START WITH PEOPLE

Designing Visually Accessible Cities and Communities

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SUMMARY *Navigating modern cities and communities can often be a daunting and intimidating experience whether you travel by car, bike or foot. Now imagine how challenging that effort could be with full or partial vision loss. Several examples of improved accessibility in urban design remind us as planners to apply the concepts of wayfinding, and to design with people in mind.*

RÉSUMÉ *Que ce soit à pied, en auto ou en vélo, parcourir les villes et les collectivités modernes peut s'avérer une expérience difficile, voire intimidante. Or, imaginez les efforts encore plus considérables qu'une personne affligée par une perte de vision partielle ou totale doit déployer. Plusieurs exemples d'amélioration de l'accessibilité servent à rappeler l'importance de mettre en application les stratégies d'orientation particulière et de tenir compte des besoins individuels lors du processus de conception.*

PHOTO: SHUTTERSTOCK

IMAGINE FOR A MOMENT

that you have half the degree of eyesight you have now, or less. How would that impact the way you navigate through your community, downtown or a foreign city? Would you be comfortable in the environment, able to move about on your own, or would you find yourself struggling to cope with your surroundings?

As planners we play a central role in shaping our cities and communities to be barrier free and inclusive. This can range from being socially integrative to practically accessible for those with mobility limitations. The design of our communities has made great strides in many areas over the last few decades; curb cuts are now commonplace, cross walks often have audible signals, and the use of textured pavement to signal stairs or grade changes can often be found.

The earliest work on accessible design can be found in Selwyn Goldsmith's 1963 publication, *Designing for the Disabled*. Community design has changed as a result of his work, foremost evident in the introduction of the cut curb. More work, however, remains to be done. According to the Canadian National Institute for the Blind (CNIB) "accessibility is best represented when features are 'built in' as an integral part of the design and development process. Unfortunately, much of the time accessibility is an afterthought and features need to be 'retro-fitted' or adapted to ensure compliance."[1]

Canada's demographics are changing when it comes to vision. Our population is aging and with that comes vision loss through disease and natural degeneration. This will impact the mobility of older populations. According to the CNIB there are currently 1,150,000 people living with blindness or partial sight in Canada.[2]

Still, there is much more that could be done to make it easier for someone with low vision or blindness to navigate cities. Many improvements can be done at low or incremental cost as part of an existing development or as part of renovation or reconstruction work. Much can also be learned from leading practices around the world.

Being someone who has grown up living with low vision I have a deep appreciation for the challenges in navigating environments typically designed for cars. The sense that, if you are not able to drive: you don't belong here. Quite often, even when more dense neighbourhoods are designed for pedestrians the concepts of wayfinding – orientation and navigation – have been forgotten during design. Many times I have stood at an intersection trying to determine what street I had arrived at only to be frustrated by the one street sign I could find located on the opposite corner of a vast intersection out of view.

I have visited many cities that demonstrate examples of both improved accessibility and wayfinding. Many of these examples are refinements rather than radical innovations. On the following pages are three examples of urban design changes that can be incorporated into community planning to improve accessibility.

These examples show that even small changes can improve the visual accessibility of cities for everyone. In addition, planners should consider the concepts embedded in the seven principles of "universal design", a term coined by architect Ronald L. Mace. Universal design describes "the concept of designing all products and the built environment to be aesthetic and usable to the greatest extent possible by everyone, regardless of their age, ability, or status in life."[3]

Making our communities accessible also means reducing automobile dependence in cities, while improving transit and walking options. Supporting services to assist persons with low vision are essential and planners are encouraged to work with local chapters of organizations like the CNIB or the Canadian Council of the Blind to best integrate visual accessibility considerations into urban design.

In the end concepts presented here represent ways we can design communities better. By starting with people and designing outward we can incorporate accessibility and wayfinding into design. This produces space that is more welcoming and the places that make me want to come back.

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2. Correspondence December 17, 2013 with Keith Gordon, Vice President Research, CNIB.
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DESIGN EXAMPLE NO. 1

STREET SIGNAGE, MAPS AND DIRECTIONS

ONE EASY WAY TO IMPROVE ACCESSIBILITY is to provide easy-to-read information on directions and locations at regular points around the community. Information signs must be clear, use high contrast colours such as white on black or black on white, be presented in large, clear font and, whenever possible, be positioned at eye level. Street signs should be located on more than one corner of major intersections. The use of clear maps, highlighting points of interest, along with the reader's current position, is also useful. Maps should use large fonts and not be cluttered with too much information.

