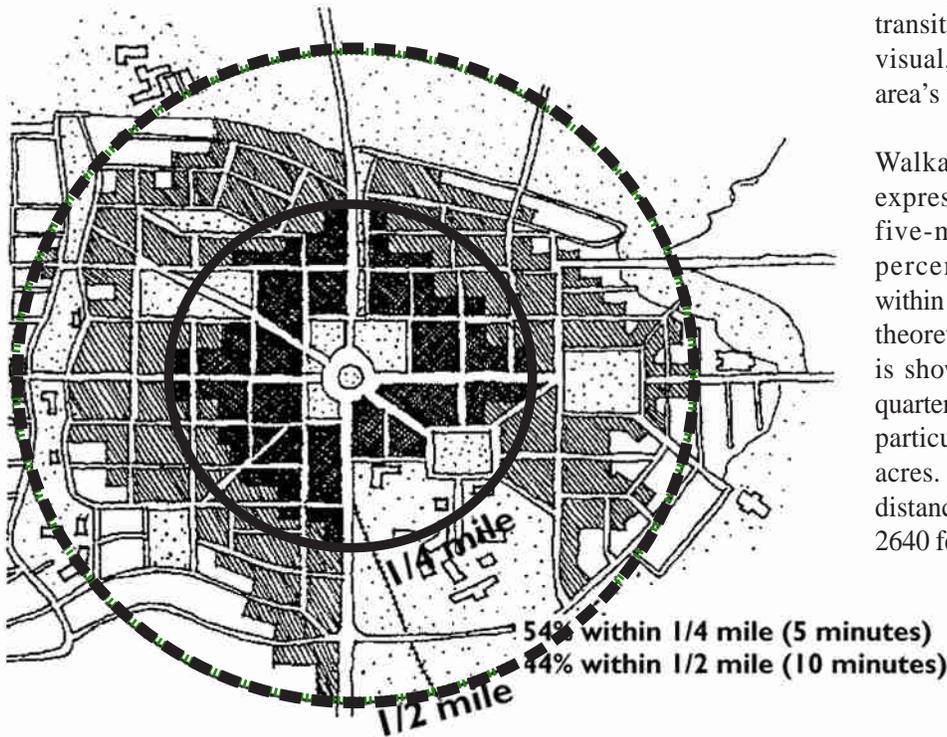# PED SHEDS

Walkable catchments, sometimes referred to as "ped sheds," can be mapped to show the actual area within a five-minute walking distance from a neighborhood or town center or within ten minutes from any major transportation stop such as a rail station. Measuring the walkable catchment is simply a technique for evaluating how easy it is to move through an urban area and access neighborhood centers or transit facilities. The resulting maps are visual, highly accurate estimates of an area's walkability.

Walkable catchment calculations are expressed as the actual area within a five-minute walking distance as a percentage of the theoretical area within a five-minute walking distance. The theoretical five-minute walking distance is shown as a circle with a radius of a quarter mile (1320 feet) drawn around any particular center. This is an area of 125 acres. Calculating a ten-minute walking distance, the radius used is half a mile or 2640 feet, resulting in a circle with an area


54% within 1/4 mile (5 minutes)
44% within 1/2 mile (10 minutes)
1/4 mile
1/2 mile

Ped Sheds are maps showing the actual area within a five- to ten-minute walking distance from any activity center or transportation stop

of 500 acres. The higher the percentage, the better the walkability of an urban area. A good target for a walkable catchment is to have 60% of the area within a five-minute walking distance, or within ten minutes in the case of major transit stops.

Process for Calculating Walkable Catchments

1. On a scaled map, draw a circle of a quarter mile radius around a neighborhood or town center or a half mile radius circle around a rail station. When drawing the circles around a station, the convention is to draw the inner quarter mile radius circle as a thick solid black line and the half mile radius circle as a broken black line.
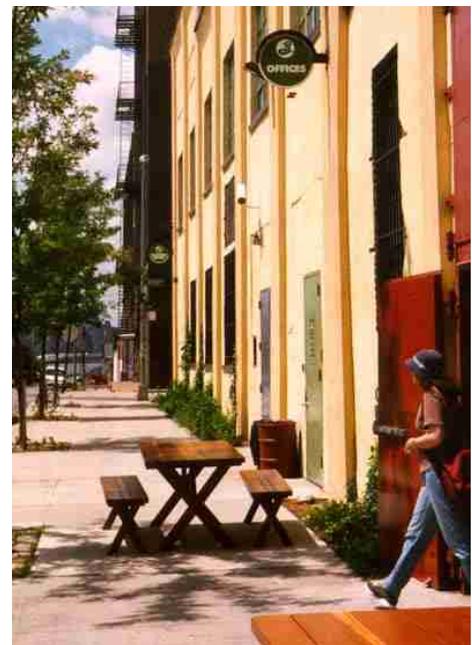
Activities along the street improve the walk

