Lanark County

Policy for the Assessment and Mitigation of Accessibility Barriers on the County Road System

draft for discussion

Prepared by:

AECOM Canada Ltd.
302 – 1150 Morrison Drive, Ottawa, ON, Canada   K2H 8S9
T 613.820.8282   F 613.820.8338   www.aecom.com

Date:
May 2009
Table of Contents

1. Goals and Objectives ................................................................. 1
2. Background ................................................................................. 1
3. Mitigation Measures for Accessibility Improvement .............. 2
   3.1 Sidewalks ................................................................................. 2
   3.2 Crosswalks .............................................................................. 2
   3.3 Visual and Auditory Aids for Pedestrians ......................... 3
   3.4 Lighting, Signage and Pavement Markings ................. 3
   3.5 Recommended Planning Guidelines ............................... 4
4. Recommended Process for Implementation .......................... 6
5. Recommended Policies ............................................................. 7
6. References .................................................................................. 8

List of Tables

Table 1: Planning Guidelines ................................................................. 4
1. Goals and Objectives

The County of Lanark has identified a need to consider accessibility within the County road network for persons with disabilities. The intent of this accessibility policy is to provide a consistent process for the identification of accessibility needs and the selection of measures that can be incorporated into the capital planning of existing and new infrastructure.

Much of the focus on accessibility is related to pedestrian facilities, which are under the jurisdiction of the local municipalities and therefore the County will work cooperatively with the municipalities to improve accessibility. Pedestrian facilities within the County road system can be made safer and more user friendly by ensuring that new or replacement pedestrian facilities provide barrier-free access for persons with mobility issues.

2. Background

In 2001, the Ontario Government passed legislation known as the *Ontarians with Disabilities Act* (ODA) and then in 2005 passed updated legislation known as the *Accessibility For Ontarians with Disabilities Act* (AODA). The purpose of these two pieces of legislation was to help create a society that is open to all, including persons with disabilities.

In a community with a population of over 10,000 people, the ODA (2001) requires that an Accessibility Advisory Committee be created. In all municipalities, an Accessibility Plan must be prepared annually to identify the barriers that exist in the community and to prepare a plan to address the removal of the barriers.

The County of Lanark has an Accessibility Advisory Committee comprised of community members with disabilities, staff representatives, a county councillor, a professional from the stakeholder community and a citizen volunteer. The committee meets throughout the year with a mandate to prepare the Accessibility Plan, to advise council regarding accessibility issues, to promote awareness of disabilities and to keep informed of accessibility in other communities and of the provincial and federal government legislation.

The Town of Mississippi Mills and the Town of Carleton Place also have Accessibility Advisory Committees.

This accessibility policy differs from the County’s Accessibility Plan in that it provides a guideline for the implementation of specific measures related to the County Road system.

Contact was made with the representatives from the three Accessibility Advisory Committees within the County of Lanark for their input regarding current issues and concerns related to accessibility and the transportation network. The issue of accessibility was also raised during the Focus Group meetings and
in the web site questionnaire undertaken for the Lanark Transportation Master Plan Study in August-September 2008.

The following issues were raised by the Committees and the public:

- Sidewalks and the need to accommodate wheelchair users on urban streets;
- Crosswalks, line painting and the fading of the paint lines;
- Visual and auditory aids for pedestrians such as auditory traffic signals;
- Lighting and signage legibility; and
- Recommended Planning Guidelines for the identification of accessibility issues on roadways and sidewalks

3. Mitigation Measures for Accessibility Improvement

The County road network is comprised mainly of rural roads (89%) although there are some urban (1%) and suburban roads (10%) as well. There are several potential measures for improving accessibility that are applicable to the County road system in Lanark, some of which are only relevant in an urban setting while others may be considered across the entire County road network.

3.1 Sidewalks

Pedestrian accessibility is defined as the provision of sidewalks and pathways to promote and sustain a walking environment to/from all areas within a community and between communities where vehicular transport is not the only viable transportation alternative. This includes incorporating safety into the walkway designs and accommodating persons of all abilities.

In an urban setting, County roads are major roads and often have sidewalks to accommodate pedestrians. Sidewalks, including those on County roads, are the responsibility of the local municipality to construct and maintain. The County provides approval and encouragement for sidewalk construction but funding must come from the local municipality. The County should adopt the Transportation Association of Canada (TAC) design standards as found in the TAC Geometric Design Guide for Canadian Roads to address accessibility issues related to sidewalks on County roads.

3.2 Crosswalks

Pedestrian crosswalks can be designed to accommodate people with visual disabilities using various measures. When a crosswalk is to be installed, adequate sight lines should be provided by removing
visual obstructions in the vicinity of the crossing. Crosswalks should have markings to distinguish the crossing area from the rest of the roadway. These pavement markings could be the standard zebra crossing stripes or they can be diagonal stripes. The crosswalk lines should be maintained regularly to prevent fading. Another option would be to replace existing asphalt with coloured pavement in the entire crosswalk area so that the colour lasts as long as the asphalt. Striped crosswalks or coloured crosswalks are most effective at high pedestrian traffic locations such as intersections near schools.

3.3 Visual and Auditory Aids for Pedestrians

At signalized intersections, pedestrian signal timing should be reviewed in order to determine whether the crossing time is adequate for people with mobility impairments. Pedestrian countdown displays can be added to the pedestrian signal heads to help pedestrians gauge the amount of time remaining for crossing.

Another assistive device at signalized intersections is accessible pedestrian signals, which aid people with visual impairments. These signals work in conjunction with the standard pedestrian signals that indicate WALK and DON'T WALK and several types exist. There are audio signals, vibrating or tactile signals or transmitter devices that can send a voice message to hand-held receivers. Information on accessible signals is provided in the Transportation Association of Canada (TAC) publication, Guidelines for understanding, use and implementation of accessible pedestrian signals (2008).

An evaluation procedure is included in the TAC guidelines, which considers:

- Pedestrian crossing demand, from very light (1-10) to heavy (>51)
- Proximity to alternative crossings, from 100m to more than 300m
- Traffic Conditions, which is qualitative measure
- Other factors, including complex traffic signal phasing, intersection geometry, and right turn volumes among others
- Width of crossing, from less than 12m to more than 24m

3.4 Lighting, Signage and Pavement Markings

Some measures to improve accessibility can be implemented in both urban and rural settings throughout the County. Street lighting should be reviewed at or near intersections in order to determine whether additional lighting may be required. Street lighting can enhance visibility of the intersection configuration and can make it easier to read directional and guide signage.

The ability to see the contrast in pavement markings is an important consideration for people with visual impairments. Pavement markings should be applied as soon as fading begins. A higher level of retroreflectivity can considerably increase the distance at which pavement markings can be seen.
Signage should have large font and contrasting colours to improve visibility. The design of signs should be reviewed using *OTM Book 1B – Sign Design Principles*. This book gives guidance on font type, letter height, sign layout and colour combinations with consideration for the design speed on the roadway.

### 3.5 Recommended Planning Guidelines

**Table 1** provides a summary discussion on accessibility topics that should be considered before facilities are constructed/ rebuilt/ refurbished. These guidelines are relevant for all users. A review of current provincial standards should be carried out before construction or rehabilitation of pedestrian facilities and site conditions should be reviewed to determine if the guidelines are appropriate for local conditions.

