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 Glenview, IL 60025  
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10/29/2024  
 ABCD Engineering, PLLC NC COA 0838

Site Information:	Page 1:
Customer: Structural Building Solutions LLC	Job Number: Q2410-324
Job Description: The Farm at Neills Creek	
Address:	

Job Engineering Criteria:	
Design Code: IRC 2021	IntelliVIEW Version: 23.02.04A JRef #: 1Y4I98360001
Wind Standard: ASCE716      Wind Speed (mph): 0	Design Loading (psf): 55.00
Building Type:	

This package contains general notes pages, 15 truss drawing(s) and 2 detail(s).

Item	Drawing Number	Truss
1	303.24.0618.57282	F2-10
3	303.24.0618.57016	F11
5	303.24.0618.57064	F2-04
7	303.24.0804.50063	F2-01G
9	303.24.0618.57298	F2-10DT
11	303.24.0805.00590	F2-08
13	303.24.0804.57063	F2-07A
15	303.24.0804.53720	F2-06
17	STRBRIBR1014	

Item	Drawing Number	Truss
2	303.24.0618.57078	F2-09
4	303.24.0618.57094	F2-03
6	303.24.0618.57063	F2-01
8	303.24.0618.57032	F2-04G
10	303.24.0618.57329	F2-02
12	303.24.0804.55630	F2-07
14	303.24.0804.52250	F2-05
16	DEFLCAMB1014	

## **General Notes**

### **Truss Design Engineer Scope of Work, Design Assumptions and Design Responsibilities:**

The design responsibilities assumed in the preparation of these design drawings are those specified in ANSI/TPI 1, Chapter 2; and the National Design Standard for Metal Plate Connected Wood Truss Construction, by the Truss Plate Institute. The truss component designs conform to the applicable provisions of ANSI/TPI 1 and NDS, the National Design Specification for Wood Construction by AWC. The truss component designs are based on the specified loading and dimension information furnished by others to the Truss Design Engineer. The Truss Design Engineer has no duty to independently verify the accuracy or completeness of the information provided by others and may rely on that information without liability. The responsibility for verification of that information remains with others neither employed nor controlled by the Truss Design Engineer. The Truss Design Engineer's seal and signature on the attached drawings, or cover page listing these drawings, indicates acceptance of professional engineering responsibility solely for the truss component designs and not for the technical information furnished by others which technical information and consequences thereof remain their sole responsibility.

The suitability and use of these drawings for any particular structure is the responsibility of the Building Designer in accordance with ANSI/TPI 1 Chapter 2. The Building Designer is responsible for determining that the dimensions and loads for each truss component match those required by the plans and by the actual use of the individual component, and for ascertaining that the loads shown on the drawings meet or exceed applicable building code requirements and any additional factors required in the particular application. Truss components using metal connector plates with integral teeth shall not be placed in environments that will cause the moisture content of the wood in which plates are embedded to exceed 19% and/or cause corrosion of connector plates and other metal fasteners.

The Truss Design Engineer shall not be responsible for items beyond the specific scope of the agreed contracted work set forth herein, including but not limited to: verifying the dimensions of the truss component, calculation of any of the truss component design loads, inspection of the truss components before or after installation, the design of temporary or permanent bracing and their attachment required in the roof and/or floor systems, the design of diaphragms or shear walls, the design of load transfer connections to and from diaphragms and shear walls, the design of load transfer to the foundation, the design of connections for truss components to their bearing supports, the design of the bearing supports, installation of the truss components, observation of the truss component installation process, review of truss assembly procedures, sequencing of the truss component installation, construction means and methods, site and/or worker safety in the installation of the truss components and/or its connections.

This document may be a high-quality facsimile of the original engineering document which is a digitally signed electronic file with third party authentication. A wet or embossed seal copy of this engineering document is available upon request.

### **Temporary Lateral Restraint and Bracing:**

Temporary lateral restraint and diagonal bracing shall be installed according to the provisions of BCSI chapters B1, B2, B7 and/or B10 (Building Component Safety Information, by TPI and SBCA), or as specified by the Building Designer or other Registered Design Professional. The required locations for lateral restraint and/or bracing depicted on these drawings are only for the permanent lateral support of the truss members to reduce buckling lengths, and do not apply to and may not be relied upon for the temporary stability of the truss components during their installation.

### **Permanent Lateral Restraint and Bracing:**

The required locations for lateral restraint or bracing depicted on these drawings are for the permanent lateral support of the truss members to reduce buckling lengths. Permanent lateral support shall be installed according to the provisions of BCSI chapters B3, B7 and/or B10, or as specified by the Building Designer or other Registered Design Professional. These drawings do not depict or specify installation/erection bracing, wind bracing, portal bracing or similar building stability bracing which are parts of the overall building design to be specified, designed, and detailed by the Building Designer.

### **Connector Plate Information:**

Alpine connector plates are made of ASTM A653 or ASTM A1063 galvanized steel with the following designations, gauges and grades: W=Wave, 20ga, grade 40; H=High Strength, 20ga, grade 60; S=Super Strength, 18ga, grade 60. Information on model code compliance is contained in the ICC Evaluation Service report ESR-1118, available on-line at [www.icc-es.org](http://www.icc-es.org).

### **Bearing Information:**

The bearing area factor,  $C_b$ , is considered for the allowable capacity of solid sawn wood bearings supporting trusses that are located a minimum of 3" from the end of the lumber piece.

## **General Notes** (continued)

### **Coated Lumber:**

Coated lumber must be properly re-dried and maintained below 19% or less moisture level through all stages of construction and usage. Coated lumber has no adjustments to lumber properties. Coated lumber may be more brittle than uncoated lumber. Special handling care must be taken to prevent breakage during all handling activities. Refer to manufacturer literature, specifications, and code evaluation reports for restrictions, details, and requirements.

### **Fire Retardant Treated Lumber:**

Fire retardant treated lumber must be properly re-dried and maintained below 19% or less moisture level through all stages of construction and usage. Fire retardant treated lumber may be more brittle than untreated lumber. Special handling care must be taken to prevent breakage during all handling activities.

### **Key to Terms:**

Information provided on drawings reflects a summary of the pertinent information required for the truss design. Detailed information on load cases, reactions, member lengths, forces and members requiring permanent lateral support may be found in calculation sheets available upon written request.

BCDL = Bottom Chord standard design Dead Load in pounds per square foot.

BCLL = Bottom Chord standard design Live Load in pounds per square foot.

C = Coated lumber.

C-AT = AtTEK coated lumber.

C-FX = FX Lumber Guard coated lumber.

C -TE = TechWood 4400 coated lumber.

CL = Certified lumber.

Des Ld = total of TCDL, TCDL, BCLL and BCDL Design Load in pounds per square foot.

FRT = Fire Retardant Treated lumber.

FRT-BF = Borafire Fire Retardant Treated lumber

FRT-DB = D-Blaze Fire Retardant Treated lumber.

FRT-DC = Dricon Fire Retardant Treated lumber.

FRT-FP = FirePRO Fire Retardant Treated lumber.

FRT-FL = FlamePRO Fire Retardant Treated lumber.

FRT-FT = FlameTech Fire Retardant Treated lumber.

FRT-ON = OnWood Fire Retardant Treated lumber.

FRT-PG = PYRO-GUARD Fire Retardant Treated lumber.

FRT-PR = ProWood Fire Retardant Treated lumber.

g = green lumber.

HORZ(LL) = maximum Horizontal panel point deflection due to Live Load, in inches.

HORZ(TL) = maximum Horizontal panel point long term deflection in inches, due to Total Load, including creep adjustment.

HPL = additional Horizontal Load added to a truss Piece in pounds per linear foot or pounds.

Ic = Incised lumber.

FJ = Finger Jointed lumber.

L/# = user specified divisor for limiting span/deflection ratio for evaluation of actual L/defl value.

L/defl = ratio of Length between bearings, in inches, divided by the vertical Deflection due to creep, in inches, at the referenced panel point. Reported as 999 if greater than or equal to 999.

Loc = Location, starting location of left end of bearing or panel point (joint) location of deflection.

Max BC CSI = Maximum bending and axial Combined Stress Index for Bottom Chords for all load cases.

Max TC CSI = Maximum bending and axial Combined Stress Index for Top Chords for all load cases.

Max Web CSI = Maximum bending and axial Combined Stress Index for Webs for all load cases.

NCBCLL = Non-Concurrent Bottom Chord design Live Load in pounds per square foot.

PL = additional Load applied at a user specified angle on a truss Piece in pounds per linear foot or pounds.

PLB = additional vertical load added to a Bottom chord Piece of a truss in pounds per linear foot or pounds

PLT = additional vertical load added to a Top chord Piece of a truss in pounds per linear foot or pounds.

PP = Panel Point.

R = maximum downward design Reaction, in pounds, from all specified gravity load cases, at the indicated location (Loc).

-R = maximum upward design Reaction, in pounds, from all specified gravity load cases, at the identified location (Loc).

Rh = maximum horizontal design Reaction in either direction, in pounds, from all specified gravity load cases, at the indicated location (Loc).

RL = maximum horizontal design Reaction in either direction, in pounds, from all specified non-gravity (wind or seismic) load cases, at the indicated location (Loc).

## **General Notes** (continued)

### **Key to Terms** (continued):

Rw = maximum downward design Reaction, in pounds, from all specified non-gravity (wind or seismic) load cases, at the identified location (Loc).

TCDL = Top Chord standard design Dead Load in pounds per square foot.

TCLL = Top Chord standard design Live Load in pounds per square foot.

U = maximum Upward design reaction, in pounds, from all specified non-gravity (wind or seismic) load cases, at the indicated location (Loc).

VERT(CL) = maximum Vertical panel point deflection in inches due to Live Load and Creep Component of Dead Load in inches.

VERT(CTL) = maximum Vertical panel point deflection ratios due to Live Load and Creep Component of Dead Load, and maximum long term Vertical panel point deflection in inches due to Total load, including creep adjustment.

VERT(LL) = maximum Vertical panel point deflection in inches due to Live Load.

VERT(TL) = maximum Vertical panel point long term deflection in inches due to Total load, including creep adjustment.

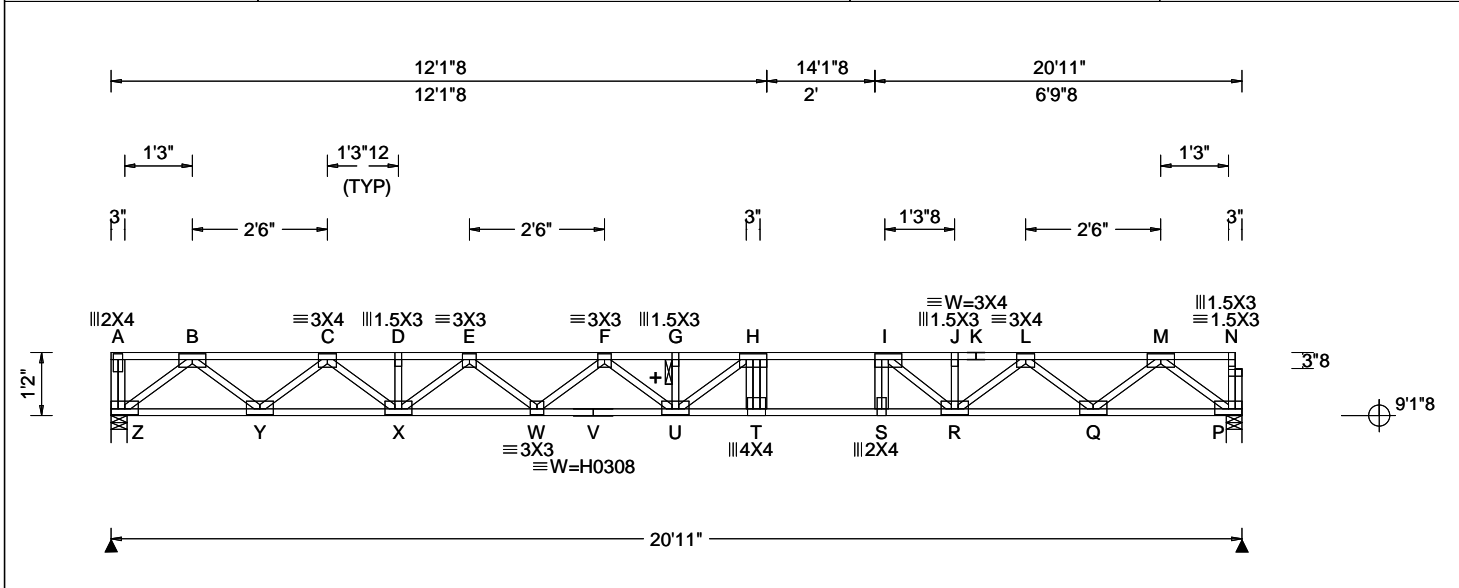
W = Width of non-hanger bearing, in inches.

Refer to ASCE-7 for Wind and Seismic abbreviations.

Uppercase Acronyms not explained above are as defined in TPI 1.

