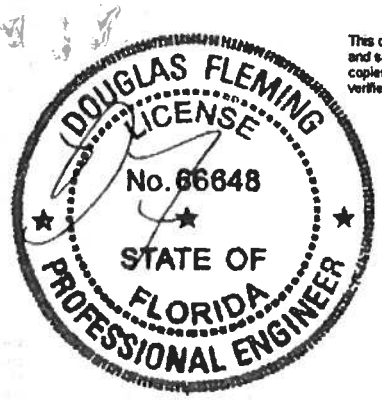
#38947



This document has been electronically signed and sealed using a Digital Signature. Printed copies without an original signature must be verified using the original electronic version.

COA #0 278
12/20/2019

Alpine, an ITW Company
6750 Forum Drive, Suite 305
Orlando, FL 32821
Phone: (800)755-6001
www.alpineitw.com

Site Information:	Page 1:
Customer: W. B. Howland Company, Inc.	*Job Number:* 19-3729
Job Description: /LANG RES. /Contractor	
Address: LAKE CITY, FL	

Job Engineering Criteria:	
Design Code: FBC 2017 RES	*IntelliVIEW Version:* 18.02.01B *JRef #:* 1WR72150003
Wind Standard: ASCE 7-10 *Wind Speed (mph):* 130 *Building Type:* Closed	*Roof Load (psf):* 20.00-10.00- 0.00-10.00 *Floor Load (psf):* None

This package contains general notes pages, 13 truss drawing(s) and 5 detail(s).

Item	Drawing Number	Truss
1	354.19.0733.09385	A01
3	354.19.0733.09402	A03
5	354.19.0733.09479	B01
7	354.19.1001.40330	B03
9	354.19.0733.09416	B05
11	354.19.0733.10274	P1
13	354.19.1001.53800	P3
15	BRCLBSUB0119	
17	PB160101014	

Item	Drawing Number	Truss
2	354.19.0733.10321	A02
4	354.19.0733.09557	A04
6	354.19.1001.36957	B02
8	354.19.1001.44330	B04
10	354.19.0733.09619	B06
12	354.19.1001.47623	P2
14	A14015ENC101014	
16	GBLLETIN0118	
18	VAL160101014	

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 AF&PA. 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.

General Notes (continued)

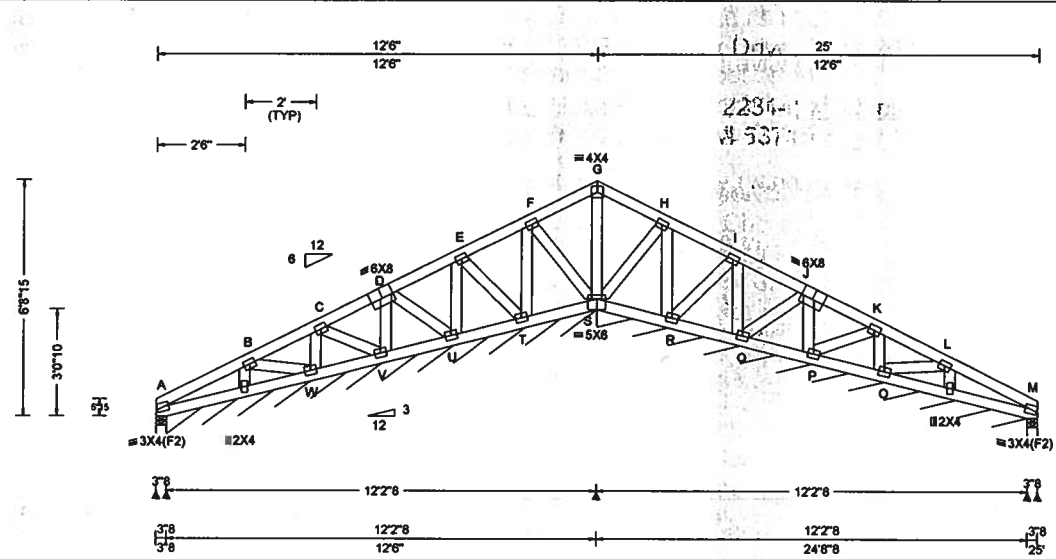
Key to Terms:
Information provided on drawings reflects a summary of the pertinent information required for the truss design. Detailed information on load cases, reactions, member lengths, forces and members requiring permanent lateral support may be found in calculation sheets available upon written 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.
Des Ld = total of TCLL, TCDL, BCLL and BCDL Design Load in pounds per square foot.
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.
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 immediate vertical Deflection, 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 of all load cases.
Max TC CSI = Maximum bending and axial Combined Stress Index for Top Chords for of all load cases.
Max Web CSI= Maximum bending and axial Combined Stress Index for Webs for of 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).
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(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. AF&PA: American Forest & Paper Association, 1111 19th Street, NW, Suite 800, Washington, DC 20036; www.afandpa.org.
2. ICC: International Code Council; www.iccsafe.org.
3. Alpine, a division of ITW Building Components Group Inc.: 13723 Riverport Drive, Suite 200, Maryland Heights, MO 63043; www.alpineitw.com.
4. TPI: Truss Plate Institute, 218 North Lee Street, Suite 312, Alexandria, VA 22314; www.tpinst.org.
5. SBCA: Wood Truss Council of America, 6300 Enterprise Lane, Madison, WI 53719; www.sbcindustry.co

SEQN: 290860 / GABL FROM: CDM	Ply: 1 Qty: 1	**Job Number:** 19-3729 /LANG RES. /Contractor **Truss Label:** A01	Cust: R 215 JRef: 1WR72150003 T9 / DrwNo: 354.19.0733.09385 JB / DF 12/20/2019



Loading Criteria (psf)
TCLL: 20.00
TCDL: 10.00
BCLL: 0.00
BCDL: 10.00
Des Ld: 40.00
NCBCLL: 10.00
Soffit: 2.00
Load Duration: 1.25
Spacing: 24.0 "

Wind Criteria
Wind Std: ASCE 7-10
Speed: 130 mph
Enclosure: Closed
Risk Category: II
EXP: C Kzt: NA
Mean Height: 15.00 ft
TCDL: 5.0 psf
BCDL: 5.0 psf
MWFRS Parallel Dist: 0 to h/2
C&C Dist a: 3.00 ft
Loc. from endwall: Any
GCpi: 0.18
Wind Duration: 1.60

Snow Criteria (Pg,Pf in PSF)
Pg: NA Ct: NA CAT: NA
Pf: NA Ce: NA
Lu: NA Cs: NA
Snow Duration: NA

Code / Misc Criteria
Bldg Code: FBC 2017 RES
TPI Std: 2014
Rep Fac: No
FT/RT:20(0)/10(0)
Plate Type(s):
WAVE

Defl/CSI Criteria

PP Deflection in	loc	L/defl	L/#
VERT(LL): 0.000	G	999	240
VERT(CL): 0.001	G	999	180
HORZ(LL): 0.002	N	-	-
HORZ(TL): 0.002	N	-	-

Creep Factor: 2.0
Max TC CSI: 0.066
Max BC CSI: 0.051
Max Web CSI: 0.034

VIEW Ver: 18.02.01B.0321.08

▲Maximum Reactions (lbs), or *=PLF

	Gravity			Non-Gravity		
Loc	R+	/ R-	/ Rh	/ Rw	/ U	/ RL
A	114	/-	/-	/91	/32	/158
A*	85	/-	/-	/59	/11	/-
S*	66	/-	/-	/46	/13	/-
M	114	/-	/-	/71	/26	/-

Wind reactions based on MWFRS
A Brg Width = 3.5 Min Req = 1.5
A Brg Width = 146 Min Req = -
S Brg Width = 146 Min Req = -
M Brg Width = 3.5 Min Req = 1.5
Bearings A, A, S, & M are a rigid surface.
Members not listed have forces less than 375#

Lumber
Top chord: 2x4 SP #2;
Bot chord: 2x4 SP #2;
Webs: 2x4 SP #3;

Plating Notes
All plates are 3X4 except as noted.

Loading
Gable end supports 8" max rake overhang. Top chord must not be cut or notched.

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

Additional Notes
Refer to General Notes for additional information

See DWGS A14015ENC101014 & GBLLETIN0118 for gable wind bracing and other requirements.

Stacked top chord must NOT be notched or cut in area (NNL). Dropped top chord braced at 24" oc intervals. Attach stacked top chord (SC) to dropped top chord in notchable area using 3x4 tie-plates 24" oc. Center plate on stacked/dropped chord interface, plate length perpendicular to chord length. Splice top chord in notchable area using 3x6.

Shim all supports to solid bearing.

The overall height of this truss excluding overhang is 6-8-15.

DOUGLAS FLEMING LICENSE No. 66648 STATE OF FLORIDA PROFESSIONAL ENGINEER

COA #0

12/20/2019

****WARNING**** READ AND FOLLOW ALL NOTES ON THIS DRAWING!
****IMPORTANT**** FURNISH THIS DRAWING TO ALL CONTRACTORS INCLUDING THE INSTALLERS

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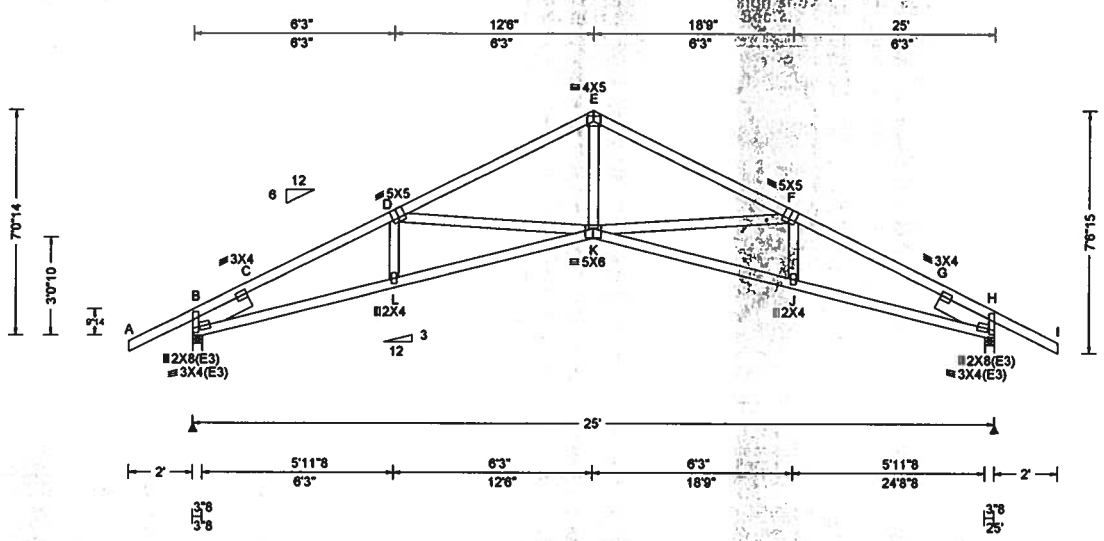
Alpine, a division of ITW Building Components Group Inc. shall not be responsible for any deviation from this drawing,any failure to build the truss in conformance with ANSI/TPI 1, or for handling, shipping, installation and bracing of trussesA seal on this drawing or cover page listing this drawing, 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 this job's general notes page and these web sites: ALPINE: www.alpineitw.com; TPI: www.tpinst.org; SBCA: www.sbcindustry.com; ICC: www.iccsafe.org

ALPINE AN ITW COMPANY
6750 Forum Drive
Suite 305
Orlando FL, 32821

SEQN: 290853 / COMN FROM: CDM	Ply: 1 Qty: 10	**Job Number:** 19-3729 /LANG RES. /Contractor **Truss Label:** A02	Cust: R 215 JRef: 1WR72150003 T2 / DrwNo: 354.19.0733.10321 JB / DF 12/20/2019



Loading Criteria (psf)

TCLL:	20.00
TCDL:	10.00
BCLL:	0.00
BCDL:	10.00
Des Ld:	40.00
NCBCLL:	10.00
Soffit:	2.00

Load Duration: 1.25
Spacing: 24.0 "

Wind Criteria
Wind Std: ASCE 7-10
Speed: 130 mph
Enclosure: Closed
Risk Category: II
EXP: C Kzt: NA
Mean Height: 15.00 ft
TCDL: 5.0 psf
BCDL: 5.0 psf
MWFRS Parallel Dist: 0 to h/2
C&C Dist a: 3.00 ft
Loc. from endwall: Any
GCpi: 0.18
Wind Duration: 1.60

Snow Criteria (Pg,Pf in PSF)
Pg: NA Ct: NA CAT: NA
Pf: NA Ce: NA
Lu: NA Cs: NA
Snow Duration: NA

Code / Misc Criteria
Bldg Code: FBC 2017 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): 0.216	K	999	240
VERT(CL): 0.436	K	688	180
HORZ(LL): 0.163	G	-	-
HORZ(TL): 0.328	G	-	-

Creep Factor: 2.0
Max TC CSI: 0.813
Max BC CSI: 0.829
Max Web CSI: 0.514

VIEW Ver: 18.02.01B.032.08

▲ Maximum Reactions (lbs)

		Gravity		Non-Gravity		
Loc	R+	/ R-	/ Rh	/ Rw	/ U	/ RL
B	1169	/-	/-	/703	/209	/210
H	1169	/-	/-	/703	/209	/-

Wind reactions based on MWFRS
B Brg Width = 3.5 Min Req = 1.5
H Brg Width = 3.5 Min Req = 1.5
Bearings B & H are a rigid surface.
Members not listed have forces less than 375#

Maximum Top Chord Forces Per Ply (lbs)

Chords	Tens.	Comp.	Chords	Tens.	Comp.
B - C	1068	-2654	E - F	794	-2082
C - D	992	-2590	F - G	1007	-2590
D - E	813	-2082	G - H	1080	-2654

Maximum Bot Chord Forces Per Ply (lbs)

Chords	Tens.	Comp.	Chords	Tens.	Comp.
B - L	2282	-741	K - J	2302	-773
L - K	2302	-739	J - H	2282	-775

Maximum Web Forces Per Ply (lbs)

Webs	Tens.	Comp.	Webs	Tens.	Comp.
D - K	342	-418	K - F	338	-418
E - K	1348	-401			

Lumber
Top chord: 2x4 SP #2;
Bot chord: 2x4 SP #2;
Webs: 2x4 SP #3;
Lt Slider: 2x6 SP 2400f-2.0E; block length = 1.970'
Rt Slider: 2x6 SP 2400f-2.0E; block length = 1.970'

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

Additional Notes
Refer to General Notes for additional information
The overall height of this truss excluding overhang is 7-0-14.

