ENGINEERING BY TRENCO
A MiTek Affiliate

RE: MP20
DRHORTON/WILMINGTON; LOT 20 MCKAY PLACE

Trenco
818 Soundside Rd
Edenton, NC 27932

Site Information:

Customer: Project Name: MP20
Lot/Block: Model:
Address: Subdivision:
City: State:

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

Design Code: IRC2015/TPI2014 Design Program: MiTek 20/20 8.6
Wind Code: ASCE 7-10 Wind Speed: 120 mph
Roof Load: 40.0 psf Floor Load: N/A psf

This package includes 10 individual, dated Truss Design Drawings and 0 Additional Drawings.

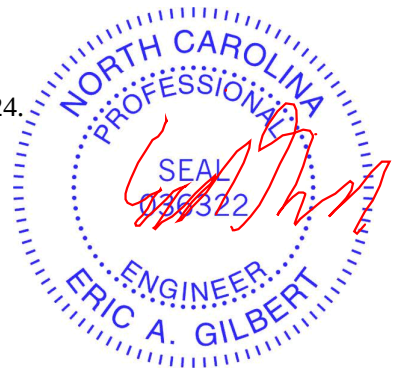
No.	Seal#	Truss Name	Date
1	I58690911	A01G	6/1/2023
2	I58690912	A02V	6/1/2023
3	I58690913	A03	6/1/2023
4	I58690914	A04	6/1/2023
5	I58690915	A05G	6/1/2023
6	I58690916	A06G	6/1/2023
7	I58690917	P01	6/1/2023
8	I58690918	P02	6/1/2023
9	I58690919	P03	6/1/2023
10	I58690920	P04G	6/1/2023

The truss drawing(s) referenced above have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by Builders FirstSource-Apex,NC.

Truss Design Engineer's Name: Gilbert, Eric

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

North Carolina COA: C-0844



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 TRENCO. Any project specific information included is for TRENCO customers file reference purpose only, and was not taken into account in the preparation of these designs. 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.

June 01, 2023

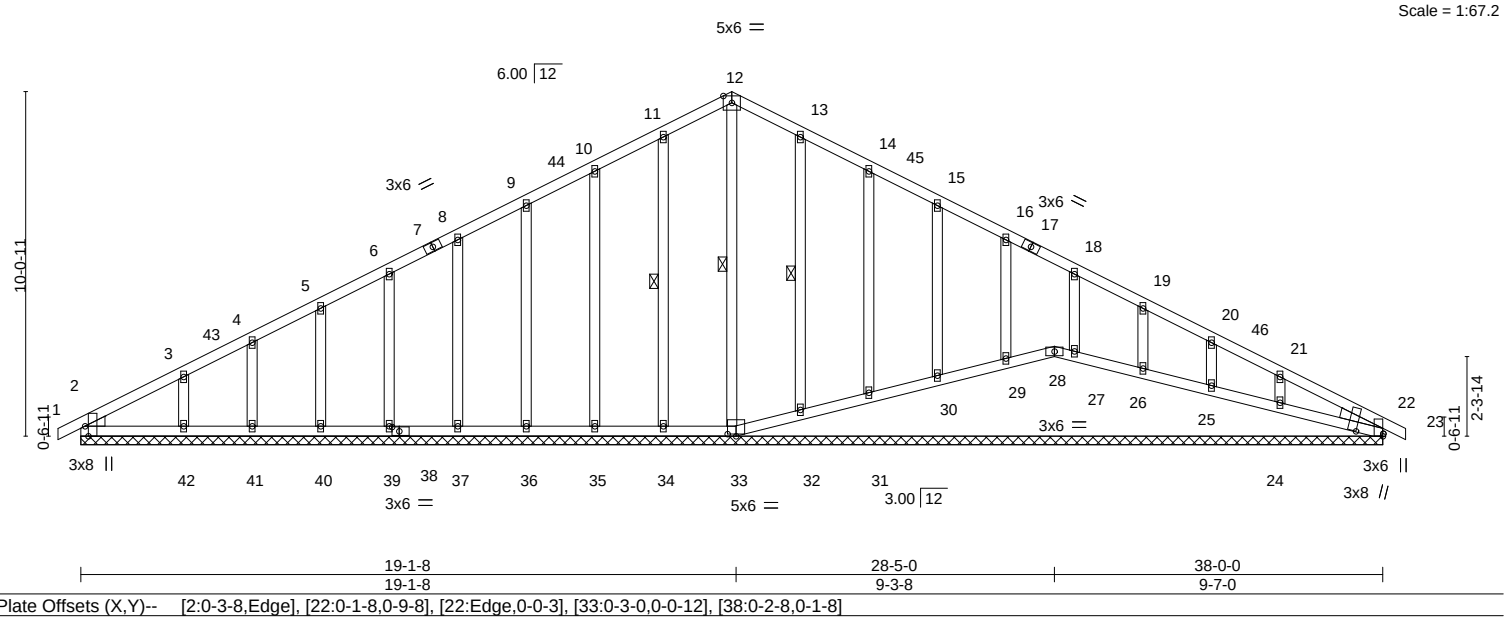
Gilbert, Eric

Job	Truss	Truss Type	Qty	Ply	DRHORTON/WILMINGTON; LOT 20 MCKAY PLACE
MP20	A01G	GABLE	99	1	I58690911
					Job Reference (optional)

Builders FirstSource (Apex, NC), Apex, NC - 27523, 8.630 s Nov 19 2022 MiTek Industries, Inc. Thu Jun 1 14:04:03 2023 Page 1
ID:YnPtfgg65JxzX?AS1huWL5zfXqm-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

-0-8-0 19-0-0 38-0-0 38-8-0
0-8-0 19-0-0 19-0-0 0-8-0

Scale = 1:67.2



19-1-8 28-5-0 38-0-0
19-1-8 9-3-8 9-7-0

Plate Offsets (X,Y)-- [2:0-3-8,Edge], [22:0-1-8,0-9-8], [22:Edge,0-0-3], [33:0-3-0,0-0-12], [38:0-2-8,0-1-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.10	Vert(LL)	0.00	23	n/r	120	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.07	Vert(CT)	0.00	23	n/r	120		
BCLL	0.0 *	Rep Stress Incr	NO	WB	0.14	Horz(CT)	0.01	22	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S							Weight: 244 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3
WEDGE
Left: 2x4 SP No.3 , Right: 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 12-33, 11-34, 13-32

REACTIONS. All bearings 38-0-0.
(lb) - Max Horz 2=143(LC 16)
Max Uplift All uplift 100 lb or less at joint(s) 2, 34, 35, 36, 37, 39, 40, 41, 42, 32, 31, 30, 29, 27, 26, 25, 24
Max Grav All reactions 250 lb or less at joint(s) 2, 28, 33, 34, 35, 36, 37, 39, 40, 41, 42, 32, 31, 30, 29, 27, 26, 25, 24, 22

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 10-11=-86/252, 11-12=-100/288, 12-13=-101/291, 13-14=-87/255

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=32ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) -0-8-0 to 4-1-10, Exterior(2) 4-1-10 to 19-0-0, Corner(3) 19-0-0 to 23-9-10, Exterior(2) 23-9-10 to 38-8-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 34, 35, 36, 37, 39, 40, 41, 42, 32, 31, 30, 29, 27, 26, 25, 24.
10) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 28, 32, 31, 30, 29, 27, 26, 25, 24, 22.