**Table 1: Planning Guidelines**

<table>
<thead>
<tr>
<th>Topic</th>
<th>Recommended</th>
<th>Reference</th>
</tr>
</thead>
</table>
| Access for People with Disabilities | In general, accessible design requires the elimination of obstacles within the route of travel, a minimum 1.5 m width of travel route widening to 3.0 m to accommodate passing wheelchairs. Slopes ranging between 2 and 4%. | TAC 2.2.6.5, Figure 2.2.6.3  
OPSD 310.010 |
| Sidewalks                     | The minimum acceptable width for sidewalks is 1.5 m widening to 3.0 m to accommodate higher pedestrian volumes and passing wheelchairs. | TAC 2.2.6.5  
TAC figures 2.2.6.1, 2.2.6.2 & 2.2.6.3 |
| Cross-Slope                   | An acceptable range of sidewalk cross-slope is 0.01 m/m to 0.05 m/m. A normal cross-slope on a sidewalk is 0.02 m/m to prevent water ponding and icing. It is ideal not to exceed 0.02 m/m for the safety of persons with disabilities and wheelchairs. | TAC 2.2.6.5 |
| Sidewalk and Pathway Surface  | Smooth surfaces such as concrete or asphalt are firm and stable enough to support wheelchair wheels, crutch tips, walkers and other mobility aids. Compacted and smooth gravel pathways may be acceptable in recreational settings; however, loose gravel and wood chips generally do not provide for an accessible surface. | TAC 2.2.6.5 |
## Table 1: Planning Guidelines

<table>
<thead>
<tr>
<th>Topic</th>
<th>Recommended</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curbs</td>
<td>Curbs are useful to provide a physical separation between pedestrians and traffic. They stop vehicles from mounting the boulevard when parking and the gutter acts as a path for storm water drainage. Ramps are particularly useful for all people with mobility difficulties as well as people with baby strollers or rolling luggage, in-line skaters, bicyclists, and people in wheelchairs. They provide accessibility at intersections, building entrances, and other areas where elevated walkways are edged with curbing. It is recommended that curb ramps have a detectable warning surface for people who are visually impaired.</td>
<td>TAC 2.2.7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OPSD 310.030</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TAC figure 2.2.6.4</td>
</tr>
<tr>
<td>Street Furniture</td>
<td>Street furniture, signs, trash cans, and utility boxes may be hazards to the visually impaired person. In general, it is suggested that street furniture be grouped together to be more noticeable than they would be individually and to take up less room. Others ideas include: add contrast with a brighter color, maintain a clear height and width of pedestrian walkways, and place grouped objects in an area with a different surface, and/or mark with a tactile strip.</td>
<td>OPSD 610.010</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OPSD 610.020</td>
</tr>
<tr>
<td>Catch Basins</td>
<td>Catch Basins are best located outside the route of pedestrian travel and should be mounted flush with the surrounding sidewalk surface where present.</td>
<td></td>
</tr>
<tr>
<td>Crosswalks</td>
<td>A marked crosswalk includes the use of pavement markings and signs. The County will install painted crosswalks and crosswalk warning signs at locations where required for school pedestrians if the local municipality places and retains an adult crossing guard during the time required for school pedestrians. Crosswalks can be better defined by using texture to aid in their identification by persons with disabilities and to provide non-slip surfaces for wheelchairs.</td>
<td>OTM Book 11</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TAC 2.2.6.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OPSD 561.030</td>
</tr>
<tr>
<td>Traffic Signals</td>
<td>Pedestrian heads on County traffic signals are installed in urban areas. Each design is evaluated on a site by site basis by Public Works staff. Pedestrian signals are installed only as warrants demand (e.g., mid-block signal for pedestrian crossing).</td>
<td>OTM Book 12</td>
</tr>
</tbody>
</table>
Table 1: Planning Guidelines

<table>
<thead>
<tr>
<th>Topic</th>
<th>Recommended</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lighting, signage and pavement markings</td>
<td>Sign design principles are followed to improve visibility and create consistency, which makes it easier for everyone and in particular those with reduced vision to read. Lighting is desirable at decision points such as intersections. Pavement markings should be applied on County roads on a regular basis and with a sufficient level of retroreflectivity.</td>
<td>OTM Book 1B</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OTM Book 11</td>
</tr>
</tbody>
</table>

4. Recommended Process for Implementation

The implementation of accessibility measures should follow a standard process, which will include:

1. Problem Identification
2. Data Collection
3. Analysis and Evaluation
4. Recommendations
5. Implementation

**Problem identification**: The need for an accessibility measure may be suggested through an Accessibility Advisory Committee, through a citizen request or through the identification of a problem by County or municipal staff. The identification of barriers is generally considered during the planning and design of road projects. Accessibility measures deemed to be of high priority may be assessed and implemented as independent projects by the County.

