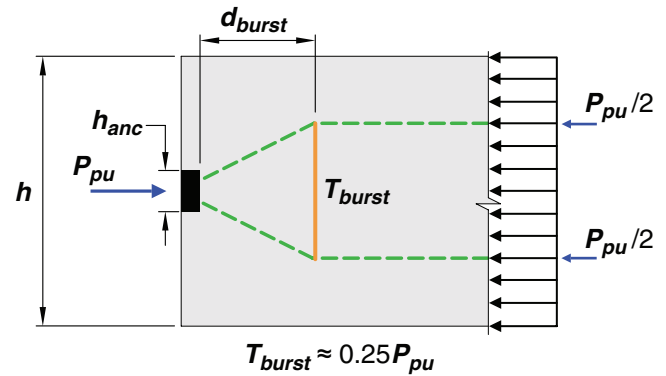
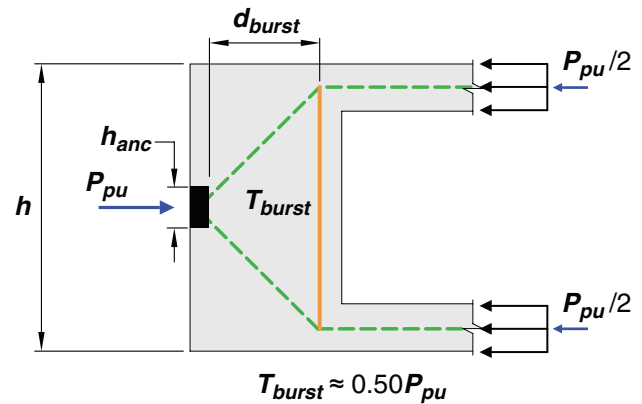


## CODE

## COMMENTARY



(a) Rectangular section



(b) Flanged section with end diaphragm

Fig. R25.9.4.4.2—Effect of cross section change.

**25.9.4.4.3** For anchorage devices located away from the end of the member, bonded reinforcement shall be provided to transfer at least  $0.35P_{pu}$  into the concrete section behind the anchor. Such reinforcement shall be placed symmetrically around the anchorage device and shall be fully developed both behind and ahead of the anchorage device.

**25.9.4.4.4** If tendons are curved in the general zone, bonded reinforcement shall be provided to resist radial and splitting forces, except for monostrand tendons in slabs or where analysis shows reinforcement is not required.

**25.9.4.4.5** Reinforcement with a nominal tensile strength equal to 2 percent of the factored prestressing force shall be provided in orthogonal directions parallel to the loaded face of the anchorage zone to limit spalling, except for monostrand tendons in slabs or where analysis shows reinforcement is not required.

**R25.9.4.4.3** Where anchorages are located away from the end of a member, local tensile stresses are generated behind these anchorages (Fig. R25.9.1.1b) due to compatibility of deformations ahead of and behind the anchorages. Bonded tie-back reinforcement parallel to the tendon is required in the immediate vicinity of the anchorage to limit the extent of cracking behind the anchorage. The requirement of  $0.35P_{pu}$  was derived using 25 percent of the unfactored prestressing force being resisted by reinforcement at  $0.6f_y$ , considering a load factor of 1.2. Therefore, the full yield strength of the reinforcement,  $f_y$ , should be used in calculating the provided capacity.

**R25.9.4.4.5** The spalling force for tendons for which the centroid lies within the kern of the section may be estimated as 2 percent of the total factored prestressing force, except for multiple anchorage devices with center-to-center spacing greater than 0.4 times the depth of the section.