DOUGLAS FLEMING LICENSE No. 66648 STATE OF FLORIDA PROFESSIONAL ENGINEER

COA #0 [illegible]

12/20/2019

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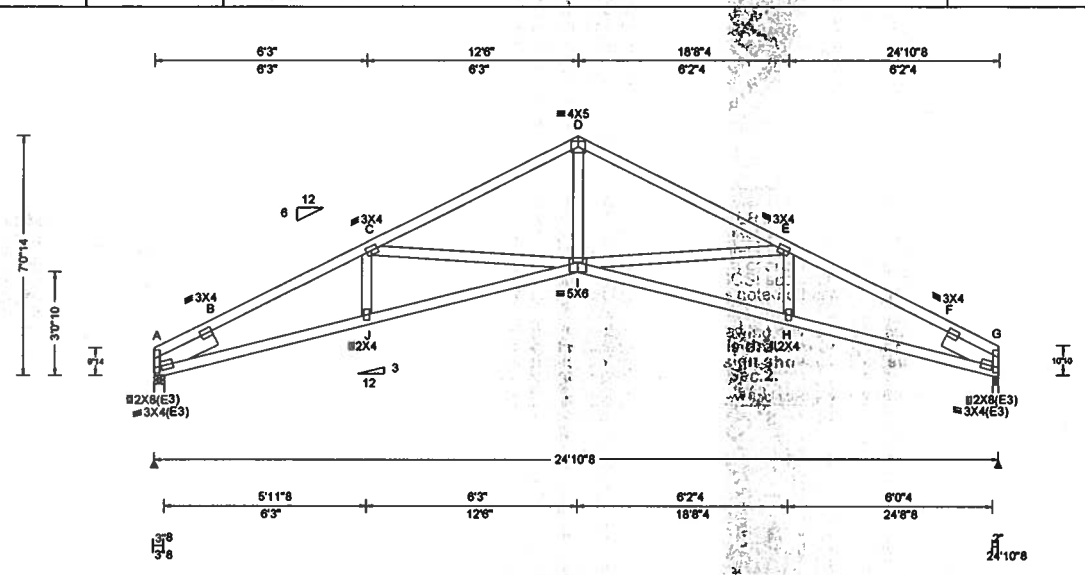
Alpine, a division of ITW Building Components Group Inc. shall not be responsible for any deviation from this drawing,any failure to build the truss in conformance with ANSI/TPI 1, or for handling, shipping, installation and bracing of trussesA seal on this drawing or cover page listing this drawing, 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 this job's general notes page and these web sites: ALPINE: www.alpineitw.com; TPI: www.tpinst.org; SBCA: www.sbcindustry.com; ICC: www.iccsafe.org

ALPINE AN ITW COMPANY
6750 Forum Drive
Suite 305
Orlando FL, 32821

SEQN: 290855 / SPEC FROM: CDM	Ply: 1 Qty: 1	Job Number: 19-3729 /LANG RES. /Contractor Truss Label: A03	Cust: R 215 JRef: 1WR72150003 T10 / DrwNo: 354.19.0733.09402 JB / DF 12/20/2019



Loading Criteria (psf)

TCLL:	20.00
TCDL:	10.00
BCLL:	0.00
BCDL:	10.00
Des Ld:	40.00
NCBCLL:	10.00
Soffit:	2.00

Load Duration: 1.25
Spacing: 24.0 "

Wind Criteria
Wind Std: ASCE 7-10
Speed: 130 mph
Enclosure: Closed
Risk Category: II
EXP: C Kzt: NA
Mean Height: 15.00 ft
TCDL: 5.0 psf
BCDL: 5.0 psf
MWFRS Parallel Dist: h to 2h
C&C Dist a: 3.00 ft
Loc. from endwall: not in 9.00 ft
GCpi: 0.18
Wind Duration: 1.60

Snow Criteria (Pg,Pf in PSF)
Pg: NA Ct: NA CAT: NA
Pf: NA Ce: NA
Lu: NA Cs: NA
Snow Duration: NA

Code / Misc Criteria
Bldg Code: FBC 2017 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):	0.209 I	999	240
VERT(CL):	0.433 I	690	180
HORZ(LL):	0.156 F	-	-
HORZ(TL):	0.324 F	-	-

Creep Factor: 2.0
Max TC CSI: 0.753
Max BC CSI: 0.833
Max Web CSI: 0.523

VIEW Ver: 18.02.01B.0321.08

▲Maximum Reactions (lbs)

		Gravity			Non-Gravity		
Loc	R+	/ R-	/ Rh		/ Rw	/ U	/ RL
A	1032	/-	/-		/588	/15	/158
G	1032	/-	/-		/590	/14	/-

Wind reactions based on MWFRS
A Brg Width = 3.5 Min Req = 1.5
G Brg Width = 2.0 Min Req = 1.5
Bearings A & G are a rigid surface.
Members not listed have forces less than 375#

Maximum Top Chord Forces Per Ply (lbs)

Chords	Tens.	Comp.	Chords	Tens.	Comp.
A - B	581	-2722	D - E	456	-2098
B - C	587	-2651	E - F	578	-2606
C - D	456	-2101	F - G	569	-2679

Maximum Bot Chord Forces Per Ply (lbs)

Chords	Tens.	Comp.	Chords	Tens.	Comp.
A - J	2346	-457	I - H	2317	-438
J - I	2365	-450	H - G	2297	-445

Maximum Web Forces Per Ply (lbs)

Webs	Tens.	Comp.	Webs	Tens.	Comp.
C - I	210	-465	I - E	200	-419
D - I	1373	-235			

Lumber

Top chord: 2x4 SP #2;
Bot chord: 2x4 SP #2;
Webs: 2x4 SP #3;
Lt Slider: 2x6 SP 2400f-2.0E; block length = 1.970'
Rt Slider: 2x6 SP 2400f-2.0E; block length = 1.822'

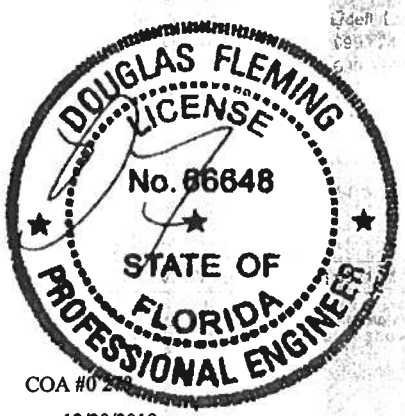
Wind

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

Additional Notes

Refer to General Notes for additional information

The overall height of this truss excluding overhang is 7-0-14.



COA #0

12/20/2019

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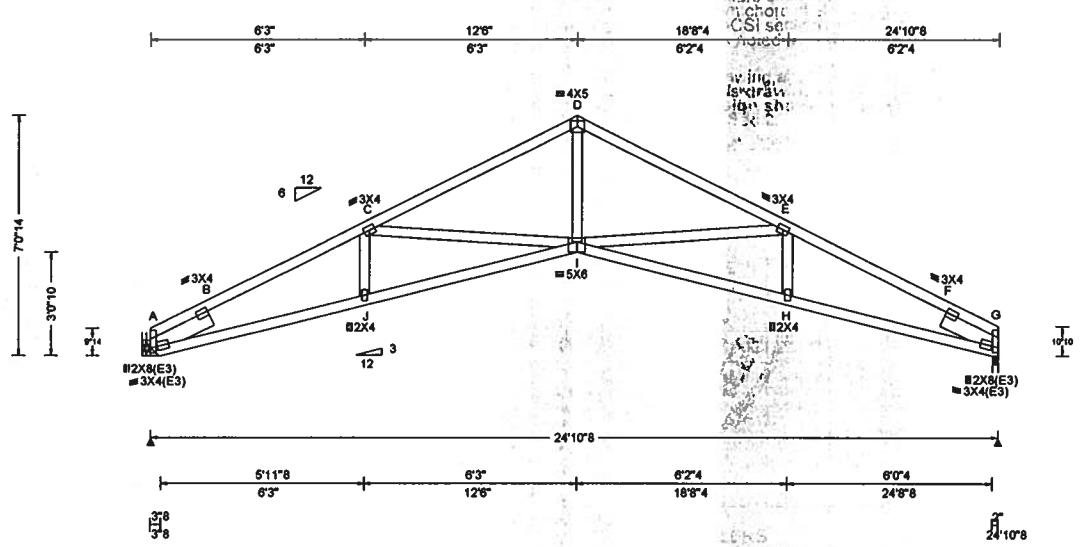
For more information see this job's general notes page and these web sites: ALPINE: www.alpineitw.com; TPI: www.tpinst.org; SBCA: www.sbcindustry.com; ICC: www.iccsafe.org

ALPINE
AN ITW COMPANY
6750 Forum Drive
Suite 305
Orlando FL, 32821

SEQN: 290857 / SPEC FROM: CDM	Ply: 1 Qty: 5	Job Number: 19-3729 /LANG RES. /Contractor Truss Label: A04	Cust: R 215 JRef: 1WR72150003 T13 / DrwNo: 354.19.0733.09557 JB / DF 12/20/2019



Loading Criteria (psf)

TCLL:	20.00
TCDL:	10.00
BCLL:	0.00
BCDL:	10.00
Des Ld:	40.00
NCBCLL:	10.00
Soffit:	2.00

Load Duration: 1.25
Spacing: 24.0 "

Wind Criteria
Wind Std: ASCE 7-10
Speed: 130 mph
Enclosure: Closed
Risk Category: II
EXP: C Kzt: NA
Mean Height: 15.00 ft
TCDL: 5.0 psf
BCDL: 5.0 psf
MWFRS Parallel Dist: h to 2h
C&C Dist a: 3.00 ft
Loc. from endwall: not in 9.00 ft
GCpi: 0.18
Wind Duration: 1.60

Snow Criteria (Pg,Pf in PSF)
Pg: NA Ct: NA CAT: NA
Pf: NA Ce: NA
Lu: NA Cs: NA
Snow Duration: NA

Code / Misc Criteria
Bldg Code: FBC 2017 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): 0.209	I	999	240
VERT(CL): 0.433	I	690	180
HORZ(LL): 0.156	F	J	-
HORZ(TL): 0.324	F	-	-

Creep Factor: 2.0
Max TC CSI: 0.753
Max BC CSI: 0.833
Max Web CSI: 0.523

VIEW Ver: 18.02.01B.0321.08

▲Maximum Reactions (lbs)

	Gravity			Non-Gravity		
Loc	R+	/ R-	/ Rh	/ Rw	/ U	/ RL
A	1032	/-	/-	/588	/15	/158
G	1032	/-	/-	/590	/14	/-

Wind reactions based on MWFRS
A Brg Width = - Min Req = -
G Brg Width = 2.0 Min Req = 1.5
Bearing G is a rigid surface.
Members not listed have forces less than 375#

Maximum Top Chord Forces Per Ply (lbs)

Chords	Tens.	Comp.	Chords	Tens.	Comp.
A - B	581	-2722	D - E	456	-2098
B - C	587	-2651	E - F	578	-2606
C - D	456	-2101	F - G	569	-2679

Maximum Bot Chord Forces Per Ply (lbs)

Chords	Tens.	Comp.	Chords	Tens.	Comp.
A - J	2346	-457	I - H	2317	-438
J - I	2365	-450	H - G	2297	-445

Maximum Web Forces Per Ply (lbs)

Webs	Tens.	Comp.	Webs	Tens.	Comp.
C - I	210	-465	I - E	200	-419
D - I	1373	-235			

Lumber

Top chord: 2x4 SP #2;
Bot chord: 2x4 SP #2;
Webs: 2x4 SP #3;
Lt Slider: 2x6 SP 2400f-2.0E; block length = 1.970'
Rt Slider: 2x6 SP 2400f-2.0E; block length = 1.822'

Hangers / Ties

(J) Hanger Support Required, by others

Wind

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

Additional Notes

Refer to General Notes for additional information

The overall height of this truss excluding overhang is 7-0-14.

