STATE OF MAINE
SCOTT LINDER SCHURWAN
14706
LICENSED
PROFESSIONAL ENGINEER

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CITY OF PORTLAND, MAINE · RESURGAM
Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 11/02/17

Site Information:

Customer:	Aroostook Trusses, Inc.	*Job Number:*	HLY30913
JobDescription:	Rainbow - Jones, Rich and Barnes		
Address:		*City, State, Zip:*	Portland, ME

Job Engineering Criteria:

Design Code:	IRC 2009		*View Version:* 16.02.01.0314.13	*JRef #:*	1W5575540002
Wind Standard:	ASCE 7-05	*Wind Speed (mph):* 100	*Roof Load (psf):* 46.20-10.00- 0.00-10.00	*Floor Load (psf):*	None

This package contains a job notes page, 6 truss drawings and 4 details.

Item	Seal #	Truss
1	290.17.1438.58997	1C1G
3	290.17.1440.47893	2S1
5	290.17.1441.51547	2S2

Item	Seal #	Truss
2	290.17.1439.49900	1S1
4	290.17.1441.35313	2S1G
6	290.17.1442.08980	2S3

Printed 10/17/2017 2:42:19 PM

Job Number: HLY30913 Rainbow - Jones, Rich and Barnes **Truss Label:** 1C1G	Ply: 1 Qty: 1	SEQN: 107138 / T2 GABL FROM:	Cust: R7554 JRe DrwNo: 290.17.14 / SLS

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Loading Criteria (psf)	**Wind Criteria**	**Snow Criteria** (Pg,Pf in PSF)	**Defl/CSI Criteria**
TCLL: 46.20 TCDL: 10.00 BCLL: 0.00 BCDL: 10.00 Des Ld: 66.20 NCBCLL: 10.00 Soffit: 0.00 Load Duration: 1.15 Spacing: 24.0 "	Wind Std: ASCE 7-05 Speed: 100 mph Enclosure: Closed Category: II EXP: C Mean Height: 15.00 ft TCDL: 6.0 psf BCDL: 6.0 psf MWFRS Parallel Dist: 0 to h/2 C&C Dist a: 3.00 ft Loc. from endwall: Any I: 1.0 GCpi: 0.18 Wind Duration: 1.60	Pg: 60.0 Ct: 1.1 CAT: II Pf: 46.2 Ce: 1.0 Lu: - Cs: not used Snow Duration: 1.15 **Code / Misc Criteria** Bldg Code: IRC 2009 TPI Std: 2007 Rep Factors Used: Yes FT/RT:20(0)/10(0) Plate Type(s): WAVE	PP Deflection in loc L/defl L/# VERT(LL): 0.002 H 999 360 VERT(TL): 0.003 H 999 240 HORZ(LL): 0.002 N - - HORZ(TL): 0.003 M - - Creep Factor: 1.5 Max TC CSI: 0.117 Max BC CSI: 0.033 Max Web CSI: 0.160 VIEW Ver: 16.02.01D.0314.13

▲Maximum Reactions (lbs), or *=PLF

Loc	R	/ U	/ Rw	/ Rh	/ RL	/ W
B	269	/ 30	/ 49	/ -	/ 144	/ 7.0
AF	*138	/ 11	/ 26	/ -	/ -	/ 317

Wind reactions based on MWFRS
B Min Brg Width Req = 1.5
AF Min Brg Width Req = -
Bearings B & B are a rigid surface.

Members not listed have forces less than 375#

Lumber

Top chord 2x4 SPF #1/#2
Bot chord 2x4 SPF #1/#2
Webs 2x4 SPF #1/#2

Plating Notes

All plates are 2X4 except as noted.

Loading

Bottom chord checked for 10.00 psf non-concurrent bottom chord live load applied per IRC-09 section 301.5.

Truss designed for unbalanced snow loads.

Wind

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

Additional Notes

See DWGS A10015051014, GBLLETIN1014, & GABRST051014 for gable wind bracing and other requirements.

Top Chord overhang(s) may be field trimmed.

Laterally brace end wall. Top wall plate is not braced by truss. Top of end wall shall be laterally braced by ceiling diaphragm or by other means as specified by the building designer.

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Job Number: HLY30913	Ply: 1	SEQN: 107134 / T1 COMN	Cust: R7554 JRe
Rainbow - Jones, Rich and Barnes	Qty: 9	FROM:	DrwNo: 290.17.14
Truss Label: 1S1			/ SLS

Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 11/02/17

Loading Criteria (psf)

TCLL:	46.20
TCDL:	10.00
BCLL:	0.00
BCDL:	10.00
Des Ld:	66.20
NCBCLL:	10.00
Soffit:	0.00

Load Duration: 1.15
Spacing: 24.0 "

Wind Criteria
Wind Std: ASCE 7-05
Speed: 100 mph
Enclosure: Closed
Category: II
EXP: C
Mean Height: 15.00 ft
TCDL: 6.0 psf
BCDL: 6.0 psf
MWFRS Parallel Dist: 0 to h/2
C&C Dist a: 3.00 ft
Loc. from endwall: Any
I: 1.0 GCpi: 0.18
Wind Duration: 1.60

Snow Criteria (Pg,Pf in PSF)
Pg: 60.0 Ct: 1.1 CAT: II
Pf: 46.2 Ce: 1.0
Lu: - Cs: not used
Snow Duration: 1.15

Code / Misc Criteria
Bldg Code: IRC 2009
TPI Std: 2007
Rep Factors Used: Yes
FT/RT:20(0)/10(0)
Plate Type(s):
WAVE

Defl/CSI Criteria

PP Deflection in	loc	L/defl	L/#
VERT(LL): 0.500	I	641	360
VERT(TL): 0.834	I	384	240
HORZ(LL): 0.332	H	-	-
HORZ(TL): 0.556	H	-	-

Creep Factor: 1.5
Max TC CSI: 0.602
Max BC CSI: 0.879
Max Web CSI: 0.826

VIEW Ver: 16.02.01D.0314.13

▲ Maximum Reactions (lbs)

Loc	R	/ U	/ Rw	/ Rh	/ RL	/ W
B	1933	/ 147	/ 419	/ -	/ 144	/ 7.0
F	1933	/ 147	/ 419	/ -	/ -	/ 7.0

Wind reactions based on MWFRS
B Min Brg Width Req = 2.4
F Min Brg Width Req = 2.4
Bearings B & F 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	1238	-5854	D - E	993	-4613
C - D	1002	-4613	E - F	1245	-5854

Maximum Bot Chord Forces Per Ply (lbs)

Chords	Tens.	Comp.	Chords	Tens.	Comp.
B - J	5333	-1046	I - H	5353	-1059
J - I	5353	-1044	H - F	5333	-1062

Maximum Web Forces Per Ply (lbs)

Webs	Tens.	Comp.	Webs	Tens.	Comp.
C - I	364	-1454	D - I	2467	-424
I - E	362	-1454			

Lumber

Top chord 2x6 SPF 2100f-1.8E
Bot chord 2x4 SPF 2100f-1.8E
Webs 2x4 SPF #1/#2

Bracing

(a) Continuous lateral restraint equally spaced on member.

Loading

Bottom chord checked for 10.00 psf non-concurrent bottom chord live load applied per IRC-09 section 301.5.

Truss designed for unbalanced snow loads.

Wind

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

Additional Notes

Top Chord overhang(s) may be field trimmed.

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Job Number: HLY30913	Ply: 1	SEQN: 113215 / T4 COMN	Cust: R7554 JRe
Rainbow - Jones, Rich and Barnes	Qty: 3	FROM:	DrwNo: 290.17.14
Truss Label: 2S1			/ SLS

Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 11/02/17

Loading Criteria (psf)

TCLL:	46.20
TCDL:	10.00
BCLL:	0.00
BCDL:	10.00
Des Ld:	66.20
NCBCLL:	10.00
Soffit:	0.00

Load Duration: 1.15
Spacing: 24.0 "

Wind Criteria
Wind Std: ASCE 7-05
Speed: 100 mph
Enclosure: Closed
Category: II
EXP: C
Mean Height: 15.00 ft
TCDL: 6.0 psf
BCDL: 6.0 psf
MWFRS Parallel Dist: 0 to h/2
C&C Dist a: 3.70 ft
Loc. from endwall: Any
I: 1.0 GCpi: 0.18
Wind Duration: 1.60

