

SURVEY-NEIGHBORHOOD WALKABILITY SCORE

November 15, 2005

INTRODUCTION TO SURVEY TOOL

The **NEIGHBORHOOD WALKABILITY SCORE Survey** is a simple questionnaire designed for ease of use and administration. This survey is intended to evaluate the physical characteristics of the built environment around the individual respondent's home, and to be used in the urban and denser suburban areas of metropolitan regions. A residential neighborhood in this survey covers a 10- to 15-minute walking distance from home, corresponding to about 1 km.

This survey was developed as part of a larger empirical study (see Introduction). The questions included are drawn from the results of this study. Objectively measured environmental variables showing statistically significant associations with the likelihood of walking, after controlling for all important confounders, are translated into the questions posed in this instrument.

This survey is work in progress. Preliminary results of the test-retest reliability and validity studies are available upon request.

Sampling of Household Points

The survey can be used by individuals interested in scoring their neighborhood for walkability. Groups of people living in close proximity to each other can also tally their survey scores to rate their neighborhood. The walkability of large areas, such as neighborhoods or cities, can be systematically estimated by administering the survey to samples of multiple residents or home locations within the area of interest. The mean score from the multiple surveys can be used to compare walkability scores of multiple neighborhoods or cities.

The number of household points used in a multiple-participant survey can vary, depending on the size of the area, the target precision, the survey purposes, and so on. Criteria for sample size estimation can range from convenience to scientific considerations. The rough rule is the more the better, with a desired minimum of 1 household per 776 acres (3 sq. km or approximately 1 sq. mile). One may choose to use a simple random sampling of residents or a systematic sampling of households in every 1 km distance interval.

Survey Administration

Anyone interested in evaluating the walkability of his/her residential neighborhood can use this survey. Multiple respondents may be selected from the target area and the results can be tallied by a survey administrator. The survey can also be used as part of a group process, where individual respondents work together and help each other respond to the questions. Maps of the target area may be provided with the survey to improve the accuracy of the responses.

The survey may be posted on the web, along with maps of the target area that include the land use and other information relevant to the survey.

Tallying Scores

Response options for each question are identified as High (H), Medium (M) or Low (L), based on the direction of association that the corresponding variable had with walking in the statistical model. A simple tallying method is recommended, transforming the High, Medium and Low scores into a 0-100 scale:

High = 100

Medium = 50

Low = 0

The total score is computed by dividing the sum of all item scores by the number of items answered. This overall mean of all responses yield the final walkability score for each respondent. The scores can be used to compare the levels of walkability in several locations.

Further empirical testing is needed to test alternative scoring methods which may lead to find more valid scoring system.

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Walk and Bike Communities Project

SURVEY-NEIGHBORHOOD WALKABILITY SCORE

University of Washington Urban Form Lab

November 2005

What is this survey about?

People love to walk and they want their neighborhoods to be more walkable. Walking is also excellent for health—walking 30 minutes a day, five days a week can increase longevity and improve the quality of life. The environment in which people live plays a big role in determining how much people can and will walk. This survey asks about those environmental factors that contribute to the likelihood of people walking.

The survey was developed at the University of Washington as part of a study sponsored by the CDCs. The study analyzed the environmental conditions and walking habits of a random sample of 600 people in King County. It found that environmental conditions within a half-mile (or 10- to 15-minute walk) distance of homes were important in determining how much people will walk. The surprising news was that the types of destinations that people could walk to in their neighborhood were more important than the conditions of sidewalks in determining the amount of walking people did. Therefore, this survey asks a lot of questions about the destinations and land uses near your home.

We developed this survey tool so people can rate their neighborhood for walkability. We also hope that it will be useful in identifying neighborhood improvements that can increase both the number of people walking and the amount of walking done.

If you are interested in how these factors relate to the likelihood of more people walking, and walking more often, look for the (H), (M), and (L) in parentheses next to your responses. They indicate High, Medium, and Low scores for neighborhood walkability. These scores will be quantified based on the results of analytical models. Researchers will assign numeric weights to each question after checking your responses against their analyses.

Please return the survey to:

NEIGHBORHOOD WALKABILITY SCORE SURVEY

The following are general questions about yourself and where you live.

