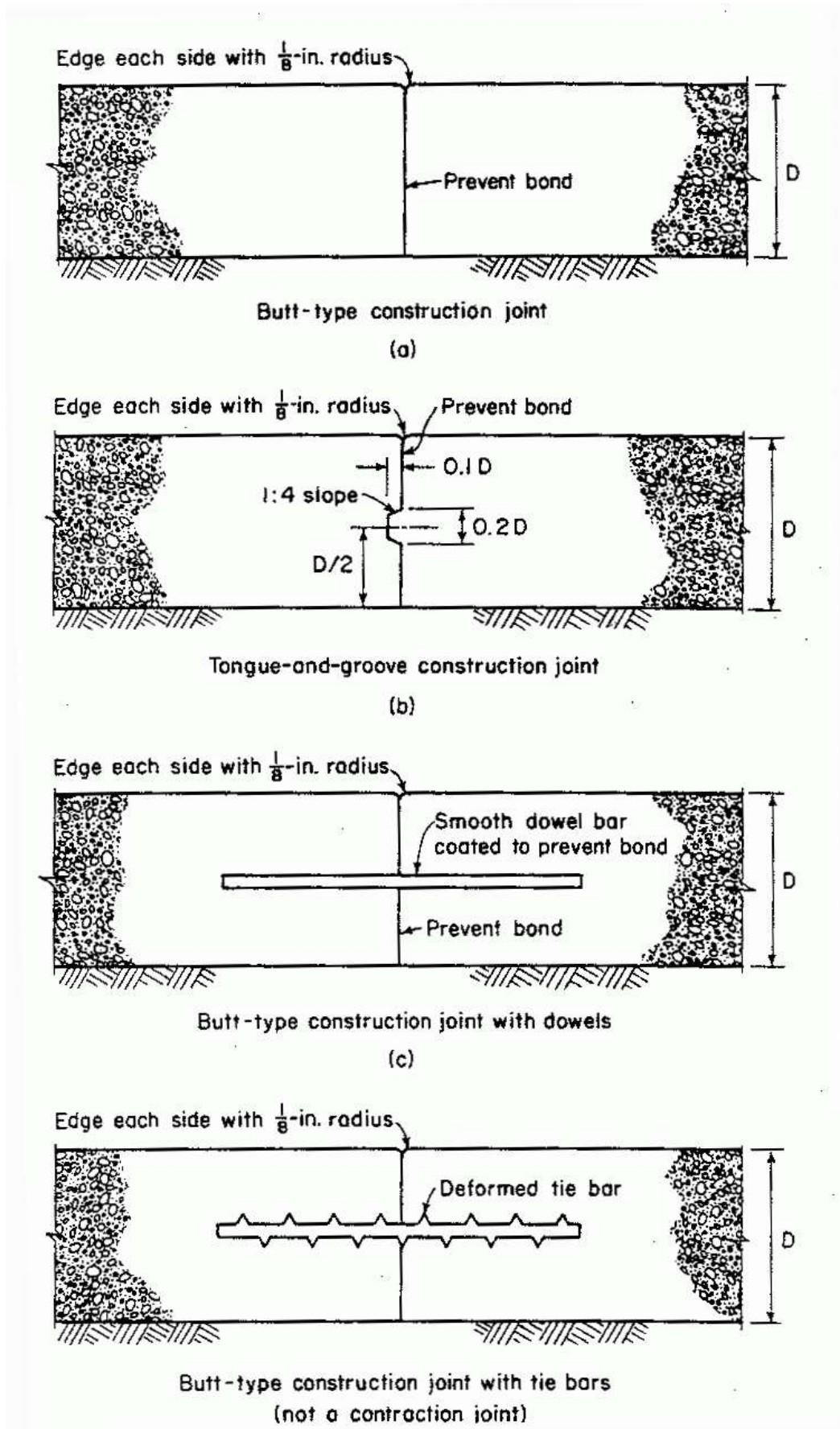
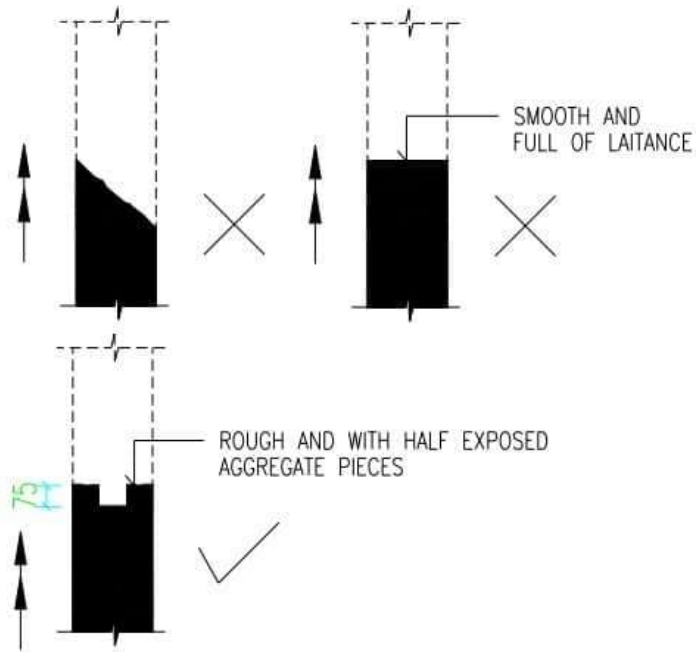


