

Proposal for BDDM – Stirrup Clearance for Box Girders

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Modify Figure 1.1.13.1B in Section 1.1.13.1(2) as follows:

1.1.13.1 Reinforcement, General - (continued)

(2) Minimum Bar Covering

The minimum covering measured from the surface of the concrete to the face of any uncoated or coated reinforcing bar should be not less than 2" except as follows.

Top of deck slab (main reinforcing)*	2.5"	
Bottom of deck slab*	1.5"	
Stirrups and ties in T-beams, bottom rebar of slab spans, and curbs and rails*	1.5"	Deleted: and outside faces of box girders
<u>Stirrups in box girder stems with non-bundled ducts **</u>	<u>2.5"</u>	
<u>Stirrup ties in box girder stems with non-bundled ducts **</u>	<u>2"</u>	
<u>Bottom slab steel in box girders</u>	1"	Deleted: Stirrup ties and b Deleted: at inside faces of
All faces in precast members (slabs, box beams and girders)	1"	
Pier and column spirals, hoops or tie bars+ (increase to 4" if exposed to marine environment or concrete is deposited in water)	2.5"	
Footing mats for dry land foundations (use 6" if ground water may be a construction problem)	3"	
Footing mats for stream crossing foundations	6"	

*Use 2" minimum cover for all surfaces exposed to the effects of a marine environment, Section 1.1.25.1.

**For box girder stems with bundled ducts, provide 3" clearance to ducts and place stirrups directly against ducts.

+Cover over supplementary cross-ties may be reduced by the diameter of the tie.

Figure 1.1.13.1B

Background

Standard detail drawing DET3130 has already been revised to reflect a change in stirrup location. This article matches Figure 1.1.13.1B with the changes in the standard detail. This change, along with a concurrent change to concrete reduce aggregate size for box girder bottom slabs and stems, will help improve concrete flow and result in higher quality construction.