ENGINEERING BY
TRENCO
A MiTek Affiliate

Trenco
818 Soundside Rd
Edenton, NC 27932

Re: 30942-30942A
22 PRINCE PLACE - FLOOR

The truss drawing(s) referenced below have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by 84 Components - #2383.

Pages or sheets covered by this seal: I50904813 thru I50904826

My license renewal date for the state of North Carolina is December 31, 2022.

North Carolina COA: C-0844

March 22,2022

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	22 PRINCE PLACE - FLOOR
30942-30942A	F1	Floor	10	1	I50904813
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.530 s Dec 6 2021 MiTek Industries, Inc. Mon Mar 21 19:20:45 2022 Page 1
ID:9qFVbj4pgi?1IMmT9WOAZfyxs_T-qvkOSXWJhkw7fVFEefnfbmm?jsjIJFzluXnOn9zYcuW

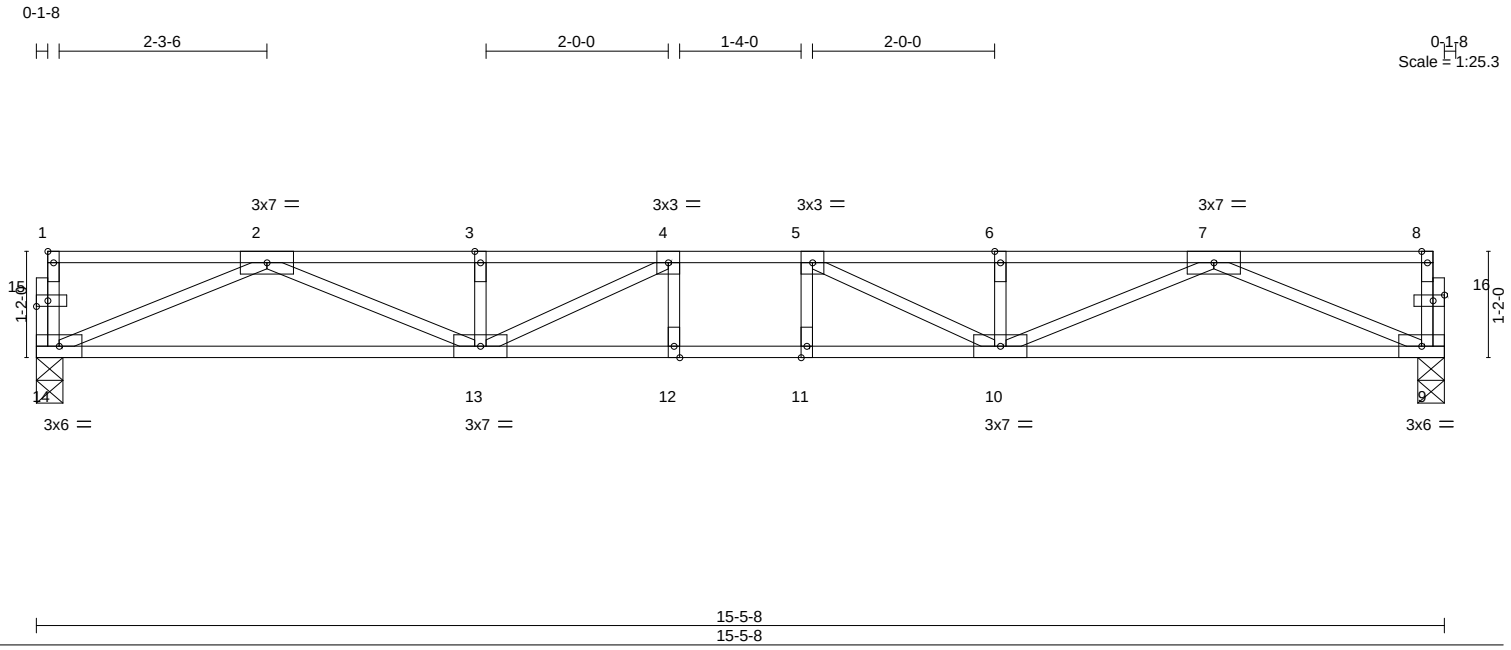


Plate Offsets (X,Y)-- [1:Edge,0-0-12], [15:0-1-8,0-0-12], [16:0-1-8,0-0-12]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.47	Vert(LL)	-0.20	11-12	>912	480	MT20	197/144
TCDL	10.0	Lumber DOL	1.00	BC	0.92	Vert(CT)	-0.28	11-12	>660	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.53	Horz(CT)	0.05	9	n/a	n/a		
BCDL	5.0	Code IRC2015/TPI2014		Matrix-S							Weight: 77 lb	FT = 20%F, 11%E

LUMBER-
TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2(flat)
BOT CHORD 2x4 SP No.2 or 2x4 SPF No.2(flat)
WEBS 2x4 SP No.3(flat)

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

REACTIONS. (size) 14=0-3-8, 9=0-3-8
Max Grav 14=830(LC 1), 9=830(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2666/0, 3-4=-2666/0, 4-5=-3033/0, 5-6=-2666/0, 6-7=-2666/0
BOT CHORD 13-14=0/1656, 12-13=0/3033, 11-12=0/3033, 10-11=0/3033, 9-10=0/1656
WEBS 2-14=-1798/0, 7-9=-1798/0, 2-13=0/1106, 3-13=-256/0, 7-10=0/1106, 6-10=-256/0, 4-13=-641/0, 5-10=-641/0

NOTES-
1) Unbalanced floor live loads have been considered for this design.
2) As requested, plates have not been designed to provide for placement tolerances or rough handling and erection conditions. It is the responsibility of the fabricator to increase plate sizes to account for these factors.
3) All plates are 1.5x4 MT20 unless otherwise indicated.
4) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.

March 22,2022

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

Job	Truss	Truss Type	Qty	Ply	22 PRINCE PLACE - FLOOR
30942-30942A	F1A	Floor	5	1	I50904814
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.530 s Dec 6 2021 MiTek Industries, Inc. Mon Mar 21 19:20:46 2022 Page 1
ID:9qFVbj4pgi?1IMmT9WOAZfyxs_T-I5ImgtXxS12_GfqRCMIu8zJ8OF362eYv7BWyKbzYcuV

