

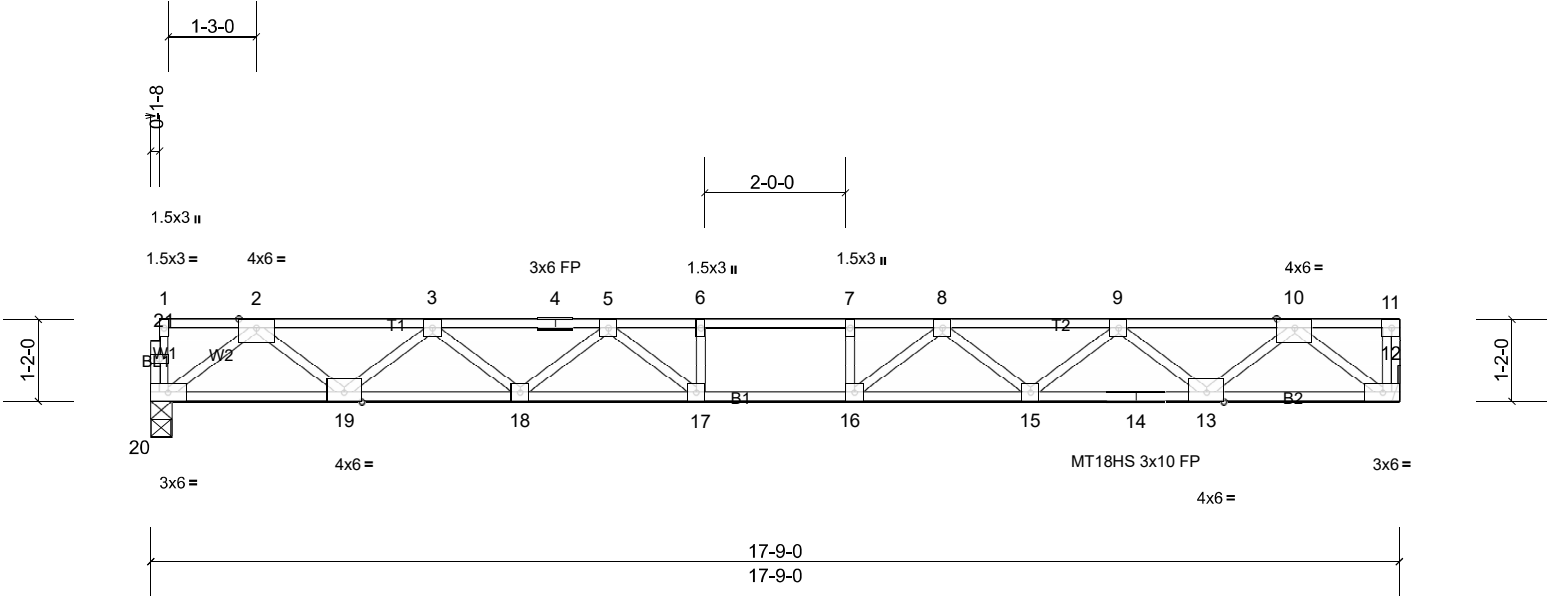
Job	Truss	Truss Type	Qty	Ply	Value Build Homes - Johnson 5-24-111
Q2301528-29	2F01	Floor	9	1	Job Reference (optional)

Carolina Structural Systems, Star, NC 27356, JSH

Run: 8.62 S Oct 13 2022 Print: 8.620 S Oct 13 2022 MiTek Industries, Inc. Thu Sep 28 14:14:55

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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	0.71	Vert(LL)	-0.30	16-17	>709	480	MT18HS 244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.84	Vert(CT)	-0.41	16-17	>517	360	MT20 244/190
BCLL	0.0	Rep Stress Incr	YES	WB	0.52	Horz(CT)	0.07	12	n/a	n/a	
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 88 lb FT = 20%F, 11%E

**LUMBER**

TOP CHORD 2x4 SP No.2(flat)  
 BOT CHORD 2x4 SP No.1(flat) \*Except\* B2:2x4 SP No.2 (flat)  
 WEBS 2x4 SP No.3(flat)  
 OTHERS 2x4 SP No.3(flat)

**BRACING**

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

**REACTIONS** (lb/size) 12=962/ Mechanical, (min. 0-1-8), 20=956/0-3-8, (min. 0-1-8)

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

TOP CHORD 2-3=-2029/0, 3-4=-3307/0, 4-5=-3307/0, 5-6=-3993/0, 6-7=-3993/0, 7-8=-3993/0, 8-9=-3307/0, 9-10=-2030/0  
 BOT CHORD 19-20=0/1196, 18-19=0/2829, 17-18=0/3756, 16-17=0/3993, 15-16=0/3756, 14-15=0/2828, 13-14=0/2828, 12-13=0/1197  
 WEBS 10-12=-1502/0, 2-20=-1498/0, 10-13=0/1084, 2-19=0/1084, 9-13=-1040/0, 3-19=-1041/0, 9-15=0/622, 3-18=0/623, 8-15=-585/0, 5-18=-584/0, 8-16=-79/638, 5-17=-79/638, 6-17=-283/0, 7-16=-283/0

**NOTES**

- 1) Unbalanced floor live loads have been considered for this design.
- 2) All plates are MT20 plates unless otherwise indicated.
- 3) All plates are 3x3 MT20 unless otherwise indicated.
- 4) Refer to girder(s) for truss to truss connections.
- 5) 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.
- 6) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 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.

**LOAD CASE(S)** Standard

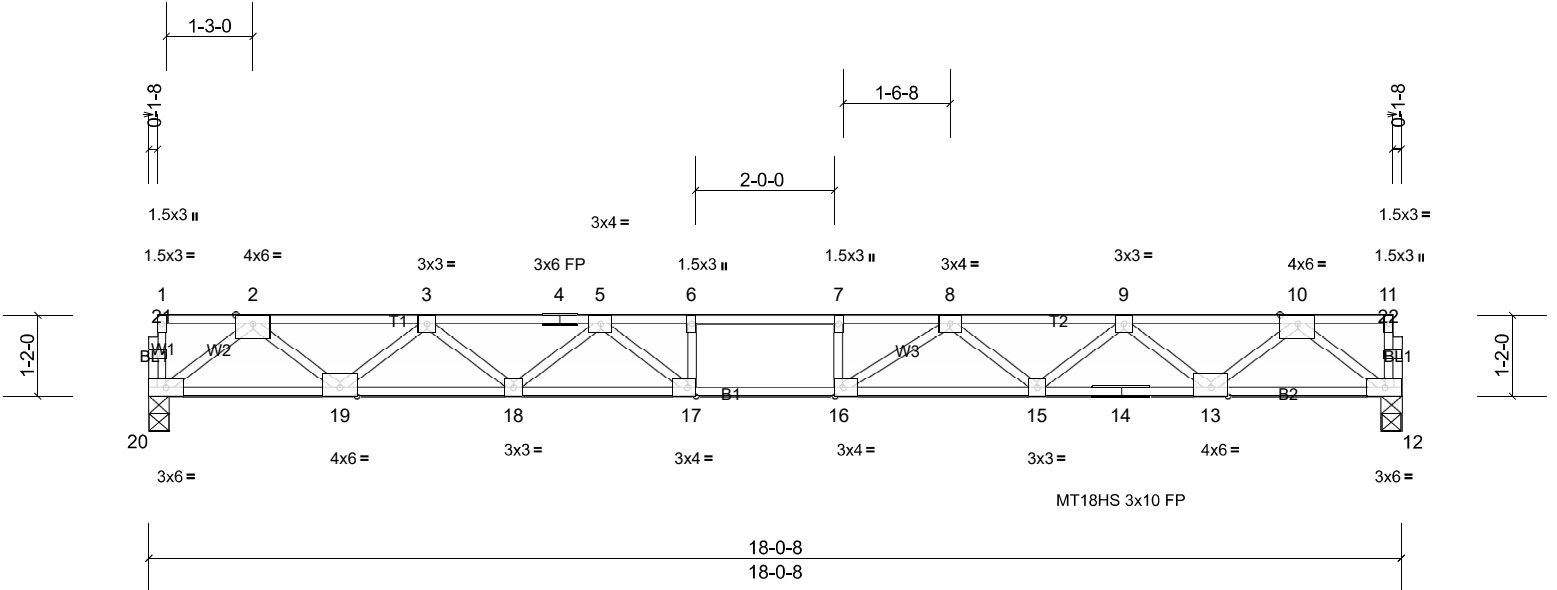
Job	Truss	Truss Type	Qty	Ply	Value Build Homes - Johnson 5-24-111
Q2301528-29	2F02	Floor	4	1	Job Reference (optional)

Carolina Structural Systems, Star, NC 27356, JSH

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Scale = 1:33.2

Plate Offsets (X, Y): [16:0-1-8,Edge], [17:0-1-8,Edge]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	I/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.80	Vert(LL)	-0.32	16	>669	480	MT18HS 244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.90	Vert(CT)	-0.44	16	>486	360	MT20 244/190
BCLL	0.0	Rep Stress Incr	YES	WB	0.53	Horz(CT)	0.07	12	n/a	n/a	
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 89 lb FT = 20%F, 11%E

**LUMBER**

TOP CHORD 2x4 SP No.2(flat)  
 BOT CHORD 2x4 SP No.1(flat) \*Except\* B2:2x4 SP No.2 (flat)  
 WEBS 2x4 SP No.3(flat)  
 OTHERS 2x4 SP No.3(flat)

**BRACING**

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

**REACTIONS** (lb/size) 12=972/0-3-8, (min. 0-1-8),  
 20=972/0-3-8, (min. 0-1-8)

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

TOP CHORD 2-3=-2070/0, 3-4=-3383/0, 4-5=-3383/0,  
 5-6=-4128/0, 6-7=-4128/0, 7-8=-4128/0,  
 8-9=-3390/0, 9-10=-2068/0  
 BOT CHORD 19-20=0/1217, 18-19=0/2888, 17-18=0/3855,  
 16-17=0/4128, 15-16=0/3855, 14-15=0/2888,  
 13-14=0/2888, 12-13=0/1217  
 WEBS 10-12=-1524/0, 2-20=-1524/0, 10-13=0/1108,  
 2-19=0/1110, 9-13=-1067/0, 3-19=-1065/0,  
 9-15=0/653, 3-18=0/644, 8-15=-605/0,  
 5-18=-614/0, 8-16=-71/673, 5-17=-60/683,  
 6-17=-299/0, 7-16=-259/0

**NOTES**

- 1) Unbalanced floor live loads have been considered for this design.
- 2) All plates are MT20 plates unless otherwise indicated.
- 3) 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.
- 4) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 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.

