

APPLICABLE CODES AND STANDARDS:
 IBC 2009
 NFPA 101 2006, NFPA 101 2009
 MSHA DESIGN AND CONSTRUCTION MANUAL
 ICC/ANSI A117.1 2003

IBC USE & CONSTRUCTION TYPES
 GROUP R-2 PARKING GARAGE CONSTRUCTION TYPE: IB
 GROUP R-2 RESIDENTIAL CONSTRUCTION TYPE: VA

NEPA OCCUPANCY & CONSTRUCTION TYPES
 STORAGE - PARKING STRUCTURE, OPEN CONSTRUCTION TYPE: II (222)
 RESIDENTIAL - APARTMENT BUILDING, NEW CONSTRUCTION TYPE: V111

SUMMARY OF REQUIRED SEPARATIONS:

- 2 HR HORIZONTAL ASSEMBLY BETWEEN STORAGE AND RESIDENTIAL OCCUPANCIES
- 2 HR FIRE BARRIER SEPARATING THE MEANS OF EGRESS FOR THE UPPER OCCUPANCY AND THE PARKING OCCUPANCY
- 90 MIN. SELF-CLOSING AND SELF-LATCHING DOORS TO EXIT ENCLOSURE FOR THE RESIDENTIAL OCCUPANCY FROM THE PARKING OCCUPANCY
- 1 HR FIRE RESISTANCE RATING OF EXIT ENCLOSURES WITHIN RESIDENTIAL OCCUPANCY
- 80 MIN. SELF-CLOSING AND SELF-LATCHING DOORS TO THE EXIT ENCLOSURE FROM THE RESIDENTIAL OCCUPANCY
- 1 HR FIRE PARTITION BETWEEN DWELLING UNITS OR SLEEPING UNITS
- 1 HR HORIZONTAL ASSEMBLY BETWEEN DWELLING UNITS OR SLEEPING UNITS IN THE SAME BUILDING
- 1/2 HR CORRIDOR FIRE-RESISTANCE RATING
- 20 MIN. SELF-CLOSING AND SELF-LATCHING DOORS TO EXIT ACCESS CORRIDOR
- 1 HR FIRE RESISTANCE RATING SEPARATION AND AUTOMATIC SPRINKLERS AT BOILER ROOMS
- 1 HR FIRE RESISTANCE RATING SEPARATION AND AUTOMATIC SPRINKLERS AT LAUNDRY ROOMS GREATER THAN 100 S.F. OUTSIDE OF DWELLING UNITS
- 1 HR FIRE RESISTANCE RATING SEPARATION AND AUTOMATIC SPRINKLERS AT TRASH COLLECTION ROOMS
- 1 HR FIRE RESISTANCE RATING PROTECTION OR AUTOMATIC SPRINKLERS AT STORAGE ROOMS OUTSIDE OF DWELLING UNITS
- 1 HR SHAFT ENCLOSURES CONNECTING LESS THAN FOUR STORIES
- 2 HR SHAFT ENCLOSURES CONNECTING FOUR OR MORE STORIES
- 1 HR BEARING WALLS - INTERIOR AND EXTERIOR
- 1 HR NON-BEARING EXTERIOR WALLS FOR WHICH THE FIRE SEPARATION DISTANCE IS GREATER THAN OR EQUAL TO 10 FEET AND LESS THAN 30 FEET.
- 1 HR ROOF CONSTRUCTION AND SECONDARY MEMBERS
- 1 HR FLOOR CONSTRUCTION AND SECONDARY MEMBERS

FIRE SEPARATIONS:
 - - - - - 1/2 HOUR FIRE-RESISTANCE RATING AT CORRIDORS
 - - - - - 1 HOUR FIRE-RESISTANCE RATING, STC 50 MIN.
 - - - - - 2 HOUR FIRE-RESISTANCE RATING

SPRINKLER SYSTEM:
 THE BUILDING SHALL BE EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM THAT COMPLIES WITH NFPA 13.

ALLOWABLE BUILDING HEIGHT:
 PER IBC 2009 TABLE 503 AND SECTIONS 504.2, 504.3, & 509.4

GRADE PLANE CALCULATION
 NORTH: (11.4+10.8+10.5+12.3) / 4 = 11.26
 SOUTH: (13.5+17.5+17.3+13.3) / 4 = 15.40
 EAST: (13.5+15.2+17) / 3 = 15.27
 WEST: (11.4+13.5+16.6+17.3) / 4 = 14.70
 54.13 / 4 = +13.53' AVERAGE GRADE PLANE

MAXIMUM BUILDING HEIGHT = 60'
 MAXIMUM ALLOWABLE BUILDING ELEVATION ABOVE AVERAGE GRADE PLANE = +73.53'
 HEIGHT OF ROOF STRUCTURES ABOVE STAIRWELLS NOT TO EXCEED 20' ABOVE ALLOWABLE BUILDING HEIGHT (SECTION 504.3)

MAXIMUM NUMBER OF STORIES ABOVE ONE LEVEL OPEN PARKING = 4 (SECTION 509.4)

PARKING STRUCTURE

NEPA 3.3.240.6
 DEFINITION OF OPEN PARKING STRUCTURE:
 1.4 S.F. WALL OPENING FOR EACH LINEAR FOOT OF EXTERIOR PERIMETER OPENINGS DISTRIBUTED UNIFORMLY OVER TWO OPPOSING SIDES
 CALCULATIONS:
 EXTERIOR PERIMETER PARKING AREA = 223' - 10" (427' TOTAL PERIMETER)
 MULTIPLY BY 1.4 FOR REQUIRED OPEN AREA = 313.67 S.F. (597.8 S.F.)
 OPEN AREA PROVIDED = 844.33 S.F.

NEPA 101 EGRESS REQUIREMENTS

- 42.8.2.5.1 MAXIMUM COMMON PATH OF TRAVEL 50 Ft
- 42.8.2.5.2 MAXIMUM DEAD END TRAVEL DISTANCE 50 Ft
- 42.8.2.6 MAXIMUM TRAVEL DISTANCE TO EXIT 400 Ft

ALLOWABLE BUILDING AREA:
 PER IBC 2009 TABLE 503 AND SECTION 506.3
 24,000 S.F. PER STORY

SOUND TRANSMISSION SEPARATIONS FOR DWELLING UNITS SHALL HAVE A MINIMUM STC OF 50.

SECOND FLOOR AREA: 14,191 SQ. FT.
 OCCUPANT LOAD: 71
 APARTMENT BUILDING @ 1:200 GROSS: 71

