Table 8.2: Spot Type Smoke Detection and Alarm Systems

ITEMS	REQUIREMENTS
5. LOCATION	i. The location of smoke detectors shall be based on an evaluation of potential ambient sources of smoke, moisture, dust, or fumes, and electrical or mechanical influences, to minimize nuisance alarms. ii. In addition to temperature, humidity, and velocity variations, smoke detectors are also affected by common environmental conditions as mechanical vibration, electrical interference, presence of aerosols and other environmental influences. Tests for these conditions are also conducted by the testing laboratories in their listing program. Manufacturers' installation guidelines shall be followed for location details.
6. SENSITIVITY	i. Smoke detectors shall be marked with their nominal production sensitivity and tolerance in percent per foot (percent per meter) obscuration, as required by the listing. ii. Smoke detectors that have provision for field adjustment of sensitivity shall have an adjustment range of not less than 0.6 percent per foot (1.95 percent per meter) obscuration. iii. If the means of adjustment of sensitivity is on the detector, a method shall be provided to restore the detector to its factory calibration. iv. Detectors that have provision for program controlled adjustment of sensitivity shall be permitted to be marked with their programmable sensitivity range only.
7. HIGH AIR MOVEMENT AREAS	i. Smoke detectors shall not be located directly in the airstream of supply registers. ii. Smoke detector spacing in high air movement areas shall be in accordance with **Table 8.2.a.**

Table 8.2.a.: Smoke Detector Spacing Based on Air Movement

MINUTES PER AIR CHANGE	AIR CHANGES PER HOUR	SPACING PER DETECTOR
1 Minute	60	11.61
2 Minutes	30	23.23
3 Minute	20	34.84
4 Minute	15	46.45
5 Minute	12	58.06
6 Minute	10	69.68
7 Minute	8.6	81.29
8 Minute	7.5	83.61
9 Minute	6.7	83.61
10 Minute	6	83.61