



Urban Design for Active Commuting

Health promotion professionals always hope that when faced with a range of options, people will make the *healthy choice*. When it comes to travel, this means making the *active choice* whenever possible.

Creating a supportive environment can help ensure that the healthy (active) choice is also an easy one. In this respect, recent interest among urban planners and transportation engineers is encouraging. There are increasing efforts to reduce the use of SOVs (single-occupancy vehicles) in favour of public transit, walking, and cycling.

Design and Transportation

Several studies show that general design characteristics have an impact on the travel mode of choice.

In one study, Katherine Shriver considered pedestrian activity in two pairs of neighbourhoods that possessed either pedestrian-oriented or automobile-oriented transportation systems, land use, and design characteristics, but otherwise similar density, housing, and sociodemographic characteristics.

In the physically accessible neighbourhoods, walks were primarily shorter, utilitarian trips involving more secondary activities. In the less accessible neighbourhoods, longer, less frequent recreational walks were more common.

In another study, Frank and Pivo examined the impact of mixed use and density of development on mode of travel. In areas of higher density and greater land-use mix (i.e., housing, work, and shopping intermingled), transit usage and walking increased whereas SOV use declined.

Return to the Traditional

The many negative consequences of suburban sprawl have kindled an interest in neo-traditional development. Writing in the *Journal of Planning Literature*, Michael Berman says this emphasizes a return to the grid patterns

and walkable streets of the early part of the 20th century.

In his article, Berman sets out the main concepts and characteristics of neo-traditional design. They include:

- a mixed-use core within walking distance of residents,
- gridded streets that provide multiple paths for drivers and pedestrians,
- narrow streets with sidewalks and alleys running behind homes,
- higher housing density and smaller lots than those in conventional suburbs,
- streets that are social spaces as well as transportation facilities, and
- common open spaces such as village greens.

One goal in all of this is to recreate the sense of community more common in older, traditional neighbourhoods. It is also hoped that design will influence behaviour, including greater use of active modes of travel.

Neo-traditional development *can* deliver transportation benefits, but they're not automatic. If the development is in a sea of urban or suburban space, for example, the influences and opportunities of the broader region will lessen any impact that a pocket of neo-traditional design might have.

Berman puts it this way: "Perhaps its greatest potential ... is not in reducing the number of driving trips but in changing the nature of those trips to decrease congestion and lower travel times."

Fixing the Inner Workings

Regardless of a community's overall design, many things can be done at "street level" to encourage and support cycling and walking.

Khisty cites seven performance measures for pedestrian facilities: attractiveness, comfort, convenience, safety, security, system coherence, and system continuity. Epperson lists important factors for cycling level of service: per-lane traffic volume, speed of traffic, right-hand-lane width, overall pavement

quality, and the generation of conflicting travel paths. (Readers interested in the details of these studies are referred to the final two entries on the *More Info ...* list.)

Doing Our Part

Health promotion professionals, educators, recreation personnel, and others can help shape the design of their local community. With public consultation now a standard part of the planning process, there is a natural forum to voice concerns and advocate for change. Participation on sub-committees or working groups allows for more in-depth involvement.

And, of course, we must encourage people to take advantage of good opportunities available right now. These include active travel to school, utility walking and cycling—to the store, to work, to visit friends—and longer walks for health, fitness, and leisure.

More Info ...

Shriver, K. (1997). Influence of environmental design on pedestrian travel behavior in four Austin neighbourhoods. *Transportation Research Record*, 1578, 64–75.

Frank, L., & Pivo, G. (1994). Impacts of mixed use and density on utilization of three modes of travel: single-occupant vehicle, transit, and walking. *Transportation Research Record*, 1466, 44–52.

Berman, M.A. (1996). The transportation effects of neo-traditional development. *Journal of Planning Literature*, 10 (4), 347–363.

Khisty, C.J. (1994). Evaluation of pedestrian facilities: beyond the level-of-service concept. *Transportation Research Record*, 1438, 45–50.

Epperson, B. (1994). Evaluating suitability of roadways for bicycle use: toward a cycling level-of-service standard. *Transportation Research Record*, 1438, 9–16.