NORTH CAROLINA PROFESSIONAL SEAL 036322 ENGINEER ERIC A. GILBERT

June 1,2023

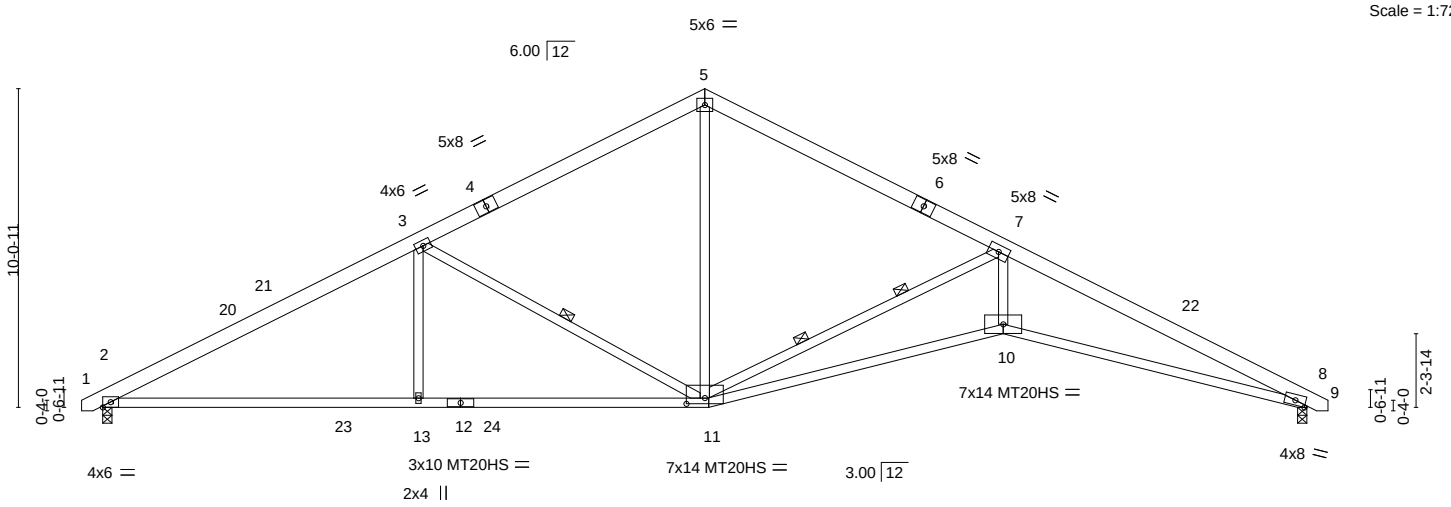
ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	DRHORTON/WILMINGTON; LOT 20 MCKAY PLACE
MP20	A02V	SPECIAL	99	1	I58690912 Job Reference (optional)

Builders FirstSource (Apex, NC), Apex, NC - 27523, 8.630 s Nov 19 2022 MiTek Industries, Inc. Thu Jun 1 14:04:04 2023 Page 1
ID:YnPtfgg65JxzX?AS1huWL5zfXqm-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

-0-8-0 9-11-9 19-0-0 28-3-9 28-5-0 38-0-0 38-8-0
0-8-0 9-11-9 9-0-7 9-3-9 0-1-6 9-7-0 0-8-0

Scale = 1:72.7



9-11-9 19-1-8 28-5-0 38-0-0
9-11-9 9-1-15 9-3-8 9-7-0

Plate Offsets (X,Y)-- [11:0-7-0,0-2-3]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.66	Vert(LL)	-0.35	10-11	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.97	Vert(CT)	-0.85	10-11	>535	240	MT20HS	187/143
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.95	Horz(CT)	0.37	8	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-MS		Wind(LL)	0.17	10-11	>999	240	Weight: 215 lb	FT = 20%

LUMBER-

TOP CHORD	2x6 SP No.2
BOT CHORD	2x4 SP No.1 *Except* 10-11: 2x4 SP SS, 11-12: 2x4 SP No.2
WEBS	2x4 SP No.3 *Except* 7-11: 2x4 SP SS

BRACING-

TOP CHORD	Structural wood sheathing directly applied or 2-11-7 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 2-2-0 oc bracing: 8-10.
WEBS	1 Row at midpt 3-11 2 Rows at 1/3 pts 7-11

REACTIONS. (size) 2=0-3-8, 8=0-3-8
Max Horz 2=135(LC 12)
Max Uplift 2=-27(LC 12), 8=-27(LC 13)
Max Grav 2=1549(LC 1), 8=1549(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2685/217, 3-5=-1838/249, 5-7=-1845/247, 7-8=-4890/321
BOT CHORD 2-13=-100/2303, 11-13=-100/2303, 10-11=-217/4406, 8-10=-218/4406
WEBS 3-13=0/403, 3-11=-942/155, 5-11=-28/999, 7-11=-3081/264, 7-10=0/2288

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=32ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) -0-5-14 to 4-3-12, Interior(1) 4-3-12 to 19-0-0, Exterior(2) 19-0-0 to 25-9-7, Interior(1) 25-9-7 to 38-5-14 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) All plates are MT20 plates unless otherwise indicated.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) Bearing at joint(s) 8 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 100 lb uplift at joint(s) 2, 8.
8) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

June 1,2023

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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	DRHORTON/WILMINGTON; LOT 20 MCKAY PLACE	I58690913
MP20	A03	COMMON	99	1	Job Reference (optional)	

Builders FirstSource, Apex, NC — 8.630 s Mar 9 2023 MiTek Industries, Inc. Thu Jun 1 14:31:04 2023 Page 1
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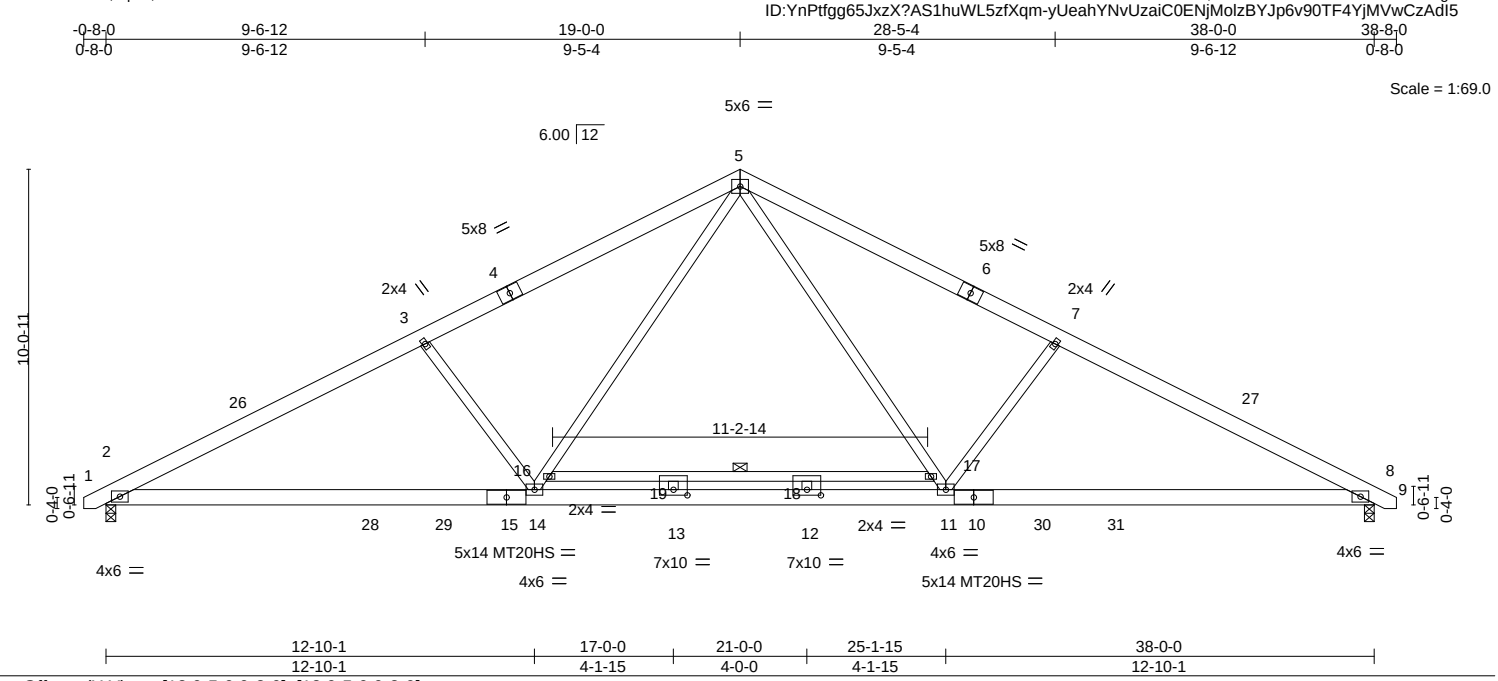