EX.NO: 14 DRAW JOINTS IN STRUCTURES

14.1 LOCATION OF CONSTRUCTION JOINTS FOR DIFFERENT MEMBERS

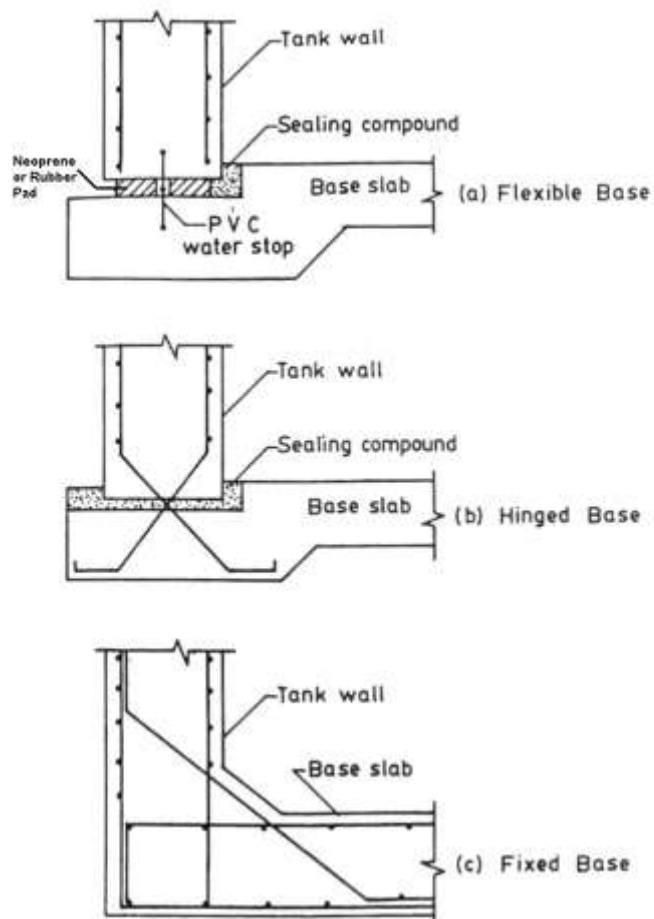


14.1. (a) CONSTRUCTION JOINT INSTALLATIONS AT SLABS AND BEAMS

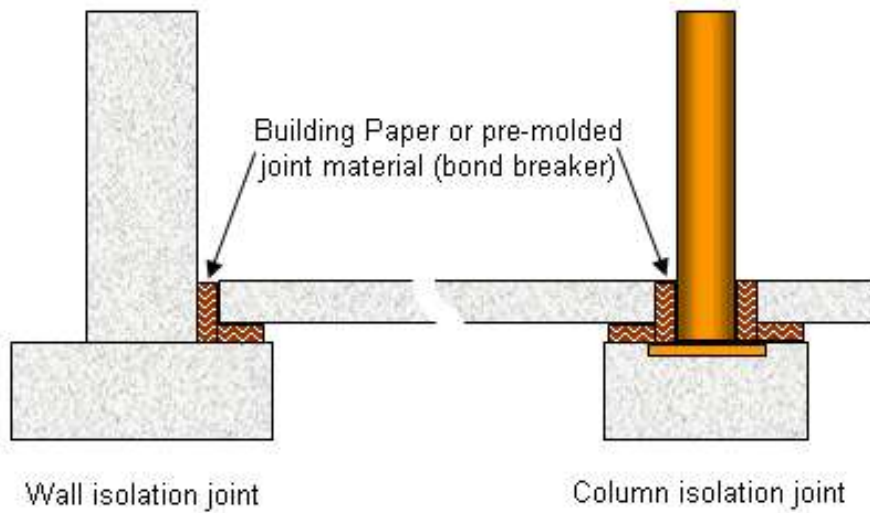


14.1. (b) CONSTRUCTION JOINT INSTALLATIONS AT C OLUMNS

14.2 DRAW DETAILS OF PROVISION OF JOINTS AT JUNCTION BETWEEN WALL AND FLOOR OF A RESERVOIR



EX.NO: 14.3 DRAW DETAILS OF DIFFERENT TYPES OF JOINTS IN STRUCTURE



(A) ISOLATION JOINT DETAIL

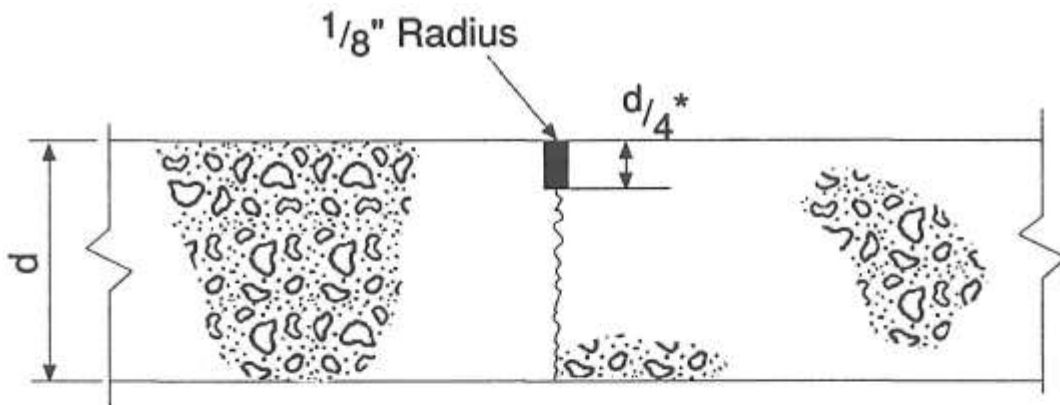
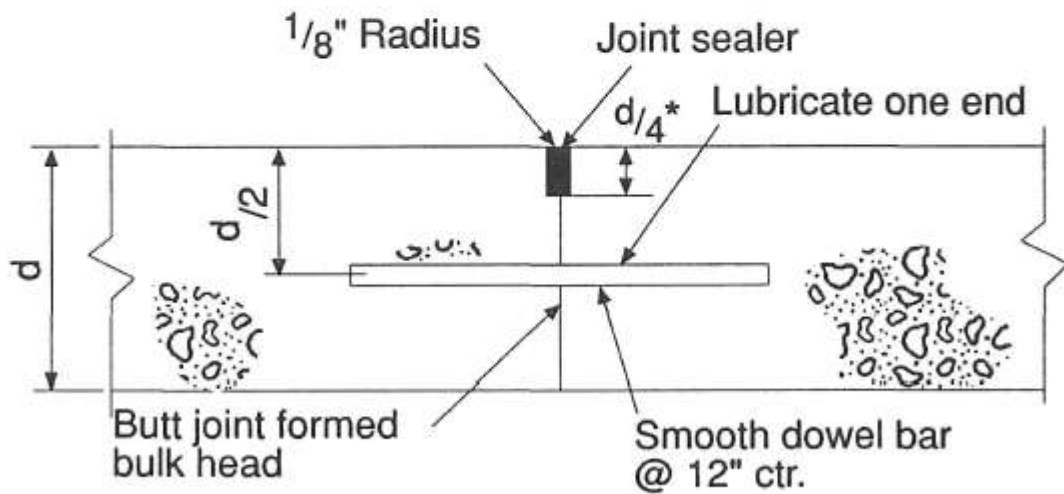