Proper signage has many complementary benefits beyond improving visual accessibility. Maps and directions enable tourists to find points of interest in the community, or shoppers to locate local vendors that they might otherwise miss. Think of your community like a shopping centre and how you can best connect people with services.

Two examples of easy to read directional signage. High contrasting fonts, positioning of signage close to eye level and proving area maps all improve accessibility. **LEFT**: Direction signage using white on black contrast **INSET**: Local area map using large font with black on white contrast)

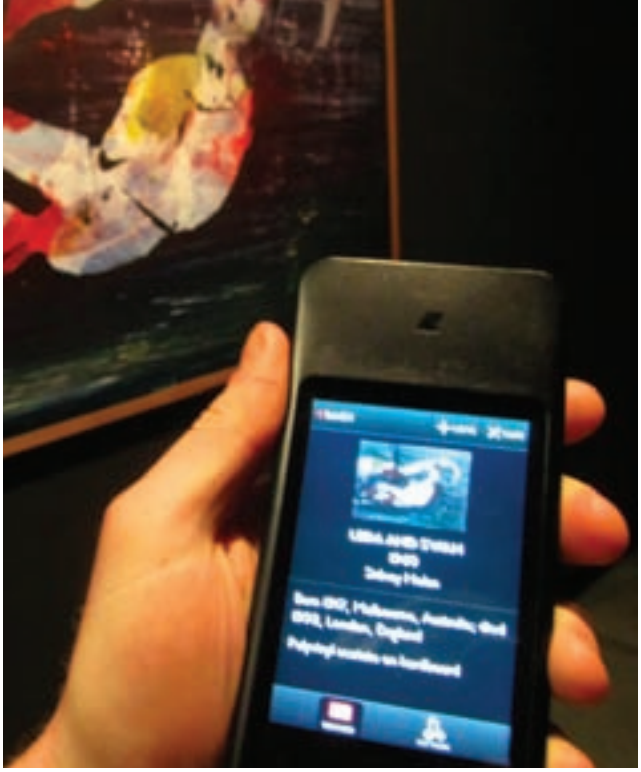
DESIGN EXAMPLE NO.2

SIDEWALK TEXTURING AND COLOURING

SIDEWALKS ARE MORE THAN JUST SOMEWHERE to put your feet. They can be used to facilitate navigation. Engraving street names at crossings presents this information at an easy-to-read distance, especially when positioned at all corners. Texturing and high contrast colours can also be used to denote crossings, intersections, stairs or changes in elevation.

The use of paving tiles and street furniture also creates a safer sense of place for visual accessibility by providing landmarks as well as a sense of separation from vehicles or cyclists. Painted signs applied to the pavement, for example, can be used to denote shared pathways with cyclists.

TOP: Cut curb with high contrast colours and texturing to denote a crossing. **INSET:** Street names engraved in sidewalk for easy reading



DESIGN EXAMPLE NO. 3

AUDIBLE SIGNALS AND MESSAGES

AUDIBLE SIGNALS, both automated and user activated, have become common at major intersections. These signals assist persons with vision loss in knowing when it is safe to cross, especially in situations where the street may be so wide that crossing signals are out of view on the other side. Crossing signals should be adequately timed to accommodate the walking pace of someone with low vision. Far too often crossings fail to provide adequate time for any pedestrian, beyond the young and fit, to cross safely.

Mobile technology, such as smart phones and tablets, has been rapidly adopted across society and has already been of great assistance to persons with low vision in accessing information. These devices can provide direction around a community or a building and can also include descriptions of exhibits or services in written or audible formats. Custom devices could be offered at specific locations, like museums or town offices. Apps or Q-codes that can be scanned at popular locations could also be developed. Reliance on technology, however, should not be used as an excuse to omit more traditional wayfinding infrastructure throughout a community. ■

RIGHT: A push button to activate a pedestrian crossing signal along with an illuminating display to indicate when to cross. **INSET**: A hand held navigation device providing descriptions of exhibits at the Museum of Old and New Art (MONA).