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PROFESSIONAL ENGINEER

COA #0

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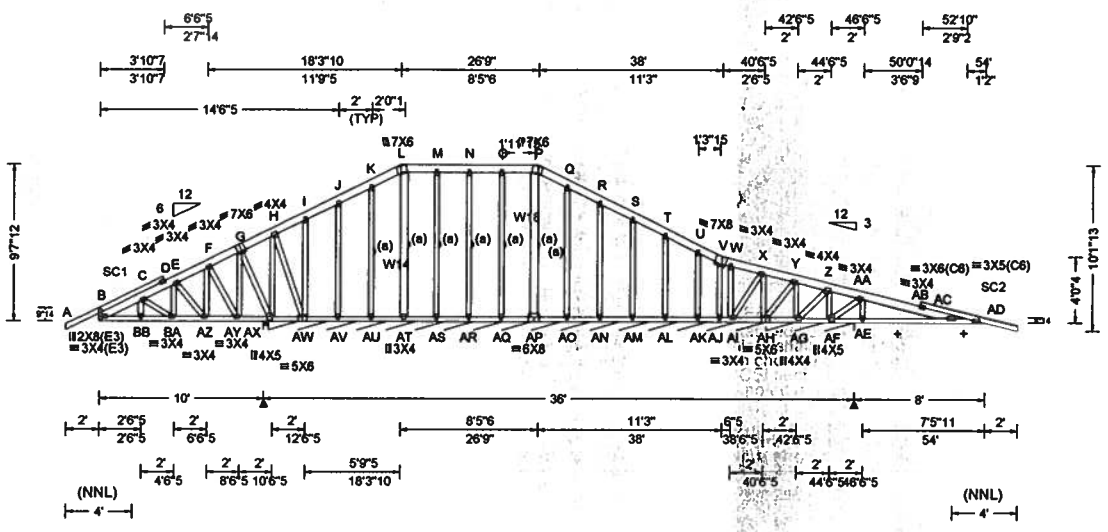
For more information see this job's general notes page and these web sites: ALPINE: www.alpineitw.com; TPI: www.tpinst.org; SBCA: www.sbcindustry.com; ICC: www.iccsafe.org

ALPINE
AN ITW COMPANY
6750 Forum Drive
Suite 305
Orlando FL, 32821

SEQN: 290842 / GABL FROM: CDM Page 1 of 2	Ply: 1 Qty: 1	**Job Number:** 19-3729 /LANG RES. /Contractor **Truss Label:** B01	Cust: R 215 JRef: 1WR72150003 T1 / DrwNo: 354.19.0733.09479 JB / DF 12/20/2019



Loading Criteria (psf)

TCLL:	20.00
TCDL:	10.00
BCLL:	0.00
BCDL:	10.00
Des Ld:	40.00
NCBCLL:	10.00
Soffit:	2.00

Load Duration: 1.25
Spacing: 24.0 "

Wind Criteria
Wind Std: ASCE 7-10
Speed: 130 mph
Enclosure: Closed
Risk Category: II
EXP: C Kzt: NA
Mean Height: 15.00 ft
TCDL: 5.0 psf
BCDL: 5.0 psf
MWFRS Parallel Dist: 0 to h/2
C&C Dist a: 5.40 ft
Loc. from endwall: Any
GCpi: 0.18
Wind Duration: 1.60

Snow Criteria (Pg,Pf in PSF)
Pg: NA Ct: NA CAT: NA
Pf: NA Ce: NA
Lu: NA Cs: NA
Snow Duration: NA

Code / Misc Criteria
Bldg Code: FBC 2017 RES
TPI Std: 2014
Rep Fac: No
FT/RT:20(0)/10(0)
Plate Type(s):
WAVE

Defl/CSI Criteria

PP Deflection in	loc	L/defl	L/#
VERT(LL): 0.179	AE	537	240
VERT(CL): 0.363	AE	264	180
HORZ(LL): -0.038	AE	-	-
HORZ(TL): 0.076	AE	-	-

Creep Factor: 2.0
Max TC CSI: 0.615
Max BC CSI: 0.401
Max Web CSI: 0.663

VIEW Ver: 18.02.01B.0321.08

▲Maximum Reactions (lbs), or *=PLF

	Gravity			Non-Gravity		
Loc	R+	/ R-	/ Rh	/ Rw	/ U	/ RL
AX	227	/-	/-	/243	/90	/316
AX*	123	/-	/-	/66	/20	/-
AW		/-729				
AI		/-153				
AH		/-104				
AG		/-337				

Wind reactions based on MWFRS
AX Brg Width = 3.5 Min Req = 1.5
AX Brg Width = 428 Min Req = -
Bearings AX & AX are a rigid surface.
Members not listed have forces less than 375#

Maximum Top Chord Forces Per Ply (lbs)

Chords	Tens.	Comp.	Chords	Tens.	Comp.
B - C	497	-660	P - Q	838	-574
C - D	678	-816	Q - R	842	-657
D - E	718	-754	R - S	839	-736
E - F	896	-906	S - T	837	-791
F - G	1073	-1071	T - U	837	-840
G - H	1206	-1191	U - V	815	-868
H - I	877	-713	V - W	754	-840
I - J	853	-644	W - X	757	-849
J - K	859	-613	X - Y	840	-784
K - L	843	-559	Y - Z	1158	-1071
L - M	754	-486	Z -AA	2128	-2252
M - N	754	-485	AA-AB	2149	-2279
N - O	754	-485	AB-AD	1679	-1861
O - P	754	-486	AB-AC	514	-461

Maximum Bot Chord Forces Per Ply (lbs)

Chords	Tens.	Comp.	Chords	Tens.	Comp.
B -BB	727	-527	AP-AO	1081	-729
BB-BA	726	-526	AO-AN	1079	-727
BA-AZ	926	-735	AN-AM	1077	-726
AZ-AY	1130	-899	AM-AL	1075	-724
AY-AX	2618	-1926	AL-AK	1073	-721
AX-AW	1432	-982	AK-AJ	1072	-719
AW-AV	1080	-726	AJ-AI	1075	-722
AV-AU	1081	-727	AI-AH	972	-780
AU-AT	1082	-729	AH-AG	1217	-1070
AT-AS	1089	-741	AG-AF	2239	-1929
AS-AR	1089	-741	AF-AE	4628	-4040
AR-AQ	1089	-741	AE-AC	2331	-2038
AQ-AP	1089	-741	AC-AD	1911	-1648

Lumber

Top chord: 2x6 SP 2400f-2.0E;
Bot chord: 2x4 SP #2;
Webs: 2x4 SP #3; W14,W18 2x6 SP 2400f-2.0E;
Stack Chord: SC1 2x4 SP #2;
Stack Chord: SC2 2x4 SP #2;

Bracing

(a) Continuous lateral restraint equally spaced on member.

Plating Notes

All plates are 2X4 except as noted.

Purlins

In lieu of structural panels use purlins to brace all flat TC @ 24" oc.

Wind

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

Left end vertical not exposed to wind pressure.

Left and right cantilevers are exposed to wind

See DWGS A14015ENC101014 & GBLLETIN0118 for more requirements.

Truss designed to support 8" maximum gable end overhang.

+ MEMBER TO BE LATERALLY BRACED FOR HORIZONTAL WIND LOADS.

GABLE END IS DESIGNED TO SUPPORT 8" MAX RAKE OVERHANG.

Additional Notes

Refer to General Notes for additional information

Stacked top chord must NOT be notched or cut in area (NNL). Dropped top chord braced at 24" oc intervals. Attach stacked top chord (SC) to dropped top chord in notchable area using 3x4 tie-plates 24" oc. Center plate on stacked/dropped chord interface, plate length perpendicular to chord length. Splice top chord in notchable area using 3x6.

WARNING: Furnish a copy of this DWG to the installation contractor. Special care must be taken during handling, shipping and installation of trusses. See "WARNING" note below.

The overall height of this truss excluding overhang is 9-7-12.

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ALPINE AN ITW COMPANY
6750 Forum Drive
Suite 305
Orlando FL, 32821

SEQN: 290842 / GABL FROM: CDM Page 2 of 2	Ply: 1 Qty: 1	Job Number: 19-3729 /LANG RES. /Contractor Truss Label: B01	Cust: R 215 JRef: 1WR72150003 T1 / DrwNo: 354.19.0733.09479 JB / DF 12/20/2019

Maximum Web Forces Per Ply (lbs)

Webs	Tens.	Comp.	Webs	Tens.	Comp.
F -AY	389	-285	X -AH	319	-432
G -AX	492	-362	AH- Y	644	-627
AX- H	1297	-1073	Y -AG	637	-712
H -AW	879	-1099	AG- Z	1401	-1468
L -AT	296	-462	Z -AF	1447	-1413
AP- P	335	-467			

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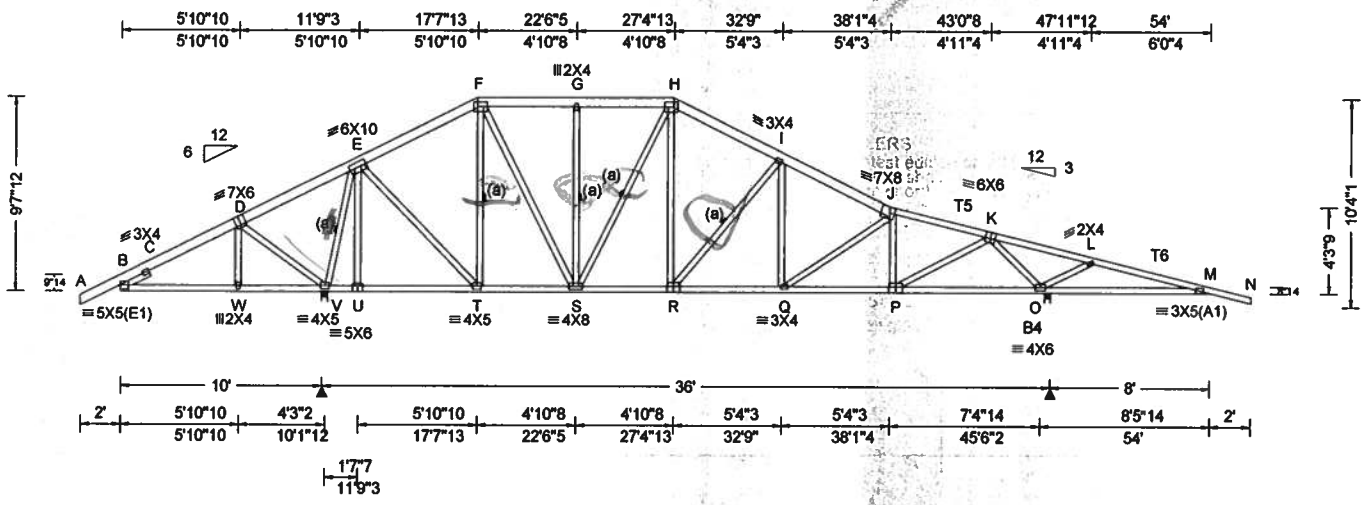
6750 Forum Drive
Suite 305
Orlando FL, 32821

SEQN: 291306 COMN FROM: CDM	Ply: 1 Qty: 13	Job Number: 19-3729 /LANG RES. /Contractor Truss Label: B02		Cust: R 215 JRef: 1WR72150003 T6 DrwNo: 354.19.1001.36957 JB / DF 12/20/2019



Loading Criteria (psf)

TCLL:	20.00
TCDL:	10.00
BCLL:	0.00
BCDL:	10.00
Des Ld:	40.00
NCBCLL:	10.00
Soffit:	2.00

Load Duration: 1.25
Spacing: 24.0 "

Wind Criteria
Wind Std: ASCE 7-10
Speed: 130 mph
Enclosure: Closed
Risk Category: II
EXP: C Kzt: NA
Mean Height: 15.11 ft
TCDL: 5.0 psf
BCDL: 5.0 psf
MWFRS Parallel Dist: 0 to h/2
C&C Dist a: 5.40 ft
Loc. from endwall: Any
GCpi: 0.18
Wind Duration: 1.60

Snow Criteria (Pg,Pf in PSF)
Pg: NA Ct: NA CAT: NA
Pf: NA Ce: NA
Lu: NA Cs: NA
Snow Duration: NA

Code / Misc Criteria
Bldg Code: FBC 2017 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): 0.107	Q	999	240
VERT(CL): 0.216	O	451	180
HORZ(LL): 0.024	F	-	-
HORZ(TL): 0.048	F	-	-

Creep Factor: 2.0
Max TC CSI: 0.814
Max BC CSI: 0.716
Max Web CSI: 0.965

VIEW Ver: 18.02.01B.0321.08

▲Maximum Reactions (lbs)

	Gravity			Non-Gravity		
Loc	R+	/ R-	/ Rh	/ Rw	/ U	/ RL
V	2715	/-	/-	/1540	/417	/331
O	2360	/-	/-	/1391	/330	/-

Wind reactions based on MWFRS
V Brg Width = 3.5 Min Req = 2.8
O Brg Width = 3.5 Min Req = 1.6
Bearings V & O are a rigid surface.
Members not listed have forces less than 375#

Maximum Top Chord Forces Per Ply (lbs)

Chords	Tens.	Comp.	Chords	Tens.	Comp.
B - C	774	-625	H - I	676	-1485
C - D	717	-524	I - J	711	-1878
D - E	1149	-655	J - K	755	-1731
E - F	399	-823	K - L	1621	-1631
F - G	704	-1057	L - M	1245	-1372
G - H	704	-1057			

Maximum Bot Chord Forces Per Ply (lbs)

Chords	Tens.	Comp.	Chords	Tens.	Comp.
B - W	620	-541	S - R	1261	-108
W - V	620	-541	R - Q	1615	-326
V - U	677	-628	Q - P	1696	-554
U - T	677	-627	P - O	938	-600
T - S	659	-42	O - M	2814	-2326

Maximum Web Forces Per Ply (lbs)

Webs	Tens.	Comp.	Webs	Tens.	Comp.
D - V	363	-545	H - R	692	-258
V - E	1052	-2365	R - I	347	-583
E - T	1494	-630	J - P	512	-653
F - T	469	-835	P - K	1699	-964
F - S	904	-476	K - O	1452	-2566
S - H	273	-438	O - L	391	-490

Lumber
Top chord: 2x6 SP 2400f-2.0E; T5,T6 2x4 SP #2;
Bot chord: 2x4 SP #2; B4 2x4 SP M-31;
Webs: 2x4 SP #3;
Lt Slider: 2x4 SP #3; block length = 1.611'

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

Plating Notes
All plates are 6X8 except as noted.

