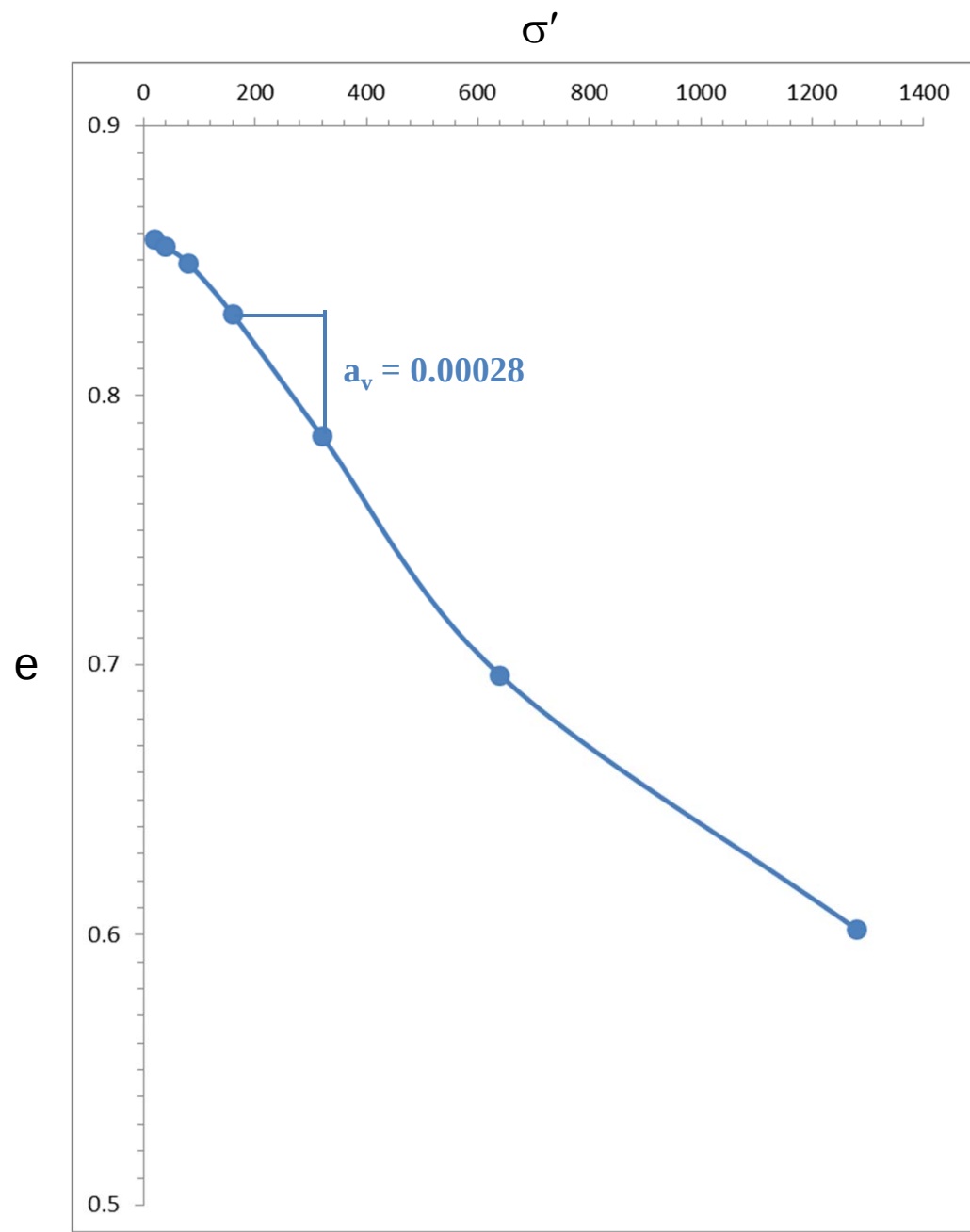
