

system shall be 35 mm.

3.
- Requirement for the other pre stressed tendons shall be as per Section 6 - Technical Report TR43, second edition.

c. Tendons

1.
- The maximum tendon spacing shall not be more than 8 times the slab thickness or 1.5 m whichever is lesser. In case the banded distributed system is used, tendon spacing should not be more than 10 times the slab thickness in the banded direction. Banded direction where at least 2 duct with 3 strands/duct at least, are passing the columns areas. Column area shall includes the area bounded within distance equal to 0.5 slab thickness all around the column perimeter, otherwise distributed system shall be considered in the respected direction, Fig. (3.9).

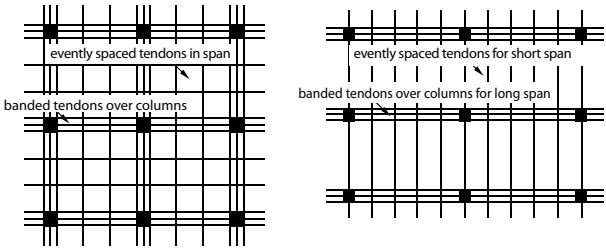


Fig. (3.9) Banded-distributed systems

2.
- Wherever there are certain difficulties to comply with the strands distribution basis, partial pre stressed slab shall be used provided that the PT strands to be compensated with designed conventional steel in the proper locations and directions.
3.
- The minimum horizontal spacing between the ducts is the greater of 75mm or duct width.
4.
- Curved tendons are to be avoided, but in case of difficulty to furnish the straight tendons, hair pins should be used in addition to bottom and top steel mesh not less than T10-200 mm, the curving shall not exceed 1:12.

5.
- Strands shall not be extended from level to another.
6.
- Tendons shall be avoided to be stopped inside the slab without support at ends. Support can be drop or hidden beams, walls or columns.

d. Loads

1.
- Design loads shall comply with project design criteria, BS 6399 and ASCE-7-05 requirements. In no cases, the live load should be less than 2.5 KN/m2.
2.
- Jacking force should be taken as per design code and should be not more than 80% of breaking loads.

e. Deflection control

1.
- Factors related to short-term elastic deflection estimation are as per Fig.(3.10):
2.
- Pre cambering is not allowable in the PT slabs.

Loading	Factor related to shor-term elastic deflection value
Dead	3.0
Post-tensioning (after losses)	3.0
Live	1.5

Fig. (3.10) Factor taking account of long term effects

f. Conventional reinforcement in the pre stressed slab.

1.
- The minimum bottom shrinkage mesh shall be applied by using T10 each 300mm.
2.
- All support areas shall have the applicable code specified minimum reinforcement in the top for purpose of distributing the cracks and strength design requirements.
3.
- Conventional reinforcement should be placed along edges of all slabs; this should include U-bars laced with at least tow longitudinal base top and bottom, Fig. (3.11).