Plate Offsets (X,Y)-- [12:0-5-0,0-2-0], [13:0-5-0,0-2-0]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.62	Vert(LL)	-0.39	12-13	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.91	Vert(CT)	-0.51	12-13	>890	240	MT20HS	187/143
BCLL	0.0 *	Rep Stress Incr	NO	WB	0.64	Horz(CT)	0.08	8	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-MS		Wind(LL)	0.10	14-22	>999	240	Weight: 259 lb	FT = 20%

LUMBER-
TOP CHORD 2x6 SP No.2
BOT CHORD 2x6 SP No.2 *Except*
10-15: 2x6 SP DSS
WEBS 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 3-10-11 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 16-17

REACTIONS. (lb/size) 2=1549/0-3-8 (min. 0-1-14), 8=1549/0-3-8 (min. 0-1-14)
Max Horz 2=-134(LC 13)
Max Uplift 2=-26(LC 12), 8=-26(LC 13)
Max Grav 2=1597(LC 2), 8=1597(LC 2)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-26=-2867/220, 3-26=-2808/247, 3-4=-2619/223, 4-5=-2501/269, 5-6=-2501/269, 6-7=-2619/223, 7-27=-2808/247, 8-27=-2867/220
BOT CHORD 2-28=-131/2517, 28-29=-131/2517, 15-29=-131/2517, 14-15=-131/2517, 13-14=0/1844, 12-13=0/1844, 11-12=0/1844, 10-11=-127/2517, 10-30=-127/2517, 30-31=-127/2517, 8-31=-127/2517
WEBS 5-17=-38/1139, 11-17=-43/957, 7-11=-597/223, 14-16=-43/957, 5-16=-38/1139, 3-14=-597/223

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=32ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) -0-5-14 to 4-3-12, Interior(1) 4-3-12 to 19-0-0, Exterior(2) 19-0-0 to 25-9-7, Interior(1) 25-9-7 to 38-5-14 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) All plates are MT20 plates unless otherwise indicated.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 26 lb uplift at joint 2 and 26 lb uplift at joint 8.
7) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) N/A
9) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.
10) 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)

NORTH CAROLINA PROFESSIONAL SEAL 036322 ENGINEER ERIC A. GILBERT

June 1,2023

Continued on page 2

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LOAD CASE(S)

1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
   Uniform Loads (plf)
   Vert: 1-5=-60, 5-9=-60, 20-23=-20
2) Dead + 0.75 Roof Live (balanced) + 0.75 Uninhab. Attic Storage: Lumber Increase=1.15, Plate Increase=1.15
   Uniform Loads (plf)
   Vert: 1-5=-50, 5-9=-50, 20-28=-20, 28-29=-50, 29-30=-20, 30-31=-50, 23-31=-20, 16-17=-30(F)
3) Dead + Uninhabitable Attic Without Storage: Lumber Increase=1.25, Plate Increase=1.25
   Uniform Loads (plf)
   Vert: 1-5=-20, 5-9=-20, 20-23=-40, 16-17=-40(F)
4) Dead + 0.6 C-C Wind (Pos. Internal) Case 1: Lumber Increase=1.60, Plate Increase=1.60
   Uniform Loads (plf)
   Vert: 1-2=47, 2-26=25, 5-26=14, 5-6=25, 6-8=14, 8-9=9, 20-23=-12
   Horz: 1-2=-59, 2-26=-37, 5-26=-26, 5-6=37, 6-8=26, 8-9=21
5) Dead + 0.6 C-C Wind (Pos. Internal) Case 2: Lumber Increase=1.60, Plate Increase=1.60
   Uniform Loads (plf)
   Vert: 1-2=9, 2-4=14, 4-5=25, 5-27=14, 8-27=25, 8-9=47, 20-23=-12
   Horz: 1-2=-21, 2-4=-26, 4-5=-37, 5-27=26, 8-27=37, 8-9=59
6) Dead + 0.6 C-C Wind (Neg. Internal) Case 1: Lumber Increase=1.60, Plate Increase=1.60
   Uniform Loads (plf)
   Vert: 1-2=-12, 2-5=-33, 5-8=-33, 8-9=-28, 20-23=-20
   Horz: 1-2=-8, 2-5=13, 5-8=-13, 8-9=-8
7) Dead + 0.6 C-C Wind (Neg. Internal) Case 2: Lumber Increase=1.60, Plate Increase=1.60
   Uniform Loads (plf)
   Vert: 1-2=-28, 2-5=-33, 5-8=-33, 8-9=-12, 20-23=-20
   Horz: 1-2=8, 2-5=13, 5-8=-13, 8-9=8
8) Dead + 0.6 MWFRS Wind (Pos. Internal) Left: Lumber Increase=1.60, Plate Increase=1.60
   Uniform Loads (plf)
   Vert: 1-2=9, 2-5=-2, 5-8=9, 8-9=4, 20-23=-12
   Horz: 1-2=-21, 2-5=-10, 5-8=21, 8-9=16
9) Dead + 0.6 MWFRS Wind (Pos. Internal) Right: Lumber Increase=1.60, Plate Increase=1.60
   Uniform Loads (plf)
   Vert: 1-2=4, 2-5=9, 5-8=-2, 8-9=9, 20-23=-12
   Horz: 1-2=-16, 2-5=-21, 5-8=10, 8-9=21
10) Dead + 0.6 MWFRS Wind (Neg. Internal) Left: Lumber Increase=1.60, Plate Increase=1.60
    Uniform Loads (plf)
    Vert: 1-2=-15, 2-5=-20, 5-8=-9, 8-9=-4, 20-23=-20
    Horz: 1-2=-5, 2-5=-0, 5-8=11, 8-9=16
11) Dead + 0.6 MWFRS Wind (Neg. Internal) Right: Lumber Increase=1.60, Plate Increase=1.60
    Uniform Loads (plf)
    Vert: 1-2=-4, 2-5=-9, 5-8=-20, 8-9=-15, 20-23=-20
    Horz: 1-2=-16, 2-5=-11, 5-8=0, 8-9=5
12) Dead + 0.6 MWFRS Wind (Pos. Internal) 1st Parallel: Lumber Increase=1.60, Plate Increase=1.60
    Uniform Loads (plf)
    Vert: 1-2=17, 2-3=22, 3-5=11, 5-8=3, 8-9=-2, 20-23=-12
    Horz: 1-2=-29, 2-3=-34, 3-5=-23, 5-8=15, 8-9=10
13) Dead + 0.6 MWFRS Wind (Pos. Internal) 2nd Parallel: Lumber Increase=1.60, Plate Increase=1.60
    Uniform Loads (plf)
    Vert: 1-2=-2, 2-5=3, 5-7=11, 7-8=22, 8-9=17, 20-23=-12
    Horz: 1-2=-10, 2-5=-15, 5-7=23, 7-8=34, 8-9=29
14) Dead + 0.6 MWFRS Wind (Pos. Internal) 3rd Parallel: Lumber Increase=1.60, Plate Increase=1.60
    Uniform Loads (plf)
    Vert: 1-2=7, 2-5=11, 5-8=3, 8-9=-2, 20-23=-12
    Horz: 1-2=-19, 2-5=-23, 5-8=15, 8-9=10
15) Dead + 0.6 MWFRS Wind (Pos. Internal) 4th Parallel: Lumber Increase=1.60, Plate Increase=1.60
    Uniform Loads (plf)
    Vert: 1-2=-2, 2-5=3, 5-8=11, 8-9=7, 20-23=-12
    Horz: 1-2=-10, 2-5=-15, 5-8=23, 8-9=19
16) Dead + 0.6 MWFRS Wind (Neg. Internal) 1st Parallel: Lumber Increase=1.60, Plate Increase=1.60
    Uniform Loads (plf)
    Vert: 1-2=9, 2-3=4, 3-5=-6, 5-8=-15, 8-9=-10, 20-23=-20
    Horz: 1-2=-29, 2-3=-24, 3-5=-14, 5-8=5, 8-9=10
17) Dead + 0.6 MWFRS Wind (Neg. Internal) 2nd Parallel: Lumber Increase=1.60, Plate Increase=1.60
    Uniform Loads (plf)
    Vert: 1-2=-10, 2-5=-15, 5-7=-6, 7-8=4, 8-9=9, 20-23=-20
    Horz: 1-2=-10, 2-5=-5, 5-7=14, 7-8=24, 8-9=29
18) Dead + Uninhabitable Attic Storage: Lumber Increase=1.25, Plate Increase=1.25
    Uniform Loads (plf)
    Vert: 1-5=-20, 5-9=-20, 20-28=-20, 28-29=-60, 29-30=-20, 30-31=-60, 23-31=-20, 16-17=-40(F)
19) Dead + 0.75 Roof Live (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) Left): Lumber Increase=1.60, Plate Increase=1.60
    Uniform Loads (plf)
    Vert: 1-2=-46, 2-5=-50, 5-8=-42, 8-9=-38, 20-28=-20, 28-29=-50, 29-30=-20, 30-31=-50, 23-31=-20, 16-17=-30(F)
    Horz: 1-2=-4, 2-5=-0, 5-8=8, 8-9=12
20) Dead + 0.75 Roof Live (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) Right): Lumber Increase=1.60, Plate Increase=1.60