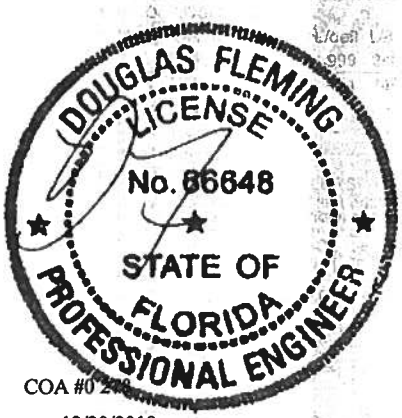
Loading
Truss passed check for 20 psf additional bottom chord live load in areas with 42"-high x 24"-wide clearance.

Purlins
In lieu of structural panels use purlins to brace all flat TC @ 24" oc.

Wind
Wind loads based on MWFRS with additional C&C member design.
Left and right cantilevers are exposed to wind

Blocking
Full Height Blocking reinforcement required to prevent buckling of members over the bearings:
bearing 1 located at 10.0'
bearing 2 located at 45.7'

Additional Notes
Refer to General Notes for additional information
WARNING: Furnish a copy of this DWG to the installation contractor. Special care must be taken during handling, shipping and installation of trusses. See "WARNING" note below.
The overall height of this truss excluding overhang is 9-7-12.



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12/20/2019

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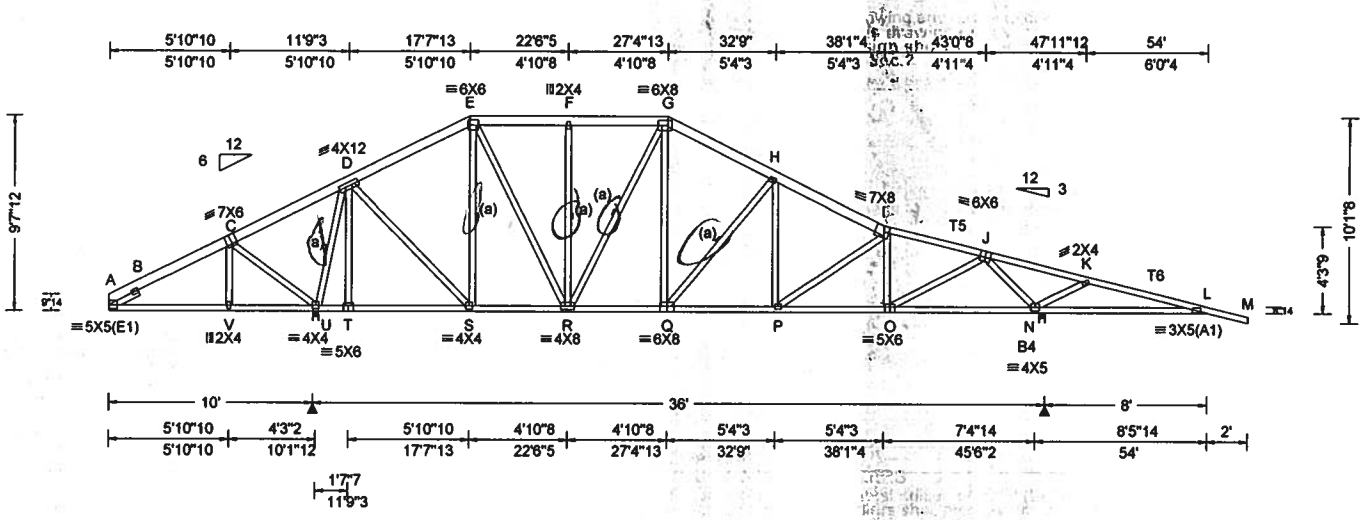
AN ITW COMPANY
6750 Forum Drive
Suite 305
Orlando FL, 32821

SEQN: 291308 COMN FROM: CDM	Ply: 1 Qty: 1	**Job Number:** 19-3729 /LANG RES. /Contractor **Truss Label:** B03		Cust: R 215 JRef: 1WR72150003 T3 DrwNo: 354.19.1001.40330 JB / DF 12/20/2019



Loading Criteria (psf)

TCLL:	20.00
TCDL:	10.00
BCLL:	0.00
BCDL:	10.00
Des Ld:	40.00
NCBCLL:	10.00
Soffit:	2.00

Load Duration: 1.25
Spacing: 24.0 "

Wind Criteria
Wind Std: ASCE 7-10
Speed: 130 mph
Enclosure: Closed
Risk Category: II
EXP: C Kzt: NA
Mean Height: 15.11 ft
TCDL: 5.0 psf
BCDL: 5.0 psf
MWFRS Parallel Dist: h to 2h
C&C Dist a: 5.40 ft
Loc. from endwall: not in 13.00 ft
GCpi: 0.18
Wind Duration: 1.60

Snow Criteria (Pg,Pf in PSF)
Pg: NA Ct: NA CAT: NA
Pf: NA Ce: NA
Lu: NA Cs: NA
Snow Duration: NA

Code / Misc Criteria
Bldg Code: FBC 2017 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): 0.085	N	999	240
VERT(CL): 0.216	N	452	180
HORZ(LL): 0.022	E	-	-
HORZ(TL): 0.050	E	-	-

Creep Factor: 2.0
Max TC CSI: 0.816
Max BC CSI: 0.640
Max Web CSI: 0.755

VIEW Ver: 18.02.01B.0321.08

▲Maximum Reactions (lbs)

	Gravity			Non-Gravity		
Loc	R+	/ R-	/ Rh	/ Rw	/ U	/ RL
U	2376	/-	/-	/1429	/35	/305
N	2250	/-	/-	/1392	/245	/-

Wind reactions based on MWFRS
U Brg Width = 3.5 Min Req = 2.4
N Brg Width = 3.5 Min Req = 1.5
Bearings U & N are a rigid surface.
Members not listed have forces less than 375#

Maximum Top Chord Forces Per Ply (lbs)

Chords	Tens.	Comp.	Chords	Tens.	Comp.
A - B	612	-331	G - H	378	-1335
B - C	495	-135	H - I	435	-1721
C - D	927	-201	I - J	464	-1782
D - E	234	-864	J - K	1620	-1437
E - F	405	-1008	K - L	1244	-1283
F - G	405	-1008			

Maximum Bot Chord Forces Per Ply (lbs)

Chords	Tens.	Comp.	Chords	Tens.	Comp.
U - T	276	-462	Q - P	1474	-186
T - S	277	-461	P - O	1730	-330
S - R	696	-53	O - N	1033	-589
R - Q	1126	-57	N - L	2592	-2324

Maximum Web Forces Per Ply (lbs)

Webs	Tens.	Comp.	Webs	Tens.	Comp.
C - U	223	-548	G - Q	565	-145
U - D	454	-2019	Q - H	205	-583
D - S	1221	-246	I - O	382	-608
E - S	194	-759	O - J	1575	-625
E - R	794	-224	J - N	922	-2416
R - G	127	-378	N - K	240	-490

Lumber

Top chord: 2x6 SP 2400f-2.0E; T5,T6 2x4 SP #2;
Bot chord: 2x4 SP #2; B4 2x4 SP M-31;
Webs: 2x4 SP #3;
Lt Slider: 2x4 SP #3; block length = 1.611'

Bracing

(a) Continuous lateral restraint equally spaced on member.

Plating Notes

All plates are 3X4 except as noted.

Purlins

In lieu of structural panels use purlins to brace all flat TC @ 24" oc.

Wind

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

Left and right cantilevers are exposed to wind

Blocking

Full Height Blocking reinforcement required to prevent buckling of members over the bearings:
bearing 1 located at 10.0'
bearing 2 located at 45.7'

Additional Notes

Refer to General Notes for additional information

WARNING: Furnish a copy of this DWG to the installation contractor. Special care must be taken during handling, shipping and installation of trusses. See "WARNING" note below.

The overall height of this truss excluding overhang is 9-7-12.

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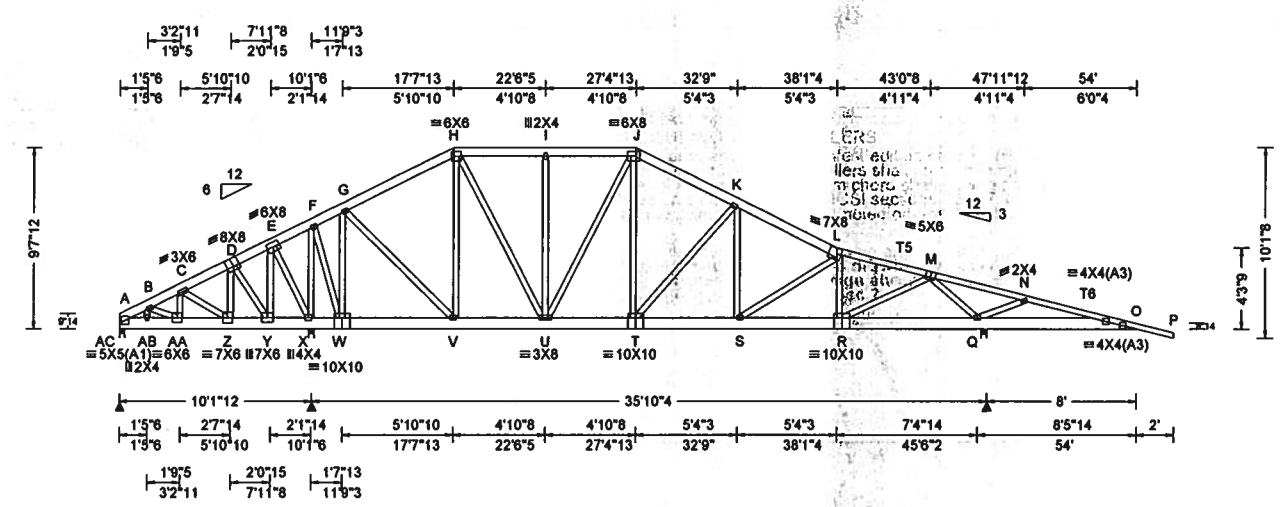
ALPINE AN ITW COMPANY
6750 Forum Drive
Suite 305
Orlando FL, 32821

SEQN: 291489 COMN FROM: CDM	Ply: 2 Qty: 1	Job Number: 19-3729 /LANG RES. /Contractor Truss Label: B04		Cust: R 215 JRef: 1WR72150003 T4 DrwNo: 354.19.1001.44330 JB / DF 12/20/2019

2 Complete Trusses Required



Loading Criteria (psf)

TCLL:	20.00
TCDL:	10.00
BCLL:	0.00
BCDL:	10.00
Des Ld:	40.00
NCBCLL:	10.00
Soffit:	2.00

Load Duration: 1.25
Spacing: 24.0 "

Wind Criteria
Wind Std: ASCE 7-10
Speed: 130 mph
Enclosure: Closed
Risk Category: II
EXP: C Kzt: NA
Mean Height: 15.00 ft
TCDL: 5.0 psf
BCDL: 5.0 psf
MWFRS Parallel Dist: h to 2h
C&C Dist a: 5.40 ft
Loc. from endwall: not in 13.00 ft
GCpi: 0.18
Wind Duration: 1.60

Snow Criteria (Pg,Pf in PSF)
Pg: NA Ct: NA CAT: NA
Pf: NA Ce: NA
Lu: NA Cs: NA
Snow Duration: NA

Code / Misc Criteria
Bldg Code: FBC 2017 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): 0.036	Q	999	240
VERT(CL): 0.081	Q	999	180
HORZ(LL): 0.010	C	-	-
HORZ(TL): 0.021	C	-	-

Creep Factor: 2.0
Max TC CSI: 0.464
Max BC CSI: 0.271
Max Web CSI: 0.895

VIEW Ver: 18.02.01B.0321.08

▲Maximum Reactions (lbs)

Loc	R+	Gravity / R-	/ Rh	Non-Gravity / Rw	/ U	/ RL
AC	4560	/-	/-	/210	/161	/305
X	9202	/-	/-	/1161	/456	/-
Q	2305	/-	/-	/1446	/481	/-

Wind reactions based on MWFRS
AC Brg Width = 3.5 Min Req = 1.9
X Brg Width = 3.5 Min Req = 3.4
Q Brg Width = 3.5 Min Req = 1.5
Bearings AC, X, & Q are a rigid surface.
Members not listed have forces less than 375#

Maximum Top Chord Forces Per Ply (lbs)

Chords	Tens.	Comp.	Chords	Tens.	Comp.
A - B	97	-2852	H - I	239	-606
B - C	101	-2831	I - J	239	-606
C - D	70	-1732	J - K	222	-786
D - E	40	-582	K - L	252	-997
E - F	553	-48	L - M	263	-1016
F - G	445	-175	M - N	883	-731
G - H	165	-542	N - O	669	-665

Maximum Bot Chord Forces Per Ply (lbs)

Chords	Tens.	Comp.	Chords	Tens.	Comp.
A -AB	2387	-80	V - U	450	-74
AB-AA	2377	-80	U - T	669	-105
AA- Z	2440	-86	T - S	859	-126
Z - Y	1414	-67	S - R	989	-196
Y - X	433	-59	R - Q	541	-260
X - W	201	-894	Q - O	1348	-1259
W - V	165	-392			

Maximum Web Forces Per Ply (lbs)

Webs	Tens.	Comp.	Webs	Tens.	Comp.
AA- C	1074	-7	F - W	404	-79
C - Z	59	-1147	W - G	138	-853
Z - D	2004	-35	G - V	749	-78
D - Y	61	-1736	H - V	79	-473
Y - E	2350	-42	H - U	406	-93
E - X	60	-2128	R - M	788	-307
X - F	113	-546	M - Q	468	-1236

Lumber
Top chord: 2x6 SP 2400f-2.0E; T5,T6 2x4 SP #2;
Bot chord: 2x8 SP 2400f-2.0E;
Webs: 2x4 SP #3;

Nailnote
Nail Schedule:0.131"x3", min. nails
Top Chord: 1 Row @12.00" o.c.
Bot Chord: 1 Row @ 7.25" o.c.
Webs : 1 Row @ 4" o.c.
Use equal spacing between rows and stagger nails in each row to avoid splitting.