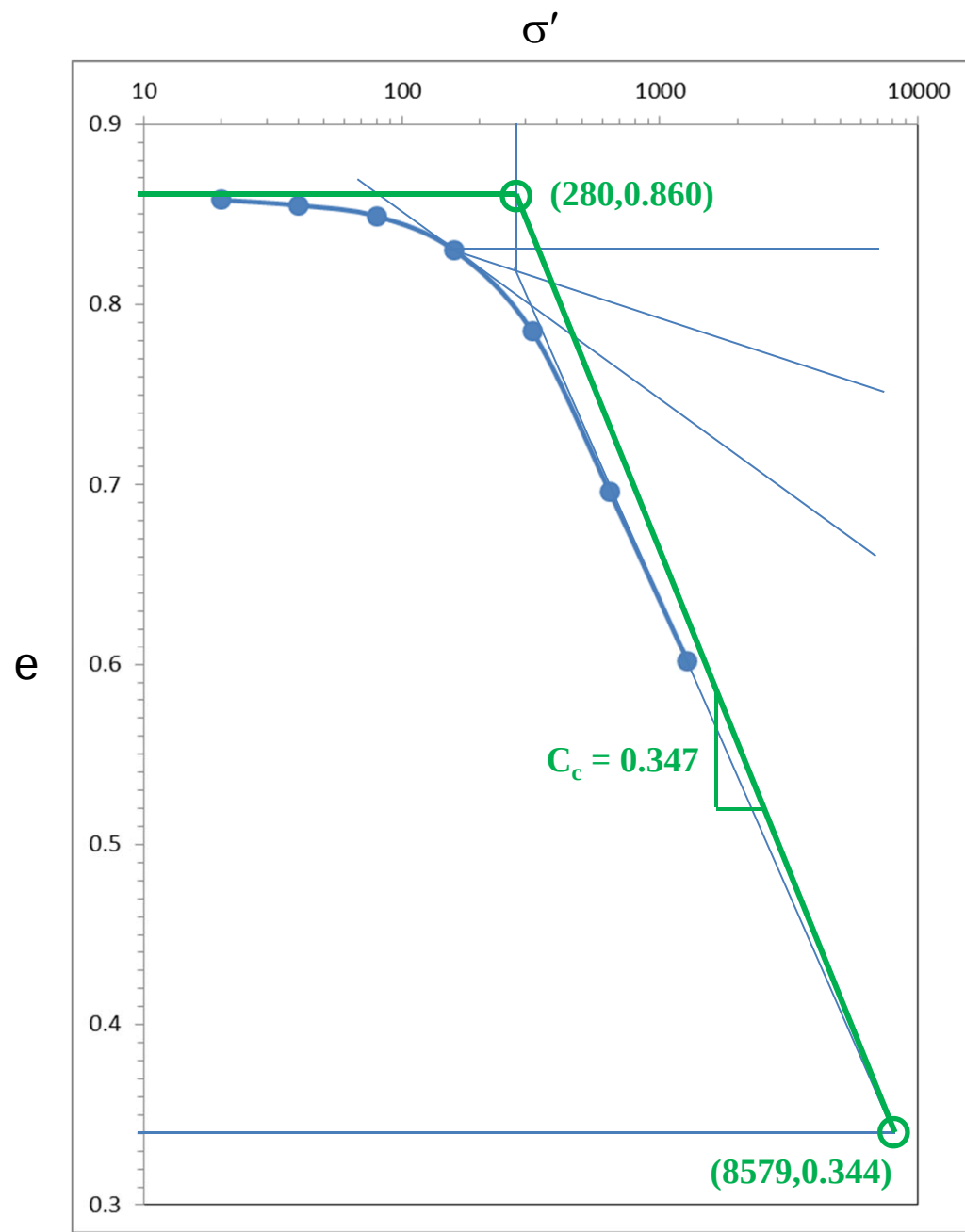
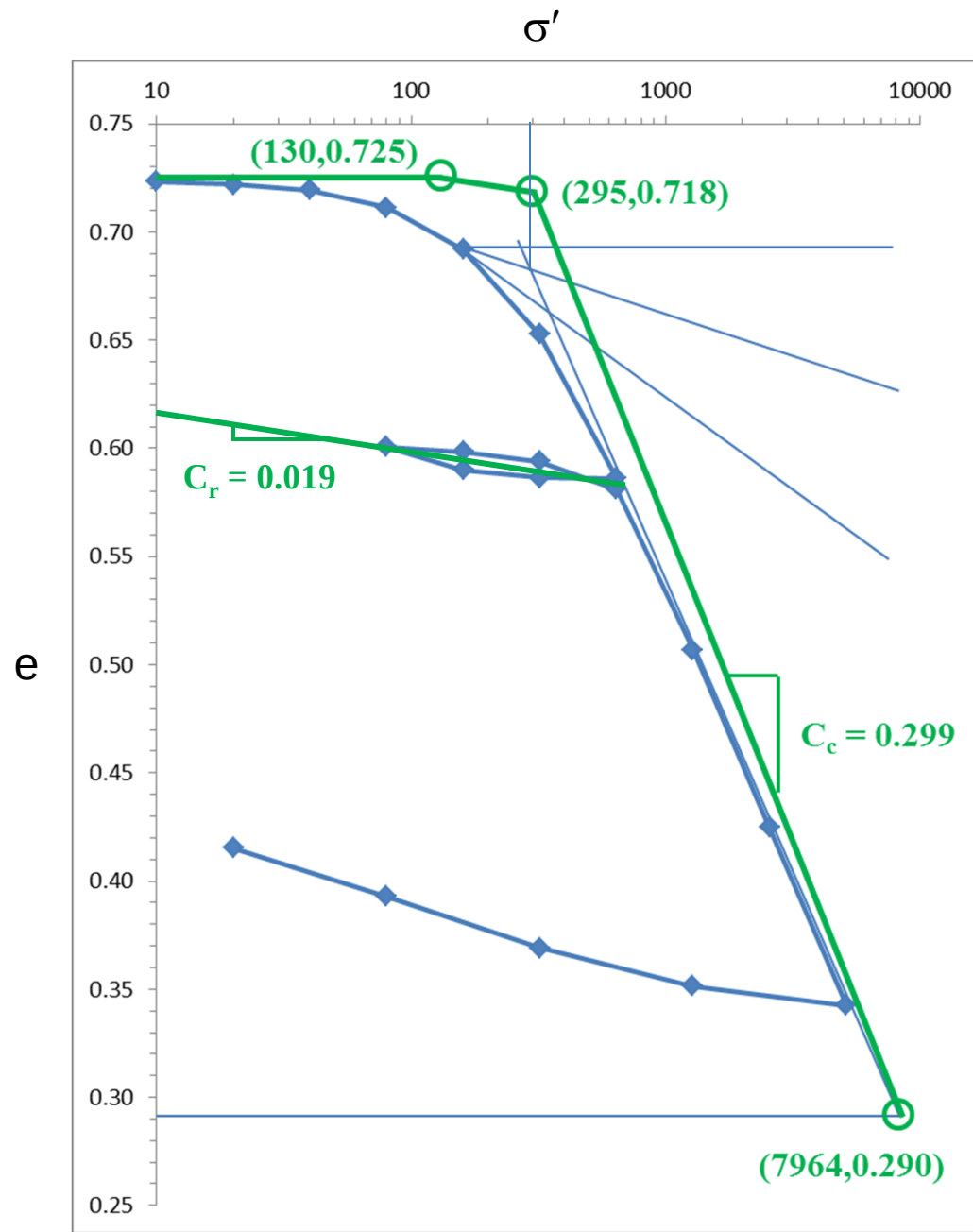
