

TAC Sustainable Urban Transportation Award Submission

Shared Streets Accessible to All: A Collaborative Research Initiative to Establish Design Parameters in Quebec

**City of Montreal
Infrastructure, Roads and Transportation Services
Transportation Branch
Road Network Design and Safety Division**

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A research project with the goal of identifying universal accessibility parameters for shared streets was developed by the Transportation Branch of the City of Montreal's Infrastructure, Roads and Transportation Services Department. This project was initiated in the fall of 2016 and completed in the spring of 2017.

Project Context

The adoption of the *Pedestrian Charter* in 2006 was a decisive moment for the City of Montreal, as the Charter recognized the pedestrians' primacy in the urban environment. By designating the pedestrian as the core priority, the City of Montreal wanted to position walking as a primary means of movement, in addition to offering Montrealers a safe and convenient pedestrian environment that would lead to the re-appropriation of the public realm by local residents. The Montreal Transportation Plan, approved in 2008, supports this vision and specifies the need to share the road between all user categories. Measures 14 and 15 of the Transportation Plan respectively focus on redefining the place of motorized transportation and on consolidating the pedestrian environment at the neighbourhood level. In keeping with the Plan's policy direction, the City of Montreal is developing highly innovative pedestrian infrastructures, including several pilot projects relating to the shared streets concept. The ultimate goal is to develop sustainable mobility at the neighbourhood level by improving pedestrian safety and comfort, encouraging all Montrealers to walk to nearby destinations as a first choice.

In order for this movement to grow, and for all Montrealers to start walking more often, it is essential to take the needs of all users into account, including our most vulnerable citizens. It is understood that the shared streets concept places the pedestrian as the core priority, followed by cyclists, automobiles and larger vehicles. The mobility impaired users are often not considered in the process. As a result, many new shared street developments have actually proved more difficult for handicapped persons to navigate.

For example, current design models for shared streets and common use public spaces can result in the loss of typical landmarks and reference points for the visually impaired. In an effort to better respond to the needs of all users as we move toward improved sustainable mobility for all, the City of Montreal Transportation Branch teamed up with the Nazareth and Louis-Braille Institute's Interdisciplinary Rehabilitation Research Centre (CRIR-INLB) to develop and implement a [collaborative research process bringing together engineers, urban designers, rehabilitation experts and mobility impaired persons to identify the universal accessibility parameters to guide the development of new shared streets and the reconfiguration of existing spaces as shared streets.](#)

Scientific Committee and Literature Review

A scientific committee was assembled to guide and direct this research project. It includes three representatives from the City of Montreal (one engineer and two urban designers), two representatives from the CRIR-INLB (one orientation and mobility specialist and one researcher) and one engineer-urban planner from the Ministère des Transports, de la Mobilité durable et de l'Électrification des Transports du Québec (MTMDETQ). The scientific committee conducted a review of relevant scientific literature relating to rehabilitation, urban design and transportation engineering, to produce a clear and fact-based assessment of key issues and best practices relating to universal accessibility on shared streets.

The literature review, published in February 2016, focused mainly on the following three questions:

- How do shared streets create mobility-related obstacles for visually impaired persons?

- According to the scientific literature, what specific orientation and mobility abilities do shared streets affect or compromise, from a visually impaired person's perspective?
- Are there solutions to the loss of reference points and accessibility that can occur with the changes that come with the development and implementation of shared streets?

The literature review examined 112 articles published between 1985 and 2016, in French and English. Authors of these articles come from North America, the United Kingdom, Netherlands, French-speaking Europe, Northern Europe, New Zealand and Japan, which represents a broad geographic area and an even broader range of shared street solutions.

The scientific committee responsible for the literature review focused on identifying the more robust studies that more closely represent the issues faced by visually impaired persons in the pedestrian environment, most notably public gathering places and shared streets. Any solutions developed and tested in response to these issues were also documented, along with obtained results.

The final document includes:

- description of the project mandate and current state of affairs for the visually impaired in Quebec
- definition of key concepts
- methodology (key elements)
- key issues relating to orientation, mobility and planning
- key solution options, summarized and categorized
- bibliography of all studies, articles and reports included in the review

The literature review faithfully reflected the contents of the consulted documents. The authors made no interpretations or recommendations that go beyond the content of the reference materials. This document is by no means intended to be a shared streets design guide.

