





**ROOFS AND ROOF STRUCTURES (Chapter 15)**

Slope/raze requirements (1505.6) \_\_\_\_\_  
 Fire classification (1506.4) \_\_\_\_\_  
 Slope/slope requirements (1507.4) \_\_\_\_\_  
 Low-slope roof coverings (1507.4.4) \_\_\_\_\_  
 Flashing (1508.0) \_\_\_\_\_  
 Roof structures (1510.0) \_\_\_\_\_

**STRUCTURAL SYSTEMS (Chapters 16, 17, 18)**

**STRUCTURAL LOADS (Chapter 16)**

**DEE GN LOADS ON CONSTRUCTION DOCUMENTS (1603.1)**

Uniformly distributed live loads (1603.2, 1608.0)

Floor Area Loads Snow  
 (1) OFFICE 140 PSF  
 (2) STAIR 140 PSF  
 (3) MECH 140 PSF  
 (4) MECH 140 PSF  
 (5) MECH 140 PSF

Live load reduction (1603.2, 1608.0)

Roof live loads (1603.4, 1608.0)

Ground snow load (1603.2, 1608.0)  
 If  $P_g > 10$  psf, atmospheric load (1608.3)  
 If  $P_g > 10$  psf, snow exposure area (1608.3.1)

If  $P_g > 10$  psf, roof thermal factor (1608.3.2)  
 If  $P_g > 10$  psf, snow load reduction factor (1608.3.3)

Sloped roof snow load (1608.4)  
 Wind loads (1608.5, 1609.0)

Has a wind speed (1609.0)

Wind exposure category (1609.4)

Wind impact force factor (1609.5)

Wind region pressure,  $P$  (1605.7)

Earthquake loads (1609.0, 1610.0)

Peak velocity related acceleration,  $A_v$  (1611.3)

Peak acceleration,  $A_p$  (1612.1.3)

Seismic hazard exposure group (1612.1.3)

Seismic performance category (1612.1.3)

Seismic design type (Table 1612.1.3.1)

Basic structural system and semi-enclosed system (Table 1612.1.3.2)

Seismic modification factor,  $C_d$ , and deflection amplification factor,  $C_d$  (Table 1612.1.3.3)

Analysis procedure (1612.1.3, 1612.5)

At risk load (1608.2.2, 1608.2.3)

Partition loads (1608.2.4)

Crane/trailer loads (1608.6)

Impact loads (1608.8)

Wind loads (1608.5, 1608.9, 1609.5, 1610.0)

**STRUCTURAL DESIGN CALCULATIONS**

Submitted for all structural members (1610.7)

NOTES: N.R. — Not required  
 N.A. — Not applicable

**ADMINISTRATION (Chapter 1)**

Complete construction documents (1072.5, 1072.6, 1072.7)

Sign/seal/submit construction documents (1072.7, 1114.1)

**BUILDING PLANNING (Chapters 3, 4, 5, 6)**

**USE OR OCCUPANCY CLASSIFICATION (302.0-313.0)**

Single Use Groups

Specific occupancy areas (302.1.1)

Mixed Use Groups

Accessory areas (302.1.2)

**GENERAL BUILDING LIMITATIONS (Chapters 5 & 6)**

Apply Case 1 to determine the allowable height and area and permitted types of construction for a building containing a single use group or non-separated mixed use groups. Apply Case 2 to determine the allowable height and area and permitted types of construction for a building containing separated mixed use groups.

P-F-A VOTER-CALCULATIONS 10-14-11 - 503

% of allowable building area (Table 503) 100%

% Reduction for height (Table 503.4) 0%

% Increase for open perimeter (Table 503.4) 0%

% Increase for perimeter spandrels (503.4) 100%

Total percentage factor 310/100 = 3.1

Conversion factor 310/100 = 3.1

Total percentage factor (100%)

Open perimeter (1510.2)	North	East	South	West
Open perimeter (1510.2)	423 ft	Perimeter 580 ft	173	117
% Open perimeter - (Open perimeter) x 100%	423/580 = 72.7%			
% Total perimeter increase - (Perimeter) x 100%	72.7% x 3.1 = 225.3%			
% Total perimeter increase - (Perimeter) x 100%	225.3% x 1.1 = 247.8%			

**CASE 1 — SINGLE USE OR NON-SEPARATED MIXED USE GROUPS (313.1.1)**

Using Table 503, identify the allowable height and area or the single use group or the most restrictive of the non-separated mixed use groups. Construction types that provide an allowable lesser area equal to or greater than the adjusted floor area and allowable height as recalled by Section 501.3 equal to or greater than the actual building height are permitted.