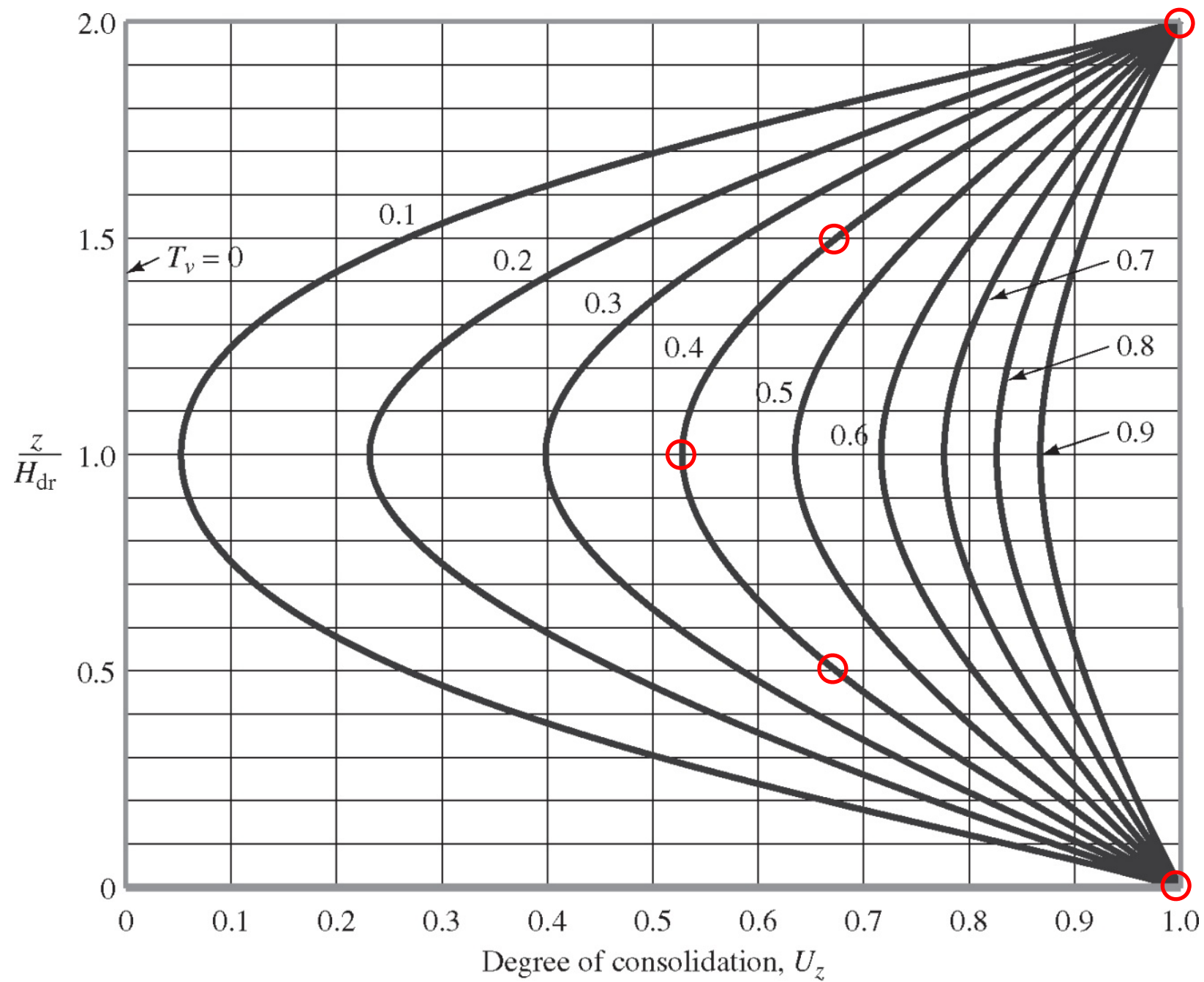






