



# Nowhere to Go: An Environmental Scan of Outdoor Public Washroom Initiatives in North America

Prepared for  
The Beasley Neighbourhood Association

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## Executive Summary

Everyone needs to use the washroom, but sometimes there's no place to go. COVID-19-related closures of retail and restaurant washroom facilities has led to an increased awareness of the pressing need for free accessible public washrooms, especially for vulnerable and houseless populations. As a result, the Beasley Neighbourhood Association (BNA) is interested in exploring municipal responses to public washrooms. In preparation for their 2021 plan update, the BNA reached out to the McMaster Research Shop to conduct an environmental scan of accessible outdoor public washroom initiatives in North America. The purpose of this report is to provide the BNA with information and evidence to advocate for the installment of outdoor public washrooms in their neighbourhood and to address any foreseeable challenges.

Results from our environmental scan identified 11 relevant initiatives, of which 7 were free to use by the public. Most initiatives were in urban areas to meet heavy population traffic and/or the needs of vulnerable community members. Washrooms ranged from elaborate designs incorporating self-cleaning features and automated maintenance schedules to more traditional portable designs. Almost all washrooms included basic accessibility features like handlebars and wheelchair accessible stalls.

Construction and/or purchasing prices of washroom units varied from \$40,000 up to a million dollars. Operational fees also varied from several thousand to close to a million dollars annually. Though initial construction and installation costs are quite high, annual operation and maintenance fees are lower and appear more reasonable. Moreover, costs can be offset through grants or revenue generated by advertising.

While some initiatives used private firms for cleaning and maintenance, others employed washroom attendants, often from disadvantaged communities as part of social improvement programs with local non-profits. In general, most of the initiatives in the scan have remained open, though a few have shut down as a result vandalism and misuse. However, the popular reception and expansion of several pilot initiatives reveals the pressing need for, and potential of, outdoor public washroom facilities.

Based on our findings, the team has provided four recommendations to the BNA to consider when advocating for the installation of outdoor public washrooms in Hamilton: 1) hire washroom attendants; 2) pursue a collaborative project; 3) actively promote the washroom; and, 4) consider revenue potential. While public washrooms can be expensive and have the potential to become sites of misuse, their presence can also increase people's access to community spaces and provide a sense of dignity, as everyone has a place to go.

# Introduction

The Beasley Neighbourhood Association (BNA) is a voluntary community group of residents and service providers in the Beasley neighbourhood in Hamilton, ON. The BNA developed a neighbourhood [charter](#) in 2011, which is an agreement between residents, service organizations and businesses that aims to improve the quality of life for those who live, work and play in Beasley. The same year the group also developed a neighbourhood plan, which was [updated in 2017](#), with plans for another update in 2021.

In preparation for the 2021 neighbourhood plan update, the BNA is interested in exploring municipal responses to public washrooms. There has been growing concern and attention paid to the need for washrooms that are accessible to members of the public, particularly people who are houseless and who have access to fewer facilities in the wake of COVID-19-related closures of restaurants, libraries, and other services.

With the 2017 Beasley Neighbourhood Plan prioritizing health and wellbeing, neighbourhood safety, parks and recreation, and diversity and inclusion, exploring possible solutions to the lack of accessible public washrooms presents an opportunity to integrate all these priorities. The BNA's goal with this project is to build community understanding and consensus on the issue of accessible, public outdoor washrooms.

In the summer of 2020, the BNA reached out to the McMaster Research Shop (RShop) to conduct an environmental scan to answer the following question:

*What are some of the best practices and lessons learned from Canada and the United States around outdoor public washrooms that could inform community discussions of the issue in Hamilton's Beasley neighbourhood?*

The RShop works with Hamilton's non-profit and community organizations (e.g., Adult Basic Education Association, YouthCAN, etc.) to support them with their research needs. It strives to work with organizations who are actively trying to make Hamilton a better, more equitable place to live. The RShop agreed to take on the project and this report is a summary of the team's research methods and findings.

The purpose of this research is to provide the BNA with information and evidence to advocate for the installment of outdoor public washrooms in the neighbourhood and to address foreseeable objections to the cause. This information may be sent to the City Council for review and to educate neighbourhood residents.

## Methodology and Limitations

This section provides an overview of the data collection strategy for our environmental scan and brief background research. It also discusses research limitations and how the team attempted to address them.

### Background Research

To help frame the research findings, as well as the final recommendations of the report, the team conducted background research on the arguments for and against outdoor public washrooms. The team searched the following scholarly databases:

- EBSCOHost,
- Google Scholar,
- and the McMaster Library Catalogue.

Search terms included, “accessible outdoor public washrooms,” “North American outdoor public washrooms,” “public washrooms,” outdoor public washroom initiatives,” “houseless populations and outdoor public washrooms,” “outdoor public washroom maintenance,” “removal of outdoor public washrooms,” and “winter conditions and outdoor public washrooms.” The team also examined grey literature, including media sources, Municipal reports, and non-profit organization websites and reports.

### Environmental Scan

For the environmental scan, the team conducted a broad online search of outdoor public accessible washroom initiatives. To ensure replicability the team focussed their research on initiatives in urban centers in Canada and the United States of America (US). One international example - the Tokyo Toilet Project - was included due to the scale of the initiative and the international media attention it has received. Additionally, the team searched for initiatives that:

- operated year-round,
- were free and/or had a low fee,
- were located on public land and were publicly owned,
- were cleaned and maintained regularly, and,
- could be accessed by all members of the general public.

Accordingly, we excluded initiatives that:

- were privately owned/operated and/or on private land,
- had a high fee for usage,
- were in a rural community,
- had no effective maintenance plan (i.e., they end up dirty),
- were no longer active and there is no publicly-available information on why the initiative ended, and,
- were restricted to particular members of the community.

In addition to a broad online search, the team examined grey literature, including media accounts (e.g., newspaper stories) and the internal reports of various government and/or non-profit agencies. For each initiative, the team looked for information on policies, procedures, funding, staffing, winter weather accommodation, and the causes and conditions for a washroom to have been uninstalled. If we could not find specific details about an initiative, we contacted the relevant municipality and/or non-profit organization by phone and/or email to clarify information, as well as to request connections to other relevant individuals and/or initiatives.

## Limitations

Limited findings led the team to refine and expand its search parameters throughout the project. For example, initially the team excluded seasonal initiatives from the scan. However, during our research it became apparent that most initiatives were seasonally operated and/or closed during the winter months. As a result, the team decided to include seasonal and pilot initiatives into the scan. Additionally, the Covid-19 global pandemic has resulted in the opening of several temporary washroom facilities to address restrictions on access to washrooms in retail and restaurant locations. Due to the pressing and ongoing severity of the pandemic, the team felt it was important to include a discussion of temporary initiatives in the report.

Information on and/or evaluations of existing programs are largely non-existent or incredibly minimal. Information on costs (e.g., user, installation, and maintenance fees) and community responses are particularly difficult to find. The research team was able to supplement some of this information through informational emails and/or phone calls with relevant municipal and/or not-for-profit staff.

The research team was only able to examine initiatives that were widely advertised online and/or referred to us. This means that the team may have missed some smaller local or word-of-mouth initiatives. As such, we cannot claim our environmental scan is fully comprehensive, nor that we captured all examples.

## Background

Everyone needs to use the washroom. However, access to a washroom can be challenging for certain members of the population, including but not limited to the elderly, persons with disabilities, houseless persons, LGBTQ+ persons, and parents with small children (Downtown Winnipeg BIZ, 2019; Greed, 2003; Kitchin & Law, 2001; Little, 2020; Lowe, 2018). Despite this universal need, free outdoor publicly accessible washrooms are lacking in most major Canadian cities (Little, 2020; Scoular, 2019; Solomon, 2014). Often when the subject of outdoor public washrooms is raised, opponents argue that people can simply use the washrooms in restaurants and retail locations. However, access to these washrooms is typically restricted to paying customers and the business hours of the location (Bridgman & Bridgman, 2019; Downtown Winnipeg BIZ, 2019; Greed, 2003; Kitchin & Law, 2001; Little, 2020; Lowe, 2018). This solution does little to help houseless persons in need of a washroom and can lead them to having little choice but to urinate and defecate in public – an act which is both unhygienic and dehumanizing (Downtown Winnipeg BIZ, 2019; Solomon, 2014).

