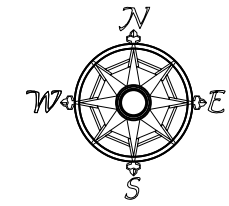


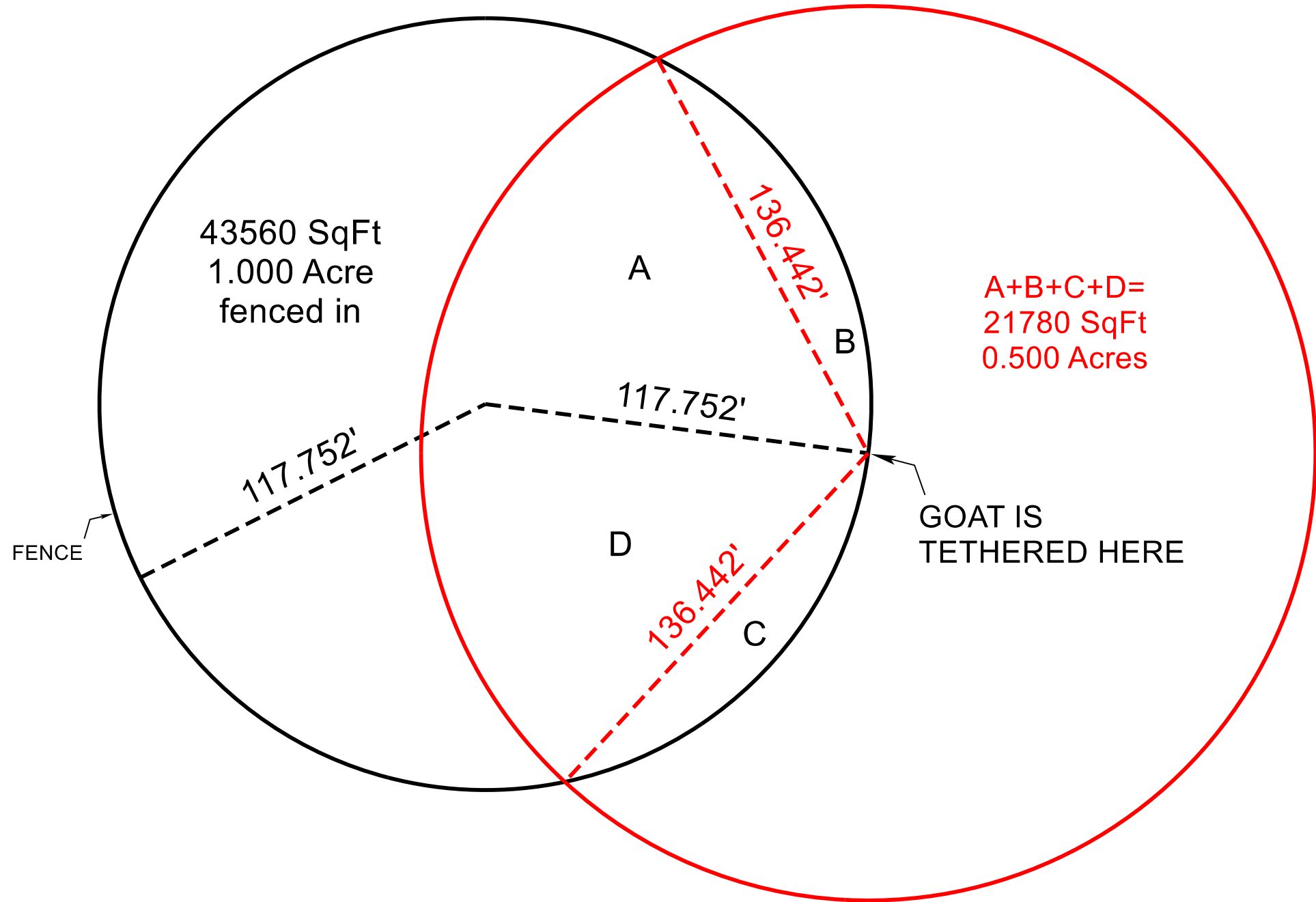
**TETHERED GOAT PROBLEM**

**THE ORIGINAL PROBLEM:** A goat is tethered to a fence post on the edge of an enclosed 1 acre grazing area. How long must the rope be to allow the goat to graze on exactly 1/2 of the original area?

**THE APPROXIMATE SOLUTION:** The circle with the radius of 117.752' equals 1 acre of fenced land. It is shown in black. The circle in red has a radius of 136.442'. The areas of A, B, C, & D add up to 21780 square feet which equals 0.500 acres.



All bearings are to an assumed meridian and indicate angles only.



JERRY SLAY, PE PS  
 335 CENTER STREET  
 ASHTABULA, OH 44004  
 surveyor5298@yahoo.com  
 PH 440 993 7205 FAX 440 992 9801

**Jerry Slay, P.E. P.S.**  
**Ohio Surveyor Number 5298**