

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.

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 TCLL, TCDL, BCLL and BCDL Design Load in pounds per square foot.

FRT = Fire Retardant Treated lumber.

FRT-BF = Boraflame 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.

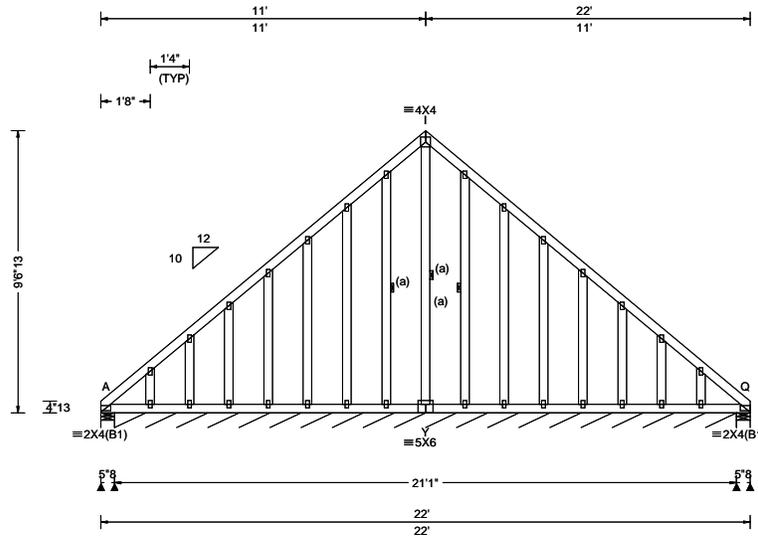
W = Width of non-hanger bearing, in inches.

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 Catoctin Circle SE, Suite 201; Leesburg, VA 20175; www.awc.org.
2. ICC: International Code Council; 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.
4. TPI: Truss Plate Institute, 2670 Crain Highway, Suite 203, Waldorf, MD 20601; www.tpinst.org.
5. SBCA: Wood Truss Council of America, 6300 Enterprise Lane, Madison, WI 53719; www.sbcacomponents.com



Loading Criteria (psf) TCCL: 20.00 TCDL: 12.00 BCLL: 10.00 BCDL: 5.00 Des Ld: 47.00 NCBCLL: 12.00 Soffit: 2.00 Load Duration: 1.25 Spacing: 24.0 "	Wind Criteria Wind Std: ASCE 7-16 Speed: 110 mph Enclosure: Closed Risk Category: II EXP: C Kzt: NA Mean Height: 15.00 ft TCDL: 6.0 psf BCDL: 3.0 psf MWFRS Parallel Dist: 0 to h/2 Loc. from endwall: Any GCp: 0.18 Wind Duration: 1.25	Snow Criteria (Pg, Pf in PSF) Pg: NA Ct: NA CAT: NA Pf: NA Ce: NA Lu: NA Cs: NA Snow Duration: NA Building Code: CBC 2022 Res TPI Std: 2014 Rep Fac: Varies by Ld Case FT/RT: 20(0)/10(0) Plate Type(s): WAVE	Defl/CSI Criteria PP Deflection in loc L/defl L/# VERT(LL): 0.002 H 999 360 VERT(CL): 0.001 H 999 240 HORZ(LL): 0.001 H - - HORZ(TL): 0.005 K - - Creep Factor: 2.0 Max TC CSI: 0.038 Max BC CSI: 0.029 Max Web CSI: 0.116 VIEW Ver: 24.02.00D.0114.11	▲ Maximum Reactions (lbs), or *=PLF <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2"></th> <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> </thead> <tbody> <tr> <td>A</td> <td>106</td> <td>- / -</td> <td>- / -</td> <td>/140</td> <td>/65</td> <td>/175</td> </tr> <tr> <td>A*</td> <td>98</td> <td>- / -</td> <td>- / -</td> <td>/39</td> <td>/10</td> <td>- / -</td> </tr> <tr> <td>Q</td> <td>106</td> <td>- / -</td> <td>- / -</td> <td>/110</td> <td>/36</td> <td>- / -</td> </tr> </tbody> </table> Wind reactions based on MWFRS A Brg Wid = 5.5 Min Req = 1.5 (Truss) A Brg Wid = 252 Min Req = - Q Brg Wid = 5.5 Min Req = 1.5 (Truss) Bearings A, A, & Q are a rigid surface. Members not listed have forces less than 375#		Gravity			Non-Gravity			Loc	R+ / R-	/ Rh	/ Rw	/ U	/ RL	A	106	- / -	- / -	/140	/65	/175	A*	98	- / -	- / -	/39	/10	- / -	Q	106	- / -	- / -	/110	/36	- / -
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Lumber
 Top chord: 2x4 DF-L #2(g);
 Bot chord: 2x4 DF-L #2(g);
 Webs: 2x4 DF-L Standard(g);

Bracing
 (a) Continuous lateral restraint equally spaced on member.

Plating Notes
 Connectors in green lumber (g) designed using NDS/TPI reduction factors.
 All plates are 1.5X3 except as noted.

Loading
 Truss designed to support 0-8-0 top chord outlookers and cladding load not to exceed 5.00 PSF one face and 24.0" span opposite face. Top chord may be notched 1.5" deep X 3.5" at 48" o/c along top edge. DO NOT OVERCUT. No knots or other lumber defects allowed within 12" of notches. Do not notch in overhang or heel panel, unless specified otherwise.
 Bottom chord checked for 12.00 psf non-concurrent live load.
 Truss designed for unbalanced load using 0.00/1.00 windward/leeward factors.

Wind
 Wind loads based on MWFRS with additional C&C member design.
 Wind loading based on both gable and hip roof types.

Additional Notes
 Lumber shall be dried to a maximum moisture content of 19% prior to installation.
 See DWGS A11515ENC160118, GBLLETIN0118, & GABRST160118 for gable wind bracing and other requirements.

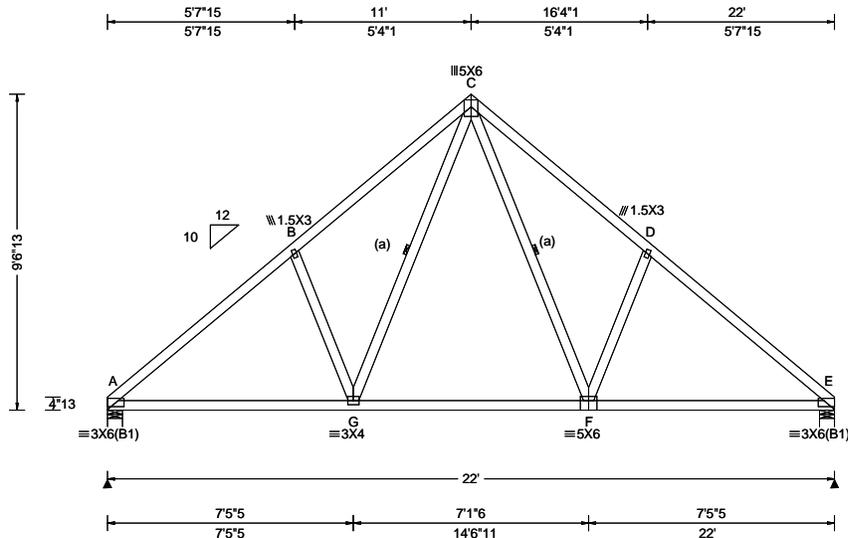


****WARNING** READ AND FOLLOW ALL NOTES ON THIS DRAWING!**
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 Alpine, a division of ITW Building Components Group Inc. shall not be responsible for any deviation from this drawing, any failure to build the truss in conformance with ANSI/TPI 1, or for 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

American Truss Company, Inc.
 4550 Spring Hill Road
 PETALUMA CA 94952
 (707)763-8713

