

Project :
 Subject :
 Location :

File :
 Date : 8/2/2011
 Eng :

Simplified Procedure - Components and Cladding

Design Wind Pressure Components (ASCE 7-05)

Building Height	=	60 ft	
Roof Angle	=	25 deg.	
Basic Wind Speed	=	90 mph	(Figure 6-1)
Category	=	I	(Table 1-1)
Importance Factor (I)	=	0.87	(Table 6-1)
Exposure Category	=	C	(Open terrain)
Kzt	=	Topographic factor obtained from Fig. 6-4	
	=	$(1 + K1 \cdot K2 \cdot K3)^2$	
	=	1.92	

Constants:

Kz	=	Velocity pressure coefficient @ height z	
	=	0.70	
Kd	=	Wind directionality factor	
	=	0.85	
G	=	Gust Factor	
	=	0.85	
Enclosure Classification	=	Enclosed Buildings	

Design Wind Pressure, p, Figure 6-3

Design wind pressures and forces are determined by Figure 6-3

Location	Zone	Wind Area	Pnet30(+) (ksf)	Pnet30(-) (ksf)	Adjustment Factor	I	Ending P(+) (ksf)	Ending P(-) (ksf)
Roof	1	10	0.01	-0.01	1.62	0.87	0.02	-0.04
	2	10	0.01	-0.02	1.62	0.87	0.02	-0.06
	3	10	0.01	-0.03	1.62	0.87	0.02	-0.09
Wall	4	10	0.01	-0.02	1.62	0.87	0.04	-0.04
	5	10	0.01	-0.02	1.62	0.87	0.04	-0.05
Overhang	2	10	-	-0.03	1.62	0.87	-	-0.01
	3	10	-	-0.05	1.62	0.87	-	-0.01