



26 February 2007

FI 064

Question:

Std: NZS 4512

Interpretation:

Issued by the Alarms and Detection Group

405.2.1(m)

A single solid beam, 470mm D x 300mm W, bisects a room 11m wide at a distance 1.5m from one wall and 9.5m from the opposite wall. What heat detector spacings and placements (if any) apply:

- a) In the 1.5m space between the beam and the nearest wall?
- b) In the 9.5m space between the beam and the farthest wall?

a) From Fig 2 two-thirds spacing is required to the first line of detectors which puts them on the ceiling 2m from the wall (i.e. beyond the beam). No detectors are therefore required in the first 1.5m space, provided the total area in that space does not exceed 30m² per 405.3.1 (introduction and (d)).

b) From Fig 2 the beam is treated as a wall and normal spacing applies (i.e. lines 3m and 9m from the far wall), with detectors on the ceiling, noting the overriding requirements of 405.3.1(d) applying to the aggregate of both spaces.

The general principle of 405.2.1(m) is that each beam-to-beam or beam-to-wall space is first assessed separately, and then the requirements are applied on a best-fit basis to aggregations of similarly-treated adjacent areas. Where beams or other protrusions are treated as walls, 405.3.1(d) must be applied twice – once to each beam-to-beam or beam-to-wall space, and secondly to the room as a whole.