Special Loads
——(Lumber Dur.Fac.=1.25 / Plate Dur.Fac.=1.25)

TC: From	62 plf at	0.00 to	62 plf at	38.10
TC: From	61 plf at	38.10 to	61 plf at	56.00
BC: From	20 plf at	0.00 to	20 plf at	54.00
BC: From	4 plf at	54.00 to	4 plf at	56.00

BC: 2064 lb Conc. Load at 1.44, 3.44, 5.44, 7.44 9.44
BC: 1037 lb Conc. Load at 9.94

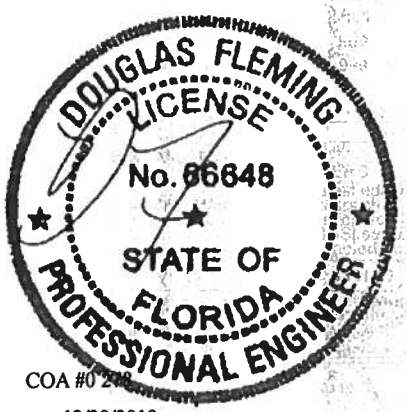
Plating Notes
All plates are 3X4 except as noted.

Purlins
In lieu of structural panels use purlins to brace all flat TC @ 24" oc.

Wind
Wind loads based on MWFRS.
Right cantilever is exposed to wind

Blocking
Full Height Blocking reinforcement required to prevent buckling of members over the bearings: bearing 2 located at 10.0'

Additional Notes
Refer to General Notes for additional information
WARNING: Furnish a copy of this DWG to the installation contractor. Special care must be taken during handling, shipping and installation of trusses. See "WARNING" note below.
The overall height of this truss excluding overhang is 9-7-12.



COA #0 [illegible]

12/20/2019

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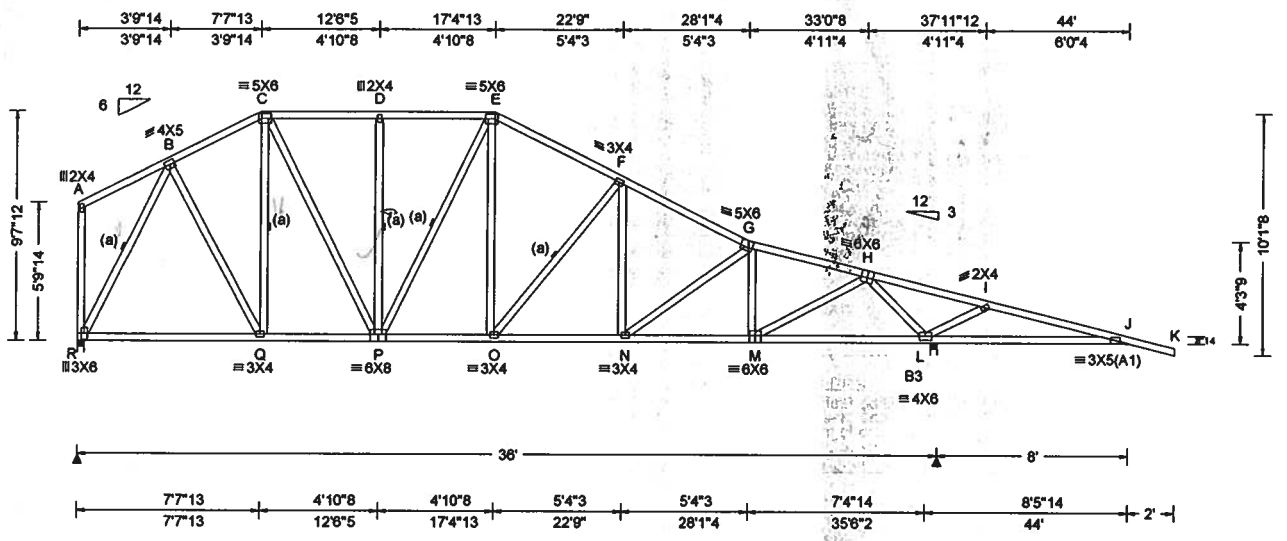
ALPINE
AN ITW COMPANY
6750 Forum Drive
Suite 305
Orlando FL, 32821

SEQN: 290825 / COMN FROM: CDM	Ply: 1 Qty: 12	**Job Number:** 19-3729 /LANG RES. /Contractor **Truss Label:** B05	Cust: R 215 JRef: 1WR72150003 T8 / DrwNo: 354.19.0733.09416 JB / DF 12/20/2019



Loading Criteria (psf)

TCLL:	20.00
TCDL:	10.00
BCLL:	0.00
BCDL:	10.00
Des Ld:	40.00
NCBCLL:	10.00
Soffit:	2.00

Load Duration: 1.25
Spacing: 24.0 "

Wind Criteria
Wind Std: ASCE 7-10
Speed: 130 mph
Enclosure: Closed
Risk Category: II
EXP: C Kzt: NA
Mean Height: 15.11 ft
TCDL: 5.0 psf
BCDL: 5.0 psf
MWFRS Parallel Dist: 0 to h/2
C&C Dist a: 4.40 ft
Loc. from endwall: Any
GCpi: 0.18
Wind Duration: 1.60

Snow Criteria (Pg,Pf in PSF)
Pg: NA Ct: NA CAT: NA
Pf: NA Ce: NA
Lu: NA Cs: NA
Snow Duration: NA

Code / Misc Criteria
Bldg Code: FBC 2017 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): 0.133	N	999	240
VERT(CL): 0.207	L	471	180
HORZ(LL): 0.052	C	-	-
HORZ(TL): 0.096	C	-	-

Creep Factor: 2.0
Max TC CSI: 0.808
Max BC CSI: 0.787
Max Web CSI: 0.865

VIEW Ver: 18.02.01B.0321.08

▲Maximum Reactions (lbs)

	Gravity			Non-Gravity		
Loc	R+	/ R-	/ Rh	/ Rw	/ U	/ RL
R	1612	/-	/-	/755	/233	/256
L	2509	/-	/-	/1441	/347	/-

Wind reactions based on MWFRS
R Brg Width = 3.5 Min Req = 1.9
L Brg Width = 3.5 Min Req = 1.7
Bearings R & L are a rigid surface.
Members not listed have forces less than 375#

Maximum Top Chord Forces Per Ply (lbs)

Chords	Tens.	Comp.	Chords	Tens.	Comp.
B - C	454	-1266	F - G	734	-2191
C - D	577	-1424	G - H	760	-2016
D - E	577	-1424	H - I	1615	-1618
E - F	627	-1805	I - J	1239	-1377

Maximum Bot Chord Forces Per Ply (lbs)

Chords	Tens.	Comp.	Chords	Tens.	Comp.
R - Q	740	-103	N - M	1972	-565
Q - P	1082	-58	M - L	1073	-527
P - O	1544	-134	L - J	2818	-2315
O - N	1889	-354			

Maximum Web Forces Per Ply (lbs)

Webs	Tens.	Comp.	Webs	Tens.	Comp.
R - B	450	-1633	O - F	356	-577
B - Q	734	-43	G - M	452	-722
C - Q	63	-383	M - H	1846	-842
C - P	739	-198	H - L	1294	-2768
E - O	699	-266	L - I	366	-488

Lumber

Top chord: 2x4 SP #2;
Bot chord: 2x4 SP #2; B3 2x4 SP M-31;
Webs: 2x4 SP #3;

Bracing

(a) Continuous lateral restraint equally spaced on member.

Loading

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

Purlins

In lieu of structural panels use purlins to brace all flat TC @ 24" oc.

Wind

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

Left end vertical not exposed to wind pressure.

Right cantilever is exposed to wind

Additional Notes

Refer to General Notes for additional information

The overall height of this truss excluding overhang is 9-7-12.

COA #0 28

12/20/2019

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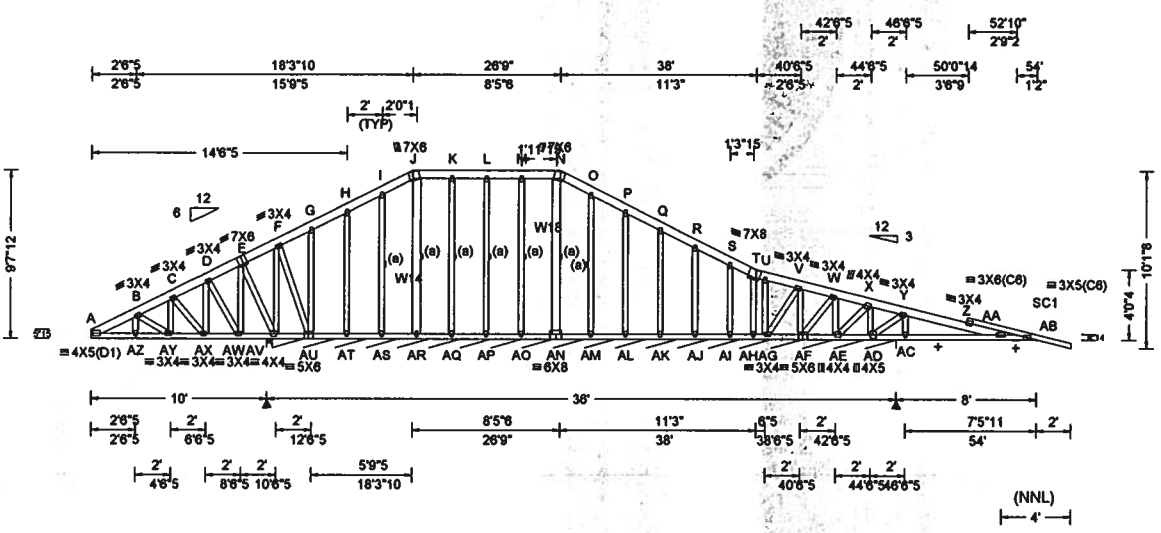
ALPINE
AN ITW COMPANY
6750 Forum Drive
Suite 305
Orlando FL, 32821

SEQN: 290845 / GABL FROM: CDM Page 1 of 2	Ply: 1 Qty: 1	Job Number: 19-3729 /LANG RES. /Contractor Truss Label: B06	Cust: R 215 JRef: 1WR72150003 T12 / DrwNo: 354.19.0733.09619 JB / DF 12/20/2019



Loading Criteria (psf)

TCLL:	20.00
TCDL:	10.00
BCLL:	0.00
BCDL:	10.00
Des Ld:	40.00
NCBCLL:	10.00
Soffit:	2.00

Load Duration: 1.25
Spacing: 24.0 "

Wind Criteria
Wind Std: ASCE 7-10
Speed: 130 mph
Enclosure: Closed
Risk Category: II
EXP: C Kzt: NA
Mean Height: 15.00 ft
TCDL: 5.0 psf
BCDL: 5.0 psf
MWFRS Parallel Dist: 0 to h/2
C&C Dist a: 5.40 ft
Loc. from endwall: Any
GCpi: 0.18
Wind Duration: 1.60

Snow Criteria (Pg,Pf in PSF)
Pg: NA Ct: NA CAT: NA
Pf: NA Ce: NA
Lu: NA Cs: NA
Snow Duration: NA

Code / Misc Criteria
Bldg Code: FBC 2017 RES
TPI Std: 2014
Rep Fac: No
FT/RT:20(0)/10(0)
Plate Type(s):
WAVE

Defl/CSI Criteria

PP Deflection in	loc	L/defl	L/#
VERT(LL):	0.177 AC	541	240
VERT(CL):	0.364 AC	263	180
HORZ(LL):	-0.034 AC	-	-
HORZ(TL):	0.069 AC	-	-

Creep Factor: 2.0
Max TC CSI: 0.615
Max BC CSI: 0.415
Max Web CSI: 0.537

VIEW Ver: 18.02.01B.0321.08

▲Maximum Reactions (lbs), or *=PLF

	Gravity			Non-Gravity		
Loc	R+	/ R-	/ Rh	/ Rw	/ U	/ RL
AV	195	/-	/-	/186	/58	/253
AV*	122	/-	/-	/64	/19	/-
AU		/-557				
AG		/-160				
AE		/-322				

Wind reactions based on MWFRS
AV Brg Width = 3.5 Min Req = 1.5
AV Brg Width = 428 Min Req = -
Bearings AV & AV are a rigid surface.
Members not listed have forces less than 375#

Maximum Top Chord Forces Per Ply (lbs)

Chords	Tens.	Comp.	Chords	Tens.	Comp.
B - C	404	-288	O - P	694	-324
C - D	594	-431	P - Q	692	-405
D - E	784	-585	Q - R	690	-463
E - F	938	-696	R - S	689	-512
F - G	692	-378	S - T	669	-543
G - H	683	-318	T - U	615	-531
H - I	696	-280	U - V	622	-548
I - J	690	-228	V - W	744	-575
J - K	608	-185	W - X	1103	-972
K - L	607	-185	X - Y	2119	-2246
L - M	607	-185	Y - Z	2149	-2291
M - N	607	-185	Z -AB	1679	-1875
N - O	690	-242	Z -AA	514	-458

Maximum Bot Chord Forces Per Ply (lbs)

Chords	Tens.	Comp.	Chords	Tens.	Comp.
AY-AX	403	-353	AM-AL	790	-595
AX-AW	601	-521	AL-AK	787	-594
AW-AV	1657	-1349	AK-AJ	786	-592
AV-AU	1009	-790	AJ-AI	784	-589
AU-AT	791	-594	AI-AH	782	-587
AT-AS	791	-595	AH-AG	784	-590
AS-AR	793	-597	AG-AF	763	-683
AR-AQ	796	-607	AF-AE	1115	-1011
AQ-AP	796	-607	AE-AD	2222	-1914
AP-AO	796	-607	AD-AC	4651	-4038
AO-AN	796	-607	AC-AA	2344	-2037
AN-AM	792	-597	AA-AB	1926	-1648

Maximum Web Forces Per Ply (lbs)

Webs	Tens.	Comp.	Webs	Tens.	Comp.

