

One General Motors Drive
PO Box 381 - Syracuse, NY 13206
Phone: 315.437.9971
Toll Free: 800.962.3211
Fax: 315.437.8118



Flat Glass Products - Tempering
Insulating - Beveling - Edgework
All-Glass Doors - Shower Enclosures
StoreFront and Curtain Wall Systems
Aluminum Entrances

September 30, 2016

**NEW YORK STATE ENERGY CODE UPDATE
Effective October 3, 2016**

The New York State Building Standards and Codes office has announced a change to the State Energy Code which applies to commercial building construction and renovation throughout New York State (outside New York City). The new code replaces the Energy Conservation Construction Code of NYS 2014 with:

- 2015 International Energy Conservation Code
- 2013 ASHRAE 90.1
- 2016 Supplement to the NYS Energy Conservation Construction Code (revised August 2016)

THIS CHANGE IS EFFECTIVE OCTOBER 3, 2016.

The state code has two methods that can be used. The International Energy Conservation Code (“prescriptive method”) is intended for small commercial buildings. The ASHRAE 90.1 Standard is intended for use by design professionals for larger, complex buildings. The state’s 2016 Supplement contains modifications to IECC and ASHRAE.

There is **NO CHANGE** to the U-Factor requirements in the 2015 IECC & 2016 Supplement. The SHGC requirement has been simplified by the elimination of different SHGC requirements on different elevations.

The code establishes minimum U-Factor and SHGC requirements **FOR THE COMBINED GLASS AND FRAMING SYSTEM**, which is different than Center of Glass Values.

See the News section of our Website, or ask us to send the following: 1) A summary of the new code, 2) a map of NYS counties and their climate zones, 3) Center of Glass U-Factor and SHGC requirements to comply with the code with several Tubelite framing systems, 4) glass performance information, and 5) a sample certification of compliance. This information is intended to assist the glazier if he is asked to select and combine glass, framing systems and shading devices, and document energy code compliance to a building owner, contractor, architect or code official.

Compliance certificates and lab simulations for Tubelite framing systems, as well as a link to the code division announcement and the actual code language are also available at www.syracuseglass.com. If you’d like more information or staff training, contact your Syracuse Glass sales representative or a member of our glass or aluminum estimating teams.

Syracuse Glass and Tubelite have made the investments to provide you the very best in energy efficient glass and glazing products; “Team Syracuse Glass” is ready to help if you need it.

Sincerely,

John Dwyer
President



NYS ENERGY CODE UPDATE OCTOBER 3, 2016

Effective Date: October 3, 2016

Contents: Prescriptive Method: 2015 International Energy Conservation Code
Performance Method: ASHRAE 90.1 -2013
2016 Supplement to the NYS Energy Conservation Construction Code
(Revised August 2016)

Compliance: AAMA 507 Certificate of Compliance

Enforcement: Local Code Officials through Permit Process

PRESCRIPTIVE METHOD from 2016 Supplement

Minimum “WHOLE SYSTEM” Glass and Glazing U -Factor Requirements:

CLIMATE ZONES	4, 5	6
Fixed Fenestration	.38	.36
Operable Fenestration	.45	.43
Entrance Doors	.77	.77

Minimum “WHOLE SYSTEM” SHGC Requirements:

PF<.2	.40
.2<= PF <.5	.48
PF>= .5	.64

PF = Projection Factor, the horizontal distance from the outside glass surface to the end of the shading device (i.e., awning, sunshade) divided by the vertical distance from the top to the bottom of the glazing.