Actual floor area 20,241 sq ft 1<sup>st</sup> Actual building height 42 ft 3 stories

Adjusted floor area 20,040 sq ft 1<sup>st</sup> Allowable building height 42 feet 3 stories

Adjusted floor area — actual floor area x conversion factor

Permitted types of construction Area 4200 sq ft 5 Type of construction assumed for review (313.1.1) 22

ACTION STAFFED BY THE FIRE DEPT

# OCCUPANT NEEDS (Chapters 10, 11, 12)

## MEANS OF EGRESS (Chapter 10)

Location	Area	High	Sq. Ft. per person	Occup. use	Other excl. made	Jobs	Egress with Int. Occupant	Stairways	Quarantine	Capacity	Non-occupant exits
1st fl.	7,300	3	245	Office				Stairway			
2nd fl.	4,200	3	140	Office				Stairway			
3rd fl.	5,500	3	183	Office				Stairway			
4th fl.	16,000	3	533	Office				Stairway			
5th fl.	7,000	3	233	Office				Stairway			
6th fl.	3,600	3	120	Office				Stairway			
7th fl.	15,700	3	523	Office				Stairway			
8th fl.	6,600	3	220	Office				Stairway			
9th fl.	6,600	3	220	Office				Stairway			
10th fl.	6,600	3	220	Office				Stairway			
11th fl.	6,600	3	220	Office				Stairway			
12th fl.	6,600	3	220	Office				Stairway			

OCCUPANT LOAD (1002.0 and Table 10.1.2)

CAPACITY OF EGRESS COMPONENTS (1002.0 and Table 10.1.2)

MEANS OF EGRESS (Chapter 10)

MEANS OF EGRESS (Chapter 10)

MEANS OF EGRESS (Chapter 10)

MEANS OF EGRESS (Chapter 10)

MEANS OF EGRESS (Chapter 10)

MEANS OF EGRESS (Chapter 10)

MEANS OF EGRESS (Chapter 10)

MEANS OF EGRESS (Chapter 10)

MEANS OF EGRESS (Chapter 10)

MEANS OF EGRESS (Chapter 10)

MEANS OF EGRESS (Chapter 10)

MEANS OF EGRESS (Chapter 10)

MEANS OF EGRESS (Chapter 10)

MEANS OF EGRESS (Chapter 10)

MEANS OF EGRESS (Chapter 10)

MEANS OF EGRESS (Chapter 10)

MEANS OF EGRESS (Chapter 10)

MEANS OF EGRESS (Chapter 10)

MEANS OF EGRESS (Chapter 10)

MEANS OF EGRESS (Chapter 10)

MEANS OF EGRESS (Chapter 10)

MEANS OF EGRESS (Chapter 10)

MEANS OF EGRESS (Chapter 10)

MEANS OF EGRESS (Chapter 10)

MEANS OF EGRESS (Chapter 10)

## ATTUMS

Automatic sprinkler system (903.2)  
 Occupancy (401.2)  
 Sprinkler control (401.4)  
 Fire alarm (903.2)  
 Fire alarm system (903.4)  
 Travel distance (103.7)

## OTHER SPECIAL USE AND OCCUPANCY

Underground structures (405.0)  
 Open parking structures (406.0)  
 Phone garages (407.0)

## FIRE PROTECTION (Chapters 6, 7, 8, 9)

FIRE PARTITIONS  
 Exit access corridors (711.0, 711.1-1)

COMBUSTIBILITY (603.0, 603.1, 603.2, 603.3)

Exterior walls

Info for elements

Fire (704.0)

CONSTRUCTION DOCUMENTS (703.0)

Fire area (704.0)

EXTERIOR WALLS (507.2, 705.0, 716.0)

North East South West

Fire separation distance

Wall-climbing

VENTILATION (708.0)

Fire for open to protectives (709.3, 709.0)

Continuity of exterior walls (708.0)

SEPARATION ASSEMBLIES

Ex. enclosures (705.0, 710.0, 714.1)

Other shafts (701.0, 710.0)

Mixed use and fire area separations (710.1.2)

Other separation assemblies (702.1.1, Table 602)

Public garages (406.0)  
 -at (709.0)  
 Use (709.0)  
 Stages and platforms (712.0)  
 Special areas from buildings (713.0)  
 HPM facilities (718.0)  
 Hazardous materials (730.0, 731.0)  
 Use (730.0)  
 Swimming pools (721.0)  
 Storage areas (402.0)

EXIT ACCESS CORRIDORS (711.0, 711.1-1)

Interior separations (711.2)

Swelling unit separations (711.6)

Guardroom separations (711.0)

OTHER FIRE RESISTANT CONSTRUCTION

Fire and party walls (707.0 and Table 607.1)

Storage areas (712.0)

Noncombustible partitions (Table 602)

Info for loadbearing walls, columns, girders, trusses (716.0)

Supporting construction (716.0)

Floor construction (713.0, 1006.0.1)

Roof construction (713.0, 715.0)

Partitions (714.0)

Opening protectives (717.0, 719.0, 720.0)

Fire dampers (718.0)

Fireblock and caulking (721.0)

The final end sound-insulating male tabs (722.0)