NCOSFM – Engineering Division

LIFE SAFETY PLAN REVIEW GUIDELINE rev. 7/25/25

(This is not an all-inclusive list. Other critical features may also be addressed).

1) Site plans
   a) Access by fire/emergency responders
   b) Adequate water supply (flow test for sprinklers within past 12 months)
   c) Property line locations
      i) True or assumed
      ii) Fire separation distances
      iii) Adjacent buildings/structures
   d) Accessible egress – NC Accessibility Codes
   e) Fenced/gated areas outside of buildings
      i) Play areas/pools
      ii) Refuge areas (correctional & institutional/Alzheimer's facilities)
   f) Building(s) in a flood zone?
      i) Base flood elevation
      ii) Floor elevations
   g) Building in a fire district?

2) Building Area, size, and height
   a) Occupant use/category/mixed occupancy
   b) Construction type
   c) Allowable height and area Table limits – area increases?
   d) Effects on existing buildings – Additions/renovations

3) Occupants can safely exit the building during emergency situations
   a) Building Code Summary (Appendix B)
   b) Life Safety Plan
      i) Area/size of spaces
      ii) Occupant loads – Types
      iii) Travel Distance
      iv) Common path of travel (single exits)
      v) Dead ends
      vi) Adequate number, location & size of exits (exits are remote)
      vii) Door swings
      viii) Stairs – load/occupants/capacity
      ix) ARA (area of rescue assistance)
      x) Wall fire ratings
   c) Egress Components
      i) Stairs – tread depths, riser heights, stair widths, stair heights, obstructions
      ii) Ramps – slopes, landings
      iii) Corridors – widths, fire rating, dead ends
      iv) Lighting/Signage – egress lighting, emergency exit lighting, exit discharge lighting, exit signage
      v) Seismic sway bracing for exit lighting
      vi) Door hardware – closers, panic hardware, exit devices
      vii) Egress Windows – locations, opening sizes, window details
   d) Emergency power
      i) Generator set

ii) Battery
iii) UPS (uninterruptible power supply) system

4) Building provides a safe environment
   a) Chapter 4 – Special occupancy requirements
   b) Interior finishes; insulation, foam plastics?
   c) Building systems – Kitchen and lab exhaust hoods
   d) Tempered safety glass/Hazardous locations
   e) Windborne debris protection
   f) Fire rated shafts
      i) Stairs
      ii) Elevators
      iii) Mechanical/HVAC/plumbing

5) Structural Soundness
   a) Use and Occupancy – design based on correct importance factors
   b) Adequate structural details (all parts & pieces of building)
      i) Foundation – Geotechnical report
      ii) Shell/Frame
      iii) Connections
      iv) Roof system
      v) Materials – specifications – strength/sizes
      vi) Correct design loads – wind, snow, live loading, seismic, soil bearing, etc. per Code requirements
      vii) Special inspections?
      viii) Firewall structural independence
      ix) Wall, floor, ceiling & roof construction details
   c) Structural drawings are consistent with architectural drawings

6) Fire protection
   a) Active
      i) Sprinklers – Dry or wet – Zones, seismic bracing
      ii) Alarm systems
      iii) Standpipes
      iv) Smoke evacuation
      v) Dry chemical suppression
   b) Passive
      i) Fire barriers and openings
      ii) UL details on drawings
      iii) Fire areas (location of barriers)
      iv) Smoke compartments
      v) Smoke/fire dampers

7) Other – Miscellaneous
   a) Bleachers
   b) Canopies
   c) Covered/enclosed connectors
   d) Tunnels
   e) Courtyards
   f) Hazardous materials – locate control areas on plans.