**LOAD CASE(S)** Standard

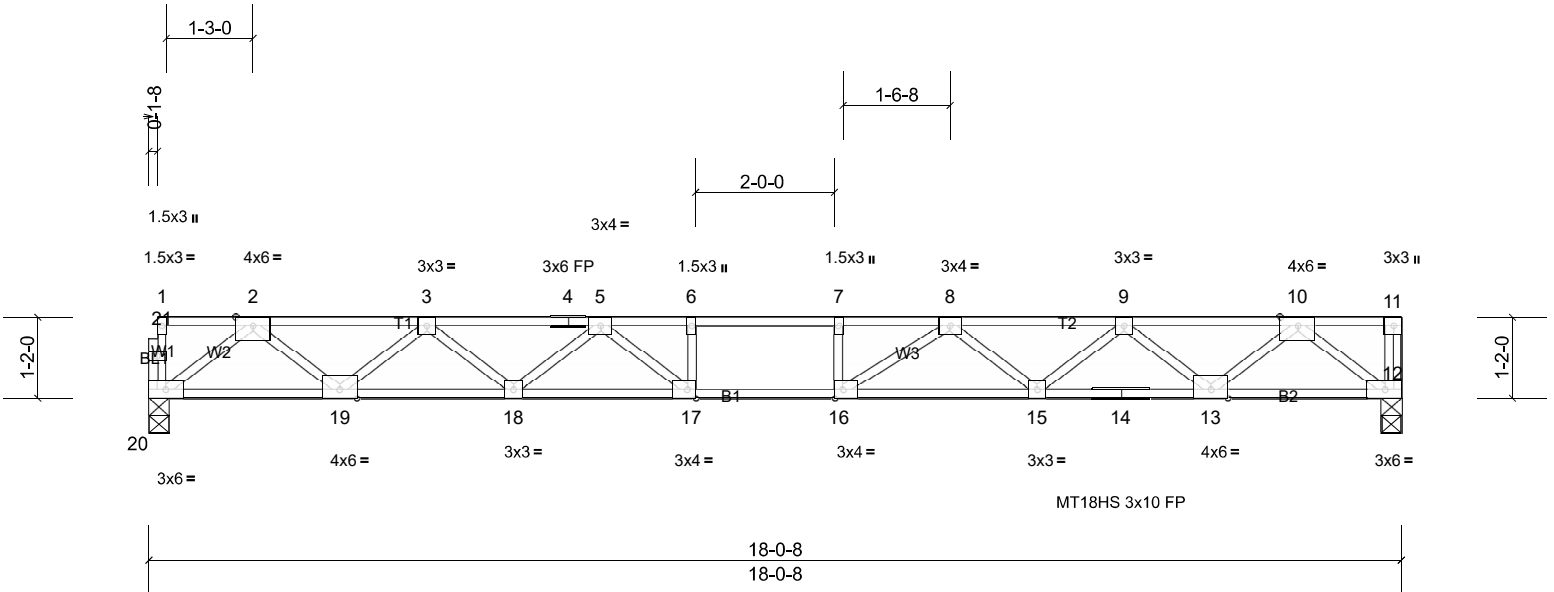
Job	Truss	Truss Type	Qty	Ply	Value Build Homes - Johnson 5-24-111
Q2301528-29	2F03	Floor	1	1	Job Reference (optional)

Carolina Structural Systems, Star, NC 27356, JSH

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Scale = 1:33.2

Plate Offsets (X, Y): [16:0-1-8,Edge], [17:0-1-8,Edge]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	I/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.80	Vert(LL)	-0.32	16	>669	480	MT18HS 244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.90	Vert(CT)	-0.44	16	>486	360	MT20 244/190
BCLL	0.0	Rep Stress Incr	YES	WB	0.53	Horz(CT)	0.07	12	n/a	n/a	
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 89 lb FT = 20%F, 11%E

**LUMBER**  
TOP CHORD 2x4 SP No.2(flat)  
BOT CHORD 2x4 SP No.1(flat) \*Except\* B2:2x4 SP No.2 (flat)  
WEBS 2x4 SP No.3(flat)  
OTHERS 2x4 SP No.3(flat)

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

**REACTIONS** (lb/size) 12=979/0-3-8, (min. 0-1-8), 20=972/0-3-8, (min. 0-1-8)

**FORCES** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-2070/0, 3-4=-3383/0, 4-5=-3383/0, 5-6=-4128/0, 6-7=-4128/0, 7-8=-4128/0, 8-9=-3390/0, 9-10=-2069/0  
BOT CHORD 19-20=0/1217, 18-19=0/2888, 17-18=0/3855, 16-17=0/4128, 15-16=0/3855, 14-15=0/2888, 13-14=0/2888, 12-13=0/1218  
WEBS 10-12=-1528/0, 2-20=-1524/0, 10-13=0/1107, 2-19=0/1110, 9-13=-1066/0, 3-19=-1065/0, 9-15=0/653, 3-18=0/644, 8-15=-605/0, 5-18=-614/0, 8-16=-71/673, 5-17=-60/683, 6-17=-299/0, 7-16=-259/0

- NOTES**
- 1) Unbalanced floor live loads have been considered for this design.
  - 2) All plates are MT20 plates unless otherwise indicated.
  - 3) 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.
  - 4) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 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.

**LOAD CASE(S)** Standard

Job	Truss	Truss Type	Qty	Ply	Value Build Homes - Johnson 5-24-111
Q2301528-29	2F04	Floor	2	1	Job Reference (optional)

Carolina Structural Systems, Star, NC 27356, JSH

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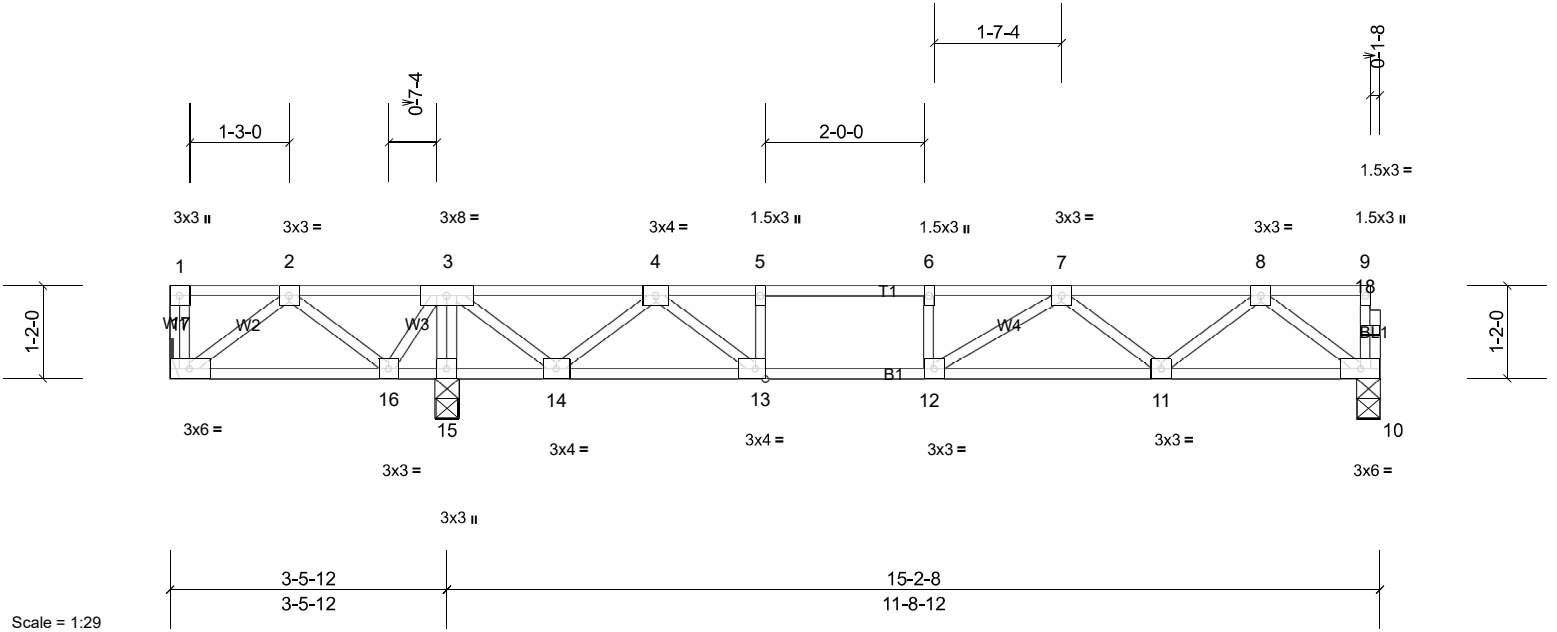


Plate Offsets (X, Y): [13:0-1-8,Edge]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in (loc)	I/defl	L/d	PLATES	GRIP		
TCLL	40.0	Plate Grip DOL	1.00	TC	0.70	Vert(LL)	-0.13	11-12	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.79	Vert(CT)	-0.18	11-12	>761	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.39	Horz(CT)	0.02	10	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 78 lb	FT = 20%F, 11%E

**LUMBER**

TOP CHORD 2x4 SP No.2(flat)  
 BOT CHORD 2x4 SP 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 6-0-0 oc bracing.

**REACTIONS** (lb/size) 10=596/0-3-8, (min. 0-1-8), 15=983/0-3-8, (min. 0-1-8), 17=60/Mechanical, (min. 0-1-8)  
 Max Uplift 17=69 (LC 4)  
 Max Grav 10=598 (LC 4), 15=983 (LC 1), 17=180 (LC 8)

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

TOP CHORD 2-3=-78/380, 3-4=-427/0, 4-5=-1493/0, 5-6=-1493/0, 6-7=-1493/0, 7-8=-1144/0  
 BOT CHORD 15-16=-559/23, 14-15=-545/31, 13-14=0/985, 12-13=0/1493, 11-12=0/1483, 10-11=0/733  
 WEBS 3-15=-938/0, 2-16=-371/0, 3-16=0/308, 8-10=-917/0, 8-11=0/534, 7-11=-442/0, 5-13=-304/0, 3-14=0/828, 4-14=-837/0, 4-13=0/679

**NOTES**

- 1) Unbalanced floor live loads have been considered for this design.
- 2) All plates are 3x3 MT20 unless otherwise indicated.
- 3) Refer to girder(s) for truss to truss connections.
- 4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 69 lb uplift at joint 17.
- 5) 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.
- 6) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 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.

