ERRATA as of July 22nd, 2010
ACI SP-17(09)
ACI Design Handbook
1st printing

Page 34, Step 8, Calculation revised as:

~~$$A_{v,min} = 0.75\sqrt{f'_c}\frac{b_{ws}}{f_y}$$~~

~~but not less than $\frac{50b_{ws}}{f_y}$~~

$$A_{v,min} = 0.75\sqrt{f'_c}\frac{b_w s}{f_y}$$

but not less than $\frac{50b_w s}{f_y}$

Page 35, Step 1, Calculation revised as:

– 4.47 kip/ft~~(23.5 in.^{2})~~**(23.5 in.)^2**/24 = 983. in.-kip

Page 38, Step 5, Calculation revised as:

~~$$\phi V_u = \frac{24.7\text{ kip} + 0.75(0.22\text{ in.}^2)60\text{ kip/in.}^2(20\text{ in.})}{10}$$~~

$$\phi V_u = 24.7\text{ kip} + \frac{0.75(0.22\text{ in.}^2)60\text{ kip/in.}^2(20\text{ in.})}{10}$$

Page 38, Step 7, code references revised as:

~~11.5.4.1~~ 11.5.6.1	Step 7 – Determine distance ℓ_{v1}, distance beyond x_1 at which no stirrups are required. Find $\ell_{v1} = (V_u - V_c/2)/w_u$ Compute $x_1 + \ell_{v1}$ Conclude: use s = 7 in. until $\phi V_u < 44.5$ kip and use s = 10 in. until $\phi V_u < 0.5\phi V_c$	ℓ_{v1} = (22.3 kip – 24.7 kip/2)/4.6 kip/ft = 2.16 ft $x_1 + \ell_{v1}$ = 4.50 ft + 2.16 ft = 6.66 ft = 80 in. From face of support use 3 in. space then 5 spaces @ 7 in. (35 in.) and 5 spaces @ 10 in. (50 in.) 88 in. > 80 in.

Page 40, Step 1, Calculation revised as:

~~$\phi V_c = 4(0.75)(\sqrt{5000}\text{ psi})(24\text{ in.} + d + 16\text{ in.} + d)d\text{ in.}$~~

$\phi V_c = 4(0.75)(\sqrt{5000}\text{ psi})2(24\text{ in.} + d + 16\text{ in.} + d)d\text{ in.}$

Page 41, ALTERNATE METHOD, Step 3, Calculation revised as:

$K2 = 0.778 + (0.763 - 0.778)(3.67 -$ ~~0.60~~ **3.6**$)/(3.8 - 3.6)$

Page 42, Step 2, Calculation revised as:

= 252.6 kip – (1.188 ~~in./kip~~ **kip/in.**)d – (0.0372 ksi)d^2

Page 42, Step 3, Calculation revised as:

~~$\phi V_c = 0.75[4(\sqrt{3000}\text{ lb/in.}^2)4(16 + d)\text{ in.}[(d)\text{ in.}]/$~~

$\phi V_c = 0.75[4(\sqrt{3000}\text{ lb/in.}^2)4(16 + d)\text{ in.}(d)\text{ in.}]/$

Page 43, Shear Example 9 revised as:

Given:

~~$V_n = 4(\alpha_s d/b_o + 2)(\sqrt{f'_c})b_o d \leq 4(\sqrt{f'_c})b_o d$~~

$V_n = (\alpha_s d/b_o + 2)(\sqrt{f'_c})b_o d \leq 4(\sqrt{f'_c})b_o d$

Page 44, Shear Example 10 revised as:

Given:

~~$V_n = 4(\alpha_s d/b_o + 2)(\sqrt{f'_c})b_o d \leq 4(\sqrt{f'_c})b_o d$~~

$V_n = (\alpha_s d/b_o + 2)(\sqrt{f'_c})b_o d \leq 4(\sqrt{f'_c})b_o d$

Page 45, Shear Example 11 revised as:

f'_c = ~~4000~~ **3000** psi

Page 46, Step 2, Calculation revised as:

~~$T_{cr} = 4(0.75)(\sqrt{5000}\text{ psi})(384\text{ in.})^2/80 = 391{,}000\text{ in.}\cdot\text{lb}$~~

$T_{cr} = 4(0.75)(\sqrt{5000}\text{ psi})(384\text{ in.}^2)^2/80 = 391{,}000\text{ in.}\cdot\text{lb}$

Page 46, Step 3, Calculation revised as:

~~$f_{vt} = 53\text{ ft}\cdot\text{kip }(12\text{ in./ft})66\text{ in.}/[1.7(256\text{ in.}^2)] = 0.377\text{ ksi}$~~

