) 9-7-13 to 11-9-5, Exterior (2) 11-9-5 to 16-1-4, Interior (1) 16-1-4 to 17-1-13 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Provide adequate drainage to prevent water ponding.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 4-0-0 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.
8) All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 35 lb uplift at joint 9, 75 lb uplift at joint 10 and 75 lb uplift at joint 8.
10) This truss is designed in accordance with the 2015 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.
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

October 8,2019

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A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Phillips' Hip RF-Roof
Q-1901805-1	V4	Valley	1	1	E13608521
					Job Reference (optional)

Peak Truss Builders, LLC, New Hill, NC - 27562,

Run: 8.32 E Sep 21 2019 Print: 8.320 E Sep 21 2019 MiTek Industries, Inc. Mon Oct 07 15:10:59 Page: 1
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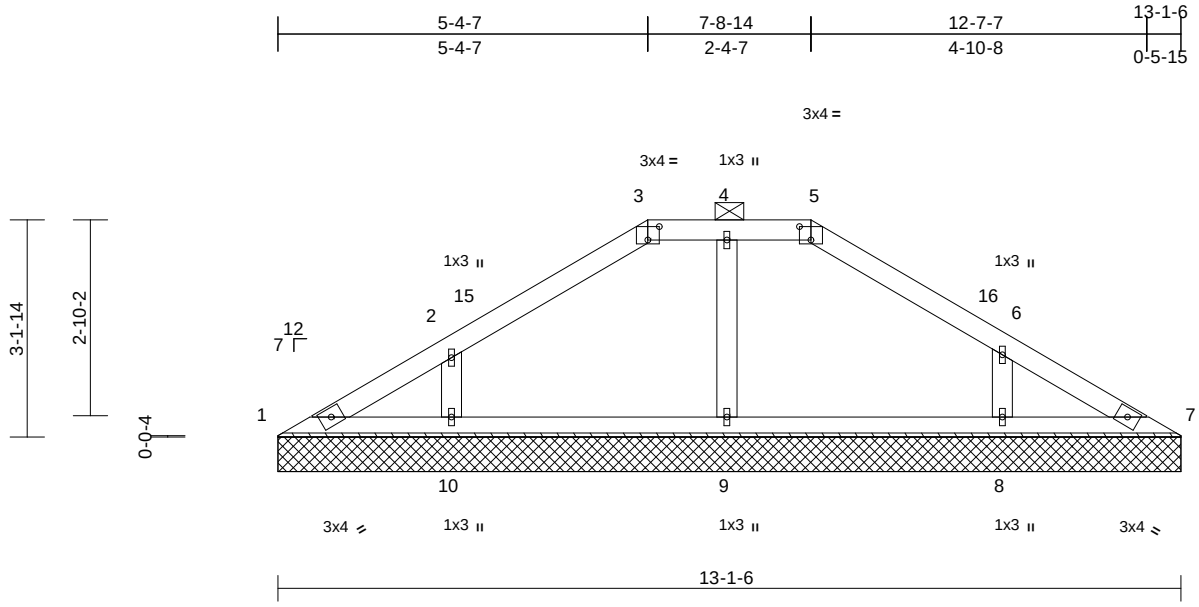

Scale = 1:33.5

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.11	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.06	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.04	Horiz(TL)	0.00	7	n/a	n/a		
BCDL	10.0	Code	IBC2015/TPI2014	Matrix-MS							Weight: 47 lb	FT = 20%

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

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

REACTIONS (lb/size) 1=113/13-1-6, 7=117/13-1-6, 8=292/13-1-6, 9=237/13-1-6, 10=291/13-1-6
Max Horiz 1=-54 (LC 9)
Max Uplift 1=-12 (LC 11), 7=-13 (LC 11), 8=-63 (LC 11), 10=-64 (LC 11)
Max Grav 1=113 (LC 1), 7=117 (LC 1), 8=301 (LC 21), 9=237 (LC 1), 10=299 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-164/23, 2-15=-165/65, 3-15=-112/80, 3-4=-106/87, 4-5=-106/87, 5-16=-112/81, 6-16=-165/66, 6-7=-110/18
BOT CHORD 1-10=-7/137, 9-10=0/97, 8-9=0/97, 7-8=0/97
WEBS 4-9=-158/38, 2-10=-217/100, 6-8=-217/98

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; B=20ft; L=20ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) 0-0-7 to 3-0-7, Interior (1) 3-0-7 to 5-4-14, Exterior (2) 5-4-14 to 12-1-4, Interior (1) 12-1-4 to 13-1-13 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Provide adequate drainage to prevent water ponding.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 4-0-0 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.
8) All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 12 lb uplift at joint 1, 13 lb uplift at joint 7, 64 lb uplift at joint 10 and 63 lb uplift at joint 8.
10) This truss is designed in accordance with the 2015 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.
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