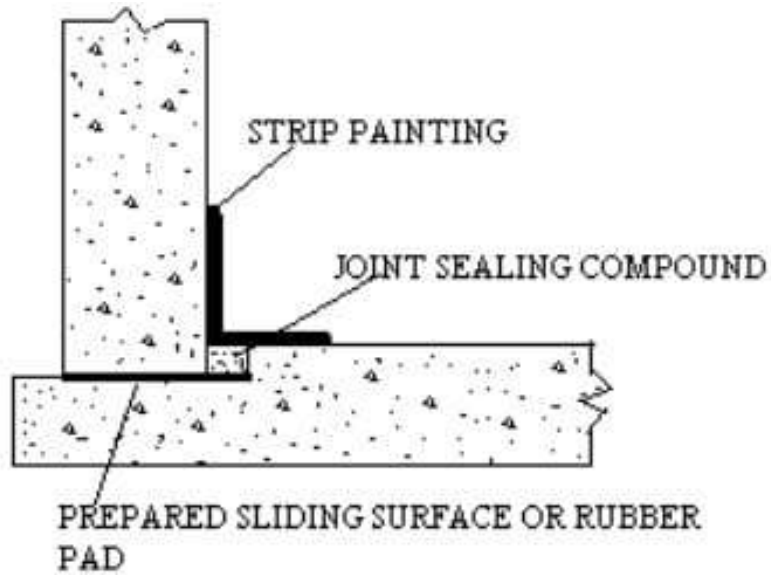
Fig. 4a. Undoweled contraction joint



* $d/3$ for pavements on stabilized subbases

Fig. 4b. Doweled contraction joint

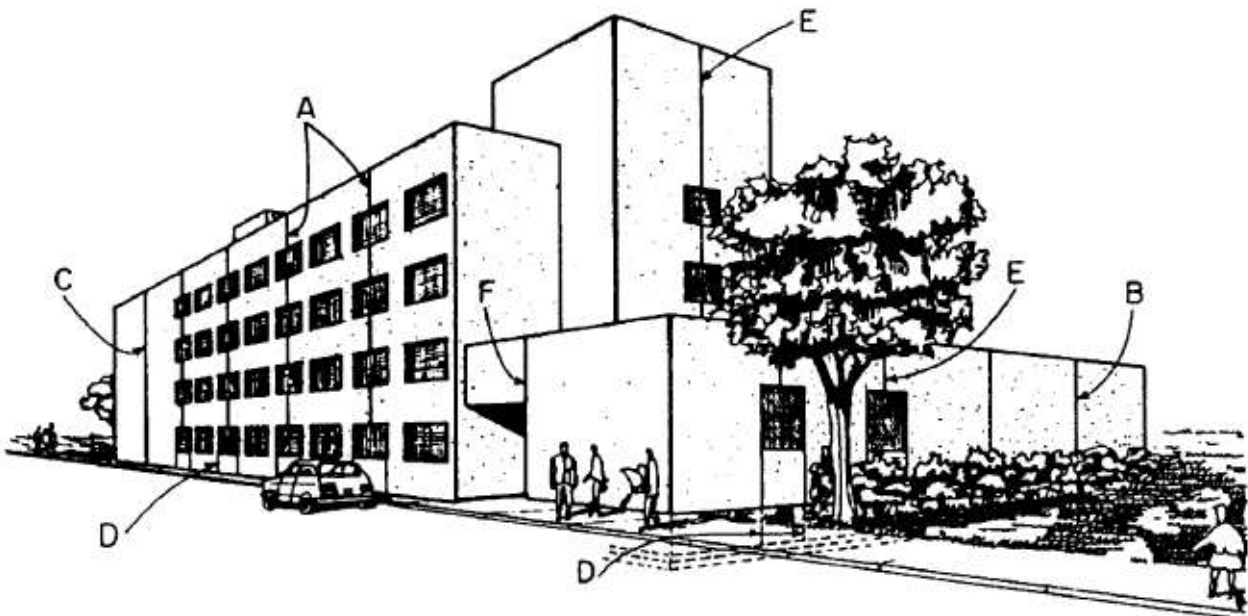
(B) CONTRACTION JOINT



(c) SLIDING JOINT

EX.NO: 14.4 DRAW PLAN SHOWING LOCATIONS OF CONTRACTION AND ISOLATION JOINTS

JOINTS IN CONCRETE CONSTRUCTION (ACI 224.3R-95)



- A. 20 ft (6m) apart in walls with frequent openings.
- B. Never more than 20 ft (6m) apart, walls with no openings.
- C. Within 10 to 15 ft (3 to 5m) of a corner, if possible.
- D. In line with each jamb at first-story level.
- E. Above first story at centerline of opening
- F. Jamb lines are preferable.

Fig. 3.1—Locations for contraction joints in buildings as recommended by the Portland Cement Association (1982).

