

(Effective until July 1, 2020)

WAC 51-50-21070 Section 2107—Allowable stress design.

2107.1 General. The design of masonry structures using *allowable stress design* shall comply with Sections 2106 and the requirements of Chapters 1 through 8 of TMS 402/ACI 530/ASCE 5 except as modified by Sections 2107.2 through 2107.4.

2107.2 TMS 402/ACI 530/ASCE 5, Section 2.1.8.7.1.1, lap splices. In lieu of Section 2.1.8.7.1.1, it shall be permitted to design lap splices in accordance with Section 2107.2.1.

2107.2.1 Lap splices. The minimum length of lap splices for reinforcing bars in tension or compression, l_d , shall be $l_d = 0.002d_b f_s$ (**Equation 21-1**)

$$\text{For SI: } l_d = 0.29d_b f_s$$

but not less than 12 inches (305 mm). In no case shall the length of the lapped splice be less than 40 bar diameters.

where:

- d_b = Diameter of reinforcement, inches (mm).
- f_s = Computed stress in reinforcement due to design loads, psi (MPa).

In regions of moment where the design tensile stresses in the reinforcement are greater than 80 percent of the allowable steel tension stress, F_s , the lap length of splices shall be increased not less than 50 percent of the minimum required length, but need not be greater than $72d_b$. Other equivalent means of stress transfer to accomplish the same 50 percent increase shall be permitted. Where epoxy coated bars are used, lap length shall be increased by 50 percent.

[Statutory Authority: RCW 19.27.031 and 19.27.074. WSR 16-03-064, § 51-50-21070, filed 1/19/16, effective 7/1/16. Statutory Authority: RCW 19.27.031 and chapters 19.27 and 34.05 RCW. WSR 13-04-067, § 51-50-21070, filed 2/1/13, effective 7/1/13. Statutory Authority: RCW 19.27.031 and 19.27.074. WSR 10-03-097, § 51-50-21070, filed 1/20/10, effective 7/1/10.]

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[Statutory Authority: RCW 19.27.031 and 19.27.074. WSR 20-01-090, § 51-50-21070, filed 12/12/19, effective 7/1/20; WSR 16-03-064, § 51-50-21070, filed 1/19/16, effective 7/1/16. Statutory Authority: RCW 19.27.031 and chapters 19.27 and 34.05 RCW. WSR 13-04-067, §

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