Part One

First calculate the volume in ft^3 and then convert the ft^3 into yd^3.

5 ft X 5 ft X (4.4 miles X 5,280 ft /mile = 23,232 ft^3) = 580,800 ft^3

$$\frac{580{,}800\ ft^3}{27\ ft^3/yd^3} = 21{,}511.1\ yd^3$$

Part Two

First calculate the volume in ft^3 and then convert the ft^3 into yd^3. Then calculate the number of loads that will be required. Then multiply by the number loads by the cost per load to calculate the cost.

5 feet wide X 0.5 feet of bedding X 23,232 feet of ditch = 50,080 ft^3

$$\frac{58{,}080\ ft^3}{27 ft^3/yd^3} = 2151.5\ yd^3$$

$$\frac{2151.1\ yd^3}{20\ yd^3/\text{truck load}} = 108\ \text{loads}$$

108 loads X \$52.50 per load =\$5,670.00