Snow Criteria (Pg,Pf in PSF)
Pg: 60.0 Ct: 1.1 CAT: II
Pf: 46.2 Ce: 1.0
Lu: - Cs: not used
Snow Duration: 1.15

Code / Misc Criteria
Bldg Code: IRC 2009
TPI Std: 2007
Rep Factors Used: Yes
FT/RT:20(0)/10(0)
Plate Type(s):
WAVE, 18SS

Defl/CSI Criteria

PP Deflection in	loc	L/defl	L/#
VERT(LL): 0.883	P	494	360
VERT(TL): 1.484	P	294	240
HORZ(LL): 0.580	N	-	-
HORZ(TL): 0.974	N	-	-

Creep Factor: 1.5
Max TC CSI: 0.493
Max BC CSI: 0.910
Max Web CSI: 0.952

VIEW Ver: 16.02.01D.0314.13

▲ Maximum Reactions (lbs)

Loc	R	/ U	/ Rw	/ Rh	/ RL	/ W
S	2605	/ 195	/ 588	/ -	/ 204	/ 7.0
L	2605	/ 195	/ 588	/ -	/ -	/ 7.0

Wind reactions based on MWFRS
S Min Brg Width Req = 2.1
L Min Brg Width Req = 2.1
Bearings S & 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	1972	-8847	G - H	1327	-6153
C - D	1907	-8695	H - I	1730	-8095
D - E	1717	-8185	I - J	1709	-8185
E - F	1737	-8095	J - K	1900	-8695
F - G	1335	-6153	K - L	1964	-8847

Maximum Bot Chord Forces Per Ply (lbs)

Chords	Tens.	Comp.	Chords	Tens.	Comp.
B - R	8102	-1641	P - O	7270	-1385
R - Q	7242	-1374	O - N	7242	-1391
Q - P	7270	-1368	N - L	8102	-1642

Maximum Web Forces Per Ply (lbs)

Webs	Tens.	Comp.	Webs	Tens.	Comp.
D - R	286	-495	P - H	505	-2011
R - F	539	-85	H - N	539	-86
F - P	506	-2011	N - J	286	-495
G - P	3881	-718			

Lumber

Top chord 2x6 SPF 2100f-1.8E
Bot chord 2x4 SP 2400f-2.0E :B2, B3 2x4 SPF 2100f-1.8E:
Webs 2x4 SPF #1/#2
:Lt Slider 2x4 SPF #1/#2: BLOCK LENGTH = 3.043'
:Rt Slider 2x4 SPF #1/#2: BLOCK LENGTH = 3.043'

Bracing

(a) Continuous lateral restraint equally spaced on member.

Plating Notes

(I) - plates so marked were sized using 0% Fabrication Tolerance, 0 degrees Rotational Tolerance, and/or zero Positioning Tolerance.

Loading

Bottom chord checked for 10.00 psf non-concurrent bottom chord live load applied per IRC-09 section 301.5.

Truss designed for unbalanced snow loads.

Wind

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

Additional Notes

Top Chord overhang(s) may be field trimmed.

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Maryland Heights, MO 63043

Job Number: HLY30913 Rainbow - Jones, Rich and Barnes **Truss Label:** 2S1G	Ply: 1 Qty: 1	SEQN: 107161 / T7 GABL FROM:	Cust: R7554 JRe DrwNo: 290.17.14 / SLS

Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 11/02/17

Loading Criteria (psf)

TCLL:	46.20
TCDL:	10.00
BCLL:	0.00
BCDL:	10.00
Des Ld:	66.20
NCBCLL:	10.00
Soffit:	0.00

Load Duration: 1.15
Spacing: 24.0 "

Wind Criteria
Wind Std: ASCE 7-05
Speed: 100 mph
Enclosure: Closed
Category: II
EXP: C
Mean Height: 15.00 ft
TCDL: 6.0 psf
BCDL: 6.0 psf
MWFRS Parallel Dist: 0 to h/2
C&C Dist a: 3.70 ft
Loc. from endwall: Any
I: 1.0 GCpi: 0.18
Wind Duration: 1.60

Snow Criteria (Pg,Pf in PSF)
Pg: 60.0 Ct: 1.1 CAT: II
Pf: 46.2 Ce: 1.0
Lu: - Cs: not used
Snow Duration: 1.15