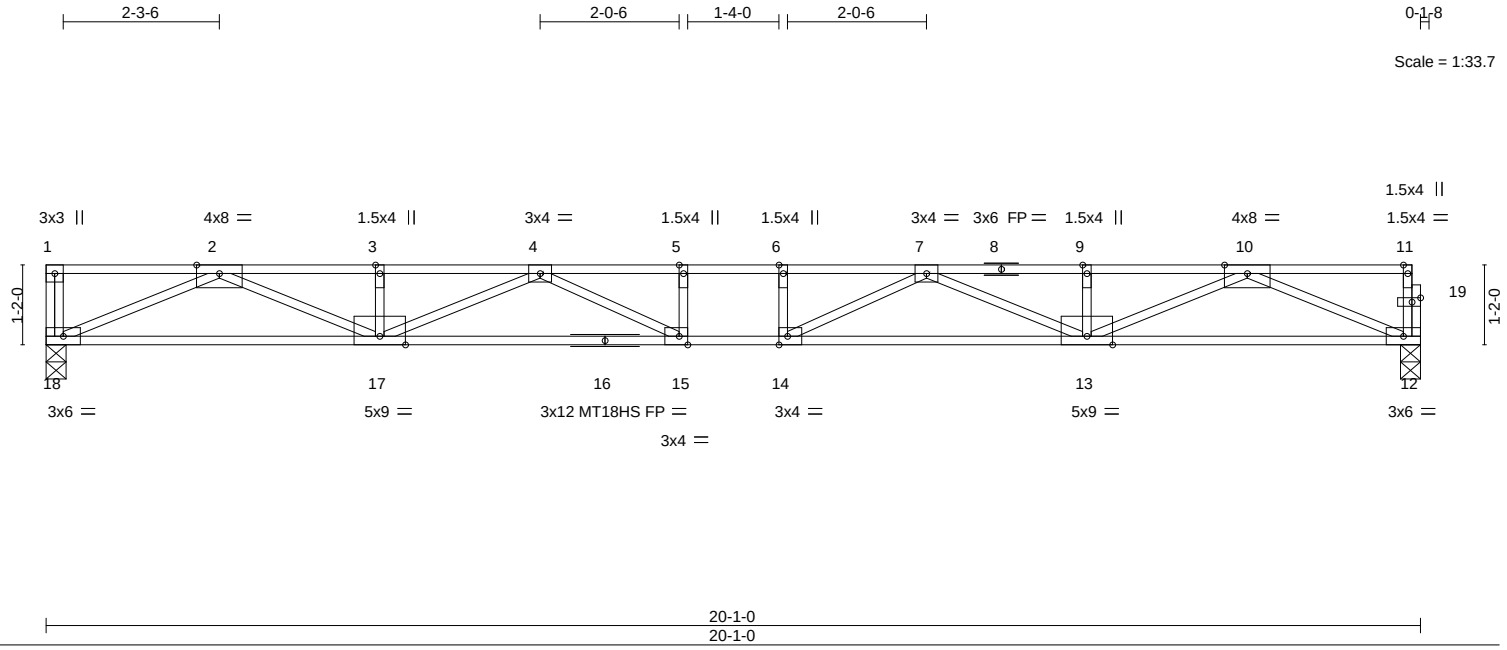


Plate Offsets (X,Y)-- [14:0-1-8,Edge], [15:0-1-8,Edge], [19:0-1-8,0-0-12]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.60	Vert(LL)	-0.48	14-15	>498	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.95	Vert(CT)	-0.66	14-15	>363	360	MT18HS	244/190
BCLL	0.0	Rep Stress Incr	YES	WB	0.83	Horz(CT)	0.10	12	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 99 lb	FT = 20%F, 11%E

LUMBER-
TOP CHORD 2x4 SP No.1(flat)
BOT CHORD 2x4 SP No.1(flat)
WEBS 2x4 SP No.3(flat)

BRACING-
TOP CHORD Structural wood sheathing directly applied or 5-1-14 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.

REACTIONS. (size) 18=0-3-8, 12=0-3-8
Max Grav 18=1091(LC 1), 12=1085(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-3824/0, 3-4=-3824/0, 4-5=-5169/0, 5-6=-5169/0, 6-7=-5169/0, 7-9=-3825/0, 9-10=-3825/0
BOT CHORD 17-18=0/2243, 15-17=0/4781, 14-15=0/5169, 13-14=0/4781, 12-13=0/2241
WEBS 2-18=-2445/0, 10-12=-2436/0, 2-17=0/1730, 10-13=0/1734, 4-17=-1047/0, 7-13=-1046/0, 4-15=-86/792, 7-14=-86/793

NOTES-
1) Unbalanced floor live loads have been considered for this design.
2) As requested, plates have not been designed to provide for placement tolerances or rough handling and erection conditions. It is the responsibility of the fabricator to increase plate sizes to account for these factors.
3) All plates are MT20 plates unless otherwise indicated.
4) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
5) CAUTION, Do not erect truss backwards.

March 22,2022

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

Job	Truss	Truss Type	Qty	Ply	22 PRINCE PLACE - FLOOR
30942-30942A	F2	Floor	7	1	I50904815
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.530 s Dec 6 2021 MiTek Industries, Inc. Mon Mar 21 19:20:47 2022 Page 1
ID:9qFVbj4pgi?1IMmT9WOAZfyxs_T-mIs8tDYZDLArupPdm3q7gBsInfPGn5Z2MrGVs1zYcuU

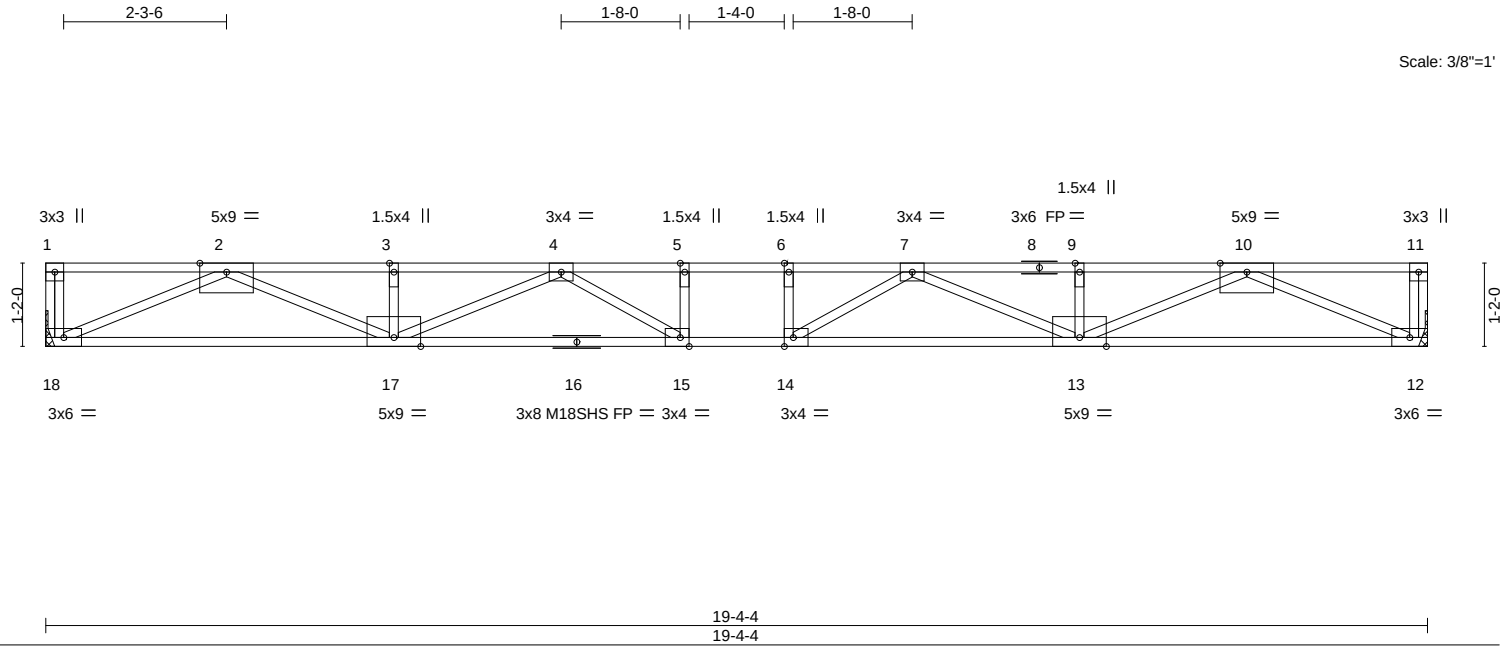


Plate Offsets (X,Y)-- [14:0-1-8,Edge], [15:0-1-8,Edge]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.69	Vert(LL)	-0.44	14-15	>520	480	MT20	197/144
TCDL	10.0	Lumber DOL	1.00	BC	0.89	Vert(CT)	-0.61	14-15	>379	360	M18SHS	244/190
BCLL	0.0	Rep Stress Incr	YES	WB	0.78	Horz(CT)	0.09	12	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 96 lb	FT = 20%F, 11%E

LUMBER-
TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2(flat)
BOT CHORD 2x4 SP No.1(flat)
WEBS 2x4 SP No.3(flat)

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

REACTIONS. (size) 18=Mechanical, 12=Mechanical
Max Grav 18=1051(LC 1), 12=1051(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-3642/0, 3-4=-3642/0, 4-5=-4787/0, 5-6=-4787/0, 6-7=-4787/0, 7-9=-3642/0, 9-10=-3642/0
BOT CHORD 17-18=0/2151, 15-17=0/4507, 14-15=0/4787, 13-14=0/4507, 12-13=0/2151
WEBS 2-18=-2344/0, 10-12=-2344/0, 2-17=0/1631, 10-13=0/1631, 4-17=-947/0, 7-13=-947/0, 4-15=-116/669, 7-14=-116/669

NOTES-
1) Unbalanced floor live loads have been considered for this design.
2) As requested, plates have not been designed to provide for placement tolerances or rough handling and erection conditions. It is the responsibility of the fabricator to increase plate sizes to account for these factors.
3) All plates are MT20 plates unless otherwise indicated.
4) Refer to girder(s) for truss to truss connections.
5) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.