Panel of Experts and Results

A panel of sixteen experts and key informants was assembled and tasked with exploring the issue of universally accessible shared streets, based on their professional training and experience in the field. Panel members included urban designers, transportation engineers, orientation/wayfinding and mobility specialists, and representatives from community and stakeholder associations. The central research question was as follows: What are the options and solutions identified in the literature review that are applicable to Quebec's urban environment, as we endeavour to adapt the concept of universally accessible shared streets to the specific constraints of our target locations?

The panel met on four occasions during the project. It analysed 26 solutions identified in the literature review. Each solution was assessed based on 14 criteria grouped into two main categories:

- user-related solutions (legibility, practicality, effort required, security, ease of use and autonomy)
- installation-related solutions (ease of maintenance, durability, transferability, design potential, construction feasibility, conformity, acceptability and science-based approach)

The panel rated 13 of the 14 criteria, and the fourteenth was rated according to the reliability of the findings in the relevant reference document based on the established scientific value scale and the

potential applicability of each proposed solution identified in the literature review. Thus, the score for the 'scientific basis' criteria was strictly based on the literature review.

The knowledge acquired as a result of this collaborative research project served as the basis for the development of design solutions, which:

- meet the common needs of a broad range of shared street users, notably the mobility impaired
- possess the best intrinsic qualities
- apply to the Canadian context, characterized by the need to consider winter conditions and a rehabilitation/inclusion approach based on providing full autonomy to mobility impaired persons

This exercise also played a key role in identifying design solutions that should not be pursued, along with those that should be subjected to further testing and analysis. Finally, this research project has produced a list of valid assessment criteria that can be used to measure the quality of future projects.

Degree of Innovation

The collaborative research approach played a key role in bringing together stakeholders from different backgrounds to address a clearly defined issue lacking in proven solutions. This collaborative process called for participants to work together to generate new knowledge through a proactive and constructive attitude toward change. A multi-criterion analysis exercise developed by a deliberative process was used to conduct a detailed assessment of the results of a comprehensive international literature search on the universal accessibility of shared streets. The requirement to achieve consensus on the best practices to implement in the Canadian context gave rise to high-quality discussions filled with real-world examples and detailed examinations of local issues of relevance.

In the end, this collaborative research exercise helped all participants gain new knowledge and a deeper understanding of three key aspects of the universal accessibility of shared streets:

- impacts on professional practices
- existing sustainable mobility issues, including issues relating to the pedestrian dimension of shared streets
- impacts of design decisions on the mobility of persons with functional limitations

Transferability to other Canadian Communities and Organizations

Although quite common in Europe, the shared street concept is still new in North America. In Quebec, discussions to include the concept in the Highway Safety Code (Bill 165) are progressing, and a few pilot projects have been implemented. These pilot projects are greatly appreciated by most pedestrians, as the entire right-of-way is designed for pedestrian use while permitting vehicles to share the open space, rather than restricting pedestrians to the sidewalk. However, groups representing the visually impaired, including the World Blind Union (based in Toronto) [have been very reluctant to support the concept](#), especially when there is no clear demarcation between the sidewalk and the roadway.¹

¹ “ *While [a shared space] is generally beneficial to most road users, it creates difficulties for pedestrians who are blind or partially sighted as the usual orientation cues are often absent and it is difficult for them to sense the subtle cues on the location of the continuous accessible path of travel (CAPT)*”.

Source: [WBU \(2016\)](#)

This research project played an important role in defining best approaches to achieve universal accessibility of shared streets. It included solutions applicable in the Canadian context, which is characterized by the need to consider winter conditions and a rehabilitation/inclusion approach based on providing unaided mobility to blind and partially sighted persons. Involving MTMDET representatives also helped improve provincial authorities' knowledge and awareness of the needs of vulnerable pedestrians in a shared street environment.

Research work conducted by the CRIR-INLB in cooperation with the City of Montreal has provided an overview of relevant universal accessibility practices internationally, along with a rigorous and precise critical assessment of their applicability in the Canadian context. This work has helped dispel some universal accessibility advocacy groups' concerns regarding the concept. It has also helped define shared streets design best practices in our context, in addition to avoiding some of the universal access difficulties encountered in other countries.