Today's Date: Month ___ Day ___ Year _____ Time: AM ___ PM ___

Name of the City you live in: _____

Name of the Neighborhood you live in (if applicable): _____

Total length of residency in current house: About ___ years ___ months

Exact street names at the closest intersection from your home:
_____ and _____

Your age: 18-24 ⊥ 25-34- ⊥ 35-44 ⊥ 45-54 ⊥ 55-64 ⊥ 65-74 ⊥ 75+ ⊥

Your gender: Male ⊥ Female ⊥

Highest grade or year of school you completed:
High School ⊥ 2yr College ⊥ 4yr College ⊥ 4+yr College/University ⊥ NA ⊥

By yourself, and without using any special equipment, how difficult is it for you to walk a **quarter of a mile** (about 3 city blocks)? Would you say:
Not at all difficult ⊥ Only a little difficult ⊥ Somewhat difficult ⊥ Very difficult ⊥
Can't do at all ⊥ Do not do this activity ⊥ Don't know/ not sure ⊥

Your general health is:
Excellent ⊥ Very Good ⊥ Good ⊥ Fair ⊥ Poor ⊥ Don't know/ not sure ⊥

During the last seven days, did you do vigorous activities for at least 10 minutes at a time, such as running, aerobics, heavy yard work, or anything else that causes large increases in breathing or heart rate?
Yes ⊥ No ⊥ Don't know/ not sure ⊥

Do you use transit at least **once a week**? Yes ⊥ No ⊥

Do you walk in places other than your neighborhood at least **once a week** for at least 10 minutes? Yes ⊥ No ⊥

Do you have a dog? Yes ⊥ No ⊥

Is your annual household income from all sources:
Less than \$25,000 ⊥ \$25,001-\$35,000 ⊥ \$35,001-\$50,000 ⊥
\$50,001-\$75,000 ⊥ \$75,001 or more ⊥ Don't know/ not sure ⊥

The following questions are about **your neighborhood—the area within a 10-15 minute WALK from your home**

1. Is your neighborhood primarily: (choose one option)
- a. Residential (M)
 - b. Commercial (H) – Skip to Question 3
 - c. A mix of residential and commercial (M)
 - d. Don't know/ not sure (L)

2. Is your neighborhood primarily: (choose one option)

- | | |
|---|--------------------------|
| a. One of single-family detached homes (L) | <input type="checkbox"/> |
| b. One of apartments or condominiums (H) | <input type="checkbox"/> |
| c. A mix of single family homes & apartment or condominiums (M) | <input type="checkbox"/> |
| d. Don't know/ not sure (L) | <input type="checkbox"/> |

The following questions are about your home.

3. Do you live in a single-family detached house or an apartment/condominium? (choose one option)

- | | |
|-------------------------------------|--------------------------|
| a. Single-family detached house (M) | <input type="checkbox"/> |
| b. Apartment/condominium (H) | <input type="checkbox"/> |
| c. Don't know/ not sure (L) | <input type="checkbox"/> |

The following questions are about street blocks and sidewalks in your neighborhood.

4. How many minutes does it take to walk around the block, starting from your home and returning back to your home? (choose one option)

- | | |
|---|--------------------------|
| a. Less than 10 minutes (H) | <input type="checkbox"/> |
| b. Between 10 and 15 minutes (M) | <input type="checkbox"/> |
| c. More than 15 minutes (L) | <input type="checkbox"/> |
| d. My block is too big to walk around (L) | <input type="checkbox"/> |
| e. Don't know/ not sure (L) | <input type="checkbox"/> |

5. What best describes the sidewalks in your neighborhood: (choose one option)

- | | |
|--|--------------------------|
| a. There are sidewalks on both sides of almost all streets (H) | <input type="checkbox"/> |
| b. There are sidewalks on both sides of some streets (M) | <input type="checkbox"/> |
| c. There are sidewalks on one side of almost all streets (M) | <input type="checkbox"/> |
| d. There are sidewalks on one side of some streets, or (L) | <input type="checkbox"/> |
| e. There are no sidewalks (L) | <input type="checkbox"/> |
| f. Don't know/ not sure (L) | <input type="checkbox"/> |

The following questions are about grocery stores or markets in your neighborhood. Please include chain or individually owned supermarkets or markets, but NOT convenience stores (convenient stores often come with a gas station and offer limited or no fresh food products).