### **References:**

1. AWC: American Wood Council; 222 Catoclin Circle SE, Suite 201; Leesburg, VA 20175; [www.awc.org](http://www.awc.org).
2. ICC: International Code Council; [www.iccsafe.org](http://www.iccsafe.org).
3. Alpine, a division of ITW Building Components Group Inc.: 155 Harlem Ave, North Building, 4th Floor, Glenview, IL 60025; [www.alpineitw.com](http://www.alpineitw.com).
4. TPI: Truss Plate Institute, 2670 Crain Highway, Suite 203, Waldorf, MD 20601; [www.tpinst.org](http://www.tpinst.org).
5. SBCA: Wood Truss Council of America, 6300 Enterprise Lane, Madison, WI 53719; [www.sbcacomponents.com](http://www.sbcacomponents.com)



<b>Loading Criteria (psf)</b> TCCL: 40.00 TCCL: 10.00 BCLL: 0.00 BCDL: 5.00 Des Ld: 55.00 NCBCLL: 10.00 Soffit: 2.00 Load Duration: 1.00 Spacing: 16.0 "	<b>Wind Criteria</b> Wind Std: NA Speed: NA mph Enclosure: NA Category: NA EXP: NA Kzt: NA Mean Height: NA ft TCCL: NA psf BCDL: NA psf MWFRS Parallel Dist: NA C&C Dist a: NA Loc. from endwall: NA I: NA GCpi: NA Wind Duration: NA	<b>Snow Criteria (Pg,Pf in PSF)</b> Pg: NA Ct: NA CAT: NA Pf: NA Ce: NA Lu: NA Cs: NA Snow Duration: NA Building Code: IRC 2021 TPI Std: 2014 Rep Fac: Yes FT/RT/PT: 10(0)/10(0)/2(0) Plate Type(s): WAVE, HS	<b>Defl/CSI Criteria</b> PP Deflection in loc L/defl L/# VERT(LL): 0.486 H 505 480 VERT(CL): 0.669 H 367 360 HORZ(LL): 0.063 B - - HORZ(TL): 0.087 B - - Creep Factor: 2.0 Max TC CSI: 0.839 Max BC CSI: 0.796 Max Web CSI: 0.253 VIEW Ver: 23.02.04A.0207.13	<b>Maximum Reactions (lbs)</b> <table style="width:100%; border-collapse: collapse;"> <tr> <th colspan="3">Gravity</th> <th colspan="3">Non-Gravity</th> </tr> <tr> <th>Loc</th> <th>R+ / R-</th> <th>/ Rh</th> <th>/ Rw</th> <th>/ U</th> <th>/ RL</th> </tr> <tr> <td>Z</td> <td>769</td> <td>- / -</td> <td>- / -</td> <td>- / -</td> <td>- / -</td> </tr> <tr> <td>P</td> <td>756</td> <td>- / -</td> <td>- / -</td> <td>- / -</td> <td>- / -</td> </tr> </table> Z Brg Wid = 3.5 Min Req = 1.5 (Truss) P Brg Wid = 3.5 Min Req = 1.5 (Truss) Bearings Z & P are a rigid surface. Members not listed have forces less than 375# <b>Maximum Top Chord Forces Per Ply (lbs)</b> <table style="width:100%; border-collapse: collapse;"> <tr> <th>Chords</th> <th>Tens.Comp.</th> <th>Chords</th> <th>Tens. Comp.</th> </tr> <tr> <td>B - C</td> <td>0 - 1552</td> <td>H - I</td> <td>0 - 3412</td> </tr> <tr> <td>C - D</td> <td>0 - 2733</td> <td>I - J</td> <td>0 - 2722</td> </tr> <tr> <td>D - E</td> <td>0 - 2733</td> <td>J - K</td> <td>0 - 2722</td> </tr> <tr> <td>E - F</td> <td>0 - 3406</td> <td>K - L</td> <td>0 - 2722</td> </tr> <tr> <td>F - G</td> <td>0 - 3707</td> <td>L - M</td> <td>0 - 1592</td> </tr> <tr> <td>G - H</td> <td>0 - 3707</td> <td></td> <td></td> </tr> </table>	Gravity			Non-Gravity			Loc	R+ / R-	/ Rh	/ Rw	/ U	/ RL	Z	769	- / -	- / -	- / -	- / -	P	756	- / -	- / -	- / -	- / -	Chords	Tens.Comp.	Chords	Tens. Comp.	B - C	0 - 1552	H - I	0 - 3412	C - D	0 - 2733	I - J	0 - 2722	D - E	0 - 2733	J - K	0 - 2722	E - F	0 - 3406	K - L	0 - 2722	F - G	0 - 3707	L - M	0 - 1592	G - H	0 - 3707		
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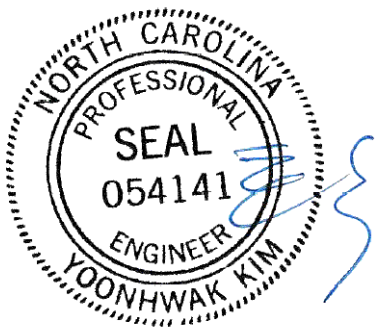
**Lumber**  
 Top chord: 4x2 SP #2;  
 Bot chord: 4x2 SP SS;  
 Webs: 4x2 SP #2;

**Plating Notes**  
 All plates are 3X6 except as noted.

**Loading**  
 Bottom chord checked for 10.00 psf non-concurrent live load.

**Deflection**  
 Max JT VERT DEFL: LL: 0.49" DL: 0.22". See detail DEFLCAMB1014 for camber recommendations.

**Additional Notes**  
 + 2x6 continuous strongback. See detail STRBRIBR1014 for bracing and bridging recommendations.  
 Truss must be installed as shown with top chord up.



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**Maximum Bot Chord Forces Per Ply (lbs)**

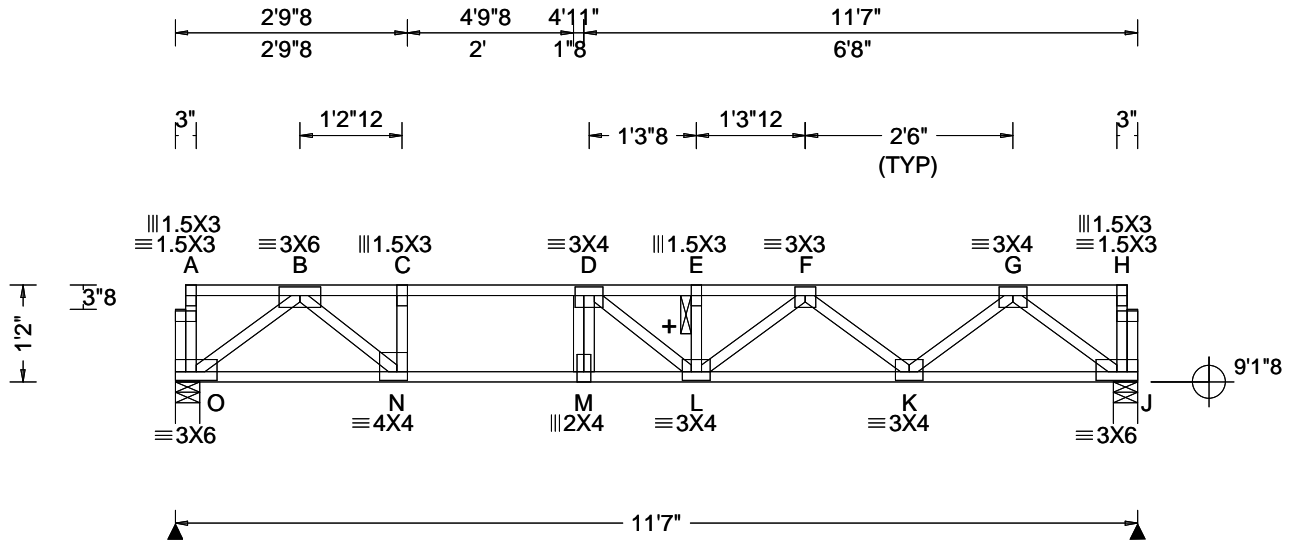
Chords	Tens.Comp.	Chords	Tens. Comp.
Z - Y	862 0	U - T	3424 0
Y - X	2220 0	T - S	3412 0
X - W	3171 0	S - R	3398 0
W - V	3634 0	R - Q	2245 0
V - U	3634 0	Q - P	904 0

**Maximum Web Forces Per Ply (lbs)**

Webs	Tens.Comp.	Webs	Tens. Comp.
Z - B	0 - 1125	I - R	0 - 981
B - Y	898 0	R - L	609 0
Y - C	0 - 870	L - Q	0 - 850
C - X	655 0	Q - M	895 0
X - E	0 - 558	M - P	0 - 1155
U - H	537 - 160		

**\*\*WARNING\*\* READ AND FOLLOW ALL NOTES ON THIS DRAWING!**  
**\*\*IMPORTANT\*\* FURNISH THIS DRAWING TO ALL CONTRACTORS INCLUDING THE INSTALLERS**  
 Trusses require extreme care in fabricating, handling, shipping, installing and bracing. Refer to and follow the latest edition of BCSI (Building Component Safety Information, by TPI and SBCA) for safety practices prior to performing these functions. Installers shall provide temporary bracing per BCSI. Unless noted otherwise, top chord shall have properly attached structural sheathing and bottom chord shall have a properly attached rigid ceiling. Locations shown for permanent lateral restraint of webs shall have continuous lateral restraint (CLR), installed with diagonal bracing installed on the CLR per BCSI sections B3, B7, or B10, as applicable. Apply plates to each face of truss and position as shown above and on the Joint Details, unless noted otherwise. Refer to drawings 160A-Z for standard plate positions. Refer to job's General Notes page for additional information.  
 Alpine, a division of ITW Building Components Group Inc. shall not be responsible for any deviation from this drawing, any failure to build the truss in conformance with ANSI/TPI 1, or for handling, shipping, installation and bracing of trusses. A seal on this drawing or cover page listing this drawing, indicates acceptance of professional engineering responsibility solely for the design shown. The suitability and use of this drawing for any structure is the responsibility of the Building Designer per ANSI/TPI 1 Sec.2.  
 For more information see these web sites: Alpine: alpineitw.com; TPI: tpinst.org; SBCA: sbccomponents.com; ICC: iccsafe.org; AWC: awc.org





<b>Loading Criteria (psf)</b> TCCL: 40.00 TCCL: 10.00 BCLL: 0.00 BCDL: 5.00 Des Ld: 55.00 NCBCLL: 10.00 Soffit: 2.00 Load Duration: 1.00 Spacing: 24.0 "	<b>Wind Criteria</b> Wind Std: NA Speed: NA mph Enclosure: NA Category: NA EXP: NA Kzt: NA Mean Height: NA ft TCCL: NA psf BCDL: NA psf MWFRS Parallel Dist: NA C&C Dist a: NA Loc. from endwall: NA I: NA GCpi: NA Wind Duration: NA	<b>Snow Criteria (Pg,Pf in PSF)</b> Pg: NA Ct: NA CAT: NA Pf: NA Ce: NA Lu: NA Cs: NA Snow Duration: NA Building Code: IRC 2021 TPI Std: 2014 Rep Fac: Yes FT/RT/PT:10(0)/10(0)/2(0) Plate Type(s): WAVE	<b>Defl/CSI Criteria</b> PP Deflection in loc L/defl L/# VERT(LL): 0.187 M 720 480 VERT(CL): 0.267 M 504 360 HORZ(LL): -0.021 G - - HORZ(TL): 0.032 G - - Creep Factor: 2.0 Max TC CSI: 0.822 Max BC CSI: 0.526 Max Web CSI: 0.248 VIEW Ver: 23.02.04A.0207.13	<b>▲ Maximum Reactions (lbs)</b> <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Loc</th> <th colspan="3">Gravity</th> <th colspan="3">Non-Gravity</th> </tr> <tr> <th>R+</th> <th>/R-</th> <th>/Rh</th> <th>/Rw</th> <th>/U</th> <th>/RL</th> </tr> </thead> <tbody> <tr> <td>O</td> <td>625</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>J</td> <td>625</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td colspan="7">O Brg Wid = 3.5 Min Req = 1.5 (Truss)</td> </tr> <tr> <td colspan="7">J Brg Wid = 3.5 Min Req = 1.5 (Truss)</td> </tr> <tr> <td colspan="7">Bearings O &amp; J are a rigid surface.</td> </tr> <tr> <td colspan="7">Members not listed have forces less than 375#</td> </tr> <tr> <td colspan="7"><b>Maximum Top Chord Forces Per Ply (lbs)</b></td> </tr> <tr> <td colspan="2">Chords</td> <td colspan="2">Tens.Comp.</td> <td colspan="2">Chords</td> <td colspan="2">Tens. Comp.</td> </tr> <tr> <td>B - C</td> <td>0</td> <td>-1377</td> <td>E - F</td> <td>0</td> <td>-1676</td> <td></td> <td></td> </tr> <tr> <td>C - D</td> <td>0</td> <td>-1401</td> <td>F - G</td> <td>0</td> <td>-1128</td> <td></td> <td></td> </tr> <tr> <td>D - E</td> <td>0</td> <td>-1676</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Loc	Gravity			Non-Gravity			R+	/R-	/Rh	/Rw	/U	/RL	O	625	-	-	-	-	-	J	625	-	-	-	-	-	O Brg Wid = 3.5 Min Req = 1.5 (Truss)							J Brg Wid = 3.5 Min Req = 1.5 (Truss)							Bearings O & J are a rigid surface.							Members not listed have forces less than 375#							<b>Maximum Top Chord Forces Per Ply (lbs)</b>							Chords		Tens.Comp.		Chords		Tens. Comp.		B - C	0	-1377	E - F	0	-1676			C - D	0	-1401	F - G	0	-1128			D - E	0	-1676					
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Top chord: 4x2 SP #2;  
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**Loading**

Bottom chord checked for 10.00 psf non-concurrent live load.

**Additional Notes**

+ 2x6 continuous strongback. See detail STRBRIBR1014 for bracing and bridging recommendations.

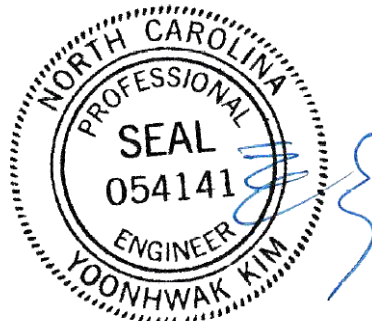
Truss must be installed as shown with top chord up.

**Maximum Bot Chord Forces Per Ply (lbs)**

Chords		Tens.Comp.		Chords		Tens. Comp.	
O - N	722	0	L - K	1520	0		
N - M	1401	0	K - J	715	0		
M - L	1413	0					

**Maximum Web Forces Per Ply (lbs)**

Webs		Tens.Comp.		Webs		Tens. Comp.	
O - B	0	-922	F - K	0	-510		
B - N	878	0	K - G	538	0		
N - C	0	-407	G - J	0	-913		
D - L	415	-58					

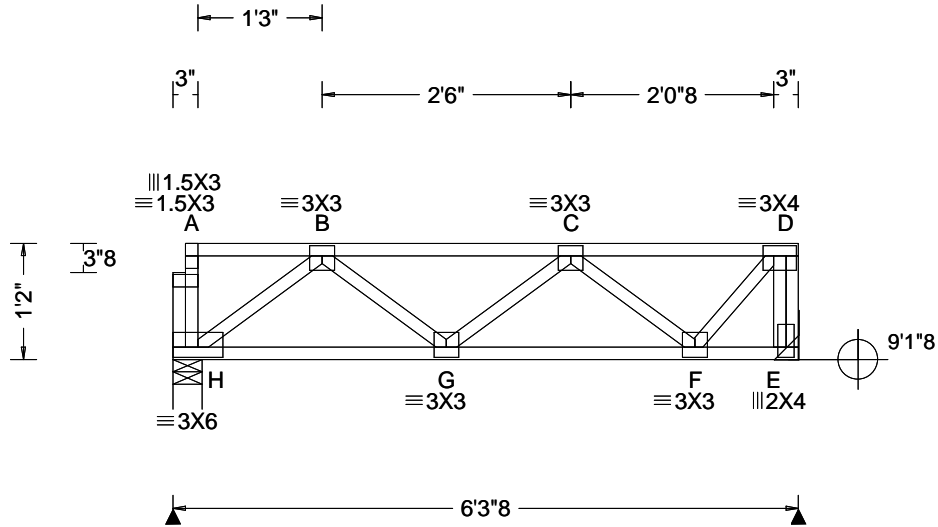


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<b>Loading Criteria (psf)</b>	<b>Wind Criteria</b>	<b>Snow Criteria (Pg, Pf in PSF)</b>	<b>Defl/CSI Criteria</b>	<b>▲ Maximum Reactions (lbs)</b>
TCLL: 40.00 TCDL: 10.00 BCLL: 0.00 BCDL: 5.00 Des Ld: 55.00 NCBCLL: 10.00 Soffit: 2.00 Load Duration: 1.00 Spacing: 16.0 "	Wind Std: NA Speed: NA mph Enclosure: NA Category: NA EXP: NA Kzt: NA Mean Height: NA ft TCDL: NA psf BCDL: NA psf MWFRS Parallel Dist: NA C&C Dist a: NA Loc. from endwall: NA I: NA GCpi: NA Wind Duration: NA	Pg: NA Ct: NA CAT: NA Pf: NA Ce: NA Lu: NA Cs: NA Snow Duration: NA  Building Code: IRC 2021 TPI Std: 2014 Rep Fac: Yes FT/RT/PT: 10(0)/10(0)/2(0) Plate Type(s): WAVE	PP Deflection in loc L/def L/# VERT(LL): 0.008 C 999 480 VERT(CL): 0.010 C 999 360 HORZ(LL): 0.002 F - - HORZ(TL): 0.002 F - - Creep Factor: 2.0 Max TC CSI: 0.215 Max BC CSI: 0.104 Max Web CSI: 0.057  VIEW Ver: 23.02.04A.0207.13	Gravity Non-Gravity Loc R+ / R- / Rh / Rw / U / RL H 220 - / - / - / - / - E 233 - / - / - / - / - H Brg Wid = 3.5 Min Req = 1.5 (Truss) E Brg Wid = - Min Req = - Bearing H is a rigid surface. Members not listed have forces less than 375#

