yes, this tank is lower than the upstream tank... the city is worried there may not be enough upstream head to fill the tank at ② (the new EST)

$$\frac{p_1}{\gamma}^{0} + z_1 + \frac{V_1^2}{2g}^{0} + h_p = \frac{p_2}{\gamma}^{0} + z_2 + \frac{V_2^2}{2g}^{0} + h_L + h_{Lm} + h_{ent} + h_{exit}$$

$$901 + h_p = 876 + f\frac{LV^2}{D2g} + 1.5\frac{V^2}{2g} + K\frac{V^2}{2g}$$

my thought → $\boxed{h_p = -25 + \dots}$

his thought →

$$\frac{p_1}{\gamma} + z_1 + \frac{V_1^2}{2g} + h_p = \frac{p_2}{\gamma}^{0} + z_2 + \frac{V_2^2}{2g}^{0} + \text{losses}^{0}$$

$$\frac{p_1}{\gamma} + 676 + \frac{V_1^2}{2g} + h_p = 876$$

$$\boxed{h_p = 200 - \frac{V_1^2}{2g} - \frac{p_1}{\gamma}}$$

← I don't see how this will work... too many unknowns