The issue of public washrooms is not just about bodily functions but also people's access to and mobility through space (Bridgman & Bridgman, 2018; Greed, 2003; Kitchin & Law, 2001; Lowe, 2018; Solomon, 2014). A parent with small children may have to cut a family outing or shopping trip short if there is no available washroom for their child (Greed, 2003; Lowe, 2018). A lack of accessible public washrooms or ones that are poorly designed (e.g., at the bottom of the stairs or too small for a second person) can also make it extremely difficult for elderly persons with caretakers and/or individuals with disabilities to take part in the community (Greed, 2003; Kitchin & Law, 2001; Solomon, 2014). Additionally, LGBTQ+ persons and/or parents with small children may feel uncomfortable using binary toilets if a unisex or gender free option is unavailable (Greed, 2003; Kitchin & Law, 2001; Little, 2020; Lowe, 2018). A lack of accessible washrooms means that many people must plan trips and outings around their bladders. It can also lead to people going without food or water or holding it until they can find a washroom later – which can lead to preventable health problems (e.g., urinary tract infections) (Downtown Winnipeg BIZ, 2019).

In their respective studies on public washrooms in Ireland and North America, Kitchin & Law (2001) and Solomon (2014) argue that public washrooms have become a contested site between addressing a real pressing public need and social anxieties surrounding their misuse by persons who use drugs, sex workers, and houseless populations (Greed, 2003; Little, 2020). Washroom designers have tried to address these anxieties with anti-crime features. For example, Portland's outdoor public washroom, the Portland Loo, includes sight lines to make it easier for police and

security to check if someone is misusing the facility and blue lighting to make it difficult for persons who use drugs to locate veins (Portland Loo, 2020a; Portland Loo, 2020b). While these features may help reduce instances of misuse, they may also make certain populations feel othered and excluded from the washroom. A hyper fixation on “misuse” ignores the pressing economic and health inequalities that these communities face and challenges the conception that public spaces are open to all (Greed, 2003; Scoular, 2019; Solomon, 2014).

Recently, designers and activists have been working to raise awareness of the great need for outdoor public washrooms and to counter the stigma and negative associations connected to these spaces. For example, in Ottawa, organizers for the GottaGo! campaign have regularly advocated for the need of public toilets in front of the city’s mayor and councillors (GottaGo!, n.d.). Recently in Japan, the Tokyo Toilet Project, founded by the private non-profit charity the Nippon Foundation, is in the process of renovating 17 existing outdoor public toilets in order to combat the negative stigma that public washrooms are “dark, dirty, smelly and scary” by making them more appealing and “accessible for everyone regardless of gender, age, or disability” (Nippon Foundation, 2020b). Their innovative designs, particularly their transparent public toilets, have generated international media attention (McCurry, 2020; Starr, 2020; Hiufu Wong & Enjoji, 2020). While free outdoor public washrooms can be misused, the Tokyo Toilet Project is an example that, when appropriately designed and maintained, public washrooms can increase everyone’s access to and enjoyment of community spaces.



## Results of Environmental Scan

The following section contains the results of our environmental scan of North American outdoor accessible public washrooms initiatives. The team included one international example, the transparent toilets of the Tokyo Toilet Project, due to the scale and media attention surrounding the project. In total, our scan includes 11 initiatives that the team deemed potentially replicable or possessing best practices that would be beneficial to the BNA. We divided our results into two tables:

- Table 1 - Scan of Permanent Outdoor Public Washroom Initiatives
- Table 2 - Scan of Pilots, Seasonal and/or Temporary Outdoor Public Washroom Initiatives

Each table is organized alphabetically by initiative name and provides an overview of the following characteristics:

- Location
- Date
- Operational Status
- Infrastructure (e.g., design, features, and accessibility)
- Operations and Maintenance (e.g., costs, staffing, and required cleaning)
- Weather proofing, and
- Available community feedback.

These results are by no means an exhaustive evaluation of North American initiatives.

Table 1 – Scan of Permanent Outdoor Public Washroom Initiatives

Initiative	Location	Date	Open	Infrastructure	Operations and Maintenance	Weather Proofing	Community Feedback
<b>OCTranspo Toilets</b>	Ottawa, Ontario, Canada	2019	Yes	<u>Manufactured by:</u> - Rideau Transit Group	<u>Hours:</u> - Same as transit times: Monday to Thursday from 5:00 am to 1:00	- Located inside enclosed facility with heating	- Informal feedback has been positive, but there is a notable lack of a formal evaluation

	- 2 locations on the light rail transit (LRT) line			<u>Partners:</u> - City of Ottawa - OCTranspo  <u>Design:</u> - Included as part of the inner terminal station  <u>Accessibility:</u> - Wheelchair accessible with lowered sinks and push to open washroom doors - Washrooms are gendered - Only available to those that have paid the fare for OCTranspo  (Kirkpatrick, 2015; S. Taylor, personal communication, December 9, 2020)	am; Friday from 5:00 am to 2:00 am; Saturday from 6:00 am to 2:00 am; and Sunday from 8:00 am to 11:00 pm  <u>Cleaning:</u> - Washrooms are cleaned as part of regular terminal maintenance  <u>Costs:</u> - Initial construction was estimated to have cost at least \$2.05 million dollars - Maintenance costs are estimated to be \$13,000 per month  (Kirkpatrick, 2015; Laucius, 2015; S. Taylor, personal communication, December 9, 2020)		to judge response to the toilets  (S. Taylor, personal communication, December 9, 2020)
<b>Montreal Self-Cleaning Toilets</b>	Montréal, Québec, Canada  - 4 locations across the city	2018	Yes	<u>Designed by</u> N/A  <u>Design</u> - Free standing square shaped structure	<u>Hours</u> - Oct 16 to May 14 7 days a week from 7:00 am-6:00 pm - May 15 to Oct 15 7 days a week from 7:00 am-10:00 pm  <u>Cleaning</u>	- Enclosed structure <sup>1</sup>	- Widely used - 80-100 cleanings per day - Toilet planned to be opened in Montreal's Chinatown was cancelled due to negative response from the community

<sup>1</sup> The research team was unable to find any information on weather proofing or winter maintenance.

			<ul style="list-style-type: none"> <li>- Between each use there is a self-cleaning cycle</li> <li>- Interior is anti-vandalism and anti-graffiti</li> <li>- Automated faucets</li> <li>- Available for individual use for a maximum of 15 mins before doors open automatically</li> <li>- Connected to City services</li> </ul> <p><u>Accessibility</u></p> <ul style="list-style-type: none"> <li>- Universal access for users with reduced mobility</li> <li>- Spacious</li> <li>- Handlebars</li> <li>- Unisex stalls</li> <li>- Needle disposal box</li> <li>- Free to use</li> </ul> <p><u>Additional Features</u></p> <ul style="list-style-type: none"> <li>- Sliding doors that can be opened in the event of a power outage</li> <li>- System sends alarm to city maintenance crews when toilet paper or soap runs out or to signal a breakage</li> </ul>	<ul style="list-style-type: none"> <li>- Self cleaning</li> <li>- Automated sprinklers and squeegees wipe the toilet and floor after each use (lasts 90 secs)</li> <li>- A sanitary maintenance firm also provides cleaning at least once daily</li> </ul> <p><u>Costs</u></p> <ul style="list-style-type: none"> <li>- Free standing unit costs \$340,000</li> <li>- Installation costs of the first 3 toilets approximately \$561,538</li> <li>- Additional maintenance fees</li> </ul> <p><u>Additional features</u></p> <ul style="list-style-type: none"> <li>- Two person teams affiliated with local organizations working with the homeless to visit toilets, answer questions, and report problems</li> </ul> <p>(Deschamps, 2018; Scott, 2018; Ville-Montréal, 2020)</p>	<p>regarding the selected site location</p> <p>(Lau, 2018; Leavitt, 2020; Scott, 2018)</p>
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				<ul style="list-style-type: none"> <li>- Automatic sprinklers</li> </ul> <p>(Deschamps, 2018; Ville-Montréal, 2020)</p>			
<b>Portland Loo</b>	<p>Portland, Oregon, United States of America</p> <p>- 6 locations across the city</p>	2010	Yes	<p><u>Designed by</u></p> <ul style="list-style-type: none"> <li>- Madden Fabrication in conjunction with the City of Portland</li> </ul> <p><u>Design</u></p> <ul style="list-style-type: none"> <li>- Free standing single occupancy restroom</li> <li>- Dimensions 10'7 long x 6 wide x 8'6 tall</li> <li>- 6,000 pounds</li> <li>- Stainless steel</li> <li>- Rounded anti-graffiti walls</li> <li>- Open grating and sight lines</li> <li>- Connected to City sewer</li> <li>- Can take 300 flushes a day</li> </ul> <p><u>Accessibility</u></p> <ul style="list-style-type: none"> <li>- American with Disabilities Act (ADA) compliant</li> <li>- Entry railings and fixtures</li> <li>- Gender neutral stall</li> </ul>	<p><u>Hours</u></p> <ul style="list-style-type: none"> <li>- Open 24hrs a day, 7 days a week</li> </ul> <p><u>Cleaning</u></p> <ul style="list-style-type: none"> <li>- Cleaned 2-5 times a day</li> <li>- Telephone number to report if cleaning needed</li> <li>- City of Portland has a maintenance contract with a private company to conduct cleaning</li> </ul> <p><u>Costs</u></p> <ul style="list-style-type: none"> <li>- \$250,000 to develop</li> <li>- \$95,000 to purchase a single unit</li> <li>- Installation costs vary but ground installation could be around \$40,000-\$50,000</li> <li>- Approximately \$11,000-\$12,000 annually for cleaning and maintenance</li> </ul> <p>(C. Robinson, Portland Loo, personal communication, 5 January 2021; E.</p>	<ul style="list-style-type: none"> <li>- Exposed plumbing and toilet bowl wrapped in heated wire for freeze protection</li> </ul> <p>(Portland Loo, 2020b)</p>	<ul style="list-style-type: none"> <li>- Occupancy counters report averages of 250 flushes per day</li> <li>- Some initial concerns about degrading the value of neighbouring districts that proved unfounded</li> <li>- Online reviewers have graded it 5 stars, praising the location choices and the unit's cleanliness</li> </ul> <p>(E. Madden, Portland Loo, personal communication, 5 October 2020; Portland Loo, 2020b; Portland Loo, 2020d)</p>

				<ul style="list-style-type: none"> <li>- Free to use</li> </ul> <p><u>Additional features</u></p> <ul style="list-style-type: none"> <li>- Baby changing station</li> <li>- Large enough to fit a bike or stroller</li> <li>- Solar panels</li> <li>- Skylight and LED lighting</li> <li>- Blue lighting</li> <li>- Hand sanitizer inside and exterior hand washing stations</li> </ul> <p>(Aptekar, N.D., City of Portland Oregon, 2020; Portland Loo, 2020a; Portland Loo, 2020b; Portland Loo, 2020c)</p>	Madden, Portland Loo, personal communication, 5 October 2020; Portland Loo, 2020a; Robinson, 2016)		
<b>San Francisco Pit Stop Program<sup>2</sup></b>	<p>San Francisco, California, United States of America</p> <ul style="list-style-type: none"> <li>- 23 active locations (and 1 additional location currently)</li> </ul>	2014	Yes	<p><u>Manufactured by</u></p> <ul style="list-style-type: none"> <li>- JCDecaux (13/23 locations)</li> <li>- N/A (10/23 locations)<sup>3</sup></li> </ul> <p><u>Design</u></p> <ul style="list-style-type: none"> <li>- Includes toilet and sink (with running water)</li> </ul>	<p><u>Hours</u></p> <ul style="list-style-type: none"> <li>- Open 24 hours a day, 7 days a week (16/23 locations)</li> <li>- All other locations open 7 days a week, hours vary from: 9:00 am to 8:00 pm (2 locations), 10:30 am to 5:30 pm (1 location), 12:30 pm to 7:30 pm (1</li> </ul>	<ul style="list-style-type: none"> <li>- Toilets have air conditioning<sup>4</sup></li> </ul>	<ul style="list-style-type: none"> <li>- Widely used, program has been adopted by other U.S. cities</li> <li>- Decline in street clearing requests in some areas with Pit Stop units, although there is still a need for other programs (i.e., Poop Patrol) as well</li> </ul>

<sup>2</sup> The San Francisco Pit Stop Program contains both permanent and temporary initiatives and thus appears in the both scan tables.

<sup>3</sup> The research team was unable to determine who designed and/or manufactured the washroom.

<sup>4</sup> The research team was unable to find any information on weather proofing or winter maintenance.

	closed for service)			<p><u>Additional features</u></p> <ul style="list-style-type: none"> <li>- Used needle receptacle</li> <li>- Dog waste station (bags and trash can)</li> </ul> <p><u>Accessibility</u></p> <ul style="list-style-type: none"> <li>- Free to use</li> </ul> <p>(San Francisco Pit Stop (n.d.))</p>	<p>location), 11:00 am to 6:00 pm (1 location), 8:00 am to 8:00 pm (2 locations)</p> <p><u>Staffing</u></p> <ul style="list-style-type: none"> <li>- All locations are staffed by paid attendants</li> <li>- 4 non-profits are under contract to staff the public toilets, and jobs are provided to the formerly incarcerated</li> <li>- JCDecaux funds the staffing for 9 locations in the program</li> </ul> <p><u>Cleaning</u></p> <ul style="list-style-type: none"> <li>- JCDecaux toilets are self-cleaning</li> <li>- Attendants make sure washrooms are well-maintained</li> </ul> <p><u>Costs</u></p> <ul style="list-style-type: none"> <li>- 2014 annual staffing costs for the pilot program was \$87,360</li> <li>- The estimated annual cost for the portable toilets was \$101,600 per unit (\$0 for JCDecaux toilets)</li> <li>- In 2019, each toilet cost an average of \$200,000/year to operate - largely due to</li> </ul>		<p>as concerns for the expensiveness of the program</p> <ul style="list-style-type: none"> <li>- Union for Pit Stop workers has expressed concerns regarding toilet's unsanitary conditions</li> </ul> <p>(San Francisco Pit Stop (n.d.); San Francisco Public Works, 2018; Bendix, 2018; Matier, 2020)</p>
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					<p>staffing and overhead expenses</p> <ul style="list-style-type: none"> <li>- From mid-August to mid-November 2019, a pilot program was enacted to operate 3 locations for 24 hours/day, which cost an additional \$300,000</li> <li>- The estimated cost for keeping all 24 locations open 24/7 is an extra \$8.25 million/year</li> </ul> <p>(San Francisco Pit Stop (n.d.); City and County of San Francisco, 2015; Har, 2019; Matier, 2019)</p>		
<p><b>Tokyo Toilet Project, Transparent Toilets<sup>5</sup></b></p>	<p>Shibuya Ward, Tokyo, Japan</p> <p>- 2 locations: Yoyogi Fukamachi Mini Park and Haru-No-Ogawa Community Park</p>	<p>August 2020</p>	<p>Yes</p>	<p><u>Designed by</u></p> <ul style="list-style-type: none"> <li>- Architect Shigeru Ban</li> <li>- Developed in conjunction with the Nippon Foundation for the Tokyo Toilet Project</li> </ul> <p><u>Design</u></p> <ul style="list-style-type: none"> <li>- Transparent toilets that turn opaque when user enters and locks the door</li> <li>-Rectangle design to resemble a hut</li> </ul>	<p><u>Hours</u></p> <ul style="list-style-type: none"> <li>- Open 24hrs a day, 7 days a week</li> </ul> <p><u>Cleaning</u></p> <ul style="list-style-type: none"> <li>- Nippon Foundation works with the Shibuya City government and Tourism Association to maintain toilets</li> <li>- Professional toilet inspectors survey the toilets to ensure the best user experience</li> </ul>	<ul style="list-style-type: none"> <li>- Washrooms are accessible throughout the year but winter accommodations, such as heaters, have not yet been determined</li> </ul> <p>(M. Ueki, The Nippon Foundation, personal communications, 6 November 2020)</p>	<ul style="list-style-type: none"> <li>- Initial concerns about whether the stalls would turn opaque or not</li> <li>- The colours and lights of the washrooms make people feel safer using them and walking at night</li> </ul> <p>(M. Ueki, The Nippon Foundation, personal communications, 6 November 2020)</p>

<sup>5</sup> The Tokyo Toilet Project will have 17 toilets located throughout the Shibuya Ward. 7 toilets are currently completed, 2 of which are the transparent toilets discussed here.

			<ul style="list-style-type: none"> <li>- 3 stalls (male, female, and multipurpose)</li> <li>- Concrete walls, smart glass and warm accent lighting</li> <li>- Colourful to match playground equipment</li> <li>- At night facility lights up like a colorful lantern</li> <li>- Washlet (bidet) installed in all toilets</li> </ul> <p><u>Accessibility</u></p> <ul style="list-style-type: none"> <li>- Wheelchair accessible</li> <li>- Handlebars</li> <li>- Facility for ostomy<sup>6</sup></li> <li>- Free to use</li> </ul> <p><u>Additional features</u></p> <ul style="list-style-type: none"> <li>- Baby chair</li> </ul> <p>(McCurry, 2020; The Nippon Foundation, 2020a; The Nippon Foundation, 2020b; The Nippon Foundation, 2020c; Starr, 2020; Hiufu</p>	<ul style="list-style-type: none"> <li>- Maintenance status of the toilets will be posted online</li> </ul> <p><u>Costs</u></p> <ul style="list-style-type: none"> <li>- Construction and installation of the completed 7 toilets of the Tokyo Toilet Projects totals 750,000,000 Japanese Yen (converted to Canadian dollars \$9,444,620)</li> <li>- Still determining annual maintenance costs and appropriate frequency of cleaning</li> </ul> <p>(The Nippon Foundation, 2020b; M. Ueki, The Nippon Foundation, personal communications, 6 November 2020; <a href="#">OANDA</a>, 2020)</p>		
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<sup>6</sup> A large flushing sink for anyone who needs to clean a surgical opening in the body for the discharge of bodily wastes.



				Wong & Enjoji, 2020)			
<b>TSECHES Toilets<sup>7</sup></b>	<p>Pierrefonds-Roxboro Borough, Montreal, Quebec, Canada</p> <p>-2 locations: Cérès Parc and du Boisé Parc</p>	2016	No	<p><u>Manufactured by</u></p> <ul style="list-style-type: none"> <li>- Tolitech</li> </ul> <p><u>Design</u></p> <ul style="list-style-type: none"> <li>- Shaped to look like a little house</li> <li>- Bright red colour</li> <li>- Opaque roof to provide natural light</li> <li>- Ecological dry toilet</li> <li>- Heat from the sun powers a continuous-air flow system that ventilates and evaporates and/or dehydrates waste</li> </ul> <p><u>Accessibility</u></p> <ul style="list-style-type: none"> <li>- Accessible for people with reduced mobility</li> <li>- Handlebars</li> <li>- Unisex</li> <li>- Large enough for a parent to assist a young child</li> <li>- Free to use</li> </ul> <p><u>Additional features</u></p>	<p><u>Hours</u></p> <ul style="list-style-type: none"> <li>- Open during the summer season 24 hrs a day, 7 days a week</li> </ul> <p><u>Cleaning</u></p> <ul style="list-style-type: none"> <li>- Only requires emptying once a year with an external contract</li> <li>- Borough is responsible for regular cleaning of the toilet interior</li> </ul> <p><u>Costs</u></p> <ul style="list-style-type: none"> <li>- \$40,000 per unit</li> <li>- Additional maintenance fees<sup>8</sup></li> </ul> <p>(Atmosphère, 2020; Greenaway, 2015; M. Hernandez, Ville de Montreal, personal communication, 2 December 2020)</p>	<ul style="list-style-type: none"> <li>- Closed during the winter months</li> </ul> <p>(Greenaway, 2015)</p>	N/A <sup>9</sup>

<sup>7</sup> TSECHES is an abbreviation for “dry toilets” in French.

<sup>8</sup> The research team was unable to find any information on the costs of maintenance fees.

<sup>9</sup> The research team was unable to find any information about the community’s reception to the washrooms.

				<ul style="list-style-type: none"> <li>- Requires no running water, electricity, or chemical products</li> <li>- Sanitary system is odourless</li> </ul> <p>(Atmosphäre, 2020; Greenaway, 2015; Ville-Montréal, 2015)</p>			
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Table 2 – Scan of Pilots, Seasonal and/or Temporary Outdoor Public Washroom Initiatives

Initiative	Location	Date	Open	Infrastructure	Operations and Maintenance	Weather Proofing	Community Feedback
<b>Pop-Up Winnipeg Public Toilet Initiative</b>	<p>Winnipeg, Manitoba, Canada</p> <ul style="list-style-type: none"> <li>- In 2018, 4 different locations in the down area</li> <li>- In 2019, located at Main Street Project and Thunderbird House</li> </ul>	<p>May to October 2018</p> <p>Summer 2019</p>	No	<p><u>Designed by</u></p> <ul style="list-style-type: none"> <li>- W. Bridgman, Architect</li> </ul> <p><u>Partners</u></p> <ul style="list-style-type: none"> <li>- Downtown Winnipeg BIZ</li> <li>- Siloam Mission</li> <li>- Bridgman Collaborative Architecture</li> </ul> <p><u>Design</u></p> <ul style="list-style-type: none"> <li>- Bright orange coloured shipping container</li> <li>- Acrylic glazed double walls that</li> </ul>	<p><u>Hours</u></p> <ul style="list-style-type: none"> <li>- 2018, Monday to Friday 7:30 am-7:30 pm</li> <li>- 2019, Sunday to Saturday from 7:30 am-4:00 pm</li> </ul> <p><u>Cleaning</u></p> <ul style="list-style-type: none"> <li>- Hired attendants to monitor and clean the facility</li> </ul> <p><u>Costs</u></p> <ul style="list-style-type: none"> <li>- 2018 total cost \$100-\$125,000 (e.g., consulting, construction, permits,</li> </ul>	N/A <sup>10</sup>	<ul style="list-style-type: none"> <li>- Largely positive feedback</li> <li>- 35-40 people used the toilet daily</li> <li>- Positive survey feedback</li> </ul> <p>(Bridgman &amp; Bridgman, 2018; Bridgman Collaborative Architecture, 2018)</p>

<sup>10</sup> Closed during the winter season.

				<p>slide up when the facility is open and down when it is closed</p> <ul style="list-style-type: none"> <li>- 2 portable toilets</li> <li>- Kiosk space</li> <li>- Not connected to City services</li> </ul> <p><u>Accessibility</u></p> <ul style="list-style-type: none"> <li>- Free to use</li> <li>- 1 portable toilet with wheelchair access</li> <li>- Sloped sidewalk</li> </ul> <p>(Bridgman Collaborative Architecture, 2018)</p>	<p>labour, wages, cleaning, etc.)</p> <ul style="list-style-type: none"> <li>- 2019 total cost \$40,000 (would be typical maintenance cost moving forward)</li> </ul> <p><u>Additional features</u></p> <ul style="list-style-type: none"> <li>- Enviro clean team and CHAT social workers on site daily to engage the community</li> </ul> <p>(Bernhardt, 2019; Bridgman &amp; Bridgman, 2018; Bridgman Collaborative Architecture, 2018; Downtown Winnipeg Biz, 2019; Hendricks, 2018)</p>		
<b>Portable Toilets Pilot Project</b>	Calgary, Alberta, Canada	<p>Trial 1: December 2006 to March 2007</p> <p>Trial 2: August 2007 to August 2008</p>	No	<p><u>Designed by</u></p> <p>N/A<sup>11</sup></p> <p><u>Partners</u></p> <ul style="list-style-type: none"> <li>- City of Calgary</li> <li>- Clean to the Core<sup>12</sup></li> </ul>	<p><u>Hours</u></p> <p>N/A<sup>14</sup></p> <p><u>Cleaning</u></p> <ul style="list-style-type: none"> <li>- Cleaning was done by the Clean to the Core staff, however this was service was</li> </ul>	N/A <sup>15</sup>	N/A <sup>16</sup>

<sup>11</sup> The research team was unable to determine who designed and/or manufactured the washroom.

<sup>12</sup> Clean to the Core is a team of more than 15 City of Calgary Departments and external partners from community organizations and businesses in Calgary's city centre.

<sup>14</sup> The research team was unable to find any information about the hours of operation for this pilot.

<sup>15</sup> The research team was unable to find any information on weather proofing or winter maintenance.

<sup>16</sup> The research team was unable to find any information about the community's reception to the washrooms.

				<u>Design</u> - Portable toilets  <u>Accessibility</u> N/A <sup>13</sup>  (City of Calgary, 2008)	discontinued in March 2007 due to vandalism and unsafe conditions  <u>Costs</u> - In August 2008, cleaning and maintenance costs were just over \$6,000 per month totaling an annual cost of \$72,000 - In September 2008, the cost was projected to increase to \$16,800 per month because of hazardous materials and the need for additional insurance  (City of Calgary, 2008)		
<b>Prince George Plaza Washrooms</b>	Prince George, British Columbia, Canada  - 808 Canada Games Way	April to December 2020  (C. Bone, personal communications, Nov 4, 2020)	No	<u>Designed by</u> N/A <sup>17</sup>  <u>Design</u> - Used existing infrastructure in an available bathroom in the Canada Games Plaza  <u>Partners</u>	<u>Hours</u> - Open daily from 5:00 am-10:00 am and 7:00 pm to midnight  <u>Cleaning</u> - Hired attendants monitor and clean the facility	- Located inside enclosed facility with heating	- Community feedback has been largely negative - Concerns arose regarding congregation and safe drug use (C. Bone, personal communications, Nov 4, 2020)

<sup>13</sup> The research team was unable to find any information on accessibility features for the pilot.

<sup>17</sup> The research team was unable to determine who designed and/or manufactured the washroom.

				<ul style="list-style-type: none"> <li>- Funded by the Canadian Medical Association</li> <li>- Implemented by the City of Prince George</li> <li>- City also partnered with a peer organization to provide operations and maintenance support</li> </ul> <p><u>Accessibility</u></p> <ul style="list-style-type: none"> <li>- Wheelchair accessible stall</li> <li>- Harm reduction infrastructure, such as sharps disposal containers and naloxone kits</li> <li>- Free to use</li> </ul> <p>(Balzer, 2020; C. Bone, personal communications, Nov 4, 2020)</p>	<p><u>Costs</u></p> <ul style="list-style-type: none"> <li>- Information on total costs unavailable</li> <li>- Funded by a grant of \$48,000, plus minimal additional support from the City of Prince George</li> <li>- The City provided a trailer (\$500 per month) outside the plaza for the peers to use as their office</li> </ul> <p>(Balzer, 2020; C. Bone, personal communications, Nov 4, 2020)</p>		
<b>San Francisco Pit Stop Program</b>	San Francisco, California, United States of America	2020	Yes	<p><u>Designed by</u> N/A<sup>18</sup></p> <p><u>Design</u> N/A<sup>19</sup></p>	<p><u>Hours</u></p> <ul style="list-style-type: none"> <li>- 24 hours a day, 7 days a week (25/26 locations)</li> </ul>	N/A <sup>20</sup>	N/A <sup>21</sup>

<sup>18</sup> The research team was unable to determine who designed and/or manufactured the washroom.

<sup>19</sup> The research team was unable to find information about the design of the washrooms.

<sup>20</sup> The research team was unable to find any information on weather proofing or winter maintenance.

<sup>21</sup> The research team was unable to find any information about the community's reception to the washrooms.

	- 26 locations				<p>- 6:30 am to 2:30 pm (1/26 locations)</p> <p><u>Cleaning</u></p> <ul style="list-style-type: none"> <li>- Portable toilets are trucked to and from the sites daily after overnight servicing at a remote location</li> <li>- Like the non-temporary Pit Stop locations, attendants make sure washrooms are well-maintained</li> </ul> <p>(San Francisco Public Works, 2016; San Francisco Pit Stop (n.d.); Office of the Mayor, 2020)</p>		
<p><b>Whyte Avenue Public Washroom Pilot Project</b></p>	<p>Edmonton, Alberta, Canada</p> <p>- Whyte avenue and Gateway Boulevard</p>	December 2019 to present	Yes	<p><u>Designed by</u></p> <ul style="list-style-type: none"> <li>- James Townsend, architect with Shelterbelt Architecture</li> </ul> <p><u>Partners</u></p> <ul style="list-style-type: none"> <li>- Boyle Street Ventures</li> <li>- Boyle Street Property Maintenance</li> <li>- City of Edmonton</li> </ul> <p><u>Design</u></p>	<p><u>Hours</u></p> <ul style="list-style-type: none"> <li>- Monday to Friday from 9:30 am-9:30 pm</li> </ul> <p><u>Cleaning</u></p> <ul style="list-style-type: none"> <li>- Hired 2 attendants to clean the toilets</li> </ul> <p><u>Costs</u></p> <ul style="list-style-type: none"> <li>- Approximately \$20,000 a month in operation expenses</li> <li>- Funding of \$36,000 provided by the City of Edmonton</li> </ul>	<p>- Building is heated in cold temperatures</p> <p>(J. Phelans, personal communication, November 3, 2020)</p>	- Largely positive response from the community

				<ul style="list-style-type: none"> <li>- Building with see-through windows</li> <li>- Stalls and urinals</li> <li>- Gendered washrooms</li> <li>- Outdoor urinals</li> <li>- Glass to prevent illegal activity</li> </ul> <p><u>Accessibility</u> N/A<sup>22</sup></p> <p>(J. Phelans, personal communication, November 3, 2020; Ramsay, 2019)</p>	<ul style="list-style-type: none"> <li>- Cleaning costs are provided and covered by Boyle Street Property Maintenance</li> </ul> <p><u>Additional Features</u></p> <ul style="list-style-type: none"> <li>- Attendants trained and hired by Boyle Street Ventures</li> <li>- Attendants were also responsible for recognizing unsafe practices, and providing peer to peer counselling in crisis situations</li> </ul> <p>(J. Phelans, personal communication, November 3, 2020; Ramsay, 2019)</p>		
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<sup>22</sup> The research team was unable to find any information on accessibility features for the pilot.

# Discussion of Environmental Scan Results

The following section provides an overview of the main findings of the environmental scan organized by the following characteristics:

- Location
- Design
- Accessibility
- Costs
- Cleaning and Maintenance
- Multi-Use Sites
- Collaboration
- Winter Accommodations
- Community Response
- Operational Status

It also includes discussions of relevant best practices that were discussed and/or emerged throughout the scan.

## Location

Our scan included three initiatives from the US, seven from Canada, and one from Japan. Most initiatives were in areas with heavy population traffic, such as urban city centres and parks close to the downtown area. However, for the pilot San Francisco Pit Stop program, the staffed toilet locations were chosen based on proximity to soup kitchens and available data regarding the incidence of human feces on public streets, which included: walking survey of feces, feedback from Public Works street cleaners, and human waste requests to the city's 311 program (City and County of San Francisco, 2015). Outdoor public toilets should ideally be in heavy traffic areas and/or in proximity to the communities in most need.

## Design

Most initiatives had plain rectangle or rounded designs with muted colors and a focus on anti-vandalism features. For example, the Portland Loo (Figure 1) is a dark grey free-standing structure with stainless steel anti-graffiti panels (Portland Loo, 2020b). However, a few initiatives have chosen more unique designs and bolder colour schemes to attract users. For example, the Whyte Avenue Public Washroom Pilot in Edmonton uses see-through windows to prevent illicit activity and to allow users to monitor the facilities' cleanliness. Similarly, the translucent toilets of the Tokyo Toilet Project (Figure 2) are clear when not in use so that people walking by can check the cleanliness of the washroom. Additionally, at night the washrooms light up in several colours creating the appealing look of a lantern (The Nippon Foundation, 2020a; The Nippon Foundation, 2020c). The Pop-Up Winnipeg (Figure 3) and Montreal TSECHE toilets also employ bold colour schemes with vibrant orange and red paint respectively



(Atmosphäre, 2020; Bridgman Collaborative Architecture, 2018). Vibrant colours and/or distinct designs make these toilets more visible and can help challenge the perception of public washrooms as dark, unappealing, and unclean.



Figure 1: Portland Loo  
Portland Loo. (2020). Loo  
Gallery. *The Portland Loo*.  
<https://portlandloo.com/gallery/>



Figure 2: Transparent Washroom Yoyogi Fukamachi Mini  
Park  
Nippon Foundation. (2020). Yoyogi Fukamachi Mini Park.  
*The Tokyo Toilet*.  
[https://tokyotoilet.jp/en/yoyogifukamachi\\_mini\\_park/](https://tokyotoilet.jp/en/yoyogifukamachi_mini_park/)



Figure 3: Pop-Up Winnipeg Toilet  
Young, J. (2018). Pop-Up Winnipeg Toilet. *Bridgman  
Collaborative Architecture Ltd*.  
<https://www.bridgmancollaborative.ca/pop-up-winnipeg-public-toilet.html>

## Accessibility

Most initiatives, such as the Portland Loo, Montreal self-cleaning, TSECHE and the Ottawa OCTranspo toilets include larger stall designs or a specific wheelchair accessible washroom, in addition to support handlebars. The transparent washrooms of the Tokyo Toilet project have gone a step further in their accessibility features by including a facility for ostomy, a large flushing sink for anyone who needs to clean a surgical opening in the body (e.g., individuals with cancer, Crohn's disease, etc.) for the discharge of bodily wastes (The Nippon Foundation, 2020a; The Nippon Foundation, 2020c). Such an accessibility feature will greatly increase the mobility and access to space for these individuals whose washrooms needs are often unknown or invisible to the general public and/or washroom designers.

Information on the accessibility features of the San Francisco Pit Stop toilets, the Whyte Avenue Public Washroom Pilot, and the Calgary Portable Toilets Pilot Project are currently unavailable.