Code / Misc Criteria
Bldg Code: IRC 2009
TPI Std: 2007
Rep Factors Used: Yes
FT/RT:20(0)/10(0)
Plate Type(s):
WAVE

Defl/CSI Criteria

PP Deflection in	loc	L/defl	L/#
VERT(LL): 0.261	R	999	360
VERT(TL): 0.482	R	650	240
HORZ(LL): 0.119	V	-	-
HORZ(TL): 0.221	V	-	-

Creep Factor: 1.5
Max TC CSI: 0.918
Max BC CSI: 0.602
Max Web CSI: 0.959

VIEW Ver: 16.02.01D.0314.13

▲ Maximum Reactions (lbs), or *=PLF

Loc	R	/ U	/ Rw	/ Rh	/ RL	/ W
B	-609	/ 609	/ 11	/ -	/ 204	/ 7.0
B*	28	/ 73	/ 14	/ -	/ -	/ 113
AQ	4195	/ 252	/ 831	/ -	/ -	/ 7.0
T	1528	/ 122	/ 383	/ -	/ -	/ 7.0
B		/ 609				
AE		/ 654				
AD		/ 466				

Wind reactions based on MWFRS
B Min Brg Width Req = 1.5
B Min Brg Width Req = -
AQ Min Brg Width Req = 6.6
T Min Brg Width Req = 1.9
Bearings B, B, AQ, & T are a rigid surface.

Lumber

Top chord 2x6 SPF #1/#2
Bot chord 2x4 SPF #1/#2 :B3 2x4 SPF 2100f-1.8E:
Webs 2x4 SPF #1/#2
:Rt Slider 2x4 SPF #1/#2: BLOCK LENGTH = 3.043'

Bracing

(a) Continuous lateral restraint equally spaced on member.

Plating Notes

All plates are 2X4 except as noted.

Loading

Bottom chord checked for 10.00 psf non-concurrent bottom chord live load applied per IRC-09 section 301.5.

Truss designed for unbalanced snow loads.

Wind

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

Additional Notes

Negative reaction(s) of -689# MAX. from a non-wind load case requires uplift connection. See Maximum Reactions.

See DWGS A10015051014, GBLLETIN1014, & GABRST051014 for gable wind bracing and other requirements.

Shim all supports to solid bearing.

Top Chord overhang(s) may be field trimmed.

Fasten rated sheathing to one face of the 24"o.c. or less vertical webs in this truss.

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Members not listed have forces less than 375#

Maximum Top Chord Forces Per Ply (lbs)

Chords	Tens.	Comp.	Chords	Tens.	Comp.
B - C	1501	-256	K - M	272	-527
C - D	1448	-211	M - P	278	-462
D - E	1696	-230	P - Q	506	-2443
E - F	2825	-454	Q - R	479	-2501
F - H	3037	-461	R - S	879	-4188
H - I	2943	-376	S - T	905	-4338
I - K	2996	-368			

Maximum Bot Chord Forces Per Ply (lbs)

Chords	Tens.	Comp.	Chords	Tens.	Comp.
B -AF	294	-1334	AB- X	315	-1058
AF-AE	306	-1357	X - W	2203	-242
AE-AD	302	-1326	W - V	3925	-684
AD-AB	302	-1327	V - T	3917	-687

Maximum Web Forces Per Ply (lbs)

Webs	Tens.	Comp.	Webs	Tens.	Comp.
E -AB	337	-1569	X - P	488	-2534
H -AB	142	-549	P - W	1426	-168
AB- K	621	-3295	W - R	475	-1661
K - X	1850	-260			

Maximum Gable Forces Per Ply (lbs)

Gables	Tens.	Comp.	Gables	Tens.	Comp.
C -AF	157	-431	F -AG	460	-44
D -AE	678	-90	AD-AG	517	-57

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Job Number: HLY30913	Ply: 1	SEQN: 107150 / T6 COMN	Cust: R7554 JRe
Rainbow - Jones, Rich and Barnes	Qty: 3	FROM:	DrwNo: 290.17.14
Truss Label: 2S2			/ SLS

CITY OF PORTLAND, MAINE — RESURGAM

Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 11/02/17

Loading Criteria (psf)

TCLL:	46.20
TCDL:	10.00
BCLL:	0.00
BCDL:	10.00
Des Ld:	66.20
NCBCLL:	10.00
Soffit:	0.00

