

# ERRATA

## PCI Design Handbook

### Precast and Prestressed Concrete

#### Fifth Edition — MNL 120-99

Prepared by

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In 1999, the Precast/Prestressed Concrete Institute published the Fifth Edition of the PCI Design Handbook: Precast and Prestressed Concrete. Although careful efforts were made to provide an accurate document, some errors have been discovered. As this edition of the handbook is used, additional errata may be found. You are urged to notify PCI of these items, and to send any questions or comments you may have regarding the presentation of the material in the handbook. Comments on any new material you feel should be included in future editions are equally welcome. Direct your comments to Jason J. Krohn (jkrohn@pcinst.com), PCI's technical services manager, at PCI headquarters (209 W. Jackson Blvd., Chicago, IL 60606-6938).

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1. Page Index-2 — The page number for “Creep strain, table” should be 3-87. The page number for “Creep, correction factors” should be 3-87.
2. Page Index-3 — The page number for “Equivalent volume change strains, table” should be 3-97.
3. Page 1-26 — In the right column, last paragraph of section 1.3.2, “C 1019” should be changed to “C 109.”
4. Page 2-30 — In the table for 4LHC12, span of 33 ft, 78-S stranding, change the capacity from “122” to “160.”
5. Page 2-37 — In the table for FS6, span of 23 ft, 58-S stranding, change the capacity from “57” to “68.”
6. Page 2-48 — In Figure 2.6.1, the interaction diagram shown in the upper right-hand quadrant of the page is for an 18 x 18 in. column with 4 strands, not 8 strands.
7. Page 2-50 — For the interaction diagram shown in the upper left-hand quadrant of Figure 2.6.2, the text “#PS4-#10” should be changed to “4-#10.”
8. Page 3-18 — In the right column, middle of the page, the term “ $M_u/I$ ” should be changed to “ $M_u/I$ .”
9. Page 3-20 — In the right column, the line reading as “ $M_c = 1.53(67.5) = 103$  kip-in” should be changed to “ $M_c = 1.53(36.3) = 55.5$  kip-in.”
10. Page 3-25 — For the table in Figure 3.6.2, the “a” in the second line of the table heading should be changed to “ $\alpha$ ” (alpha).
11. Page 3-34 — In the right column, “ $M = 205.1$  kip-ft” should be inserted after the line that reads “Maximum moment at foundation.”
12. Page 3-34 — In the right column, at the end of the calculations for  $f_{ut}$ , the term “= 205.1 kip-ft” should be eliminated.
13. Page 4-7 — In the right column, second line, “ $\omega_p$ ” should be changed to “ $\omega_p$ .” This change should also be made in the fifth line.
14. Page 4-9 — In the left column, midway down, the term “ $\omega_p$ ,” should be eliminated from the front of this equation (in front of the brackets).
15. Page 4-10 — In Figure 4.2.2, on the right-hand side, inside the first six-sided shape up from the bottom, the term “ $\omega_p$ ” should be eliminated.
16. Page 4-14 — In Figure 4.2.6, the arrow from the rectangle containing “ $c = a/\beta_1$ ” to the six-sided figure containing “ $c/d_t > 0.375$ ” should be eliminated.
17. Page 4-24 — In the table for Example 4.2.8, the value “+2400” relating to  $0.70f'_{ci}$  should be changed to “+2800.”
18. Page 4-32 — In the solution to Example 4.3.2, part 3.a., the result should be changed from 5.2 kips to 5.65 kips.
19. Page 4-32 — In the solution to Example 4.3.2, part 3.b., the result should be changed to:  $1.69 + 28.0(V_u d/M_u)$ .
20. Page 4-35 — In the right column, second part of Eq. 4.3.10, the “ $T$ ” should be a script “ $l$ .”
21. Page 4-36 — In the last paragraph of the right column, “1.75, 2.5 and 3.25” should read “2.25, 2.75, and 3.25.” Reference 4 gives these distances as  $4d + 3/4$ .
22. Page 4-38 — In the left column, in the calculations for “ $l_e$ ,” the term “(1)” should be deleted.
23. Page 4-38 — In the left column, in the calculations for “ $A'_{cs}$ ,” the term “4.12” should be changed to “3.4.” The term “0.39” should be changed to “0.47.”
24. Page 4-42 — Midway down in the right column, part 8, the line “=  $3.16 - 2.82 = 0.33 < 3.28$  in<sup>3</sup>” should read “=  $3.16 - 2.82 = 0.34 < 3.35$  in.<sup>2</sup>”
25. Page 4-53 — In the right column, first line, the term “167” should be changed to “143.” In the next line, the term “129” should be changed to “125.”
26. Page 4-53 — In the right column, third line, the term “167” should be changed to “143.” The term “298” should be changed to “290.” In the next line, the term “298” should be changed to “290.”
27. Page 4-53 — In the right column, fifth line, the term “129” should be changed to “125.” The term “110 kips” should be changed to “106 kips.”
28. Page 4-53 — In the right column, seventh line, the term “129” should be changed to “125.” The term “0.00102” should be changed to “0.0019.”
29. Page 4-54 — In the left column, midway down, the term “0.00102” should be changed to “0.0019.” The term “0.0165” (3 places) should be changed to “0.0174.” The term “13.3 in.” should be changed to “12.6 in.” The term “24.2 in.” should be changed to “23.0 in.”
30. Page 4-54 — In the left column, last paragraph, first sentence, delete “to pocket B.”
31. Page 4-54 — In the left column, last paragraph, second sentence, add “(Pocket A)” to the end of the sentence.
32. Page 4-54 — In the left column, last paragraph, third sentence, change “Between pockets B and” to “From that point to.”

33. Page 4-54 — In the right column, second line, change the number “0.00794” to “0.00667.”
34. Page 4-54 — In the right column, lines 24 and 25, change “pocket B” to “pocket A.”
35. Page 4-54 — In the right column, line 25, change “193.1” to “171.6.”
36. Page 4-57 — In the left column, near the bottom, the term “ $1.3l_d$ ” should be changed to “ $l_d$ .” In that same line, the number “33” should be changed to “25.” In the next line, the number “1.3” should be eliminated.
37. Page 4-57 — In the left column, the second to last line should be changed from “= 78 - 39 + 33” to “= 78 - 39 + 25.”
38. Page 4-57 — In the left column, the last line should be changed from “= 72 in. (6 ft - 0 in.)” to “= 64 in. (5 ft - 4 in.)”
39. Page 4-57 — In the right column, the third line should be changed from “ $1.3l_d = 22$  in. (say, 2 ft - 0 in)” to “ $l_d = 17$  in. (say, 1 ft - 6 in.)”
40. Page 4-76 — In the left column, third line, in the  $y'$  term, the factor “0.090” should be changed to “0.80.”
41. Page 5-23 — In the left column, the graphic of the 3-point pick is drawn such that the arrowhead indicating the ROLLING BLOCK is actually pointing to the lift line. This arrowhead should point to the circle under the “inverted V” created by the lift line.
42. Page 6-14 — In the left column, the second line after the sketch should read “8 — 1/2 in. diam. studs” instead of “6 — 1/2 in. diam. studs.”
43. Page 6-15 — In the left column, the eighth line from the top, the value “35.0” used for  $P_u$  in equation 6.5.13 should be changed to “24.0.”
44. Page 6-15 — In the left column, the ninth line from the top, “0.98” should be changed to “0.60.”
45. Page 6-15 — In the left column, the fourth line in section 2.c., the result “0.71” should be changed to “0.56.”
46. Page 6-28 — In the left column, the eleventh line from the top, in the denominator the term “ $3.6e$ ” should be changed to “ $3.6e$ ” (i.e.,  $e$  is a variable, not a subscript).
47. Page 6-28 — In the right column, first line, the word “Tables” should be changed to “Figures.”
48. Page 6-37 — In Figure 6.12.1, second row, third detail from the left, the weld between the reinforcing bar and the structural tube should be indicated as a “Flare Bevel” type instead of a “Fillet” type.
49. Page 6-47 — In Figure 6.15.2, under E70 Electrode, the design strength value for a 5/16 in. weld size should be changed from 6.96 to 6.69.
50. Page 6-60 — Along the left side of Figure 6.15.7C, the column heading “ $l_e - h$ ” should be changed to “ $h - l_e$ .”
51. Page 6-62 — In Figure 6.15.10, the column heading “Tonsile Stress” should be changed to “Tensile Stress.”
52. Page 7-5 — In Figure 7.2.1(B), the column heading labeled as “(X)” should be changed to “(Z).”
53. Page 7-5 — In Figure 7.2.1(C), the weld symbol should be changed to a fillet weld along both sides of the connection angle, as shown in Figure 7.2.1(A).
54. Page 7-5 — In Figure 7.2.1(D), the heading should be changed to “VERTICAL LOAD TRANSFER IN Y DIRECTION.”
55. Page 9-17 — In the right column, “Example 9.1.1” should be re-named “Example 9.1.3.” Examples 9.1.1 and 9.1.2 are contained in Figure 9.1.1 on page 9-5.
56. Page 9-19 — In Figure 9.1.4, the extension line for the dimension “ $d = 1.5$ ” CLEAR (TYP.)” should align with the wythe ties, not the wire reinforcement.
57. Page 9-31 — In Table 9.3.1, Part III.4., the footnote superscript at the end of this sentence, “b,” should be changed to “c.”
58. Page 10-59 — In the left column, ACI Code section 16.6.2.2(b), the words “or a least” should be changed to “or at least.”
59. Page 11-30 — On the right side, second box down, the title “HALF CIRCLE” should be changed to “PARTIAL CIRCLE.”
60. Page 11-33 — At the end of footnote “b” the term “1 N/mm<sup>2</sup>” should be changed to “1 N/m<sup>2</sup>.”