This project's rigorous and methodical scientific approach and high quality information will prove highly valuable and applicable to other Canadian municipalities. Shared streets are destined to play a crucial role in achieving improved sustainable mobility in urban areas.

The lessons learned from the detailed literature review will provide the framework for the development of shared street environments that reflect the needs of a wide range of user groups, including the visually impaired. The list of criteria developed as part of this project will be a valuable tool to assess the quality and universal accessibility of the pedestrian component of future shared street initiatives.

Added Value

The collaborative method used for this research project is only one of many approaches available to researchers. The collaborative method, gaining popularity across North America, provides an excellent example of an innovative partnership between organizations and institutions, which at first glance would have appeared improbable. The specific project, initiated essentially to provide a solid framework for streetscape design improvements, was able to draw from the technical and methodological knowledge of some team members (engineers and designers) and the practical experience and user needs awareness of others (wayfinding and mobility experts and mobility-impaired persons).

The validity of the joint project findings, which are by definition new, is ensured by the methodical integration of experience-based, practical and theoretical knowledge from a broad range of sources, in compliance with a rigorous approach which was used from the beginning (literature review) to the end (presentation and discussion of analysis results). This also applied to the proven methodical approach used to collect data and information from experts and key informants consulted throughout the project.

In addition, the collaborative method does not limit itself to generating an explicit body of knowledge, such as a portfolio of workable options or a list of validated criteria. The deliberative process is in itself an instrument of change to help participants articulate a common understanding and definition of the issue. After arriving at a common definition of key terms, the group embarks on the process of developing a common understanding of possible solutions.

After taking the necessary steps to offer panel members 'networking spaces' throughout the process, we are confident that this nascent 'community of understanding' will take shape and eventually lead to

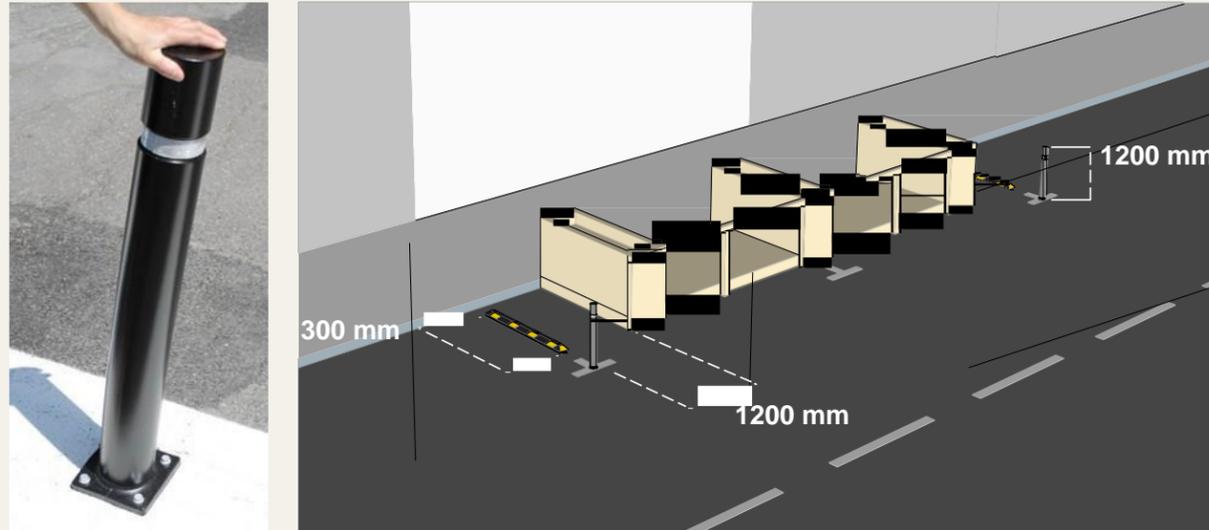
other collaborations that will prove as fruitful as the joint project by the CRIR-INLB and the City of Montréal.