## Costs

The construction and/or purchasing price of the washroom units reviewed covered a broad range from \$40,000 up to several million dollars. On the higher price end are initiatives like the Tokyo Toilet project, where the construction costs of 7 of the 17 planned washroom renovations has been approximately 750,000,000 Japanese Yen or \$9,444,620 Canadian (The Nippon Foundation, 2020b; M. Ueki, The Nippon Foundation, personal communications, 6 November 2020; [OANDA](#), 2020). Similarly, the construction costs of two washrooms in the Ottawa OCTranspo were around \$2,050,000 (Kirkpatrick, 2015; Laucius, 2015). Mid-range priced units included the Montreal self-cleaning toilets and the Portland Loo averaging \$340,000 and \$95,000 per unit respectively (C. Robinson, Portland Loo, personal communication, 5 January 2021; Robinson, 2016; Scott, 2018). The Montreal TSECHE toilet had the lowest purchase price of \$40,000 (Atmosphäre, 2020; Greenaway, 2015).

In general, the initial costs of most initiatives tended to be higher than their annual operational costs due to the initial purchasing and/or construction fees. For example, the 2018 total for the Pop-Up Winnipeg Toilet, which included consultation, construction, advertising, attendant pay and moving costs, was around \$100,000-\$125,000. The next year, the project costs dropped to \$40,000 (Downtown Winnipeg Biz, 2019). Additionally, initial costs for the Portland Loo were around \$140,000 (covering unit price and ground installation) but its annual operation and maintenance costs are approximately \$11,000-\$12,000 (C. Robinson, Portland Loo, personal communication, 5

January 2021; E. Madden, Portland Loo, personal communication, 5 October 2020; Portland Loo, 2020).

However, larger scale initiatives, such as the San Francisco Pit Stop, have higher operational costs, in this case the estimated cost of operating 25 locations was approximately \$200,000 a year per toilet (i.e., ~\$5,000,000/year USD) (Har, 2019). A pilot program expanding the hours of operation for 3 Pit stop locations to 24 hours a day from mid-August to mid-November added \$300,000 to the city's sanitation budget (Matier, 2019). When taking into account the number of overnight uses, the costs of operating these locations was reported as "almost \$30 per flush" (Bendix, 2019). While there were no significant reductions in the number of complaints for these Pit Stop locations, city officials argued that there was still a need for 24-hour toilets given the high number of persons experiencing homelessness within San Francisco, as well as the washroom's provision of needle disposal receptacles and pet waste bags (Bendix, 2019; Matier, 2019). The city estimated that expanding the hours of 21 other locations would cost \$8.25 million, bringing the total annual cost of operating 24 facilities all-day to \$13.25 million (Matier, 2019).

For San Francisco, the primary purpose of the Pit Stop program is to provide access to staffed public toilets, and so staffing makes up a large chunk of the operation costs. Initial annual staffing estimates of the pilot program for 12 hours/day was \$87,360 per staffing attendant, with attendants earning \$20/hour (City and County of San Francisco, 2015). As of 2019, staffing attendants reportedly earn \$16/hour (Har, 2019). In addition to the Pit Stop Program, San Francisco also employs a Poop Patrol program to address the high incidence of feces on San Francisco streets. Poop Patrol is a clean-up program with a budget of \$830,977 and consists of a 5-person team that travels to "hot spots" in a steam cleaner-equipped vehicle to eliminate feces on public streets (Bendix, 2018).

High operational costs are an important factor in determining the long-term feasibility of public washroom projects. In August 2008, the second trial of the Calgary Portable Washroom Pilot cost over \$6,000 dollars per month to add up to an annual cost of \$72,000 (The City of Calgary, 2008). However, increasing vandalism and the need for additional insurance raised the monthly cost by \$16,800 (The City of Calgary, 2008).<sup>23</sup> While the team was unable to determine the maintenance and cleaning fees for the Montreal TSECHE toilet, its design – it evaporates and dehydrates waste – means that it only requires emptying once a year which could help save on annual costs and make the unit a more viable long-term option (Atmosphäre, 2020; Greenaway, 2015).

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<sup>23</sup> Issues of vandalism and cleanliness included garbage buildup, outdoor urination and defecation.

Some initiatives have been able to cover high costs through external funding and/or financial grants. For example, the Whyte Avenue Public Washroom Pilot received \$36,000 in funding from the City of Edmonton and the Boyle Street Ventures currently covers expenses for facility cleaning (CBC News, 2019; J. Phelans, personal communication, November 3, 2020). The Prince George Plaza washrooms received a grant of \$48,000 from the Canadian Medical Association to run their initial pilot program. Additional support from the City of Prince George was also provided, including \$500 a month to fund offices (trailers) for washroom attendees and \$200,000 per year for off-site storage facilities so that people experiencing houselessness can access essential facilities more conveniently (Chris Bone, personal communication, November 4, 2020).

Uniquely, the San Francisco Pit Stop program was able to subset the costs of the semi-permanent toilets used at some Pit Stop locations through an existing partnership with an advertising company. These semi-permanent self-cleaning toilets were provided by JCDecaux; a company under contract with the city prior to the start of the Pit Stop program to operate toilets in exchange for advertising rights, and so no charge was associated with the continued maintenance of those toilets (San Francisco Public Works, 2015; City and County of San Francisco, 2015). However, the costs of the portable toilets, which were estimated as \$101,920 per unit, were not subsidized.

## Cleaning and Maintenance

Several initiatives, including the Portland Loo, the Tokyo Toilet Project, and the Montreal TSECHE toilet, employ private or city employees to engage in daily cleaning of washroom facilities (Aptekar, N.D., City of Portland Oregon, 2020; M. Hernandez, Ville de Montreal, personal communication, 2 December 2020; The Nippon Foundation, 2020b; Portland Loo, 2020a). The portable toilets used in the San Francisco Pit Stop program are trucked off-site for overnight servicing (San Francisco Public Works, 2016). While the self-cleaning toilets in Montreal do conduct a cleaning cycle after each use, they are also cleaned daily by a maintenance firm (Ville-Montréal, 2020). The Calgary Portable Toilets Pilot also used maintenance personnel to clean their toilets. Cleaning services were provided by members of the Clean to the Core program, a team made up of 15 of the City's departments and external partners from community organizations and businesses to address cleanliness and safety issues within the City's centre (Linn, 2009). Unfortunately, these cleaning services were discontinued as of March 2007 due to increased vandalism and concerns for staff safety (The City of Calgary, 2008).

Other initiatives, such as the Pop-Up Winnipeg Toilet, San Francisco Pit Stop Toilets, and Whyte Avenue Public Washroom have taken a different approach, hiring washroom attendants to clean the facilities, as well as to monitor the sites to prevent misuse and

reduce chances of vandalism (Bridgman & Bridgman, 2018; Ramsay, 2019). In these cases, the attendants were hired from populations facing barriers to employment (e.g., at risk youth, formerly incarcerated persons, etc.) through partnerships with local non-profit organizations (Bridgman & Bridgman, 2018; Ramsay, 2019). For the San Francisco Pit Stop Program, staff attendants are provided by four non-profit organizations that offer employment opportunities to disadvantaged City residents, including the formerly incarcerated and underserved youth (San Francisco Pit Stop (n.d.)). The Pit Stop attendants work to make sure that the washrooms are kept clean and used for their intended purpose and have received positive feedback from community members, which is of importance as historically, public toilets in challenging locations have been criticized as places where drug activity, prostitution, and vandalism take place (Har, 2019; Matier, 2019; San Francisco Pit Stop (n.d.)).

In the case of the Whyte Avenue Public Washroom Pilot, attendants were hired and trained by Boyle Street Ventures (CBC News, 2019). Alongside earning a custodial certificate, attendants received training in naloxone administration and situation de-escalation (CBC News, 2019). The presence of attendants, in combination with their special training, was important in providing crisis support for vulnerable populations, preventing illicit activity, and fostering a safe welcoming space for all patrons of the washroom (CBC News, 2019). The Prince George Plaza washrooms engaged in a similar strategy, providing its attendants training in safe disposal and administering naloxone. However, the added comfort of washroom users with the attendants gave rise to frequent gatherings at the facilities outside of their intended purpose (Balzer, 2020; C. Bone, personal communication, November 4, 2020). An evaluation of the program revealed that the attendants did not have the supervision required to support the facility.

## Multi-Use Sites

Most initiatives reviewed acted solely as a washroom facility. However, several facilities had multi-site purposes. For example, the San Francisco Pit Stop units also offered used needle receptacles and dog waste stations (San Francisco Pit Stop (n.d.)). Additionally, advertising kiosks are offered through the toilets provided by the company JCDecaux (Matier & Ross, 2015). The Pop-Up Winnipeg Toilet kiosk booth has also been used to generate revenue, with attendants selling reusable bottles, t-shirts, and other items, with all proceeds going to support the programs of the Siloam Mission (Bernhardt, 2019; Bridgman & Bridgman, 2019). In 2019, the toilet was placed at the Main Street Project and Thunderbird House near the Siloam Mission and Salvation Army. At this new location the function of the kiosk switched from generating revenue to providing outreach support, with attendants offering needle exchanges and condoms, as well as helping direct people to support services in the area (e.g., food bank,

counselling, etc.) (Bernhardt, 2019). The multi-purpose designs of these two examples show how outdoor public toilets can be used to not only generate revenue, but also provide additional support to the community.