**Lumber**

Top chord: 4x2 SP #2;  
Bot chord: 4x2 SP #2;  
Webs: 4x2 SP #2;

**Hangers / Ties**

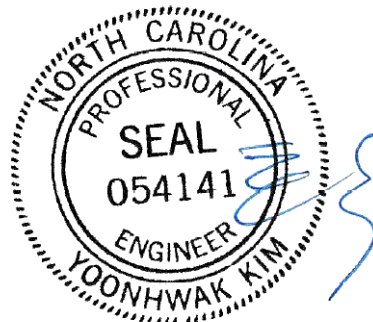
(J) Hanger Support Required, by others

**Loading**

Bottom chord checked for 10.00 psf non-concurrent live load.

**Additional Notes**

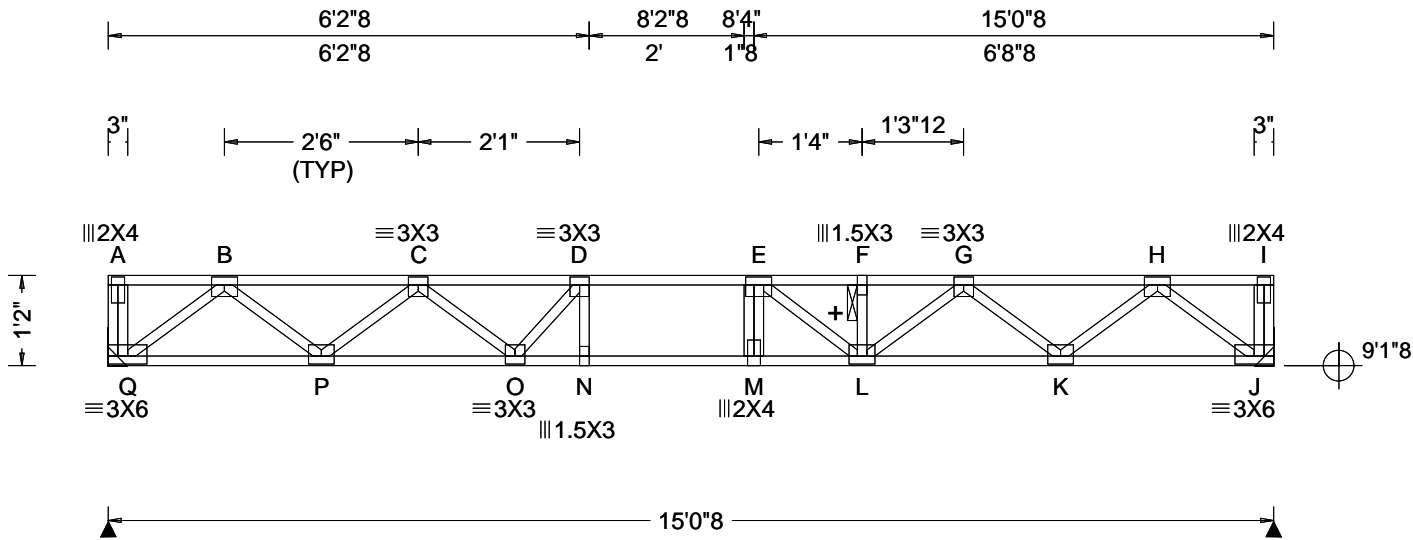
Truss must be installed as shown with top chord up.



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<b>Loading Criteria (psf)</b> TCCL: 40.00 TCCL: 10.00 BCCL: 0.00 BCDL: 5.00 Des Ld: 55.00 NCBCCL: 10.00 Soffit: 2.00 Load Duration: 1.00 Spacing: 16.0 "	<b>Wind Criteria</b> Wind Std: NA Speed: NA mph Enclosure: NA Category: NA EXP: NA Kzt: NA Mean Height: NA ft TCCL: NA psf BCDL: NA psf MWFRS Parallel Dist: NA C&C Dist a: NA Loc. from endwall: NA I: NA GCpi: NA Wind Duration: NA	<b>Snow Criteria (Pg,Pf in PSF)</b> Pg: NA Ct: NA CAT: NA Pf: NA Ce: NA Lu: NA Cs: NA Snow Duration: NA  <b>Building Code:</b> IRC 2021 TPI Std: 2014 Rep Fac: Yes FT/RT/PT:10(0)/10(0)/2(0) Plate Type(s): WAVE	<b>Defl/CSI Criteria</b> PP Deflection in loc L/defl L/# VERT(LL): 0.130 M 999 480 VERT(CL): 0.179 M 974 360 HORZ(LL): 0.022 J - - HORZ(TL): 0.030 J - - Creep Factor: 2.0 Max TC CSI: 0.427 Max BC CSI: 0.713 Max Web CSI: 0.158  VIEW Ver: 23.02.04A.0207.13	<b>▲ Maximum Reactions (lbs)</b> <table style="width:100%; border-collapse: collapse;"> <tr> <th colspan="3">Gravity</th> <th colspan="3">Non-Gravity</th> </tr> <tr> <th>Loc</th> <th>R+ / R-</th> <th>/ Rh</th> <th>/ Rw</th> <th>/ U</th> <th>/ RL</th> </tr> <tr> <td>Q</td> <td>552</td> <td>- / -</td> <td>- / -</td> <td>- / -</td> <td>- / -</td> </tr> <tr> <td>J</td> <td>552</td> <td>- / -</td> <td>- / -</td> <td>- / -</td> <td>- / -</td> </tr> <tr> <td>Q</td> <td colspan="2">Brg Wid = -</td> <td colspan="3">Min Req = -</td> </tr> <tr> <td>J</td> <td colspan="2">Brg Wid = -</td> <td colspan="3">Min Req = -</td> </tr> </table> <p>Members not listed have forces less than 375#</p> <b>Maximum Top Chord Forces Per Ply (lbs)</b> <table style="width:100%; border-collapse: collapse;"> <tr> <th>Chords</th> <th>Tens.Comp.</th> <th>Chords</th> <th>Tens. Comp.</th> </tr> <tr> <td>B - C</td> <td>0 - 1032</td> <td>E - F</td> <td>0 - 1684</td> </tr> <tr> <td>C - D</td> <td>0 - 1666</td> <td>F - G</td> <td>0 - 1684</td> </tr> <tr> <td>D - E</td> <td>0 - 1825</td> <td>G - H</td> <td>0 - 1032</td> </tr> </table>	Gravity			Non-Gravity			Loc	R+ / R-	/ Rh	/ Rw	/ U	/ RL	Q	552	- / -	- / -	- / -	- / -	J	552	- / -	- / -	- / -	- / -	Q	Brg Wid = -		Min Req = -			J	Brg Wid = -		Min Req = -			Chords	Tens.Comp.	Chords	Tens. Comp.	B - C	0 - 1032	E - F	0 - 1684	C - D	0 - 1666	F - G	0 - 1684	D - E	0 - 1825	G - H	0 - 1032
Gravity			Non-Gravity																																																					
Loc	R+ / R-	/ Rh	/ Rw	/ U	/ RL																																																			
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**Lumber**

Top chord: 4x2 SP #2;  
 Bot chord: 4x2 SP #2;  
 Webs: 4x2 SP #2;

**Plating Notes**

All plates are 3X4 except as noted.

**Hangers / Ties**

(J) Hanger Support Required, by others

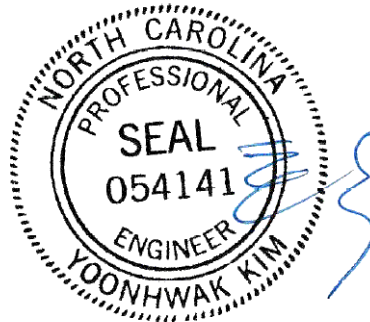
**Loading**

Bottom chord checked for 10.00 psf non-concurrent live load.

**Additional Notes**

+ 2x6 continuous strongback. See detail STRBRIBR1014 for bracing and bridging recommendations.

Truss must be installed as shown with top chord up.



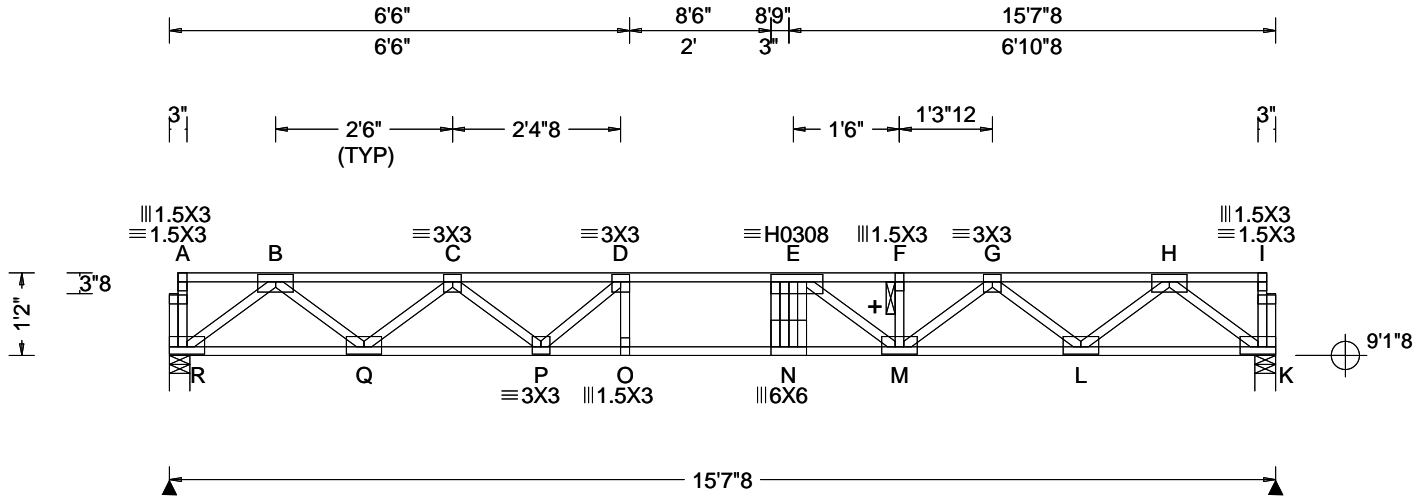
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<b>Loading Criteria (psf)</b> TCLL: 40.00 TCCL: 10.00 BCLL: 0.00 BCDL: 5.00 Des Ld: 55.00 NCBCLL: 10.00 Soffit: 2.00 Load Duration: 1.00 Spacing: 24.0 "	<b>Wind Criteria</b> Wind Std: NA Speed: NA mph Enclosure: NA Category: NA EXP: NA Kzt: NA Mean Height: NA ft TCCL: NA psf BCDL: NA psf MWFRS Parallel Dist: NA C&C Dist a: NA Loc. from endwall: NA I: NA GCpi: NA Wind Duration: NA	<b>Snow Criteria (Pg,Pf in PSF)</b> Pg: NA Ct: NA CAT: NA Pf: NA Ce: NA Lu: NA Cs: NA Snow Duration: NA  <b>Building Code:</b> IRC 2021 TPI Std: 2014 Rep Fac: Yes FT/RT/PT:10(0)/10(0)/2(0) Plate Type(s): WAVE, HS	<b>Defl/CSI Criteria</b> PP Deflection in loc L/defl L/# VERT(LL): 0.206 N 888 480 VERT(CL): 0.287 N 638 360 HORZ(LL): 0.031 B - - HORZ(TL): 0.044 B - - Creep Factor: 2.0 Max TC CSI: 0.790 Max BC CSI: 0.528 Max Web CSI: 0.252  VIEW Ver: 23.02.04A.0207.13	<b>▲ Maximum Reactions (lbs)</b> <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Loc</th> <th colspan="3">Gravity</th> <th colspan="3">Non-Gravity</th> </tr> <tr> <th>R+</th> <th>/R-</th> <th>/Rh</th> <th>/Rw</th> <th>/U</th> <th>/RL</th> </tr> </thead> <tbody> <tr> <td>R</td> <td>847</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>K</td> <td>847</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> </tbody> </table> R Brg Wid = 3.5 Min Req = 1.5 (Truss) K Brg Wid = 3.5 Min Req = 1.5 (Truss) Bearings R & K are a rigid surface. Members not listed have forces less than 375# <b>Maximum Top Chord Forces Per Ply (lbs)</b> <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Chords</th> <th>Tens.Comp.</th> <th>Chords</th> <th>Tens. Comp.</th> </tr> </thead> <tbody> <tr> <td>B - C</td> <td>0 - 1679</td> <td>E - F</td> <td>0 - 2734</td> </tr> <tr> <td>C - D</td> <td>0 - 2691</td> <td>F - G</td> <td>0 - 2734</td> </tr> <tr> <td>D - E</td> <td>0 - 3016</td> <td>G - H</td> <td>0 - 1676</td> </tr> </tbody> </table>	Loc	Gravity			Non-Gravity			R+	/R-	/Rh	/Rw	/U	/RL	R	847	-	-	-	-	-	K	847	-	-	-	-	-	Chords	Tens.Comp.	Chords	Tens. Comp.	B - C	0 - 1679	E - F	0 - 2734	C - D	0 - 2691	F - G	0 - 2734	D - E	0 - 3016	G - H	0 - 1676
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**Lumber**

Top chord: 4x2 SP #2;  
 Bot chord: 4x2 SP SS;  
 Webs: 4x2 SP #2;

**Plating Notes**

All plates are 3X6 except as noted.