Continued on page 3

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LOAD CASE(S)

Uniform Loads (plf)
Vert: 1-2=-38, 2-5=-42, 5-8=-50, 8-9=-46, 20-28=-20, 28-29=-50, 29-30=-20, 30-31=-50, 23-31=-20, 16-17=-30(F)
Horz: 1-2=-12, 2-5=-8, 5-8=0, 8-9=4

21) Dead + 0.75 Roof Live (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) 1st Parallel): Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=-28, 2-3=-32, 3-5=-40, 5-8=-46, 8-9=-43, 20-28=-20, 28-29=-50, 29-30=-20, 30-31=-50, 23-31=-20, 16-17=-30(F)
Horz: 1-2=-22, 2-3=-18, 3-5=-10, 5-8=4, 8-9=7

22) Dead + 0.75 Roof Live (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) 2nd Parallel): Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=-43, 2-5=-46, 5-7=-40, 7-8=-32, 8-9=-28, 20-28=-20, 28-29=-50, 29-30=-20, 30-31=-50, 23-31=-20, 16-17=-30(F)
Horz: 1-2=-7, 2-5=-4, 5-7=10, 7-8=18, 8-9=22

23) 1st Dead + Roof Live (unbalanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-5=-60, 5-9=-20, 20-23=-20

24) 2nd Dead + Roof Live (unbalanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-5=-20, 5-9=-60, 20-23=-20

25) 3rd Dead + 0.75 Roof Live (unbalanced) + 0.75 Uninhab. Attic Storage: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-5=-50, 5-9=-20, 20-28=-20, 28-29=-50, 29-30=-20, 30-31=-50, 23-31=-20, 16-17=-30(F)

26) 4th Dead + 0.75 Roof Live (unbalanced) + 0.75 Uninhab. Attic Storage: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-5=-20, 5-9=-50, 20-28=-20, 28-29=-50, 29-30=-20, 30-31=-50, 23-31=-20, 16-17=-30(F)

Job	Truss	Truss Type	Qty	Ply	DRHORTON/WILMINGTON; LOT 20 MCKAY PLACE
MP20	A04	COMMON	99	1	I58690914
					Job Reference (optional)

Builders FirstSource (Apex, NC), Apex, NC - 27523, 8.630 s Nov 19 2022 MiTek Industries, Inc. Thu Jun 1 14:04:06 2023 Page 1
ID:YnPtfgg65JxzX?AS1huWL5zfXqm-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

-0-8-0 9-6-12 19-0-0 28-5-4 38-0-0 38-8-0
0-8-0 9-6-12 9-5-4 9-5-4 9-6-12 0-8-0

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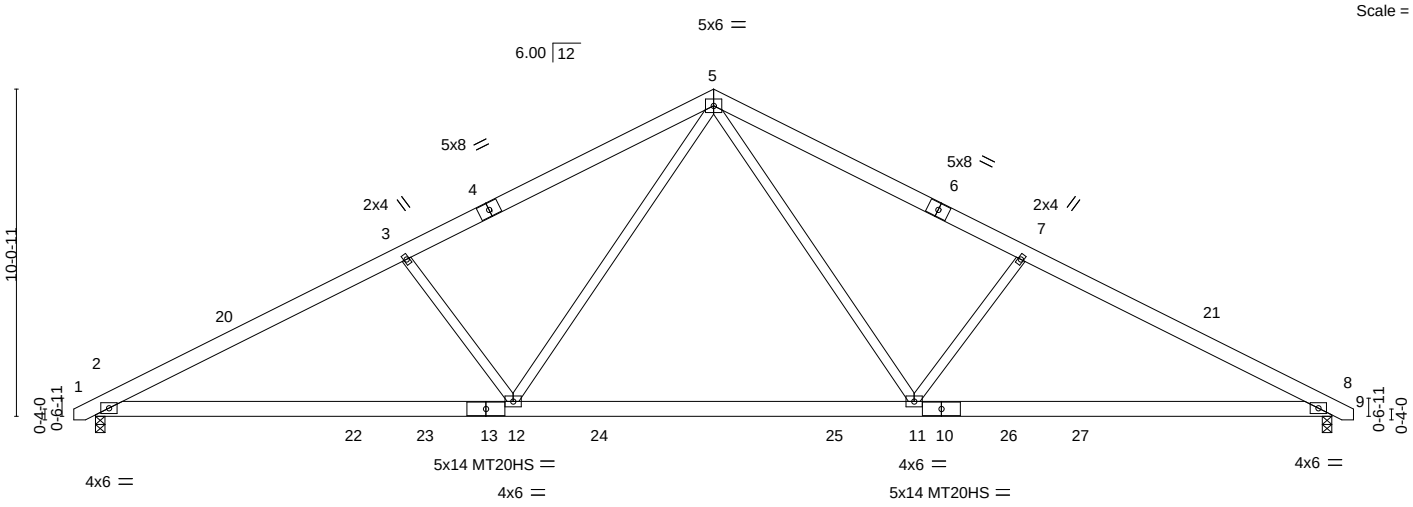