March 22,2022

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

Job	Truss	Truss Type	Qty	Ply	22 PRINCE PLACE - FLOOR
30942-30942A	F3	Floor	2	1	I50904816
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.530 s Dec 6 2021 MiTek Industries, Inc. Mon Mar 21 19:20:48 2022 Page 1
ID:9qFVbj4pgi?1IMmT9WOAZfyxs_T-EUQX4ZZB_fliWy_pKnLMDOOSk3k6WYVCaV?2OTzYcuT

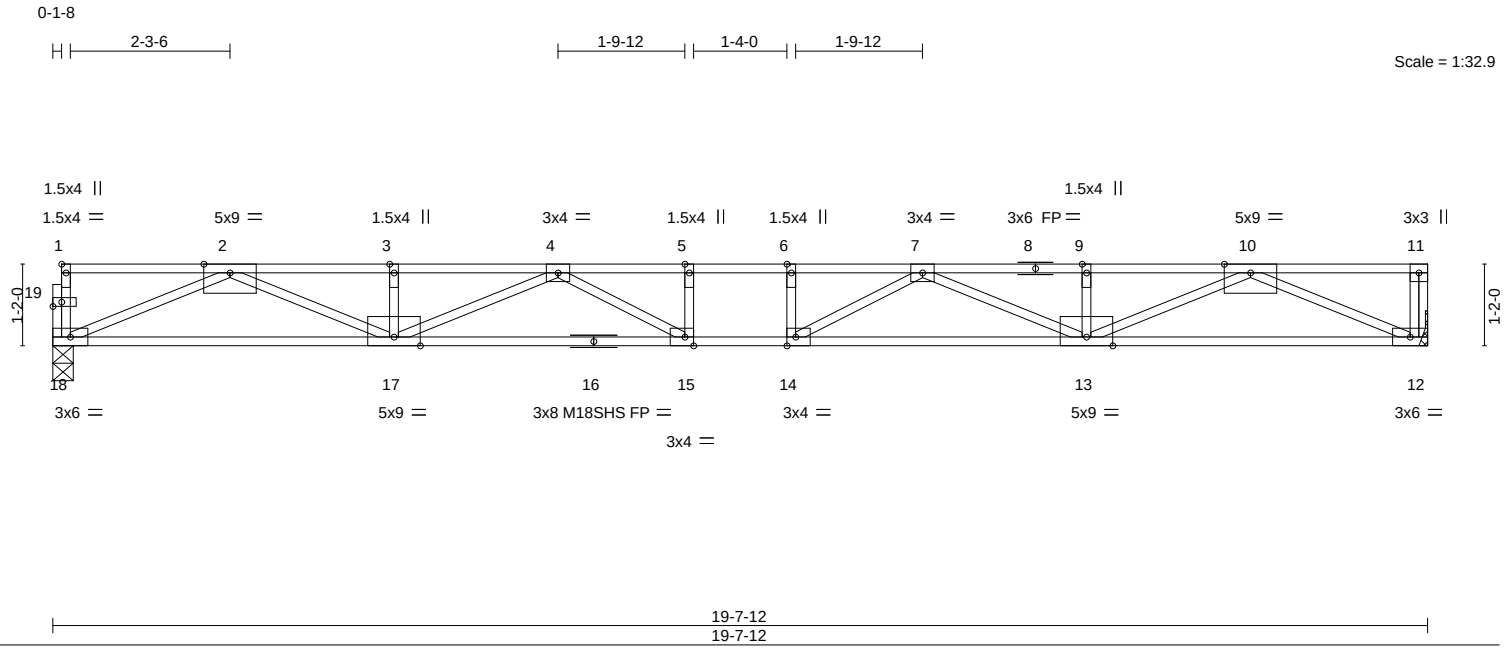


Plate Offsets (X,Y)-- [1:Edge,0-0-12], [14:0-1-8,Edge], [15:0-1-8,Edge], [19:0-1-8,0-0-12]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.74	Vert(LL)	-0.47	14-15	>498	480	MT20	197/144
TCDL	10.0	Lumber DOL	1.00	BC	0.91	Vert(CT)	-0.64	14-15	>363	360	M18SHS	244/190
BCLL	0.0	Rep Stress Incr	YES	WB	0.80	Horz(CT)	0.10	12	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 97 lb	FT = 20%F, 11%E

LUMBER-
TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2(flat)
BOT CHORD 2x4 SP No.1(flat)
WEBS 2x4 SP No.3(flat)

BRACING-
TOP CHORD Structural wood sheathing directly applied or 4-5-15 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.

REACTIONS. (size) 18=0-3-8, 12=Mechanical
Max Grav 18=1061(LC 1), 12=1067(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-3715/0, 3-4=-3715/0, 4-5=-4938/0, 5-6=-4938/0, 6-7=-4938/0, 7-9=-3714/0, 9-10=-3714/0
BOT CHORD 17-18=0/2186, 15-17=0/4617, 14-15=0/4938, 13-14=0/4617, 12-13=0/2188
WEBS 2-18=-2376/0, 10-12=-2385/0, 2-17=0/1673, 10-13=0/1670, 4-17=-987/0, 7-13=-988/0, 4-15=-104/715, 7-14=-105/715

NOTES-
1) Unbalanced floor live loads have been considered for this design.
2) As requested, plates have not been designed to provide for placement tolerances or rough handling and erection conditions. It is the responsibility of the fabricator to increase plate sizes to account for these factors.
3) All plates are MT20 plates unless otherwise indicated.
4) Refer to girder(s) for truss to truss connections.
5) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
6) CAUTION, Do not erect truss backwards.

March 22,2022

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

Job	Truss	Truss Type	Qty	Ply	22 PRINCE PLACE - FLOOR
30942-30942A	F4	Floor Supported Gable	1	1	I50904817
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.530 s Dec 6 2021 MiTek Industries, Inc. Mon Mar 21 19:20:48 2022 Page 1
ID:9qFVbj4pgi?1IMmT9WOAZfyxs_T-EUQX4ZZB_fliWy_pKnLMDOOV73oGWfYCaV?2OTzYcuT

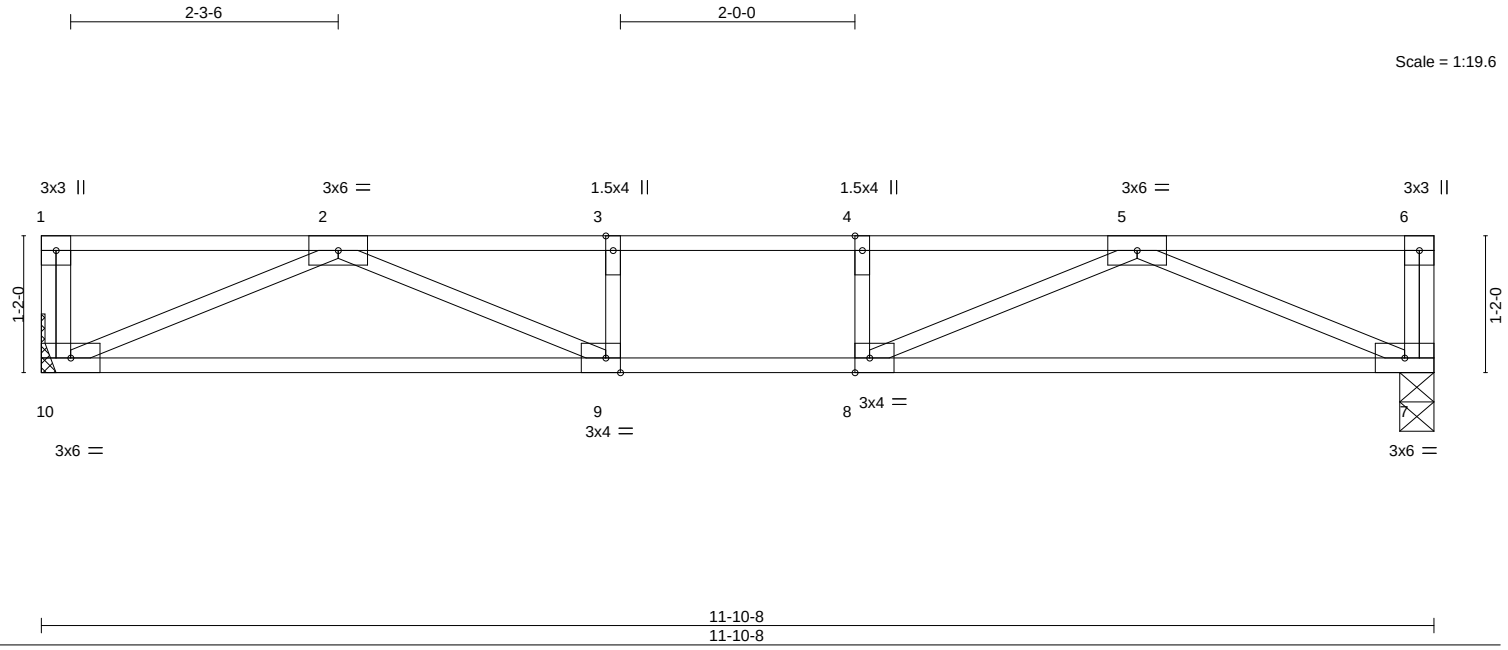


Plate Offsets (X,Y)-- [8:0-1-8,Edge], [9:0-1-8,Edge]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.52	Vert(LL)	-0.14	7-8	>970	480	MT20	197/144
TCDL	10.0	Lumber DOL	1.00	BC	0.65	Vert(CT)	-0.20	9-10	>686	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.35	Horz(CT)	0.02	7	n/a	n/a		
BCDL	5.0	Code IRC2015/TPI2014		Matrix-S							Weight: 58 lb	FT = 20%F, 11%E

LUMBER-
TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2(flat)
BOT CHORD 2x4 SP No.2 or 2x4 SPF No.2(flat)
WEBS 2x4 SP No.3(flat)

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. (size) 10=Mechanical, 7=0-3-8
Max Grav 10=639(LC 1), 7=639(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1767/0, 3-4=-1767/0, 4-5=-1767/0
BOT CHORD 9-10=0/1204, 8-9=0/1767, 7-8=0/1204
WEBS 2-10=-1312/0, 5-7=-1312/0, 2-9=0/708, 5-8=0/708

NOTES-
1) Unbalanced floor live loads have been considered for this design.
2) As requested, plates have not been designed to provide for placement tolerances or rough handling and erection conditions. It is the responsibility of the fabricator to increase plate sizes to account for these factors.
3) Refer to girder(s) for truss to truss connections.
4) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.

March 22,2022

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

Job	Truss	Truss Type	Qty	Ply	22 PRINCE PLACE - FLOOR
30942-30942A	F5	Floor	3	1	I50904818
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.530 s Dec 6 2021 MiTek Industries, Inc. Mon Mar 21 19:20:49 2022 Page 1
ID:9qFVbj4pgi?1IMmT9WOAZfyxs_T-ig_vIvZqlyQZ76Y?tUsblcxioTDGF9LLp9lcwwzYcuS

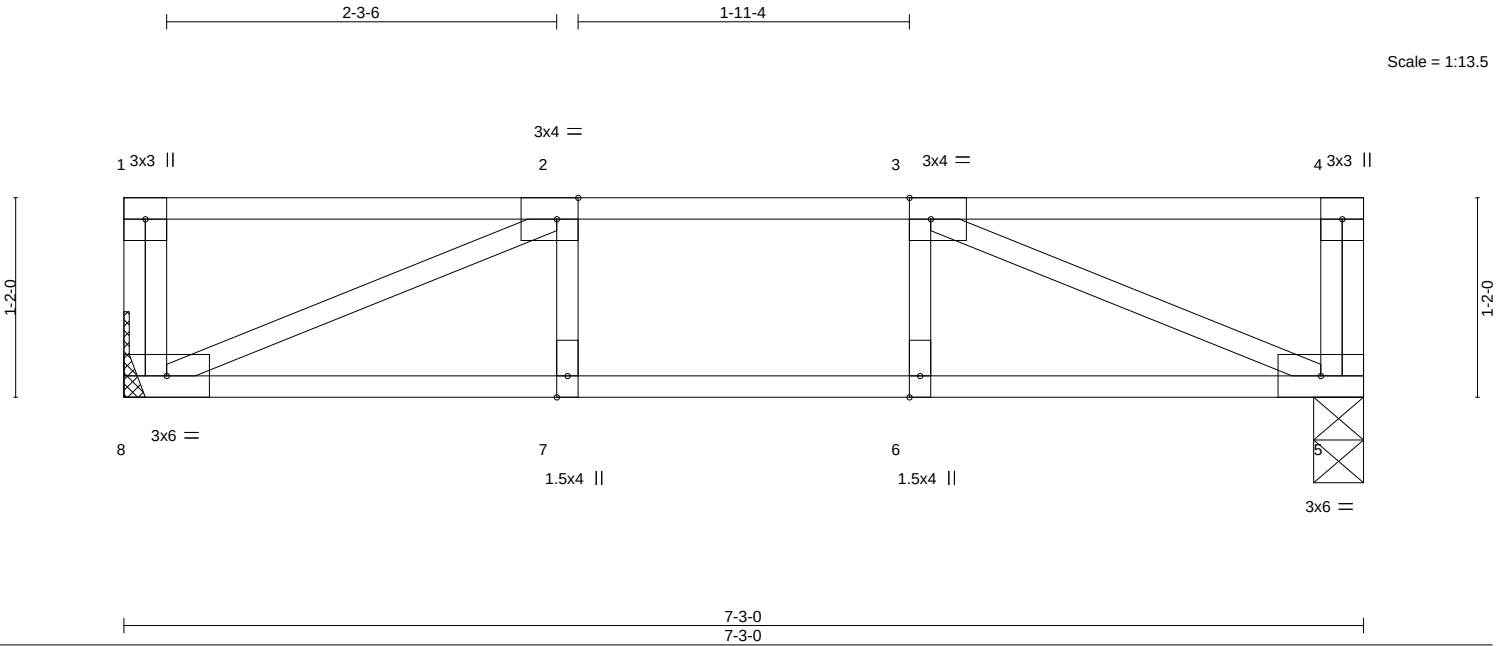


Plate Offsets (X,Y)-- [2:0-1-8,Edge], [3:0-1-8,Edge]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.40	Vert(LL)	-0.04	7-8	>999	480	MT20	197/144
TCDL	10.0	Lumber DOL	1.00	BC	0.34	Vert(CT)	-0.05	7-8	>999	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.18	Horz(CT)	0.01	5	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 37 lb	FT = 20%F, 11%E

LUMBER-
TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2(flat)
BOT CHORD 2x4 SP No.2 or 2x4 SPF No.2(flat)
WEBS 2x4 SP No.3(flat)

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. (size) 8=Mechanical, 5=0-3-8
Max Grav 8=385(LC 1), 5=385(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-641/0
BOT CHORD 7-8=0/641, 6-7=0/641, 5-6=0/641
WEBS 2-8=-695/0, 3-5=-695/0

NOTES-
1) Unbalanced floor live loads have been considered for this design.
2) As requested, plates have not been designed to provide for placement tolerances or rough handling and erection conditions. It is the responsibility of the fabricator to increase plate sizes to account for these factors.
3) Refer to girder(s) for truss to truss connections.
4) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.

March 22,2022

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

Job	Truss	Truss Type	Qty	Ply	22 PRINCE PLACE - FLOOR
30942-30942A	F6	Floor	2	1	I50904819
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.530 s Dec 6 2021 MiTek Industries, Inc. Mon Mar 21 19:20:50 2022 Page 1
ID:9qFVbj4pgi?1IMmT9WOAZfyxs_T-BtXHVEaSWGYQlG7CRCNqIpUtVtZo_cgU2pU9TMzYcuR

