

Table 8.3: Installation and Spacing of Spot Type Smoke Detection

ITEMS	REQUIREMENTS
1. INSTALLATION AND SPACING OF SPOT TYPE SMOKE DETECTORS	<u>5. SLOPED CEILING, BEAMS RUNNING PARALLEL</u> <ul style="list-style-type: none"> i. For sloped ceiling with beams running parallel up slope, the following shall apply. <ul style="list-style-type: none"> a. Spot-type detector(s) shall be located on the ceiling within beam pocket(s). b. The ceiling height shall be taken as the average height over slope. c. Spacing shall be measured along a horizontal projection of the ceiling. d. Smooth ceiling spacing shall be permitted within beam pocket(s) parallel to the beams. e. For beam depths less than or equal to 10% of the ceiling height ($0.1 H$), spot-type detectors shall be located with smooth ceiling spacing perpendicular to the beams. f. For beam depths greater than 10% of the ceiling height ($0.1 H$), the following shall apply for spacing perpendicular to the beams: <ul style="list-style-type: none"> 1. For beam spacing greater than or equal to 40% of the ceiling height ($0.4 H$), spot-type detectors shall be located in each beam pocket. 2. For beam spacing less than 40% of the ceiling height ($0.4 H$), spot-type detectors shall not be required in every beam pocket but shall be spaced not greater than 50 percent of smooth ceiling spacing.
	<u>6. SLOPED CEILING, BEAMS RUNNING PARPENDICULAR</u> <ul style="list-style-type: none"> i. For sloping ceilings with beams running perpendicular across slope, the following shall apply: <ul style="list-style-type: none"> a. Spot-type detector(s) shall be located at the bottom of the beams. b. The ceiling height shall be taken as the average height over slope. c. Spacing shall be measured along a horizontal projection of the ceiling. d. Smooth ceiling spacing shall be permitted within beam pocket(s). e. For beam depths less than or equal to 10% of the ceiling height ($0.1 H$), spot-type detectors shall be located with smooth ceiling spacing. f. For beam depths greater than 10% of the ceiling height ($0.1 H$), spot-type detectors shall not be required to be located closer than ($0.4 H$) and shall not exceed 50 % of smooth ceiling spacing.
	<u>7. SLOPED CEILING, BEAM POCKETS FORMED BY INTERSECTING BEAMS</u> <ul style="list-style-type: none"> i. For sloped ceilings with beam pockets formed by intersecting beams, the following shall apply: <ul style="list-style-type: none"> a. Spot-type detector(s) shall be located at the bottom of the beams. b. The ceiling height shall be taken as the average height over slope. c. Spacing shall be measured along a horizontal projection of the ceiling. d. For beam depths less than or equal to 10% of the ceiling height ($0.1 H$), spot-type detectors shall be spaced with not more than three beams between detectors and shall not exceed smooth ceiling spacing. e. For beam depths greater than 10% of the ceiling height ($0.1 H$), spot-type detectors shall be spaced with not more than two beams between detectors, but shall not be required to be spaced closer than ($0.4 H$), and shall not exceed 50% of smooth ceiling spacing.