12-10-1 25-1-15 38-0-0
12-10-1 12-3-15 12-10-1

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.54	Vert(LL)	-0.27	11-12	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.88	Vert(CT)	-0.42	11-12	>999	240	MT20HS	187/143
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.42	Horz(CT)	0.08	8	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS		Wind(LL)	0.10	12-16	>999	240	Weight: 241 lb	FT = 20%

LUMBER-
TOP CHORD 2x6 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 3-11-2 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 2=0-3-8, 8=0-3-8
Max Horz 2=-134(LC 13)
Max Uplift 2=-26(LC 12), 8=-26(LC 13)
Max Grav 2=1549(LC 1), 8=1549(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2714/247, 3-5=-2465/269, 5-7=-2465/269, 7-8=-2714/247
BOT CHORD 2-12=-132/2381, 11-12=0/1562, 8-11=-127/2381
WEBS 5-11=-38/1008, 7-11=-598/223, 5-12=-38/1008, 3-12=-598/223

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=32ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) -0-5-14 to 4-3-12, Interior(1) 4-3-12 to 19-0-0, Exterior(2) 19-0-0 to 25-9-7, Interior(1) 25-9-7 to 38-5-14 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) All plates are MT20 plates unless otherwise indicated.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 8.
7) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

June 1,2023

ENGINEERING BY TRENCO
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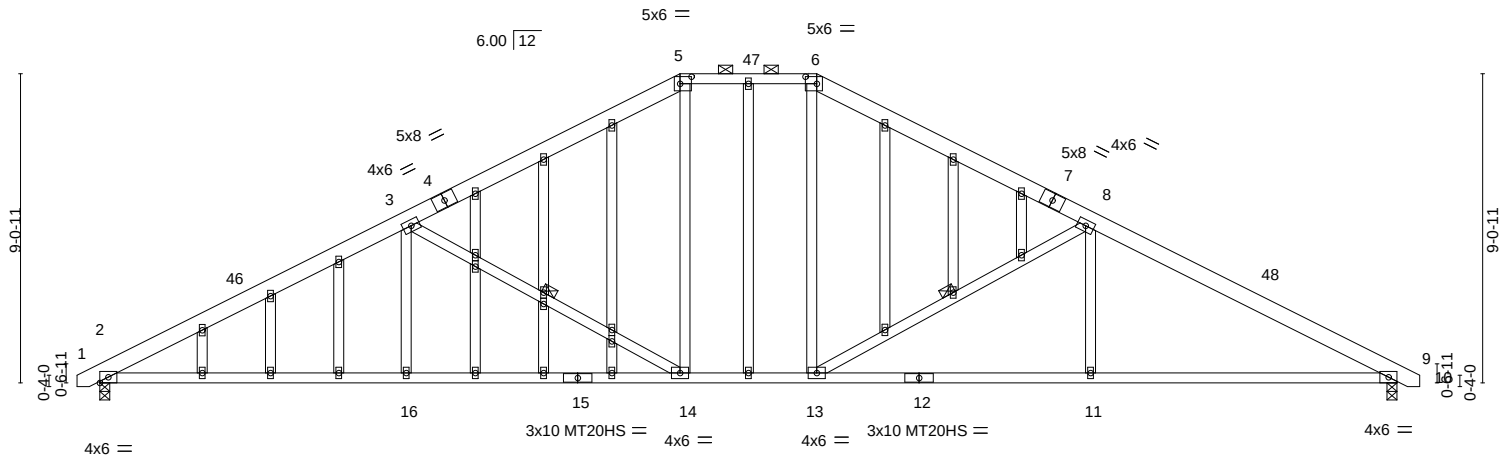
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	DRHORTON/WILMINGTON; LOT 20 MCKAY PLACE
MP20	A05G	GABLE	99	1	I58690915 Job Reference (optional)

Builders FirstSource (Apex, NC), Apex, NC - 27523, 8.630 s Nov 19 2022 MiTek Industries, Inc. Thu Jun 1 14:04:07 2023 Page 1
ID:YnPtfgg65JxzX?AS1huWL5zfXqm-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

-0-8-0	8-11-11	16-11-15	21-0-0	29-0-5	38-0-0	38-8-0
0-8-0	8-11-11	8-0-4	4-0-1	8-0-4	8-11-11	0-8-0

Scale = 1:67.5



8-6-11	16-11-15	21-0-0	29-5-5	38-0-0
8-6-11	8-5-4	4-0-1	8-5-4	8-6-11

Plate Offsets (X,Y)-- [5:0-4-0,0-2-8], [6:0-4-0,0-2-8], [9:0-0-1,0-0-0]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.51	Vert(LL)	-0.34	11-13	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.98	Vert(CT)	-0.52	11-13	>880	240	MT20HS	187/143
BCLL	0.0 *	Rep Stress Incr	NO	WB	0.42	Horz(CT)	0.12	9	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-MS		Wind(LL)	0.21	14-16	>999	240	Weight: 289 lb	FT = 20%

LUMBER-

TOP CHORD	2x6 SP No.2 *Except* 5-6: 2x4 SP No.2
BOT CHORD	2x4 SP No.1 *Except* 12-15: 2x4 SP No.2
WEBS	2x4 SP No.3
OTHERS	2x4 SP No.3

BRACING-

TOP CHORD	Structural wood sheathing directly applied or 4-0-9 oc purlins, except 2-0-0 oc purlins (4-5-13 max.): 5-6.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	1 Row at midpt 3-14, 8-13

REACTIONS. (size) 2=0-3-8, 9=0-3-8
Max Horz 2=-128(LC 13)
Max Uplift 2=-106(LC 12), 9=-106(LC 13)
Max Grav 2=1549(LC 1), 9=1549(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2736/256, 3-5=-1967/272, 5-6=-1647/272, 6-8=-1967/272, 8-9=-2736/256
BOT CHORD 2-16=-196/2357, 14-16=-196/2357, 13-14=-8/1647, 11-13=-146/2357, 9-11=-146/2357
WEBS 3-16=0/355, 3-14=-891/234, 5-14=-12/527, 8-11=0/355, 6-13=-12/527, 8-13=-891/235

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=32ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) -0-5-14 to 4-3-12, Interior(1) 4-3-12 to 16-11-15, Exterior(2) 16-11-15 to 27-9-8, Interior(1) 27-9-8 to 38-5-14 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 MT20 plates unless otherwise indicated.
6) All plates are 2x4 MT20 unless otherwise indicated.
7) Gable studs spaced at 2-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=106, 9=106.
11) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

June 1,2023

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

Job	Truss	Truss Type	Qty	Ply	DRHORTON/WILMINGTON; LOT 20 MCKAY PLACE
MP20	A06G	GABLE	99	1	I58690916 Job Reference (optional)

