

2001 Company

UNIVERSITY OF WISCONSIN,
SCHOOL OF ENGINEERING CHOSE:

2001 Company Wind Vented Roof System

*Transfers
Wind Up-Lift
Vacuum Pressure
through the Roof
Membrane and
Insulation to
the Structural
Roof Deck.*

*2001 Roof
System Wind
Rating =
Structural
Strength of
Roof Deck*



2001 Company Wind Vented Roof System Exceeds 288 PSF (pounds per square foot) Wind Uplift Requirement of ASCE-7-98



Contact our 2001 Company local representative below for more information:

ASCE-7-98 Wind Uplift Evaluation:

2001 Company is able to assist architects and engineers in the review of the mathematical factors required to meet the new ASCE-7 (American Society of Civil Engineers) roof assembly uplift pressures for a specific building. These factors are derived from anticipated PSF (pounds per square foot) pressures that will potentially effect a building's roof over a 50-year period. The following is a sample calculation as prepared for the University of Wisconsin.

Building: University of Wisconsin School of Engineering

- 1.) ASCE-7 area wind design: **90mph**
- 2.) Building height above ground: **200 ft. plus**
- 3.) Building exposure category (as listed below): **D**
A -> low building protected
B -> suburban near buildings
C -> open terrain, fields, desert
D -> within 1 mile of a large body of water
- 4.) Partially enclosed building? **Yes**
(i.e. windows broken from wind blown debris causing an internal pressurizing of the building)
- 5.) Roof Slope: **Low slope**
(i.e. under 2" 12" = low slope, over 2" 12" = steep slope)
- 6.) Topographic wind speed up: **No**
(i.e. buildings on hillsides or valleys subject to high winds)
- 7.) Critical facility: **Yes (School)**
(the building is used as a shelter for manmade or natural disasters: a school or hospital, utility, police, fire, etc.)
- 8.) Safety factor: **2.0**
(i.e. 0 = farm buildings, 1.6 = residential, 2.0 critical facility and/or over 300 person occupancy)

The ASCE-7 design calculations for wind resistance on this building were determined to be as follows:

Actual PSF Pressure

Field	Perimeter	Corner
74.86 PSF	109.42 PSF	143.97 PSF

Safety Factor 2.0

149.72 PSF	218.84 PSF	287.94 PSF
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