

Making the Case for Active Transportation

- Bulletin # 5: Built Infrastructure -



Built infrastructure in communities refers to the physical structures within the community that form the foundation for the development of land-use (e.g., buildings, roads, electricity). There are five elements of the built infrastructure that influence the travel behaviour of residents:¹

1. **Density of the development:** Refers to the number of housing units per acre, which includes different housing forms such as single, semi-detached, townhouses and high- and low-rise buildings.
2. **Land Use Mix:** Includes placing residential with commercial (i.e., retail, office, employment or service).
3. **Street Connectivity:** Determines how directly one can travel between activities.
4. **Street Scale:** Refers to the design of space between the curb and the front of a building and also the ratio of street width to building height. It may include items such as shade trees, benches, wide sidewalks, lighting, awnings and building design elements.
5. **Aesthetic Qualities:** Includes elements of the natural environment such as trees, flowers and fixtures such as benches, lighting and signage that create a sensation or feeling of peace and safety for non-motorized users.

Did you know?

- ✦ Evidence shows that neighbourhoods that are designed to be spread-out and car-dependent are more likely to have residents that walk less and weigh more compared to more efficient, higher density walkable communities.²

Active transportation refers to any form of human-powered transportation. Examples include:

- Walking,
- Cycling,
- Using a wheelchair,
- Pushing a stroller,
- Running, and
- In-line skating or skateboarding.



Photo credit: Go for Green

“Active transportation infrastructure consists of the systems of sidewalks, road lanes and trails that support human-powered transportation and keep them separate from motorized modes of transportation. The degree of coverage, continuity and maintenance of this infrastructure are significant determinants of the amount of travel by active modes (p.11).”³

- ✦ Neighbourhood designs that have interconnected streets and pathways, narrow streets, houses close to sidewalks, shopping areas and a mixture of land uses can increase active transportation choices.⁴
- ✦ The Heart and Stroke Foundation of Canada⁵ recommends that governments allocate at least 7% of transportation-related infrastructure funds toward the development of community infrastructure that promotes the use of active modes of transportation.
- ✦ Well-connected walking and cycling networks are crucial to encourage active transportation for all citizens, but may be particularly needed in lower-income neighbourhoods. “Money spent on pedestrian and cycling infrastructure is particularly important in supporting the mobility and participation of lower-income individuals in work and community life (p.263).”⁶

“A highly interconnected local street network with shorter block lengths will allow traffic flow to dissipate more evenly through neighbourhoods. This pattern will limit traffic speed on long road stretches and the need for traffic calming devices (p.24)⁴ and make it more inviting for residents to engage in active transportation.

Take Action!

Build positive relationships with others in your community: for example, with local branches of non-government organizations such as the Heart and Stroke Foundation of Canada; Canadian Diabetes Association; and local community groups such as walking, cycling or trail clubs, daycare centres, and seniors groups. Share the information in this bulletin and discuss how to work together to build active transportation infrastructure in your community.

Work with other interested community organizations and individuals to identify built infrastructure elements that enhance or hinder active transportation opportunities. Use positive feedback with municipal decision makers to acknowledge where they have done a good job to provide built infrastructure that supports active transportation; examples may include zoning for increased density, mixed land-use, and improving street connectivity, street scale and aesthetics. Also take the opportunity to highlight areas for improvement to increase active transportation opportunities inclusive of vulnerable community members such as children, youth, families, people with disabilities and older adults.

Share this bulletin with community decision makers such as municipal council members and staff in urban planning, parks and recreation, traffic management, transit, public health and other departments to increase their understanding of the effect of their community planning decisions on active transportation opportunities in their community. Encourage staff from various departments to establish interdepartmental working committees to address active transportation issues.

How to use this bulletin: This bulletin is for professionals and community members who want to build a case for active transportation in their community. Share the information in this bulletin with community decision makers such as municipal council members and municipal staff responsible for land-use planning, transportation, public utilities, social services, parks, recreation and building codes to increase awareness of the link between built infrastructure and active transportation.

Other Making the Case for Active Transportation Bulletins:

- Health Benefits
- Economic Benefits
- Safety
- Role for Municipal Decision Makers
- Barriers
- Environmental Benefits
- Increasing Social Capital



Bergeron, K. & Cragg, S. (2009). Making the Case for Active Transportation: Bulletin #5 – Built Infrastructure. Canadian Fitness and Lifestyle Research Institute, Ottawa, Ontario.

CFLRI Quick Facts:

The CFLRI's 2007 Physical Activity Monitor examined neighbourhood amenities.⁷ Overall, the majority of Canadians agree that:

- ✗ sidewalks exist on most streets in their neighbourhood;
- ✗ they live within in a ten to fifteen minute walk to a transit stop such as a bus, train, trolley or tram;
- ✗ there are facilities to bicycle, such as special lanes, separate paths or trails, or shared use paths or bicycles and pedestrians in or near their neighbourhood; and
- ✗ there are many shops, stores, markets or other places to buy things they need within easy walking distance of their homes.

The CFLRI's 2004 *Survey of Canadian Municipalities*⁸ collected data from municipalities with populations of 1,000 or more to examine local policy and the extent to which social and physical environments support and promote physical activity:

- ✗ Just over half report having bicycle racks at municipal buildings;
- ✗ the majority indicate that they do not have designated bicycle lanes on roads;
- ✗ three in five report that an increase in the amount of walking, bicycling and multi-purpose trails was the most pressing infrastructure need in their community to help increase physical activity levels among their citizens.

References:

1. Handy, S.L., Boarnet, M.G., Ewing, R. & Killingsworth, R. E. (2002). How the built environment affects physical activity: Views from urban planning. *American Journal of Preventive Medicine*, Vol 23 (2S), 64-73.
2. Ewing, R., Schmid, T., Killingsworth, R., Zlot, A. & Raudenbush, S. (2003). Relationship between urban sprawl and physical activity, obesity, and morbidity. *American Journal of Health Promotion*, Vol 18, 47-57.
3. Metrolinx (2008). Green Paper #3: Active transportation development of a regional transportation plan for the greater Toronto and Hamilton area. Toronto, Ontario.
4. Frank, L., Kavage, S. & Litman, T. (2006). Promoting public health through smart growth: Building healthier communities through transportation and land use policies and practices. *Smart Growth BC*. 1-43.
5. Heart and Stroke Foundation of Canada (2006) Tipping the scales of progress. *Heart Disease and Stroke in Canada 2006*.
6. Butler, G.P., Orpana, H. & Wiens, A.J. (2007). By your own two feet: Factors associated with active transportation in Canada. *Canadian Journal of Public Health*, Vol98(4), 259-264.
7. Canadian Fitness and Lifestyle Research Institute. Changing the Canadian Landscape...one step at a time: Results of the Physical Activity Monitor 2007. Bulletin number 10. available at: http://cflri.ca/eng/statistics/surveys/documents/2007pam_b10.pdf
8. Cameron, C., Craig, C.L. & Paolin, S. (2005). *A municipal perspective on opportunities for physical activity: Trends from 2000 – 2004*. Ottawa, ON: Canadian Fitness and Lifestyle Research Institute.

Learn more about the municipal planning process. Visit your provincial website and type “land-use planning” into the search function:

Alberta: www.alberta.ca
New Brunswick: www.gnb.ca
Nova Scotia: www.gov.ns.ca
Newfoundland & Labrador: www.gov.nl.ca
Northwest Territories: www.gov.nt.ca
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