

## Answers to “Test Yourself” No. 6

### Compute the Pile Elevations With Answers

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A Point on Tangent (POT) has coordinates 7000.00 North, 8500.00 East and Elevation 426.89 and is at Station 8+36.92. From this POT, the centerline departs on a bearing of N47°18'26"W. There is a curve Point of Curvature (PC) at Station 13+14.15. For that curve, the Degree of Curvature is exactly 3° and “Delta” or “I” is Left 38°47'05”. A bent of three piles are to be located at the following locations:

Station	Offset	Elevation	Coordinates	
			North	East
20+62.69	0	<b>461.03</b>	<b>7711.82</b>	<b>7514.84</b>
20+62.69	30.00 Right	<b>461.33</b>	<b>7739.96</b>	<b>7525.22</b>
20+62.69	43.00 Left	<b>460.60</b>	<b>7671.47</b>	<b>7499.96</b>

The centerline grade from the POT for this part of the route is 2.785%. At the bent of piles, the route’s cross-slope is exactly 1% (sloped toward the curve radius point).

The answers are in bold red type above.