"UTILIZATION OF AVAILABLE SKILLS & MATERIALS IN FIRE PREVENTION"

Speaker: Deputy Chief Harry W. Martin
Fire Marshal
Los Angeles, California

Harry W. Martin
Deputy Chief and Fire Marshal
City of Los Angeles Fire Department

Currently the Fire Marshal and Commander of the Bureau of Fire Prevention of the Los Angeles City Fire Department, Mr. Martin has been a member of the Fire Department for 28 years. He has also lectured on fire protection and engineering at various seminars at the University of California at Davis, UCLA, USC, Chabot College at Hayward, and Phoenix College at Phoenix, Arizona.

Mr. Martin attended Los Angeles City College and Cal State in Los Angeles where he majored in civil engineering with minor studies in physical sciences and public administration.

Mr. Martin has been a consulting fire protection engineer and expert witness in legal action in numerous states.

FIRE PROTECTION FOR LARGE OFFICE BUILDINGS

I. Planning Stage

A. Determine type of occupancy

B. Special requirements for different occupancies.

C. Consider water supply available to building

1. Supplemental fire protection may be required where access is restricted

2. Supplemental protection may consist of on-site hydrants

D. Distribution of water supply in building for fire fighting

1. Combination standpipes

a. Wet standpipe system

b. Connected to fire pumps

c. Fire Department connections for second source of supply

d. Gravity tanks may be required according to building height

e. For use by Fire Department

2. Interior standpipes

a. For use by building occupants

b. Connected to combination system and gravity tank

E. Exits (types)

1. Enclosed stairway

2. Conventional smoke-proof enclosure

a. Located on exterior wall

b. No opening directly into interior of the building

3. Mechanically ventilated smoke-proof enclosure

a. Located in building core

b. Involves a system of smoke detectors and mechanical ventilation

F. Emergency power

1. Required to light exits and exit signs during power failure

2. Supply power to mechanically ventilated smoke tower

G. Extinguishing systems

1. Sprinklers required in below grade areas

2. May be required in lieu of other protection

II. Construction Stage

A. Water supply

1. Extend standpipe as building goes up

2. Provide fire pump

B. Special problems

1. Vertical and horizontal access limited

2. Accumulation of combustibles

a. Trash

b. Packing material

c. Lumber

3. Flammable liquids

a. Paint spraying

b. Adhesives

4. Welding and heating devices being operated

5. Special detection and extinguishing systems may be incomplete

6. Communications system in building often lacking

III. Final Testing of Fire Protection Systems

A. Standpipe system

1. Each riser flowed from topmost outlet at 30 p.s.i. for one minute

2. Fire pump

a. Operated for one hour

b. Started three times automatically and three times manually

c. Tested to 150% of its rated capacity for 15 minutes

B. Emergency power system

1. Tested upon completion

2. Must provide rated capacity

C. Mechanically ventilated smoke-proof enclosure

1. All smoke detectors checked

2. Ventilation and pressure differentials checked

3. All accessory equipment must function properly

IV. Maintenance

A. All fire protection systems to be tested at least every five years.

1. Combination standpipes

2. Wet standpipes

3. Automatic sprinkler systems

4. Smoke detection systems

5. Fire protection assemblies

    a. Fire doors

    b. Fire dampers

B. Emergency power system

1. Tested weekly

2. Written record to be kept of tests

C. Tests when required shall be conducted by qualified person

1. Building engineer

2. Specially trained personnel

3. Private outside agency

D. Fire Department to be notified in advance of such tests.