Lumber

Top chord: 2x6 SP 2400f-2.0E;
Bot chord: 2x4 SP #2;
Webs: 2x4 SP #3; W14,W18 2x6 SP 2400f-2.0E;
Stack Chord: SC1 2x4 SP #2;

Bracing

(a) Continuous lateral restraint equally spaced on member.

Plating Notes

All plates are 2X4 except as noted.

Purlins

In lieu of structural panels use purlins to brace all flat TC @ 24" oc.

Wind

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

Left and right cantilevers are exposed to wind

See DWGS A14015ENC101014 & GBLLETIN0118 for more requirements.

+ MEMBER TO BE LATERALLY BRACED FOR HORIZONTAL WIND LOADS.

Truss designed to support 8" maximum gable end overhang.

GABLE END IS DESIGNED TO SUPPORT 8" MAX RAKE OVERHANG.

Additional Notes

Refer to General Notes for additional information

Stacked top chord must NOT be notched or cut in area (NNL). Dropped top chord braced at 24" oc intervals. Attach stacked top chord (SC) to dropped top chord in notchable area using 3x4 tie-plates 24" oc. Center plate on stacked/dropped chord interface, plate length perpendicular to chord length. Splice top chord in notchable area using 3x6.

WARNING: Furnish a copy of this DWG to the installation contractor. Special care must be taken during handling, shipping and installation of trusses. See "WARNING" note below.

The overall height of this truss,excluding overhang is 9-7-12.

DOUGLAS FLEMING LICENSE No. 66648 STATE OF FLORIDA PROFESSIONAL ENGINEER

COA #0 [illegible]

12/20/2019

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ALPINE
AN ITW COMPANY
6750 Forum Drive
Suite 305
Orlando FL, 32821

SEQN: 290845 / GABL FROM: CDM Page 2 of 2	Ply: 1 Qty: 1	Job Number: 19-3729 /LANG RES. /Contractor Truss Label: B06	Cust: R 215 JRef: 1WR72150003 T12 / DrwNo: 354.19.0733.09619 JB / DF 12/20/2019

E -AV	390	-378	V -AF	440	-441
AV- F	841	-870	AF- W	653	-740
F -AU	690	-681	W -AE	749	-721
J -AR	154	-399	AE- X	1409	-1581
AN- N	190	-402	X -AD	1564	-1422

DOUGLAS FLEMING
LICENSE
No. 66648
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

COA #0

12/20/2019

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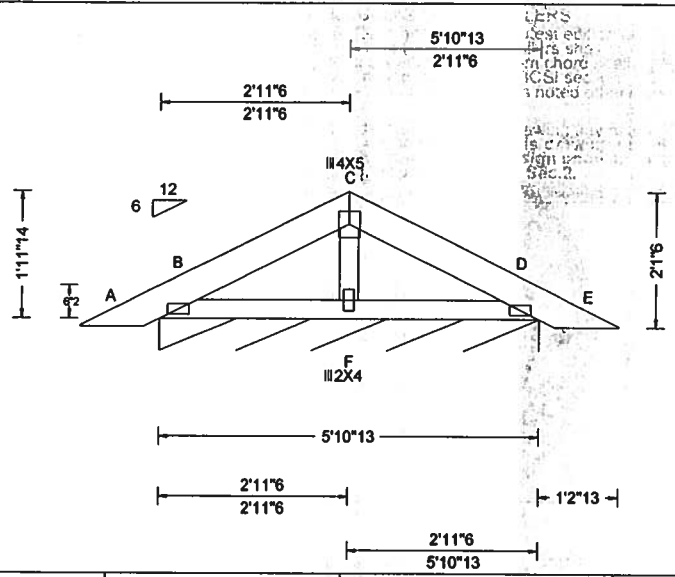
ALPINE
AN ITW COMPANY
6750 Forum Drive
Suite 305
Orlando FL, 32821

SEQN: 290847 / GABL FROM: CDM	Ply: 1 Qty: 2	Job Number: 19-3729 /LANG RES. /Contractor Truss Label: P1	Cust: R 215 JRef: 1WR72150003 T62 / DrwNo: 354.19.0733.10274 JB / DF 12/20/2019



Loading Criteria (psf)

TCLL:	20.00
TCDL:	10.00
BCLL:	0.00
BCDL:	10.00
Des Ld:	40.00
NCBCLL:	10.00
Soffit:	2.00

Load Duration: 1.25
Spacing: 24.0 "

Wind Criteria
Wind Std: ASCE 7-10
Speed: 130 mph
Enclosure: Closed
Risk Category: II
EXP: C Kzt: NA
Mean Height: 19.81 ft
TCDL: 5.0 psf
BCDL: 5.0 psf
MWFRS Parallel Dist: 0 to h/2
C&C Dist a: 5.40 ft
Loc. from endwall: Any
GCpi: 0.18
Wind Duration: 1.60

Snow Criteria (Pg,Pf in PSF)
Pg: NA Ct: NA CAT: NA
Pf: NA Ce: NA
Lu: NA Cs: NA
Snow Duration: NA

Code / Misc Criteria
Bldg Code: FBC 2017 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):	0.001 F	999	240
VERT(CL):	0.001 F	999	180
HORZ(LL):	-0.000 F	-	-
HORZ(TL):	0.001 F	-	-

Creep Factor: 2.0
Max TC CSI: 0.029
Max BC CSI: 0.063
Max Web CSI: 0.018

VIEW Ver: 18.02.01B.0321.08

▲Maximum Reactions (lbs), or *=PLF

Loc	Gravity R+	/ R-	/ Rh	Non-Gravity / Rw	/ U	/ RL
B*	100	/-	/-	/49	/26	/10

Wind reactions based on MWFRS
B Brg Width = 70.8 Min Req = -
Bearing B is a rigid surface.
Members not listed have forces less than 375#

Lumber

Top chord: 2x6 SP 2400f-2.0E;
Bot chord: 2x4 SP #2;
Webs: 2x4 SP #3;

Plating Notes

All plates are 2X4(A1) except as noted.

Wind

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

Additional Notes

Refer to General Notes for additional information

See DWG VAL160101014 for valley details.

The overall height of this truss excluding overhang is 11-9-2.

Refer to DWG PB160101014 for piggyback details.

DOUGLAS FLEMING LICENSE No. 66648 STATE OF FLORIDA PROFESSIONAL ENGINEER

COA #0 [illegible]

12/20/2019

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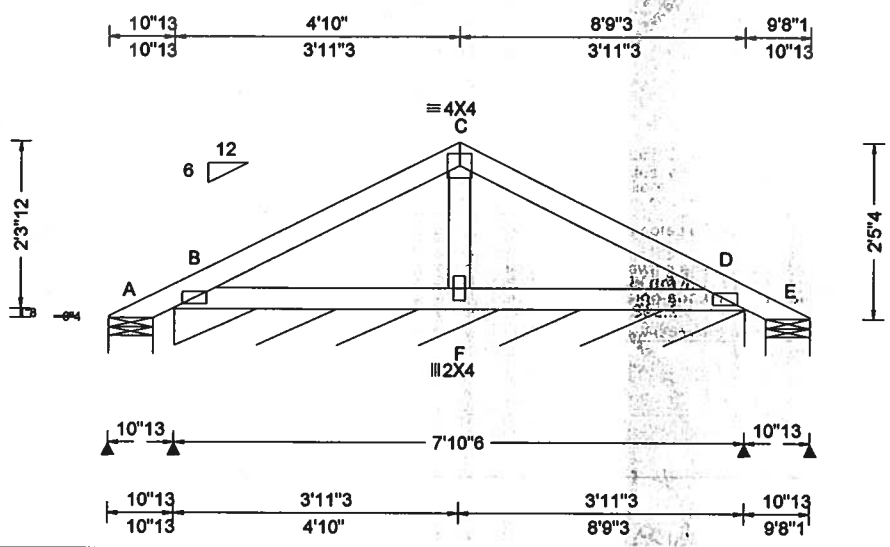
ALPINE AN ITW COMPANY
6750 Forum Drive
Suite 305
Orlando FL, 32821

SEQN: 291319 COMN FROM: CDM	Ply: 1 Qty: 26	**Job Number:** 19-3729 /LANG RES. /Contractor **Truss Label:** P2		Cust: R 215 JRef: 1WR72150003 T5 DrwNo: 354.19.1001.47623 JB / DF 12/20/2019



Loading Criteria (psf)

TCLL:	20.00
TCDL:	10.00
BCLL:	0.00
BCDL:	10.00
Des Ld:	40.00
NCBCLL:	10.00
Soffit:	2.00

Load Duration: 1.25
Spacing: 24.0 "

Wind Criteria
Wind Std: ASCE 7-10
Speed: 130 mph
Enclosure: Closed
Risk Category: II
EXP: C Kzt: NA
Mean Height: 15.11 ft
TCDL: 5.0 psf
BCDL: 5.0 psf
MWFRS Parallel Dist: 0 to h/2
C&C Dist a: 3.00 ft
Loc. from endwall: Any
GCpi: 0.18
Wind Duration: 1.60

Snow Criteria (Pg,Pf in PSF)
Pg: NA Ct: NA CAT: NA
Pf: NA Ce: NA
Lu: NA Cs: NA
Snow Duration: NA

Code / Misc Criteria
Bldg Code: FBC 2017 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): 0.002	F	999	240
VERT(CL): 0.005	F	999	180
HORZ(LL): -0.001	F	-	-
HORZ(TL): 0.003	F	-	-

Creep Factor: 2.0
Max TC CSI: 0.176
Max BC CSI: 0.159
Max Web CSI: 0.023

VIEW Ver: 18.02.01B.0321.08

▲Maximum Reactions (lbs), or *=PLF

	Gravity			Non-Gravity		
Loc	R+	/ R-	/ Rh	/ Rw	/ U	/ RL
A	-	/-57	/-	/40	/65	/64
B*	131	/-	/-	/52	/14	/-
E	-	/-57	/-	/20	/37	/-

Wind reactions based on MWFRS
A Brg Width = 7.3 Min Req = 1.5
B Brg Width = 94.4 Min Req = -
E Brg Width = 7.3 Min Req = 1.5
Bearings A, B, & E are a rigid surface.
Members not listed have forces less than 375#

Lumber

Top chord: 2x4 SP #2;
Bot chord: 2x4 SP #2;
Webs: 2x4 SP #3;

Plating Notes

All plates are 2X4(A1) except as noted.

Loading

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

Purlins

In lieu of rigid ceiling use purlins to brace BC @ 24" oc.

Wind

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

Additional Notes

Refer to General Notes for additional information

Refer to DWG PB160101014 for piggyback details.

The overall height of this truss excluding overhang is 2-5-4.

COA #0 2

12/20/2019

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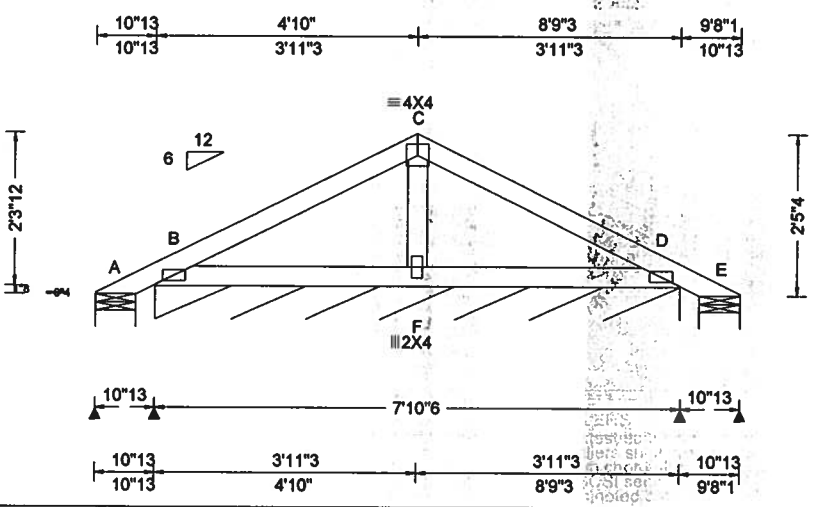
ALPINE
AN ITW COMPANY
6750 Forum Drive
Suite 305
Orlando FL, 32821

SEQN: 291321 COMN FROM: CDM	Ply: 2 Qty: 1	Job Number: 19-3729 /LANG RES. /Contractor Truss Label: P3		Cust: R 215 JRef: 1WR72150003 T7 DrwNo: 354.19.1001.53800 JB / DF 12/20/2019

2 Complete Trusses Required



Loading Criteria (psf)
TCLL: 20.00
TCDL: 10.00
BCLL: 0.00
BCDL: 10.00
Des Ld: 40.00
NCBCLL: 10.00
Soffit: 2.00
Load Duration: 1.25
Spacing: 24.0 "

Wind Criteria
Wind Std: ASCE 7-10
Speed: 130 mph
Enclosure: Closed
Risk Category: II
EXP: C Kzt: NA
Mean Height: 15.11 ft
TCDL: 5.0 psf
BCDL: 5.0 psf
MWFRS Parallel Dist: h to 2h
C&C Dist a: 3.00 ft
Loc. from endwall: not in 13.00 ft
GCpi: 0.18
Wind Duration: 1.60

Snow Criteria (Pg,Pf in PSF)
Pg: NA Ct: NA CAT: NA
Pf: NA Ce: NA
Lu: NA Cs: NA
Snow Duration: NA

Code / Misc Criteria
Bldg Code: FBC 2017 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): 0.001	F	999	240
VERT(CL): 0.002	F	999	180
HORZ(LL): -0.000	F	-	-
HORZ(TL): 0.001	F	-	-

Creep Factor: 2.0
Max TC CSI: 0.080
Max BC CSI: 0.080
Max Web CSI: 0.011

VIEW Ver: 18.02.01B.0321.08

▲Maximum Reactions (lbs), or *=PLF

	Gravity			Non-Gravity		
Loc	R+	/ R-	/ Rh	/ Rw	/ U	/ RL
A	-	/-57	/-	/40	/65	/64
B*	110	/-	/-	/52	/-	/-
E	-	/-57	/-	/12	/37	/-

Wind reactions based on MWFRS
A Brg Width = 7.3 Min Req = 1.5
B Brg Width = 94.4 Min Req = -
E Brg Width = 7.3 Min Req = 1.5
Bearings A, B, & E are a rigid surface.
Members not listed have forces less than 375#

Lumber

Top chord: 2x4 SP #2;
Bot chord: 2x4 SP #2;
Webs: 2x4 SP #3;

Nailnote

Nail Schedule:0.131"x3", min. nails
Top Chord: 1 Row @12.00" o.c.
Bot Chord: 1 Row @12.00" o.c.
Webs : 1 Row @ 4" o.c.
Use equal spacing between rows and stagger nails in each row to avoid splitting.