**Loading**

Bottom chord checked for 10.00 psf non-concurrent live load.

**Additional Notes**

+ 2x6 continuous strongback. See detail STRBRIBR1014 for bracing and bridging recommendations.

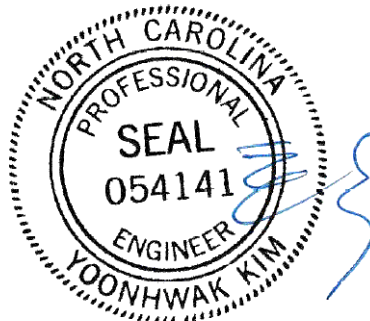
Truss must be installed as shown with top chord up.

**Maximum Bot Chord Forces Per Ply (lbs)**

Chords	Tens.Comp.	Chords	Tens. Comp.
R - Q	993 0	N - M	3017 0
Q - P	2331 0	M - L	2326 0
P - O	3014 0	L - K	994 0
O - N	3016 0		

**Maximum Web Forces Per Ply (lbs)**

Webs	Tens.Comp.	Webs	Tens. Comp.
R - B	0 - 1268	E - M	9 - 614
B - Q	893 0	M - G	521 0
Q - C	0 - 849	G - L	0 - 846
C - P	517 0	L - H	888 0
P - D	0 - 610	H - K	0 - 1270

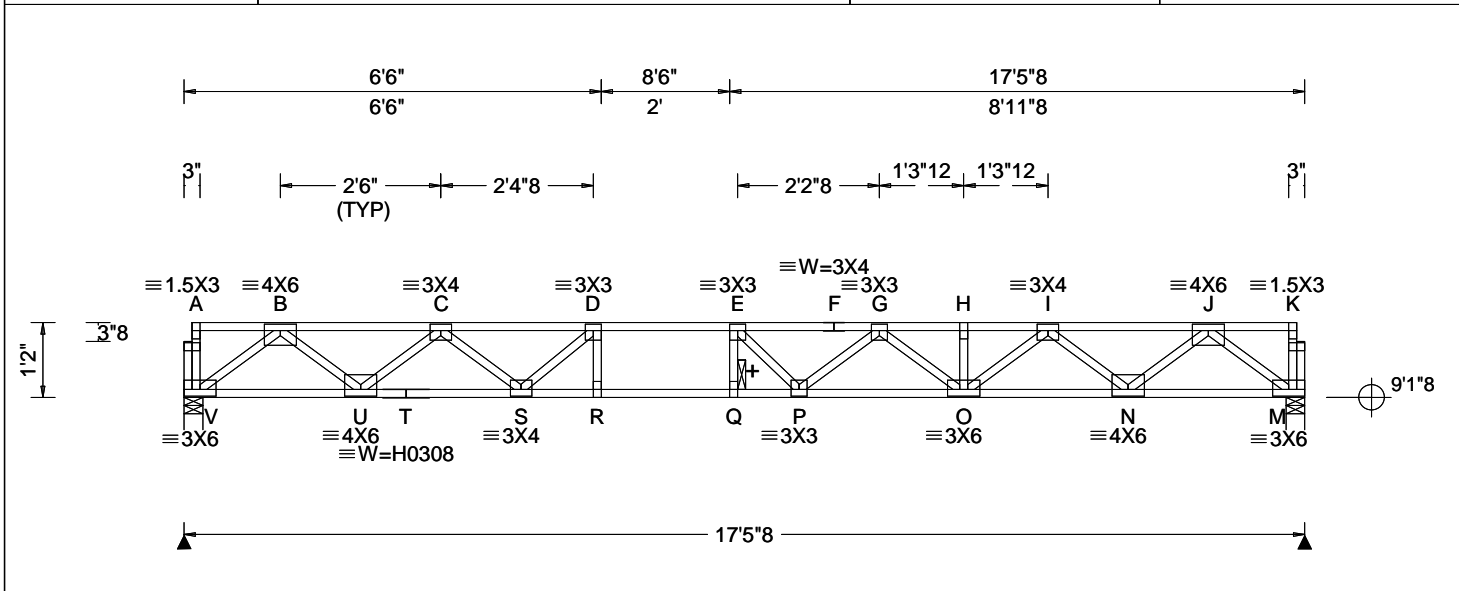


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Loc	Gravity			Non-Gravity																																																																																												
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**Lumber**

Top chord: 4x2 SP SS;  
 Bot chord: 4x2 SP SS;  
 Webs: 4x2 SP #2;

**Plating Notes**

All plates are 1.5X3 except as noted.

**Loading**

Bottom chord checked for 10.00 psf non-concurrent live load.

**Additional Notes**

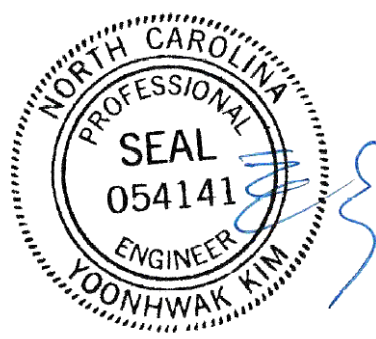
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 Truss must be installed as shown with top chord up.

**Maximum Bot Chord Forces Per Ply (lbs)**

Chords	Tens.Comp.		Chords	Tens. Comp.	
V - U	1122	0	Q - P	3735	0
U - T	2685	0	P - O	3643	0
T - S	2685	0	O - N	2693	0
S - R	3714	0	N - M	1120	0
R - Q	3725	0			

**Maximum Web Forces Per Ply (lbs)**

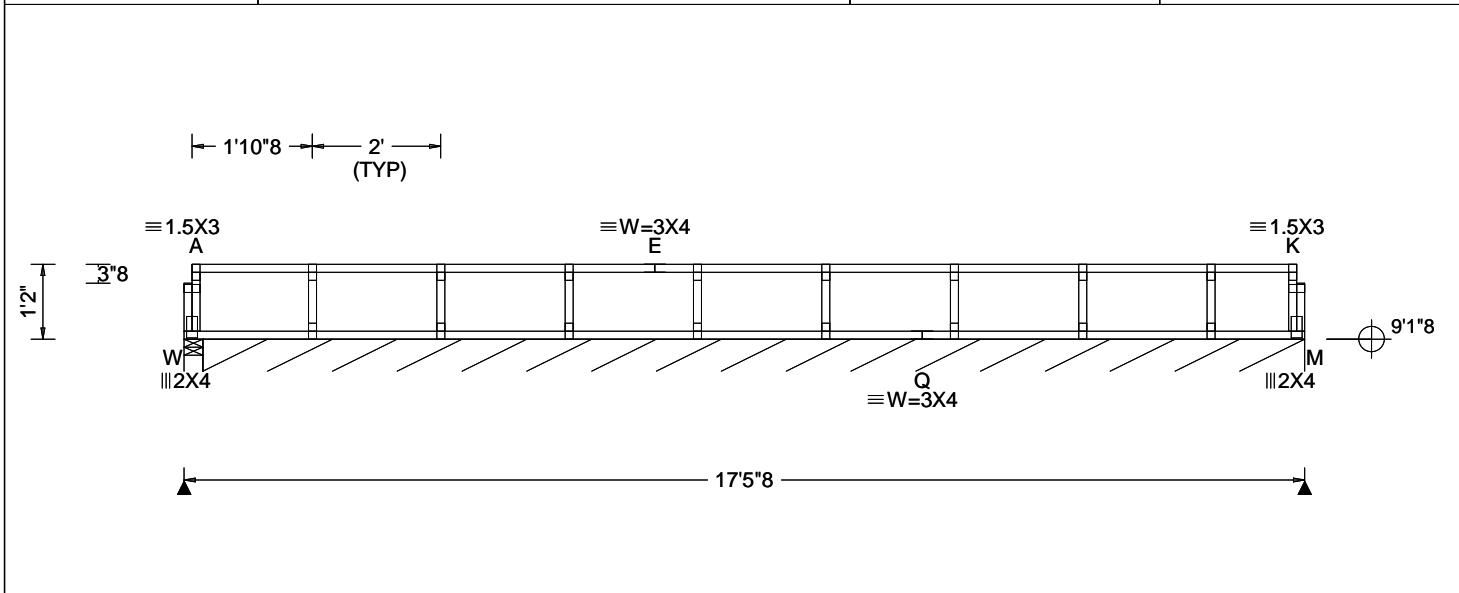
Webs	Tens.Comp.		Webs	Tens. Comp.	
V - B	0	-1433	G - O	0	-541
B - U	1043	0	O - I	672	0
U - C	0	-991	I - N	0	-1001
C - S	683	0	N - J	1046	0
S - D	0	-841	J - M	0	-1431



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<b>Loading Criteria (psf)</b> TCCL: 40.00 TCCL: 10.00 BCCL: 0.00 BCDL: 5.00 Des Ld: 55.00 NCBCCL: 10.00 Soffit: 2.00 Load Duration: 1.00 Spacing: 24.0 "	<b>Wind Criteria</b> Wind Std: NA Speed: NA mph Enclosure: NA Category: NA EXP: NA Kzt: NA Mean Height: NA ft TCCL: NA psf BCDL: NA psf MWFRS Parallel Dist: NA C&C Dist a: NA Loc. from endwall: NA I: NA GCpi: NA Wind Duration: NA	<b>Snow Criteria (Pg,Pf in PSF)</b> Pg: NA Ct: NA CAT: NA Pf: NA Ce: NA Lu: NA Cs: NA Snow Duration: NA Building Code: IRC 2021 TPI Std: 2014 Rep Fac: Yes FT/RT/PT:20(0)/10(0)/2(0) Plate Type(s): WAVE	<b>Defl/CSI Criteria</b> PP Deflection in loc L/defl L/# VERT(LL): 0.000 B 999 480 VERT(CL): 0.000 B 999 360 HORZ(LL): 0.001 B - - HORZ(TL): 0.002 B - - Creep Factor: 2.0 Max TC CSI: 0.226 Max BC CSI: 0.046 Max Web CSI: 0.029 VIEW Ver: 23.02.04A.0207.13	<b>▲ Maximum Reactions (lbs), or *=PLF</b> <table border="1"> <thead> <tr> <th rowspan="2">Loc</th> <th colspan="3">Gravity</th> <th colspan="3">Non-Gravity</th> </tr> <tr> <th>R+</th> <th>/R-</th> <th>/Rh</th> <th>/Rw</th> <th>/U</th> <th>/RL</th> </tr> </thead> <tbody> <tr> <td>W</td> <td>86</td> <td>/-</td> <td>/-</td> <td>/-</td> <td>/-</td> <td>/-</td> </tr> <tr> <td>M*</td> <td>105</td> <td>/-</td> <td>/-</td> <td>/-</td> <td>/-</td> <td>/-</td> </tr> </tbody> </table> W Brg Wid = 3.5 Min Req = 1.5 (Truss) M Brg Wid = 206 Min Req = - Bearings W & W are a rigid surface. Members not listed have forces less than 375#	Loc	Gravity			Non-Gravity			R+	/R-	/Rh	/Rw	/U	/RL	W	86	/-	/-	/-	/-	/-	M*	105	/-	/-	/-	/-	/-
Loc	Gravity			Non-Gravity																											
	R+	/R-	/Rh	/Rw	/U	/RL																									
W	86	/-	/-	/-	/-	/-																									
M*	105	/-	/-	/-	/-	/-																									

**Lumber**

Top chord: 4x2 SP #2;  
 Bot chord: 4x2 SP #2;  
 Webs: 4x2 SP #2;

**Bracing**

Sheathing is required for any longitudinal(drag) forces. All connections to be designed by the building designer.  
 Fasten rated sheathing to one face of this frame.

**Plating Notes**

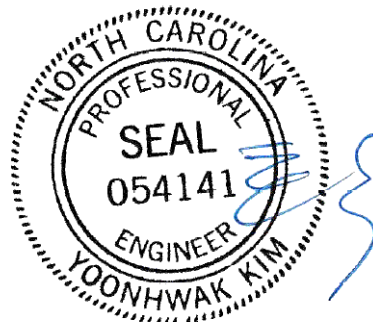
All plates are 1.5X3 except as noted.

**Loading**

Bottom chord checked for 10.00 psf non-concurrent live load.

**Additional Notes**

See detail STRBRIBR1014 for bracing and bridging recommendations.  
 Truss must be installed as shown with top chord up.

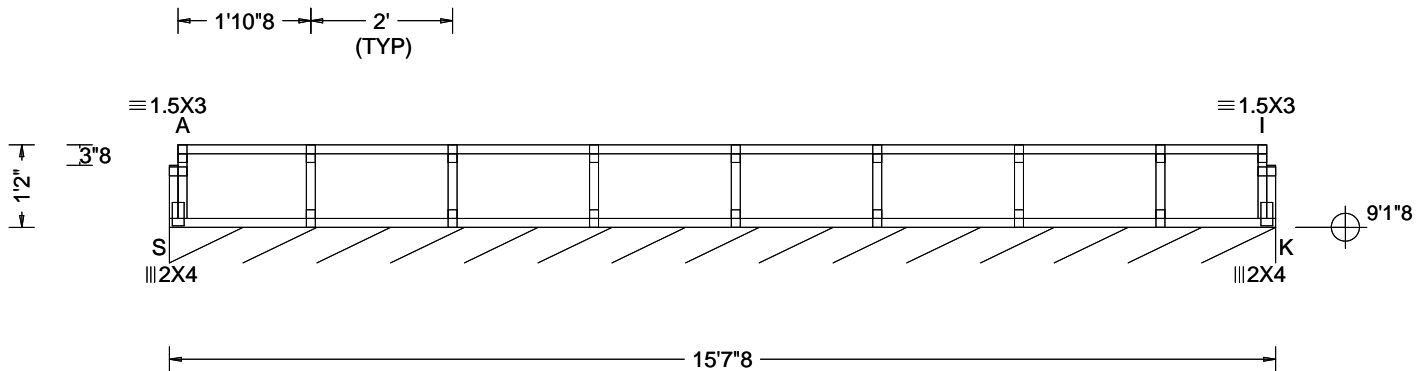


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SEQN: 1775 / FROM:	SY42 Ply: 1 Qty: 1	Job Number: Q2410-324 The Farm at Neills Creek	Cust: R 9836 JRef: 1Y4I98360001 T5 / DrwNo: 303.24.0618.57032 NW / DF 10/29/2024	Truss Label: <b>F3G</b>
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<b>Loading Criteria (psf)</b> TCLL: 40.00 TCDL: 10.00 BCLL: 0.00 BCDL: 5.00 Des Ld: 55.00 NCBCLL: 10.00 Soffit: 2.00 Load Duration: 1.00 Spacing: 24.0 "	<b>Wind Criteria</b> Wind Std: NA Speed: NA mph Enclosure: NA Category: NA EXP: NA Kzt: NA Mean Height: NA ft TCDL: NA psf BCDL: NA psf MWFRS Parallel Dist: NA C&C Dist a: NA Loc. from endwall: NA I: NA GCpi: NA Wind Duration: NA	<b>Snow Criteria (Pg,Pf in PSF)</b> Pg: NA Ct: NA CAT: NA Pf: NA Ce: NA Lu: NA Cs: NA Snow Duration: NA  Building Code: IRC 2021 TPI Std: 2014 Rep Fac: Yes FT/RT/PT:20(0)/10(0)/2(0) Plate Type(s): WAVE	<b>Defl/CSI Criteria</b> PP Deflection in loc L/defl L/# VERT(LL): 0.000 B 999 480 VERT(CL): 0.000 B 999 360 HORZ(LL): 0.001 B - - HORZ(TL): 0.001 B - - Creep Factor: 2.0 Max TC CSI: 0.226 Max BC CSI: 0.043 Max Web CSI: 0.029  VIEW Ver: 23.02.04A.0207.13	<b>▲ Maximum Reactions (lbs), or *=PLF</b> Gravity Non-Gravity Loc R+ / R- / Rh / Rw / U / RL K* 108 - / - / - / - / - K Brg Wid = 187 Min Req = - Bearing S is a rigid surface. Members not listed have forces less than 375#
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**Lumber**

Top chord: 4x2 SP #2;  
Bot chord: 4x2 SP #2;  
Webs: 4x2 SP #2;

**Bracing**

Sheathing is required for any longitudinal(drag) forces. All connections to be designed by the building designer.  
Fasten rated sheathing to one face of this frame.