The following steps can be taken to identify barriers:

- Note previously identified barriers from the Accessibility Plan
- Conduct field review of project area to identify potential barriers in physical facilities, site planning or in technologies
- Consult with the Accessibility Advisory Committee, County staff and municipal staff

**Data collection**: Once problems have been identified, existing conditions need to be documented. The area affected should be described. The number of people affected by the problem (in terms of few, several or many) and the type of disability that is affected by the barrier should be determined and documented where practical.

**Analysis and Evaluation**: A list of potential solutions for each identified problem should be considered from the suggestions presented in Section 3. Other measures may also be available in the future as new technologies develop.
Potential measures should be evaluated for their ability to solve the problem and for their cost effectiveness. Criteria should be established and prioritized to apply to the list of potential measures during the evaluation. The criteria can include the following:

- The proximity to schools, parks, senior’s complexes, residential areas, retail and business districts
- Road width to be crossed by pedestrians
- The need to connect sidewalks with existing sidewalks/pathways
- Traffic volumes and truck percentages
- Street topography and the implications for pedestrian safety (related to hills and curves)
- Public input
- Complexity of intersection
- Installation cost
- Street classification (all County roads will be either arterials or collector roads)

**Recommendations:** Following the evaluation, a list of recommended measures will be generated, associated with a specific capital project. This list will be reviewed with the Accessibility Advisory Committee. As the road projects advance from the planning stage to the design stage, the accessibility measure recommended should be reviewed in order to determine whether it is still required and within the budget priorities of the County.

**Implementation:** Construction of accessibility measures would usually be included as part of a larger capital project that may require EA approval. If implemented as a stand-alone project, accessibility measures are unlikely to require clearance under the Municipal Class EA.

The MTO produces the *Ontario Traffic Manual* (OTM), which should be referred to in conjunction with this accessibility policy. Specifically, *OTM Book 12* discusses Traffic Signals and *OTM Book 1* discusses sign design. Other OTM books will have application to accessibility but have not yet been published. These books include *OTM Book 8 – Directional Guide Signs*, *OTM Book 9 – Tourism and Commercial Signs* and *OTM Book 15 – Pedestrian Control and Protection*.

### 5. Recommended Policies

The County will:

- Liaise with local municipalities prior to the start of County road rehabilitation and reconstruction projects to ensure accessibility measures are considered
- Consult with the County and Local Municipal Accessibility Advisory Committees concerning projects to be undertaken and the list of recommended measures for each project
- Liaise with local municipalities to agree on appropriate design standards to be applied in Lanark County for each accessibility measure
Lanark County
Accessibility Policy

• Coordinate efforts with Planning Departments of local municipalities to ensure that connections between on-street and off-street facilities are well designed
• Establish standards to ensure access and safety to pedestrians during construction projects
• Request that all pedestrian projects comply with recognized design standards, such as:
  • Ontario Provincial Standard Specifications and Drawings (OPSS and OPSD)
  • Transportation Association of Canada Guidelines
  • Municipal Engineers Association (MEA) Municipal Works Design Manual and
  • Ontario Traffic Manuals (OTM)

  Encourage local municipalities, where they construct sidewalks, to construct them wide enough for two persons to move side by side where feasible and where a need has been indicated. This includes persons with disabilities and persons in wheelchairs.

6. References

List of references used in this document include: