



Problem 85

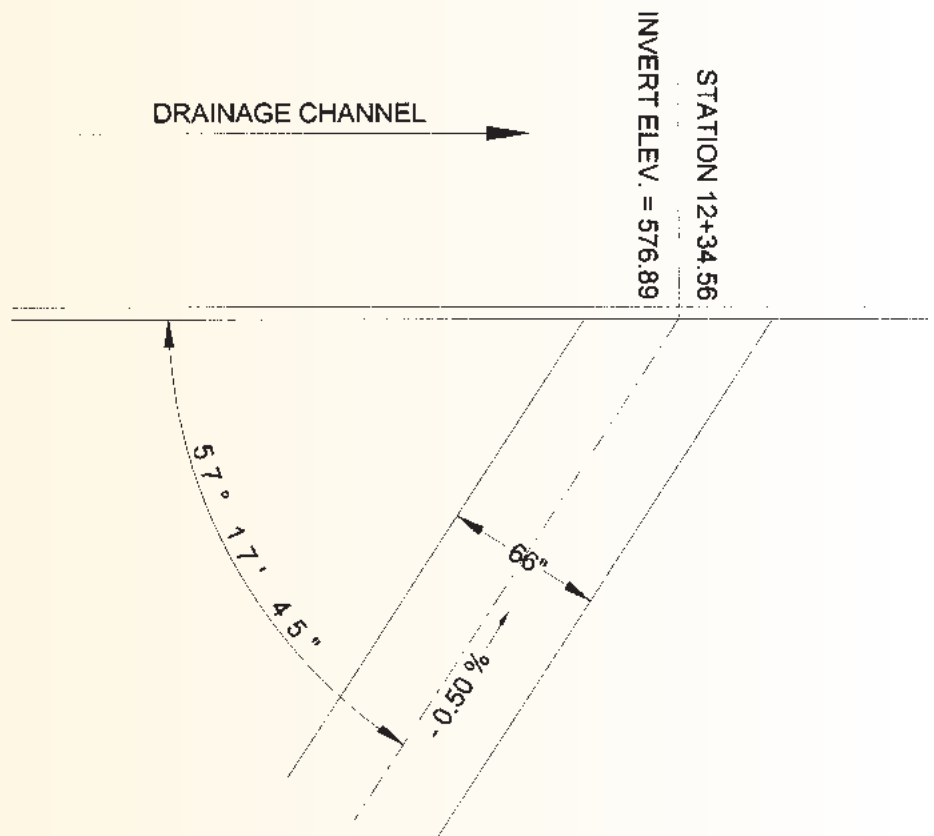
The so-called "Bermuda Triangle" is unofficially defined as extending from Miami, Florida (Latitude 25°48' North, Longitude 80°13' West) to San Juan, Puerto Rico (Latitude 18°27' North, Longitude 66°04' West) to Bermuda (Latitude 32°18' North, Longitude 64°47' West). How many square miles does it encompass?

Problem 86

A 66" outside diameter reinforced concrete pipe with 3" thick walls is proposed to intersect the vertical concrete outer wall of an existing drainage channel at an angle of 57°17'45" as shown, and at a slope of minus 0.50 percent. The intended station is 12+34.56 and the intended invert elevation is 576.89.

Where would you locate the focal points to define the ellipse that is required to minimally sawcut the existing wall?

If you were using a piece of piano wire in a triangular fashion to layout the ellipse, how long would it have to be?



Solutions can be found on our website at www.profsurv.com

The problems for this column are contributed by retired California surveyor Dave Lindell, LS.