Findings and results generated through this project were used to produce a technical factsheet for the design and implementation of shared streets, which is included in the [City of Montreal Sustainable Streets Design Guide – Section 5: Universally Accessible Pedestrian Environments](#). This reference document will prove very useful to those involved in the design of shared streets when this concept is finally recognized in the Quebec Highway Safety Code.

The shared streets universal accessibility design principles are already being applied to all projects financed through the [City of Montreal Pedestrian and Shared Streets Development Program](#).



Sidewalk Cafés and Parklets



Articulated delineator posts must be lined up with the parking stoppers. They are positioned at the parking zone boundary for maximum visibility from the roadway. These devices must be 1200 mm tall. To ensure night-time visibility, articulated delineator posts must feature a reflective band. This band must be white and comply with all other applicable requirements.

When there are several sidewalk cafés grouped together, safety devices must only be placed at either extremity of this grouping. In fact, these devices are only necessary when there is parking permitted. For 'stand-alone' sidewalk cafés, the safety devices must be placed at either end of the installation. These devices must be installed in the manner deemed appropriate by precinct authorities.

References

- Association des sociétés de développement commercial de Montréal.
- ASSOCIATION DES TRANSPORTS DU CANADA (TAC), *Geometric Design Guide for Canadian Roads*, 2017.
- Code de la sécurité routière du Québec (CSR).
- Code national du bâtiment (CNB).
- Comité consultatif en accessibilité universelle de la Direction des transports de la Ville de Montréal (CCAU).
- DEPARTMENT OF TRANSPORTATION (DOT) de New York, *Highway Design Manual*, chapitre 18, « *Pedestrian Facility Design, Revision 83* », New York, 2008.
- Normes d'implantation de parcomètres de Stationnement Montréal.
- Règlement du Service d'incendies de Montréal (SIM).



Shared Street Development Concepts

Objectives

- Create a meeting place where pedestrians, cyclists and drivers can safely move in the same space.

Description

According to the *Table québécoise de la sécurité routière*, the main features of a shared street in the Quebec context could be as follows:

- Priority is given to pedestrians on the entire roadway;
- All users must behave in a careful and respectful manner toward the more vulnerable users;
- The speed limit is set at 20 km/h;
- Cyclists are allowed to circulate in both directions on a one-way shared street, unless the signage indicates otherwise;
- The development is in compliance with the concept, meaning:
 - It reflects the priority to pedestrians requirement;
 - It provides safe and comfortable pedestrian movements, including the mobility impaired;
 - It includes an area where vehicles cannot circulate or park, and this area must be apparent to visually impaired persons;

- Snow removal must be done right up to the edge of adjacent buildings, to ensure universal accessibility in all seasons;
- The development must reflect seasonal changes.

As this technical sheet was being written, the shared street concept was still not legally authorized in the Quebec Highway Safety Code. However, certain streets in Montreal have already been modified in keeping with this approach.

Road network administrators are responsible for assessing these local initiatives in order to further define and refine the design parameters that will guide the future development of shared streets across Montreal.

The matter of universal access to these spaces is not a minor concern. This technical sheet is the result of extensive collaboration between urban designers, municipal and precinct engineers, community and



RUE SAINT-PAUL, VILLE-MARIE PRECINCT



RUE ÉMERY, VILLE-MARIE PRECINCT



RUE DE BIENCOURT, SOUTH-WEST PRECINCT



Shared Street Development Concepts

Description (cont.)

universal accessibility stakeholders, wayfinding and mobility experts and visually impaired persons.

During expert panel discussions, design aspects such as practicality, comfort or required effort were measured against other characteristics, including ease of maintenance, feasibility and winter viability in order to determine the optimal design elements and practices required to achieve universally accessible shared streets.

Shared Streets – Key Issues

The shared street, as initially developed in Europe, is a space without signage that essentially rejects the conventional sidewalk and roadway sequence. The objective is to encourage pedestrians to occupy the entire roadway and encourage drivers to give priority to the vulnerable users. To do so, the roadway is typically developed on a single continuous plane. As a result, no specific area appears to belong to one particular user group, all users must be aware of each other.

All users must seek to see and be seen to avoid any potential conflicts. However, visually impaired persons are not in a position to manage these visual interactions. They must rely entirely on other shared street users to ensure their personal safety.