Zone 4 – Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

Zone 5 – Albany, Cayuga, Chautauqua, Chemung, Columbia, Cortland, Dutchess, Erie, Genesee, Greene, Livingston, Monroe, Niagara, Onondaga, Ontario, Orange, Orleans, Oswego, Putnam, Rensselaer, Rockland, Saratoga, Schenectady, Seneca, Tioga, Washington, Wayne, Yates

Zone 6 – Allegany, Broome, Cattaraugus, Chenango, Clinton, Delaware, Essex, Franklin, Fulton, Hamilton, Herkimer, Jefferson, Lewis, Madison, Montgomery, Oneida, Otsego, Schoharie, Schuyler, St. Lawrence, Steuben, Sullivan, Tompkins, Ulster, Warren, Wyoming

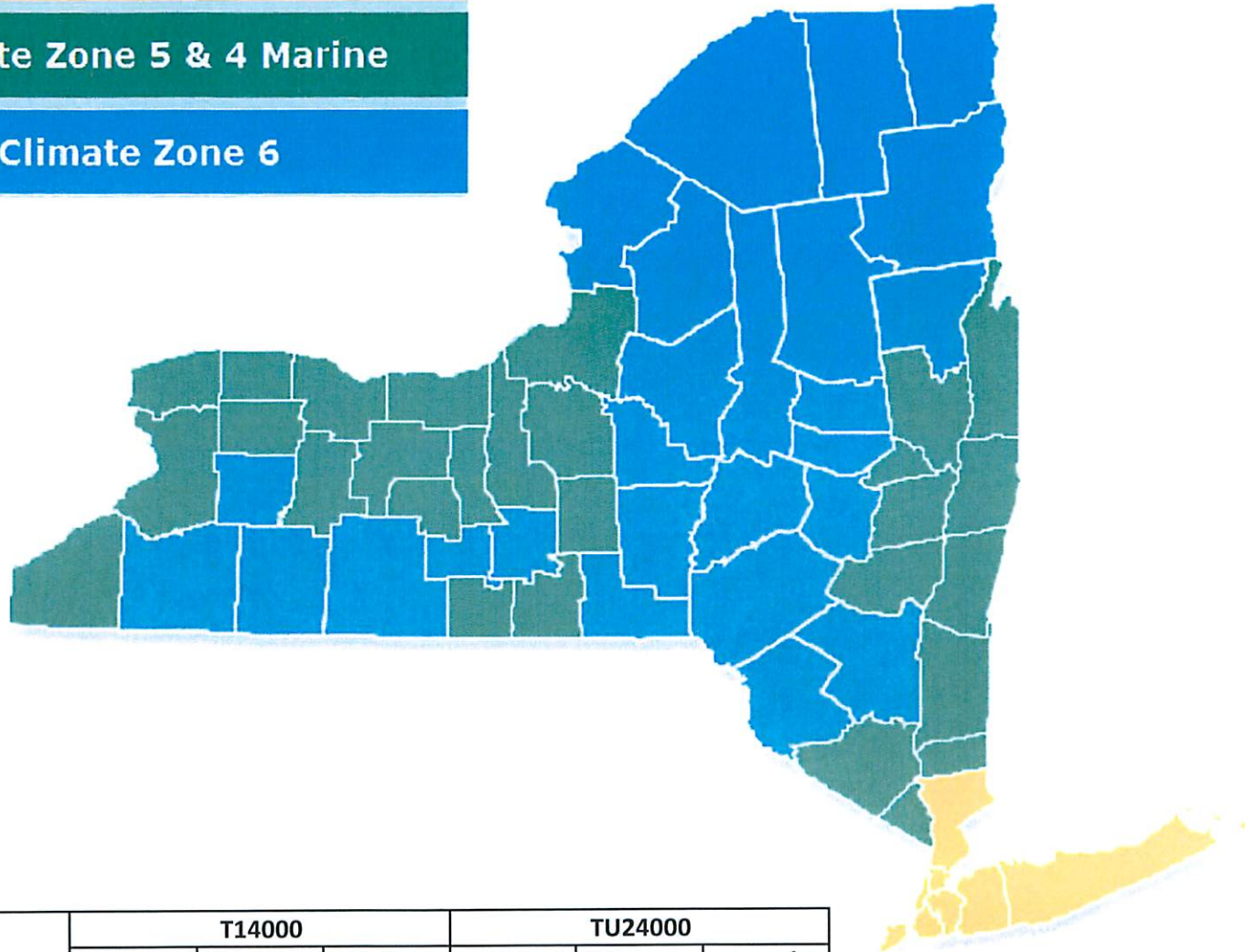
Maximum Glazing: 30% of Wall Area, or 40% if Section C402.4.4.1 conditions are met

