Lead Controller Design

With a lead controller in place, we have

$$KL(s) = K\frac{s+z}{s+p} \cdot G_p(s)$$

where the lead zero parameter z and lead pole parameter p are constrained to satisfy $z < p$.

In our example with $G_p(s) = 1/s^2$, we have set $z = 1$ to approximate PD control. Then $p > 1$ is our design parameter (and, of course, K is the gain parameter in the root locus).

Alternatively, we can assume that p is given (say, from noise suppression considerations), and we look for z that will give us a desired pole on the RL.

Is there a systematic procedure for doing this?