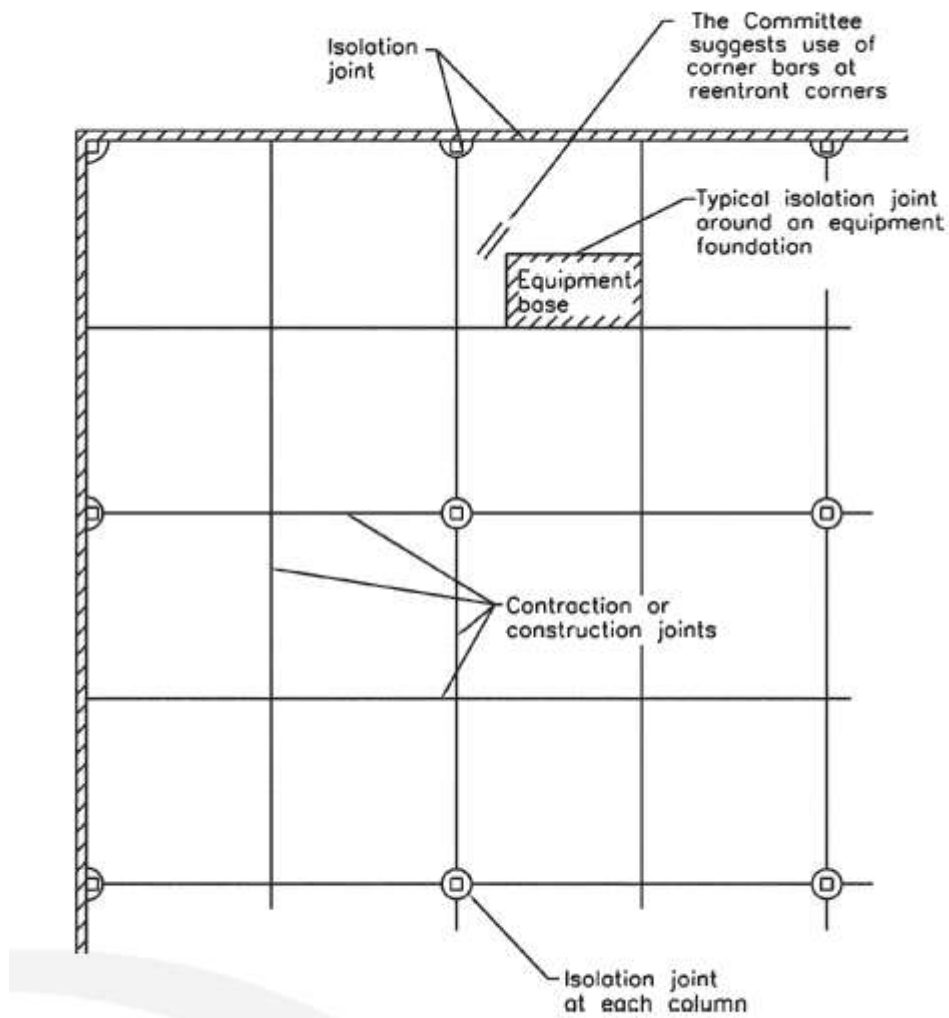


Fig. 5.2.9—Appropriate locations for joints.

JOINTS IN CONCRETE