ALPINE
 AN ITW COMPANY

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



Loading Criteria (psf) TCLL: 20.00 TCCL: 12.00 BCLL: 10.00 BCDL: 5.00 Des Ld: 47.00 NCBCLL: 12.00 Soffit: 2.00 Load Duration: 1.25 Spacing: 24.0 "	Wind Criteria Wind Std: ASCE 7-16 Speed: 110 mph Enclosure: Closed Risk Category: II EXP: C Kzt: NA Mean Height: 15.00 ft TCCL: 6.0 psf BCDL: 3.0 psf MWFRS Parallel Dist: 0 to h/2 C&C Dist a: 3.00 ft Loc. from endwall: Any GCp: 0.18 Wind Duration: 1.25	Snow Criteria (Pg,Pf in PSF) Pg: NA Ct: NA CAT: NA Pf: NA Ce: NA Lu: NA Cs: NA Snow Duration: NA Building Code: CBC 2022 Res TPI Std: 2014 Rep Fac: Yes FT/RT:20(0)/10(0) Plate Type(s): WAVE	Defl/CSI Criteria PP Deflection in loc L/defl L/# VERT(LL): 0.035 G 999 360 VERT(CL): 0.058 G 999 240 HORZ(LL): 0.018 B - - HORZ(TL): 0.030 B - - Creep Factor: 2.0 Max TC CSI: 0.245 Max BC CSI: 0.448 Max Web CSI: 0.257 VIEW Ver: 24.02.00D.0114.11	▲ Maximum Reactions (lbs) <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>A</td> <td>1154</td> <td>-</td> <td>-</td> <td>/492</td> <td>/39</td> <td>/196</td> </tr> <tr> <td>E</td> <td>1154</td> <td>-</td> <td>-</td> <td>/492</td> <td>/39</td> <td>-</td> </tr> </tbody> </table> <p>Wind reactions based on MWFRS A Brg Wid = 5.5 Min Req = 1.5 (Truss) E Brg Wid = 5.5 Min Req = 1.5 (Truss) Bearings A & E are a rigid surface. Members not listed have forces less than 375# Maximum Top Chord Forces Per Ply (lbs)</p> <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>A - B</td> <td>208 -1458</td> <td>C - D</td> <td>325 -1314</td> </tr> <tr> <td>B - C</td> <td>325 -1316</td> <td>D - E</td> <td>208 -1456</td> </tr> </tbody> </table> <p>Maximum Bot Chord Forces Per Ply (lbs)</p> <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>A - G</td> <td>1033 -71</td> <td>F - E</td> <td>1033 -65</td> </tr> <tr> <td>G - F</td> <td>692 0</td> <td></td> <td></td> </tr> </tbody> </table> <p>Maximum Web Forces Per Ply (lbs)</p> <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>G - C</td> <td>632 -159</td> <td>C - F</td> <td>629 -160</td> </tr> </tbody> </table>	Loc	Gravity			Non-Gravity			R+	/R-	/Rh	/Rw	/U	/RL	A	1154	-	-	/492	/39	/196	E	1154	-	-	/492	/39	-	Chords	Tens.Comp.	Chords	Tens. Comp.	A - B	208 -1458	C - D	325 -1314	B - C	325 -1316	D - E	208 -1456	Chords	Tens.Comp.	Chords	Tens. Comp.	A - G	1033 -71	F - E	1033 -65	G - F	692 0			Webs	Tens.Comp.	Webs	Tens. Comp.	G - C	632 -159	C - F	629 -160
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Lumber

Top chord: 2x4 DF-L #1&Bet.(g);
 Bot chord: 2x4 DF-L #2(g);
 Webs: 2x4 DF-L Standard(g);

Bracing

(a) Continuous lateral restraint equally spaced on member.

Plating Notes

Connectors in green lumber (g) designed using NDS/TPI reduction factors.

Loading

Truss passed check for 20 psf additional bottom chord live load in areas with 42"-high x 24"-wide clearance.

Bottom chord checked for 12.00 psf non-concurrent live load.

Truss designed for unbalanced load.

Wind

Wind loads based on MWFRS with additional C&C member design.

Wind loading based on both gable and hip roof types.

Additional Notes

Lumber shall be dried to a maximum moisture content of 19% prior to installation.



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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

American Truss Company, Inc.
 4550 Spring Hill Road
 PETALUMA CA 94952
 (707)763-8713



Gable Stud Reinforcement Detail

ASCE 7-16: 115 mph Wind Speed, 15' Mean Height, Enclosed, Exposure C, Kzt = 1.00

Max Gable Vertical Length	2x4 Gable Vertical		Brace Grade	No Braces	(1) 1x4 'L' Brace *		(1) 2x4 'L' Brace *		(2) 2x4 'L' Brace **		(1) 2x6 'L' Brace *		(2) 2x6 'L' Brace **	
	Spacing	Species			Group A	Group B	Group A	Group B	Group A	Group B	Group A	Group B	Group A	Group B
	24" o.c.	SPF	#1 / #2	#1 / #2	4' 11"	8' 5"	8' 9"	9' 11"	10' 4"	11' 10"	12' 4"	14' 0"	14' 0"	14' 0"
#3				4' 8"	8' 1"	8' 7"	9' 10"	10' 3"	11' 9"	12' 2"	14' 0"	14' 0"	14' 0"	14' 0"
Stud				4' 8"	8' 0"	8' 6"	9' 10"	10' 3"	11' 9"	12' 2"	14' 0"	14' 0"	14' 0"	14' 0"
HF			#1	4' 8"	6' 11"	7' 4"	9' 2"	9' 10"	11' 9"	12' 2"	14' 0"	14' 0"	14' 0"	14' 0"
			#2	5' 2"	8' 7"	8' 10"	10' 1"	10' 6"	12' 0"	12' 5"	14' 0"	14' 0"	14' 0"	14' 0"
			Standard	4' 8"	8' 0"	8' 6"	9' 10"	10' 3"	11' 9"	12' 2"	14' 0"	14' 0"	14' 0"	14' 0"
SP		#1	#1	4' 11"	8' 5"	8' 9"	9' 11"	10' 4"	11' 10"	12' 4"	14' 0"	14' 0"	14' 0"	14' 0"
			#2	4' 11"	8' 5"	8' 9"	9' 11"	10' 4"	11' 10"	12' 4"	14' 0"	14' 0"	14' 0"	14' 0"
			Standard	4' 10"	7' 3"	7' 9"	9' 8"	10' 3"	11' 9"	12' 3"	14' 0"	14' 0"	14' 0"	14' 0"
		DFL	#1	4' 10"	7' 3"	7' 9"	9' 8"	10' 3"	11' 9"	12' 3"	14' 0"	14' 0"	14' 0"	14' 0"
			#2	4' 10"	7' 3"	7' 9"	9' 8"	10' 3"	11' 9"	12' 3"	14' 0"	14' 0"	14' 0"	14' 0"
			Standard	4' 8"	6' 5"	6' 10"	8' 7"	9' 2"	11' 7"	12' 2"	13' 5"	14' 0"	14' 0"	14' 0"
16" o.c.	SPF	#1 / #2	#1 / #2	5' 8"	9' 8"	10' 0"	11' 5"	11' 10"	13' 7"	14' 0"	14' 0"	14' 0"	14' 0"	
			#3	5' 5"	9' 6"	10' 0"	11' 3"	11' 8"	13' 5"	14' 0"	14' 0"	14' 0"	14' 0"	
			Stud	5' 5"	9' 6"	9' 10"	11' 3"	11' 8"	13' 5"	14' 0"	14' 0"	14' 0"	14' 0"	
		HF	#1	5' 5"	9' 6"	9' 10"	11' 3"	11' 8"	13' 5"	14' 0"	14' 0"	14' 0"	14' 0"	
			#2	5' 11"	9' 9"	10' 2"	11' 6"	12' 0"	13' 8"	14' 0"	14' 0"	14' 0"	14' 0"	
			Standard	5' 5"	8' 5"	9' 0"	11' 3"	11' 8"	13' 5"	14' 0"	14' 0"	14' 0"	14' 0"	
	SP	#1	#1	5' 11"	9' 9"	10' 2"	11' 6"	12' 0"	13' 8"	14' 0"	14' 0"	14' 0"	14' 0"	
			#2	5' 8"	9' 8"	10' 0"	11' 5"	11' 10"	13' 7"	14' 0"	14' 0"	14' 0"	14' 0"	
			Standard	5' 6"	8' 11"	9' 6"	11' 4"	11' 9"	13' 6"	14' 0"	14' 0"	14' 0"	14' 0"	
		DFL	#1	5' 6"	8' 11"	9' 6"	11' 4"	11' 9"	13' 6"	14' 0"	14' 0"	14' 0"	14' 0"	
			#2	5' 5"	7' 10"	8' 4"	10' 6"	11' 2"	13' 5"	14' 0"	14' 0"	14' 0"	14' 0"	
			Standard	5' 5"	7' 10"	8' 4"	10' 6"	11' 2"	13' 5"	14' 0"	14' 0"	14' 0"	14' 0"	
12" o.c.	SPF	#1 / #2	#1 / #2	6' 3"	10' 7"	11' 0"	12' 7"	13' 0"	13' 7"	14' 0"	14' 0"	14' 0"	14' 0"	
			#3	5' 11"	10' 6"	10' 10"	12' 5"	12' 10"	14' 0"	14' 0"	14' 0"	14' 0"	14' 0"	
			Stud	5' 11"	10' 6"	10' 10"	12' 5"	12' 10"	14' 0"	14' 0"	14' 0"	14' 0"	14' 0"	
		HF	#1	5' 11"	10' 6"	10' 10"	12' 5"	12' 10"	14' 0"	14' 0"	14' 0"	14' 0"	14' 0"	
			#2	5' 11"	9' 9"	10' 5"	12' 5"	12' 10"	14' 0"	14' 0"	14' 0"	14' 0"	14' 0"	
			Standard	5' 11"	9' 9"	10' 5"	12' 5"	12' 10"	14' 0"	14' 0"	14' 0"	14' 0"	14' 0"	
	SP	#1	#1	6' 6"	10' 9"	11' 12"	12' 8"	13' 2"	14' 0"	14' 0"	14' 0"	14' 0"	14' 0"	
			#2	6' 3"	10' 7"	11' 0"	12' 7"	13' 0"	14' 0"	14' 0"	14' 0"	14' 0"	14' 0"	
			Standard	6' 1"	10' 3"	10' 11"	12' 6"	12' 11"	14' 0"	14' 0"	14' 0"	14' 0"	14' 0"	
		DFL	#1	6' 1"	10' 3"	10' 11"	12' 6"	12' 11"	14' 0"	14' 0"	14' 0"	14' 0"	14' 0"	
			#2	6' 1"	10' 3"	10' 11"	12' 6"	12' 11"	14' 0"	14' 0"	14' 0"	14' 0"	14' 0"	
			Standard	5' 11"	9' 1"	9' 8"	12' 1"	12' 10"	14' 0"	14' 0"	14' 0"	14' 0"	14' 0"	

