

Bridge Design Details 9.3 June 2025

Center of Gravity of Prestressing Force Diagram

On multi-span continuous prestressed bridges, utilizing two-end stressing may be more economical. Use a similar center of gravity (CG) diagram for both one and two-end stressing and dimension the location of the theoretical point of no movement in all cases. For additional details, see 14.2 Longitudinal Section. Provide directions in the plans regarding stressing sequence assumed for design, using a note similar to the following: "NOTE: Two end stressing shall be performed." Or "NOTE: One end stressing shall be performed from Abutment X side."

Actual dimensions should be shown for single span bridges or bridges with unequal length spans.

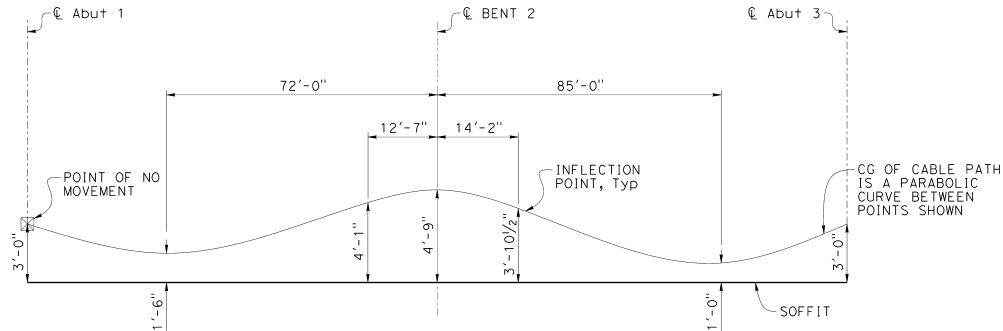


Figure 9.3.1 Unequal Span Bridge Path of CG of Prestressing Force

On bridges with variable span lengths or bridges with a radius, the span dimensions should be indicated as below. Bifurcated and curved girders will have different lengths.

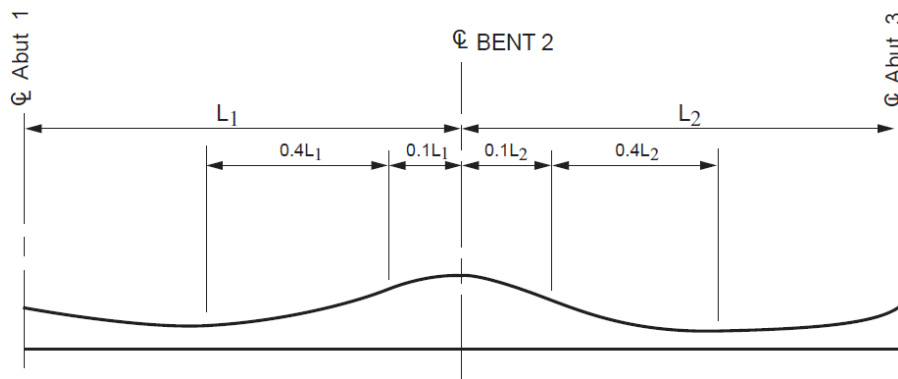


Figure 9.3.2 Variable Span Bridge Path of CG of Prestressing Force