CONSTRUCTION (ACI 224.3R-95)

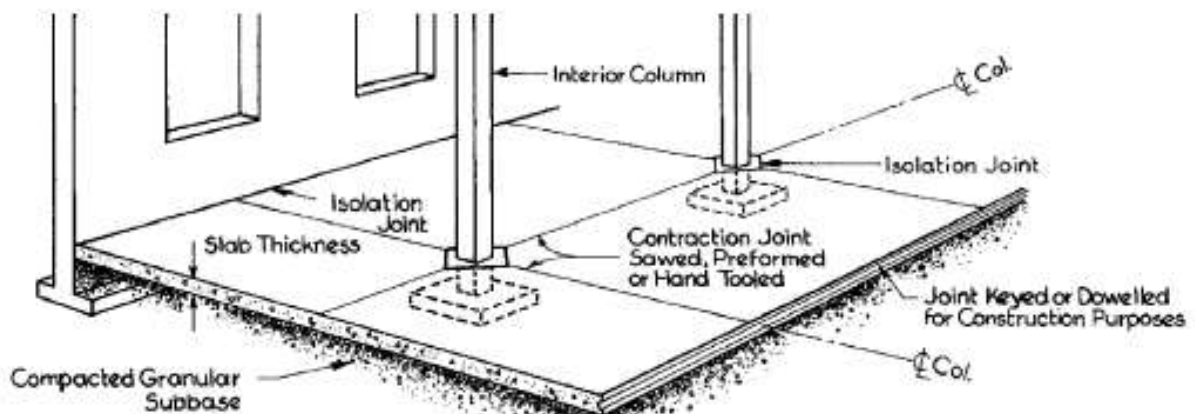
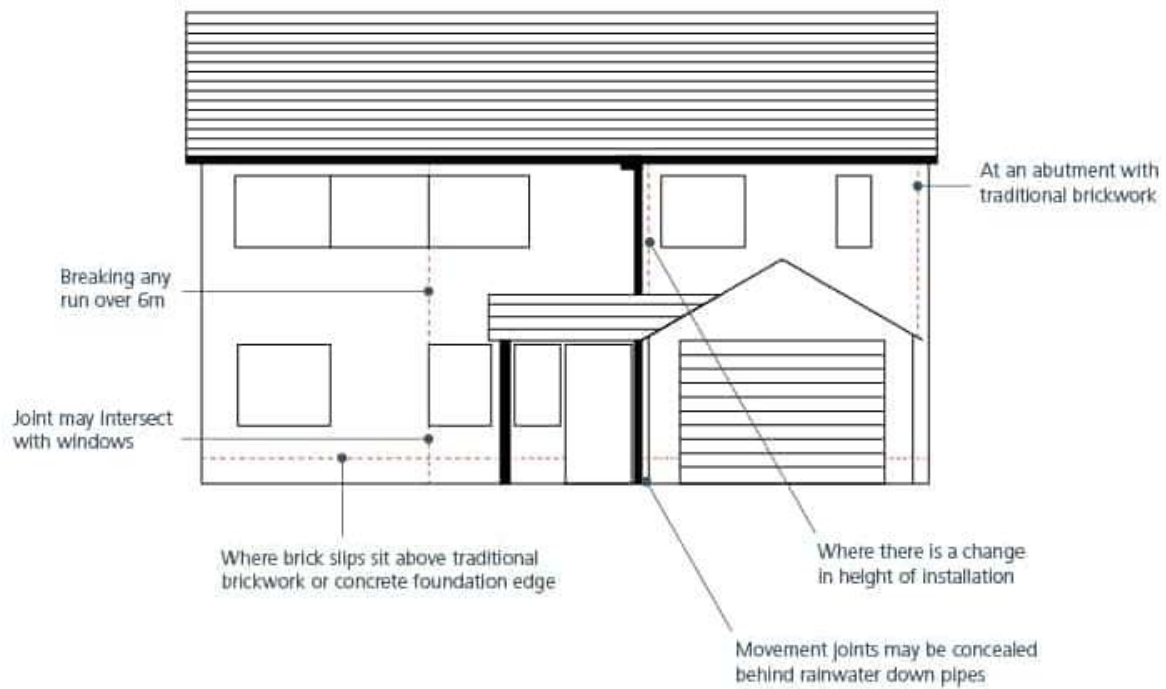


Fig. 5.1—Location and types of joints (ACI 302.1R).

EX.NO:14.5 ILLUSTRATE EXPANSION JOINTS IN WALLS AND ROOFS



1. Many designers consider it good practice to place expansion joints where walls change direction as in L- T- Y-, and U-shaped structures, and where different cross sections develop.

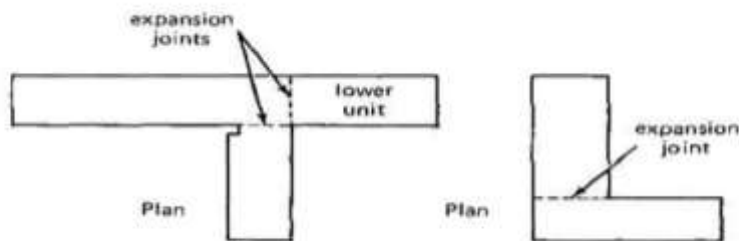


Figure 3 : Joints related to shapes of Building

2. Expansion joints may be necessary at the junction of tall and short buildings (Fig.4) to avoid distress due to differential settlements

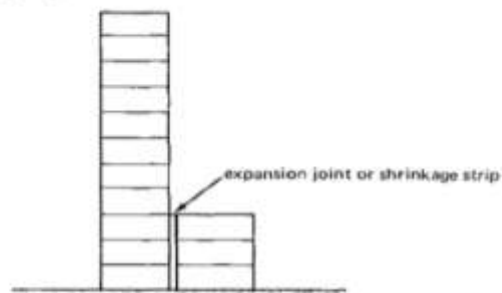


Figure 4 : Joints related to shapes of Building

3. When expansion joints are required in nonrectangular structures, they should always be located at places where the plan or elevation dimensions change radically.

4. The simplest expansion joint is one on a column line with double columns.

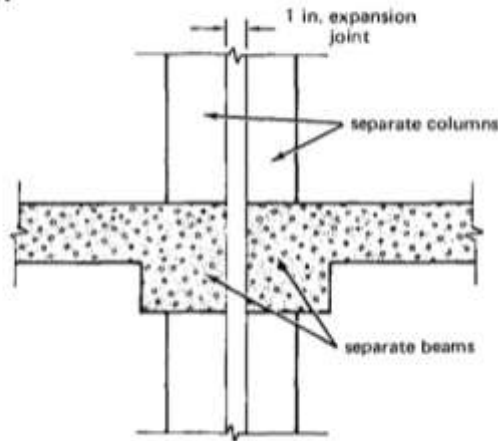


Figure 5 :Joints related to shapes of Building

5. Expansion joints without a double column may be used by introducing them in the third or quarter point in the slab as in fig 6.

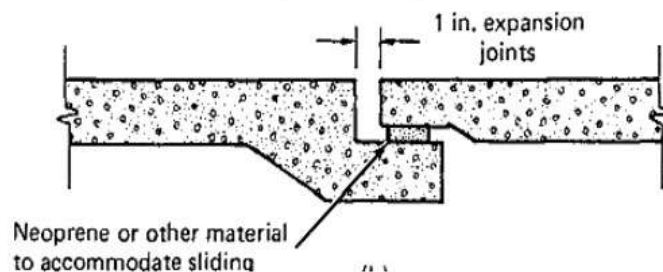
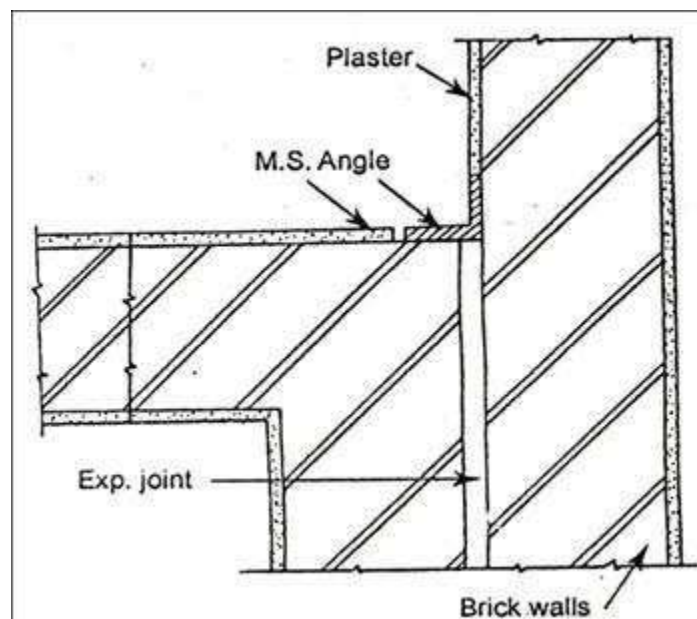
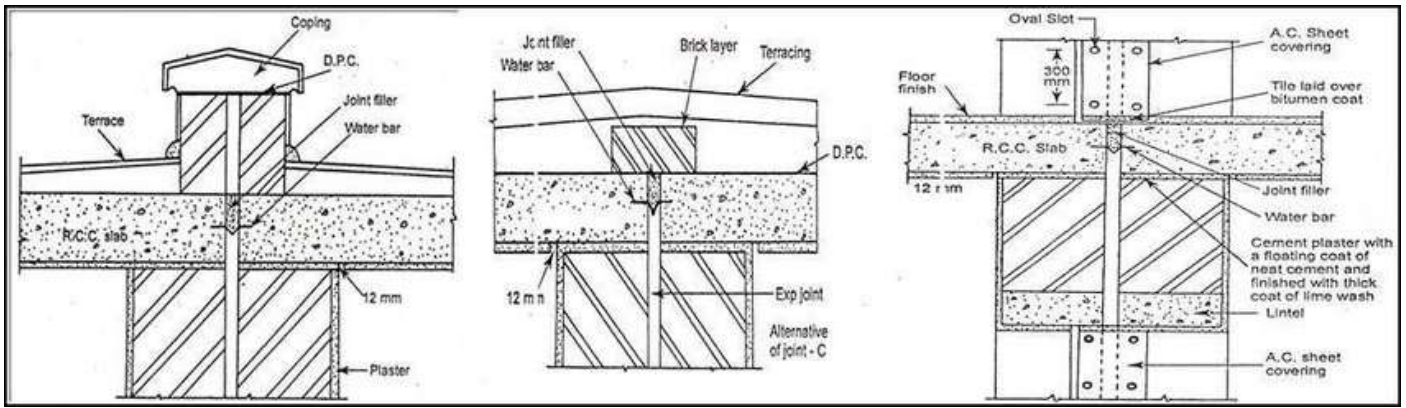


Figure 6 :Joints related to shapes of Building

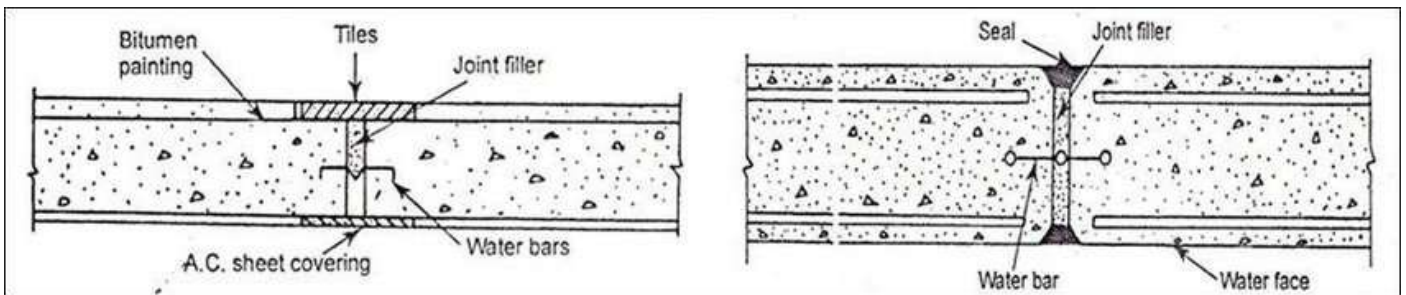
6. Joints should extend through foundation walls, but column footings need not be cut at a joint unless the columns are short and rigid. No reinforcement should pass through these joints; it should terminate 2 in. from the face of the joint. Dowels with bond breaker may be used to maintain plane.



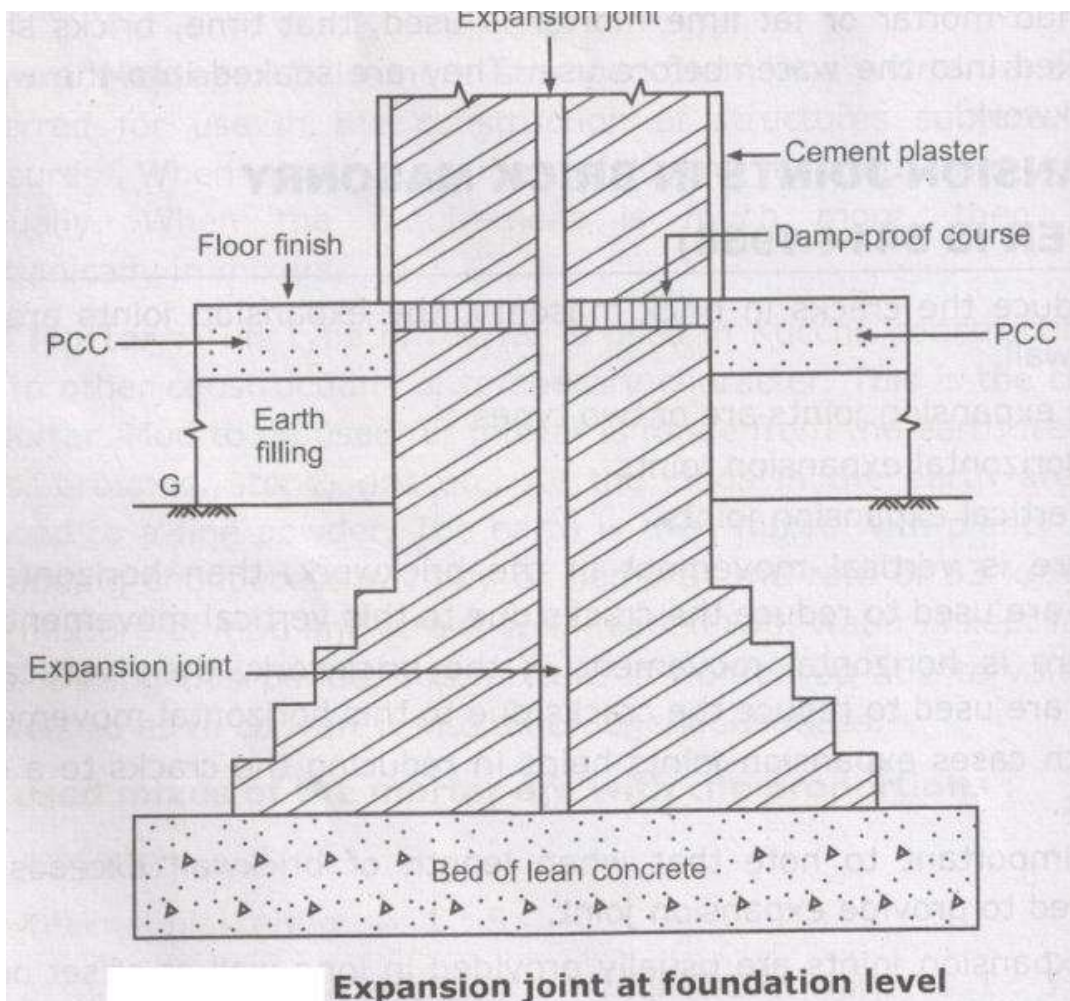
Expansion Joint treatment in walls



Expansion Joint treatment in Framed walls



Expansion Joint treatment in Roofing Slab



Expansion joint at foundation level