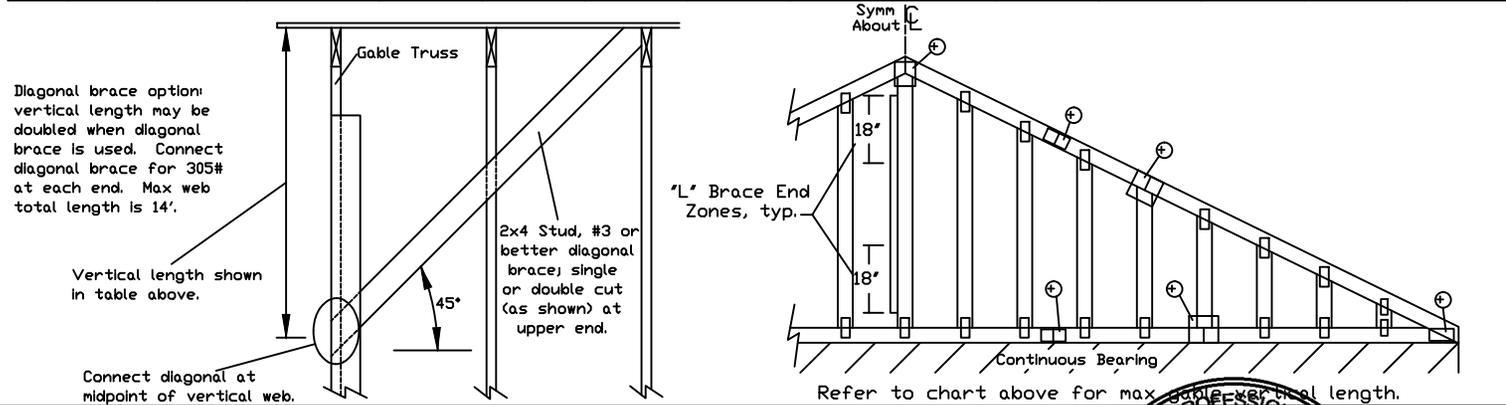
Bracing Group Species and Grades:

Group A:			
Spruce-Pine-Fir		Hem-Fir	
#1 / #2	Standard	#2	Stud
#3	Stud	#3	Standard
Douglas Fir-Larch		Southern Pine***	
#3		#3	
Stud		Stud	
Standard		Standard	

Group B:	
Hem-Fir	
#1 & Btr	
#1	
Douglas Fir-Larch	
#1	
#2	
Southern Pine***	
#1	
#2	

1x4 Braces shall be SRB (Stress-Rated Board).
 ***For 1x4 So. Pine use only Industrial 55 or Industrial 45 Stress-Rated Boards. Group B values may be used with these grades.

Gable Truss Detail Notes:
 Wind Load deflection criterion is L/240.
 Provide uplift connections for 30 plf over continuous bearing (5 psf TC Dead Load).
 Gable end supports load from 4' 0" outlookers with 2' 0" overhang, or 12' plywood overhang.



Attach 'L' braces with 10d (0.128"x3.0" min) nails.
 * For (1) 'L' brace: space nails at 2' o.c. in 18' end zones and 4' o.c. between zones.
 ** For (2) 'L' braces: space nails at 3' o.c. in 18' end zones and 6' o.c. between zones.
 'L' bracing must be a minimum of 80% of web member length.

Gable Vertical Plate Sizes	
Vertical Length	No Splice
Less than 4' 0"	1X4 or 2X3
Greater than 4' 0", but less than 11' 6"	2X4
Greater than 11' 6"	3X4

+ Refer to common truss design for peak, splice, and heel plates.

Refer to the Building Designer for conditions not addressed by this detail.

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 ALPINE: www.alpineitw.com; TPI: www.tpinst.org; SBCA: www.sbcacomponents.com; ICC: www.iccsafe.org

MAX. TOT. LD. 60 PSF

MAX. SPACING 24.0"

REF	ASCE7-16-GAB11515
DATE	01/26/2018
DRWG	A11515ENC160118

CLR Reinforcing Member Substitution

This detail is to be used when a Continuous Lateral Restraint (CLR) is specified on a truss design but an alternative web reinforcement method is desired.

Notes:

This detail is only applicable for changing the specified CLR shown on single ply sealed designs to T-reinforcement or L-reinforcement or scab reinforcement.

Alternative reinforcement specified in chart below may be conservative. For minimum alternative reinforcement, re-run design with appropriate reinforcement type.

Use scabs instead of L- or T- reinforcement on webs with intersecting truss joints, such as K-web joints, that may interfere with proper application along the narrow face of the web.

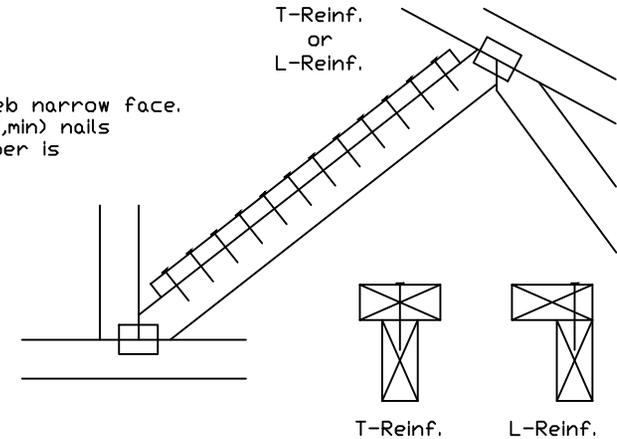
Web Member Size	Specified CLR Restraint	Alternative Reinforcement T- or L- Reinf.	Scab Reinf.
2x3 or 2x4	1 row	2x4	1-2x4
2x3 or 2x4	2 rows	2x6 or 2x4	2-2x4
2x6	1 row	2x4	1-2x6
2x6	2 rows	2x6	2-2x4(*)
2x8	1 row	2x6	1-2x8
2x8	2 rows	2x6	2-2x6(*)

T-reinforcement, L-reinforcement, or scab reinforcement to be same species and grade or better than web member unless specified otherwise on Engineer's sealed design.

(*) Center scab on wide face of web. Apply (1) scab to each face of web.

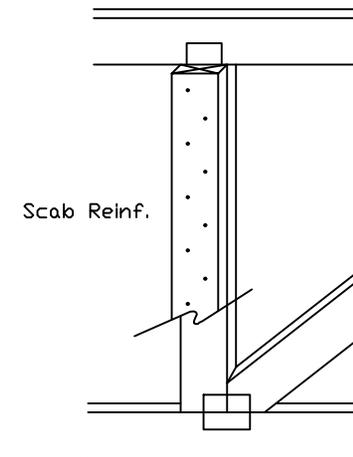
T-Reinforcement or L-Reinforcement:

Apply to either side of web narrow face. Attach with 10d (0.128"x3.0",min) nails at 6" o.c. Reinforcing member is a minimum 80% of web member length.



Scab Reinforcement:

Apply scab(s) to wide face of web. No more than (1) scab per face. Attach with 10d (0.128"x3.0",min) nails at 6" o.c. Reinforcing member is a minimum 80% of web member length.



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

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TC LL	PSF	REF CLR Subst.
TC DL	PSF	DATE 01/02/19
BC DL	PSF	DRWG BRCLBSUB0119
BC LL	PSF	
TOT. LD.	PSF	
DUR. FAC.		
SPACING		

ASCE 7-16: 120 mph, 30' Mean Height, Closed, Exposure C Common Residential Gable End Wind Bracing Requirements - Stiffeners

120 mph, 30ft. Mean Hgt, ASCE 7-16, Enclosed, Exp C, or
100 mph, 30ft. Mean Hgt, ASCE 7-16, Enclosed, Exp D, or
100 mph, 30ft. Mean Hgt, ASCE 7-16, Part. Enclosed, Exp C,
Kzt = 1.00, Wind TC DL=5.0 psf, Wind BC DL=5.0 psf.

Lateral chord bracing requirements
Top: Continuous roof sheathing
Bot: Continuous ceiling diaphragm

See Engineer's sealed design referencing this detail for lumber, plates, and other information not shown on this detail.