Builders FirstSource (Apex, NC), Apex, NC - 27523, 8.630 s Nov 19 2022 MiTek Industries, Inc. Thu Jun 1 14:04:08 2023 Page 1
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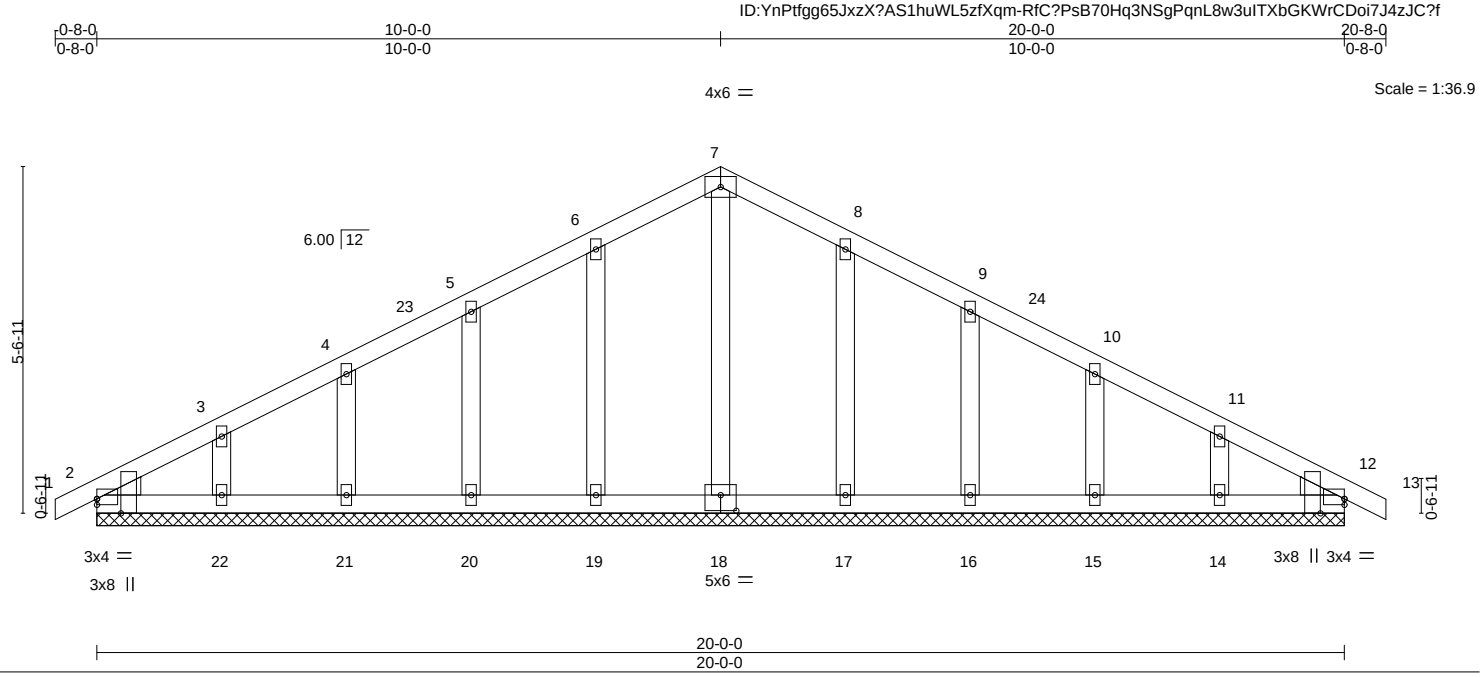

Plate Offsets (X,Y)-- [2:0-0-0,0-1-2], [2:0-2-12,Edge], [12:0-2-12,Edge], [12:Edge,0-1-2], [18:0-3-0,0-3-0]

LOADING (psf)		SPACING- 2-0-0		CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.06	Vert(LL)	0.00	12	n/r	120	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	0.00	12	n/r	120		
BCLL	0.0 *	Rep Stress Incr	NO	WB	0.06	Horz(CT)	0.00	12	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S							Weight: 105 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3
WEDGE
Left: 2x4 SP No.3 , Right: 2x4 SP No.3

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

REACTIONS. All bearings 20-0-0.
(lb) - Max Horz 2=77(LC 12)
Max Uplift All uplift 100 lb or less at joint(s) 2, 19, 20, 21, 22, 17, 16, 15, 14
Max Grav All reactions 250 lb or less at joint(s) 2, 18, 19, 20, 21, 22, 17, 16, 15, 14, 12

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=32ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) -0-8-0 to 4-0-0, Exterior(2) 4-0-0 to 10-0-0, Corner(3) 10-0-0 to 14-9-10, Exterior(2) 14-9-10 to 20-8-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 19, 20, 21, 22, 17, 16, 15, 14.

June 1,2023

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Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	DRHORTON/WILMINGTON; LOT 20 MCKAY PLACE
MP20	P01	MONO HIP	99	1	I58690917
					Job Reference (optional)

Builders FirstSource (Apex, NC), Apex, NC - 27523, 8.630 s Nov 19 2022 MiTek Industries, Inc. Thu Jun 1 14:04:09 2023 Page 1
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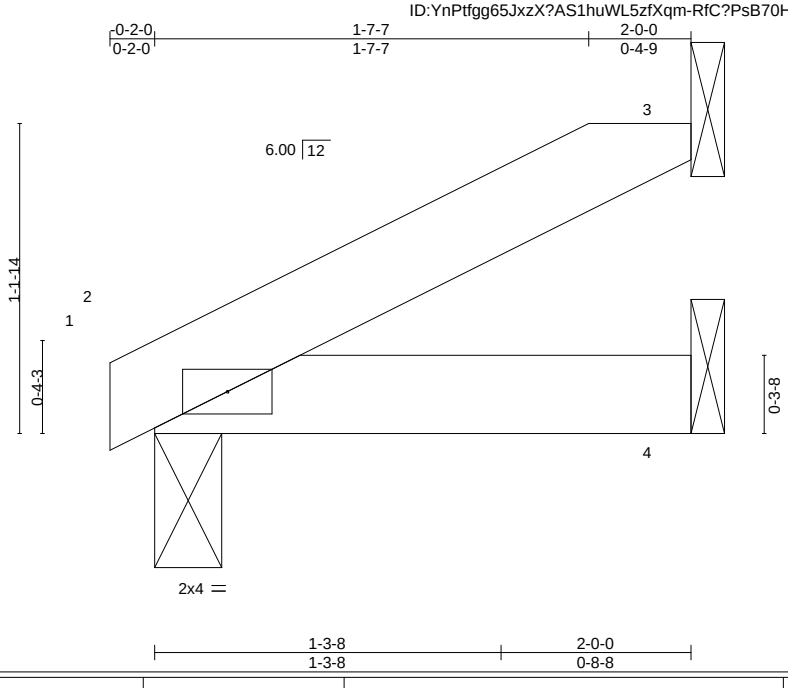


LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.05	Vert(LL)	-0.00	7	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	-0.00	7	>999	240		
BCLL	0.0 *	Rep Stress Incr	NO	WB	0.00	Horz(CT)	0.00	2	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MP		Wind(LL)	0.00	7	>999	240	Weight: 7 lb	FT = 20%

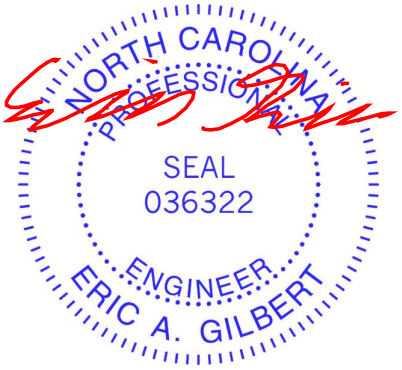
LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2

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

REACTIONS. (size) 2=0-3-0, 4=Mechanical, 3=Mechanical
Max Horz 2=33(LC 8)
Max Uplift 3=-21(LC 8)
Max Grav 2=83(LC 1), 4=36(LC 3), 3=50(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

NOTES-
1) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=32ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone; 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 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3.
6) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.