In addition, eliminating the separation between the sidewalk and the roadway transforms the street into a vast space devoid of demarcations and cues.

By definition, the shared street involves numerous and constant interactions between users. The vast majority of these interactions are visual in nature;

When facing these unexpected developments that are so very different from what they are accustomed to on their daily travels, some visually impaired persons may have difficulty adapting.



RUE DE LA GAUCHETIÈRE, VILLE-MARIE PRECINCT



EXPLORATORY WALK PRIOR TO REDEVELOPMENT RUE SAINT-PAUL



Shared Street Development Concepts

Shared Streets – Key Issues (cont.)

In a context where the mobility impaired are entitled to an urban environment providing the opportunity to maximize their autonomy, the shared street, as it has been designed and developed in recent decades, is characterized by major constraints.

In response to these international cautionary statements, the Transportation Branch took the initiative to assemble a panel of experts⁵² to develop local solutions to the issue of universal accessibility of shared streets.

The World Blind Union has published a specific cautionary statement⁵¹ on shared streets, urging authorities to work with stakeholder groups to make shared streets accessible to all. In French-speaking Europe and in the United Kingdom, an important movement aimed at adapting the shared streets concept to respond to the needs of mobility impaired persons is taking hold.

Design aspects such as practicality, comfort or required effort were measured against other characteristics, including ease of maintenance, feasibility and winter viability in order to determine the optimal design elements and practices required to achieve universally accessible shared streets in our specific context. This technical sheet provides a summary of this collaborative work.

Recommendations

Core principles

- The design must be user-friendly and must position vulnerable users as the primary focus. These users must be at the centre of all decisions regarding safety, practicality and comfort;
- All users must exhibit prudent and respectful behaviour toward the more vulnerable users;
- Wayfinding and orientation must be independent and intuitive for all users. Visual contact between users must be facilitated, and the tactile and acoustic cues must be simplified. On the entire shared street section, the priority must be given to the most vulnerable users : Pedestrians → Bicycles → Motor vehicles;
- The spaces where motor vehicles are authorized should be reduced to the minimum required to respond to the basic functional and safety requirements of adjacent residents and businesses;

- Cyclists are allowed to circulate in both directions on a one-way shared street, unless the signage indicates otherwise;
- Pedestrians must have the possibility to circulate anywhere on the roadway. They must also have the choice between the shared roadway with other modes of transportation or the protected pedestrian corridors where they can stop, rest and socialize;
- Surface treatment must allow all users to distinguish (from a visual or tactile perspective) the spaces open to motor vehicles and the corridors reserved for pedestrians;
- The aesthetic and functional aspects must be integrated. It is essential to avoid surface treatments that could generate confusion and give rise to conflicts between users. The use of bollards, fences and signage needs to be kept to a strict minimum;

51. See reference on last page of technical sheet

52. See research report listed on last page of technical sheet



Shared Street Development Concepts

Recommendations (cont.)



RUE ÉMERY, IN VILLE-MARIE PRECINCT



RUE ÉMERY, IN VILLE-MARIE PRECINCT

- Intersections with non-shared streets should be equipped with physical traffic calming devices;
- Any occasional or temporary occupation of the public realm must not affect the free movement of mobility impaired persons nor compromise the overall safety of all users.

Technical Criteria

- The entrance and exit points of a shared street must be made obvious with contrasting signage in a manner to produce a gateway look and feel, preferably by using elements that are exclusive to the shared street. These gateways are to be designed in a way that will:
 - indicate to all users that they are entering a shared street;
 - assist in the positioning and orientation of pedestrians in a way that they can clearly differentiate the shared roadway from the pedestrian-only corridors, by visual and tactile means;

- To facilitate wayfinding by visually impaired persons, the standard visual and tactile codes normally used at intersections should be employed. When the site has specific constraints that do not permit the use of these codes, the entrance and exit areas can be delineated with podo-tactiles surfaces, bollards or any other feature to be determined with the assistance of wayfinding and mobility experts and client testing.
- The compulsory speed limit is 20 km/h, for motor vehicles and cyclists. The physical layout must encourage compliance to the speed limit in addition to compensating for the loss of auditory cues stemming from lower speeds, as these are particularly useful to visually impaired persons.
- The pedestrian-only corridors must be free of any motor vehicle traffic. They must be linear and free of all obstacles. In front of buildings, they must be at least 1800 mm wide. Surface materials must be free of any holes, fissures or any other deformations, or any changes of elevation over 6 mm. The surface must be non-slip, uniform in texture, with narrow and shallow joints.