6. How many grocery stores or markets are within approximately a 10-15 minute WALK from your home? (choose one option)

- | | |
|-----------------------------|--------------------------|
| a. None (L) | <input type="checkbox"/> |
| b. 1 (H) | <input type="checkbox"/> |
| c. 2-3 (M) | <input type="checkbox"/> |
| d. 4 or more (L) | <input type="checkbox"/> |
| e. Don't know/ not sure (L) | <input type="checkbox"/> |

7. Thinking about the grocery store or market closest to you, how many minutes does it take to WALK there from your home? (choose one option)

- | | |
|-----------------------------|--------------------------|
| a. Less than 10 minutes (H) | <input type="checkbox"/> |
| b. 10-15 minutes (M) | <input type="checkbox"/> |
| c. More than 15 minutes (L) | <input type="checkbox"/> |
| d. Don't know/ not sure (L) | <input type="checkbox"/> |

8. Thinking about the route from your home to the closest grocery store or market, is the route: (choose one option)

- | | |
|--|--------------------------|
| a. Fairly direct (H) | <input type="checkbox"/> |
| b. Fairly indirect with some detours (M) | <input type="checkbox"/> |
| c. Very indirect with many detours (L) | <input type="checkbox"/> |
| d. Don't know/ not sure (L) | <input type="checkbox"/> |

9. How many of those grocery stores or markets are close to or clustered with restaurants and retail stores? (choose one option)

- | | |
|-----------------------------|--------------------------|
| a. None (L) | <input type="checkbox"/> |
| b. 1 (H) | <input type="checkbox"/> |
| c. 2 or more (M) | <input type="checkbox"/> |
| d. Don't know/ not sure (L) | <input type="checkbox"/> |

10. Thinking of the grocery store, restaurant, and retail store cluster closest to you, how many minutes does it take to WALK there from your home? (choose one option)

- | | |
|-----------------------------|--------------------------|
| a. Less than 5 minutes (H) | <input type="checkbox"/> |
| b. 5-10 minutes (M) | <input type="checkbox"/> |
| c. More than 10 minutes (L) | <input type="checkbox"/> |
| d. Don't know/ not sure (L) | <input type="checkbox"/> |

The following questions are about eating or drinking places in your neighborhood. Include restaurants, bars, pubs, taverns, lounges, but NOT fast food restaurants.

11. Thinking about the eating or drinking place closest to you, how many minutes does it take to WALK there from your home? (choose one option)

- | | |
|-----------------------------|--------------------------|
| a. Less than 10 minutes (H) | <input type="checkbox"/> |
| b. 10-15 minutes (M) | <input type="checkbox"/> |
| c. More than 15 minutes (L) | <input type="checkbox"/> |
| d. Don't know/ not sure (L) | <input type="checkbox"/> |

The following questions are about schools in your neighborhood.

12. How many schools, public or private, and other educational facilities (e.g. grade schools, technical schools, community colleges, etc.) are within approximately a 10-15 minute WALK from your home? (choose one option)

- | | |
|---|--------------------------|
| a. None (H) – Skip to Question 16 | <input type="checkbox"/> |
| b. 1-2 (M) | <input type="checkbox"/> |
| c. 3 or more (L) | <input type="checkbox"/> |
| d. Don't know/ not sure (L) – Skip to Question 16 | <input type="checkbox"/> |

13. Thinking about the route from your home to the closest school, is the route: (choose one option)

- | | |
|--|--------------------------|
| a. Fairly direct (H) | <input type="checkbox"/> |
| b. Fairly indirect with some detours (M) | <input type="checkbox"/> |
| c. Very indirect with many detours (L) | <input type="checkbox"/> |
| d. Don't know/ not sure (L) | <input type="checkbox"/> |

14. Thinking about all schools in your neighborhood, are any of those schools close to or clustered with a religious institution? (choose one option)