June 1,2023

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Job	Truss	Truss Type	Qty	Ply	DRHORTON/WILMINGTON; LOT 20 MCKAY PLACE
MP20	P02	MONO HIP	99	1	I58690918
					Job Reference (optional)

Builders FirstSource (Apex, NC), Apex, NC - 27523, 8.630 s Nov 19 2022 MiTek Industries, Inc. Thu Jun 1 14:04:09 2023 Page 1
ID:YnPtfgg65JxzX?AS1huWL5zfXqm-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

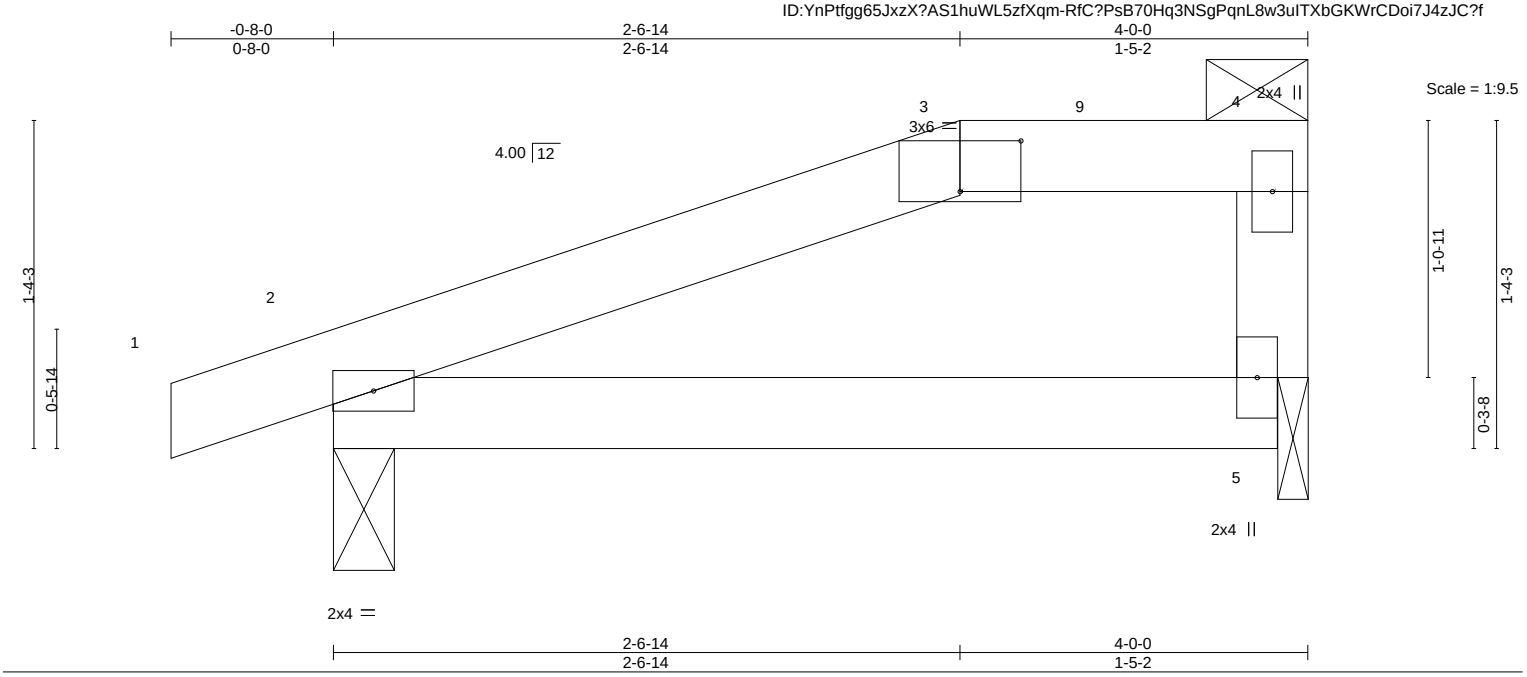

Plate Offsets (X,Y)-- [3:0-3-0,0-2-8]

LOADING (psf)		SPACING- 2-0-0		CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.26	Vert(LL)	-0.00	5-8	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.14	Vert(CT)	-0.01	5-8	>999	240		
BCLL	0.0 *	Rep Stress Incr	NO	WB	0.00	Horz(CT)	0.00	2	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-MR		Wind(LL)	0.00	5-8	>999	240	Weight: 14 lb	FT = 20%

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

BRACING-
TOP CHORD Structural wood sheathing directly applied or 4-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins: 3-4.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 2=0-3-0, 5=0-1-8
Max Horz 2=40(LC 5)
Max Uplift 2=-41(LC 4), 5=-20(LC 4)
Max Grav 2=206(LC 1), 5=159(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=32ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; 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 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
6) Bearing at joint(s) 5 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 at joint(s) 5.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 5.
9) Girder carries hip end with 0-0-0 right side setback, 0-0-0 left side setback, and 2-6-0 end setback.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
11) 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 (plf)
Vert: 1-2=-60, 2-3=-63(F=-3), 3-4=-63(F=-3), 5-6=-21(F=-1)

June 1,2023

ENGINEERING BY TRENCO
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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	DRHORTON/WILMINGTON; LOT 20 MCKAY PLACE
MP20	P03	MONO TRUSS	99	1	I58690919
					Job Reference (optional)

Builders FirstSource (Apex, NC), Apex, NC - 27523, 8.630 s Nov 19 2022 MiTek Industries, Inc. Thu Jun 1 14:04:10 2023 Page 1
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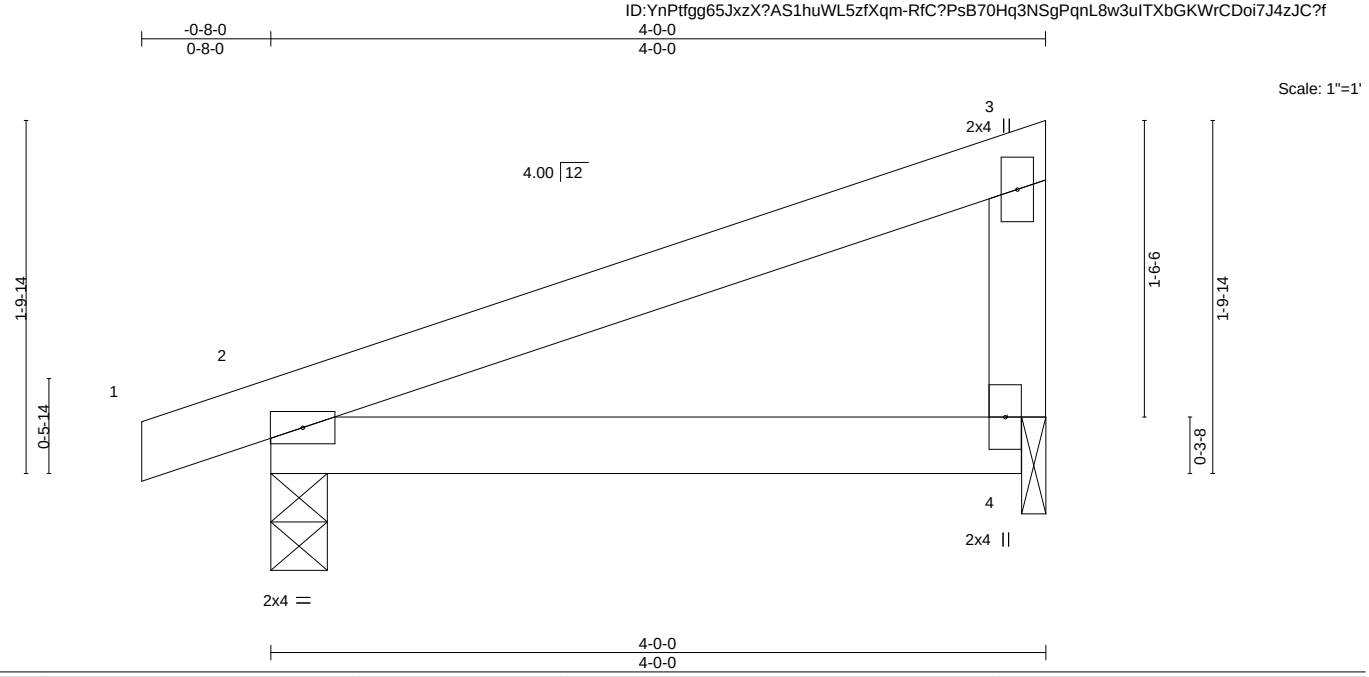


LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.21	Vert(LL)	-0.01	4-7	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.15	Vert(CT)	-0.02	4-7	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	2	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MP		Wind(LL)	0.01	4-7	>999	240	Weight: 15 lb	FT = 20%

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

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

REACTIONS. (size) 2=0-3-8, 4=0-1-8
Max Horz 2=55(LC 11)
Max Uplift 2=-38(LC 8), 4=-22(LC 12)
Max Grav 2=198(LC 1), 4=151(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

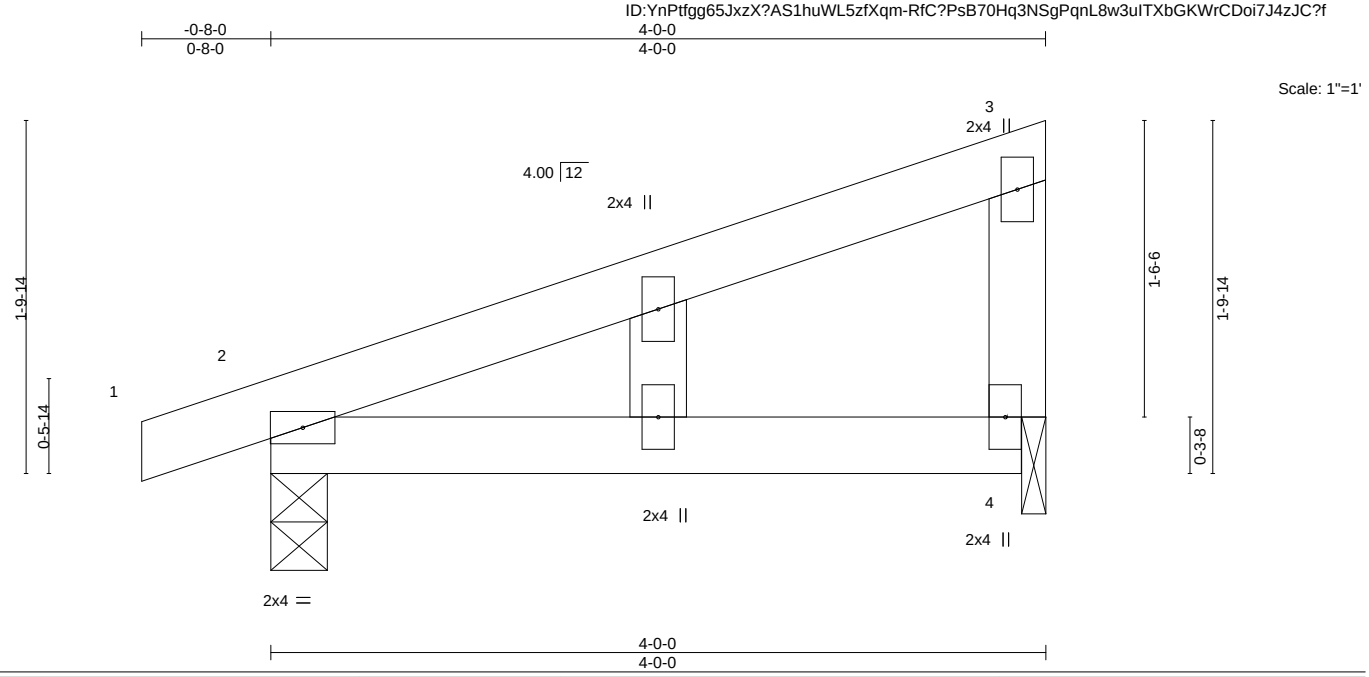
NOTES-
1) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=32ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
4) Bearing at joint(s) 4 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
5) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 4.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 4.

June 1,2023

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

Job	Truss	Truss Type	Qty	Ply	DRHORTON/WILMINGTON; LOT 20 MCKAY PLACE
MP20	P04G	GABLE	99	1	I58690920
					Job Reference (optional)

Builders FirstSource (Apex, NC), Apex, NC - 27523, 8.630 s Nov 19 2022 MiTek Industries, Inc. Thu Jun 1 14:04:10 2023 Page 1
ID:YnPtfgg65JxzX?AS1huWL5zfXqm-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.21	Vert(LL)	-0.01	4-9	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.15	Vert(CT)	-0.02	4-9	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	2	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MP		Wind(LL)	0.01	4-9	>999	240	Weight: 16 lb	FT = 20%

LUMBER-

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

BRACING-

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

REACTIONS. (size) 2=0-3-8, 4=0-1-8
Max Horz 2=55(LC 11)
Max Uplift 2=-38(LC 8), 4=-22(LC 12)
Max Grav 2=198(LC 1), 4=151(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

NOTES-

1) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=32ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone 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
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable studs spaced at 2-0-0 oc.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
6) Bearing at joint(s) 4 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 at joint(s) 4.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 4.

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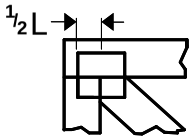
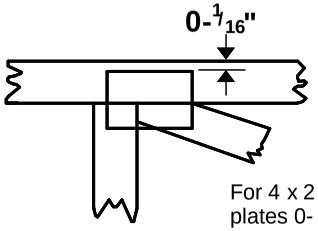
Symbols

PLATE LOCATION AND ORIENTATION



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



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

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

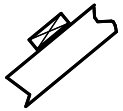
* Plate location details available in MiTek software or upon request.

PLATE SIZE

4 x 4

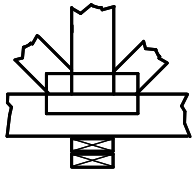
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



Indicated by symbol shown and/or by text in the bracing section of the output. Use T or I bracing if indicated.

BEARING

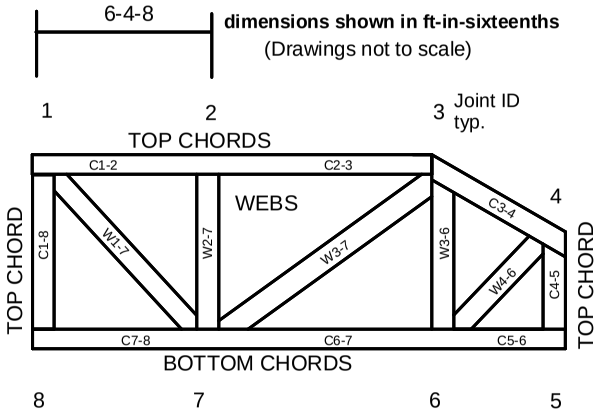


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-22: Design Standard for Bracing.
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses.

Numbering System



JOINTS ARE GENERALLY NUMBERED/LETTERED CLOCKWISE AROUND THE TRUSS STARTING AT THE JOINT FARTHEST TO THE LEFT.

CHORDS AND WEBS ARE IDENTIFIED BY END JOINT NUMBERS/LETTERS.

Product Code Approvals

ICC-ES Reports:

ESR-1988, ESR-2362, ESR-2685, ESR-3282
ESR-4722, ESL-1388

Design General Notes

Trusses are designed for wind loads in the plane of the truss unless otherwise shown.

Lumber design values are in accordance with ANSI/TPI 1 section 6.3 These truss designs rely on lumber values established by others.

MiTek®

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MiTek Engineering Reference Sheet: MII-7473 rev. 1/2/2023

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