**LOAD CASE(S)** Standard

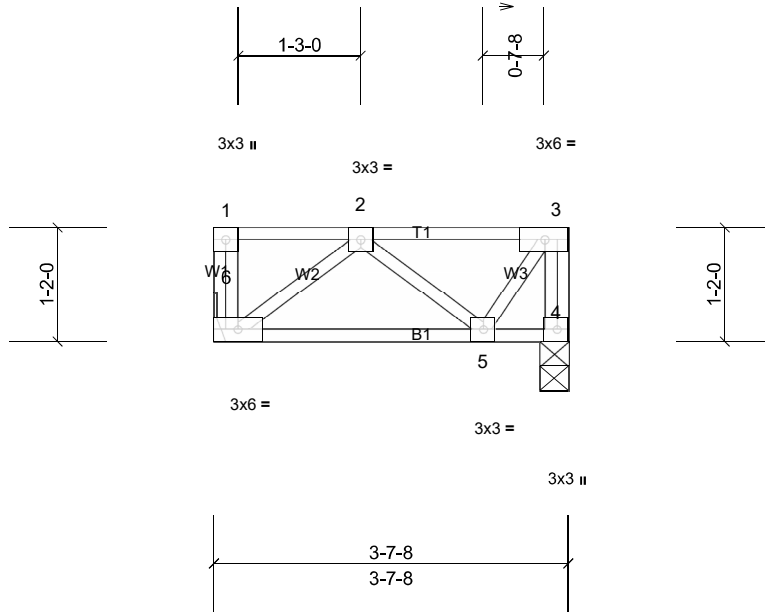
Job	Truss	Truss Type	Qty	Ply	Value Build Homes - Johnson 5-24-111
Q2301528-29	2F05	Floor	1	1	Job Reference (optional)

Carolina Structural Systems, Star, NC 27356, JSH

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Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	I/defl	L/d	PLATES	GRIP	
TCLL	40.0	Plate Grip DOL	1.00	TC	0.21	Vert(LL)	0.00	5	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.09	Vert(CT)	0.00	5-6	>999	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.06	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(flat)  
 BOT CHORD 2x4 SP No.2(flat)  
 WEBS 2x4 SP No.3(flat)

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 3-7-8 oc purlins, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (lb/size) 4=186/0-3-8, (min. 0-1-8), 6=186/Mechanical, (min. 0-1-8)

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

**NOTES**

- 1) Refer to girder(s) for truss to truss connections.
- 2) 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.
- 3) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 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.

**LOAD CASE(S)** Standard

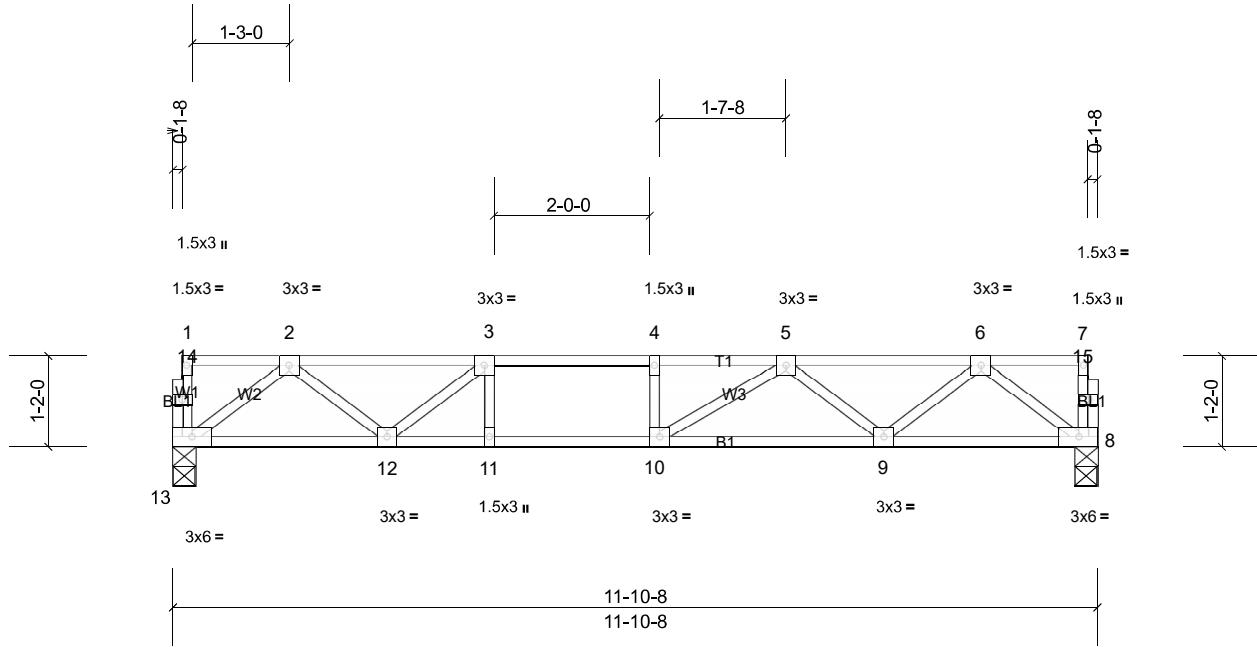
Job	Truss	Truss Type	Qty	Ply	Value Build Homes - Johnson 5-24-111
Q2301528-29	2F06	Floor	5	1	Job Reference (optional)

Carolina Structural Systems, Star, NC 27356, JSH

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Scale = 1:29.6

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	I/defl	L/d	PLATES	GRIP	
TCLL	40.0	Plate Grip DOL	1.00	TC	0.63	Vert(LL)	-0.14	9-10	>962	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.92	Vert(CT)	-0.19	9-10	>738	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.28	Horz(CT)	0.02	8	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 59 lb	FT = 20%F, 11%E

**LUMBER**

TOP CHORD 2x4 SP No.2(flat)  
 BOT CHORD 2x4 SP 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, Except:  
 2-2-0 oc bracing: 10-11.

**REACTIONS** (lb/size) 8=633/0-3-8, (min. 0-1-8),  
 13=633/0-3-8, (min. 0-1-8)

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

TOP CHORD 2-3=-1219/0, 3-4=-1722/0, 4-5=-1722/0,  
 5-6=-1227/0

BOT CHORD 12-13=0/761, 11-12=0/1722, 10-11=0/1722,  
 9-10=0/1615, 8-9=0/779

WEBS 6-8=-975/0, 2-13=-951/0, 6-9=0/583,  
 2-12=0/596, 5-9=-506/0, 3-12=-660/0,  
 5-10=-44/361

**NOTES**

- 1) Unbalanced floor live loads have been considered for this design.
- 2) 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.
- 3) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 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.

**LOAD CASE(S)** Standard

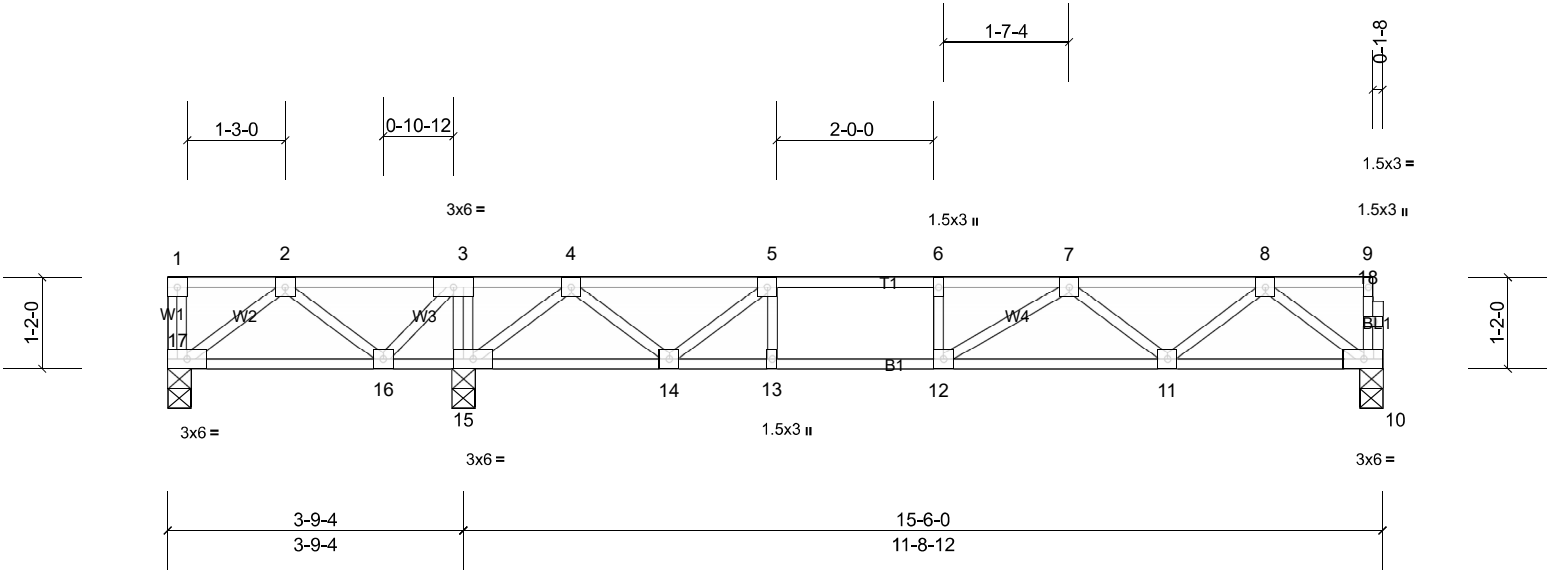
Job	Truss	Truss Type	Qty	Ply	Value Build Homes - Johnson 5-24-111
Q2301528-29	2F07	Floor	1	1	Job Reference (optional)

Carolina Structural Systems, Star, NC 27356, JSH

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Scale = 1:29.4

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in (loc)	I/defl	L/d	PLATES	GRIP		
TCLL	40.0	Plate Grip DOL	1.00	TC	0.64	Vert(LL)	-0.14	11-12	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.91	Vert(CT)	-0.19	11-12	>749	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.32	Horz(CT)	0.02	10	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 80 lb	FT = 20%F, 11%E

**LUMBER**

- TOP CHORD 2x4 SP No.2(flat)
- BOT CHORD 2x4 SP 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, Except:  
6-0-0 oc bracing: 16-17,15-16.

**REACTIONS**

- (lb/size) 10=590/0-3-8, (min. 0-1-8),  
15=1014/0-3-8, (min. 0-1-8),  
17=67/0-3-8, (min. 0-1-8)
- Max Uplift 17=-72 (LC 4)
- Max Grav 10=592 (LC 4), 15=1014 (LC 1),  
17=197 (LC 8)

**FORCES**

- (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
- TOP CHORD 2-3=-109/375, 3-4=-34/643, 4-5=-871/0,  
5-6=-1467/0, 6-7=-1467/0, 7-8=-1129/0
- BOT CHORD 15-16=-643/34, 14-15=0/422, 13-14=0/1467,  
12-13=0/1467, 11-12=0/1462, 10-11=0/726
- WEBS 3-15=-459/0, 8-10=-908/0, 4-15=-980/0,  
8-11=0/525, 4-14=0/668, 7-11=-433/0,  
5-14=-768/0, 2-16=-404/0, 3-16=0/384

**NOTES**

- Unbalanced floor live loads have been considered for this design.
- All plates are 3x3 MT20 unless otherwise indicated.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 72 lb uplift at joint 17.
- 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.
- Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 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.
- CAUTION, Do not erect truss backwards.

