



DSA Structural Amendments under review are highlighted in GRAY

Template 19-11

2001 CBC - Chapter 19A  
CONCRETE

Section - 1905A - CONCRETE QUALITY, MIXING AND PLACING

Subsection(s) - 1905A.3.1 - 1905A.3.2.2

1 **1905A.3 Proportioning on the Basis of Field Experience**  
2 **(Method B) and Trial Mixtures (Method C).**

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4 **1905A.3.1 Standard deviation.**

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6 **1905A.3.1.1 (Method B) with test records.** Where a *testing laboratory acceptable to the enforcement agency has records of compressive strength tests*, a standard deviation shall be established.  
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8 Test records *from which* a standard deviation *is* calculated *shall*:

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11 1. Represent materials, quality control procedures and conditions similar to those expected, and changes in materials and proportions within the test records shall not have been more restricted than those for proposed work.

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16 2. Represent concrete produced to meet a specified strength or strengths  $f'_c$  within 1,000 psi (6.89 MPa) of that specified for proposed work.

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20 3. Must consist of at least 30 consecutive tests or two groups of consecutive tests totaling at least 30 tests as defined in Sections 1905A.3.3 and 1905A.6.1.4, except as provided in Section 1905A.3.1.2.

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25 **1905A.3.1.2** Where a concrete production facility does not have test records meeting requirements of Section 1905A.3.1.1, but does have a record based on 15 to 29 consecutive tests, a standard deviation may be established as the product of the calculated standard deviation and the modification factor of Table 19A-A-6. *The compressive test records used for this calculation* must meet the requirements of Section 1905A.3.1.1, Items 1 and 2, and represent only a single record of consecutive tests that span a period of not  
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33 less than 45 calendar days.

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35 **1905A.3.2 Required average strength.**

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37 **1905A.3.2.1** Required average compressive strength  $f'_{cr}$  used as  
38 the basis for selection of concrete proportions shall be the larger of  
39 Formula (5A-1) or (5A-2) using a standard deviation calculated in  
40 accordance with Section 1905A.3.1.1 or 1905A.3.1.2.

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$$f'_{cr} = f'_c + 1.34s \quad (5A-1)$$

42 or

43 
$$f'_{cr} = f'_c + 2.33s - 500 \quad (5A-2)$$

44 For **SI**: 
$$f'_{cr} = f'_c + 2.33s - 3.45$$

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46 **1905A.3.2.2** Where test records meeting the requirements of Sec-  
47 tion 1905A.3.1.1 or 1905A.3.1.2 above are not available, Method  
48 A or C shall be used.