TORONTO

# STAFF REPORT
# ACTION REQUIRED

# Advancing Active Transportation in Toronto: Findings from Four Demonstration Projects

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| **Date:** | May 13, 2014 |
| **To:** | Board of Health |
| **From:** | Medical Officer of Health |
| **Wards:** | All |
| **Reference Number:** | |

## SUMMARY

In June 2013, an update to the Board of Health (BOH) was provided on the development of four Active Transportation Demonstration Projects to explore the feasibility, sustainability and potential impact of implementing recommendations made in the *Road to Health* report. Toronto Public Health (TPH) in collaboration with community partners engaged four neighbourhoods – Black Creek, Annex, North York and Cliffside – in the identification of community needs and preferences for pedestrian and cycling infrastructure changes and potential barriers to their implementation. This report outlines the findings from these four demonstration projects and highlights opportunities to further support active transportation in Toronto.

While the four neighbourhoods had unique sociodemographic characteristics, built forms and patterns of walking and cycling, several common themes emerged. Recurring community-identified safety concerns and constraints to active transportation included: real and perceived risks related to traffic speed and volumes, limitations in street design and accessibility, and limited network connections. Common challenges to making changes in support of active transportation included: competing interests and priorities, funding and implementing community-identified improvements, and engaging communities in active transportation decision-making. Overall, the findings from community engagement are well-supported by existing health evidence and practice-based examples from other jurisdictions.

Ongoing City of Toronto and provincial policies and plans provide key windows for expanding active transportation infrastructure and improving safety and accessibility for all street users in the city. The Toronto Strong Neighbourhoods Strategy could further support the City and communities through investments in locally-driven active

transportation initiatives. Moving forward, TPH will continue to work with local partners to ensure that community-identified suggestions for local active transportation improvements are considered, and will continue to collaborate with other City divisions and stakeholders on key policies and plans to advance active transportation in Toronto.

## RECOMMENDATIONS

The Medical Officer of Health recommends that the Board of Health:

1. Request the Medical Officer of Health to continue to collaborate with the General Manager, Transportation Services and the Chief Planner and Executive Director, City Planning on key initiatives intended to improve road safety and encourage walking and cycling, including:

    a) the development of Complete Street Guidelines for the City of Toronto; and
    b) the review of transportation policies in the Official Plan.

2. Request the Medical Officer of Health to collaborate with the Executive Director, Social Development Finance and Administration to encourage consideration of active transportation as an investment priority through the Toronto Strong Neighbourhoods Strategy 2020.

3. Encourage the provincial government elect to reintroduce Bill 173, Highway Traffic Amendment Act (*Keeping Ontario's Roads Safe Act*) tabled on March 17, 2014 once the new government is formed and the Ontario legislature resumes.

4. Forward this report to:

    a) The Ontario Ministers of Health and Long-Term Care and Transportation;
    b) Metrolinx;
    c) The Canadian Diabetes Association, the Canadian Public Health Association, the Ontario Public Health Association, the Heart and Stroke Foundation, the Ontario Medical Association, the Ontario Public Health Association, the Toronto Cancer Prevention Coalition - Occupational and Environmental Health Working Group, the Urban Public Health Network;
    d) The Canadian Institute of Planners, the Canadian Urban Institute, the Ontario Professional Planners Institute; and
    e) 8-80 Cities, Civic Action, Clean Air Partnership, Cycle Toronto, the Toronto Cycling Think and Do Tank and Toronto Centre for Active Transportation.

### Financial Impact

There are no financial impacts from the adoption of this report.

## DECISION HISTORY

In April 2012, the Board of Health adopted the *Road to Health: Improving Walking and Cycling in Toronto* (http://www.toronto.ca/health/hphe/pdf/roadtohealth.pdf ), a report in the "Healthy Toronto by Design" series. This report reviews the health evidence related to active transportation and health and sets out recommended actions to support increased and safer walking and cycling in the city.

One of the Board of Health's decisions in response to the *Road to Health* report was to request the Medical Officer of Health and the General Manager of Transportation Services to jointly examine specific approaches to enhance pedestrian and cycling safety and to report back to the Board of Health on the possibility of a pilot program. (http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2012.HL13.1)

In June 2013, the Medical Officer of Health in consultation with the Transportation Services division, reported on the development of Active Transportation Demonstration Projects and the selection of four demonstration areas. (http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2013.HL23.6).