October 8,2019

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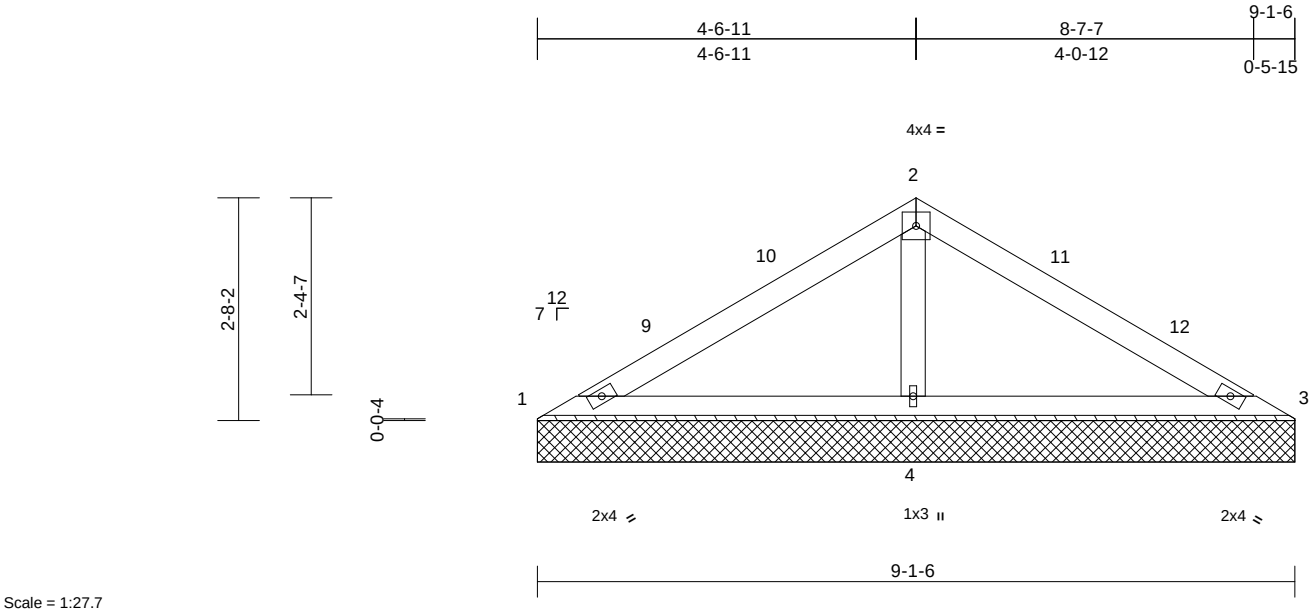
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Phillips' Hip RF-Roof	E13608522
Q-1901805-1	V5	Valley	1	1	Job Reference (optional)	

Peak Truss Builders, LLC, New Hill, NC - 27562,

Run: 8.32 E Sep 21 2019 Print: 8.320 E Sep 21 2019 MiTek Industries, Inc. Mon Oct 07 15:10:59

ID:5QbeFuh5X5CyAS?bgXsRMsyX8pN-1k?g1d5JwqVrIEa?2Z8Hb_hdc_?rCpzjjVO0N6yVmWg



Scale = 1:27.7

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.16	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.16	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.10	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IBC2015/TPI2014	Matrix-MS							Weight: 31 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD Structural wood sheathing directly applied or 9-1-6 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (lb/size) 1=46/9-1-6, 3=51/9-1-6, 4=632/9-1-6
Max Horiz 1=-45 (LC 9)
Max Uplift 1=-11 (LC 21), 3=-8 (LC 20), 4=-92 (LC 11)
Max Grav 1=80 (LC 20), 3=84 (LC 21), 4=632 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-9=-76/203, 9-10=-35/233, 2-10=-33/293, 2-11=-31/286, 11-12=-33/225, 3-12=-43/195
BOT CHORD 1-4=-213/80, 3-4=-207/78
WEBS 2-4=-471/112

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; B=20ft; L=20ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) 0-0-7 to 3-0-7, Interior (1) 3-0-7 to 4-7-2, Exterior (2) 4-7-2 to 7-7-2, Interior (1) 7-7-2 to 9-1-13 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 4-0-0 oc.
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) All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 11 lb uplift at joint 1, 8 lb uplift at joint 3 and 92 lb uplift at joint 4.
9) This truss is designed in accordance with the 2015 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

October 8,2019

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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Phillips' Hip RF-Roof	
Q-1901805-1	V6	Valley	1	1	Job Reference (optional)	E13608523