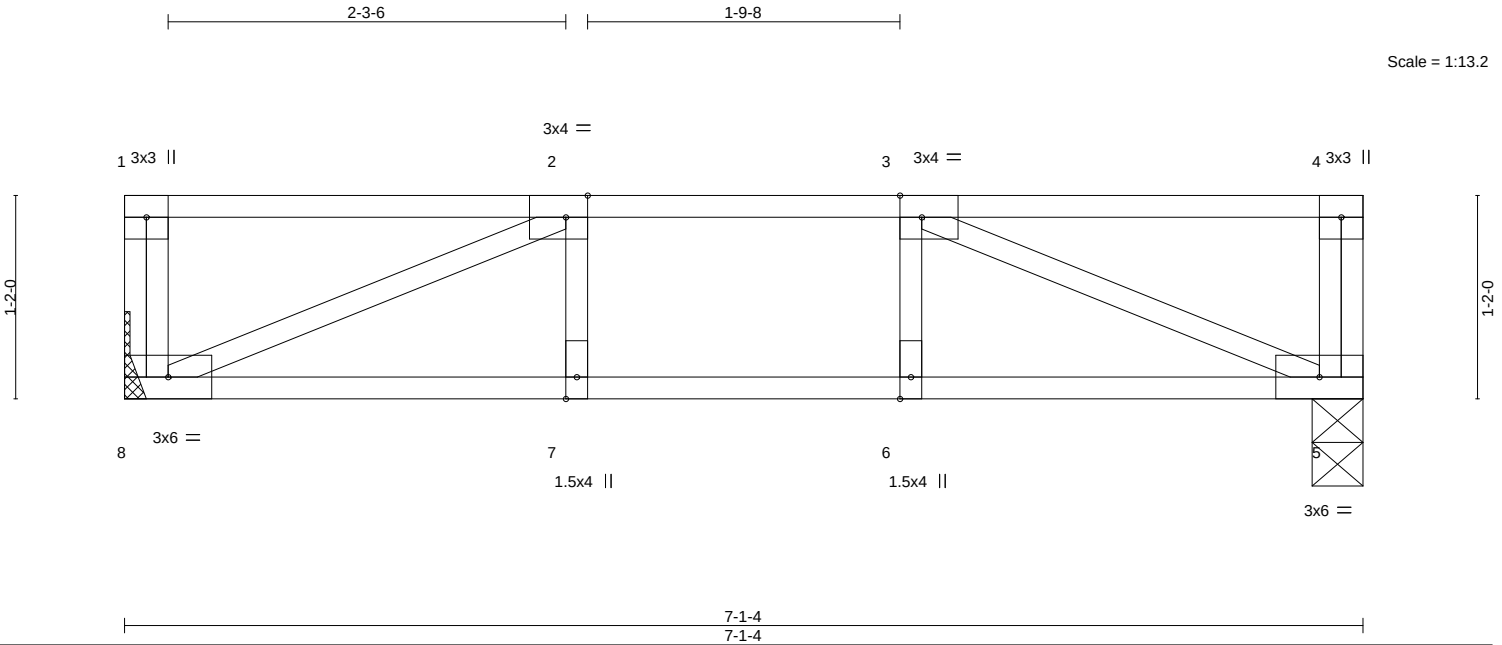


Plate Offsets (X,Y)-- [2:0-1-8,Edge], [3:0-1-8,Edge]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.40	Vert(LL)	-0.04	7-8	>999	480	MT20	197/144
TCDL	10.0	Lumber DOL	1.00	BC	0.32	Vert(CT)	-0.05	7-8	>999	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.18	Horz(CT)	0.01	5	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 37 lb	FT = 20%F, 11%E

LUMBER-
TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2(flat)
BOT CHORD 2x4 SP No.2 or 2x4 SPF No.2(flat)
WEBS 2x4 SP No.3(flat)

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. (size) 8=Mechanical, 5=0-3-8
Max Grav 8=377(LC 1), 5=377(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-620/0
BOT CHORD 7-8=0/620, 6-7=0/620, 5-6=0/620
WEBS 2-8=-673/0, 3-5=-673/0

NOTES-
1) Unbalanced floor live loads have been considered for this design.
2) As requested, plates have not been designed to provide for placement tolerances or rough handling and erection conditions. It is the responsibility of the fabricator to increase plate sizes to account for these factors.
3) Refer to girder(s) for truss to truss connections.
4) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.

March 22,2022

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

Job	Truss	Truss Type	Qty	Ply	22 PRINCE PLACE - FLOOR
30942-30942A	F7	Floor	1	1	I50904820
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.530 s Dec 6 2021 MiTek Industries, Inc. Mon Mar 21 19:20:50 2022 Page 1
ID:9qFVbj4pgi?1IMmT9WOAZfyxs_T-BtXHVEaSWGYQlG7CRCNqIpUtRtaC_crU2pU9TMzYcuR

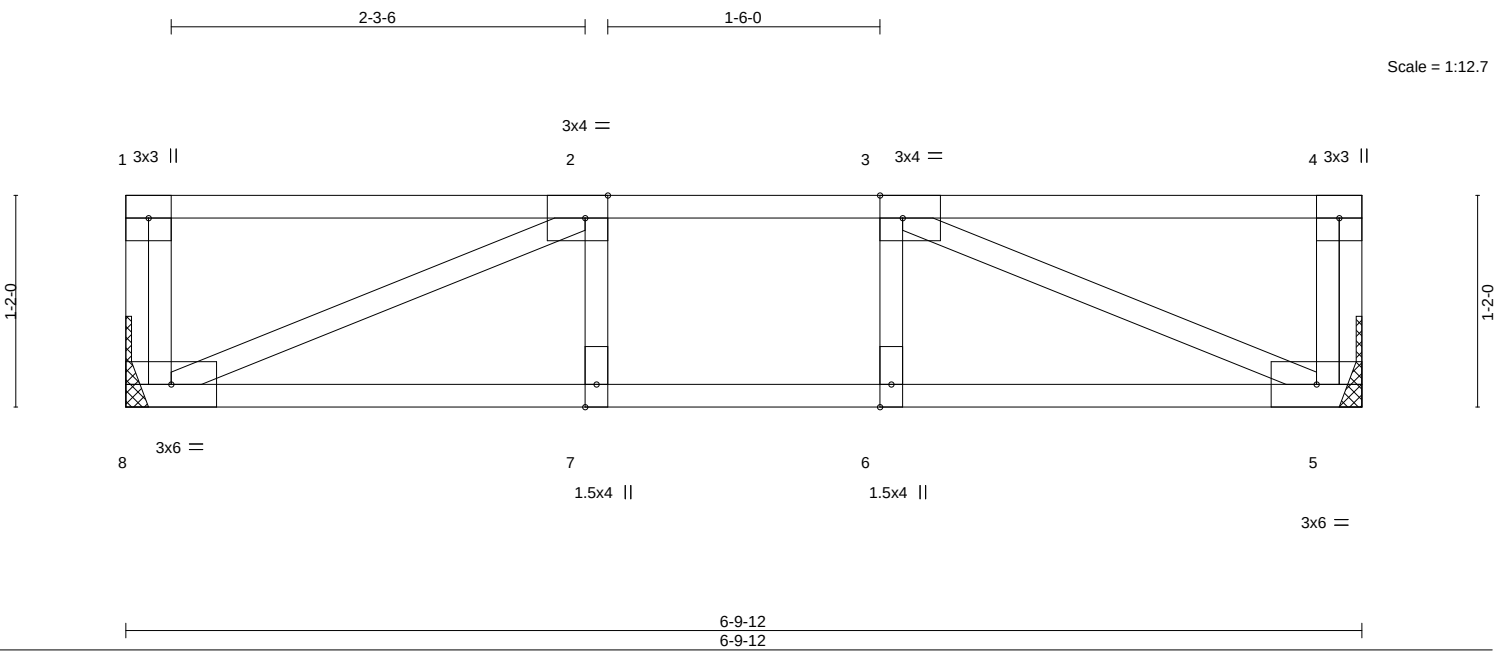


Plate Offsets (X,Y)-- [2:0-1-8,Edge], [3:0-1-8,Edge]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.41	Vert(LL)	-0.03	7-8	>999	480	MT20	197/144
TCDL	10.0	Lumber DOL	1.00	BC	0.30	Vert(CT)	-0.04	7-8	>999	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.17	Horz(CT)	0.01	5	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 36 lb	FT = 20%F, 11%E

LUMBER-
TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2(flat)
BOT CHORD 2x4 SP No.2 or 2x4 SPF No.2(flat)
WEBS 2x4 SP No.3(flat)

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. (size) 8=Mechanical, 5=Mechanical
Max Grav 8=361(LC 1), 5=361(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-579/0
BOT CHORD 7-8=0/579, 6-7=0/579, 5-6=0/579
WEBS 2-8=-629/0, 3-5=-629/0

NOTES-
1) Unbalanced floor live loads have been considered for this design.
2) As requested, plates have not been designed to provide for placement tolerances or rough handling and erection conditions. It is the responsibility of the fabricator to increase plate sizes to account for these factors.
3) Refer to girder(s) for truss to truss connections.
4) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.