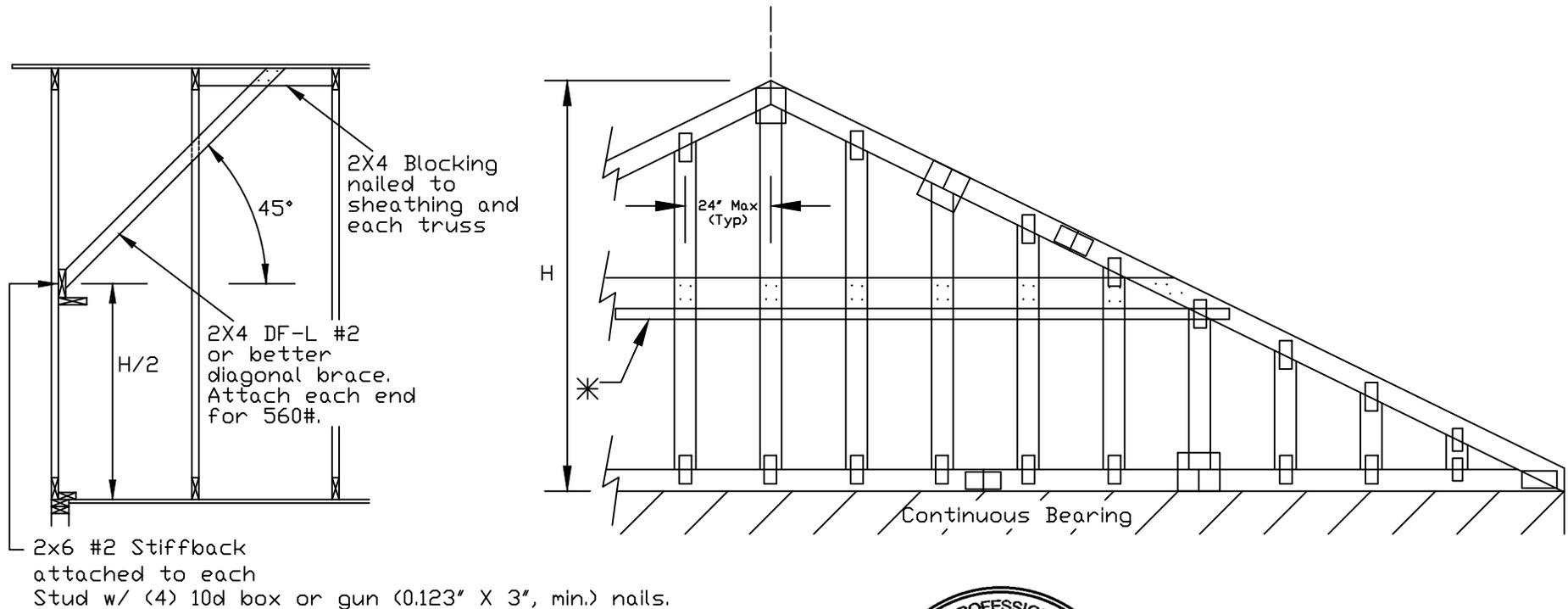
Nails: 10d box or gun (0.128"x3",min) nails.

H Less than 4'6" - no stud bracing required

H Greater than 4'6" to 7'6" in length
provide a 2x6 stiffback at mid-height and brace stiffback to roof diaphragm every 6'0" (see detail below or refer to DRWG A12030ENC160118).

H Greater than 7'6" to 12'0" max:
provide a 2x6 stiffback at mid-height and brace to roof diaphragm every 4'0" (see detail below or refer to DRWG A12030ENC160118).

* Optional 2x L-reinforcement attached to stiffback with 10d box or gun (0.128" x 3", min.) nails @ 6" o.c.



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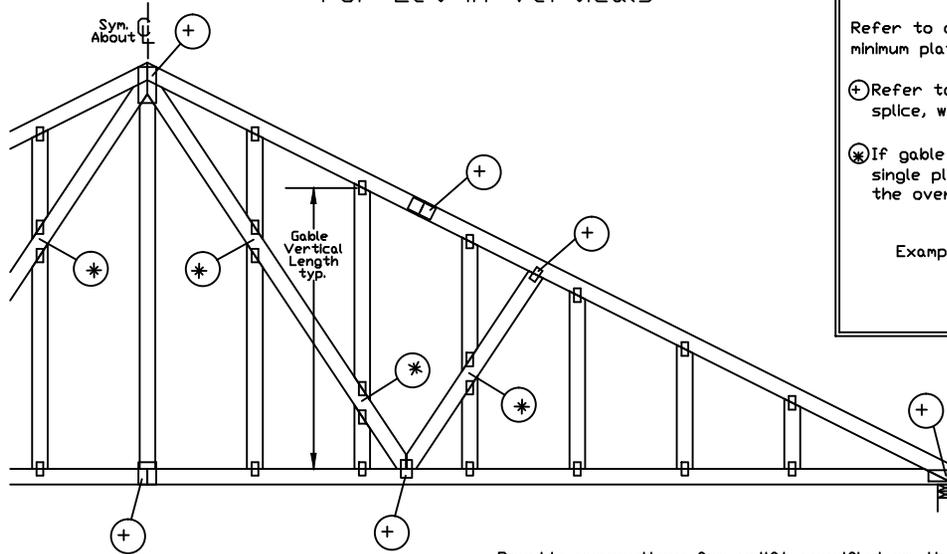