$f_{vt} = 53\text{ ft}\cdot\text{kip }(12\text{ in./ft})66\text{ in.}/[1.7(256\text{ in.}^2)^2] = 0.377\text{ ksi}$

Page 46, Step 4, Procedure revised as:

~~$A_v/s = \left[V_u - 2\phi f'_c(b_w d)\right]/(\phi f_y d)$~~

$A_v/s = \left[V_u - 2\phi\sqrt{f'_c}(b_w d)\right]/(\phi f_y d)$

Page 47, Step 5, Calculation revised as:

~~$A_{\ell,min} = 5(\sqrt{5000}\text{ psi})(384\text{ in.}^2/60{,}000\text{ psi} - (0.0324)(60\text{ ksi}/60\text{ ksi}) = 1.90\text{ in.}^2$~~

$A_{\ell,min} = 5(\sqrt{5000}\text{ psi})(384\text{ in.}^2/60{,}000\text{ psi} - (0.0324)(66\text{ in.})(60\text{ ksi}/60\text{ ksi}) = 0.12\text{ in.}^2$

Page 47, ALTERNATE METHOD, Step 1, Calculation revised as:
K_{vs} = 1290 ~~ksi~~ **kip/in.**

Page 47, ALTERNATE METHOD, Step 1, code references revised as:

ALTERNATE METHOD using design aid			
~~11.2.1.1~~ ~~11.5.6.2~~ **11.3.1.1** **11.5.7.2** 11.6.2.2a 11.6.3.1 11.6.3.6	Step 1 – Look up parameters for f_c’ = 5000 psi, Grade 60 reinforcement, b_w = 16 in., h = 24 in	$K_{fc}K_{vc}$ = (1.118)43.5k = 48.6 kip K_{vs} = 1290 ksi $K_{fc}K_t$ = (1.118)89.1 ft·kip = 99.6 ft·kip $K_{fc}K_{tcr}$ = (1.118)38.9 ft·kip = 43.5 ft·kip K_{ts}= 1089 ft·kip/in.	Shear 2 Table 2a Table 2b Shear 6.1a Shear 6.1b Shear 6.2b

Page 47, ALTERNATE METHOD, Step 2, Calculation revised as:
53 ft·kip > 0.25ϕ(43.5 ft·kip) = ~~10.9~~ **8.2** ft·kip

Page 47, ALTERNATE METHOD, Step 3, Calculation revised as:

~~$= \sqrt{\{61\,\text{kip} / 5[(0.75)48.6\,\text{kip}]\}^2 + \{53\,\text{ft·kip} / [(0.75(1089\,\text{ft·kip})]\}^2}$~~

$$= \sqrt{\{61\,\text{kip} / 5[(0.75)48.6\,\text{kip}]\}^2 + \{53\,\text{ft·kip} / [(0.75(99.6\,\text{ft·kip})]\}^2}$$

Page 47, ALTERNATE METHOD, Step 4, Calculation revised as:
(61 kip/0.75 – 48.6 kip)/ 1290 ~~ksi~~**kip/in.** + 53.0 ft·kip**/**
[(0.75)1089 ft·kip**/in.**] = 0.0254 + 0.0649 = 0.0903 in.^{2}/in.

Page 48, Step 6, Calculation revised as:

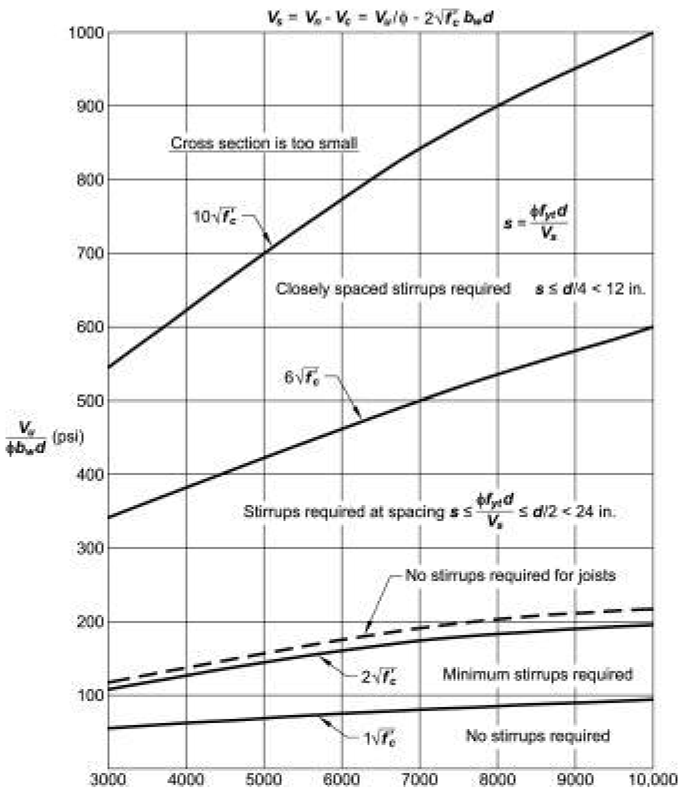
A_ℓ = (0.020 in.)66 in.(1.00) = ~~0.13~~**1.32** in.^{2}