**Plating Notes**

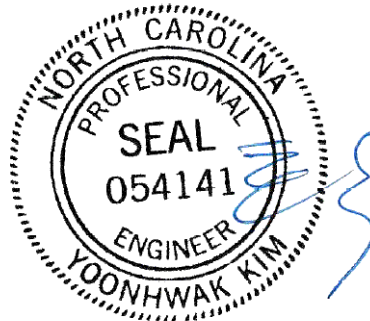
All plates are 1.5X3 except as noted.

**Loading**

Bottom chord checked for 10.00 psf non-concurrent live load.

**Additional Notes**

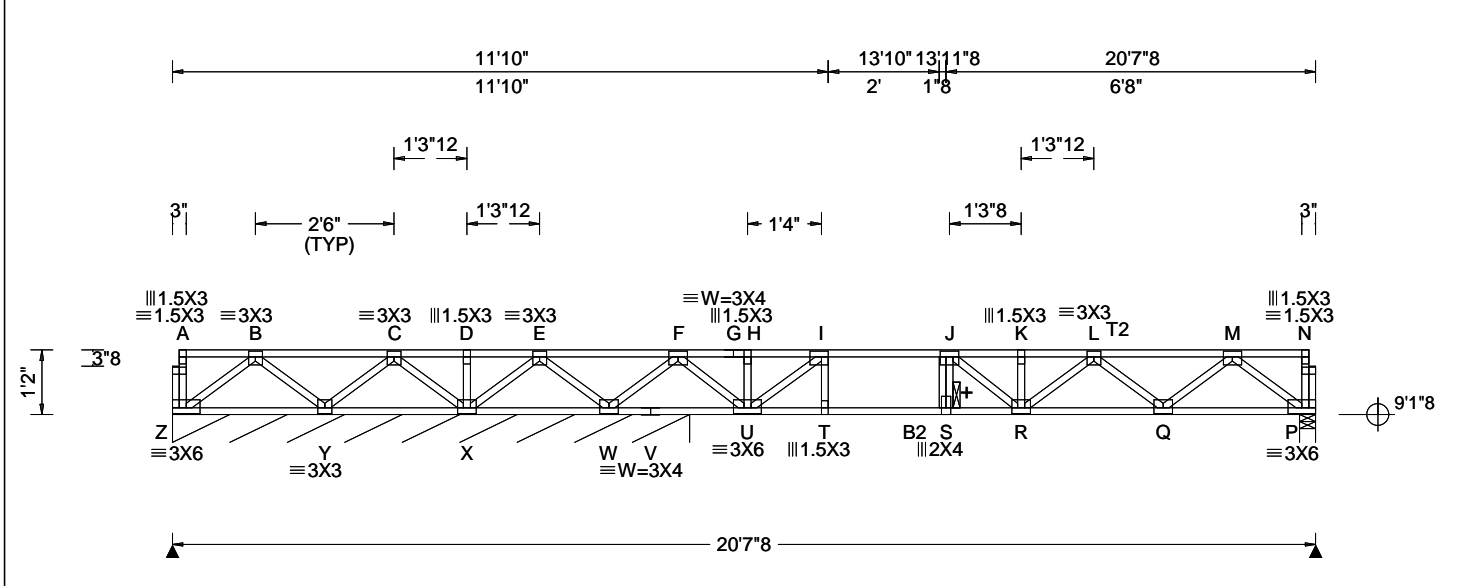
Truss must be installed as shown with top chord up.



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<b>Loading Criteria (psf)</b> TCCL: 40.00 TCCL: 10.00 BCLL: 0.00 BCDL: 5.00 Des Ld: 55.00 NCBCLL: 10.00 Soffit: 2.00 Load Duration: 1.00 Spacing: 24.0 "	<b>Wind Criteria</b> Wind Std: NA Speed: NA mph Enclosure: NA Category: NA EXP: NA Kzt: NA Mean Height: NA ft TCCL: NA psf BCDL: NA psf MWFRS Parallel Dist: NA C&C Dist a: NA Loc. from endwall: NA I: NA GCpi: NA Wind Duration: NA	<b>Snow Criteria (Pg,Pf in PSF)</b> Pg: NA Ct: NA CAT: NA Pf: NA Ce: NA Lu: NA Cs: NA Snow Duration: NA Building Code: IRC 2021 TPI Std: 2014 Rep Fac: Varies by Ld Case FT/RT/PT: 10(0)/10(0)/2(0) Plate Type(s): WAVE	<b>Defl/CSI Criteria</b> PP Deflection in loc L/defl L/# VERT(LL): 0.157 S 902 480 VERT(CL): 0.218 S 651 360 HORZ(LL): 0.015 P - - HORZ(TL): 0.020 P - - Creep Factor: 2.0 Max TC CSI: 0.478 Max BC CSI: 0.504 Max Web CSI: 0.189 VIEW Ver: 23.02.04A.0207.13	<b>▲ Maximum Reactions (lbs), or *=PLF</b> <table style="width:100%; border-collapse: collapse;"> <tr> <th colspan="2"></th> <th colspan="3">Gravity</th> <th colspan="3">Non-Gravity</th> </tr> <tr> <th>Loc</th> <th>R+</th> <th>/R-</th> <th>/Rh</th> <th>/Rw</th> <th>/U</th> <th>/RL</th> <th></th> </tr> <tr> <td>Z*</td> <td>169</td> <td>-</td> <td>-</td> <td>/47</td> <td>-</td> <td>/16</td> <td></td> </tr> <tr> <td>P</td> <td>670</td> <td>-</td> <td>-</td> <td>/189</td> <td>-</td> <td>-</td> <td></td> </tr> </table> <p>Z Brg Wid = 111 Min Req = -          P Brg Wid = 3.5 Min Req = 1.5 (Truss)          Bearings Z &amp; P are a rigid surface.          Members not listed have forces less than 375#  <b>Maximum Top Chord Forces Per Ply (lbs)</b></p> <table style="width:100%; border-collapse: collapse;"> <tr> <th>Chords</th> <th>Tens.Comp.</th> <th>Chords</th> <th>Tens. Comp.</th> </tr> <tr> <td>E - F</td> <td>495 -25</td> <td>I - J</td> <td>0 -1741</td> </tr> <tr> <td>F - G</td> <td>0 -1003</td> <td>J - K</td> <td>0 -1890</td> </tr> <tr> <td>G - H</td> <td>0 -1003</td> <td>K - L</td> <td>0 -1890</td> </tr> <tr> <td>H - I</td> <td>0 -1003</td> <td>L - M</td> <td>0 -1241</td> </tr> </table> <p><b>Maximum Bot Chord Forces Per Ply (lbs)</b></p> <table style="width:100%; border-collapse: collapse;"> <tr> <th>Chords</th> <th>Tens.Comp.</th> <th>Chords</th> <th>Tens. Comp.</th> </tr> <tr> <td>W - V</td> <td>489 0</td> <td>S - R</td> <td>1750 0</td> </tr> <tr> <td>V - U</td> <td>489 0</td> <td>R - Q</td> <td>1685 0</td> </tr> <tr> <td>U - T</td> <td>1729 0</td> <td>Q - P</td> <td>772 0</td> </tr> <tr> <td>T - S</td> <td>1741 0</td> <td></td> <td></td> </tr> </table> <p><b>Maximum Web Forces Per Ply (lbs)</b></p> <table style="width:100%; border-collapse: collapse;"> <tr> <th>Webs</th> <th>Tens.Comp.</th> <th>Webs</th> <th>Tens. Comp.</th> </tr> <tr> <td>W - F</td> <td>0 -1042</td> <td>L - Q</td> <td>0 -579</td> </tr> <tr> <td>F - U</td> <td>670 0</td> <td>Q - M</td> <td>610 0</td> </tr> <tr> <td>U - I</td> <td>0 -921</td> <td>M - P</td> <td>0 -985</td> </tr> </table>			Gravity			Non-Gravity			Loc	R+	/R-	/Rh	/Rw	/U	/RL		Z*	169	-	-	/47	-	/16		P	670	-	-	/189	-	-		Chords	Tens.Comp.	Chords	Tens. Comp.	E - F	495 -25	I - J	0 -1741	F - G	0 -1003	J - K	0 -1890	G - H	0 -1003	K - L	0 -1890	H - I	0 -1003	L - M	0 -1241	Chords	Tens.Comp.	Chords	Tens. Comp.	W - V	489 0	S - R	1750 0	V - U	489 0	R - Q	1685 0	U - T	1729 0	Q - P	772 0	T - S	1741 0			Webs	Tens.Comp.	Webs	Tens. Comp.	W - F	0 -1042	L - Q	0 -579	F - U	670 0	Q - M	610 0	U - I	0 -921	M - P	0 -985
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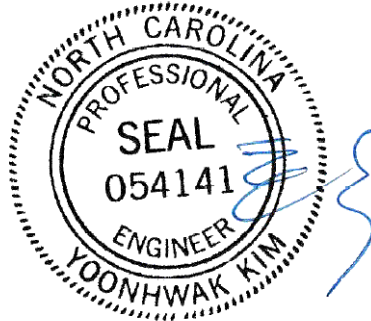
**Lumber**  
 Top chord: 4x2 SP #2; T2 4x2 SP SS;  
 Bot chord: 4x2 SP #2; B2 4x2 SP SS;  
 Webs: 4x2 SP #2;

**Plating Notes**  
 All plates are 3X4 except as noted.

**Loading**  
 Truss transfers a maximum horizontal load of 150 # ( 7.41 plf ) along top chord, from either direction, to supports where indicated. Diaphragm and connections are to be designed by Engineer of Record.  
 Drag Loads: Force(#) (PLF) Mbr Start End  
 Case 1: 150 7.41 TC 0.19 20.44  
 150 BC 8.62

Bottom chord checked for 10.00 psf non-concurrent live load.

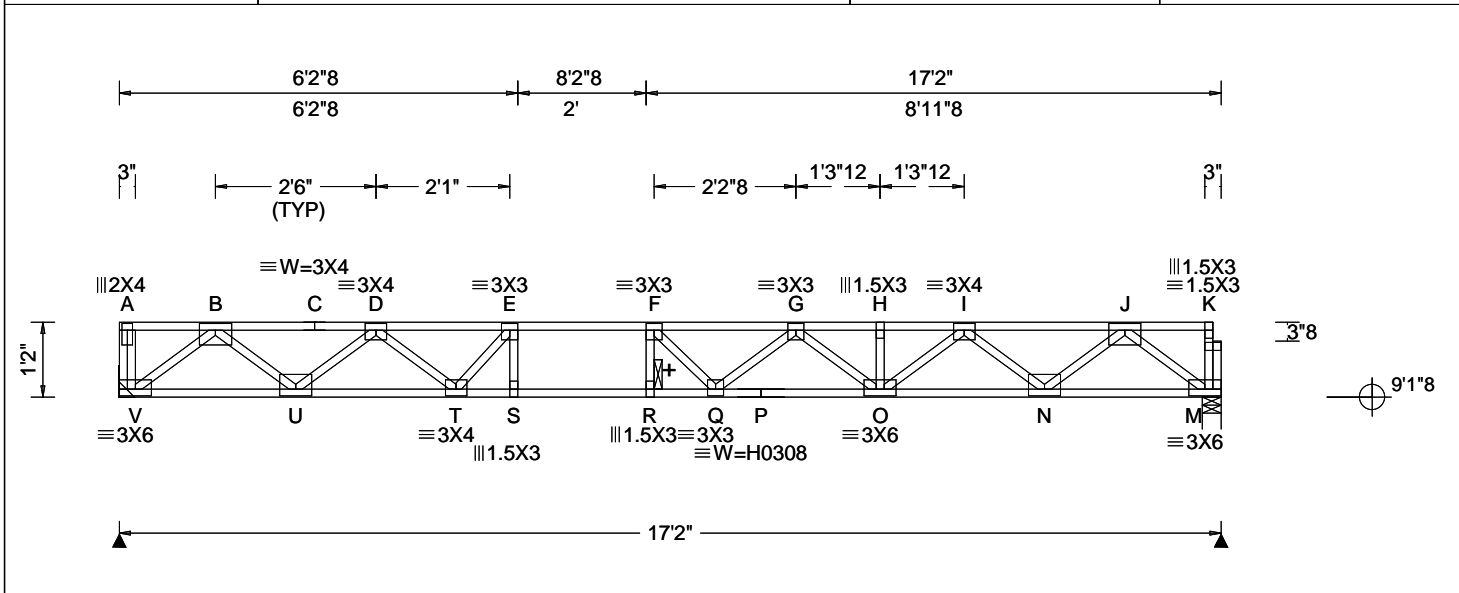
**Additional Notes**  
 + 2x6 continuous strongback. See detail STRBRIBR1014 for bracing and bridging recommendations.  
 Provide for complete drainage of roof.  
 Truss must be installed as shown with top chord up.



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<b>Loading Criteria (psf)</b> TCCL: 40.00 TCCL: 10.00 BCCL: 0.00 BCDL: 5.00 Des Ld: 55.00 NCBCCL: 10.00 Soffit: 2.00 Load Duration: 1.00 Spacing: 24.0 "	<b>Wind Criteria</b> Wind Std: NA Speed: NA mph Enclosure: NA Category: NA EXP: NA Kzt: NA Mean Height: NA ft TCCL: NA psf BCDL: NA psf MWFRS Parallel Dist: NA C&C Dist a: NA Loc. from endwall: NA I: NA GCpi: NA Wind Duration: NA	<b>Snow Criteria (Pg,Pf in PSF)</b> Pg: NA Ct: NA CAT: NA Pf: NA Ce: NA Lu: NA Cs: NA Snow Duration: NA Building Code: IRC 2021 TPI Std: 2014 Rep Fac: Yes FT/RT/PT: 10(0)/10(0)/2(0) Plate Type(s): WAVE, HS	<b>Defl/CSI Criteria</b> PP Deflection in loc L/defl L/# VERT(LL): 0.310 F 648 480 VERT(CL): 0.404 F 496 360 HORZ(LL): 0.039 M - - HORZ(TL): 0.053 M - - Creep Factor: 2.0 Max TC CSI: 0.516 Max BC CSI: 0.771 Max Web CSI: 0.287 VIEW Ver: 23.02.04A.0207.13	<b>▲ Maximum Reactions (lbs)</b> <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Loc</th> <th colspan="3">Gravity</th> <th colspan="3">Non-Gravity</th> </tr> <tr> <th>R+</th> <th>/R-</th> <th>/Rh</th> <th>/Rw</th> <th>/U</th> <th>/RL</th> </tr> </thead> <tbody> <tr> <td>V</td> <td>948</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>M</td> <td>928</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>V Brg Wid =</td> <td colspan="6">Min Req = -</td> </tr> <tr> <td>M Brg Wid = 3.5</td> <td colspan="6">Min Req = 1.5 (Truss)</td> </tr> </tbody> </table> <p>Bearing M is a rigid surface. Members not listed have forces less than 375#</p> <b>Maximum Top Chord Forces Per Ply (lbs)</b> <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Chords</th> <th>Tens.Comp.</th> <th>Chords</th> <th>Tens. Comp.</th> </tr> </thead> <tbody> <tr> <td>B - C</td> <td>0 - 1833</td> <td>F - G</td> <td>0 - 3611</td> </tr> <tr> <td>C - D</td> <td>0 - 1833</td> <td>G - H</td> <td>0 - 3122</td> </tr> <tr> <td>D - E</td> <td>0 - 3093</td> <td>H - I</td> <td>0 - 3122</td> </tr> <tr> <td>E - F</td> <td>0 - 3543</td> <td>I - J</td> <td>0 - 1875</td> </tr> </tbody> </table> <b>Maximum Bot Chord Forces Per Ply (lbs)</b> <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Chords</th> <th>Tens.Comp.</th> <th>Chords</th> <th>Tens. Comp.</th> </tr> </thead> <tbody> <tr> <td>V - U</td> <td>1051 0</td> <td>Q - P</td> <td>3524 0</td> </tr> <tr> <td>U - T</td> <td>2575 0</td> <td>P - O</td> <td>3524 0</td> </tr> <tr> <td>T - S</td> <td>3529 0</td> <td>O - N</td> <td>2621 0</td> </tr> <tr> <td>S - R</td> <td>3543 0</td> <td>N - M</td> <td>1096 0</td> </tr> <tr> <td>R - Q</td> <td>3554 0</td> <td></td> <td></td> </tr> </tbody> </table> <b>Maximum Web Forces Per Ply (lbs)</b> <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Webs</th> <th>Tens.Comp.</th> <th>Webs</th> <th>Tens. Comp.</th> </tr> </thead> <tbody> <tr> <td>V - B</td> <td>0 - 1373</td> <td>G - O</td> <td>0 - 513</td> </tr> <tr> <td>B - U</td> <td>1017 0</td> <td>O - I</td> <td>640 0</td> </tr> <tr> <td>U - D</td> <td>0 - 966</td> <td>I - N</td> <td>0 - 971</td> </tr> <tr> <td>D - T</td> <td>713 0</td> <td>N - J</td> <td>1015 0</td> </tr> <tr> <td>T - E</td> <td>0 - 824</td> <td>J - M</td> <td>0 - 1399</td> </tr> </tbody> </table>	Loc	Gravity			Non-Gravity			R+	/R-	/Rh	/Rw	/U	/RL	V	948	-	-	-	-	-	M	928	-	-	-	-	-	V Brg Wid =	Min Req = -						M Brg Wid = 3.5	Min Req = 1.5 (Truss)						Chords	Tens.Comp.	Chords	Tens. Comp.	B - C	0 - 1833	F - G	0 - 3611	C - D	0 - 1833	G - H	0 - 3122	D - E	0 - 3093	H - I	0 - 3122	E - F	0 - 3543	I - J	0 - 1875	Chords	Tens.Comp.	Chords	Tens. Comp.	V - U	1051 0	Q - P	3524 0	U - T	2575 0	P - O	3524 0	T - S	3529 0	O - N	2621 0	S - R	3543 0	N - M	1096 0	R - Q	3554 0			Webs	Tens.Comp.	Webs	Tens. Comp.	V - B	0 - 1373	G - O	0 - 513	B - U	1017 0	O - I	640 0	U - D	0 - 966	I - N	0 - 971	D - T	713 0	N - J	1015 0	T - E	0 - 824	J - M	0 - 1399
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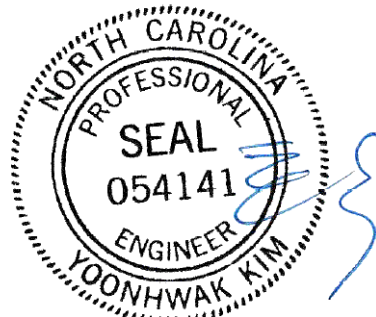
**Lumber**  
 Top chord: 4x2 SP SS;  
 Bot chord: 4x2 SP SS;  
 Webs: 4x2 SP #2;

**Plating Notes**  
 All plates are 4X6 except as noted.

**Hangers / Ties**  
 Simpson Construction Hardware is specified based on the most current information provided by Simpson Strong-Tie. Please refer to the most recent Simpson Strong-Tie catalog for additional information.  
 Recommended hanger connections are based on manufacturer tested capacities and calculations. Conditions may exist that require different connections than indicated. Refer to manufacturer publication for additional information.  
 Hanger specified assumes connection to supporting chord is located a minimum of five times the depth of the supporting chord from any unsupported end, unless unsupported chord end has 85% plating coverage.  
 Bearing at location x=0' uses the following support conditions: 0'  
 Bearing V (0', 9'1"8) HHUS410  
 Supporting Member: (2)1.75x14 2.0E PWLVL (30) 0.148"x3" nails into supporting member,  
 (10) 0.148"x3" nails into supported member.

**Loading**  
 Bottom chord checked for 10.00 psf non-concurrent live load.

**Additional Notes**  
 + 2x6 continuous strongback. See detail STRBRIBR1014 for bracing and bridging recommendations.  
 Truss must be installed as shown with top chord up.



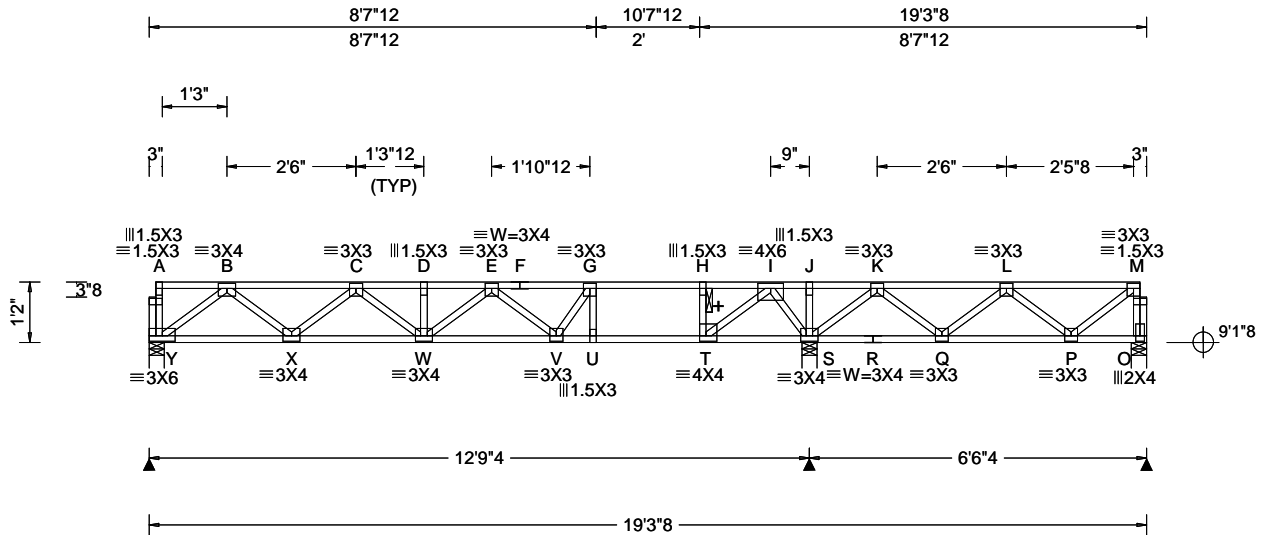
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SEQN: 6296 FROM:	SY42 Ply: 1 Qty: 2	<b>Job Number:</b> Q2410-324 The Farm at Neills Creek	Cust: R 9836 JRef: 1Y4I98360001 T15 DrwNo: 303.24.0805.00590 / YK 10/29/2024	<b>Truss Label:</b> <b>F2-08</b>
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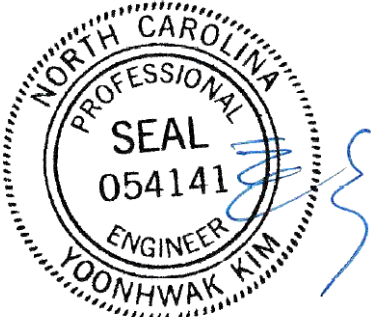


<b>Loading Criteria (psf)</b> TCLL: 40.00 TCDL: 10.00 BCLL: 0.00 BCDL: 5.00 Des Ld: 55.00 NCBCLL: 10.00 Soffit: 2.00 Load Duration: 1.00 Spacing: 19.2 "	<b>Wind Criteria</b> Wind Std: NA Speed: NA mph Enclosure: NA Category: NA EXP: NA Kzt: NA Mean Height: NA ft TCDL: NA psf BCDL: NA psf MWFRS Parallel Dist: NA C&C Dist a: NA Loc. from endwall: NA I: NA GCpi: NA Wind Duration: NA	<b>Snow Criteria (Pg,Pf in PSF)</b> Pg: NA Ct: NA CAT: NA Pf: NA Ce: NA Lu: NA Cs: NA Snow Duration: NA  Building Code: IRC 2021 TPI Std: 2014 Rep Fac: Yes FT/RT/PT:10(0)/10(0)/2(0) Plate Type(s): WAVE	<b>Defl/CSI Criteria</b> PP Deflection in loc L/defl L/# VERT(LL): 0.219 G 688 480 VERT(CL): 0.301 G 502 360 HORZ(LL): 0.033 B - - HORZ(TL): 0.046 B - - Creep Factor: 2.0 Max TC CSI: 0.765 Max BC CSI: 0.550 Max Web CSI: 0.281  VIEW Ver: 23.02.04A.0207.13	<b>▲ Maximum Reactions (lbs)</b> Gravity Loc R+ /R- /Rh /Rw /U /RL Non-Gravity Y 585 -/- /- /- /- /- S 802 -/- /- /- /- /- O 329 -/- /- /- /- /- Y Brg Wid = 3.5 Min Req = 1.5 (Truss) S Brg Wid = 3.5 Min Req = 1.5 (Truss) O Brg Wid = 3.5 Min Req = 1.5 (Truss) Bearings Y, S, & O are a rigid surface. Members not listed have forces less than 375# <b>Maximum Top Chord Forces Per Ply (lbs)</b> Chords Tens.Comp. Chords Tens. Comp.
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<b>Lumber</b> Top chord: 4x2 SP #2; Bot chord: 4x2 SP SS Dense; Webs: 4x2 SP #2;	<b>Maximum Bot Chord Forces Per Ply (lbs)</b> Chords Tens.Comp. Chords Tens. Comp. Y - X 666 0 T - S 562 0 X - W 1487 0 S - R 449 0 W - V 1798 0 R - Q 449 0 V - U 1366 0 Q - P 532 0 U - T 1341 0
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<b>Loading</b> Bottom chord checked for 10.00 psf non-concurrent live load.	<b>Maximum Web Forces Per Ply (lbs)</b> Webs Tens.Comp. Webs Tens. Comp. Y - B 0 -852 H - T 0 -378 B - X 552 0 T - I 997 0 X - C 0 -517 I - S 0 -657 V - G 534 0 S - K 0 -389 G - U 0 -439
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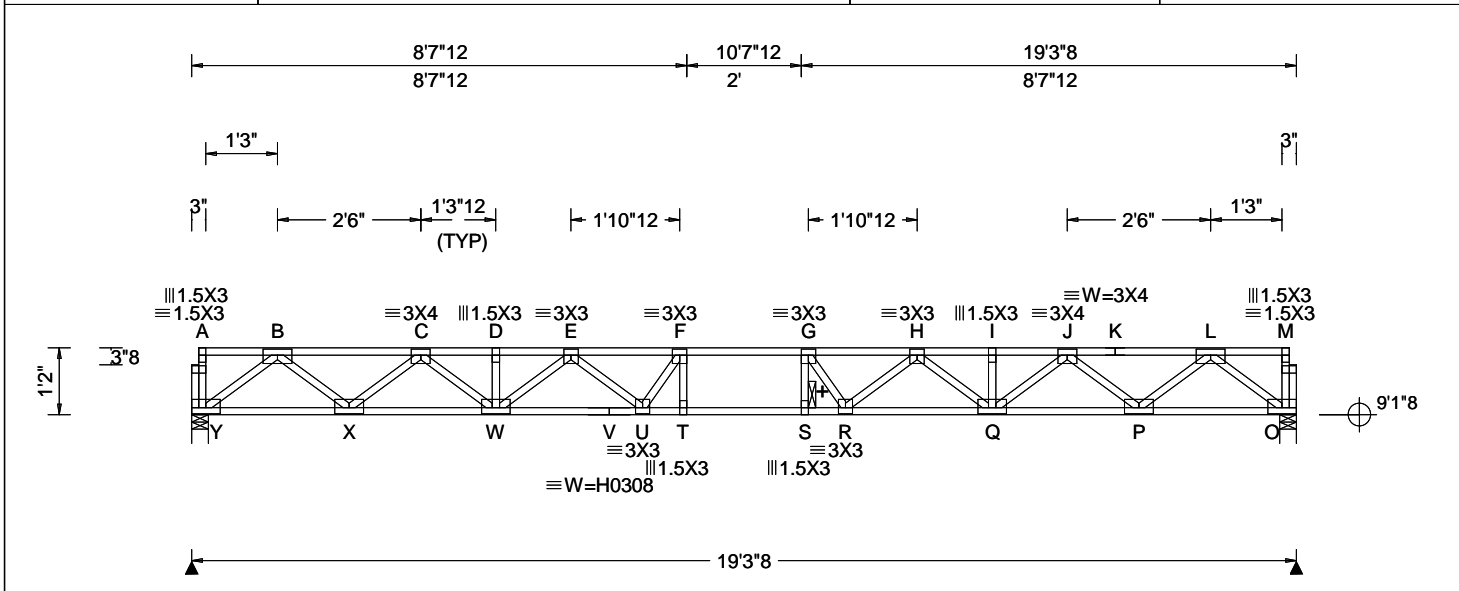
<b>Additional Notes</b> + 2x6 continuous strongback. See detail STRBRIBR1014 for bracing and bridging recommendations. Truss must be installed as shown with top chord up.
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10/29/2024  
ABCD Engineering, PLLC NC COA 0838

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<b>Loading Criteria (psf)</b> TCCL: 40.00 TCCL: 10.00 BCLL: 0.00 BCDL: 5.00 Des Ld: 55.00 NCBCLL: 10.00 Soffit: 2.00 Load Duration: 1.00 Spacing: 19.2 "	<b>Wind Criteria</b> Wind Std: NA Speed: NA mph Enclosure: NA Category: NA EXP: NA Kzt: NA Mean Height: NA ft TCCL: NA psf BCDL: NA psf MWFRS Parallel Dist: NA C&C Dist a: NA Loc. from endwall: NA I: NA GCpi: NA Wind Duration: NA	<b>Snow Criteria (Pg,Pf in PSF)</b> Pg: NA Ct: NA CAT: NA Pf: NA Ce: NA Lu: NA Cs: NA Snow Duration: NA Building Code: IRC 2021 TPI Std: 2014 Rep Fac: Yes FT/RT/PT:10(0)/10(0)/2(0) Plate Type(s): WAVE, HS	<b>Defl/CSI Criteria</b> PP Deflection in loc L/defl L/# VERT(LL): 0.334 T 679 480 VERT(CL): 0.460 T 493 360 HORZ(LL): 0.049 B - - HORZ(TL): 0.067 B - - Creep Factor: 2.0 Max TC CSI: 0.836 Max BC CSI: 0.468 Max Web CSI: 0.271 VIEW Ver: 23.02.04A.0207.13	<b>▲ Maximum Reactions (lbs)</b> <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Loc</th> <th colspan="3">Gravity</th> <th colspan="3">Non-Gravity</th> </tr> <tr> <th>R+</th> <th>/R-</th> <th>/Rh</th> <th>/Rw</th> <th>/U</th> <th>/RL</th> </tr> </thead> <tbody> <tr> <td>Y</td> <td>838</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>O</td> <td>838</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>Y</td> <td colspan="6">Brg Wid = 3.5 Min Req = 1.5 (Truss)</td> </tr> <tr> <td>O</td> <td colspan="6">Brg Wid = 3.5 Min Req = 1.5 (Truss)</td> </tr> </tbody> </table> Bearings Y & O are a rigid surface. Members not listed have forces less than 375# <b>Maximum Top Chord Forces Per Ply (lbs)</b> <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Chords</th> <th>Tens.Comp.</th> <th>Chords</th> <th>Tens. Comp.</th> </tr> </thead> <tbody> <tr> <td>B - C</td> <td>0 - 1735</td> <td>G - H</td> <td>0 - 3620</td> </tr> <tr> <td>C - D</td> <td>0 - 2972</td> <td>H - I</td> <td>0 - 2972</td> </tr> <tr> <td>D - E</td> <td>0 - 2972</td> <td>I - J</td> <td>0 - 2972</td> </tr> <tr> <td>E - F</td> <td>0 - 3620</td> <td>J - K</td> <td>0 - 1735</td> </tr> <tr> <td>F - G</td> <td>0 - 3733</td> <td>K - L</td> <td>0 - 1735</td> </tr> </tbody> </table>	Loc	Gravity			Non-Gravity			R+	/R-	/Rh	/Rw	/U	/RL	Y	838	-	-	-	-	-	O	838	-	-	-	-	-	Y	Brg Wid = 3.5 Min Req = 1.5 (Truss)						O	Brg Wid = 3.5 Min Req = 1.5 (Truss)						Chords	Tens.Comp.	Chords	Tens. Comp.	B - C	0 - 1735	G - H	0 - 3620	C - D	0 - 2972	H - I	0 - 2972	D - E	0 - 2972	I - J	0 - 2972	E - F	0 - 3620	J - K	0 - 1735	F - G	0 - 3733	K - L	0 - 1735
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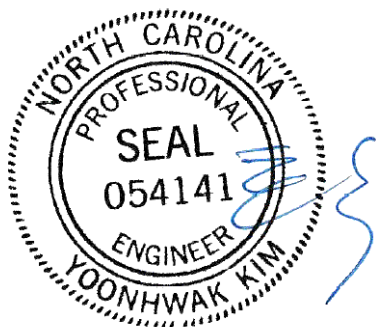
**Lumber**  
 Top chord: 4x2 SP #2;  
 Bot chord: 4x2 SP SS Dense;  
 Webs: 4x2 SP #2;

**Plating Notes**  
 All plates are 3X6 except as noted.

**Loading**  
 Bottom chord checked for 10.00 psf non-concurrent live load.

**Deflection**  
 Max JT VERT DEFL: LL: 0.33" DL: 0.15". See detail DEFLCAMB1014 for camber recommendations.

**Additional Notes**  
 + 2x6 continuous strongback. See detail STRBRIBR1014 for bracing and bridging recommendations.  
 Truss must be installed as shown with top chord up.



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**Maximum Bot Chord Forces Per Ply (lbs)**

Chords	Tens.Comp.	Chords	Tens. Comp.
Y - X	997 0	T - S	3733 0
X - W	2447 0	S - R	3733 0
W - V	3387 0	R - Q	3387 0
V - U	3387 0	Q - P	2447 0
U - T	3733 0	P - O	997 0

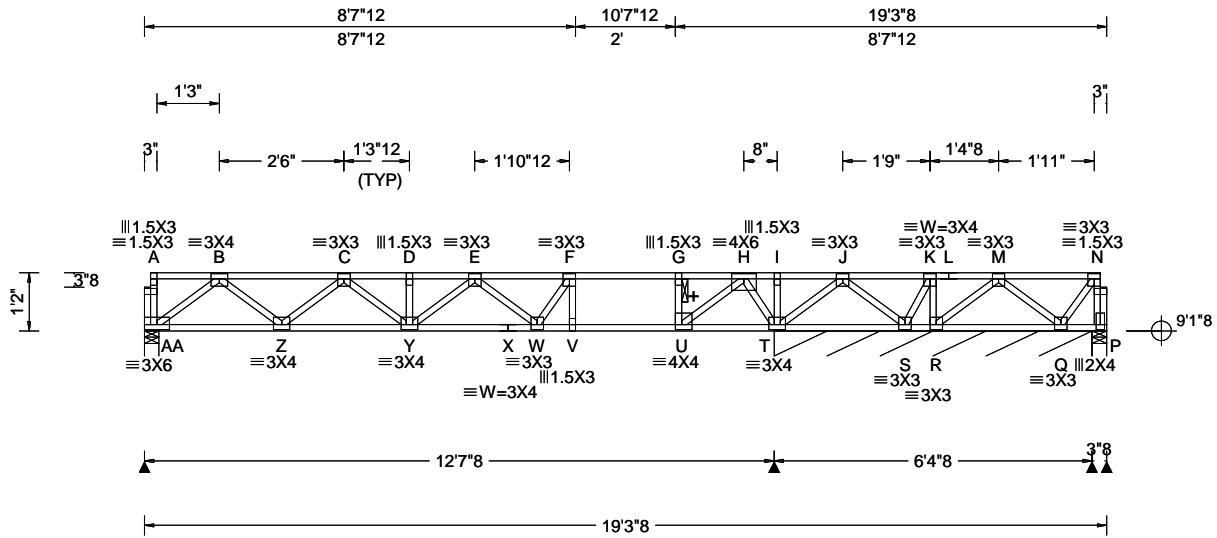
**Maximum Web Forces Per Ply (lbs)**

Webs	Tens.Comp.	Webs	Tens. Comp.
Y - B	0 - 1273	G - R	117 - 470
B - X	961 0	R - H	436 0
X - C	0 - 927	H - Q	0 - 529
C - W	670 0	Q - J	670 0
W - E	0 - 529	J - P	0 - 927
E - U	436 0	P - L	961 0
U - F	117 - 470	L - O	0 - 1273

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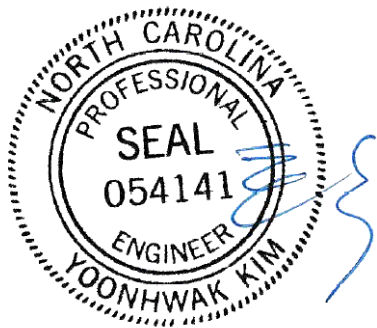






<b>Loading Criteria (psf)</b> TCLL: 40.00 TCCL: 10.00 BCCL: 0.00 BCDL: 5.00 Des Ld: 55.00 NCBCLL: 10.00 Soffit: 2.00 Load Duration: 1.00 Spacing: 19.2 "	<b>Wind Criteria</b> Wind Std: NA Speed: NA mph Enclosure: NA Category: NA EXP: NA Kzt: NA Mean Height: NA ft TCCL: NA psf BCDL: NA psf MWFRS Parallel Dist: NA C&C Dist a: NA Loc. from endwall: NA I: NA GCpi: NA Wind Duration: NA	<b>Snow Criteria (Pg,Pf in PSF)</b> Pg: NA Ct: NA CAT: NA Pf: NA Ce: NA Lu: NA Cs: NA Snow Duration: NA Building Code: IRC 2021 TPI Std: 2014 Rep Fac: Yes FT/RT/PT:10(0)/10(0)/2(0) Plate Type(s): WAVE	<b>Defl/CSI Criteria</b> PP Deflection in loc L/defl L/# VERT(LL): 0.216 F 692 480 VERT(CL): 0.298 F 503 360 HORZ(LL): 0.033 B - - HORZ(TL): 0.045 B - - Creep Factor: 2.0 Max TC CSI: 0.747 Max BC CSI: 0.543 Max Web CSI: 0.279 VIEW Ver: 23.02.04A.0207.13	<b>▲ Maximum Reactions (lbs), or *PLF</b> <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Loc</th> <th colspan="3">Gravity</th> <th colspan="3">Non-Gravity</th> </tr> <tr> <th>R+</th> <th>/R-</th> <th>/Rh</th> <th>/Rw</th> <th>/U</th> <th>/RL</th> </tr> </thead> <tbody> <tr> <td>AA</td> <td>586</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>T*</td> <td>163</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>P</td> <td>61</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> </tbody> </table> AA Brg Wid = 3.5 Min Req = 1.5 (Truss) T Brg Wid = 76.5 Min Req = - P Brg Wid = 3.5 Min Req = 1.5 (Truss) Bearings AA, T, & P are a rigid surface. Members not listed have forces less than 375# <b>Maximum Top Chord Forces Per Ply (lbs)</b> <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Chords</th> <th>Tens.Comp.</th> <th>Chords</th> <th>Tens. Comp.</th> </tr> </thead> <tbody> <tr> <td>B - C</td> <td>0 - 1093</td> <td>E - F</td> <td>0 - 1641</td> </tr> <tr> <td>C - D</td> <td>0 - 1682</td> <td>F - G</td> <td>0 - 1352</td> </tr> <tr> <td>D - E</td> <td>0 - 1682</td> <td>G - H</td> <td>0 - 1330</td> </tr> </tbody> </table>	Loc	Gravity			Non-Gravity			R+	/R-	/Rh	/Rw	/U	/RL	AA	586	-	-	-	-	-	T*	163	-	-	-	-	-	P	61	-	-	-	-	-	Chords	Tens.Comp.	Chords	Tens. Comp.	B - C	0 - 1093	E - F	0 - 1641	C - D	0 - 1682	F - G	0 - 1352	D - E	0 - 1682	G - H	0 - 1330
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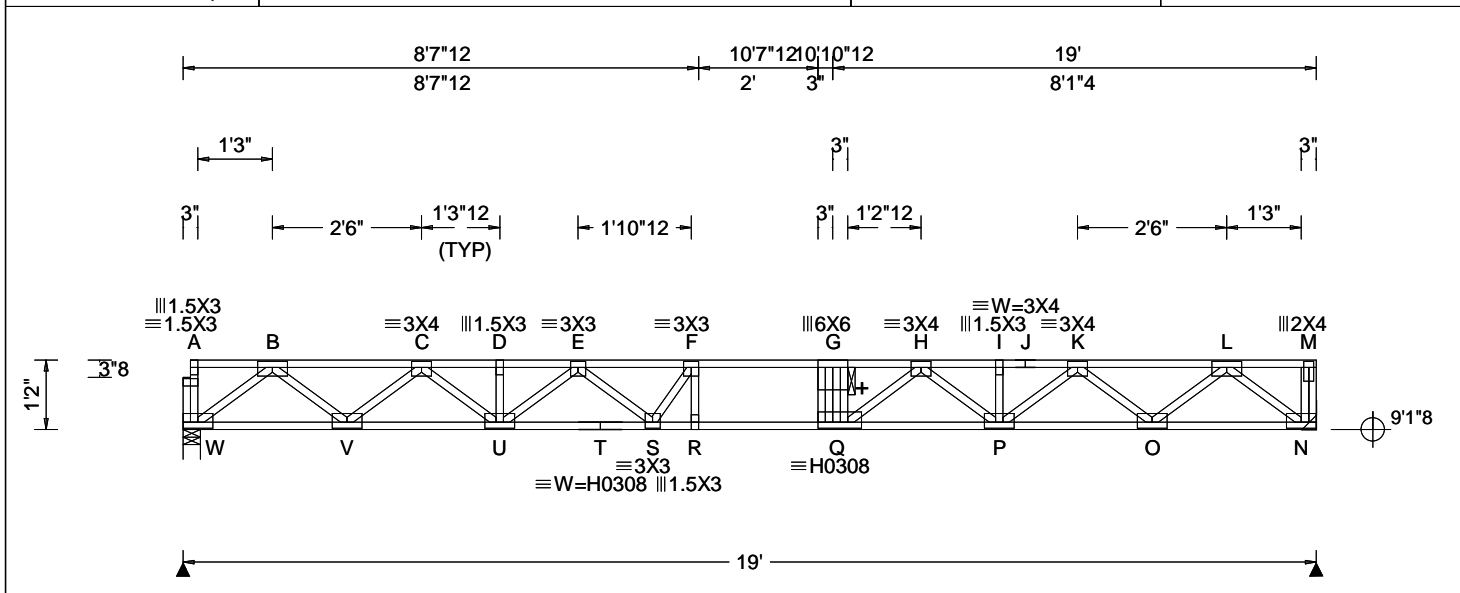
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10/29/2024  
 ABCD Engineering, PLLC NC COA 0838

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**Lumber**  
 Top chord: 4x2 SP #2;  
 Bot chord: 4x2 SP SS Dense;  
 Webs: 4x2 SP #2;

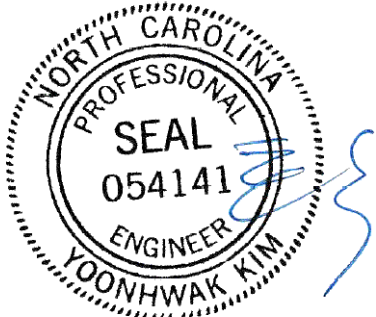
**Plating Notes**  
 All plates are 3X6 except as noted.