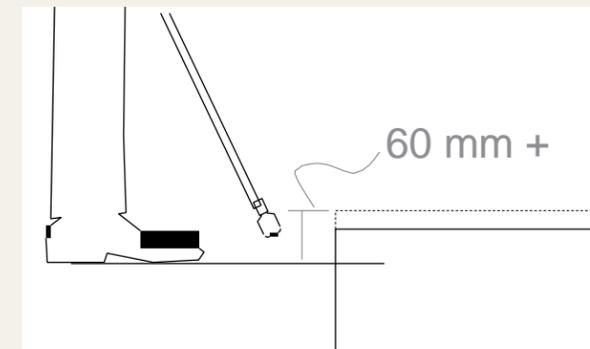
Shared Street Development Concepts

Recommendations (cont.)

- The demarcation between the shared roadway and the protected pedestrian corridor must be easy to detect visually and by feel/touch. To do so, designers must choose one of the four options below, as each has been proven to provide the requisite cues and guidance to visually impaired persons:
 - Straight edge border with a minimum height of 60 mm. Construction tolerance must be ± 10 mm so that the actual constructed height must not be less than 50 mm ;
 - Street furniture components that are easily detectable visually and by feel, with maximum spacing of 1 200 mm between items;

- Bands of vegetation at least 600 mm wide. The planting area must be on the same plane as the protected pedestrian corridor, or with a maximum height differential of 6 mm;
- Bollards at least 1 000 mm high, contrasting colour, with low glare materials or coating.

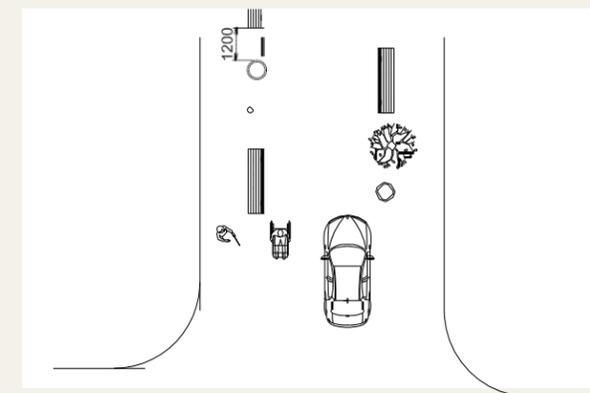
The straight-edged border (option 1) is the only option that can be used on its own. Options 2, 3 et 4 work best when combined.



OPTION 1: STRAIGHT-EDGED BORDER



WALKING TESTS ON THE MOCK-UP PREPARED FOR THE REDEVELOPMENT OF RUE SAINT-PAUL



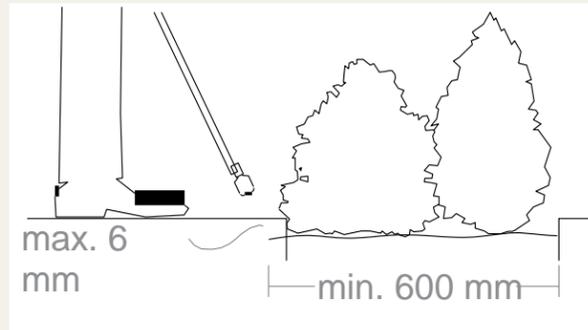
OPTION 2: LAYOUT OF URBAN FURNITURE COMPONENTS OF A SHARED STREET





Shared Street Development Concepts

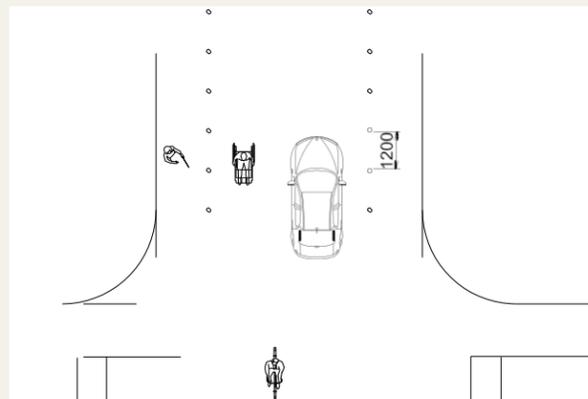
Recommendations (cont.)