Page 48, Step 1, code references revised as:

~~11.2.1.1~~ **11.3.1.1** ~~11.5.6.2~~ **11.5.7.2** 11.6.2.2a 11.6.3.1 11.6.3.6	Step 1 – Look up parameters for f_c' = 5000 psi, Grade 60 reinforcement, b_w = 16 in, h = 24 in.	$K_{fc}K_{vc}$ = (1.118)43.5 = 48.6 kip K_{vs} = 1290 ksi $K_{fc}K_t$ = (1.118)89.1 = 99.6 ft·kip $K_{fc}K_{tcr}$ = (1.118)38.9 = 43.5 ft·kip K_{ts} = 1089 ft·kip/in.	Shear 2 Table 2a & 2c Shear 2a & 2b Shear 6.1a Shear 6.1b Shear 6.2b

Page 49, Shear 1, Reference Sections revised as:
~~11.11.1~~ **11.1.1**, 11.3.1.1, 11.5.4, ~~11.5.6.2~~ **11.5.7.2**, ~~11.2.6.8~~ **11.5.7.9**, and 8.11.8.

Page 49, revised as:



~~$\sqrt{f'_c}$~~ **f'_c** (psi)

Page 50, Shear 2, Reference Sections revised as:
~~11.2.1.1~~ **11.3.1.1** and ~~11.5.6.2~~ **11.5.7.2**

Page 50, Table 2b, heading revised as:

Table 2b

Values K_{vs} (~~psi~~ **lb/in.**)

Page 50, Shear 2 revised as:
K_{vs} = $f_y d$ (~~kip~~ **kip/in.**) (Table 2(b))

Page 55, Table 5.1b heading revised as;

Values ***K*2**~~, ksi~~

Page 68, top of page, Calculation revised as:

~~$\gamma \approx \frac{15-5}{18} = 0.67$~~

$\gamma \approx \frac{15-5}{15} = 0.67$

Page 69, "B" Calculation revised as;

$\frac{686}{(5)(201)(16)}$	$\frac{686}{(5)(201)(16)}$
~~= 0.43~~	**= 0.043**

Page 69, "C" Calculation revised as:

~~0.64~~ **0.58**	0.69	~~0.72~~ **0.75**

Page 69, "D" Calculation, second sentence revised as:
Use interaction diagrams C5-60.6, C5-60.7, ~~C5-60.7,~~ and C5-60.8.

Page 69, "F" Procedure revised as:

F) Compute ~~$A_g = \frac{P_n}{f'_c k_n}$, in.^{2}~~

$$A_g = \frac{P_n}{f'_c K_n}, \text{in.}^2$$

Page 179, 10.13.5,

Calculation revised as:

~~$\ell_u / r > 35 / \sqrt{P_u / (f'_c / A_g)}$~~

$\ell_u / r > 35 / \sqrt{P_u / (f'_c A_g)}$

Page 180, 10.13.5, Calculation revised as:

~~$\ell_u / r > 35 / \sqrt{P_u / (f'_c / A_g)}$~~

$\ell_u / r > 35 / \sqrt{P_u / (f'_c A_g)}$

Page 183, Calculation revised as:
Summary of design loads:

Load combinations	**P_u, (kip)**	**(M_u) (in.-kip)**
I—$U = 1.2D + 1.6L_r + 0.8W$	694 or 670	–2738
II—$U = 1.2D + 1.6W + 1.0L + 0.5L_r$	869 or 821	~~–4967~~ **–4867**
III—$U = 0.9D + 1.6W$	476 or 428	–3616
IV—$U = 1.4D$	703	–1512
V—$U = 1.2D + 1.6L + 0.5L_r$	976	–2032
VI—$U = 1.2D + 1.6L_r + 1.0L$	900	–1756

Page 231, Table A2 heading revised as:

Cross section area of bar ~~As~~ $\underline{A_s}$ (or ~~As'~~ $\underline{A_s'}$), in.^{2}

Page 234, revised as:

~~Centroid of group, W =~~ **For the bundled bars configuration shown here, the centroidal distance is calculated by the following equation:**

$$x = \frac{\frac{5}{2} A_{si} d_{b1} + A_{s2}(d_{b1} + d_{b2}/2)}{\Sigma A_{si}}$$

Last revised 07-22-10, 4:00 p.m.