9/30/16

Climate Zone 4 (Except Marine)

Climate Zone 5 & 4 Marine

Climate Zone 6



CLIMATE ZONE	PROJECTION FACTOR	T14000			TU24000		
		PILK EA ARGON	SN-68 ARGON	SNX62/27 ARGON	PILK EA ARGON	SN-68 ARGON	SNX62/27 ARGON
4, 5	<.2 .2-.5 >=.5	N/N/N	Y/Y/Y	Y/Y/Y	N/N/Y	Y/Y/Y	Y/Y/Y
6	<.2 .2-.5 >=.5	N/N/N	N/N/N	Y/Y/Y	N/N/N	Y/Y/Y	Y/Y/Y



**CENTER OF GLASS U-FACTOR & SHGC REQUIREMENTS FOR GLASS USED
WITH SELECT TUBELITE FRAMING SYSTEMS AND DOORS**

	<u>U- FACTOR</u>		<u>SHGC</u>
	CLIMATE ZONE 4,5	CLIMATE ZONE 6	PF<.2 .2-.5 PF>=.5
FIXED - STOREFRONT	(.38 REQ.)	(.36 REQ.)	(.40 .48 .64 REQ.)
T 14000	.26	.24	.43 .52 .68
T 14000 Out	.28	.26	.42 .49 .69
T 14000 In	.31	.28	.42 .51 .70
TU 24000	.30	.28	.44 .52 .76
<hr/>			
CURTAINWALL			
300 ES (6")	.31	.28	.47 .52 .70
See website for 200 and 400 Series Curtain Wall Options.			
<hr/>			
DOORS – THERMAL ONLY!	(.77 REQ.)	(.77 REQ.)	
THERM =BLOCK DOORS	.48	.48	ALL GLASS COMPLIES

Numbers in parentheses are “whole system” performance requirements from the Code based on glass and framing performance. Other numbers reflect required center of glass performance.

NOTE: Independent Lab Tests available at www.syracuseglass.com or www.tubeliteinc.com.

9/30/16 Rev. 2



CENTER OF GLASS U-FACTORS & SHGC VALUES

COG U-FACTOR		SHGC
	HARD COAT LOW-E (2 or 3) - ARGON	
.29	Pilkington Energy Advantage (2) Argon	.63
	Bronze Argon Pilkington Energy Advantage (3)	.45
	Gray Argon Pilkington Energy Advantage (3)	.40
	Green Argon Pilkington Energy Advantage (3)	.44
	Arctic Blue Argon Pilkington Energy Advantage (3)	.34
	Evergreen Argon Pilkington Energy Advantage (3)	.35
	SOFT COAT LOW-E (2 or 3) - AIR	
.29	Guardian SN 68 (2) Air	.38
.28	Guardian SNX 62/27 (2) Air	.27
	SOFT COAT LOW-E (2 or 3) - ARGON	
.25	Guardian SN 68 (2) Argon	.37
	Bronze Argon Guardian SN68 (3)	.31
	Gray Argon Guardian SN68 (3)	.30
	Green Argon Guardian SN68 (3)	.35
.24	Guardian SNX 62/27 (2) Argon	.27
	Bronze Argon Guardian SNX 62/27 (3)	.26
	Gray Argon Guardian SNX 62/27 (3)	.23
	Green Argon Guardian SNX 62/27 (3)	.32
	SOFT COAT LOW-E (2) - AIR - HARD COAT LOW-E (4)	
.24	Guardian SN 68 (2) Air Guardian IS20 (4)	.36
	Bronze Eclipse Advantage (2) Argon Pilkington Energy Advantage (4)	.34
.23	Guardian SN 68 (2) Air Pilkington Energy Advantage (4)	.36
	SOFTCOAT LOW-E (2) - ARGON - HARD COAT LOW-E (4)	
.20	Guardian SN 68 (2) Argon Guardian IS20 (4)	.36
	Guardian SN 68 (2) Argon Pilkington Energy Advantage (4)	.35