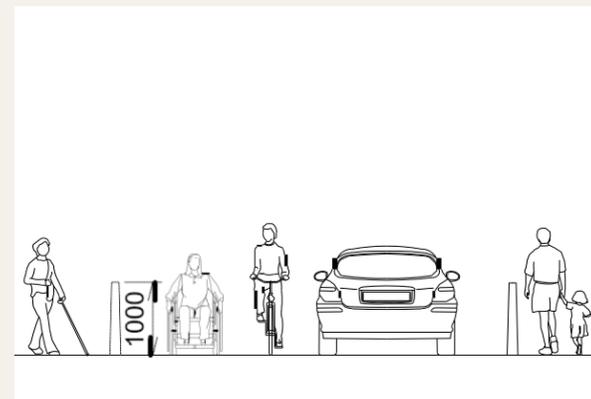
OPTION 3: BAND OF VEGETATION ON A SHARED STREET



RUE DE LA GAUCHETIÈRE, IN THE VILLE-MARIE PRECINCT



OPTION 4: DEMARCATION OF A SHARED STREET WITH BOLLARDS



In the spirit of a shared street where pedestrians are encouraged to appropriate the roadway from edge to edge, these street furniture components are laid out in a way to facilitate pedestrian movements between the protected pedestrian corridor and the shared roadway, without hindering the (visual and tactile) detectability of these features. The distance between the end of one component and the beginning of the next must be at most 1200 mm. In addition to helping with positioning and navigations, these components help prevent attempts to park in the protected pedestrian corridor, in those cases where parking is allowed in the area.

- Where a shared street intersects with a non-shared street, the natural directional guidelines of the protected pedestrian corridor must line up with the regular sidewalks. The pedestrian crossings must be straight and on axis with the protected pedestrian corridors and the regular sidewalks. The beginning and end of each pedestrian crossing must be clearly indicated and easy to recognize visually and by touch/feel, for instance with the use of podo-tactile surfaces, in compliance with common practices.



Shared Street Development Concepts

Recommendations (cont.)

- Standard podo-tactile surfaces (600 mm, cast iron) at all pedestrian crossings and other potential conflict areas where the pedestrian does not automatically have priority. This tells visually impaired persons to be more vigilant and make decisions accordingly. These tactile surface treatments must be bordered with materials that are devoid of holes, fissures and any other deformations, and any edges higher than 6 mm. The surface treatment must be non-slip and uniform with narrow and shallow joints. They must provide a clear visual contrast.

If parking is authorized on the shared street, it must be clearly marked, limited and controlled. Parking spaces must be clearly indicated and they must not cause any conflicts with pedestrian crossings or the protected pedestrian corridors. They must not impede pedestrian access to the roadway and they must not create a visual obstacle between users (pedestrians, cyclists and drivers).

- A visual contrast must be provided through a combination of materials and colours, and it must be maintained in all weather conditions. This feature must be completely obvious on all elements providing natural tactile guidelines and all podo-tactile surfaces.

Although it is difficult to create and maintain a high degree of contrast, given the natural colours used in most materials, the target level of contrast is in the 0,7 to 0,8 range, and must never be lower than 0,4, which corresponds to the level of contrast visible to a person with no visual impairment – even several years of wear and tear and exposure to the elements. However, these contrasting elements, no matter how high, must not be the only elements delineating a pedestrian-only corridor or the beginning and end of a shared street section.

Street lighting must be laid out carefully and in a manner consistent with the shared street context, while respecting the lighting principles that apply to all streets: it must preserve and enhance the perception of contrasts, avoid glare and provide adequate light to all users, on the entire width of the roadway. In order to reinforce the natural guidelines, lampposts, trees and street furniture should follow the same alignment.