March 22,2022

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

Job	Truss	Truss Type	Qty	Ply	22 PRINCE PLACE - FLOOR
30942-30942A	F8	Floor	2	1	I50904821
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.530 s Dec 6 2021 MiTek Industries, Inc. Mon Mar 21 19:20:51 2022 Page 1
ID:9qFVbj4pgi?1IMmT9WOAZfyxs_T-f35fjab4HagHNQiO?vu3r102CGwEj3?eHTEj?ozYcuQ

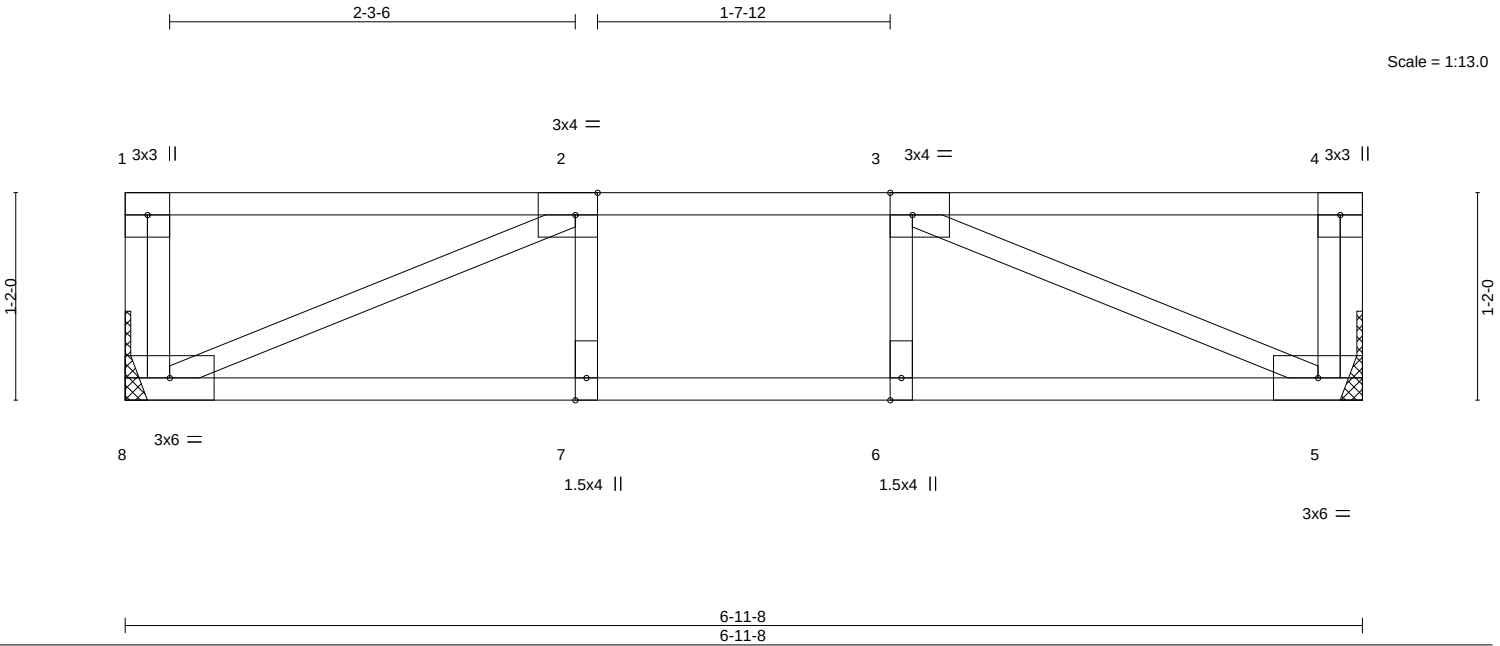


Plate Offsets (X,Y)-- [2:0-1-8,Edge], [3:0-1-8,Edge]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.41	Vert(LL)	-0.04	5-6	>999	480	MT20	197/144
TCDL	10.0	Lumber DOL	1.00	BC	0.31	Vert(CT)	-0.04	7-8	>999	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.17	Horz(CT)	0.01	5	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 36 lb	FT = 20%F, 11%E

LUMBER-
TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2(flat)
BOT CHORD 2x4 SP No.2 or 2x4 SPF No.2(flat)
WEBS 2x4 SP No.3(flat)

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. (size) 8=Mechanical, 5=Mechanical
Max Grav 8=369(LC 1), 5=369(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-599/0
BOT CHORD 7-8=0/599, 6-7=0/599, 5-6=0/599
WEBS 2-8=-650/0, 3-5=-650/0

NOTES-
1) Unbalanced floor live loads have been considered for this design.
2) As requested, plates have not been designed to provide for placement tolerances or rough handling and erection conditions. It is the responsibility of the fabricator to increase plate sizes to account for these factors.
3) Refer to girder(s) for truss to truss connections.
4) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.

March 22,2022

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

Job	Truss	Truss Type	Qty	Ply	22 PRINCE PLACE - FLOOR
30942-30942A	F9	Floor	1	1	I50904822
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.530 s Dec 6 2021 MiTek Industries, Inc. Mon Mar 21 19:20:52 2022 Page 1
ID:9qFVbj4pgi?1IMmT9WOAZfyxs_T-7Ff1wwci2to8_aHaZdPINEZGQgJLSY?nV7zGXFzYcuP

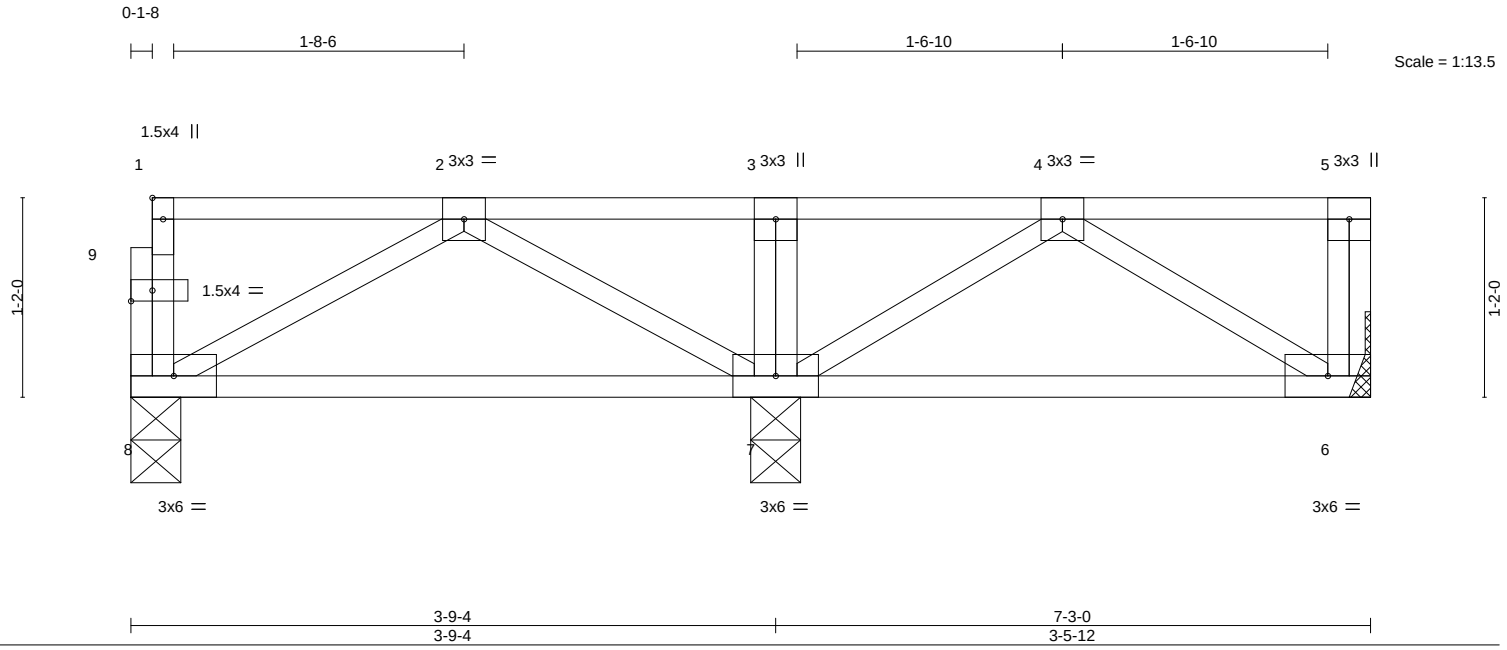


Plate Offsets (X,Y)-- [1:Edge,0-0-12], [9:0-1-8,0-0-12]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.18	Vert(LL)	0.00	7	****	480	MT20	197/144
TCDL	10.0	Lumber DOL	1.00	BC	0.13	Vert(CT)	-0.01	7-8	>999	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00	6	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-P							Weight: 40 lb	FT = 20%F, 11%E

LUMBER-
TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2(flat)
BOT CHORD 2x4 SP No.2 or 2x4 SPF No.2(flat)
WEBS 2x4 SP No.3(flat)

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

REACTIONS. (size) 8=0-3-8, 6=Mechanical, 7=0-3-8
Max Grav 8=173(LC 3), 6=164(LC 4), 7=449(LC 1)

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

NOTES-
1) Unbalanced floor live loads have been considered for this design.
2) As requested, plates have not been designed to provide for placement tolerances or rough handling and erection conditions. It is the responsibility of the fabricator to increase plate sizes to account for these factors.
3) Refer to girder(s) for truss to truss connections.
4) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
5) CAUTION, Do not erect truss backwards.