Peak Truss Builders, LLC, New Hill, NC - 27562,

Run: 8.32 E Sep 21 2019 Print: 8.320 E Sep 21 2019 MiTek Industries, Inc. Mon Oct 07 15:11:00 Page: 1
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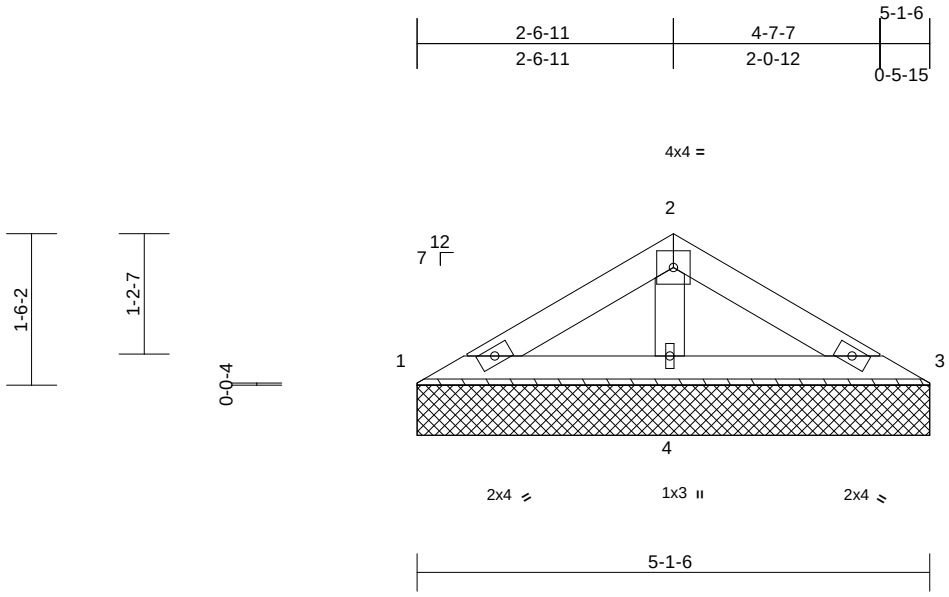


Scale = 1:23

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	0.04	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.06	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.04	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IBC2015/TPI2014	Matrix-MP							Weight: 16 lb	FT = 20%

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

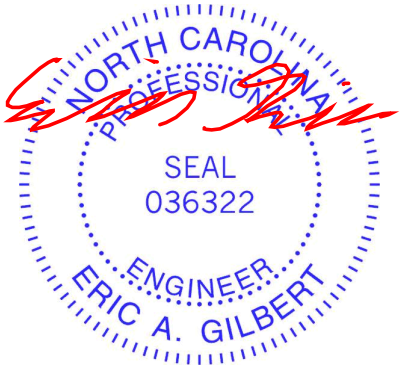
BRACING
TOP CHORD Structural wood sheathing directly applied or 5-1-6 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (lb/size) 1=53/5-1-6, 3=57/5-1-6, 4=300/5-1-6
Max Horiz 1=-24 (LC 9)
Max Uplift 1=-6 (LC 11), 3=-7 (LC 11), 4=-38 (LC 11)
Max Grav 1=65 (LC 20), 3=68 (LC 21), 4=300 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-62/107, 2-3=-9/101
BOT CHORD 1-4=-85/49, 3-4=-81/38
WEBS 2-4=-181/39

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; B=20ft; L=20ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 4-0-0 oc.
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) All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 6 lb uplift at joint 1, 7 lb uplift at joint 3 and 38 lb uplift at joint 4.
9) This truss is designed in accordance with the 2015 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



October 8,2019

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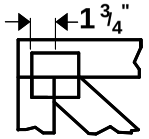
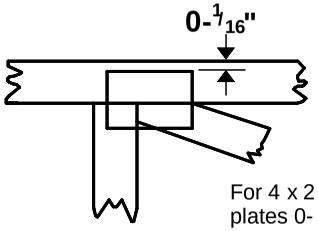
Symbols

PLATE LOCATION AND ORIENTATION



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



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

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

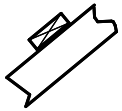
*** Plate location details available in MiTek 20/20 software or upon request.**

PLATE SIZE

4 x 4

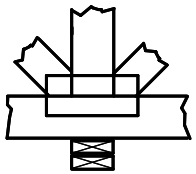
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

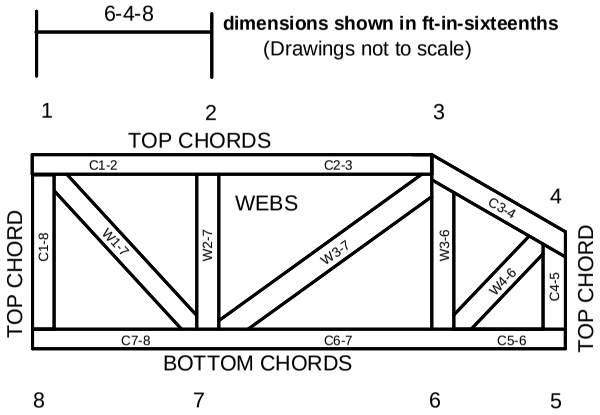


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TPI1: 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



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/TPI 1 section 6.3 These truss designs rely on lumber values established by others.

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MiTek Engineering Reference Sheet: MII-7473 rev. 10/03/2015

General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

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