



16-008746 Letter of Certification

Date: 4/14/2016

Time: 04:42 PM

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Letter of Certification

Contact: Wil Ferland
 Name: Sheridan Corp.
 Address: 739 Warren Ave

Project: Safelite Auto
 Builder PO #:
 Jobsite: 421 Warren Ave

City, State: Portland, Maine 04103
 Country: United States

City, State: Portland, Maine 04103
 County, Country: Cumberland, TIMOR-LESTE

This is to certify that the above referenced project has been designed in accordance with the applicable portions of the Building Code specified below. All loading and building design criteria shown below have been specified by contract and applied in accordance with the building code.

Overall Building Description

Shape	Overall Width	Overall Length	Floor Area (sq. ft.)	Wall Area (sq. ft.)	Roof Area (sq. ft.)	Max. Eave Height	Min. Eave Height 2	Max. Roof Pitch	Min. Roof Pitch	Peak Height
Shipping Addition	90/0/0	17/0/0	1530	3116	1800	15/6/0	13/7/8	0.250:12		

Loads and Codes - Shape: Shipping Addition

City: Portland County: Cumberland
 Building Code: ME-09
 Based on Building Code: 2009 International Building Code
 Building Risk/Occupancy Category: II (Standard Occupancy Structure)

State: Maine
 Structural: 05AISC - ASD
 Cold Form: 07AISI - ASD

Country: TIMOR-LESTE
 Rainfall: 1: 4.00 inches per hour
 Fc: 3000.00 psi Concrete

Dead and Collateral Loads

Collateral Gravity: 3.00 psf
 Collateral Uplift: 0.00 psf

Roof Covering + Second. Dead Load: 2.22 psf
 Frame Weight (assumed for seismic): 2.50 psf

Roof Live Load

Roof Live Load: 20.00 psf Reducible

Wind Load

Wind Speed: 99.00 mph
 The 'Envelope Procedure' is Used
 Wind Exposure: B - Kz: 0.701
 Parts Wind Exposure Factor: 0.701
 Wind Enclosure: Enclosed
 Wind Importance Factor: Iw: 1.000
 Topographic Factor: Kzt: 1.0000
 NOT Windborne Debris Region
 Base Elevation: 0/0/0
 Primary Zone Strip Width: 2a: 6/0/0
 Parts / Portions Zone Strip Width: a: 3/0/0
 Basic Wind Pressure: q: 14.94 psf

Snow Load

Ground Snow Load: pg: 60.00 psf
 Flat Roof Snow: pf: 42.00 psf
 Design Snow (Sloped): ps: 42.00 psf
 Rain Surcharge: 0.00
 Exposure Factor: 2 Partially Exposed - Cc: 1.00
 Snow Importance: Is: 1.000
 Thermal Factor: Heated - Ct: 1.00
 Ground / Roof Conversion: 0.70
 Unobstructed, Slippery

Seismic Load

Mapped MCE Acceleration: Ss: 32.10 %g
 Mapped MCE Acceleration: S1: 7.80 %g
 Site Class: Stiff soil (D)
 Seismic Importance: Ie: 1.000
 Design Acceleration Parameter: Sds: 0.3302
 Design Acceleration Parameter: Sd1: 0.1248
 Seismic Design Category: C
 Seismic Snow Load: 8.40 psf
 % Snow Used in Seismic: 20.00
 Diaphragm Condition: Flexible
 Fundamental Period Height Used: 14/6/12

Transverse Direction Parameters

Redundancy Factor: Rho: 1.00
 Fundamental Period: Ta: 0.2386
 R-Factor: 3.00
 Overstrength Factor: Omega: 2.50
 Deflection Amplification Factor: Cd: 3.00
 Base Shear: V: 0.1101 x W

Longitudinal Direction Parameters

Redundancy Factor: Rho: 1.00
 Fundamental Period: Ta: 0.1491
 R-Factor: 3.00
 Overstrength Factor: Omega: 2.50
 Deflection Amplification Factor: Cd: 3.00
 Base Shear: V: 0.1101 x W



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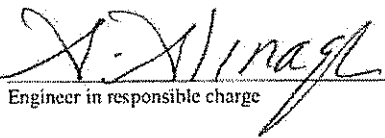
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Building design loads and governing building code is provided by the Builder and is not validated by Butler Manufacturing, a division of BlueScope Buildings North America, Inc. The Builder is responsible for contacting the local Building Official or project Design Professional to obtain all code and loading information for this specific building site.

The design of this building is in accordance with Butler Manufacturing, a division of BlueScope Buildings North America, Inc. design practices which have been established based upon pertinent procedures and recommendations of the Standards listed in the Building Code or later editions.

This certification DOES NOT apply to the design of the foundation or other on-site structures or components not supplied by Butler Manufacturing, a division of BlueScope Buildings North America, Inc., nor does it apply to unauthorized modifications to building components. Furthermore, it is understood that certification is based upon the premise that all components will be erected or constructed in strict compliance with pertinent documents for this project. Butler Manufacturing, a division of BlueScope Buildings North America, Inc. DOES NOT provide general review of erection during or after building construction unless specifically agreed to in the contract documents.

The undersigned engineer in responsible charge certifies that this building has been designed in accordance with the contract documents as indicated in this letter.



Engineer in responsible charge

Date: 4/14/16

Engineer's Seal



Design Tool	Wind Loading - Components & Cladding		Job No: 16-008746
	2009 International Building Code		Page: 1
	ASCE7-05: Ch. 6 DP 1.4.5		Date: 04/14/16
			Prepared By: AA
		Reviewed By:	
		Rev: 5.3	04/16

Notes:

(Risk Category) Occupancy (II) Standard Basic Wind Speed V_{base} (mph) = 99 <small>Figure 6-1</small> Importance Factor $I = 1$ Exposure Factor $K_z = 0.70$ $K_1 = 0$ Topographic Factor $K_{zt} = 1.00$ $K_2 = 0$ Directionality Factor $K_d = 0.85$ $K_3 = 0$	Hurricane Region N Exposure Category B Envelope Enclosed Internal Pressure Coeff. $GC_{pi} = 0.18$ <small>Figure 6-5</small> Gust Factor $G = 0.85$	Width W (ft) = 90 Length L (ft) = 17 Eave Height H_e (ft) = 13.75 Roof Pitch /12 = 0.25 = 1.19° High Eave (ft) = 15.6 Roof Shape Monoslope Mean Eave Height H_m (ft) = 13.8 C&C Edge Zone a (ft) = 3.0
Velocity Pressure q_h (psf) = 14.94 <small>Eq. 6-15</small> Height z (ft) = q_s (psf) = 14.94		

PANEL LOADING									
ROOF		Wind Effective Area (ft ²) = 10 <small>Figure 6-118</small>							
Zone	+GCp	-GCp	GCpi +/-	Pressure Coeff.	p (psf)	Suction Coeff.	p (psf)	<input checked="" type="checkbox"/> Standing Seam Roof AISI Red. 0.67	
1	0.30	-1.00	0.18	0.48	7.2	-1.18	-17.6		
2	0.30	-1.80	0.18	0.48	7.2	-1.98	-19.8		
3	0.30	-2.80	0.18	0.48	7.2	-2.98	-29.8		
WALLS		Wind Effective Area (ft ²) = 10 <small>Figure 6-11A</small>							
Zone	+GCp	-GCp	GCpi +/-	Pressure Coeff.	p (psf)	Suction Coeff.	p (psf)		
4	0.90	-0.99	0.18	1.08	16.1	-1.17	-17.5		
5	0.90	-0.99	0.18	1.08	16.1	-1.17	-17.5		

OVERHANG		
Zone	-GCp	Suction p (psf)
1	-1.70	-25.4
2	-1.70	-25.4
3	-2.80	-28.0

SECONDARY LOADING									
Tributary Width (ft) = 5									
Member Length (ft) = 25									
Trib. width used (ft ²) = 8.3									
ROOF		Wind Effective Area (ft ²) = 208.3 <small>Figure 6-11B</small>							
Zone	+GCp	-GCp	GCpi +/-	Pressure Coeff.	p (psf)	Suction Coeff.	p (psf)		
1	0.20	-0.90	0.18	0.38	5.7	-1.08	-16.1		
2	0.20	-1.10	0.18	0.38	5.7	-1.28	-19.1		
3	0.20	-1.10	0.18	0.38	5.7	-1.28	-19.1		
Tributary Width (ft) = 5									
Member Length (ft) = 25									
Trib. width used (ft ²) = 8.3									
WALLS		Wind Effective Area (ft ²) = 208.3 <small>Figure 6-11A</small>							
Zone	+GCp	-GCp	GCpi +/-	Pressure Coeff.	p (psf)	Suction Coeff.	p (psf)		
4	0.69	-0.78	0.18	0.87	13.0	-0.96	-14.4		
5	0.69	-0.84	0.18	0.87	13.0	-1.02	-15.3		

OVERHANG		
Zone	-GCp	Suction p (psf)
1	-1.37	-20.5
2	-1.37	-20.5
3	-0.80	-12.0

MINIMUM WIND LOAD - C&C
Min. wind of ± 10 psf is required for wind-only LC Sect. 6.1.4.2