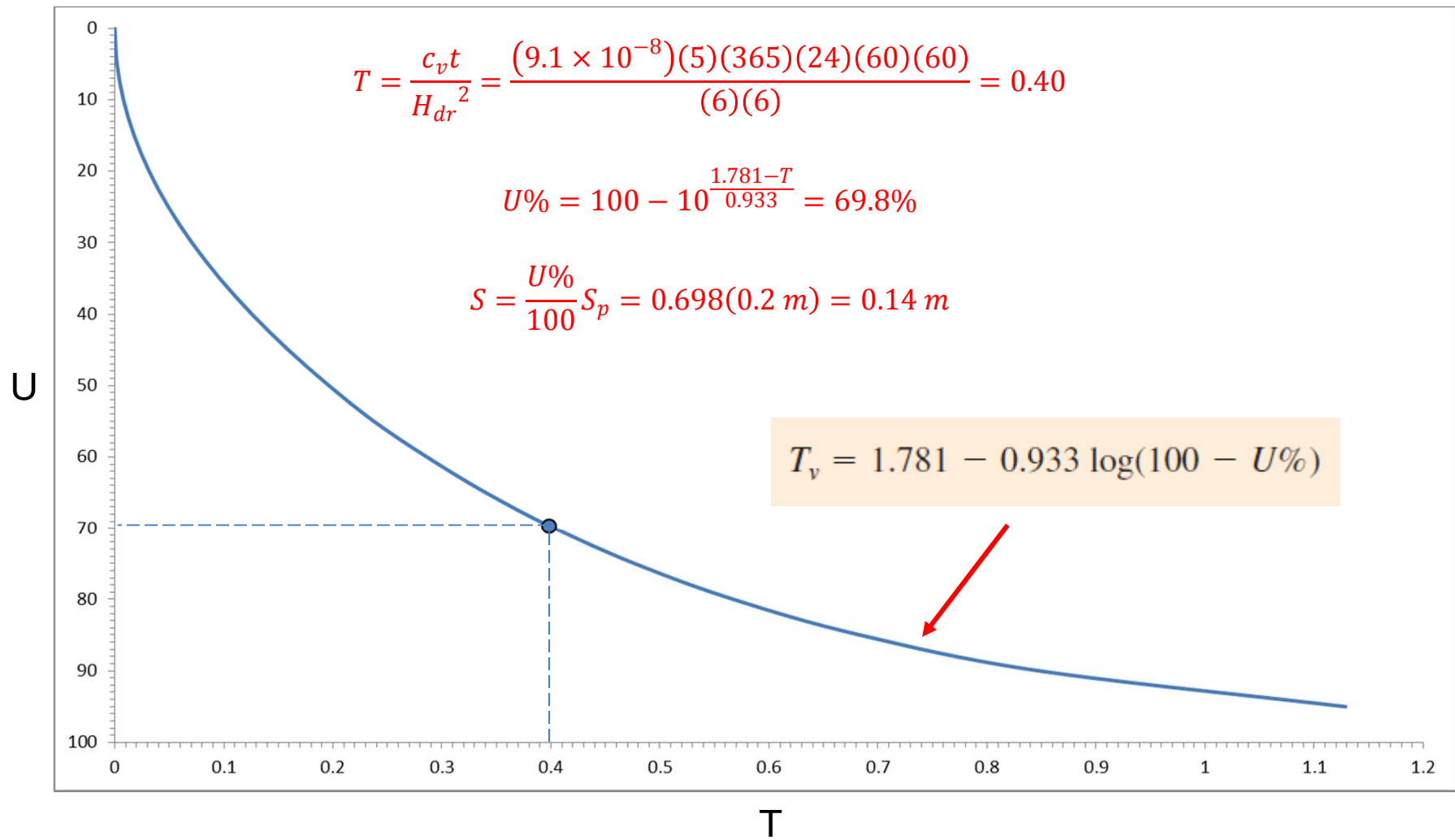


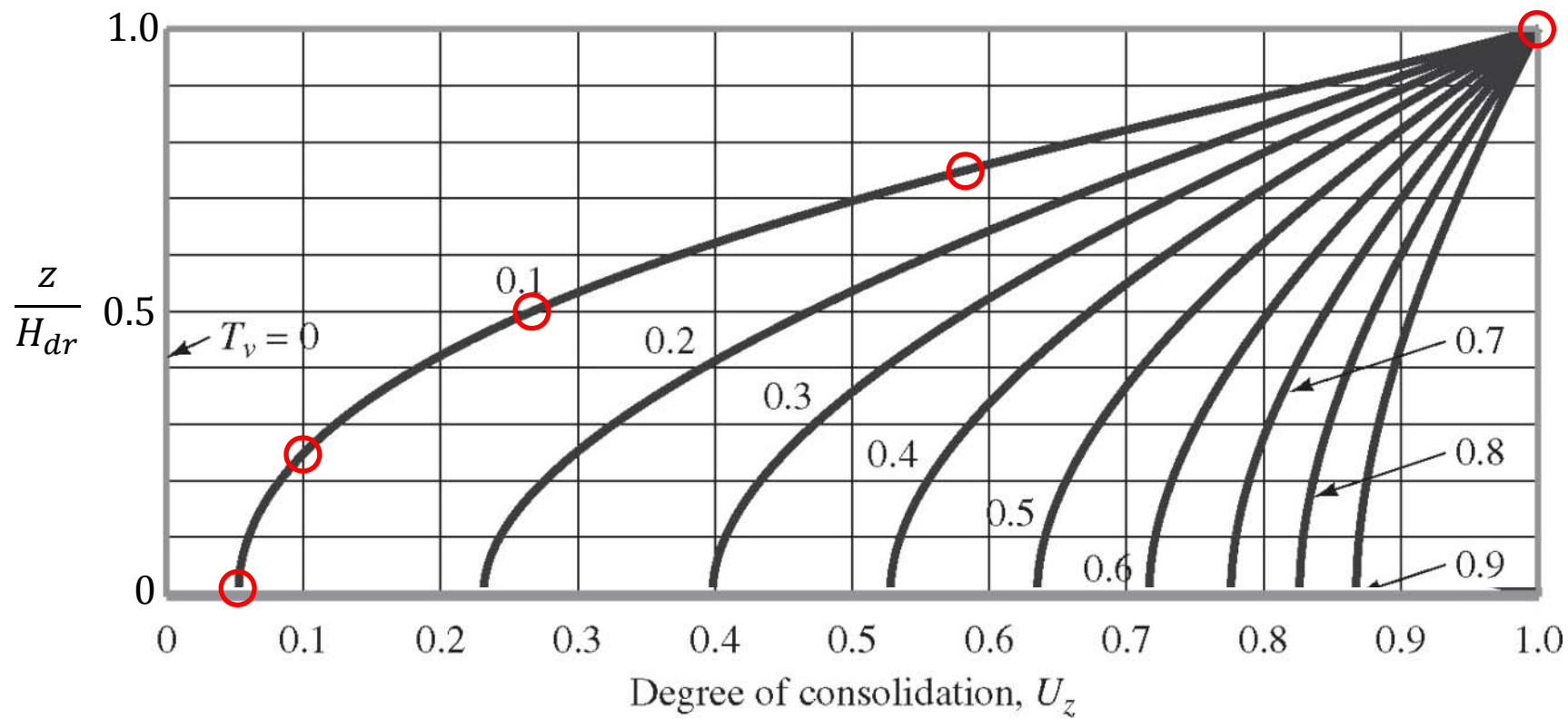


$$\frac{u}{u_0} = \sum_{m=0}^{m=\infty} \left[\frac{2}{M} \sin\left(\frac{Mz}{H_{\text{dr}}}\right) \right] e^{-M^2 T_v}$$

$$M = \frac{\pi}{2}(2m + 1)$$

		z / H _{dr}				
m	M	0	0.5	1	1.5	2
0	1.570796	0	0.33673	0.47621	0.33673	5.83E-17
1	4.712389	0	4.3E-05	-6.1E-05	4.3E-05	2.23E-20
	u / u ₀ =	0	0.337	0.476	0.337	0
	U _z =	1	0.663	0.524	0.663	1