March 22,2022

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

Job	Truss	Truss Type	Qty	Ply	22 PRINCE PLACE - FLOOR
30942-30942A	F10	Floor	1	1	I50904823
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.530 s Dec 6 2021 MiTek Industries, Inc. Mon Mar 21 19:20:45 2022 Page 1
ID:9qFVbj4pgi?1IMmT9WOAZfyxs_T-qvkOSXWJhkw7fVFEefnfbmm47sv?JNLluXnOn9zYcuW

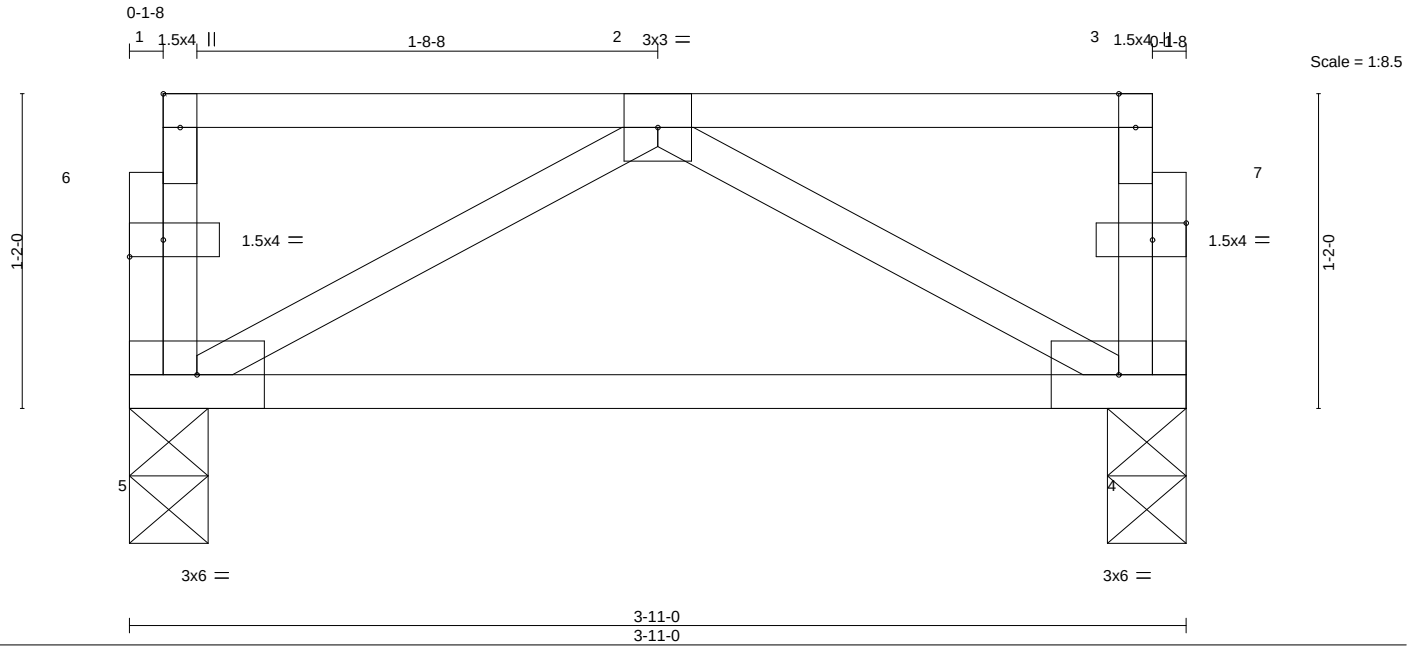


Plate Offsets (X,Y)-- [1:Edge,0-0-12], [6:0-1-8,0-0-12], [7:0-1-8,0-0-12]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.19	Vert(LL)	0.00	5	****	480	MT20	197/144
TCDL	10.0	Lumber DOL	1.00	BC	0.17	Vert(CT)	-0.03	4-5	>999	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.05	Horz(CT)	0.00	4	n/a	n/a		
BCDL	5.0	Code IRC2015/TPI2014		Matrix-P							Weight: 22 lb	FT = 20%F, 11%E

LUMBER-
TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2(flat)
BOT CHORD 2x4 SP No.2 or 2x4 SPF No.2(flat)
WEBS 2x4 SP No.3(flat)

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

REACTIONS. (size) 5=0-3-8, 4=0-3-8
Max Grav 5=195(LC 1), 4=195(LC 1)

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

NOTES-
1) As requested, plates have not been designed to provide for placement tolerances or rough handling and erection conditions. It is the responsibility of the fabricator to increase plate sizes to account for these factors.
2) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.

March 22,2022

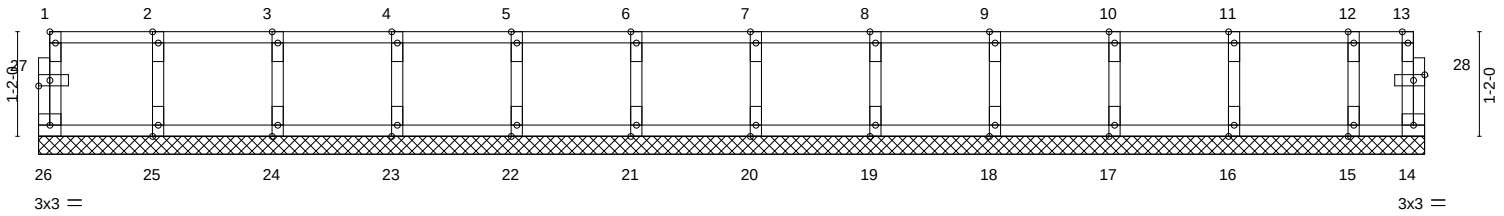
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	22 PRINCE PLACE - FLOOR
30942-30942A	KW1	Floor Supported Gable	1	1	I50904824
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.530 s Dec 6 2021 MiTek Industries, Inc. Mon Mar 21 19:20:52 2022 Page 1
ID:qQLROU_jpHRc_KII0y3GDMywmo5-7Ff1wwci2to8_aHaZdPINEZH2gK2SYRnV7zGXFzYcuP

0-1-8 0-1-8

Scale = 1:25.7



15-5-8
15-5-8

Plate Offsets (X,Y)-- [1:Edge,0-0-12], [27:0-1-8,0-0-12], [28:0-1-8,0-0-12]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.00	BC	0.02	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.03	Horz(CT)	0.00	14	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-R							Weight: 66 lb	FT = 20%F, 11%E

LUMBER-
TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2(flat)
BOT CHORD 2x4 SP No.2 or 2x4 SPF No.2(flat)
WEBS 2x4 SP No.3(flat)
OTHERS 2x4 SP No.3(flat)

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. All bearings 15-5-8.
(lb) - Max Grav All reactions 250 lb or less at joint(s) 26, 14, 25, 24, 23, 22, 21, 20, 19, 18, 17, 16, 15

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

NOTES-
1) As requested, plates have not been designed to provide for placement tolerances or rough handling and erection conditions. It is the responsibility of the fabricator to increase plate sizes to account for these factors.
2) All plates are 1.5x4 MT20 unless otherwise indicated.
3) Gable requires continuous bottom chord bearing.
4) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
5) Gable studs spaced at 1-4-0 oc.
6) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.

