You are staking out an equal tangent vertical curve on a highway with the following design criteria:

G1	=	-2.321%	PVI STA.	=	32+00
G2	=	+1.234%	PVI ELEV.	=	537.12
L	=	800 feet			

As you are checking ahead on the proposed alignment, you discover an overpass that will cross directly over the highway you are staking. Remembering what you learned at Westwood College about inverted rod shots, you quickly determine the elevation of the bottom of the overpass to be 552.50. A little careful chaining reveals the overpass to be at your centerline station 34+50.

A hasty call to the design engineer confirms your worst fears. You must have exactly 12.00 feet clearance between your road and the bottom of that overpass. Furthermore, the design engineer tells you that you have to hold both the PVC and the PVI station and elevation, the length of the curve, and the symmetry. The good news is that everything else can change, as long as you get exactly 12.00 feet of clearance.

As a dozer gobbles up the last stake you set, you feverishly recalculate the vertical curve. Show the criteria for your redesigned curve and a table of the new elevations at full stations including the overpass station.