- | | |
|---|--------------------------|
| a. Yes (M) | <input type="checkbox"/> |
| b. No (L) – Skip to Question 16 | <input type="checkbox"/> |
| c. Don't know/ Not sure (L) – Skip to Question 16 | <input type="checkbox"/> |

15. Thinking about the school and religious institution cluster closest to you, how many school and religious buildings are located within a short, one to three minute walk of each other? (choose one option)

- | | |
|---|--------------------------|
| a. 2 (1 school and 1 religious buildings) (L) | <input type="checkbox"/> |
| b. 3-4 (M) | <input type="checkbox"/> |
| c. 5 or more (H) | <input type="checkbox"/> |
| d. Don't know/ not sure (L) | <input type="checkbox"/> |

The following questions are about offices in your neighborhood. Do NOT include medical or dental offices. An office "building" refers to one structure used for offices only (with no other ground-floor use), and an office "complex" refers to multiple office buildings in close proximity to each other.

16. Are there office complexes with 3 or more office buildings within approximately a 10-15 minute WALK from your home? (choose one option)

- | | |
|--|--------------------------|
| a. Yes (M) | <input type="checkbox"/> |
| b. No (H)– Skip to Question 22 | <input type="checkbox"/> |
| c. Don't know/ not sure (L)– Skip to Question 22 | <input type="checkbox"/> |

17. Thinking about the office complex closest to you, how many minutes does it take to WALK there from your home? (choose one option)

- | | |
|-----------------------------|--------------------------|
| a. Less than 5 minutes (L) | <input type="checkbox"/> |
| b. 5-10 minutes (M) | <input type="checkbox"/> |
| c. More than 10 minutes (H) | <input type="checkbox"/> |
| d. Don't know/ not sure (L) | <input type="checkbox"/> |

18. About how many minutes does it take to WALK from one office building to another in that same office complex? (choose one option)

- | | |
|-----------------------------|--------------------------|
| a. Less than 2 minutes (H) | <input type="checkbox"/> |
| b. 2-5 minutes (M) | <input type="checkbox"/> |
| c. More than 5 minutes (L) | <input type="checkbox"/> |
| d. Don't know/ not sure (L) | <input type="checkbox"/> |

19. About how many minutes does it take to WALK along or through that same office complex? (choose one option)

- | | |
|--|--------------------------|
| a. Less than 2 minutes (smaller than 10 acres) (H) | <input type="checkbox"/> |
| b. Between 2 and 5 minutes (10-20 acres) (M) | <input type="checkbox"/> |
| c. More than 5 minutes (larger than 20 acres) (L) | <input type="checkbox"/> |
| d. Don't know/ not sure (L) | <input type="checkbox"/> |

20. Are any of the office buildings close to or clustered with multi-use buildings (e.g., buildings with shops or offices on the ground floor and with residences or offices above)? (choose one option)

- | | |
|---------------------------------|--------------------------|
| a. Yes (M) | <input type="checkbox"/> |
| b. No (L) – Skip to Question 22 | <input type="checkbox"/> |
| c. Don't know/ not sure (L) | <input type="checkbox"/> |

21. Thinking about the cluster of office and multi-use buildings closest to you, how many minutes would it take to WALK there from your home? (choose one option)

- | | |
|-----------------------------|--------------------------|
| a. Less than 5 minutes (L) | <input type="checkbox"/> |
| b. 5-10 minutes (M) | <input type="checkbox"/> |
| c. More than 10 minutes (H) | <input type="checkbox"/> |
| d. Don't know/ not sure (L) | <input type="checkbox"/> |

The following question is about banks in your neighborhood. ATM machines alone do NOT count as banks.

22. Thinking about the bank closest to you, how many minutes does it take to WALK there from your home? (choose one option)

- | | |
|-----------------------------|--------------------------|
| a. Less than 10 minutes (H) | <input type="checkbox"/> |
| b. 10-15 minutes (M) | <input type="checkbox"/> |
| c. More than 15 minutes (L) | <input type="checkbox"/> |
| d. Don't know/ not sure (L) | <input type="checkbox"/> |

Please indicate time needed to complete this survey:

Approximately _____ minutes

Please return the completed survey to: