Job	Truss	Truss Type	Qty	Ply	Blake Pond Lot 00.0126 Roof	
2504-4981-A	A1D	Piggyback Base	2	1	Job Reference (optional)	I72639269

Structural, LLC, Thurmont, MD - 21788,   Run: 9.17 S 8.83 Mar 20 2025 Print: 8.830 S Mar 20 2025 MiTek Industries, Inc. Wed Apr 09 10:21:24   Page: 1
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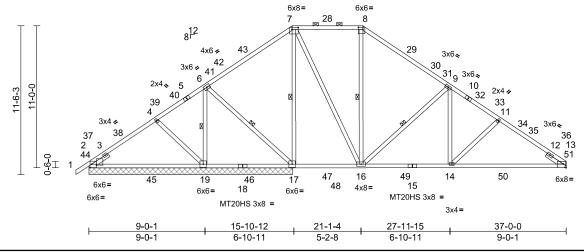
Scale = 1:89.3

Plate Offsets (X, Y): [2:0-1-9,0-3-4], [2:0-4-7,0-1-0], [7:0-5-12,0-2-0], [8:0-4-4,0-2-4], [13:Edge,0-3-8]

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	0.89	Vert(LL)	-0.26	19-26	>414	360	MT20	244/190
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.63	Vert(CT)	-0.36	14-22	>696	240	MT20HS	187/143
TCDL	10.0	Rep Stress Incr	NO	WB	0.75	Horz(CT)	0.04	13	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.11	14-16	>999	240		
BCDL	10.0										Weight: 233 lb	FT = 20%

LUMBER

TOP CHORD   2x4 SP No.2 *Except* 10-13,5-1:2x4 SP SS
BOT CHORD   2x4 SP SS
WEBS   2x4 SP No.3
SLIDER   Left 2x4 SP No.3 -- 1-6-0, Right 2x4 SP No.3 -- 1-6-0

BRACING

TOP CHORD   Structural wood sheathing directly applied, except
    2-0-0 oc purlins (5-7-6 max.): 7-8.
BOT CHORD   Rigid ceiling directly applied.
WEBS   1 Row at midpt   7-17, 8-16, 6-19, 6-17, 9-16

REACTIONS (size)   2=15-9-8, 13= Mechanical, 17=15-9-8, 19=15-9-8

Max Horiz   2=176 (LC 53)
Max Uplift   2=-1807 (LC 58), 13=-2322 (LC 61), 17=-1049 (LC 61), 19=-1660 (LC 58)
Max Grav   2=2061 (LC 55), 13=2856 (LC 56), 17=2069 (LC 40), 19=2043 (LC 55)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD   7-8=-1045/868, 8-9=-2373/2081, 9-11=-3465/2846, 11-13=-4458/3728, 1-2=0/45, 2-4=-3081/2881, 4-6=-2105/1997, 6-7=-2495/2434

BOT CHORD   2-19=-2651/2830, 17-19=-930/1014, 16-17=-683/742, 14-16=-1536/2089, 13-14=-3220/3839

WEBS   7-17=-1200/198, 7-16=-276/1033, 8-16=250/274, 9-14=-94/590, 6-19=-1859/1825, 6-17=-1574/1540, 4-19=-328/157, 11-14=-334/221, 9-16=-876/130

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-0-0 to 2-8-6, Interior (1) 2-8-6 to 15-9-0, Exterior(2E) 15-9-0 to 21-3-0, Exterior(2R) 21-3-0 to 26-5-13, Interior (1) 26-5-13 to 36-11-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) All plates are MT20 plates unless otherwise indicated.
8) Plates checked for a plus or minus 5 degree rotation about its center.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * 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.
11) Bearings are assumed to be: Joint 2 SP SS .
12) Refer to girder(s) for truss to truss connections.
13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 2322 lb uplift at joint 13, 1049 lb uplift at joint 17, 1807 lb uplift at joint 2, 1660 lb uplift at joint 19 and 1807 lb uplift at joint 2.

14) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
15) This truss has been designed for a total drag load of 200 plf. Lumber DOL=(1.33) Plate grip DOL=(1.33) Connect truss to resist drag loads along bottom chord from 0-0-0 to 37-0-0 for 200.0 plf.
16) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
17) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S)   Standard

April 10,2025

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