



TORONTO'S ACTIVE ROOTS

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CONTEST
2021

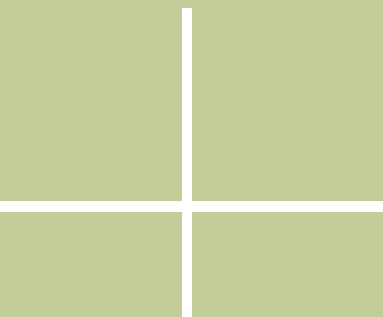


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LAND ACKNOWLEDGEMENT

We wish to acknowledge this land on which the City of Toronto operates. For thousands of years it has been the traditional land of the Huron-Wendat, the Seneca, and the Mississaugas of the Credit. Today, this meeting place is still the home to many Indigenous people from across Turtle Island and we are grateful to have the opportunity to live, learn, and work on this land. We recognize the enduring presence of all First Nations, Métis and the Inuit peoples.



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EXECUTIVE SUMMARY

THE CHALLENGE

Residents in the high-density Moss Park and St. James Town neighbourhoods in Toronto are underserved by active transportation and lack adequate green space, which should be accessible, safe, and functional, within a 10-minute walk of their homes. Laneways and alleyways in the subject area are underutilized and considered unsafe, and major streets lack safe cycling infrastructure.

THE OPPORTUNITY

Currently underutilized laneways and alleyways can be revitalized, greened, and made into attractive alternative corridors for pedestrians and cyclists making short trips. This presents an opportunity for accessible, active transportation and to increase access to greenspace for residents of all ages and abilities. The health advantages of active transportation are compounded by the health benefits of greening the city, through the addition of green spaces within the proposed space.

We see a better opportunity in creating green alleys rather than in other possible solutions, like widening sidewalks or adding more bike lanes, because it will re-activate underutilized laneways and alleyways while providing climate, health, and safety improvements, as well as bring local communities together.

THE SOLUTION

Active Roots is an initiative to transform underutilized laneways, alleys, and small streets into beautiful, safe, active transportation corridors across Moss Park and St. James Town. Revitalized corridors will integrate various design features and amenities to improve environmental resilience, physical and mental wellness, and safety for residents in high-density underserved areas, while increasing much-needed access to greenspace.

The modular system we propose will develop the network piece-by-piece, with each corridor "adopted" by groups of residents, small business owners, or community groups in order to ensure that the spaces will be activated and animated, and that the amenities will be engaging and relevant to the community's actual needs and priorities.



RELEVANCE TO MUNICIPAL PRIORITIES

The Active Roots initiative intends to support the City's mission for transit equity through providing access to active transportation and greenspaces. There are three major goals of our project, which are to (1) mitigate the effects of the transportation sector's impact on the climate crisis, (2) foster improvements in the physical and mental health of residents, and (3) increase the level of safety and security in neighbourhoods. In 2018, 36% of Toronto's greenhouse gas emissions were caused by the transportation sector, and 80% of those emissions were attributed to personal vehicles. Our network of bike lanes will encourage commuters to bike or walk, instead of driving. The quantity of parks in a neighbourhood directly impacts the number of people who exercise, leading to higher physical health. Furthermore, people who live close to parks report better mental health, even if they do not exercise there. Our routes will be adorned with foliage and will connect to existing parks and parkettes, which will be beneficial for people's mental health. They will also make small lanes and alleys safer by bringing in more people and activity to the otherwise barren roads.

These three goals align with TransformTO, the City's climate action plan, and Toronto's Resilient Strategy, an initiative that targets broad resilience challenges, such as equity, the environment, communities, and mobility.

PROBLEM DEFINITION AND RELEVANCE TO THE GTHA

Our proposal addresses three interconnected problems facing the Moss Park and St. James Town neighbourhoods; environmental and climate concerns, residents' health, and personal safety.



As some of the densest neighbourhoods in Toronto, Moss Park and St. James Town lack sufficient access to greenspace to serve the many people living in the area. Low-income, high-rise communities are particularly unprepared to respond to extreme weather events and increasing summer temperatures. Without a clear and united effort towards urban cooling and environmental resilience, Moss Park and St. James Town remain at risk and residents continue to experience the escalating impacts of climate change in their communities.



Area of Study: St. James Town and Moss Park

Though Moss Park and St. James Town are on track for drastic development and further densification in the upcoming decades upon the completion of the Ontario Line and the Moss Park subway station, the neighbourhoods lack sufficient green space and active transportation networks to support the large population. According to a news report by CBC, St. James Town has the least amount of park space per capita of any neighbourhood in Toronto; a drastic contrast to nearby Cabbagetown and Rosedale, where residents enjoy significantly more greenspace. This deficit has direct impacts on residents' mental and physical health which must be addressed as the area continues to grow, and highlights the disparities of access across neighbourhoods.

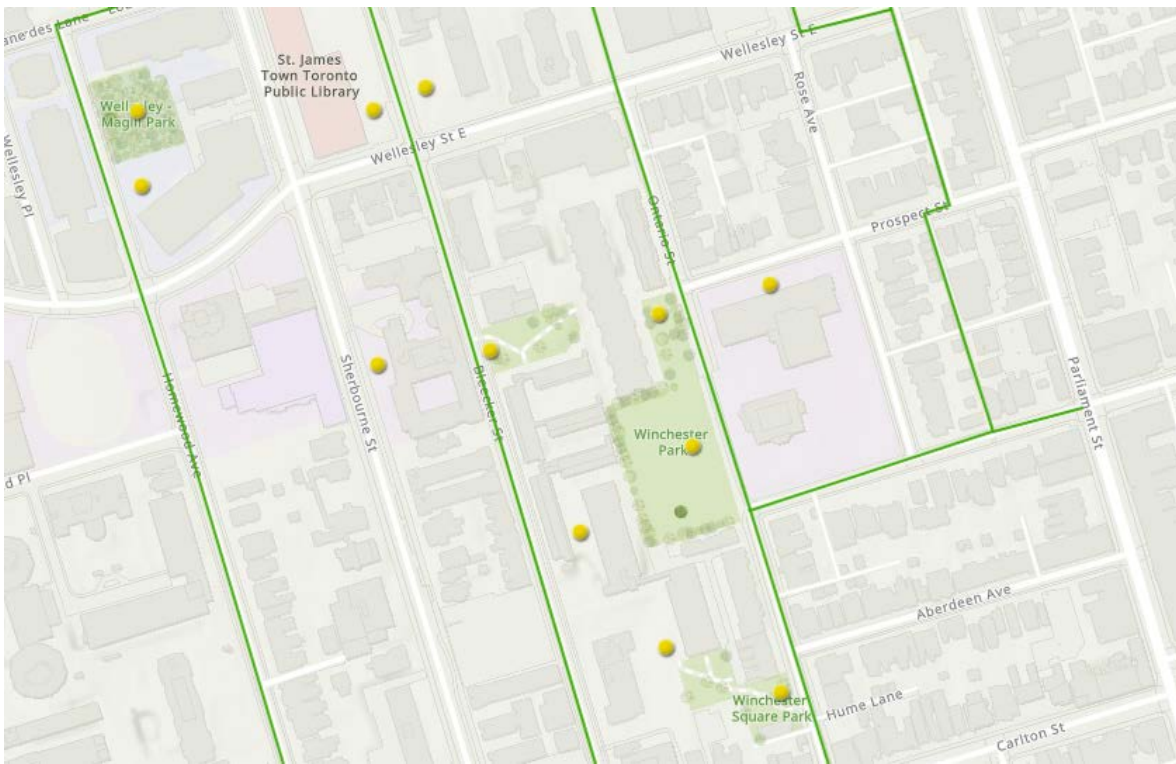
With higher than average crime rates in the Moss Park and St. James Town areas, residents (especially women and youth) feel unsafe using small streets, laneways, and alleys to traverse the neighbourhoods. At the same time, insufficient bike lanes and heavy traffic on Sherbourne and Parliament street create unsafe riding situations for all but the most confident and enthused cyclists.

Though concerns over environmental and climate effects, mental and physical health, and personal safety are especially visible in underserved communities such as St. James Town and Moss Park, they are also relevant topics across Toronto and other major cities. Pilot projects such as Active Roots could act as a model for other areas navigating similar challenges.

THE PROPOSED SOLUTION: TORONTO'S ACTIVE ROOTS

Active transportation infrastructure can lead to better transportation equity for short trips, and it creates positive health benefits for individuals because it allows people to stay active. Our project, called the Active Roots, aims to increase access to safe and equitable active transportation by reimagining underutilized side streets and alleys in the St. James Town and Moss Park neighbourhoods into pedestrian and cycle-friendly corridors with a focus on greening the spaces. The different cycling routes in the network will be called 'Roots', which will connect to various parks, schools, and community centres in the neighbourhood, as well as Toronto's greater bike network. After the greenery and cycling infrastructure becomes implemented, we plan to collaborate with community organizations to add amenities and animate certain areas along the Roots. These pockets of amenities will be called 'Sprouts', and they may include features like a community garden or a playground. The Active Roots project will be modular in the sense that each Root of the network will be executed individually with attention to location-specific resident priorities and spatial issues, yet the collective of the revitalized alleys will add up to create a cohesive active transportation route from Sherbourne Station to the upcoming Moss Park station on the Ontario Line.

- Potential Sprouts
- Potential Roots



Example of Roots and Sprouts

The Active Roots will have a positive impact on the environment, as well as the health and safety of the community. The option of active transportation will result in fewer people driving private vehicles, thus lowering carbon emissions. We will also be planting native vegetation along the active transit corridors to support the ecosystem. These greenspaces will be more accessible to residents because they are close to people's homes. Cyclists and pedestrians can passively enjoy the greenspaces while commuting, rather than planning a trip to specifically visit a park. The implementation of the Active Roots will reduce car traffic in small residential streets, which will increase the level of comfort and safety for everyone, including children and older adults. This may lend parents to feeling more reassured to allow their children to travel or play independently in Roots or Sprouts close to their home. The increase of pedestrians and cyclists on the street will also benefit the health of local businesses, as these travellers are more likely to be attracted into a store, compared to a commuter in a bus or car.



**BEST
PRACTICE
REVIEW**

METHODOLOGY

Our research for this project began with an assessment of greenspace and active transit inequity in Toronto in order to select neighbourhoods most in need of improved active transit networks. Next, we began a comparative review of various multi-use paths, green corridors, and laneway/ alley animation projects across North America.

- Individual laneway revitalization efforts by The Laneway Project in Toronto
- The Ruelles Vertes (Green Alleys) system in Montreal
- The Green Line Project in Toronto

After developing a background understanding of the best practices in active transit and multi-use path revitalization projects, we used our networks and our mentors to outreach to professionals involved in these projects. We conducted semi-structured interviews with professionals involved with Montreal's Ruelles Vertes, Toronto's Greenline, The Laneway Project, and a community group in the area.

INTERVIEWS

Michael Widener

We interviewed Michael Widener, an associate professor in the Department of Geography and Planning at UofT. Widener specializes in research pertaining to access to healthcare facilities and transportation. We contacted him in regards to his work with The Centre for Active Transportation. Widener is leading the topic of 'Prioritizing Populations' in TCAT's National Research Initiative on Mobility Equity.

Jake Tobin Garrett

We met with Jake Tobin Garrett, a Policy and Planning manager at Park People who works on the Green Line project. Garrett has been involved in coalition building and planning for the corridor, and shared suggestions on building a distinct identity and strong community support.

Sean Bergeron

We talked to Sean Bergeron, a project manager and greening lead at The Laneway Project. He focuses on the improvement of the laneways through implementing innovative and sustainable design. The interview with Bergeron helped us understand major logistical challenges that initiatives, similar to our proposal, face.

INTERVIEWS

Caroline Magar Bisson

We interviewed Caroline Magar Bisson, a landscape architect and environmental designer who has been involved with Montreal's Ruelles Vertes in various professional capacities. She shared lessons from Montreal's successes and suggested opportunities for adapting them to a Toronto context

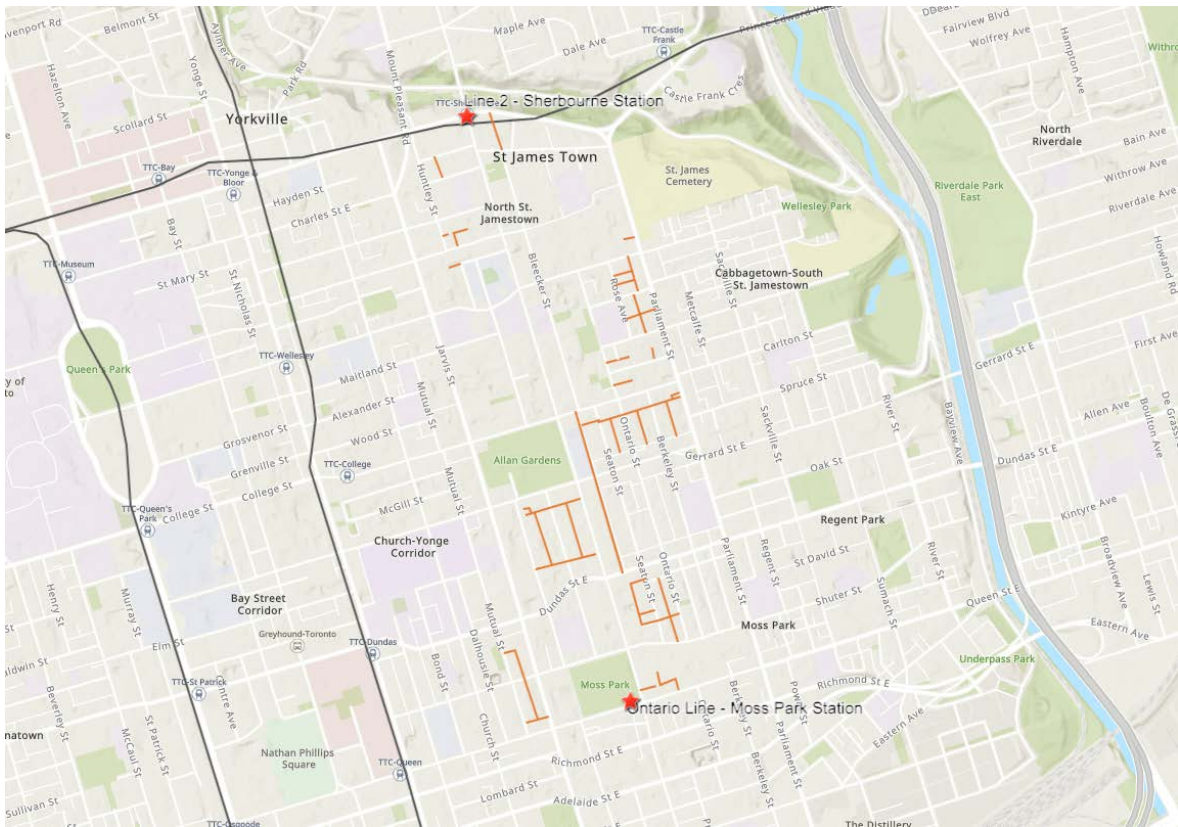
Yasmine El-Hammasy

Lastly, we met with Yasmine El-Hammasy from the St. James Town Community Co-op to learn more about the community's priorities and goals, and to consider ways that the green alley network could be mobilized to respond to them. She shared various areas that the co-op is working on, including food growing, food distribution, access to green space, access to cooling spaces, and alternate routes for cyclists and pedestrians to avoid loud and busy main roads.

ANALYSIS AND FINDINGS

BEST PRACTICE REVIEW

The Laneway Project is a non-profit initiative that transforms Toronto's underused laneways. The social enterprise partners with various communities, municipalities and other stakeholders to activate laneways' potential and develop public support towards laneway revitalization. Some services which The Laneway Project provides which could be incorporated in our proposed project include planning advising for neighbourhoods, orientation to long-term project sustainability, support of local communities, and partnership work. Since the work is initiated on the existing property it is always hard to negotiate with the landowners (either the City or private stakeholders). However, The Laneway Project's team has done a lot of work to push the City to collaborate and has become a successful and respected enterprise. In our interview with Sean Bergeon, he emphasized that success largely depends on public support and that having an established problem or need, a catalyst, makes it easier to bring the community together. The Laneway Project has identified suitable lanes in our area of study, but no action has been taken yet to activate these lanes. We used this information as inspiration for our own route map.



Map of Laneway Project's Lanes

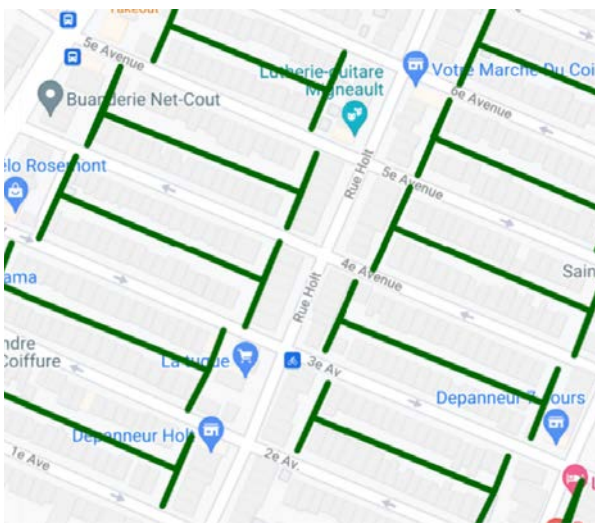
Montreal's Green Alleys are a system of greened, animated, and activated residential alleyways which allow residents to cultivate and enjoy greenspace near their homes. The system is successful in part because of its modularity; any group of residents hoping to revitalize a local alley is able to access funding, support, and a streamlined permit system through the city.



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Caroline Magar Bisson, who has been involved with Montreal's Green Alleys in various professional capacities, shared that the network is also successful because of Montreal's unique grid system (Figure 4). When pictured from a bird's eye view, Montreal's green alleys include a long vertical corridor between residential streets and two shorter corridors on either end connecting to the street. This layout allows the alley to be isolated from the noise of the traffic, while also sufficiently connected to the street so as to be a public (rather than private) active transportation corridor. Because of the residential layout, the alleys tend to primarily attract residents on the same block, adding to a sense of community stewardship.

Though we were able to mimic this pattern in some parts of the route map, it cannot be wholly replicated in the Toronto context because of the differences between our grid systems. Instead, we considered the factors which make Montreal's green alleys successful (including the modularity in project planning, the reduced vehicular traffic, distancing active transit corridors from main streets, and cultivating a community atmosphere), and used these lessons to guide our proposal.



Map of Ruelles Vertes (left) and proposed Active Roots (right)

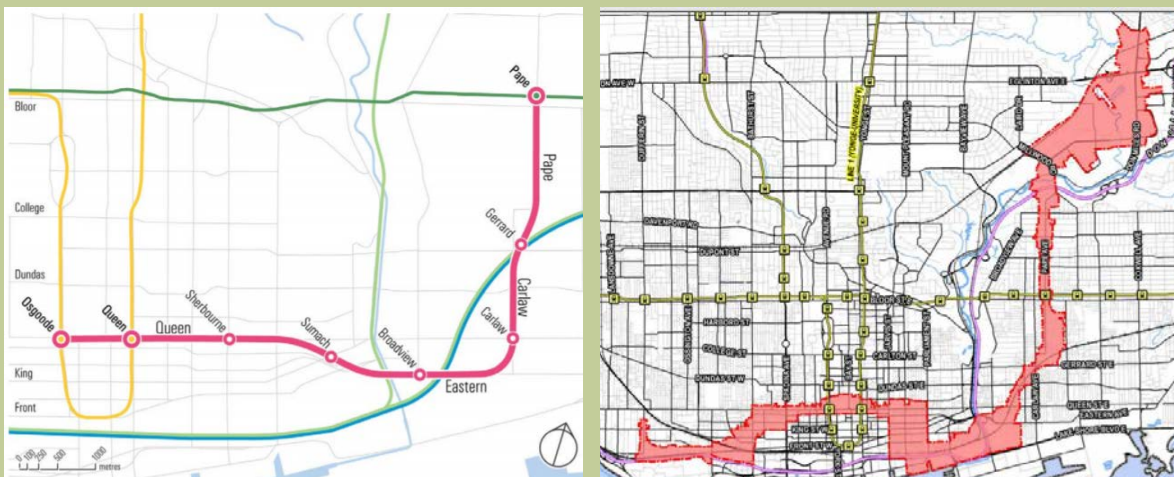
The Green Line Project in Toronto aims to connect diverse neighbourhoods and expand the network of connected park space in Midtown and West Toronto. Approximately five kilometres in length along an active hydro-electric corridor, the Green Line takes advantage of underutilized space and functions as a bridge between new and existing parks along the line. Jake Tobin Garrett, manager of Policy and Planning at Park People and a central organizer of the Green Line, highlighted the importance of coalition-building in long, linear projects such as the Green Line and Active Roots. As the project connects through multiple communities and neighbourhoods, it is especially important to ensure it has a distinct, recognizable identity and that it feels relevant and inclusive to users at all points on the corridor.



The Green Line Project Rendering

ECOLOGICAL RESTORATION

In addition to improving environmental resilience by increasing permeability and greening paved surfaces, the Active Roots initiative will take a proactive approach to ecological restoration in the green alleys because the specific species to be planted and ecologies to cultivate will be informed by the final environmental impact assessment for the Ontario Line, so as to contribute to mitigating those specific impacts during construction. At the time of writing this report, only the Environmental Conditions Report has been completed, so we supplemented the Ontario Line ECR with findings from the Relief Line Environmental Projects Report to gain a fuller understanding of potential impacts on native species.



Maps from the Ontario Line ECR and the Relief Line EPR

Some of the at-risk native plant species most impacted by the Ontario Line will include the butternut walnut tree (*Juglans cinerea*), white wood asters (*Eurybia divaricata*) and mineral cultural meadow habitat used by Monarch Butterflies (*Danaus plexippus*). The ECR also notes the loss of habitat for protected migratory birds and the high rate of invasive plants within the study area, reporting that approximately 60% of the 72 species surveyed were invasive. As part of the potential mitigation methods Metrolinx has listed for these impacts include compensating for the loss of tree and vegetation stock, Active Root's native plant gardens and tree planting in laneways may represent an opportunity for partnership and sponsorship. This potential partnership will not only help Metrolinx achieve their mitigation commitments for the Ontario Line ECR, it will also support the broader goal of the upcoming Ontario Line's Moss Park station to improve transit options for the 23,600 people expected to live in the area by 2041. In doing so, it will support Metrolinx's commitment to work with the City of Toronto to revitalize and beautify the surrounding area before the Ontario Line's completion in 2030.



Native species including Butternut Walnut, White Wood Asters, and unique Monarch Butterfly habitats will be impacted by the Ontario Line

CITY OF TORONTO INITIATIVES

We researched initiatives from the City of Toronto that align well with our proposed project. TransformTO is the City of Toronto's climate action strategy, which aims to reach net-zero emission by 2050 while focusing on health, the economy, and social equity. TransformTO forms long term goals to reduce carbon emissions, one of which is for 75% of trips under 5km to be completed by active transportation by 2050. Our Active Roots project aligns with the goals of this initiative and can be adopted into neighbourhoods across the city.



Toronto's Resilient Strategy combines multiple dimensions of resiliency to ensure that people have access to the things they need to survive (Toronto). It places emphasis on civic engagement in communities so that people can work together to solve local problems. One of the priority actions of this strategy is to “enhance the capacity of neighbourhoods to prepare for and recover from shocks”. Although our project is focused on equitable transportation and access to greenspaces, there are synergistic effects that will encourage community engagement. The active transportation routes will allow for more interactions between residents. We also plan on implementing amenities along the routes, such as community gardens and parkettes, which will increase the sense of ownership and belonging in the neighbourhood.

BENEFITS OF ACTIVE TRANSPORTATION

In Toronto, only 6.7% of commuters use active modes of transportation, such as walking or biking, as their main mode of travel. However, the percentage increases to 16.1% when commuters travel less than 5km between their home and workplace. Active transportation is a great solution for people travelling short distances because it saves them from taking public transportation. While it is convenient to walk or bike when commuting relatively short distances, many people do not have the opportunity to do so because their neighbourhood lacks active transportation infrastructure. Toronto's current bike network has many gaps, which makes it difficult to commute to all areas of the city. On some roads, the only option is to bike on the shoulder of the road, which can be dangerous due to the high volume of high speed cars. Many people, especially children, older adults, and inexperienced bikers may not feel safe travelling on roads without high quality bike lanes.

To accommodate cyclists with all ranges of experience, bike lanes must have low traffic level stress. This can look like a bike lane separated from traffic by a barrier or one on a raised curb, such as the one on Sherbourne Street. In order for active transportation to be equitable, the infrastructure must be inclusive for people of all ages and ranges of ability.



Bike Lane on Sherbourne St.

During COVID-19, the City of Toronto implemented new cycling infrastructure, which increased people's access to jobs, food, and greenspaces. This short-term project demonstrates that there is a high demand for more active transportation infrastructure in Toronto. The Active Roots project will fill this gap by creating bike lanes in underserved neighbourhoods of Moss Park and St. James Town.

BENEFITS OF GREENSPACES

Green spaces are an essential amenity for healthy cities, as they improve air quality, store stormwater, and enhance biodiversity. They are beneficial for the natural environment, and also improve people's physical health and mental wellbeing. Parks should be publicly accessible spaces that provide everyone to gather, exercise, play, or simply be.