- A streetscape that is well maintained in all seasons and kept in good condition will remain efficient and usable for a longer period of time, in terms of legibility. Therefore, maintenance related constraints (spring clean-up, snow removal, waste collection, etc.) and upkeep requirements (markings, replacement of damaged street furniture, horticulture, tree maintenance, etc.) must be carefully considered at the design stage.

It is essential to pay special attention to the following elements :

- Installation and maintenance of contrasting signage at the entrance and exit of a shared street section, in compliance with applicable standards;
- Installation and year-round maintenance of street furniture components, especially those that provide and reinforce natural wayfinding guidelines;
- Maintenance of visual and tactile contrasts, especially in regard to podo-tactile surface treatments;
- Viability and maintenance of vegetation.



Shared Street Development Concepts

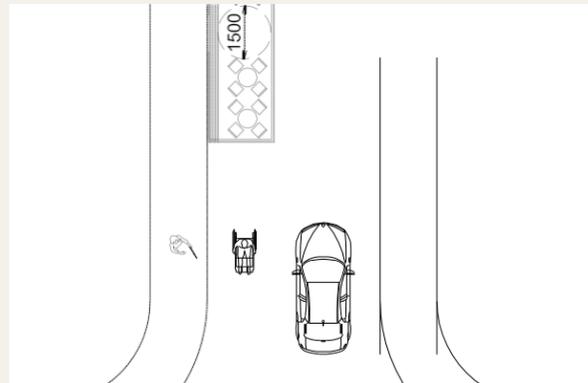
Recommendations (cont.)

For example, a natural guide line formed by a straight curb facilitates snow removal, as opposed to a row of bollards, which can be damaged by snow removal equipment. When bollards are chosen, replacement costs must be included in the regular street maintenance program.

- Sidewalk cafés, market stalls and all other temporary fixtures must be easy to detect visually and by feel. When they are clearly delineated and controlled, they can play an important role in keeping the entire width of the pedestrian corridor free of obstacles. Sidewalk cafés must feature universally accessible entrances and platforms, in keeping with established standards for regular streets.

Market stalls must comply with the requirements laid out in the Precincts Official Plan and Regulations (Règlement d'urbanisme des arrondissements). In addition, a certificate of compliance with the City of Montreal Universal Accessibility Policy may be required.

When a shared street is transformed into a pedestrian-only street on a temporary or seasonal basis, the protected pedestrian corridors must be kept free of obstacles and the natural guidelines must be protected in order to prevent the creation of a vast, difficult to navigate space.



SIDEWALK CAFÉS ON A SHARED STREET



SIDEWALK CAFÉ ON RUE DE CASTELNAU, IN THE VILLERAY-SAINT-MICHEL-PARC-EXTENSION PRECINCT



Shared Street Development Concepts

References

- VILLE DE MONTRÉAL, *Dessins techniques : Abaissement de trottoir avec plaques podotactiles (accès universel) – DN-7301*, 2 pages, 2017.
- ABEL-WILLIAMSON, MARTINE, *WBU Statement : Shared Spaces*. Toronto : World Blind Union, 5 pages, 2016.
- CANTIN, S., *Identification des paramètres d'accessibilité universelle des rues partagées dans le contexte de la réfection de la rue Saint-Paul dans le Vieux-Montréal*. Rapport de recherche. Longueuil : Centre de recherche CRIR – site INLB, CISSS de la Montérégie-Centre; Montréal : Ville de Montréal, 8 pages, 2017.
- TABLE QUÉBÉCOISE DE LA SÉCURITÉ ROUTIÈRE, *Troisième rapport de recommandations : Pour des routes de plus en plus sécuritaires*, Direction des communications du ministère des Transports du Québec, Québec, Octobre 2013.
- HOUTEKIER, C., *Recension des écrits : identification des paramètres d'accessibilité universelle des rues partagées dans le contexte de la réfection de la rue Saint-Paul dans le Vieux-Montréal*. (PDF non accessible aux personnes ayant une déficience visuelle) (document téléchargeable). Longueuil : Centre de recherche CRIR – site INLB, CISSS de la Montérégie-Centre, 102 pages, 2016.