



Bridge Design Details 14.6 January 2023

Box Girder Cell Access for Inspection and Repair

Although rare, when tendons are exposed within the cells of post-tensioned concrete box girder bridges, access must be provided to those cells for removal of deck forms and future inspection of the tendons. Use standard specifications to detail what is required for removing forms to provide permanent access to cells. More common is providing access for installation and repair of utilities in cells without soffit or deck openings.

A minimum of two access openings per span and multiple openings in interior webs are required to provide access to all bays for future access of spans with exposed tendons and utilities. Openings in diaphragms and webs should follow details and sizes given in the *Standard Plans*. Temporary openings in the top or bottom slab shall be permitted for removal of deck forms. Location and maximum size of temporary openings shall be shown and indicated as optional for the Contractor. Temporary openings 4'-0" x 4'-0" will be permitted in the top or bottom slab, where indicated, at Contractor's option. Openings in the top slab (deck) are preferred for overcrossings, while openings in bottom slab (soffit) may be preferred for undercrossings. Final location of access openings is determined by the Engineer after considering structural effects, security and limiting future disruption to traffic.

If possible, form lumber should not have to be moved through more than two openings in diaphragms or webs. Permanent stay-in-place galvanized, corrugated steel forms are an acceptable alternative for Contractor. Using steel forms would allow Contractor to leave forms in cells; if lumber forms are used all material should be removed for future access.

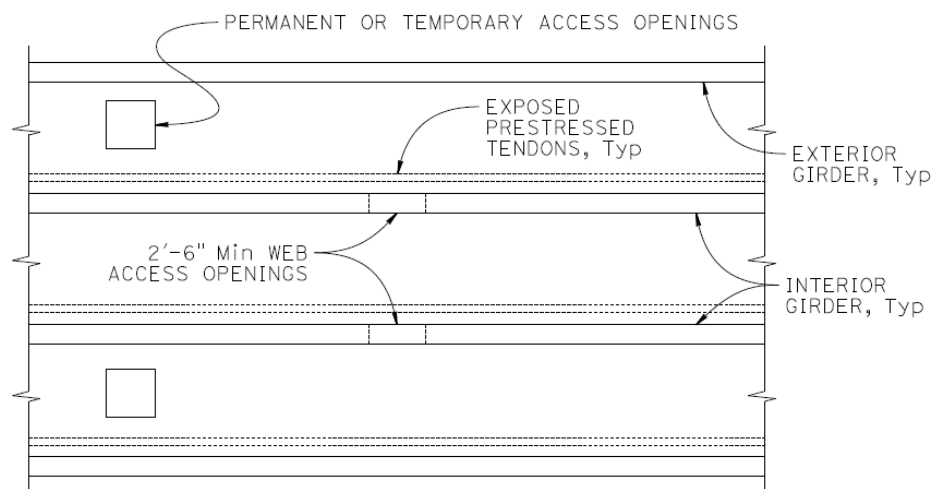


Figure 14.6.1 Girder Layout with Access to Tendons