Plating Notes

All plates are 2X4(A1) except as noted.

Wind

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

Additional Notes

Refer to General Notes for additional information

Refer to DWG PB160101014 for piggyback details.

The overall height of this truss excluding overhang is 2-5-4.

DOUGLAS FLEMING LICENSE No. 66648 STATE OF FLORIDA PROFESSIONAL ENGINEER

COA #0 [illegible]

12/20/2019

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ALPINE AN ITW COMPANY
6750 Forum Drive
Suite 305
Orlando FL, 32821

Gable Stud Reinforcement Detail

ASCE 7-10: 140 mph Wind Speed, 15' Mean Height, Enclosed, Exposure C, Kzt = 1.00

Or: 120 mph Wind Speed, 15' Mean Height, Partially Enclosed, Exposure C, Kzt = 1.00
Or: 120 mph Wind Speed, 15' Mean Height, Enclosed, Exposure D, Kzt = 1.00
Or: 100 mph Wind Speed, 15' Mean Height, Partially Enclosed, Exposure D, Kzt = 1.00

Max Gable Vertical Length

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

Bracing Group Species and Grades:

Group A:

Spruce-Pine-Fir	
#1 / #2	Standard
#3	Stud

Hem-Fir	
#2	Stud
#3	Standard

Douglas Fir-Larch
#3
Stud
Standard

Southern Pine※※※
#3
Stud
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 55 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' braces: space nails at 2" o.c. in 18" end zones and 4" o.c. between zones.

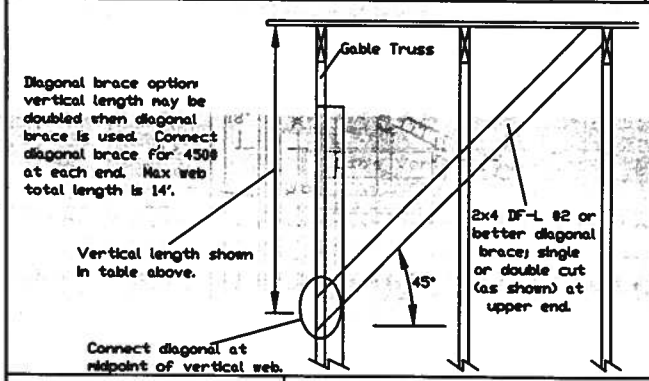
※※For (2) 'L' braces: space nails at 3" o.c. in 18" end zones and 6" o.c. between zones.

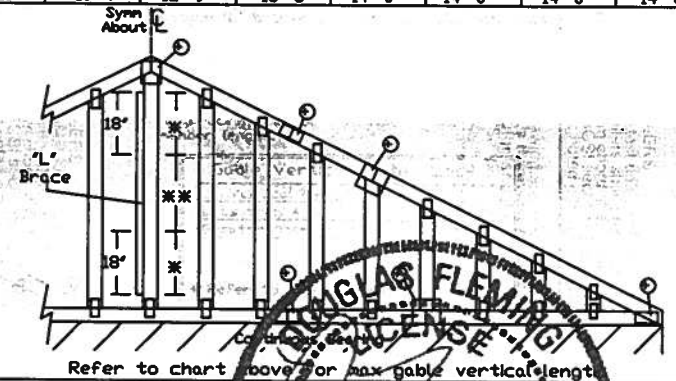
'L' bracing must be a minimum of 80% of web member length.

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

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

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





ALPINE
AN ITW COMPANY

13723 Riverport Drive
Suite 200
Maryland Heights, MO 63043

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DOUGLAS FLEMING LICENSE No. 66648 STATE OF FLORIDA PROFESSIONAL ENGINEER 12/10/2014

MAX. TOT. LD. 60 PSF

MAX. SPACING 24.0"

REF ASCE7-10-GAB14015
DATE 10/01/14
DRWG A14015ENC101014

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-reinforecement 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.

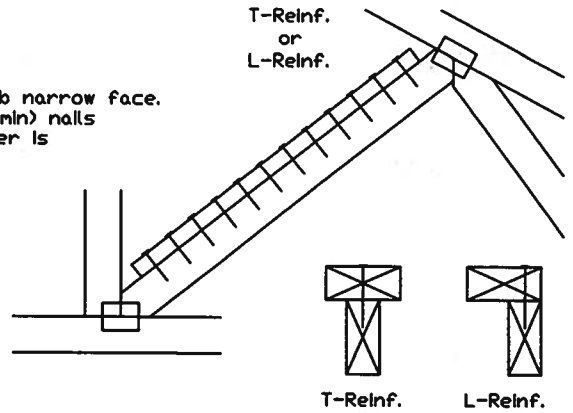
Web Member Size	Specified CLR Restraint	Alternative Reinforecement T- or L- Reinf.	Scab Reinf.
2x3 or 2x4	1 row	2x4	1-2x4
2x3 or 2x4	2 rows	2x6	2-2x4
2x6	1 row	2x4	1-2x6
2x6	2 rows	2x6	2-2x4(#)
2x8	1 row	2x6	1-2x8
2x8	2 rows	2x6	2-2x6(#)

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.

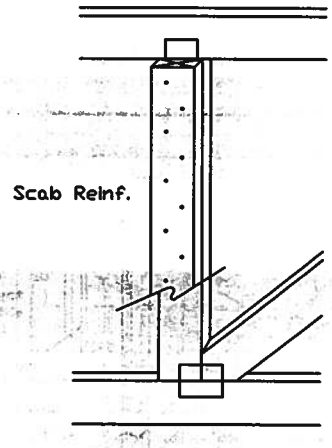
T-Reinforcement or L-Reinforcement:

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.



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AN ITW COMPANY
13723 Riverport Drive
Suite 200
Maryland Heights, MO 63043

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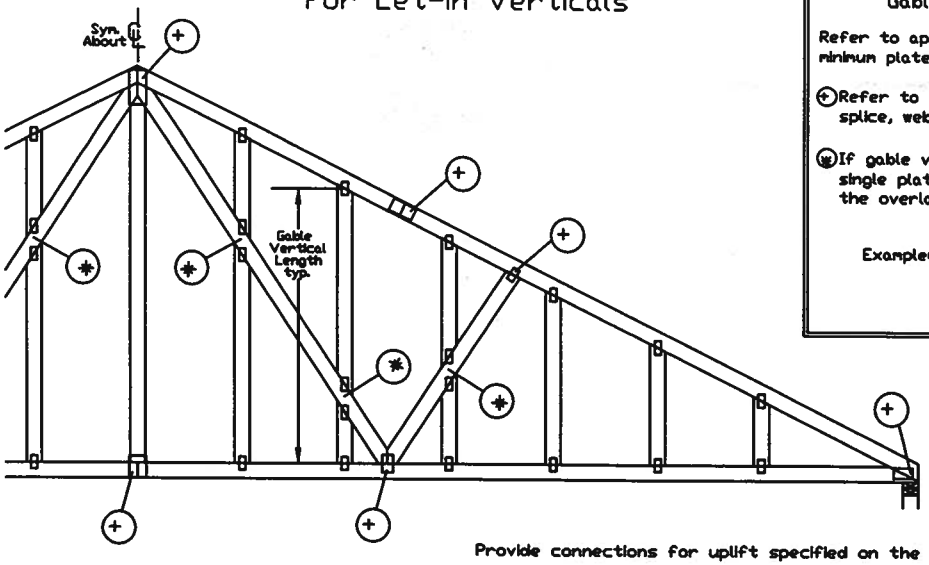
TC LL	PSF	REF	CLR Subst.
TC DL	PSF	DATE	01/02/19
BC DL	PSF	DRWG	BRCLBSUB0119
BC LL	PSF		
TOT. L.D.	PSF		
DUR. FAC.			
SPACING			

Gable Detail
For Let-in Verticals



Gable Truss Plate Sizes

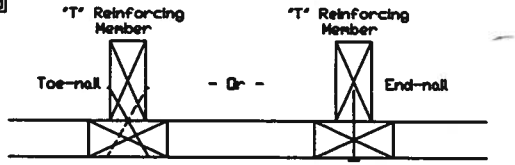
Refer to appropriate Alpine gable detail for minimum plate sizes for vertical studs.

(+) 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: 2X4 / 2X4 — 2X8

"T" Reinforcement Attachment Detail

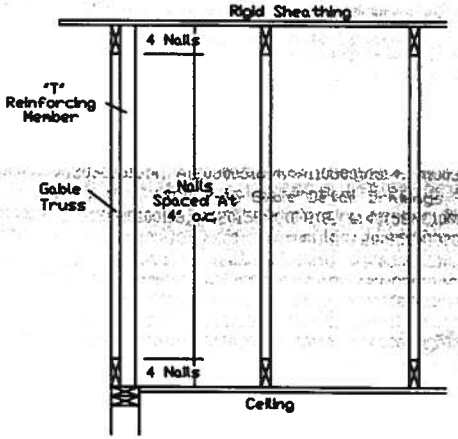


Provide connections for uplift specified on the engineered truss design.

Attach each "T" reinforcing member with

End Driven Nails:
10d Common (0.148"x 3",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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AN ITW COMPANY
13723 Riverport Drive
Suite 200
Maryland Heights, MO 63043

DONALD FLEMING
LICENSED
No. 66848
STATE OF FLORIDA
PROFESSIONAL ENGINEER
CA #0278

MAX. TOT. L.D. 60 PSF
DUR. FAC. ANY
MAX. SPACING 24.0"

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

Piggyback Detail - ASCE 7-10: 160 mph, 30' Mean Height, Enclosed, Exposure C, Kzt=1.00

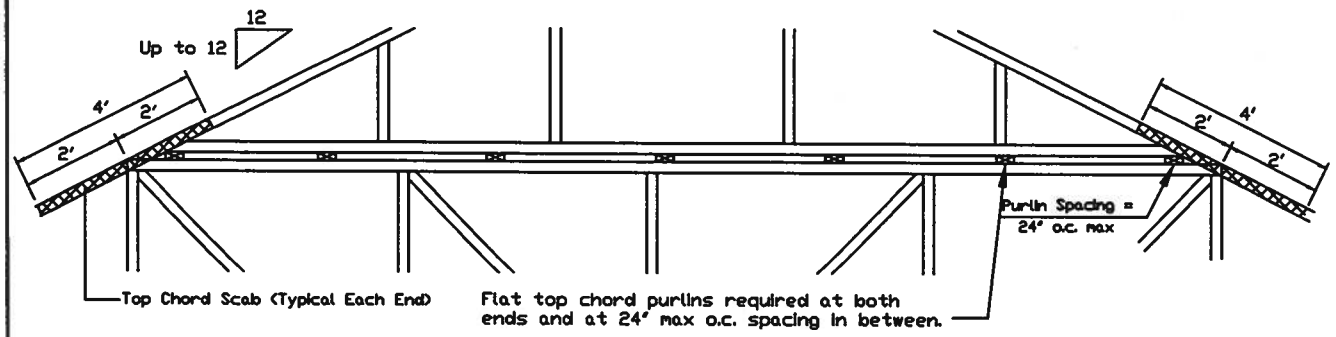
160 mph Wind, 30.00 ft Mean Hgt, ASCE 7-10, Enclosed Bldg. located anywhere in roof, Exp C, Wind DL= 5.0 psf (min), Kzt=1.0.
Or 140 mph wind, 30.00 ft Mean Hgt, ASCE 7-10, Enclosed Bldg. located anywhere in roof, Exp D, wind DL= 5.0 psf (min), Kzt=1.0.

Note: Top chords of trusses supporting piggyback cap trusses must be adequately braced by sheathing or purlins. The building Engineer of Record shall provide diagonal bracing or any other suitable anchorage to permanently restrain purlins, and lateral bracing for out of plane loads over gable ends.

Maximum truss spacing is 24" o.c. detail is not applicable if cap supports additional loads such as cupola, steeple, chimney or drag strut loads.

** Refer to Engineer's sealed truss design drawing for piggyback and base truss specifications.

Detail A : Purlin Spacing = 24" o.c. or less

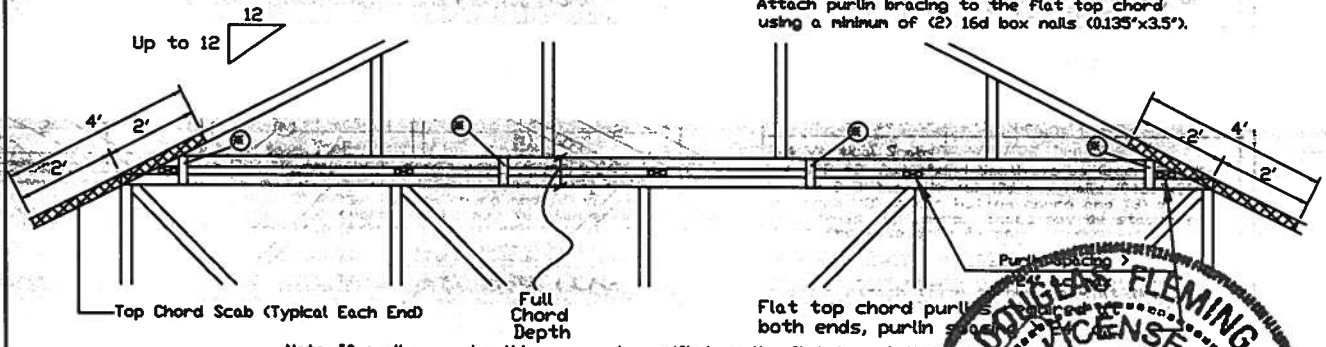


Piggyback cap truss slant nailed to all top chord purlin bracing with (2) 16d box nails (0.135"x3.5") and secure top chord with 2x4 #3 grade scab (1 side only at each end) attached with 2 rows of 10d box nails (0.128"x3") at 4' o.c.

Attach purlin bracing to the flat top chord using (2) 16d box nails (0.135"x3.5").

The top chord #3 grade 2x4 scab may be replaced with either of the following: (1) 3X8 Trulox plate attached with (8) 0.120"x1.375" nails, (4) into cap TC & (4) into base truss TC or (1) 28PB wave piggyback plate plated to the piggyback truss TC and attached to the base truss TC with (4) 0.120"x1.375" nails. Note: Nailing thru holes of wave plate is acceptable.

Detail B : Purlin Spacing > 24" o.c.



Piggyback cap truss slant nailed to all top chord purlin bracing with (2) 16d box nails (0.135"x3.5") and secure top chord with 2x4 #3 grade scab (1 side only at each end) attached with 2 rows of 10d box nails (0.128"x3") at 4' o.c.

Attach purlin bracing to the flat top chord using a minimum of (2) 16d box nails (0.135"x3.5").

Flat top chord purlins required at both ends, purlin spacing > 24" o.c. max.

Note: If purlins or sheathing are not specified on the flat top of the base truss, purlins must be installed at 24" o.c. max. and use Detail A.

* In addition, provide connection with one of the following methods:

Trulox
Use 3X8 Trulox plates for 2x4 chord member, and 3X10 Trulox plates for 2x6 and larger chord members. Attach to each face @ 8" o.c. with (4) 0.120"x1.375" nails into cap bottom chord and (4) in base truss top chord. Trulox plates may be staggered 4" o.c. front to back faces.

APA Rated Gusset
8"x8"x7/16" (min) APA rated sheathing gussets (each face). Attach @ 8" o.c. with (8) 6d common (0.113"x2") nails per gusset, (4) in cap bottom chord and (4) in base truss top chord. Gussets may be staggered 4" o.c. front to back faces.

2x4 Vertical Scabs
2x4 SPF #2, full chord depth scabs (each face). Attach @ 8" o.c. with (6) 10d box nails (0.128"x3") per scab, (3) in cap bottom chord and (3) in base truss top chord. Scabs may be staggered 4" o.c. front to back faces.

28PB Wave Piggyback Plate
One 28PB wave piggyback plate to each face @ 8" o.c. Attach teeth to piggyback at time of fabrication. Attach to supporting truss with (4) 0.120"x1.375" nails per face per ply. Piggyback plates may be staggered 4" o.c. front to back faces.

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AN ITW COMPANY
13723 Riverport Drive
Suite 200
Maryland Heights, MO 63043

WARNING READ AND FOLLOW ALL NOTES ON THIS DRAWING
IMPORTANT FURNISH THIS DRAWING TO ALL CONTRACTORS INCLUDING THE INSTALLER

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 3. 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 web shall have bracing installed 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.

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 & 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 Sec2.

For more information see this job's general notes page and these web sites:
ALPINE www.alpinetw.com TPI www.tpinst.org SBCA www.sbcindustry.org ICC www.iccsafe.org

DOUGLAS FLEMING LICENSE No. 66648 STATE OF FLORIDA PROFESSIONAL ENGINEER

REF	PIGGYBACK
DATE	10/01/14
DRWG	PB160101014
SPACING	24.0"

Valley Detail - ASCE 7-10: 160 mph, 30' Mean Height, Enclosed, Exp. C, Kzt=1.00

Top Chord 2x4 SP #2N, SPF #1/#2, DF-L #2 or better.
Bot Chord 2x4 SP #2N or SPF #1/#2 or better.
Webs 2x4 SP #3, SPF #1/#2, DF-L #2 or better.

** Attach each valley to every supporting truss with:
(2) 16d box (0.135" x 3.5") nails toe-nailed for
ASCE 7-10 160 mph. 30' Mean Height, Enclosed
Building, Exp. C, Wind TC DL=5 psf, Kzt = 1.00
Or
ASCE 7-10 140 mph. 30' Mean Height, Enclosed
Building, Exp. D, Wind TC DL=5 psf, Kzt = 1.00

Bottom chord may be square or pitched cut as shown.

Valleys short enough to be cut as solid triangular members from a single 2x6, or larger as required, shall be permitted in lieu of fabricating from separate 2x4 members.

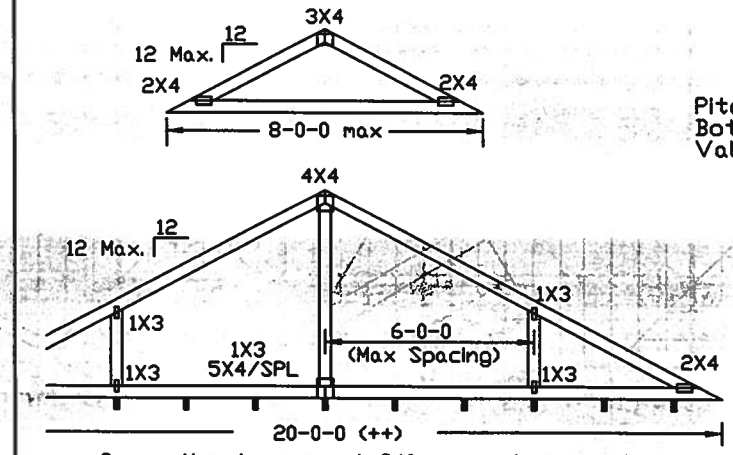
All plates shown are ITW BCG Wave Plates.

Unless specified otherwise on engineer's sealed design, for vertical valley webs taller than 7-9" apply 2x4 "T" reinforcement, 80% length of web, same species and grade or better, attached with 10d box (0.128" x 3.0") nails at 6" o.c. In lieu of "T" reinforcement, 2x4 Continuous Lateral Restraint applied at mid-length of web is permitted with diagonal bracing as shown in DRWG BRCLBANC1014.

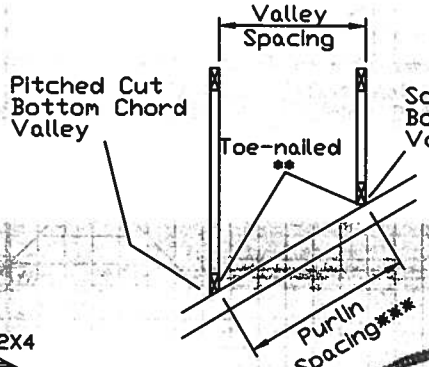
Top chord of truss beneath valley set must be braced with:
properly attached, rated sheathing applied prior to valley truss installation.
Or
Purlins at 24" o.c. or as otherwise specified on engineer's sealed design
Or
By valley trusses used in lieu of purlin spacing as specified on Engineer's sealed design.

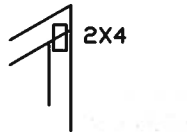
*** Note that the purlin spacing for bracing the top chord of the truss beneath the valley is measured along the slope of the top chord.

++ Larger spans may be built as long as the vertical height does not exceed 14'-0".

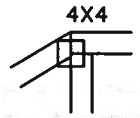


Supporting trusses at 24" o.c. maximum spacing.

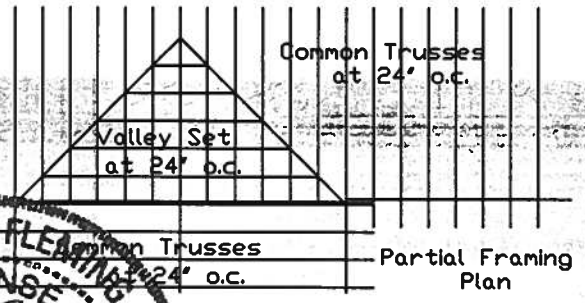




Stubbed Valley End Detail



Optional Hip Joint Detail



Partial Framing Plan

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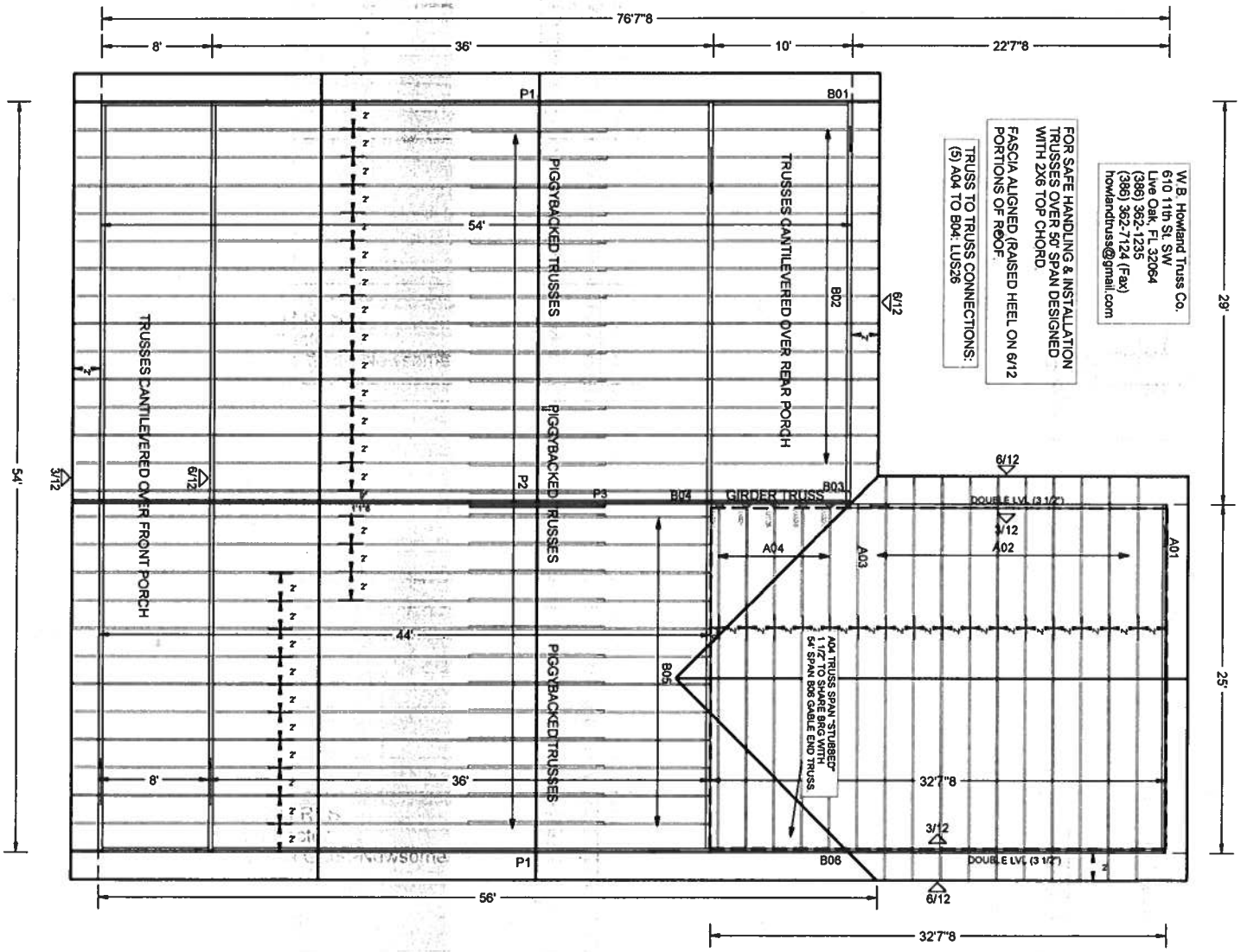
DOUGLAS FLEMING LICENSE No. 66648 STATE OF FLORIDA PROFESSIONAL ENGINEER

12/2[illegible]/2014

TC	LL	30	30	40PSF	REF VALLEY DETAIL
TC	DL	20	15	7PSF	DATE 10/01/2014
BC	DL	10	10	10 PSF	DRWG VAL160101014
BC	LL	0	0	0PSF	
TOT. L.D.		60	55	57PSF	
DUR.FAC. 1.25/1.33			1.15	1.15	
SPACING			24.0"		

#38947



PAGE NO:	JOB NO:		
1 OF 1	19-3729	Job Name: LANG RES. Customer: Contractor Designer: Cynthia Gude-Newsome ADDRESS: SALESMAN: DB : <Not Found>	JOB #: 19-3729