Studies show that people who regularly use parks get more and better exercise, compared to people who don't. However, most people are not willing to walk more than 10 minutes to travel to a park. Equitable access to greenspaces is necessary in order to improve public health and minimize social inequities in the city, especially during the pandemic. 70% of Canadians reported a higher appreciation for greenspaces since the beginning of the pandemic. Due to COVID-19, access to greenspace became essential for people's mental health, particularly if they live alone. 16% of Canadians without access to a park within a 10-minute walk said that they have not used parks at all during COVID-19, compared to only 3% of those with access to a park within walking distance. This shows that making greenspaces easily accessible in all neighbourhoods will greatly increase the number of people who will benefit from them.





During the pandemic, we have learned that parks were a haven for people to connect with nature and clear their minds. It is paramount to implement greenspaces along the Active Roots and all of Toronto's transit corridors so that people can benefit from access to nature.

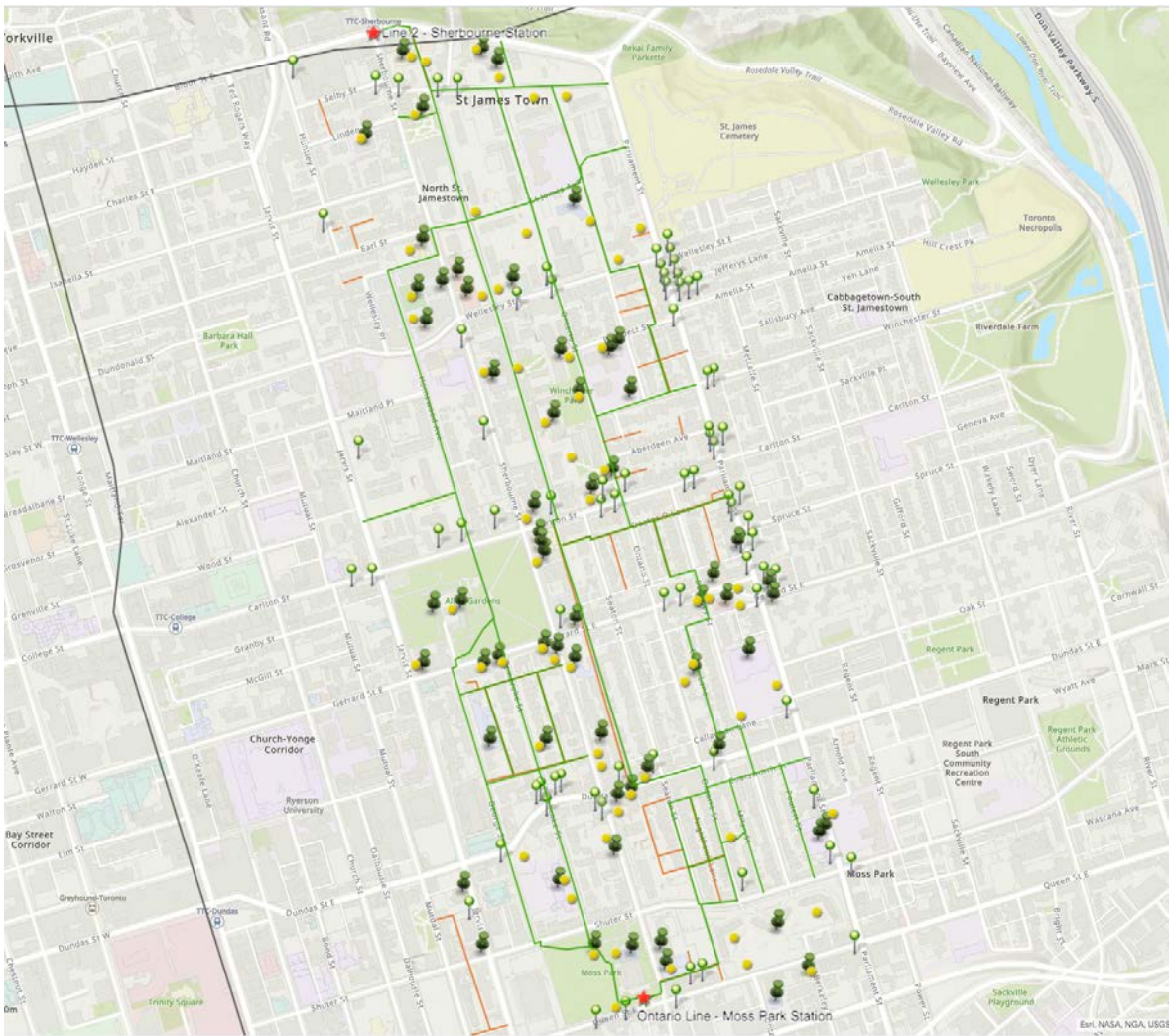
PROPOSED STRATEGY

DESCRIPTION OF THE ACTIVE ROOTS

Our vision for Toronto's Active Roots is a network of pedestrian and cyclist-friendly paths throughout small streets and alleys in St James Town and Moss Park. The network will connect Sherbourne Station on Line 2 to the new Moss Park Station on the Ontario Line. These Roots will pass through community sites, such as local grocery stores, parks, schools, and community centres. On this map, we have identified small businesses, existing community assets, and locations for potential Sprouts. Some Roots overlap with streets which the Laneway Project has identified as potential sites for animation. Community assets are public, private, or non-profit organizations that serve the neighbourhood, such as public libraries, community centres, shelters, places of worship, employment support centres, cooperative homes, schools, daycares, or more.

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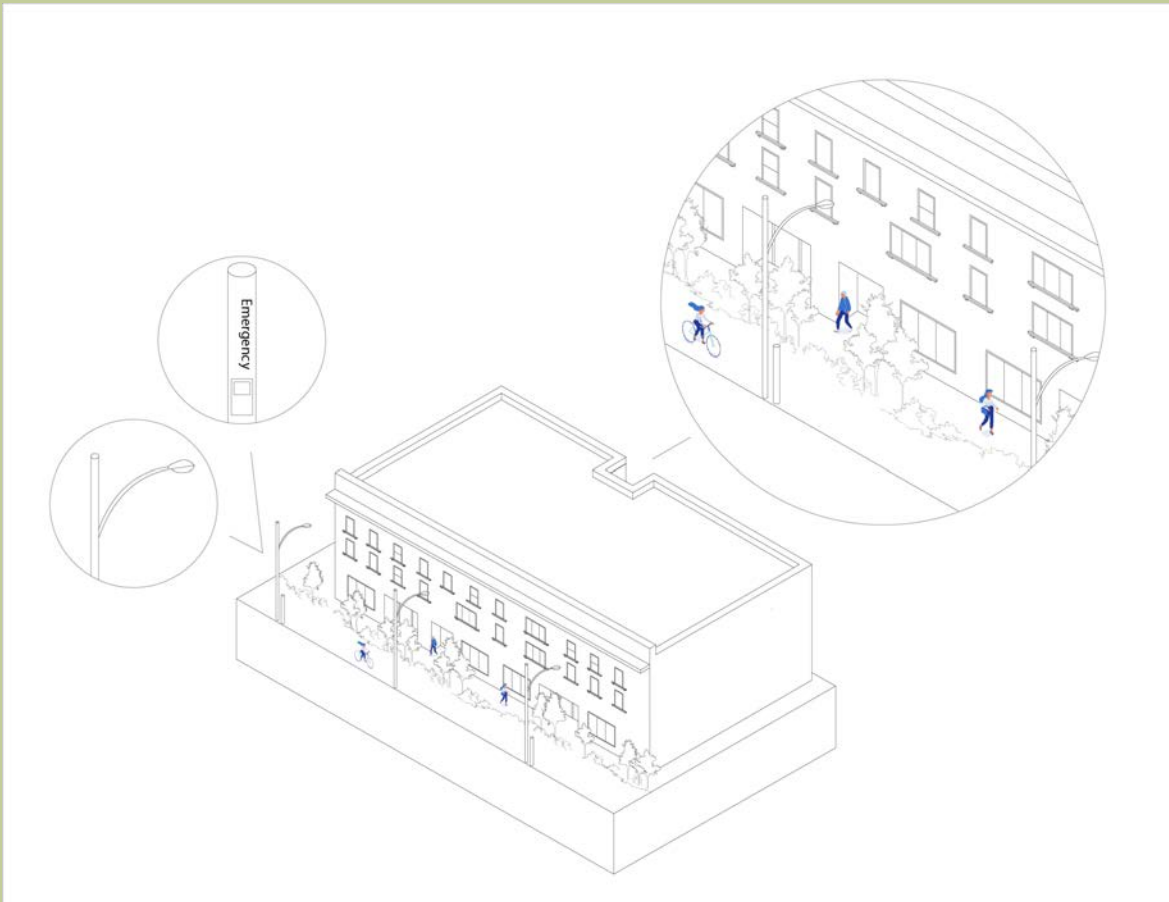
-  Potential Sprouts
-  Potential Roots
-  Community Assets
-  The Laneway Project
-  Small Businesses



Map of Active Roots Network

To view the full map and access the different points and layers, head to <https://arcg.is/15059b>

The network will feature native plants and trees along the Roots, which will increase people's access to greenspaces and improve people's connection with nature. Additionally, it will enhance the biodiversity of the area, provide shading and cooling from the summer heat, store overflows of storm water, and mitigate environmental impacts of vehicles. The paths will also include amenities such as park benches, an abundance of street lights, and emergency call booths to ensure everyone's safety.



Active Roots Visualization



In alignment with the findings from our best practices review and with TransformTO's "Mobilize Low-Carbon Neighbourhoods" campaign, which uses community capacity building to forward climate action, our project will focus on engaging community groups and resident's associations to activate spaces in accordance with resident's actual priorities. Throughout the network, community organizations, resident groups, or small businesses can 'adopt' Roots and become 'guardians' of the Roots. We will collaborate with the guardians to begin the work of 'greening' laneways and alleys through permeable paving and strategically removing asphalt and to add simple amenities, safety features, and accessibility features such as park benches, lighting, and water fountains. We will also work with guardians to add features such as community gardens, food vendors, playgrounds, community fridges, or tiny libraries, and these projects will be called 'Sprouts'.

By working directly with community leaders in the St. James Town and Moss Park areas, we will gain local knowledge of the community and provide amenities to best ameliorate specific, location-specific concerns. Guardians of adopted Roots and Sprouts will be responsible for maintaining the area and reporting feedback or issues to the Active Roots organization. Though the Active Roots will be a cohesive whole, we will work directly with small business owners, community groups, and residents at each Root, addressing concerns and responding to location-specific priorities.



THE ACTIVE ROOTS TIMELINE

PHASE 1

INITIAL STARTUP FUNDING IS SECURED

PHASE 2

INITIAL RESEARCH, CONSULTATION, AND PROJECT PLANNING BEGINS

- A research scan of potential laneways is undertaken with attention to nearby small businesses, connecting streets, local physical and social assets, and residential density.
- The network map is determined and divided into distinct Roots
- With the intention of developing a distinct identity for each root and maintaining a modular workflow, Guardian groups are selected to adopt and steward individual roots. Guardians may be representatives of local businesses, residents associations, community groups, or simply interested individual residents.
- An initial public consultation session is undertaken to gather early-stage input from residents and business owners in Moss Park and St. James Town.
- Based on the insights of Guardians and the public consultations, a project vision is determined for individual Roots. Due to the modular format, each project vision responds to local priorities and site-specific challenges.

PHASE 3

LOGISTICS

- With the support of the Active Roots team, Guardians outreach to BIAs, local businesses, the City of Toronto, and others to obtain funding and sponsorships.
- With the support of the Active Roots team, Guardians obtain the necessary permits to begin greening the Root and adding amenities and safety features.
- A secondary public consultation session takes place with residents and local business owners.

PHASE 4

IMPLEMENTATION

- Greening techniques are undertaken and amenities and safety features are added. Best practices from organizations such as The Laneway Project may influence design choices.

PHASE 5

MAINTENANCE

- Guardians maintain responsibility for flagging maintenance needs and organizing regular community clean-up events to ensure the spaces remain clean and usable.
- Clean signage and contact information about the Active Roots project is made visible in participating corridors so that residents and users are encouraged to share feedback on their experiences.
- The Active Roots team remains responsible for resident feedback, incorporating needed amenities and changes as needed.

FUNDING AVENUES

We believe that this project is an asset to the city and can receive funding from the City of Toronto, as well as Metrolinx, due to its alignment in both of these parties' missions, which includes ameliorating urban inequality, promoting transportation equity, and mitigating the effects of the transportation sector on the climate crisis. Another avenue of funding would be to partner with nonprofit organizations (NGOs), which are dedicated to serving people and often come up with innovative solutions to urban problems. On top of that, NGOs often have established trust and support from the local community, which means they have networks needed for public engagement. That is why the City of Toronto supports and acknowledges the importance of working with NGOs.

Theoretically, if the Green Alleys project was implemented in real life it would act as a non-profit initiative. This project could be realized as a part of larger community-oriented or greening initiatives funded by the Government of Canada. For instance, The Healthy Communities Initiative gives funds to projects that create safe and vibrant public spaces, improve mobility options, and provide innovative digital solutions, such as our proposal.

At the same time, based on the best practices research on similar projects, the Green Alleys could collaborate with The Laneway Project, St. James Town Community Corner, the Canadian Urban Institute, or Business Improvement Areas, which are initially interested in improving certain areas and creating better urban spaces.

THE CHALLENGES

The Active Roots project faces various challenges, from physical limitations to public support. The most dominant challenge is the physical limitations of the narrow alleys and side streets in which the Roots will reside. Although we would wish to adorn all Roots with plenty of greenery, park benches, and emergency poles, it is not physically possible in some of the alleys. Therefore, some Roots will be simple bike lanes, while others will have more features that bring the Roots to life.

Since we are implementing infrastructure on public land, we will need to get permits from the City. We hope this challenge will be minor because our project aligns with many of the City's values. There will be several stages of public consultation during our project because the Roots will affect local residents and businesses. We project there will be pushback from people who want to keep the streets for cars and parking. The solution for each Root will be different, as it depends on the existing structure of the streetscape.

Residents may be worried by the influx of non-residents passing through their neighbourhoods, which decreases privacy. However, our Sprouts will encourage community bonding and cohesion. The growth of travellers will actually increase safety because there will be more eyes and bodies on the street, along with our added streetlights and emergency call poles.

We acknowledge that active transportation is not a viable solution for everyone. For instance, parents with young children, older adults, or differently abled individuals may opt to travel by car. Nevertheless, there is a great number of commuters who currently travel by car that could make the switch to active transportation.



CONCLUSION

Transit equity means that transportation is never the reason that a person does not have access to something. There are a lot of dimensions to 'accessibility', but transportation should never be the factor that limits a person's abilities. In order to make transit equitable for all ages and identities, we must first prioritize communities of lower-income and racialized communities. We believe that increasing access to active transportation and greenspaces will allow people more choices when it comes to travel, and will benefit all.

We recognize that active transportation does not work for everyone, however, we seek an inclusive design that will accommodate as many people as possible.

After conducting thorough research, we determined that the implementation of active transportation will reduce transit harmful effects on climate, while greening will positively impact residents' physical and mental health. At the same time, reimagining and developing small streets will create an overall safer environment.



It is important that our proposal aligns with such initiatives as TransformTO, the City of Toronto's climate action strategy, and the City of Toronto's resilient strategy. Therefore, we believe that Active Roots would be an asset for the municipal government, so it could get funding from the city. Alternatively, our proposal could act as a not-for-profit initiative and get support from private stakeholders or other NFOs.

To conclude, Active Roots is designed to increase access to safe and equitable active transportation. We see an opportunity in reactivating underutilized laneways and alleyways through the processes of revitalization. The main aim of our proposal is to create a safe and equitable environment for the residents and bring local communities together.

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