

## FLAT ROOF GRADING

### 1. GENERAL

1.01 This section covers the use of dead-level or graded flat roofs of fire-resistive telephone buildings and is intended as a reference for general procedures in arranging details of the roof construction.

1.02 Arrows in the margin indicate changes in the text.

1.03 This section is reissued to suggest taking advantage of improved roofing materials and techniques which allow dead-level roof construction with reduced risk of leakage. The use of a dead-level roof affords several economies, particularly in buildings where vertical growth is planned. With the use of dead-level roof construction, the cost of fill material, the labor to install it and the cost of removal at the time of additional vertical expansion are eliminated.

1.04 Where roof drains are provided it is recommended that the flat roof be slightly pitched for an area of two to three feet in the vicinity of and towards the roof drain. This usually can be accomplished within the roof insulation without disturbing the structural slab. The type and number of drains would be determined by the amount of rainfall experienced in the area.

1.05 For dead-level roofs where no parapet wall is used a slight pitch away from the roof edge or a slight pitch from the gravel stop and coping is suggested to prevent dirty roof water from washing down over the face of the building.

1.06 Where there is an abnormal amount of traffic on a dead-level roof protective measures such as the installation of duckboards or walks might be considered.

### 2. ROOF FILL

2.01 Where pitched roof is used it is desirable that minimum depth of fill consistent with insulating value be provided at low points (leader outlets), also that the fill at ridges be limited to provide a slope sufficient to assure positive drainage. Minimum volume of fill facilitates its removal in connection with building additions, and reduces requirements for step flashing. It is suggested that the fill material have thermal insulation value as well as the qualities to facilitate easy removal.

2.02 Experience indicates advantages in sloping the fill to drain from the roof center toward the outside walls. This arrangement permits wider distribution of runoff with more leader outlets and with scuppers; in general, it also reduces the height of exterior walls.

### 3. EXPANSION JOINTS

3.01 Liberal use of expansion joints extending entirely through the fill is considered effective in preventing damage to surrounding parapet walls by accommodating fill movement due to variations in temperature. Also, to further avoid pressure due to expansion, no fill or insulating materials are permitted to come in contact with parapet walls.

### 4. PERMANENT ROOFS

4.01 Except for references to fill removal, the foregoing provisions are intended to apply to flat roofs of buildings that have attained their ultimate height as well as those designed for future additional stories. However, where it is preferred to use pitched roofs for buildings that are at the ultimate height the use of dead-level roofs for buildings where future stories are to be added may prove advantageous.