**LOAD CASE(S)** Standard

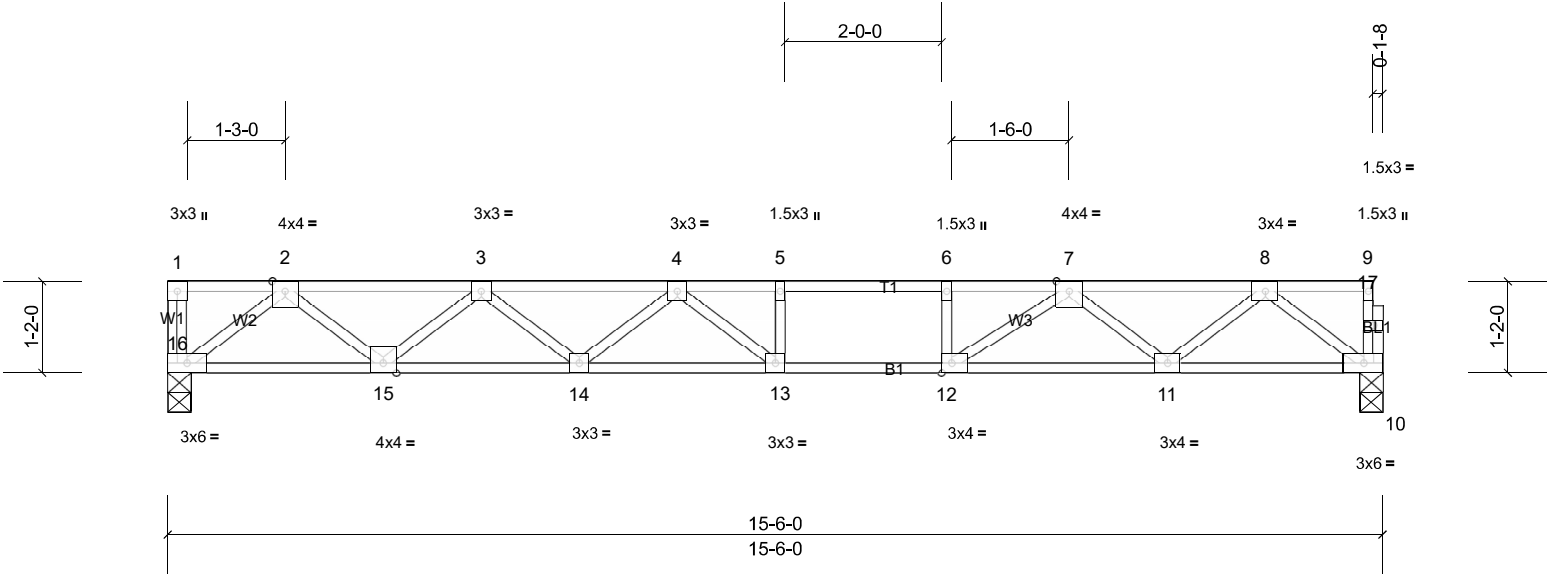
Job	Truss	Truss Type	Qty	Ply	Value Build Homes - Johnson 5-24-111
Q2301528-29	2F08	Floor	1	1	Job Reference (optional)

Carolina Structural Systems, Star, NC 27356, JSH

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Scale = 1:29.4

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	I/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	Vert(LL)	-0.25	13-14	>732	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	Vert(CT)	-0.34	13-14	>538	360		
BCLL	0.0	Rep Stress Incr	YES	WB	Horz(CT)	0.05	10	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(flat)  
 BOT CHORD 2x4 SP No.1(flat)  
 WEBS 2x4 SP No.3(flat)  
 OTHERS 2x4 SP No.3(flat)

**BRACING**

TOP CHORD Structural wood sheathing directly applied, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:  
 2-2-0 oc bracing: 13-14.

**REACTIONS** (lb/size) 10=833/0-3-8, (min. 0-1-8),  
 16=839/0-3-8, (min. 0-1-8)

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

TOP CHORD 2-3=-1714/0, 3-4=-2721/0, 4-5=-2956/0,  
 5-6=-2956/0, 6-7=-2956/0, 7-8=-1695/0  
 BOT CHORD 15-16=0/1034, 14-15=0/2372, 13-14=0/2995,  
 12-13=0/2956, 11-12=0/2354, 10-11=0/1037  
 WEBS 8-10=-1299/0, 2-16=-1297/0, 8-11=0/857,  
 2-15=0/886, 7-11=-857/0, 3-15=-857/0,  
 3-14=0/453, 4-14=-357/0, 7-12=0/882,  
 4-13=-272/346, 6-12=-335/0

**NOTES**

- 1) Unbalanced floor live loads have been considered for this design.
- 2) 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.
- 3) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 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.
- 4) CAUTION, Do not erect truss backwards.

**LOAD CASE(S)** Standard



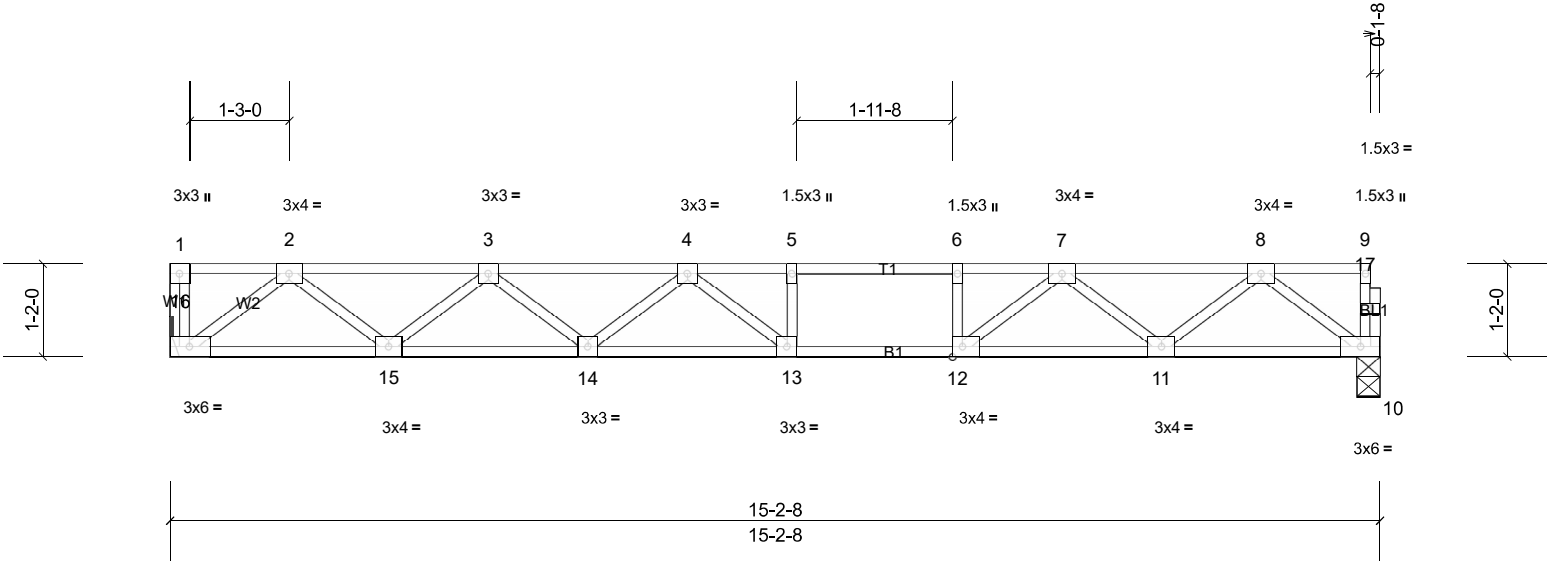
Job	Truss	Truss Type	Qty	Ply	Value Build Homes - Johnson 5-24-111
Q2301528-29	2F09	Floor	5	1	Job Reference (optional)

Carolina Structural Systems, Star, NC 27356, JSH

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Scale = 1:29

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	I/defl	L/d	PLATES	GRIP	
TCLL	40.0	Plate Grip DOL	1.00	TC	0.97	Vert(LL)	-0.24	13-14	>757	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.92	Vert(CT)	-0.32	13-14	>552	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.41	Horz(CT)	0.04	10	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S								
											Weight: 76 lb	FT = 20%F, 11%E

**LUMBER**

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

**BRACING**

TOP CHORD Structural wood sheathing directly applied, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:  
 2-2-0 oc bracing: 13-14.

**REACTIONS** (lb/size) 10=816/0-3-8, (min. 0-1-8),  
 16=823/ Mechanical, (min. 0-1-8)

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

TOP CHORD 2-3=-1674/0, 3-4=-2644/0, 4-5=-2828/0,  
 5-6=-2828/0, 6-7=-2828/0, 7-8=-1653/0  
 BOT CHORD 15-16=0/1013, 14-15=0/2313, 13-14=0/2897,  
 12-13=0/2828, 11-12=0/2299, 10-11=0/1016  
 WEBS 8-10=-1272/0, 2-16=-1270/0, 8-11=0/829,  
 2-15=0/860, 7-11=-841/0, 3-15=-833/0,  
 7-12=0/835, 3-14=0/430, 4-14=-330/0,  
 4-13=-290/308, 6-12=-360/0

**NOTES**

- 1) Unbalanced floor live loads have been considered for this design.
- 2) Refer to girder(s) for truss to truss connections.
- 3) 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.
- 4) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 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.