MAX. TOT. LD. 60 PSF

MAX. SPACING

REF	GE WHALER
DATE	01/02/2018
DRWG	GABRST160118

Gable Detail For Let-in Verticals

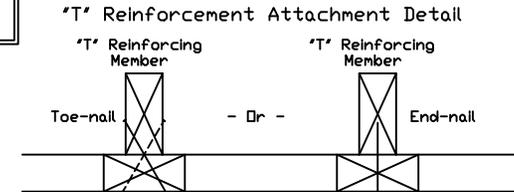


Gable Truss Plate Sizes

Refer to appropriate Alpine gable detail for minimum plate sizes for vertical studs.

- ⊕ Refer to Engineered truss design for peak, splice, web, and heel plates.
- ⊗ If gable vertical plates overlap, use a single plate that covers the total area of the overlapped plates to span the web.

Example:



Provide connections for uplift specified on the engineered truss design.
 Attach each 'T' reinforcing member with
 End Driven Nails:
 10d Common (0.148"x3",min) Nails at 4' o.c. plus
 (4) nails in the top and bottom chords.

Toenailed Nails:
 10d Common (0.148"x3",min) Toenails at 4' o.c. plus
 (4) toenails in the top and bottom chords.

This detail to be used with the appropriate Alpine gable detail for ASCE wind load.

- ASCE 7-05 Gable Detail Drawings
 A13015051014, A12015051014, A11015051014, A10015051014, A14015051014,
 A13030051014, A12030051014, A11030051014, A10030051014, A14030051014
- ASCE 7-10 & ASCE 7-16 Gable Detail Drawings
 A11515ENC100118, A12015ENC100118, A14015ENC100118, A16015ENC100118,
 A18015ENC100118, A20015ENC100118, A20015END100118, A20015PED100118,
 A11530ENC100118, A12030ENC100118, A14030ENC100118, A16030ENC100118,
 A18030ENC100118, A20030ENC100118, A20030END100118, A20030PED100118,
 S11515ENC100118, S12015ENC100118, S14015ENC100118, S16015ENC100118,
 S18015ENC100118, S20015ENC100118, S20015END100118, S20015PED100118,
 S11530ENC100118, S12030ENC100118, S14030ENC100118, S16030ENC100118,
 S18030ENC100118, S20030ENC100118, S20030END100118, S20030PED100118

See appropriate Alpine gable detail for maximum unreinforced gable vertical length.

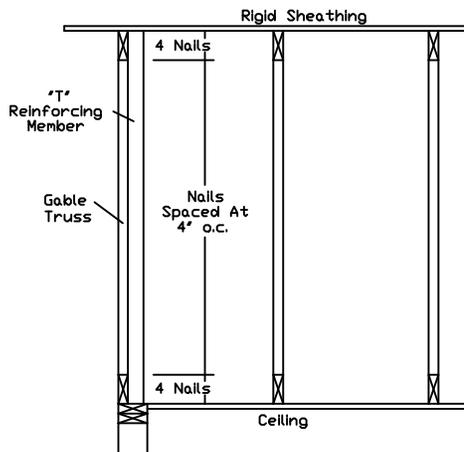
To convert from 'L' to 'T' reinforcing members, multiply 'T' increase by length (based on appropriate Alpine gable detail).

Maximum allowable 'T' reinforced gable vertical length is 14' from top to bottom chord.
 'T' reinforcing member material must match size, specie, and grade of the 'L' reinforcing member.

Web Length Increase w/ 'T' Brace

'T' Reinf. Mbr. Size	'T' Increase
2x4	30 %
2x6	20 %

Example:
 ASCE 7-10 Wind Speed = 120 mph
 Mean Roof Height = 30 ft, Kzt = 1.00
 Gable Vertical = 24' o.c. SP #3
 'T' Reinforcing Member Size = 2x4
 'T' Brace Increase (From Above) = 30% = 1.30
 (1) 2x4 'L' Brace Length = 8' 7"
 Maximum 'T' Reinforced Gable Vertical Length
 1.30 x 8' 7" = 11' 2"



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



MAX. TOT. LD. 60 PSF
 DUR. FAC. ANY
 MAX. SPACING 24.0"

REF LET-IN VERT
 DATE 01/02/2018
 DRWG GBLLETIN0118