2. Starting from the center point, measure along the centerline of all available streets to a distance of a quarter mile.

3. Estimate the boundary of the lots within a quarter mile walk and color this area. The convention is to color this area purple. This is the actual area able to access a center along the available streets within a five-minute walk.

4. In the case of stations, complete the task outlined in item 3 above and also complete the task for a ten-minute walking distance, using half a mile as the distance measure. The resulting map will show the actual distance within both a five-minute walk and a ten-minute walk from the railway station. The convention is to color the ten-minute walking distance area light blue.

5. Using a scaled grid (e.g., 250-foot squares at the appropriate scale), calculate the approximate area in acres of the land colored purple and express this as a percentage of 125 acres. (Each 250-foot square has an area of 1.435 acres, so multiply the number of squares by 1.435 to convert squares to acres.) This shows the actual area within a quarter mile of the center as a percentage of the 125 acre circle. In the example, this is 68 ac/125 ac = 54%.
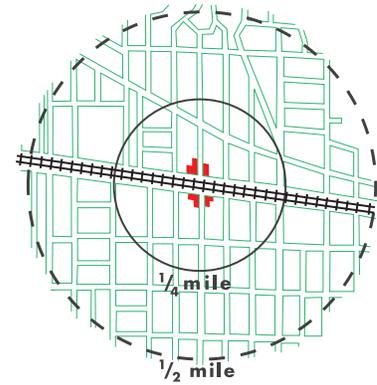
6. Repeat the exercise for rail stations, using the scaled grid, and calculate the area accessible within a 10-minute walk (half a mile) of the 500 acre area. In the example below, this is 220 ac/500 ac = 44%. Note that the walkable catchment should always count the area of land used for dwellings or businesses but should not include public open space contained in the accessible area.
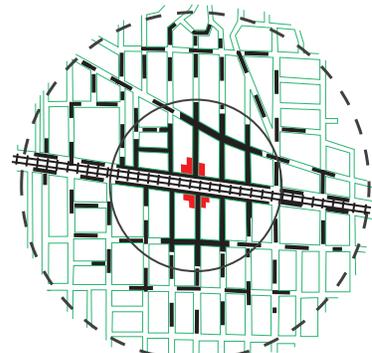
Fine-Tuning the Calculation

There are practical influences on walkable catchments, such as short cuts through parks or along pedestrian paths. These should only be included where there is good lighting and a high degree of surveillance in the evening and on weekends from nearby development that fronts the parks. Similarly, the walkable catchment may need to be reduced where there is poor surveillance and routes are perceived to be unsafe.
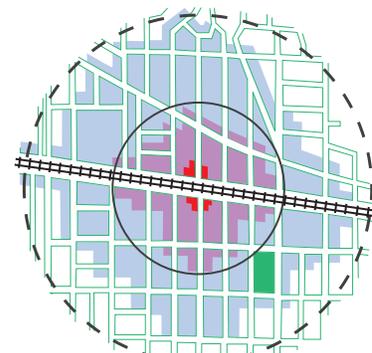
Source:
Adapted from "Liveable Neighbourhoods Community Design Code," a Western Australian Government Sustainable Communities Initiative, December 1997.
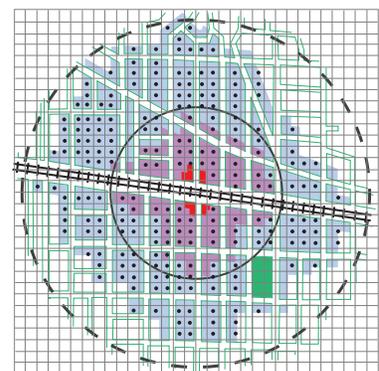

Step 1

Step 2

Step 3

Steps 4 & 5