## Collaboration

Key to the success of several outdoor public washroom projects has been their collaborative nature. From its inception, the Portland Loo was a collaborative project between Madden Fabrication and the City of Portland (Portland Loo, 2020c). The design and implementation of the Pop-Up Winnipeg Toilet has involved extensive collaboration among community members, local businesses, non-profits and outreach workers, architectural designers, and city councillors. In particular, the Siloam Mission's employment readiness program played an important role in helping find and hire kiosk attendants to provide oversight at the washroom locations (Bridgman & Bridgman, 2018). The designer also had to work closely with the city and local businesses to determine zoning and building permits as the toilet was in four different locations (a mix of public and private property) ((Bridgman & Bridgman, 2018).

Like the Pop-Up Winnipeg example, the partnership between the City of Edmonton and Boyle Street Ventures has played an important role in destigmatizing negative perception of public washrooms and the overall success of the Whyte Avenue Public Washroom. The facility where the washroom currently exists has been cited as a location known for congregations of houseless persons, drug use, and alcohol consumption (J. Phelans, personal communication, November 3, 2020). The partnership between City of Edmonton and Boyle Street Ventures provided a way to hire washroom attendants with lived experiences and provided those individuals with training to not only combat negative associations of this community, but to also ensure that they could direct their peers to helpful resources and supports. This collaboration has ensured the cleanliness of the facility, as well as helped address the needs of the city's houseless and vulnerable populations.

## Winter Accommodations

Most initiatives provide no winter accommodations and/or are closed during the winter months. Few of the permanent year-round initiatives included any discussion of winter proofing and/or design features to address North America's winter conditions. The Portland Loo is an exception to this rule, as its toilets include exposed plumbing and heated wire for freeze protection during the winter season (Portland Loo, 2020b). Whereas the Ottawa OCTranspo and Prince George Plaza washrooms are located inside enclosed facilities with heating and do not require winter proofing.

## Community Response

Most of the initiatives reviewed have not received a formal evaluation – either internally or externally. Information on the reception of these initiatives has been pulled from a variety of sources, including usage counters, informal surveys, online reviews, media coverage, and the opinions of staff members and/or related stakeholders.

Several initiatives appeared to have received a positive response from the community. In Montreal, the self-cleaning toilets have proved quite popular, with the city reporting 80-100 cleanings per day (bearing in mind that the toilets perform a cleaning cycle after every use) (Leavitt, 2020). The Portland Loo also appears to be widely used as occupancy counters report roughly 250 flushes per day and online reviews are generally positive (Portland Loo, 2020b; Portland Loo, 2020d). The Whyte Avenue Public Washroom Pilot is highly trafficked by members of the community and has been especially helpful for houseless individuals, vulnerable populations, gig workers, bus drivers, and truck drivers who may otherwise face barriers in accessing public washrooms (J. Phelans, personal communication, November 3, 2020). According to a representative from the project, the washroom has led to an increase in community cohesion, destigmatizing concerns surrounding public washrooms, and combating negative stereotypes. Importantly, the community reported that the presence of a washroom attendant was crucial to increasing safety of the washrooms (J. Phelans, personal communication, November 3, 2020).

The Pop-Up Winnipeg Toilet pilot was also popularly received, averaging 35-40 usages daily, with locations also noticing “dramatic improvements” in cleanliness and decreased vandalism in the surrounding areas it was located (Bridgman & Bridgman, 2018; Bridgman Collaborative Architecture, 2018). Reverend Enid Pow of the Holy Trinity Anglican Church, one of the first locations of the toilet, stated that they would “welcome a permanent presence of such a facility here” (Bridgman Collaborative Architecture, 2018). 72% of survey respondents at the second location, Portage Place, also felt a permanent toilet should be built, while 58% of survey respondents at the third location, True North Square, felt that the toilet would increase their time spent downtown (Bridgman Collaborative Architecture, 2018).

Responses to the San Francisco Pit Stop program, which offers the most public toilets of the examined initiatives, have also largely been positive. On their website, they report 300,000+ annual uses of Pit Stop toilets, the proper disposal of 8,700+ hypodermic needles per year and a decline in steam-cleaning requests in Pit Stop areas by a third (San Francisco Pit Stop (n.d.)). In May 2019 alone, almost 50,000 flushes were logged by Pit Stop attendants, highlighting the widespread use of these public toilets (Har,



2019). The Pit Stop program has also been adopted by other cities, including, Los Angeles, Sacramento, Miami, and Denver, although the Sacramento Pit Stop program ended after a few months because it was too costly (Har, 2019; San Francisco Public Works, 2018).

Some initiatives while receiving positive reviews have also faced their fair share of criticisms and/or backlash. For example, when installing toilets in the downtown area, the Portland Loo initially received some concerns from wealthier neighbouring districts that the toilet would lead to unwanted foot traffic, negative activity, and invite crime in their neighbourhood (C. Robinson, Portland Loo, personal communication, 5 January 2021). According to a representative from Portland Loo, these fears were proven unfounded as no complaints were filed and said neighbourhood has installed two Portland Loos since (C. Robinson, Portland Loo, personal communication, 5 January 2021; E. Madden, Portland Loo, personal communication, 5 October 2020). However, in Montreal, a self-cleaning toilet that was planned for installation in Sun Yet Sen Park was suspended due to the community's negative reaction. In this instance, the city had not consulted with the community on the site location, the choice of which the community felt was disrespectful (Lau, 2018; Leavitt, 2020; Scott, 2018). This example highlights the importance of community consultation in the planning process of outdoor public washroom facilities.

According to a representative from the project, the Prince George Plaza washrooms have received a large volume of criticisms from the community, particularly with regards to congregation at the washroom facilities. There were also rising tensions between the Royal Canadian Mountain Police (RCMP), community members, and the municipality, as the plaza washrooms were perceived by non-users and the police force as grounds for unsafe drug use. Unfortunately, collaboration in this case was confined, and communication between the municipality, RCMP, and community was lacking, leading to misconceptions from the community regarding the purpose and use of the facilities (C. Bone, personal communication, November 4, 2020). This case demonstrates the importance of communication between washroom stakeholders.

Similarly, the union for San Francisco workers have expressed concerns regarding the cleanliness of the Pit Stop restrooms (Matier, 2020). The Public Works department, which is responsible for the Pit Stop program, has dismissed the union's claims, citing a lack of evidence, and suggested that employees bring specific concerns to management teams so that they can be addressed. However, the union says their complaints have gotten nowhere and are requesting dedicated toilets for employees (Matier, 2020). This suggests that the work environment concerns of Pit Stop workers



are not being directly addressed, and that there is a need for stricter adherence to maintenance guidelines for the public toilets.

## Operational Status

Most of the initiatives reviewed for our scan are still operational. In fact, some of the temporary initiatives and/or pilot projects were extended past their initial timelines. For example, due to positive community responses, the Whyte Avenue Public Washroom Pilot, originally intended to operate for 3 months between December 2019 to February 2020, is still operating as of November 2020 (J. Phelans, personal communication, November 3, 2020). The Pop-Up Winnipeg Toilet was also only supposed to be operational from May to October 2018 to raise awareness of the need for a permanent facility, but was reopened in the summer of 2019 due to its popularity (Bernhardt, 2019). In fact, as of 2020, the City of Winnipeg has received a grant from the Canadian Medical Association to build permanent washrooms in the city (CBC News, 2020).

Similarly, since its inception in 2014, the San Francisco Pit Stop program has expanded from a six-month pilot project that provided 3 portable toilets in a single neighbourhood to an initiative with 24 semi-permanent locations (of which 23 are currently active) across 13 neighbourhoods (San Francisco Pit Stop (n.d.)). As a result of the COVID-19 pandemic, the city has increased the number of Pit Stop locations operating 24 hours a day (Office of the Mayor, 2020). Currently, according to the program's website, there are 26 temporary Pit Stop locations available, of which 25 locations are open 24 hours a day (San Francisco Pit Stop (n.d.)).