March 22,2022

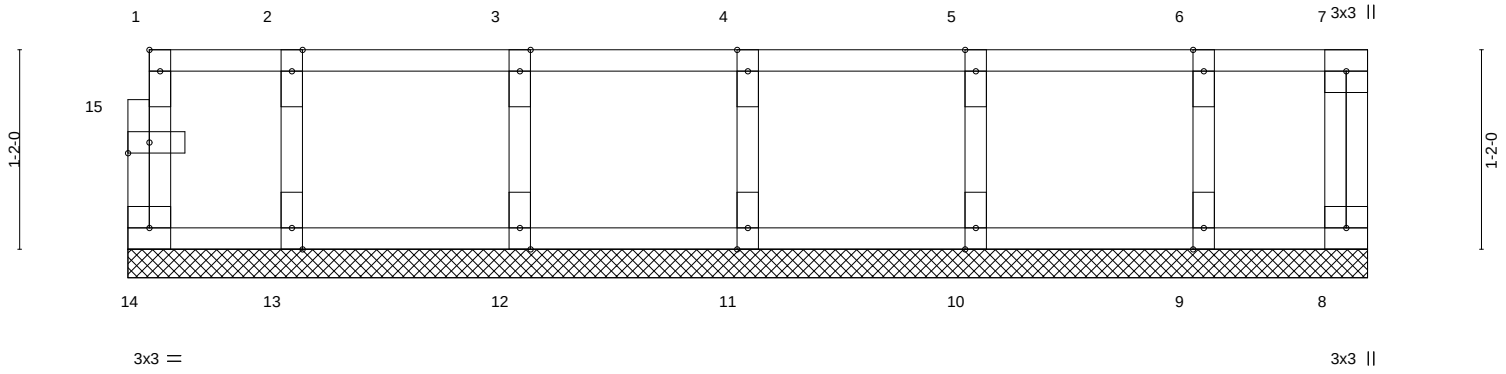
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	22 PRINCE PLACE - FLOOR
30942-30942A	KW2	GABLE	1	1	I50904825
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.530 s Dec 6 2021 MiTek Industries, Inc. Mon Mar 21 19:20:53 2022 Page 1
ID:qQLROU_jpHRc_KII0y3GDMywmo5-bRDQ8GdKpBw?cksn6KwXwS6Sp4gPB?hxknjp3hzYcuO

0-1-8

Scale = 1:13.5



0-11-8	2-3-8	3-7-8	4-11-8	6-3-8	7-3-0
0-11-8	1-4-0	1-4-0	1-4-0	1-4-0	0-11-8

Plate Offsets (X,Y)-- [1:Edge,0-0-12], [15:0-1-8,0-0-12]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.00	BC	0.01	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.03	Horz(CT)	0.00	8	n/a	n/a		
BCDL	5.0	Code IRC2015/TPI2014		Matrix-R							Weight: 33 lb	FT = 20%F, 11%E

LUMBER-

TOP CHORD	2x4 SP No.2 or 2x4 SPF No.2(flat)
BOT CHORD	2x4 SP No.2 or 2x4 SPF No.2(flat)
WEBS	2x4 SP No.3(flat)
OTHERS	2x4 SP No.3(flat)

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. All bearings 7-3-0.
(lb) - Max Grav All reactions 250 lb or less at joint(s) 14, 8, 11, 12, 13, 10, 9

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

NOTES-

1) As requested, plates have not been designed to provide for placement tolerances or rough handling and erection conditions. It is the responsibility of the fabricator to increase plate sizes to account for these factors.
2) All plates are 1.5x4 MT20 unless otherwise indicated.
3) Gable requires continuous bottom chord bearing.
4) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
5) Gable studs spaced at 1-4-0 oc.
6) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
7) CAUTION, Do not erect truss backwards.

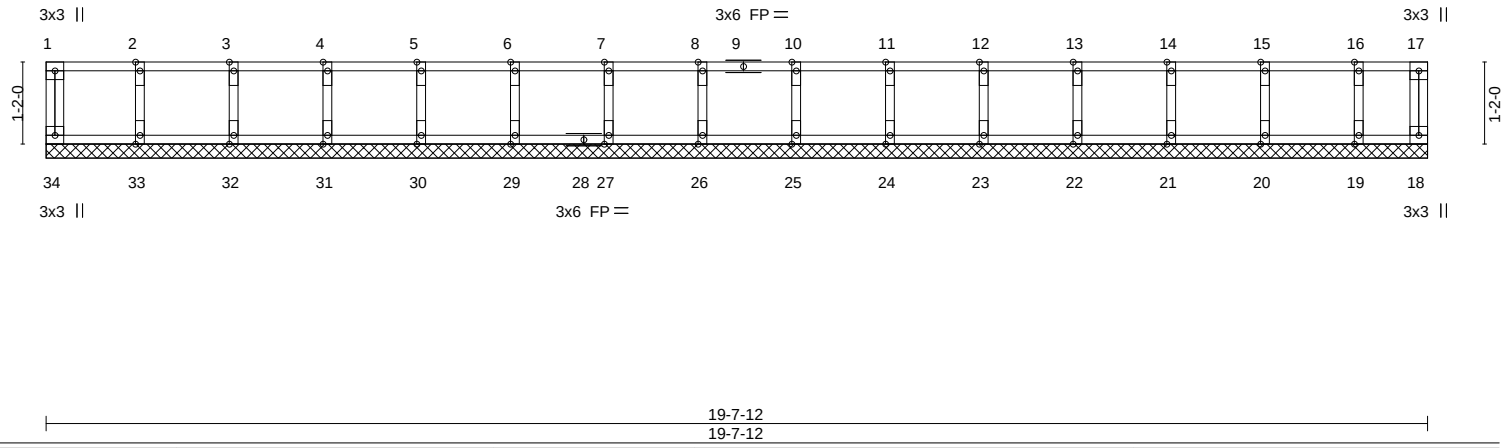
March 22,2022

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

Job	Truss	Truss Type	Qty	Ply	22 PRINCE PLACE - FLOOR
30942-30942A	KW3	Floor Supported Gable	1	1	I50904826
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.530 s Dec 6 2021 MiTek Industries, Inc. Mon Mar 21 19:20:54 2022 Page 1
ID:qQLROU_jpHRc_KIl0y3GDMywmo5-3enoLcdyZV2rEtRzg2SmSfedYU?ZwSx4zRSNc7zYcuN

Scale = 1:32.8



LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.00	BC	0.01	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.03	Horz(CT)	0.00	18	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-R							Weight: 83 lb	FT = 20%F, 11%E

LUMBER-

TOP CHORD	2x4 SP No.2 or 2x4 SPF No.2(flat)
BOT CHORD	2x4 SP No.2 or 2x4 SPF No.2(flat)
WEBS	2x4 SP No.3(flat)
OTHERS	2x4 SP No.3(flat)

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. All bearings 19-7-12.
(lb) - Max Grav All reactions 250 lb or less at joint(s) 34, 18, 33, 32, 31, 30, 29, 27, 26, 25, 24, 23, 22, 21, 20, 19

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

NOTES-

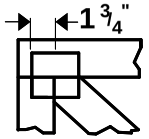
1) As requested, plates have not been designed to provide for placement tolerances or rough handling and erection conditions. It is the responsibility of the fabricator to increase plate sizes to account for these factors.
2) All plates are 1.5x4 MT20 unless otherwise indicated.
3) Gable requires continuous bottom chord bearing.
4) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
5) Gable studs spaced at 1-4-0 oc.
6) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.

March 22,2022

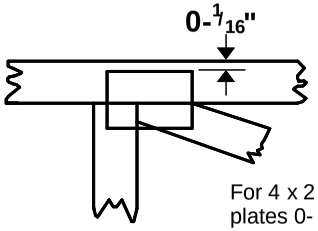
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Symbols

PLATE LOCATION AND ORIENTATION



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



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

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

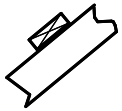
*** Plate location details available in MiTek 20/20 software or upon request.**

PLATE SIZE

4 x 4

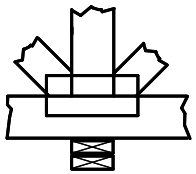
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



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

BEARING

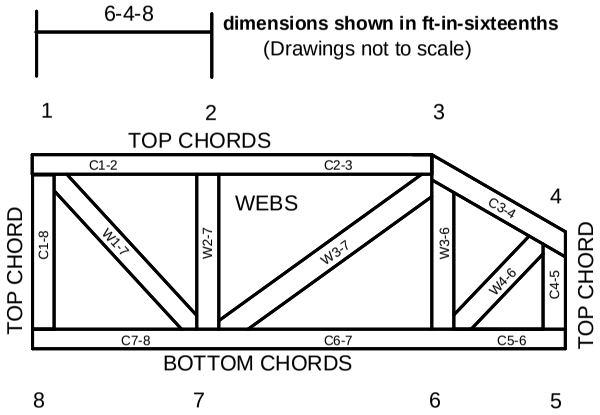


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/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.

MiTek Engineering Reference Sheet: MII-7473 rev. 5/19/2020

General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative Tor I bracing should be considered.
3. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
4. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
5. Cut members to bear tightly against each other.
6. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/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.