**Hangers / Ties**  
 (J) Hanger Support Required, by others

**Loading**  
 Bottom chord checked for 10.00 psf non-concurrent live load.

**Deflection**  
 Max JT VERT DEFL: LL: 0.32" DL: 0.16". See detail DEFLCMB1014 for camber recommendations.

**Additional Notes**  
 + 2x6 continuous strongback. See detail STRBRIBR1014 for bracing and bridging recommendations.  
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**Maximum Bot Chord Forces Per Ply (lbs)**

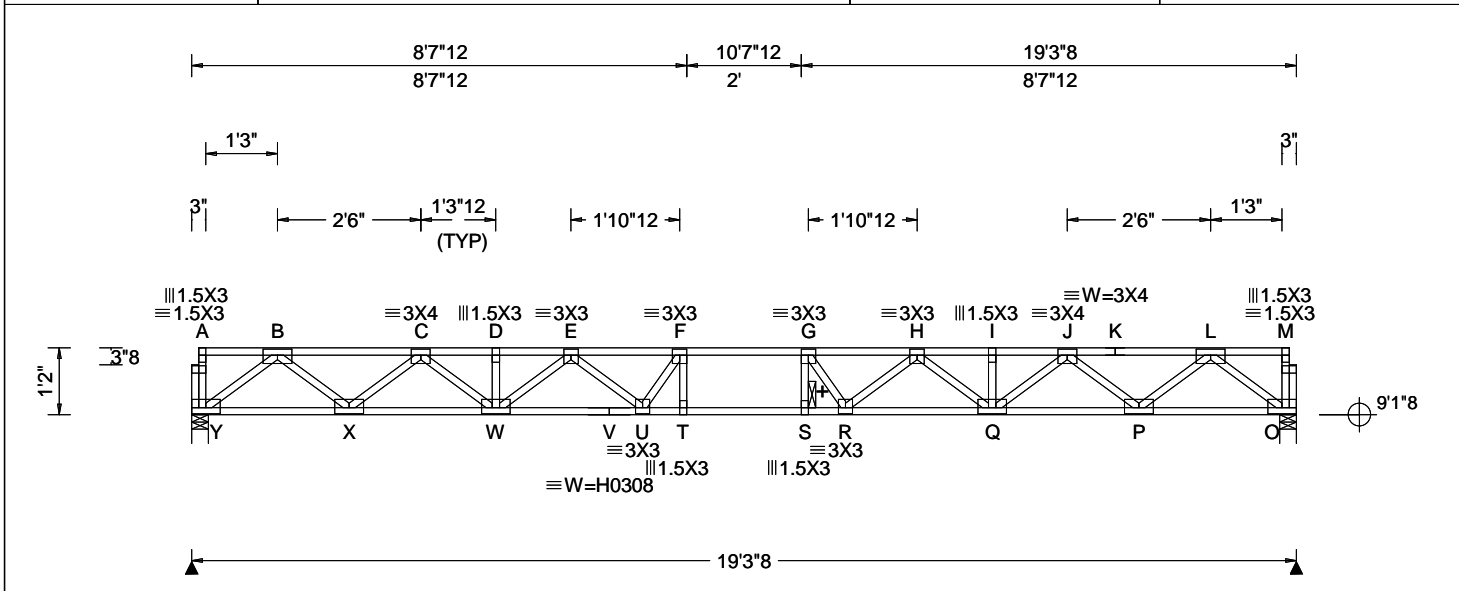
Chords	Tens.Comp.		Chords	Tens. Comp.	
W - V	977	0	R - Q	3583	0
V - U	2390	0	Q - P	3271	0
U - T	3292	0	P - O	2359	0
T - S	3292	0	O - N	934	0
S - R	3585	0			

**Maximum Web Forces Per Ply (lbs)**

Webs	Tens.Comp.		Webs	Tens. Comp.	
W - B	0	-1248	Q - H	600	0
B - V	937	0	H - P	0	-510
V - C	0	-903	P - K	654	0
C - U	644	0	K - O	0	-909
U - E	0	-507	O - L	945	0
E - S	426	0	L - N	0	-1219
S - F	171	-447			

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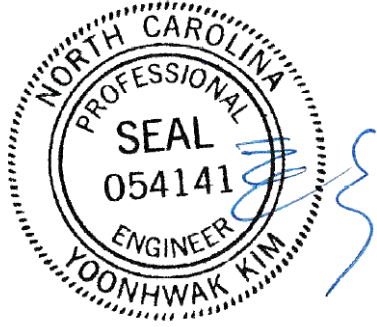
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 Webs: 4x2 SP #2;

**Plating Notes**  
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**Loading**  
 Bottom chord checked for 10.00 psf non-concurrent live load.

**Deflection**  
 Max JT VERT DEFL: LL: 0.33" DL: 0.15". See detail DEFLCAMB1014 for camber recommendations.

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**Maximum Bot Chord Forces Per Ply (lbs)**

Chords	Tens.Comp.	Chords	Tens. Comp.
Y - X	997	T - S	3733
X - W	2447	S - R	3733
W - V	3387	R - Q	3387
V - U	3387	Q - P	2447
U - T	3733	P - O	997

**Maximum Web Forces Per Ply (lbs)**

Webs	Tens.Comp.	Webs	Tens. Comp.
Y - B	0 - 1273	G - R	117 - 470
B - X	961	R - H	436
X - C	0 - 927	H - Q	0 - 529
C - W	670	Q - J	670
W - E	0 - 529	J - P	0 - 927
E - U	436	P - L	961
U - F	117 - 470	L - O	0 - 1273

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 For more information see these web sites: Alpine: alpineitw.com; TPI: tpinst.org; SBCA: sbccomponents.com; ICC: iccsafe.org; AWC: awc.org



## Commentary: Deflection and Camber

Camber may be built into trusses to compensate for the vertical deflection that results from the application of loads. Providing camber has the following advantages:

- Helps to ensure level ceilings and floors after dead loads are applied.
- Facilitates drainage to avoid ponding on flat or low slope roofs.
- Compensates for different deflection characteristics between adjacent trusses.
- Improves appearance of garage door headers and other long spans that can appear to "sag."
- Avoids "dips" in roof ridgelines at the transition from the gable to adjacent clear span trusses.

In accordance with ANSI/TPI 1 the Building Designer, through the Construction Documents, shall provide the location, direction, and magnitude of all loads attributable to ponding that may occur due to the design of the roof drainage system. The Building Designer shall also specify any dead load, live load, and in-service creep deflection criteria for flat or low-slope roofs subject to ponding loads.

The amount of camber is dependent on the truss type, span, loading, application, etceteras.

More restrictive limits for allowable deflection and slenderness ratio (L/D) may be required to help control vibration.

The following tables are provided as guidelines for limiting deflection and estimating camber. Conditions or codes may exist that require exceeding these recommendations, or past experience may warrant using more stringent limitations.

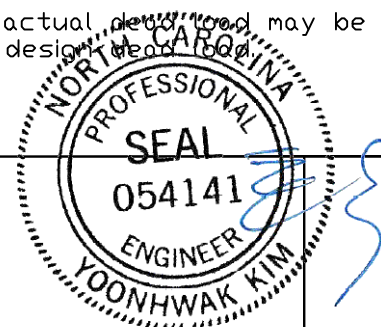
L = Span of Truss (inches)  
D = Depth of Truss at Deflection Point (inches)

### Recommended Truss Deflection Limits

Truss Type	L/D	Deflection Limits	
		Live Load	Total Load
Pitched Roof Trusses	24	L/240 (vertical)	L/180 (vertical)
Floor of Room-In-Attic Trusses	24	L/360 (vertical)	L/240 (vertical)
Flat or Shallow Pitched Roof Trusses	24	L/360 (vertical)	L/240 (vertical)
Residential Floor Trusses	24	L/360 (vertical)	L/240 (vertical)
Commercial Floor Trusses	20	L/480 (vertical)	L/240 (vertical)
Scissors Trusses	24	0.75" (horizontal)	1.25" (horizontal)

Truss Type	Recommended Camber
Pitched Trusses	1.00 x Deflection from Actual Dead Load
Sloping Parallel Chord Trusses	1.5 x Vertical Deflection from Actual Dead Load
Floor Trusses	(0.25 x Deflection from Live Load) + Actual Dead Load
Flat Roof Trusses	(0.25 x Deflection from Live Load) + (1.5 x Design Dead Load Deflection)

Note: The actual design load may be considerably less than the design dead load.



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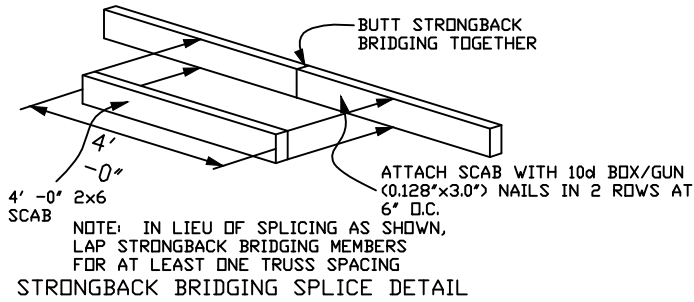
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 ALPINE: [www.alpineitw.com](http://www.alpineitw.com); TPI: [www.tpinst.org](http://www.tpinst.org); SBCA: [www.sbcacomponents.com](http://www.sbcacomponents.com); ICC: [www.iccsafe.org](http://www.iccsafe.org)

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10/29/2024

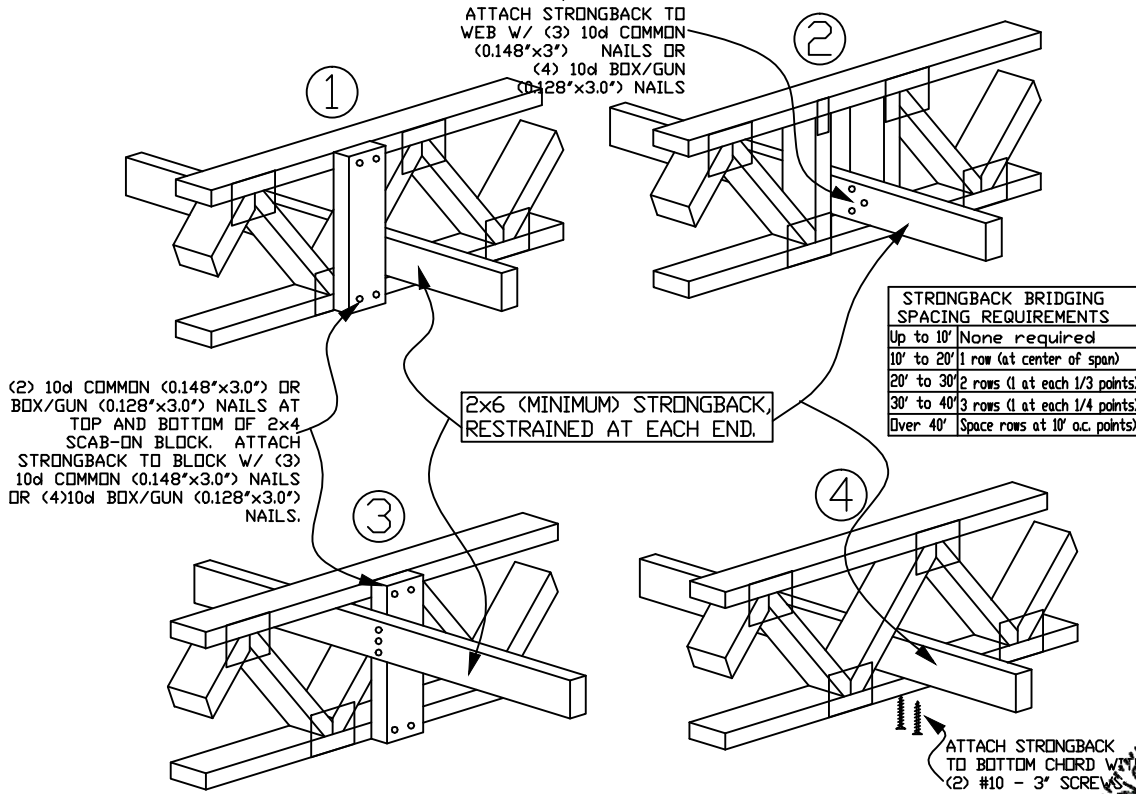
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DATE	10/01/14
DRWG	DEFLCAMB1014

# STRONGBACK BRIDGING RECOMMENDATIONS



- ▶ All scab-on blocks shall be a minimum 2x4 "stress graded lumber."
- ▶ All strongback bridging and bracing shall be a minimum 2x6 "stress graded lumber."
- ▶ The purpose of strongback bridging is to develop load sharing between individual trusses, resulting in an overall increase in the stiffness of the floor system. 2x6 strongback bridging, positioned as shown in details, is recommended at 10' -0" o.c. (max.)

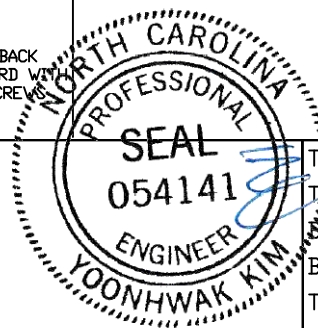
NOTE: Details 1 and 2 are the preferred attachment methods



- ▶ The terms "bridging" and "bracing" are sometimes mistakenly used interchangeably. "Bracing" is an important structural requirement of any floor or roof system. Refer to the Truss Design Drawing (TDD) for the bracing requirements for each individual truss component. "Bridging," particularly "strongback bridging" is a recommendation for a truss system to help control vibration. In addition to aiding in the distribution of point loads between adjacent truss, strongback bridging serves to reduce "bounce" or residual vibration resulting from moving point loads, such as footsteps.

The performance of all floor systems are enhanced by the installation of strongback bridging and therefore is strongly recommended by Alpine.

For additional information regarding strongback bridging, refer to BCSI (Building Component Safety Information).



155 Harlem Ave  
North Building, 4th Floor  
Glenview, IL 60025

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SPACING			

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