**LOAD CASE(S)** Standard

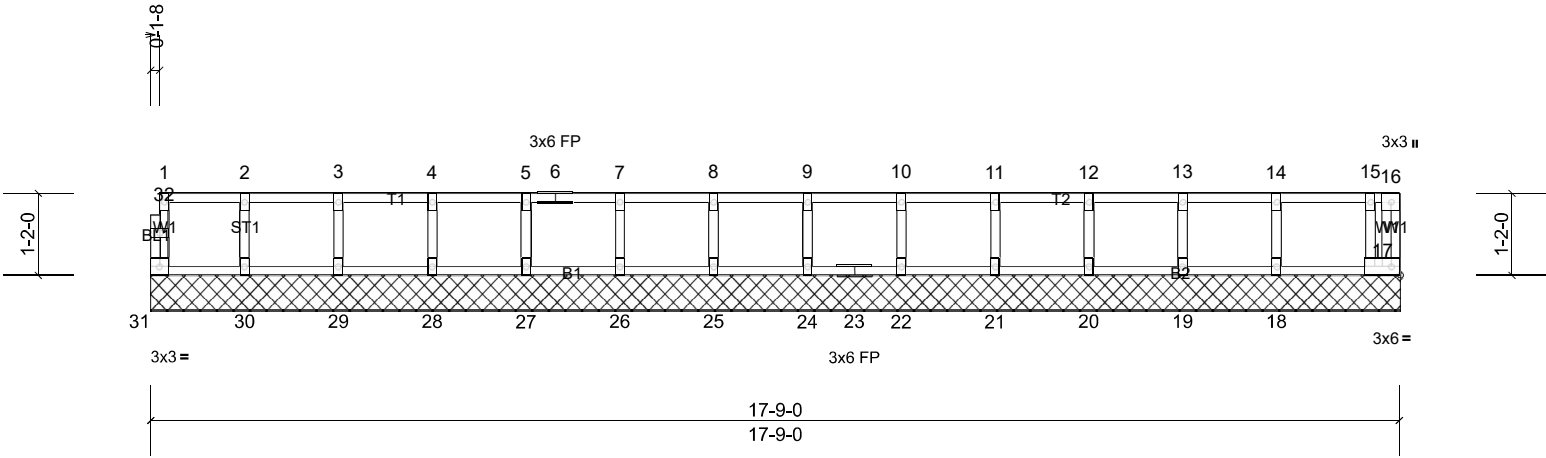
Job	Truss	Truss Type	Qty	Ply	Value Build Homes - Johnson 5-24-111
Q2301528-29	2K01	Floor Supported Gable	2	1	Job Reference (optional)

Carolina Structural Systems, Star, NC 27356, JSH

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Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	I/defl	L/d	PLATES	GRIP	
TCLL	40.0	Plate Grip DOL	1.00	TC	0.09	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.03	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.03	Horiz(TL)	n/a	-	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-R							Weight: 75 lb	FT = 20%F, 11%E

**LUMBER**

TOP CHORD 2x4 SP No.2(flat)  
 BOT CHORD 2x4 SP 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 17-9-0.

(lb) - Max Grav All reactions 250 (lb) or less at joint  
 (s) 17, 18, 19, 20, 21, 22, 24, 25,  
 26, 27, 28, 29, 30, 31

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

**NOTES**

- All plates are 1.5x3 MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- Gable studs spaced at 1-4-0 oc.
- 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.
- Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 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.
- CAUTION, Do not erect truss backwards.

**LOAD CASE(S)** Standard

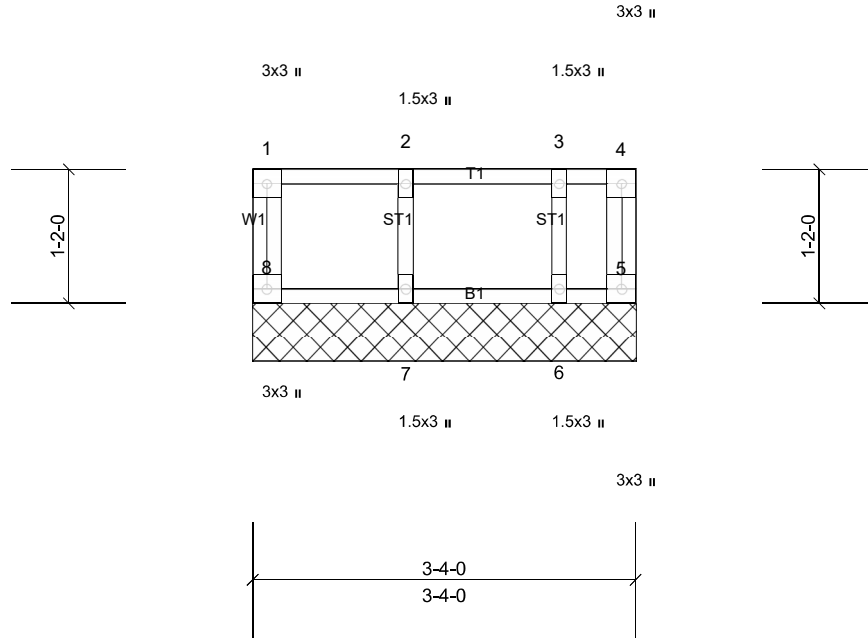
Job Q2301528-29	Truss 2K02	Truss Type Floor Supported Gable	Qty 1	Ply 1	Value Build Homes - Johnson 5-24-111 Job Reference (optional)
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Carolina Structural Systems, Star, NC 27356, JSH

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Scale = 1:20.1

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	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.02	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.03	Horiz(TL)	n/a	-	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-R							Weight: 18 lb	FT = 20%F, 11%E

**LUMBER**

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

**BRACING**

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

**REACTIONS** All bearings 3-4-0.

(lb) - Max Grav All reactions 250 (lb) or less at joint (s) 5, 6, 7, 8

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

**NOTES**

- Gable requires continuous bottom chord bearing.
- Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- Gable studs spaced at 1-4-0 oc.
- 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.
- Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 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.

**LOAD CASE(S)** Standard

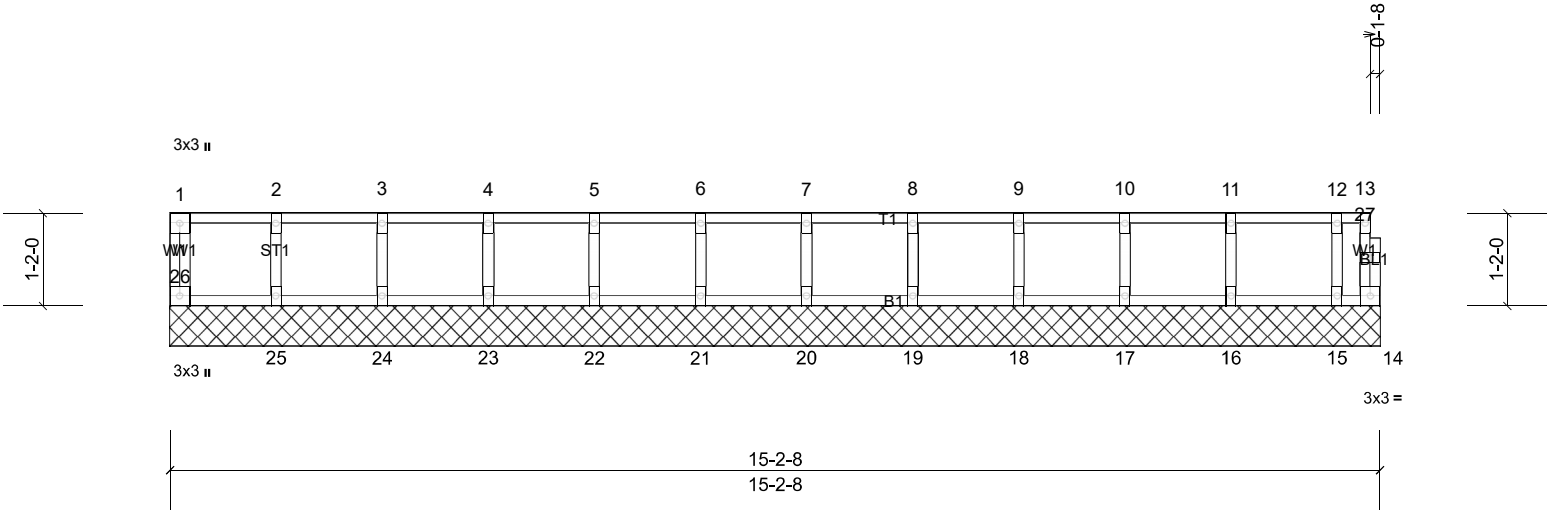
Job	Truss	Truss Type	Qty	Ply	Value Build Homes - Johnson 5-24-111
Q2301528-29	2K09	Floor Supported Gable	1	1	Job Reference (optional)

Carolina Structural Systems, Star, NC 27356, JSH

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Scale = 1:29

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	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.02	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.03	Horiz(TL)	n/a	-	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-R							Weight: 65 lb	FT = 20%F, 11%E

**LUMBER**

- TOP CHORD 2x4 SP No.2(flat)
- BOT CHORD 2x4 SP 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 15-2-8.

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

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

**NOTES**

- All plates are 1.5x3 MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- Gable studs spaced at 1-4-0 oc.
- 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.
- Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 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.
- CAUTION, Do not erect truss backwards.

**LOAD CASE(S)** Standard

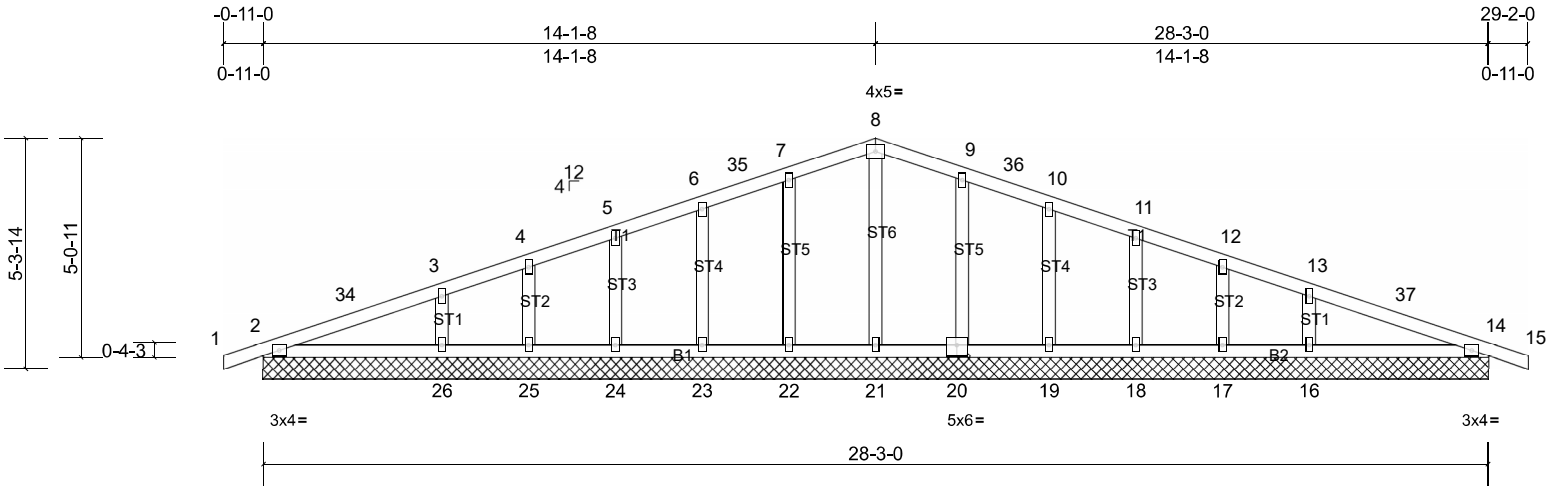
Job	Truss	Truss Type	Qty	Ply	Value Build Homes - Johnson 5-24-111
Q2301528-29	A01	Common Supported Gable	2	1	Job Reference (optional)

Carolina Structural Systems, Star, NC 27356, JSH

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Scale = 1:53.2

Plate Offsets (X, Y): [20:0-3-0,0-3-0]

Loading	(psf)	Spacing	1-11-4	CSI	DEFL	in	(loc)	I/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.14	Vert(LL)	n/a	-	n/a	999	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.13	Vert(CT)	n/a	-	n/a	999	
BCLL	0.0*	Rep Stress Incr	YES	WB	0.05	Horz(CT)	0.00	16	n/a	n/a	
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS							
										Weight: 133 lb	FT = 20%

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

**BRACING**  
 TOP CHORD Structural wood sheathing directly applied.  
 BOT CHORD Rigid ceiling directly applied.

**REACTIONS** All bearings 28-3-0.  
 (lb) - Max Horiz 2=-46 (LC 10), 27=-46 (LC 10)  
 Max Uplift All uplift 100 (lb) or less at joint(s)  
 2, 14, 16, 17, 18, 19, 20, 22, 23,  
 24, 25, 26, 27, 31  
 Max Grav All reactions 250 (lb) or less at joint  
 (s) 2, 14, 17, 18, 19, 20, 21, 22, 23,  
 24, 25, 27, 31 except 16=313 (LC  
 22), 26=313 (LC 21)

**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 (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=28ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Corner (3) -0-11-0 to 2-1-0, Exterior (2) 2-1-0 to 14-1-8, Corner (3) 14-1-8 to 17-1-8, Exterior (2) 17-1-8 to 29-2-0 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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.

- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint (s) 2, 22, 23, 24, 25, 26, 20, 19, 18, 17, 16, 14, 2, 14.
- 10) 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.
- 11) 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.

**LOAD CASE(S)** Standard

Job Q2301528-29	Truss A02	Truss Type Common	Qty 5	Ply 1	Value Build Homes - Johnson 5-24-111 Job Reference (optional)
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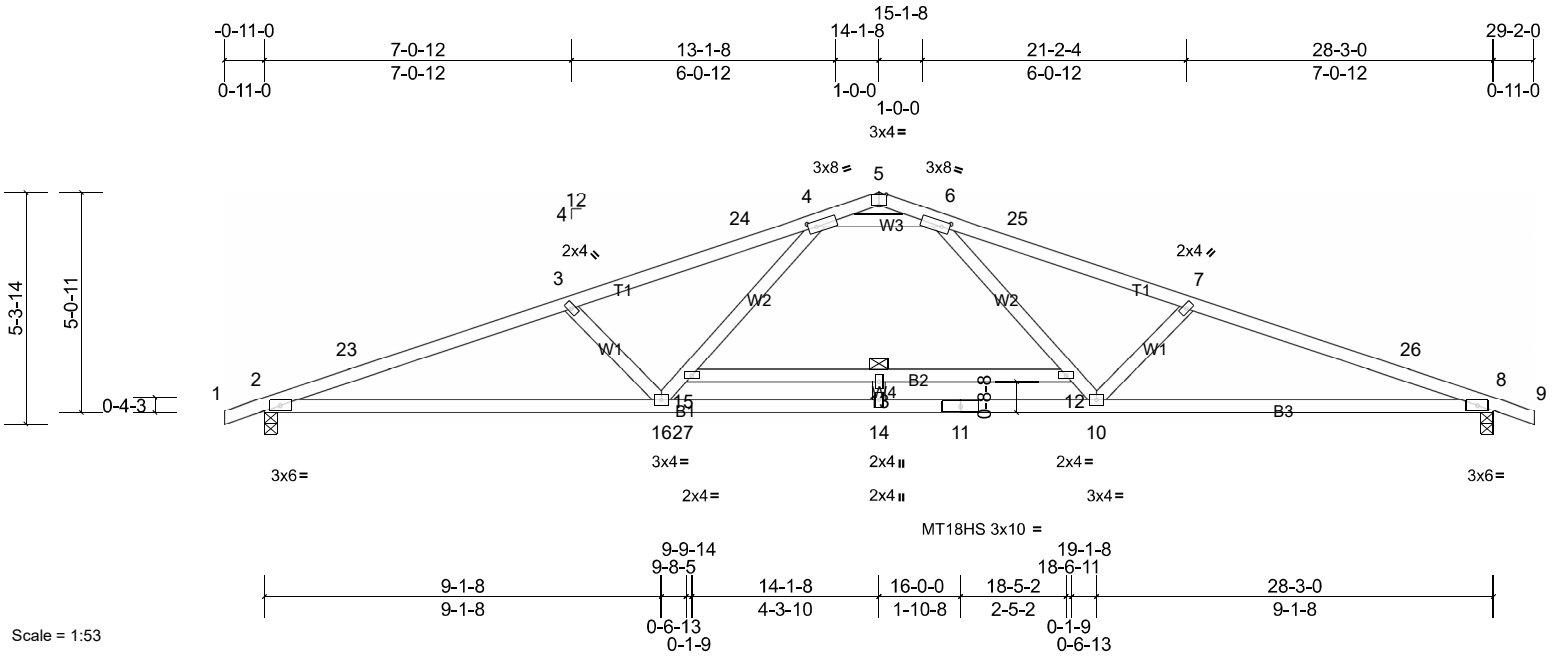


Plate Offsets (X, Y): [4:0-2-4,0-1-8], [5:0-2-0,Edge], [6:0-2-4,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	Vert(LL)	-0.36	13	>934	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	Vert(CT)	-0.78	13	>434	240	MT18HS	244/190
BCLL	0.0*	Rep Stress Incr	YES	WB	Horz(CT)	0.09	8	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS	Wind(LL)	0.09	15	>999	240	Weight: 133 lb	FT = 20%

**LUMBER**  
 TOP CHORD 2x4 SP No.2  
 BOT CHORD 2x4 SP No.1 \*Except\* B2:2x4 SP No.2  
 WEBS 2x4 SP No.3

7) 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.

**BRACING**  
 TOP CHORD Structural wood sheathing directly applied.  
 BOT CHORD Rigid ceiling directly applied. Except:  
 6-0-0 oc bracing: 12-15

**LOAD CASE(S)** Standard

**REACTIONS** (lb/size) 2=1275/0-3-8, (min. 0-1-8),  
 8=1275/0-3-8, (min. 0-1-8)  
 Max Horiz 2=-47 (LC 10)

**FORCES** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-23=-3033/0, 3-23=-2995/0, 3-24=-2754/0, 4-24=-2675/0, 6-25=-2675/0, 7-25=-2754/0, 7-26=-2995/0, 8-26=-3033/0  
 BOT CHORD 2-16=0/2841, 16-27=0/2101, 14-27=0/2101, 11-14=0/2101, 10-11=0/2101, 8-10=0/2841  
 WEBS 7-10=-488/117, 3-16=-488/117, 4-6=-1973/90, 15-16=0/756, 4-15=0/846, 6-12=0/940, 10-12=0/756

- 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=25ft; B=45ft; L=28ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) -0-11-0 to 2-1-0, Interior (1) 2-1-0 to 14-1-8, Exterior (2) 14-1-8 to 17-1-8, Interior (1) 17-1-8 to 29-2-0 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) 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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
  - 6) 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.

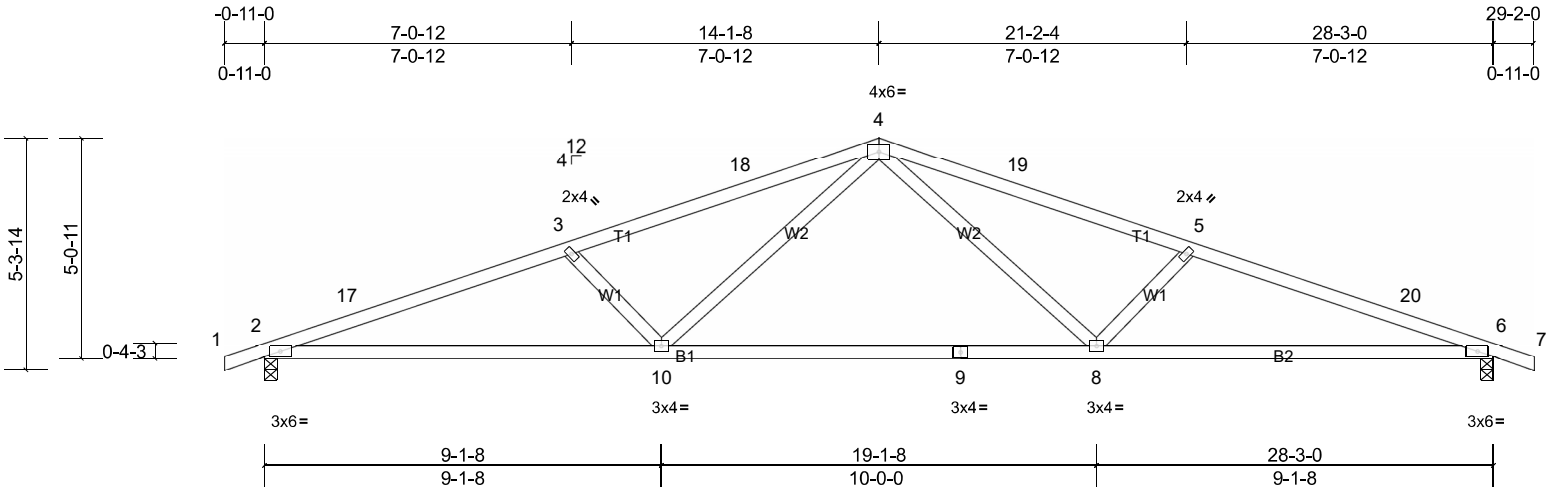
Job	Truss	Truss Type	Qty	Ply	Value Build Homes - Johnson 5-24-111
Q2301528-29	A03	Common	12	1	Job Reference (optional)

Carolina Structural Systems, Star, NC 27356, JSH

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Scale = 1:53

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	I/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.56	Vert(LL)	-0.23	8-10	>999	360	MT20 244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.98	Vert(CT)	-0.54	8-10	>625	240	
BCLL	0.0*	Rep Stress Incr	YES	WB	0.34	Horz(CT)	0.09	6	n/a	n/a	
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS		Wind(LL)	0.10	10	>999	240	Weight: 118 lb FT = 20%

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

7) 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.

**BRACING**  
TOP CHORD Structural wood sheathing directly applied.  
BOT CHORD Rigid ceiling directly applied.

**LOAD CASE(S)** Standard

**REACTIONS** (lb/size) 2=1185/0-3-8, (min. 0-1-8),  
6=1185/0-3-8, (min. 0-1-8)  
Max Horiz 2=-47 (LC 10)  
Max Uplift 2=-31 (LC 12), 6=-31 (LC 12)

**FORCES** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-17=-2765/134, 3-17=-2732/155,  
3-18=-2465/118, 4-18=-2386/131,  
4-19=-2386/131, 5-19=-2465/118,  
5-20=-2732/155, 6-20=-2765/134  
BOT CHORD 2-10=-90/2592, 9-10=-33/1689,  
8-9=-33/1689, 6-8=-98/2592  
WEBS 4-8=0/825, 5-8=-493/129, 4-10=0/825,  
3-10=-493/129

- NOTES**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=28ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) -0-11-0 to 2-1-0, Interior (1) 2-1-0 to 14-1-8, Exterior (2) 14-1-8 to 17-1-8, Interior (1) 17-1-8 to 29-2-0 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
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 31 lb uplift at joint 2 and 31 lb uplift at joint 6.
  - 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.

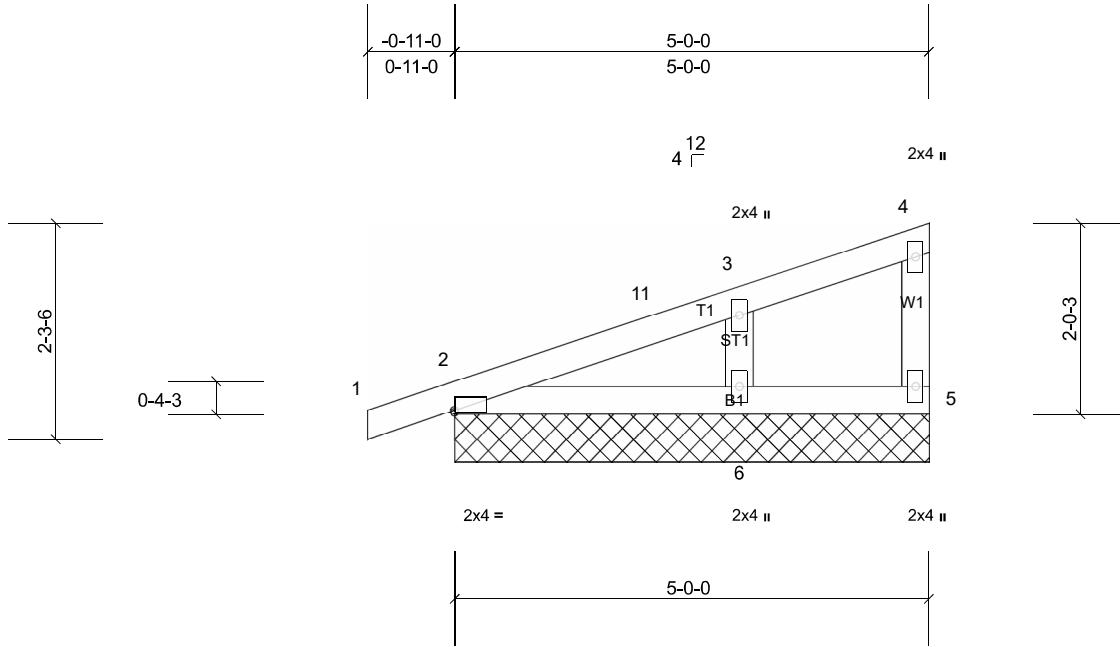
Job	Truss	Truss Type	Qty	Ply	Value Build Homes - Johnson 5-24-111
Q2301528-29	B01	Monopitch Supported Gable	1	1	Job Reference (optional)

Carolina Structural Systems, Star, NC 27356, JSH

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Scale = 1:24.3

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

Loading	(psf)	Spacing	1-11-4	CSI	DEFL	in	(loc)	I/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.17	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.35	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.04	Horz(CT)	0.00	2	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS							Weight: 20 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

9) 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.

**LOAD CASE(S)** Standard

**BRACING**  
TOP CHORD Structural wood sheathing directly applied, except end verticals.  
BOT CHORD Rigid ceiling directly applied.

**REACTIONS** All bearings 5-0-0.  
(lb) - Max Horiz 2=49 (LC 12), 7=49 (LC 12)  
Max Uplift All uplift 100 (lb) or less at joint(s) 2, 7  
Max Grav All reactions 250 (lb) or less at joint (s) 2, 5, 7 except 6=256 (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 (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Corner (3) -0-11-0 to 2-1-0, Exterior (2) 2-1-0 to 4-10-4 zone; cantilever 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 requires continuous bottom chord bearing.
  - 4) Gable studs spaced at 2-0-0 oc.
  - 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 6) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
  - 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint (s) 2, 2.
  - 8) 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.



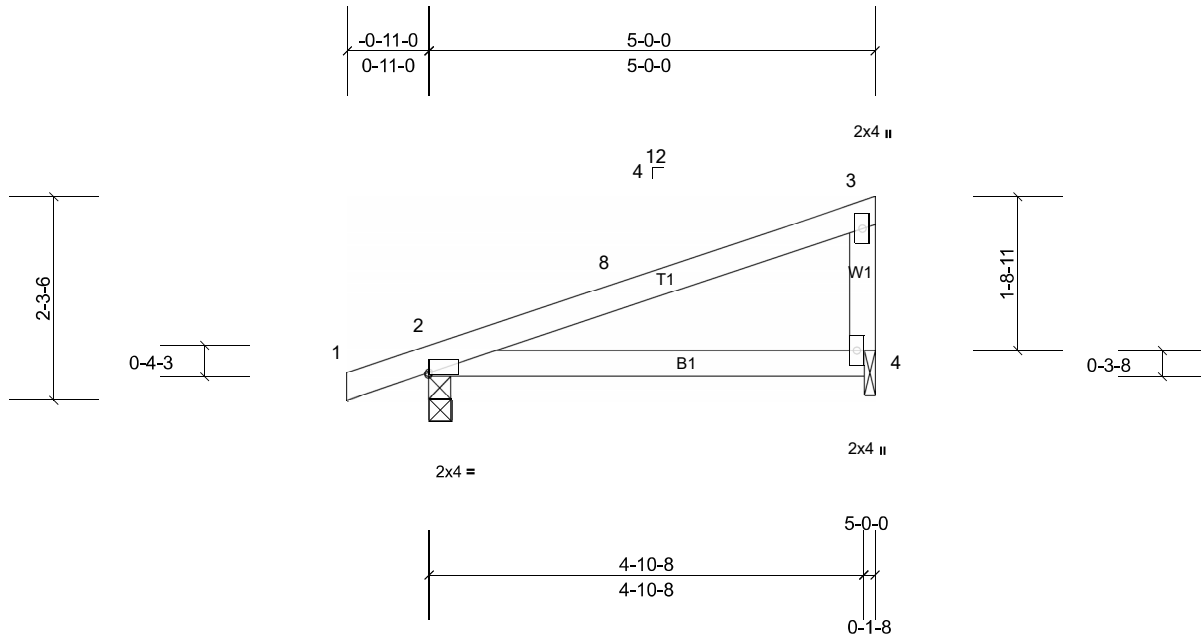
Job	Truss	Truss Type	Qty	Ply	Value Build Homes - Johnson 5-24-111
Q2301528-29	B02	Monopitch	10	1	Job Reference (optional)

Carolina Structural Systems, Star, NC 27356, JSH

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Scale = 1:25.8

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	I/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.31	Vert(LL)	-0.02	4-7	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.25	Vert(CT)	-0.05	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-AS		Wind(LL)	0.05	4-7	>999	240	Weight: 19 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, except end verticals.  
 BOT CHORD Rigid ceiling directly applied.

**REACTIONS** (lb/size) 2=254/0-3-0, (min. 0-1-8), 4=189/0-1-8, (min. 0-1-8)  
 Max Horiz 2=51 (LC 12)  
 Max Uplift 2=-61 (LC 12), 4=-47 (LC 12)

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

**NOTES**

- Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) -0-11-0 to 2-1-0, Interior (1) 2-1-0 to 4-10-4 zone; cantilever left and right exposed ; porch left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* 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.
- 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.
- Provide mechanical connection (by others) of truss to bearing plate at joint(s) 4.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 61 lb uplift at joint 2 and 47 lb uplift at joint 4.
- 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.
- 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.

**LOAD CASE(S)** Standard

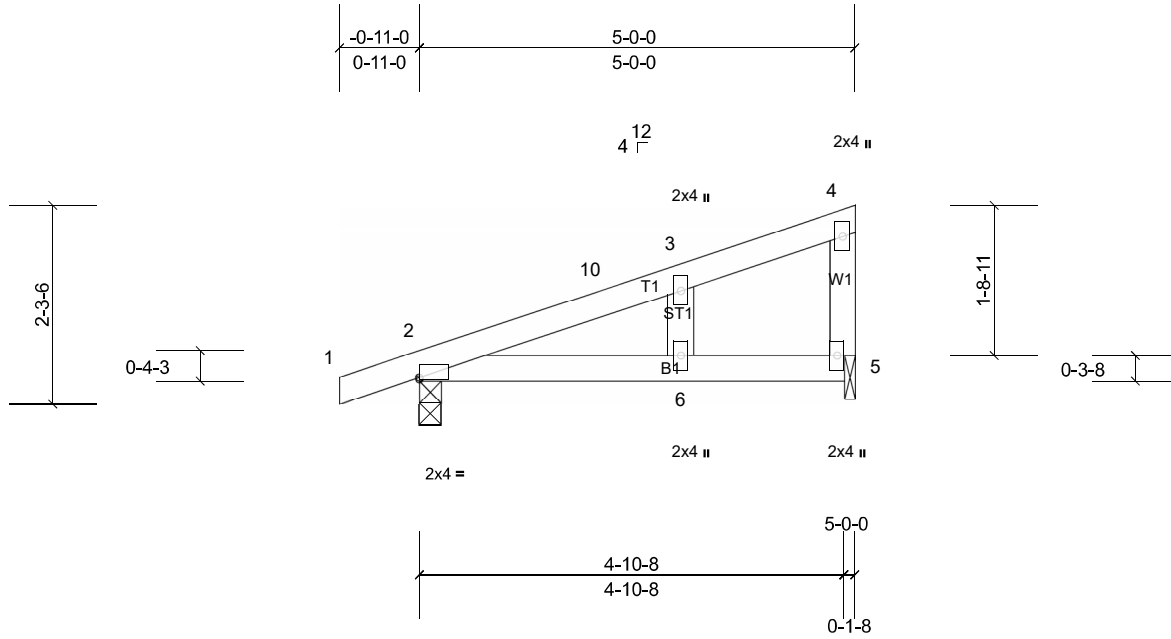
Job	Truss	Truss Type	Qty	Ply	Value Build Homes - Johnson 5-24-111
Q2301528-29	B03	Monopitch Structural Gable	1	1	Job Reference (optional)

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Scale = 1:26.5

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	I/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.26	Vert(LL)	-0.03	6-9	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.30	Vert(CT)	-0.06	6-9	>940	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.01	Horz(CT)	0.00	2	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS		Wind(LL)	0.05	6-9	>999	240	Weight: 20 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, except end verticals.  
 BOT CHORD Rigid ceiling directly applied.