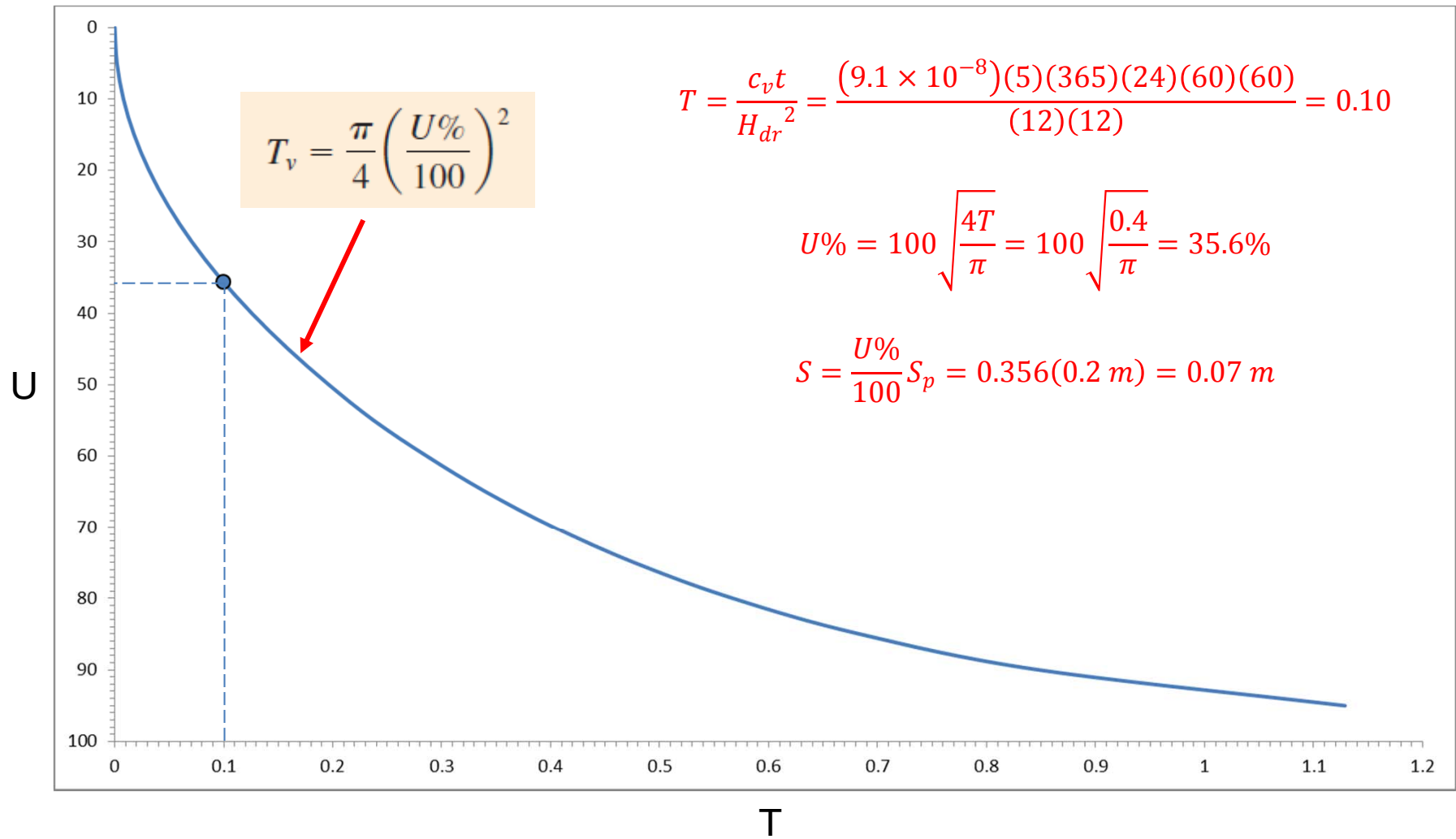


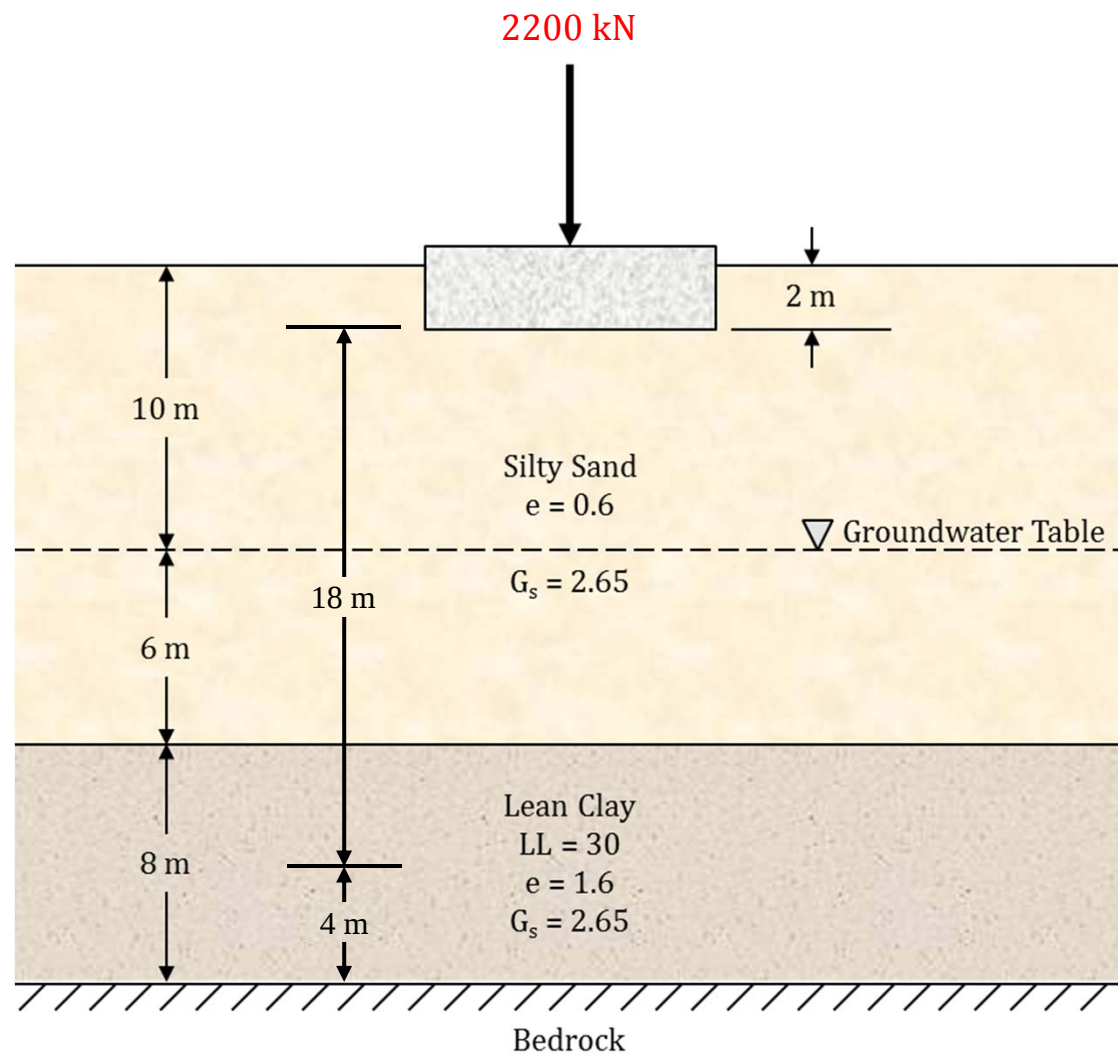


$$\frac{u}{u_0} = \sum_{m=0}^{m=\infty} \left[\frac{2}{M} \sin\left(\frac{Mz}{H_{\text{dr}}}\right) \right] e^{-M^2 T_v}$$

$$M = \frac{\pi}{2}(2m + 1)$$

		z / H _{dr}				
m	M	0	0.25	0.5	0.75	1
0	1.57079	0	0.38104	0.70407	0.91992	0.99571
1	4.71239	0	0.04290	0.03283	-0.01777	-0.04643
2	7.85398	0	0.00050	-0.00039	-0.00021	0.00055
3	10.9956	0	4.08E-07	-7.5E-07	9.85E-07	-1.1E-06
	u / u ₀ =	0	0.424	0.737	0.902	0.95
	U _z =	1	0.576	0.263	0.098	0.05





$$Sand \gamma_d = \frac{G_s \gamma_w}{1 + e} = 16.25 \frac{kN}{m^3}$$

$$Sand \gamma_{sat} = \frac{(G_s + e) \gamma_w}{1 + e} = 19.93 \frac{kN}{m^3}$$

$$Sand \gamma' = \gamma_{sat} - \gamma_w = 10.12 \frac{kN}{m^3}$$

$$Clay \gamma_{sat} = \frac{(G_s + e) \gamma_w}{1 + e} = 16.03 \frac{kN}{m^3}$$

$$Clay \gamma' = \gamma_{sat} - \gamma_w = 6.23 \frac{kN}{m^3}$$