However, not all initiatives and/or pilot projects have remained open or been successful. The Montreal TSECHE toilet remains closed as a part of Covid-19 restrictions in the city (M. Hernandez, Ville de Montreal, personal communication, 2 December 2020). The first phase of the Calgary Portable Toilets Project only lasted from December 2006 to March 2007 due to increasing vandalism and cleanliness issues. Then, at different times within the second trial (August 2007-August 2008), 5 of the 6 portable toilets deployed were burned down. The replacement cost of each unit was \$1,050 (The City of Calgary, 2008). Attempts were made to try to resolve these issues by adding in waste receptacles, increasing frequency of cleaning, and adding in needle bin disposal containers, however these attempts did not improve safety and sanitation in a substantial manner (The City of Calgary, 2008). Due to increasing costs from vandalism, the pilot was ended in August 2008.

The Prince George Plaza washrooms was also one of the less successful initiatives reviewed in this scan, and is no longer operational. The washrooms were originally

necessitated by the public defecation problem in the city. However, the pilot project did not demonstrate a marked change in public defecation. In addition, as aforementioned, the negative community response and overactive police involvement led to the eventual closure of the facility. In hindsight, the City believes that having involved the larger community and RCMP earlier in the planning process could have helped to reduce the police activity at the site (Chris Bone, personal communication, November 4, 2020).

## **Recommendations**

At the request of the community partner, on reviewing the results of our environmental scan, the Research Team has developed four recommendations for the BNA to consider when promoting the installation of outdoor public washrooms in Hamilton.

### **1. Hire Washroom Attendants**

The results of this environmental scan have shown that communities interested in establishing a public toilet should consider hiring washroom attendants. Paid attendants provide several benefits that may help mitigate challenges that often lead to the closure of many outdoor public washrooms (Bridgman & Bridgman, 2018; Greed, 2003; Little, 2020; Solomon, 2014). For example, in addition to cleaning and maintaining the washroom, the mere presence of attendants can help reduce vandalism and misuse of the facility. Hiring attendants may also create employment opportunities for at-risk populations or those facing employment barriers in the community, as seen in the cases of Prince George, Edmonton, Winnipeg, and San Francisco. Attendants may also be trained in various harm reduction practices and may be able to provide other forms of community support, such as being able to administer safe drug use kits and overdose prevention kits. However, hiring attendants comes with a caveat that they must receive appropriate training and be provided with adequate supervisory support for them to carry out their roles effectively.

### **2. Pursue a Collaborative Project**

The team recommends the creation of partnerships between community, city, public services and/or non-profit organizations in raising awareness of and/or promoting the installation of public accessible washrooms in Hamilton. Throughout this environmental scan, it became evident that the most successful projects and/or pilots were those that were done in collaboration. Specifically, pursuing a collaborative public washroom project has shown to be instrumental in tackling societal stigma, addressing negative community perceptions of public washrooms, and increasing the likelihood of project initiation and/or installation. Working in collaboration with municipal government is especially essential for determining zoning and building permits for the location of an

outdoor public toilet (Bridgman & Bridgman, 2018). The Portland Loo, Winnipeg Pop-Up Toilet, and Whyte Avenue Public Washroom are successful examples demonstrating how collaborative partnerships between stakeholders is important for improving access to public washroom facilities and, importantly, for the long-term sustainability of these projects.

### 3. Actively Promote the Washroom

It is recommended that washroom planners actively promote the existence of outdoor public washrooms in their city. This promotion is necessary for encouraging regular use of the facility and combating the negative stigma associated with them. For example, in 2018, the Pop-Up Winnipeg Toilet Initiative invited volunteers to take photographs with their legs crossed and to share their stories about needing to use a public washroom. These images and stories were then turned into posters and placed in bus shelters across downtown Winnipeg (Bridgman & Bridgman, 2018; [ToiletlessWinnipeg](#), 2018). This campaign provides a valuable learning experience, as it simultaneously illustrated the need for the facility and helped inform the public of the new washroom's existence.

Planners should not stop at promotional posters but should also ensure that directional signage is posted near commonly frequented spaces near the toilets, such as bus stops and park spaces. Effective signage would need to include directions to the toilets, as well as information on their timings and gender and general accessibility. Braille features and audio instructions may also improve the accessibility of the toilets to individuals with visual disabilities. Key community partners near each washroom should also be informed of the service in order to direct individuals to them. This was done in the case of the Ottawa OTranspo toilets, resulting in transit staff being able to regularly send visitors to the washrooms (S. Taylor, personal communication, December 9, 2020). Proper promotion and signage not only help to raise awareness of the washroom's existence, but ensures that individuals who may need to use it can find it easily.

### 4. Consider Revenue Potential

The team recommends that communities interested in establishing a public toilet seek ways to generate revenue in order to subset the costs of installing and operating the unit(s). One way that public toilets can generate revenue is through advertising. For example, by partnering with organizations or corporations to install and operate public toilets, cities can offset the costs of public toilet programs. This was the case for the San Francisco Pit Stop program, which had a two-decade old contract with the company JCDecaux prior to the start of the Pit Stop program for the free installation and

maintenance of public toilets in exchange for advertising rights. This provided JCDecaux with 113 advertising kiosks and \$96.8 million in revenue from 1997 to 2014, and generated \$5.8 million for the city (Matier & Ross, 2015). Similarly, the designer of the Pop-Up Winnipeg toilet, Wins Bridgman, has also postulated that the acrylic wall that “pops up” when the washroom is open could be used as advertising space to generate revenue for the toilet (Bridgman & Bridgman, 2019). Overall, given the space available both within the public toilet units and on the outside surface of the units, there are wide advertising opportunities available to interested corporations and organizations. However, it is important to note that interest in using public toilets for advertising may be contingent on the location of the toilet, foot traffic, and projected number of uses of the toilets. In exchange for advertising space, public health and social services organizations may be interested in contributing to the funding of public toilets for areas with large numbers of people experiencing homelessness.

Public toilets also provide opportunities for the development of small businesses, which can further generate revenue. Regarding the Winnipeg toilets, Bridgman noted that the kiosk space in his design could be used to generate income through the sale of coffee and tourism information or the space could even be converted into a bike shop (Bridgman & Bridgman, 2019). In addition to selling items, attendants within this retail space may engage visitors and positively add to the overall experience of using the public toilets, and thereby increase the number of users of the space.

## **Conclusion**

In this report, a team of McMaster University Research Shop researchers conducted an environmental scan of outdoor public washroom initiatives in North America to provide the BNA with information and evidence to advocate for and address foreseeable objections to the installation of an outdoor washroom in their neighbourhood.

The findings from this environmental scan show that most public washroom initiatives are in urban centres or parks to meet the needs of large population groups and/or more vulnerable community members. While several initiatives use generic portable toilet designs, others have implemented unique design features (e.g., transparent stalls) or bright bold colour schemes in order to attract users and to dispel the notion that public washrooms are dark and unclean.

Outside of the facility for ostomy in the transparent toilets of the Tokyo Toilet Project, most initiatives provided only general accessibility features, such as larger stalls for wheelchair access. While a few units included sharps disposal bins, most focussed on

preventing drug use in their units by incorporating site lines for police, blue lighting, and/or transparent stall designs.

Our scan results showed that the initial construction and/or purchasing price of washroom units can vary from \$40,000 up to several million dollars. Depending on the size of the initiative, operation and maintenance costs can also vary from several thousand to close to a million dollars annually. While costs for the first year can be quite high, annual operation and maintenance costs do appear to drop in subsequent years. Some initiatives have been able to cover these costs with the assistance of grants or funds from the municipality or non-profits. Two of the reviewed initiatives have experimented with incorporating revenue generating ventures, such as advertising deals, to help offset these costs.

Many of the initiatives reviewed employed private firms to conduct cleaning and maintenance of their washroom units. Others have taken to hire washroom attendants, often from disadvantaged communities in collaboration with local non-profits, to monitor and clean their washrooms. In general, initiatives with washroom attendants have been successful in keeping their facilities clean and encouraging wider use of the facilities. The most successful initiatives tended to be those that were collaborative in nature and/or employed washroom attendants.

Very few initiatives were operational during the winter season. Those that were tended to be enclosed with a heating source and/or located inside heated indoor facilities. The issue of outdoor public washroom winter accommodations requires further exploration and action on the part of washroom planners.

Most of the initiatives examined in the scan have remained open or continued beyond their initial pilot project phase due to positive community feedback. While promising, the long-term effectiveness of these pilots has yet to be determined. Additionally, a few initiatives that employed similar tactics have been shut due to misuse or vandalism. More research is required to better understand this disparity.

Based on these findings the team generated four recommendations for the BNA to consider: 1) hire washroom attendants; 2) pursue a collaborative project; 3) actively promote the washroom; and, 4) consider revenue potential. Overall, findings from this report show that public washroom facilities are an important public amenity for community well-being.

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