Load Duration: 1.15
Spacing: 24.0 "

Wind Criteria
Wind Std: ASCE 7-05
Speed: 100 mph
Enclosure: Closed
Category: II
EXP: C
Mean Height: 15.00 ft
TCDL: 6.0 psf
BCDL: 6.0 psf
MWFRS Parallel Dist: 0 to h/2
C&C Dist a: 3.64 ft
Loc. from endwall: Any
I: 1.0 GCpi: 0.18
Wind Duration: 1.60

Snow Criteria (Pg,Pf in PSF)
Pg: 60.0 Ct: 1.1 CAT: II
Pf: 46.2 Ce: 1.0
Lu: - Cs: not used
Snow Duration: 1.15

Code / Misc Criteria
Bldg Code: IRC 2009
TPI Std: 2007
Rep Factors Used: Yes
FT/RT:20(0)/10(0)
Plate Type(s):
HS, WAVE, 18SS

Defl/CSI Criteria

PP Deflection in	loc	L/defl	L/#
VERT(LL): 0.850	O	506	360
VERT(TL): 1.429	O	301	240
HORZ(LL): 0.534	M	-	-
HORZ(TL): 0.899	M	-	-

Creep Factor: 1.5
Max TC CSI: 0.920
Max BC CSI: 0.895
Max Web CSI: 0.923

VIEW Ver: 16.02.01D.0314.13

▲ Maximum Reactions (lbs)

Loc	R	/ U	/ Rw	/ Rh	/ RL	/ W
R	2568	/ 193	/ 581	/ -	/ 191	/ 7.0
S	2445	/ 171	/ 538	/ -	/ -	/ -

Wind reactions based on MWFRS
R Min Brg Width Req = 2.1
S Min Brg Width Req = -
Bearing R 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.
B - C	1960	-8693	G - H	1346	-5967
C - D	1894	-8541	H - I	1780	-7825
D - E	1716	-8024	I - J	1767	-7968
E - F	1736	-7933	J - K	1962	-8379
F - G	1326	-5971	K - L	1957	-8552

Maximum Bot Chord Forces Per Ply (lbs)

Chords	Tens.	Comp.	Chords	Tens.	Comp.
B - Q	7960	-1677	O - N	7031	-1386
Q - P	7084	-1429	N - M	6999	-1388
P - O	7112	-1423	M - L	7803	-1719

Maximum Web Forces Per Ply (lbs)

Webs	Tens.	Comp.	Webs	Tens.	Comp.
D - Q	284	-504	O - H	485	-1955
Q - F	547	-82	H - M	576	-127
F - O	505	-1983	M - J	313	-399
G - O	3761	-732			

Lumber

Top chord 2x6 SPF 2100f-1.8E :T3, T4 2x6 SPF #1/#2:
Bot chord 2x4 SPF 2100f-1.8E :B1 2x4 SP 2400f-2.0E:
:B4 2x6 SPF 2100f-1.8E:
Webs 2x4 SPF #1/#2
:Lt Slider 2x4 SPF #1/#2: BLOCK LENGTH = 3.043'
:Rt Slider 2x4 SPF #1/#2: BLOCK LENGTH = 3.043'

Bracing

(a) Continuous lateral restraint equally spaced on member.

Plating Notes

(I) - plates so marked were sized using 0% Fabrication Tolerance, 0 degrees Rotational Tolerance, and/or zero Positioning Tolerance.

(**) 1 plate(s) require special positioning. Refer to scaled plate plot details for special positioning requirements.

Loading

Bottom chord checked for 10.00 psf non-concurrent bottom chord live load applied per IRC-09 section 301.5.

Truss designed for unbalanced snow loads.

Wind

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

Additional Notes

Top Chord overhang(s) may be field trimmed.

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Suite 200
Maryland Heights, MO 63043

Job Number: HLY30913 Rainbow - Jones, Rich and Barnes **Truss Label:** 2S3	Ply: 1 Qty: 1	SEQN: 107165 / T3 COMN FROM:	Cust: R7554 JRe DrwNo: 290.17.14 / SLS

Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 11/02/17

Loading Criteria (psf)

TCLL:	46.20
TCDL:	10.00
BCLL:	0.00
BCDL:	10.00
Des Ld:	66.20
NCBCLL:	10.00
Soffit:	0.00

Load Duration: 1.15
Spacing: 24.0 "

Wind Criteria
Wind Std: ASCE 7-05
Speed: 100 mph
Enclosure: Closed
Category: II
EXP: C
Mean Height: 15.00 ft
TCDL: 6.0 psf
BCDL: 6.0 psf
MWFRS Parallel Dist: 0 to h/2
C&C Dist a: 3.64 ft
Loc. from endwall: Any
I: 1.0 GCpi: 0.18
Wind Duration: 1.60

Snow Criteria (Pg,Pf in PSF)
Pg: 60.0 Ct: 1.1 CAT: II
Pf: 46.2 Ce: 1.0
Lu: - Cs: not used
Snow Duration: 1.15

Code / Misc Criteria
Bldg Code: IRC 2009
TPI Std: 2007
Rep Factors Used: Yes
FT/RT:20(0)/10(0)
Plate Type(s):
HS, WAVE, 18SS

Defl/CSI Criteria

PP Deflection in	loc	L/defl	L/#
VERT(LL): 0.852	N	505	360
VERT(TL): 1.429	N	301	240
HORZ(LL): 0.536	L	-	-
HORZ(TL): 0.899	L	-	-

Creep Factor: 1.5
Max TC CSI: 0.920
Max BC CSI: 0.895
Max Web CSI: 0.923

VIEW Ver: 16.02.01D.0314.13

▲ Maximum Reactions (lbs)

Loc	R	/ U	/ Rw	/ Rh	/ RL	/ W
Q	2451	/ 177	/ 537	/ -	/ 182	/ 7.0
R	2445	/ 171	/ 537	/ -	/ -	/ -

Wind reactions based on MWFRS
Q Min Brg Width Req = 2.0
R Min Brg Width Req = -
Bearing Q 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	2066	-8693	F - G	1349	-5967
B - C	2001	-8541	G - H	1783	-7825
C - D	1773	-8024	H - I	1770	-7968
D - E	1794	-7933	I - J	1964	-8379
E - F	1348	-5971	J - K	1960	-8552

Maximum Bot Chord Forces Per Ply (lbs)

Chords	Tens.	Comp.	Chords	Tens.	Comp.
A - P	7960	-1771	N - M	7031	-1405
P - O	7084	-1434	M - L	6999	-1407
O - N	7112	-1428	L - K	7803	-1722

Maximum Web Forces Per Ply (lbs)

Webs	Tens.	Comp.	Webs	Tens.	Comp.
C - P	333	-504	N - G	484	-1954
P - E	547	-119	G - L	575	-127
E - N	508	-1983	L - I	312	-398
F - N	3761	-734			

Lumber

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Bot chord 2x4 SPF 2100f-1.8E :B1 2x4 SP 2400f-2.0E:
:B4 2x6 SPF 2100f-1.8E:
Webs 2x4 SPF #1/#2
:Lt Slider 2x4 SPF #1/#2: BLOCK LENGTH = 3.043'
:Rt Slider 2x4 SPF #1/#2: BLOCK LENGTH = 3.043'

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GABLE STUD REINFORCEMENT DETAIL

ASCE 7-05: 100 MPH WIND SPEED, 15' MEAN HEIGHT, ENCLOSED, I = 1.00, EXPOSURE C, Kzt =

MAX GABLE VERTICAL LENGTH

2X4 GABLE VERTICAL SPACING	SPECIES	BRACE GRADE	NO BRACES	(1) 1X4 'L' BRACE * GROUP A	(1) 1X4 'L' BRACE * GROUP B	(1) 2X4 'L' BRACE * GROUP A	(1) 2X4 'L' BRACE * GROUP B	(2) 2X4 'L' BRACE ** GROUP A	(2) 2X4 'L' BRACE ** GROUP B	(1) 2X6 'L' BRACE * GROUP A	(1) 2X6 'L' BRACE * GROUP B	(2) 2X6 'L' BRACE ** GROUP A	(2) 2X6 'L' BRACE ** GROUP B
24" O.C.	SPF HF	#1 / #2	4' 2"	7' 3"	7' 5"	8' 7"	8' 9"	10' 2"	10' 6"	13' 5"	13' 10"	14' 0"	14' 0"
		#3	4' 1"	6' 9"	6' 9"	8' 7"	8' 7"	10' 2"	10' 2"	13' 5"	13' 5"	14' 0"	14' 0"
		STUD	4' 1"	6' 9"	6' 9"	8' 7"	8' 7"	10' 2"	10' 2"	13' 5"	13' 5"	14' 0"	14' 0"
		STANDARD	4' 1"	5' 9"	5' 9"	7' 8"	7' 8"	10' 2"	10' 2"	11' 11"	11' 11"	14' 0"	14' 0"
	SP DFL	#1	4' 7"	7' 3"	7' 9"	8' 7"	9' 3"	10' 2"	11' 0"	13' 5"	14' 0"	14' 0"	14' 0"
		#2	4' 6"	7' 3"	7' 9"	8' 7"	9' 3"	10' 2"	11' 0"	13' 5"	14' 0"	14' 0"	14' 0"
		#3	4' 3"	6' 11"	6' 11"	8' 7"	9' 0"	10' 2"	10' 9"	13' 5"	14' 0"	14' 0"	14' 0"
		STUD	4' 3"	6' 10"	6' 10"	8' 7"	9' 0"	10' 2"	10' 9"	13' 5"	14' 0"	14' 0"	14' 0"
		STANDARD	4' 2"	5' 11"	5' 11"	7' 10"	7' 10"	10' 2"	10' 6"	12' 2"	12' 2"	14' 0"	14' 0"
16" O.C.	SPF HF	#1 / #2	4' 10"	8' 3"	8' 6"	9' 9"	10' 1"	11' 8"	12' 0"	14' 0"	14' 0"	14' 0"	14' 0"
		#3	4' 8"	8' 3"	8' 3"	9' 9"	9' 9"	11' 8"	11' 8"	14' 0"	14' 0"	14' 0"	14' 0"
		STUD	4' 8"	8' 3"	8' 3"	9' 9"	9' 9"	11' 8"	11' 8"	14' 0"	14' 0"	14' 0"	14' 0"
		STANDARD	4' 8"	7' 1"	7' 1"	9' 4"	9' 4"	11' 8"	11' 8"	14' 0"	14' 0"	14' 0"	14' 0"
	SP DFL	#1	5' 3"	8' 3"	8' 11"	9' 9"	10' 7"	11' 8"	12' 7"	14' 0"	14' 0"	14' 0"	14' 0"
		#2	5' 2"	8' 3"	8' 11"	9' 9"	10' 7"	11' 8"	12' 7"	14' 0"	14' 0"	14' 0"	14' 0"
		#3	4' 11"	8' 3"	8' 6"	9' 9"	10' 4"	11' 8"	12' 4"	14' 0"	14' 0"	14' 0"	14' 0"
		STUD	4' 11"	8' 3"	8' 5"	9' 9"	10' 4"	11' 8"	12' 4"	14' 0"	14' 0"	14' 0"	14' 0"
		STANDARD	4' 10"	7' 3"	7' 3"	9' 7"	9' 7"	11' 8"	12' 0"	14' 0"	14' 0"	14' 0"	14' 0"
12" O.C.	SPF HF	#1 / #2	5' 3"	9' 1"	9' 4"	10' 9"	11' 1"	12' 10"	13' 3"	14' 0"	14' 0"	14' 0"	14' 0"
		#3	5' 2"	9' 1"	9' 1"	10' 9"	10' 9"	12' 10"	12' 10"	14' 0"	14' 0"	14' 0"	14' 0"
		STUD	5' 2"	9' 1"	9' 1"	10' 9"	10' 9"	12' 10"	12' 10"	14' 0"	14' 0"	14' 0"	14' 0"
		STANDARD	5' 2"	8' 2"	8' 2"	10' 9"	10' 9"	12' 10"	12' 10"	14' 0"	14' 0"	14' 0"	14' 0"
	SP DFL	#1	5' 9"	9' 1"	9' 10"	10' 9"	11' 7"	12' 10"	13' 10"	14' 0"	14' 0"	14' 0"	14' 0"
		#2	5' 8"	9' 1"	9' 10"	10' 9"	11' 7"	12' 10"	13' 10"	14' 0"	14' 0"	14' 0"	14' 0"
		#3	5' 5"	9' 1"	9' 7"	10' 9"	11' 4"	12' 10"	13' 6"	14' 0"	14' 0"	14' 0"	14' 0"
		STUD	5' 5"	9' 1"	9' 7"	10' 9"	11' 4"	12' 10"	13' 6"	14' 0"	14' 0"	14' 0"	14' 0"
		STANDARD	5' 3"	8' 5"	8' 5"	10' 9"	11' 1"	12' 10"	13' 3"	14' 0"	14' 0"	14' 0"	14' 0"

Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 11/02/17

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

SOUTHERN PINE

#1
#2

DOUGLAS FIR-LARCH

#1
#2

GABLE TRUSS DETAIL NOTES:

LIVE LOAD DEFLECTION CRITERIA IS L/240.

PROVIDE UPLIFT CONNECTIONS FOR 60 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 EACH 'L' BRACE WITH 10d NAILS. (0.128"x3" min)

* 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.

DIAGONAL BRACE OPTION: VERTICAL LENGTH MAY BE DOUBLED WHEN DIAGONAL BRACE IS USED. CONNECT DIAGONAL BRACE FOR 480# AT EACH END. MAX WEB TOTAL LENGTH IS 14'.

REFER TO CHART ABOVE FOR MAX GABLE VERTICAL 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"	2.5X4

+ REFER TO COMMON TRUSS DESIGN FOR PEAK, SPLICE, AND HEEL PLATES.

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10/17/2017

MAX. TOT. LD. 60 PSF

MAX. SPACING 24.0"

REF	ASCE7-05-GAB10015
DATE	10/01/14
DRWG	A10015051014

ASCE 7-05: EXPOSURE C
COMMON RESIDENTIAL GABLE END WIND BRACING REQUIREMENTS - STIFFENERS

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100 MPH, 30FT. MEAN HGT, ASCE 7-05, CLOSED BLDG, LOCATED ANYWHERE IN ROOF, CAT II, 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 COMMON (0.148"x3") OR BOX (0.128"x3",MIN) NAILS OR GUN (0.125"X 3.",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 DRAWING A1003005).

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 A1003005).

✳ 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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TC LL	PSF	
TC DL	PSF	
BC DL	PSF	
BC LL	PSF	
TOT. LD.	PSF	
DUR. FAC.		
MAX SPACING	24"	

REF	GE WHALER
DATE	10/01/14
DRWG	GABRST051014

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:

"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 Gable Detail Drawings
A11515ENC101014, A12015ENC101014, A14015ENC101014, A16015ENC101014, A18015ENC101014, A20015ENC101014, A20015END101014, A20015PED101014, A11530ENC101014, A12030ENC101014, A14030ENC101014, A16030ENC101014, A18030ENC101014, A20030ENC101014, A20030END101014, A20030PED101014 S11515ENC100815, S12015ENC100815, S14015ENC100815, S16015ENC100815, S18015ENC100815, S20015ENC100815, S20015END100815, S20015PED100815, S11530ENC100815, S12030ENC100815, S14030ENC100815, S16030ENC100815, S18030ENC100815, S20030ENC100815, S20030END100815, S20030PED100815

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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10/17/2017

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

REF	LET-IN VERT
DATE	10/01/14
DRWG	GBLLETIN1014

CLR Reinforcing Member Substitution

Reviewed for Code Compliance
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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.

Web Member Size	Specified CLR Restraint	Alternative Reinforecement T- or L- Reinf.	Alternative Reinforecement 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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WARNING READ AND FOLLOW ALL NOTES ON THIS DRAWING!
IMPORTANT FURNISH THIS DRAWING TO ALL CONTRACTORS INCLUDING THE INSTALLERS.

Trusses require extreme care in fabricating, handling, shipping, installing and bracing. Refer to and follow the latest edition of BCSI (Building Component Safety Information, by TPI and SBCA) for safety practices prior to performing these functions. Installers shall provide temporary bracing per BCSI. Unless noted otherwise, top chord shall have properly attached structural sheathing and bottom chord shall have a properly attached rigid ceiling. Locations shown for permanent lateral restraint of webs shall have 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 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.org; ICC: www.iccsafe.org

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DUR. FAC.		
SPACING		

REF	CLR Subst.
DATE	10/01/14
DRWG	BRCLBSUB1014

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