$$\sigma'_0 = 16.25(10 \text{ m}) + 10.12(6 \text{ m}) + 6.23(4 \text{ m}) = 248 \frac{kN}{m^2}$$

or

$$\sigma'_0 = \sigma_0 - u = 16.25(10) + 19.93(6) + 16.03(4) - 9.81(10) = 248 \frac{kN}{m^2}$$

$$\Delta\sigma_t = \frac{P}{(B+z)(L+z)} = \frac{2200}{(6+14)(3+14)} = 6.47 \frac{kN}{m^2}$$

$$\Delta\sigma_m = \frac{P}{(B+z)(L+z)} = \frac{2200}{(6+18)(3+18)} = 4.37 \frac{kN}{m^2}$$

$$\Delta\sigma_b = \frac{P}{(B+z)(L+z)} = \frac{2200}{(6+22)(3+22)} = 3.14 \frac{kN}{m^2}$$

$$\Delta\sigma = \frac{\Delta\sigma_t + 4\Delta\sigma_m + \Delta\sigma_b}{6} = \frac{6.47 + 4(4.37) + 3.14}{6} = 4.52 \frac{kN}{m^2}$$

$$C_c = 0.009(LL - 10) = 0.009(30 - 10) = 0.18$$

$$S_p = \frac{H}{1 + e_0} \left(C_c \log \frac{\sigma'_o + \Delta\sigma}{\sigma'_o} \right) = \frac{8 \text{ m}}{1 + 1.6} \left(0.18 \log \frac{248 + 4.5}{248} \right) = 0.004 \text{ m} = 4 \text{ mm}$$