**REACTIONS** (lb/size) 2=254/0-3-0, (min. 0-1-8), 5=189/0-1-8, (min. 0-1-8)  
 Max Horiz 2=51 (LC 12)  
 Max Uplift 2=-61 (LC 12), 5=-47 (LC 12)

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

- NOTES**
- 1) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) -0-11-0 to 2-1-0, Interior (1) 2-1-0 to 4-10-4 zone; cantilever left and right exposed; porch 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 3-06-00 tall by 2-00-00 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) 2, 5.
  - 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 61 lb uplift at joint 2 and 47 lb uplift at joint 5.

- 9) 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.
- 10) 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.

**LOAD CASE(S)** Standard

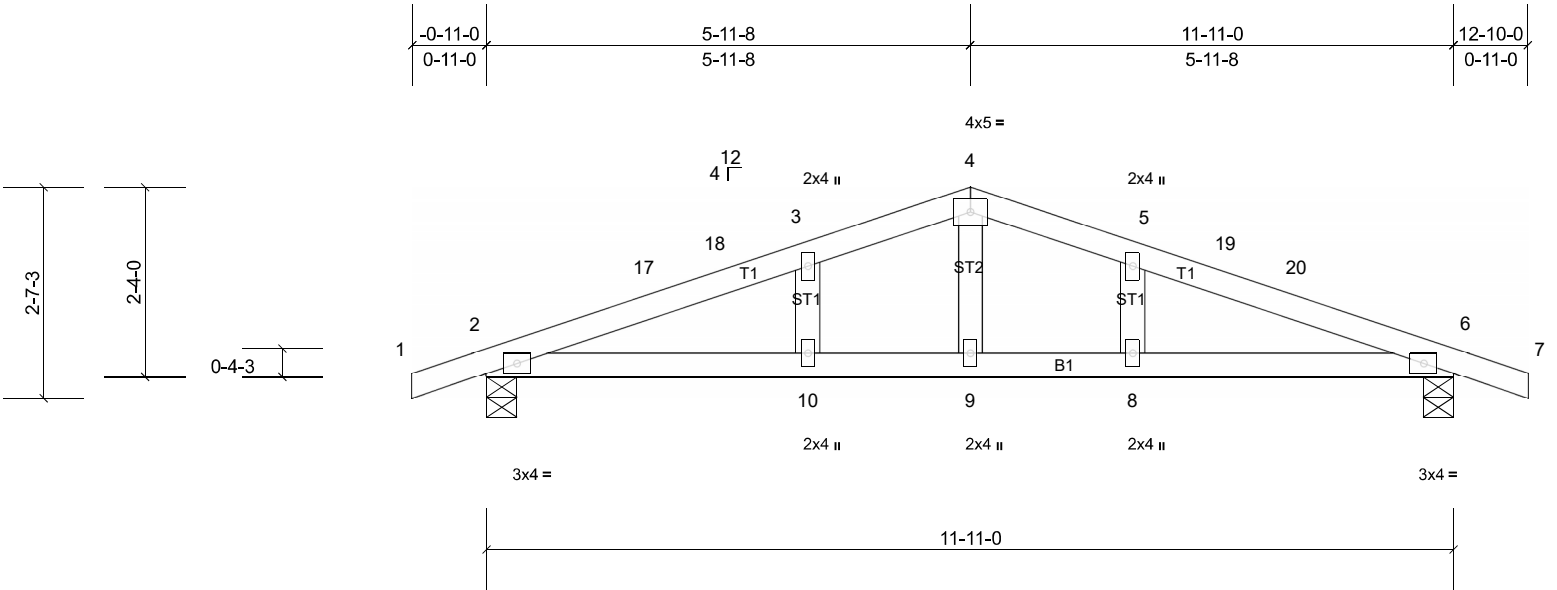
Job	Truss	Truss Type	Qty	Ply	Value Build Homes - Johnson 5-24-111
Q2301528-29	C01	Common Structural Gable	1	1	Job Reference (optional)

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Scale = 1:28.4

Loading	(psf)	Spacing	1-11-4	CSI	DEFL	in	(loc)	I/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.28	Vert(LL)	-0.05	10-13	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.51	Vert(CT)	-0.09	10-13	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.11	Horz(CT)	0.01	6	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS		Wind(LL)	0.06	8-16	>999	240	Weight: 45 lb	FT = 20%

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

**BRACING**  
 TOP CHORD Structural wood sheathing directly applied.  
 BOT CHORD Rigid ceiling directly applied.

**REACTIONS** (lb/size) 2=515/0-4-8, (min. 0-1-8),  
 6=515/0-4-8, (min. 0-1-8)  
 Max Horiz 2=-20 (LC 10)  
 Max Uplift 2=-124 (LC 12), 6=-124 (LC 12)

**FORCES** (lb) - Max. Comp./Max. Ten. - All forces 250  
 (lb) or less except when shown.  
 TOP CHORD 2-17=-864/552, 17-18=-839/552,  
 3-18=-830/557, 3-4=-832/563, 4-5=-832/563,  
 5-19=-830/557, 19-20=-839/552,  
 6-20=-864/552  
 BOT CHORD 2-10=-485/796, 9-10=-485/796,  
 8-9=-485/796, 6-8=-485/796  
 WEBS 4-9=-203/258

- 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=25ft;  
 B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed;  
 MWFRS (directional) and C-C Exterior (2) -0-11-0 to  
 2-1-0, Interior (1) 2-1-0 to 5-11-8, Exterior (2) 5-11-8 to  
 8-11-8, Interior (1) 8-11-8 to 12-10-0 zone; cantilever left  
 and right exposed ; end vertical left and right exposed;  
 porch 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 studs spaced at 2-0-0 oc.
  - 5) This truss has been designed for a 10.0 psf bottom  
 chord live load nonconcurrent with any other live loads.
  - 6) \* This truss has been designed for a live load of 20.0psf  
 on the bottom chord in all areas where a rectangle  
 3-06-00 tall by 2-00-00 wide will fit between the bottom  
 chord and any other members.

- 7) Provide mechanical connection (by others) of truss to  
 bearing plate capable of withstanding 124 lb uplift at joint  
 2 and 124 lb uplift at joint 6.
  - 8) 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.
  - 9) 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.
- LOAD CASE(S)** Standard

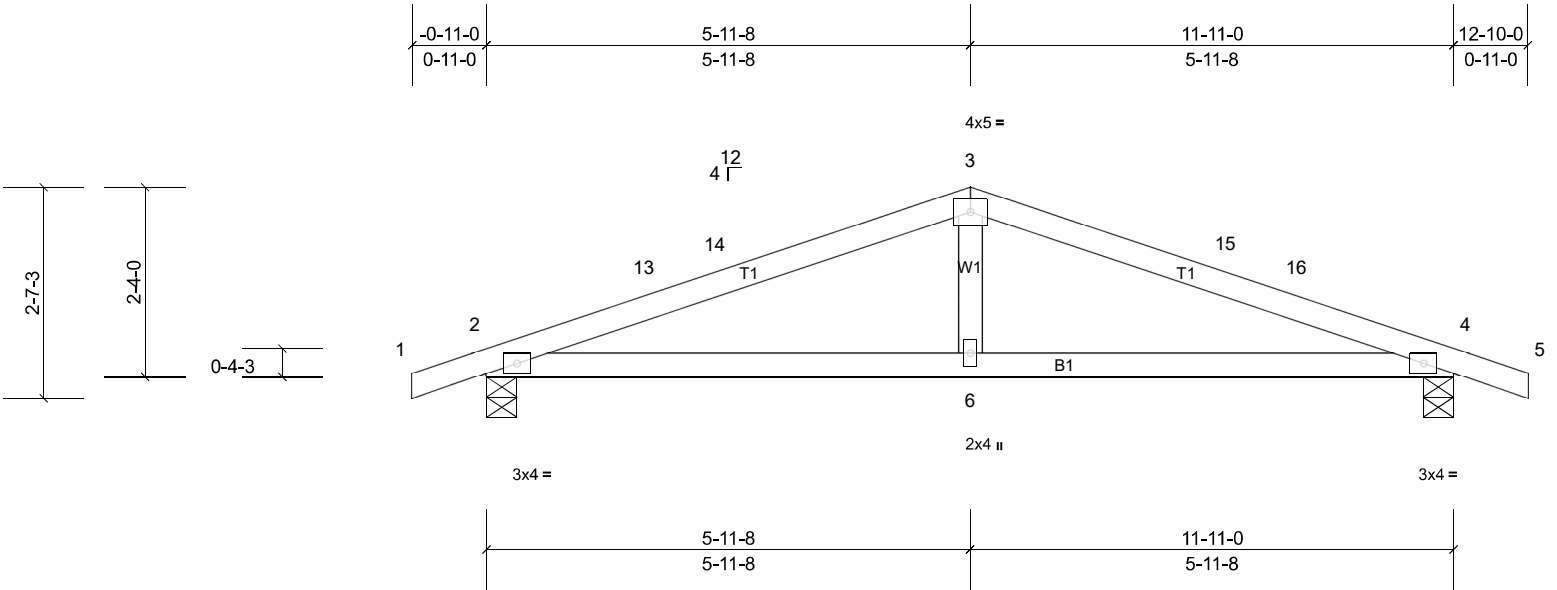
Job	Truss	Truss Type	Qty	Ply	Value Build Homes - Johnson 5-24-111
Q2301528-29	C02	Common	4	1	Job Reference (optional)

Carolina Structural Systems, Star, NC 27356, JSH

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Scale = 1:28.4

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	I/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.37	Vert(LL)	-0.04	6-9	>999	360	MT20 244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.41	Vert(CT)	-0.08	6-9	>999	240	
BCLL	0.0*	Rep Stress Incr	YES	WB	0.10	Horz(CT)	0.01	4	n/a	n/a	
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-AS		Wind(LL)	0.06	6-12	>999	240	Weight: 42 lb FT = 20%

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

7) 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.

**BRACING**  
 TOP CHORD Structural wood sheathing directly applied.  
 BOT CHORD Rigid ceiling directly applied.

**LOAD CASE(S)** Standard

**REACTIONS** (lb/size) 2=532/0-4-8, (min. 0-1-8),  
 4=532/0-4-8, (min. 0-1-8)  
 Max Horiz 2=-20 (LC 10)  
 Max Uplift 2=-128 (LC 12), 4=-128 (LC 12)

**FORCES** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-13=-881/562, 13-14=-849/562,  
 3-14=-849/577, 3-15=-849/577,  
 15-16=-849/562, 4-16=-881/562  
 BOT CHORD 2-6=-494/806, 4-6=-494/806  
 WEBS 3-6=-212/263

- 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=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior (2) -0-11-0 to 2-1-0, Interior (1) 2-1-0 to 5-11-8, Exterior (2) 5-11-8 to 8-11-8, Interior (1) 8-11-8 to 12-10-0 zone; cantilever left and right exposed; end vertical left and right exposed; porch 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 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 128 lb uplift at joint 2 and 128 lb uplift at joint 4.
  - 6) 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.