## ISSUE BACKGROUND

The *Road to Health* report reviewed the health evidence related to active transportation and showed that improved spaces and infrastructure for pedestrians and cyclists helps support public health and transportation objectives, including:

- facilitating physical activity and preventing chronic disease such as diabetes, heart disease, stroke or cancer;
- reducing injury risks for all modes, especially for pedestrians and cyclists (the 'safety in numbers' effect);
- improving public safety and perceptions of safety; and
- generating social, environmental, economic and transportation system benefits.

The *Road to Health* report also outlined several recommendations to make active transportation safer, more accessible, more attractive, and better connected through effective land use planning. Some of the interventions outlined to promote safety included reduced speed limits, traffic calming and safer intersection design.

Following the adoption of the *Road to Health* report, the Board of Health requested that the TPH work jointly with Transportation Services on a pilot initiative to explore measures recommended in the *Road to Health* report. Toronto Public Health developed an eligibility and selection tool for selecting active transportation demonstration areas. Potential projects were considered by advisors from TPH and Transportation Services according to factors such as health equity, traffic safety, project and community readiness, and potential for local partnership building. In total, four project sites were selected and communities were engaged throughout 2013-2014.

## COMMENTS

### Overview of Demonstration Projects

Four Active Transportation Demonstration Projects were undertaken in 2013-2014. This work aimed to: 1) share knowledge about the health and safety benefits of active transportation; 2) work with the community to identify their needs and preferences for infrastructure changes to enable increased and safer walking and cycling in the selected Toronto neighborhoods; and 3) consider opportunities and barriers to possible improvements such as reduced speed limits, traffic calming and safer intersections.

### Community Engagement Approach

The projects occurred in areas representing different types of social and geographic communities across the city. Each community had unique built form, health status, patterns of walking and cycling, and potential needs for active transportation. The projects took place in parts of the Black Creek, Annex, North York and Cliffside neighbourhoods.

Two of the projects (Black Creek and Annex) were facilitated by the Toronto Centre for Active Transportation (TCAT) in partnership with TPH, as part of the "Healthy Canada by Design" Coalition Linking Action and Science for Partnership. The projects in North York and Cliffside were facilitated by external consultants contracted by TPH.

Each project site developed its own engagement approach which considered: (1) the community's history of engagement on active transportation-related issues; (2) the most effective ways of involving community groups (e.g. schools, seniors groups, and key community organizations); and (3) new developments in the neighbourhoods. City staff including TPH Community Health Officers, Transportation Services' staff, City Planners, Parks staff and local City Councillors provided insight to shape the community engagement process. In two of the Demonstration Projects, a local advisory group was formed to provide technical and process advice to the community.

The consultation activities generally consisted of key informant interviews, community meetings, focus groups and interactive workshops to identify strengths, barriers, challenges and opportunities related to active transportation in each of the areas. Toronto Public Health also added a dedicated web page to share information about upcoming consultation events and host an online survey that gathered information about community members' modes of travel and active transportation preferences.

### Community Engagement Findings

The following is a brief description of the four sites and the main results of community engagement in these neighbourhoods. While community-suggested improvements are presented, there was a general feeling among community members that a combination of intervention options were needed to address the multiple challenges and safety concerns raised. Overall, the preferred interventions represent local community visions for improvement and are indicative of how people move around their neighbourhood, and the local challenges and opportunities for active transportation that exist.

## Black Creek

The Black Creek neighbourhood for this study was bounded by Highway 400 to the west, Steeles Avenue to the north, Black Creek Drive to the east, and Finch Avenue to the south. Black Creek is a culturally diverse community characterized by high numbers of children and youth, lower-than-average income, apartment towers, low walkability and high rates of obesity and diabetes. Black Creek was recently designated one of Toronto's 31 Neighbourhood Improvement Area (NIA) under the Toronto Strong Neighbourhoods Strategy 2020. In the spring of 2013, Toronto's largest urban farm opened in the Black Creek neighbourhood and representatives of the farm want to encourage people to visit on foot, bicycle and transit. The farm site and surrounding neighbourhood are currently not ideal for walking and cycling.

Site-specific community concerns

- Traffic speed and volume make walking and cycling feel unsafe;
- Distances between crosswalks causes people to cross the street mid-block;
- Cyclists avoid using streets due to traffic speed and a lack of separation with vehicles and use sidewalks instead;
- Lack of benches and shade make active transportation difficult, particularly for children and the elderly;
- Poor lighting is a safety issue; and
- Lack of landscaping makes streets unwelcoming for cyclists and pedestrians.

Preferred interventions identified by community

- The placement of a traffic control signal in front of the farm and across from the residential area, at Jane Street at Hullmar Drive; and
- Shade, benches and beautification of Jane Street.

## Annex

The Annex neighbourhood for this project was bounded by Christie Street to the west, Dupont Street to the north, St. George Street to the east, and Harbord Street to the south. The area is comprised of mixed income groups and mixed rates of chronic disease. There are high rates of walking and cycling, as well as high incidences of cycling collisions. There is a long history in the neighbourhood of community engagement with regards to walking and cycling issues. A key characteristic of the Annex is its maze of one-way streets, which was implemented in the 1970s and '80s to reduce cut-through car traffic, but which results in many cyclists riding the wrong way against traffic to traverse the neighbourhood.

Site-specific community concerns

- Speed and traffic congestion are major safety issues for cyclists and pedestrians;
- Lack of on-street bike parking and lanes are major barriers to safe cycling; and
- Pedestrians, cyclists and drivers disobey rules for crosswalks and intersections.

Preferred interventions identified by community

- Residents would like to see bike lanes on Bloor Street;
- Lower speed limits;

- Traffic calming;
- Contra-flow bike lanes so bikes can travel in dedicated lane against flow of one-way traffic; and
- Improved intersection and crosswalk design, better enforcement of rules.

### North York

The boundaries of the North York demonstration project were Grantbrook Road / Senlac Road / Gwendolen Crescent to the west, Drewry Avenue to the north, Yonge Street / Willowdale Avenue to the east, and Highway 401 to the south. The population in the demonstration area is well educated and there are a high number of young adults, a significant population of seniors, and a higher than average number of recent immigrants. The neighbourhood is characterized by low walkability and bikeability and low rates of walking and cycling.

Site-specific community concerns

- No safe bicycle route to cross under Highway 401;
- No bicycle lanes on arterial or collector streets that could create a network or link to transit;
- A lack of bicycle parking;
- There are several local streets with no sidewalks; and
- Busy arterials are dangerous. Many students jaywalk to get to a neighbourhood Secondary School. The placement of a pedestrian crossing is not technically feasible due to the proximity of traffic control signals.

Preferred interventions identified by community

- More "multi-use" trails;
- Traffic calming;
- More bike lanes;
- Better intersection design (i.e. safer crossings for pedestrians); and
- More pedestrian crossings

### Cliffside

The area for this demonstration project was bounded by Birchmount Road to the west, the rail corridor and St. Clair Avenue East to the north, Brimley Road to the east, and the shore of Lake Ontario to the south. The Cliffside community has a diverse mix of very low income, mid and high income residents. The community is characterized by low rates of walking and cycling, low safety for walking and cycling and a high pedestrian priority rating.

Site-specific community concerns

- Kingston Road does not seem safe for cyclists. Many cyclists use the sidewalks;
- Many destinations cannot be reached by transit and active transportation; and
- Many streets do not have sidewalks and existing sidewalks are in very poor condition (narrow, rough surface).

Preferred interventions identified by community

- Separated bike lanes that do not slow down traffic;
- More sidewalks and sidewalk improvements;
- Traffic calming (i.e. speed bumps, lower traffic speeds along Chine Drive enforced by police);
- Improve connectivity of existing trails with parks;
- Better transit; and
- Education for drivers about sharing the road.

## Common Challenges in Advancing Active Transportation

A number of challenges to advancing active transportation were identified through the process of engaging communities about their needs and preferences and trying to pursue preferred active transportation interventions. Some of these challenges are the result of community perceptions and experiences with traffic safety, some are the result of built environment constraints, and others are the result of complex decision-making dynamics that affect active transportation in the city. The combination of these challenges can make it difficult to implement solutions that meet safety and technical requirements and have support from the community.

### Traffic Speed and Volume and Perceptions of Safety

A key goal of the Active Transportation Demonstration Project was to understand and improve policies and procedures for traffic calming and reduced speed in residential neighbourhoods. The community also strongly supported the need to focus on traffic speed, as their comfort around roads can be largely described as hostile and unsafe wherever traffic speeds and volumes are perceived to be high.

Speeding, particularly in residential areas, affects both the real and perceived safety of non-motorized road users, especially young children. Many Canadian studies have shown that a person's perception of safety plays an important part in influencing their decision to walk or bike, both for themselves and their children.[1,2,3] Studies indicate a strong relationship between impact speed and the severity of injury, with the estimated risk of a pedestrian fatality at 50 km/h being twice as high as the risk at 40 km/h and more than five times higher than the risk at 30 km/hour.[4] Speeding also contributes to traffic fatalities more than any other risk factor (e.g. drinking and driving or not wearing a seat belt) and is the third most important risk factor for nonfatal injuries.[5]

Lowering traffic speed and volume has been shown to be an effective strategy in reducing traffic-related injury rates. [6] The introduction of 20 mph (32 km/hr) traffic speed zones in London, England was associated with a 42% reduction in road causalities.[7] Reducing traffic speed limits may be more effective in combination with other speed-regulating mechanisms, such as automated enforcement and speed display signs. [8,9] A recent systematic review has found that other measures such as traffic calming and playgrounds improve walking and help reduce child pedestrian injuries.[10]

In Toronto, vehicle speeds and traffic volumes are the prime criteria for installing traffic calming measures. However, speed limits are typically not reduced below 40 km/hr

without the introduction of physical traffic calming measures, such as speed humps. In some circumstances, exceptions have been made and 30km/hr speed limits have been established on residential roads in the absence of traffic calming measures.

## Limitations in Street Design and Accessibility

The communities involved in the demonstration projects identified several limitations in street design and infrastructure which make it difficult and possibly dangerous to walk or cycle. Many Toronto streets either lack buffers to separate pedestrians and cyclists from high-speed traffic, or lack accessible sidewalk networks along both sides of streets — particularly near school zones, retail areas, and transit locations.

It is well-documented that active transportation is safer and more enjoyable if cyclists and pedestrians are well separated from traffic. Sidewalk connectivity is an important predictor of walking attractiveness, [11] and the presence of sidewalks (particularly on both sides of the road) has been associated reduced pedestrian-vehicle collisions.[12] Well-connected and high quality bicycle facilities are also important for improving safety and attracting new people to bicycling.[13,14] With respect to design, bicycle facilities that separate cyclists from motor vehicle traffic (e.g. buffered lanes and cycle tracks) are strongly associated with increased levels of cycling[15] and reduced crashes and injuries.[16]

The communities also identified several safety and accessibility concerns related to road crossings and route quality. Evidence from Toronto suggests that the likelihood of crossing mid-block without a crosswalk or traffic signal is higher for those living on arterial streets with long blocks that provide limited crossing opportunities.[17] Path connections and quality, street trees, and scenery are all aspects of route quality that can encourage people to walk or bike. [18,19] There is also evidence to suggest that people with disabilities are more likely to engage in active transportation in neighbourhoods with improved streetscapes.[20]

Considering the most vulnerable road users and their respective mode shares should be a key aspect of City of Toronto policies regarding the planning, design, and operation of public streets to support and encourage active transportation. A potential basis for considering differential health impacts and guiding street planning, design and operation decisions could be the application of a hierarchy of transportation users, as has been endorsed by the World Health Organization and applied in York, England (Figure 1).[21]

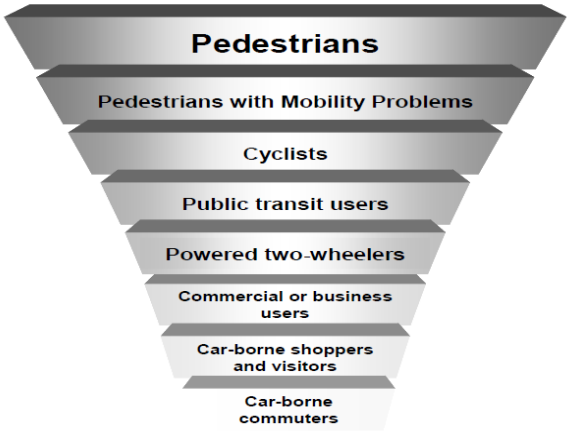


*Figure 1: Hierarchy of Transportation Users (Adapted from: WHO 2006)*

Transportation Services and City Planning are currently developing "Complete Street" Guidelines that should provide a framework for design and decision-making to enable safe access and functionality for all users of the transportation system. These guidelines should address some of the issues discussed above and in this report.

### Limited Network Connectivity

The communities also described how the lack of connections between pedestrian and bike networks, and bike and transit networks is a major barrier to using active transportation for non-recreational purposes, such as commuting or shopping. "Missing links" within transportation networks make it difficult for people to walk or bike for part of their trip.

Travel distance is one of the most important factors determining pedestrian and cyclist route choice.[22,23] Connectivity has also been linked to more physical activity[24] and evidence from other cities suggests that where networks are not well connected and not of high quality, mode share will remain the same.[25] There is also evidence to suggest that better integration of bicycling with public transport – such as having bike parking at transit stations and enabling transit vehicles to carry bikes – leads to more “bike and ride” trips, and increased cycling overall.[26] Transit-bike connections may be particularly attractive in Toronto's suburbs, to enable people to incorporate cycling into longer commute distances. End-of-trip facilities such as secure bicycle parking and showers also promote cycling, particularly to work and to school.

The City of Toronto is already taking action to better integrate transit and active transportation through Metrolinx's The Big Move plan, and is making progress towards a Bikeway Network. The Network will serve both commuter and recreational cycling and will consist of connected Cycle Tracks, bicycle lanes, shared roadway routes and multi-use pathways in parklands and hydro and rail corridors. The Bikeway Trails Implementation Plan adopted in 2012 will expand the network by an additional 77 kilometres and will also upgrade the existing trails where required to improve safety and connectivity.

## Competing Interests and Priorities

A common challenge identified through community engagement is that varying interests between and among road users as well as operational pressures faced by authorities responsible for active transportation make it difficult to create changes in the built environment.

Addressing the real and perceived safety concerns of active transportation users often requires re-allocating roadway space from motor vehicles in order to separate pedestrians and cyclists from traffic. This is problematic in Toronto, as there are few opportunities to accommodate bicycle lanes on existing roadways without impacting traffic capacity or on-street parking.[27] As highlighted through the project in the Annex, although many community stakeholders support roadway re-allocations that favour pedestrians and cyclists, this can compete with the interests of other stakeholders, resulting in a slow pace of change. Studies of major roadway reallocation projects in cities like New York suggest that the re-allocation of space from motor vehicles to pedestrians and cyclists can improve walkability, decrease traffic-related injuries, and reduce traffic congestion.[28]

Growing budget and operational pressures faced by Transportation Services also make it difficult to prioritize community-identified active transportation projects. Transportation Services' state of good repair backlog is a prime example of a growing operational pressure. The 2013 year-end backlog was estimated at $949.022 million and is anticipated to grow to $1.215 billion by 2023.[29] This includes keeping roads, expressways, sidewalks, bridges and traffic control signals in a good state of repair. Meeting winter maintenance demands is also a key operational challenge. In this context, development proposals or roadway reconstruction projects provide the best opportunity to create bike facilities or pedestrian and streetscape improvements for specific neighbourhoods. However, the integration of active transportation features into these larger plans can also be influenced by many competing factors, such road class, site conditions, timing, councillor support, and staff resources to analyze and design requests.

## Funding and Implementation

In the absence a dedicated budget for community-identified improvements, there are limitations to what can currently be done within new developments and reconstruction plans in the four sites as well as other Toronto neighbourhoods. Many improvements identified through the demonstration projects may be relatively inexpensive to implement (e.g. painted lanes and markings). Other interventions, such as the traffic signal installation in Black Creek, are more complex and require lengthy approval processes and funding to support both capital and maintenance costs. While these challenges are not easy to address, holding back on active transportation initiatives can also frustrate or discourage community stakeholders from engaging in future active transportation efforts.

In cities like New York, innovative program and funding models have served as important stimuli for implementing locally-driven active transportation initiatives. New York City's Plaza Program for instance, requires that the City's Department of Transportation (DOT) work with community organizations and residents to create neighborhood plazas in requested neighborhoods where an intersection may be

dangerous. [30] DOT prioritizes and funds sites that are in neighborhoods that lack open space, and partners with community groups that commit to operate, maintain, and manage these spaces so they are vibrant pedestrian plazas.

### Community Involvement in Active Transportation Decision-Making

A key goal of the Demonstration Projects was to build stronger on-the-ground partnerships and support community involvement in active transportation decision making. A common challenge is that there are limited opportunities for community stakeholders and decision makers to engage in constructive dialogue about locally appropriate and feasible intervention options for active transportation. For community stakeholders, complex decision-making structures make it difficult to understand how to best engage in active transportation decision-making. At the same time, the City faces resource challenges in responding to multiple community requests.

The Demonstration Projects helped facilitate the exchange of knowledge between City staff and community stakeholders to advance active transportation improvements in each site. This process of partnership and community engagement seems to have mutual benefits. It ensures that community needs are heard and considered either through immediate or longer term actions. It also creates more sustainable and cost-effective infrastructure changes because the process engages those who will implement and maintain changes alongside those who will use them. In neighbourhoods where there has been long-standing engagement on key active transportation concerns with conflicting results, dialogue directed at improving understanding about decision-making and implementation challenges has the potential to foster and maintain community trust. From a community health perspective, greater opportunities for community involvement in active transportation decision making also has positive implications for empowerment and personal well-being as communities participate in factors that impact their health.

While the intensive partnership and community engagement approach taken by the demonstration projects may not be feasible to adopt for every neighbourhood in Toronto, elements of this work could help inform ongoing actions by diverse City divisions to strengthen civic engagement around active transportation issues.

## Opportunities for Improving Active Transportation

### City-Wide Policies and Plans Under Review

Numerous City of Toronto policies and plans support and encourage safe active transportation. The Official Plan 5-Year review and the development of Complete Street Guidelines are two notable examples of projects currently underway where there are opportunities to enable active transportation through supportive cycling and walking polices and street design guidelines. The City's Public Works and Infrastructure Committee also recently directed that Transportation Services review the feasibility of establishing 30km/hour speed limits on local roads in the absence of physical traffic calming.[31]

### Keeping Ontario's Roads Safe Act

Ontario's *Highway Traffic Act* regulates the behaviour of road users and in that way, also offers opportunities to promote active transportation. In October 2013, City Council expressed support for a province-wide one-metre passing rule to improve safety for cyclists. On March 17, 2014 the Ontario Minister of Transportation introduced Bill 173, *Keeping Ontario's Roads Safe Act*, [32] which proposed a number of changes to the *Highway Traffic Act*, most importantly:

- Requiring drivers to maintain a one-metre distance when passing a cyclist;
- Allowing for contra-flow bicycle lanes on one-way streets;
- Allowing for traffic control signals that have specific symbols for bicycles;
- Increasing fines and assigning demerit points for drivers that open vehicle doors in the path of cyclists;
- Increasing fines and assigning demerit points for distracted driving;
- Increasing fines for cyclists who don't use lights at night; and
- Requiring drivers to remain stopped at a pedestrian crosswalk or school crossing until the pedestrian is completely off the roadway.

Toronto Public Health and Transportation Services communicated their support for the proposed amendments to the *Highway Traffic Act* through a letter to the Minister and a separate submission to the Environmental Registry. Bill 173 cannot proceed through further readings because a provincial election has been called. The proposed changes, however, can be considered by the new Ontario government. This report recommends that the Board of Health encourage the government elect to reintroduce Bill 173, Highway Traffic Amendment Act (*Keeping Ontario's Roads Safe Act*) once the new government is formed and the Ontario legislature resumes.

### Toronto Strong Neighbourhood Strategy

Toronto City Council's approval of 31 Neighbourhood Improvement Areas through the Strong Neighbourhoods Strategy[33] may provide an important avenue to invest in active transportation infrastructure at a local level. Specifically, the Strategy aims to develop local investment portfolios which align with divisional strategies and programs to advance equitable outcomes across five areas: Economic Opportunities, Social Development, Healthy Lives, Participation in Decision-Making and Physical Surroundings. As a key component of the built environment, investments in active transportation projects provide an opportunity to address multiple indicators of neighbourhood equity in Toronto.

This report recommends that the TPH work with Social Development, Finance and Administration to consider the inclusion of active transportation as key investment priority through the Toronto Strong Neighbourhoods Strategy 2020.

## Moving Forward

Toronto Public Health will continue to collaborate with relevant City divisions, partners, and community stakeholders to share the detailed findings from the four Demonstration Projects to support neighbourhood-level improvements. Discussions are continuing

between TPH and Transportation Services staff about the appropriate mechanism to follow-up on community concerns and the potential interventions identified by the community.

Toronto Public Health will also continue to collaborate with City Planning on the Official Plan review to maximize opportunities to support active transportation.

Toronto Public Health is also collaborating with Transportation Services on a Health Evidence Review for Complete Streets which will consider available health evidence for a broad range of measures to improve active transportation, including design guidelines that impact traffic speed.

## CONTACT


Carol Mee
Manager, Healthy Public Policy
Toronto Public Health
Tel: 416-338-8098
Email: cmee@toronto.ca

Monica Campbell
Director, Health Public Policy
Toronto Public Health
Tel: 416-338-0661
Email: mcampbe2@toronto.ca


## SIGNATURE

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Dr. David McKeown
Medical Officer of Health

## Endnotes

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