— EXAMPLE —

11.0 CERTIFICATE OF COMPLIANCE

OVERALL RATING	
U-Factor: (Btu/h·ft ² ·°F)	- 37
SHGC:	. 35

Certificate Authorization

Name: Joe Glazier
 Signature: Joe Glazier

Company: Energy Saving Glazing, Inc.
 Date: 11/1/15

CERTIFIES THAT THE MATERIALS LISTED ON THIS CERTIFICATE WERE INSTALLED ON THE PROJECT IDENTIFIED BELOW

PROJECT INFORMATION:			
Street Address: <u>Chase Manhattan Bank</u>			
City: <u>101 Salina St</u>			
City: <u>Syracuse</u>		State: <u>NY</u>	Zip: <u>13206</u>
GLAZING CONTRACTOR / INSTALLER:			
Street Address: <u>Energy Saving Glazing Inc</u>			
City: <u>200 Main St</u>			
City: <u>Syracuse</u>		State: <u>NY</u>	Zip: <u>13206</u>
Contact Person: <u>Joe Glazier</u>		Phone Number: <u>315 555-5555</u>	
State: <u>NY</u>		Zip: <u>13206</u>	

TABLE 1 - GLAZING	GLAZING MATERIAL SUPPLIER:		SYRACUSE GLASS COMPANY, INC.	
	Street Address:		1 General Motors Drive	
	City:		Syracuse	
	Glass and Spacer Type:		1" Insulating SW-68 LOWE Argon ENNOMATECH Ultra	
	Center-of-glass (C.O.G.) U-factor:		.25	
		Btu/h·ft ² ·°F		
Contact Person:		John Dwyer		
Phone Number:		315-437-9971		
State:		NY		
Zip:		13206		
Center-of-glass (C.O.G.) SHGC:		.38		

TABLE 2 - FRAMING	FRAMING MATERIAL SUPPLIER:		Tubelite Inc./Syracuse Glass	
	Street Address:		4878 Mackinaw Trail	
	City:		Reed City	
	Contact Person:		Mike York	
	Phone Number:		315-437-9971	
	State:		MI	
	Zip:		49677	
	Product Line:		T 14000 Storefront	
	The overall ratings for U-factor and SHGC are based on a size of 2000 mm x 2000mm (78-3/4 in x 78-3/4 in) as required in NFRC 100.			
	Overall U-factors and Solar Heat Gain Coefficients (SHGC) listed in the matrix were determined in accordance with NFRC 100 and NFRC 200 respectively by a NFRC accredited laboratory.			
ACCREDITED LABORATORY:				
Architectural Testing				
Reference Test Report #:				
65916.01-116-45				

U-factor Matrix (Btu/h·ft ² ·°F)		SHGC Matrix	
C.O.G. U-factor	OVERALL U-factor	C.O.G. SHGC	OVERALL SHGC
0.48	.66	0.90	.83
0.46	.64	0.85	.79
0.44	.63	0.80	.74
0.42	.61	0.75	.69
0.40	.49	0.70	.65
0.38	.48	0.65	.60
0.36	.46	0.60	.66
0.34	.44	0.55	.61
0.32	.43	0.50	.46
0.30	.41	0.45	.42
0.28	.39	0.40	.37
0.26	.38	0.35	.33
0.24	.36	0.30	.28
0.22	.34	0.25	.24
0.20	.33	0.20	.19