

Fig. 2. This measurement is *incorrect* because it ignores the expressway barrier.



Fig. 3. This measurement is *incorrect* because it follows every single road on the map.

5) Measure the average mm distance for the nearest public elementary school, grocery store, and restaurant and convert this measurement to miles based on the length indicator on your map. Below is a sample calculation based on a sample map (Fig. 4):

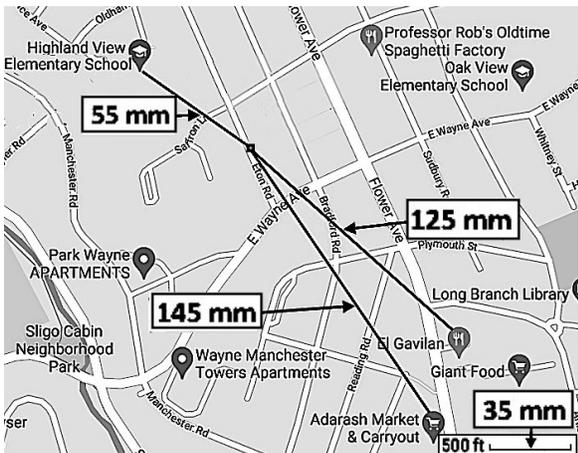


Fig. 4. Sample map with measurements.

Average mm based on map measurements:
 $(55 \text{ mm} + 125 \text{ mm} + 145 \text{ mm}) \div 3 = \underline{112 \text{ mm}}$

Feet per mm based on map scaling:
 $500 \text{ ft} \div 35 \text{ mm} = \underline{14.3 \text{ ft/mm}}$

Converting average mm to average feet:
 $(112 \text{ mm}) \times (14.3 \text{ ft/mm}) = \underline{1600 \text{ ft}}$

Converting average feet to miles:
 $(1600 \text{ ft}) \div (5,290 \text{ ft/mi}) = \underline{0.303 \text{ mile}}$
This is the average walking distance

6) Turn in your map with the three lines indicating the distance to the nearest school, grocery, and restaurant (as in Fig 4), then answer the following questions:

Questions:

- 1) What is your average walking distance?
- 2) Use “walkscore.com” to get the score for your original location. What score did you get? How does this compare to your average walking distance? *Note: A high walkscore indicates that your walking distances are shorter, not longer.*
- 3) Suppose you are employed at the restaurant that is closest to your house and you also and have a child in kindergarten. Estimate how long it takes for you to walk your child to school and then walk from your child’s school to your job at the restaurant.
- 4) Scope out the nearest grocery stores and restaurants in both the low sprawl and high sprawl neighborhoods and use this information to answer question 1 for both the low sprawl and high sprawl neighborhoods. *Note: Since you probably do not live in these places, you just need to roughly estimate these answers.*
- 5) What is the advantage of living in the low-sprawl residence you chose on the map?
- 6) What is the advantage of living in the high-sprawl residence you chose on the map?
- 7) List some features other than walking distance sets these two neighborhoods apart. Be specific!

Literature Cited:

1. Mitchell, J.G. “Urban Sprawl”. *National Geographic*, July 2001. Retrieved June 28, 2014, from http://ngm.nationalgeographic.com/ngm/data/2001/07/01/html/ft_20010701.3.html