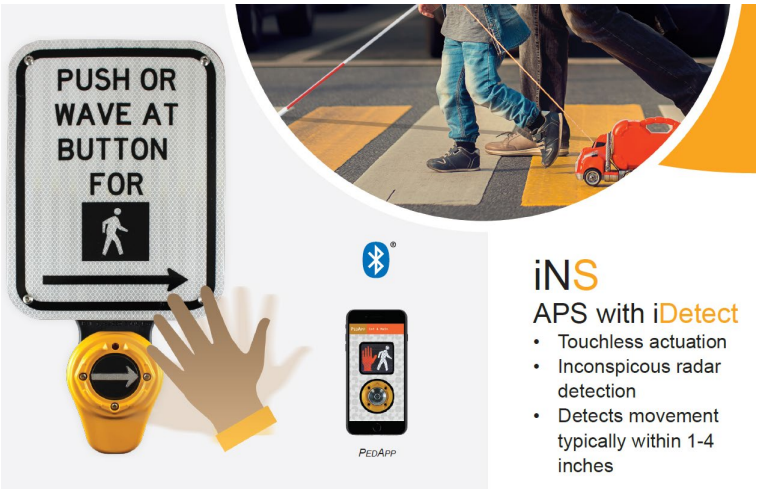
Touchless Accessible Pedestrian Pushbuttons

Project Definition

Last April, to help reduce community transmission of COVID-19, all of the City's traffic signals were placed into 'ped recall' mode. This change resulted in each traffic signal cycling through providing a green light and walk signal to each approach in a systematic way. This eliminated the need for pedestrians to push the button to "call" the walk signal thus reducing the potential of transmitting COVID-19. Over the last half of 2020, several intersections were placed back into "regular" operation that typically show green to the major street until a vehicle approaches on the side street, or a pedestrian activates the walk signal by pushing the call button. These reversions were made in response to requests from drivers who were delayed for no reason at intersections. This condition, where very minimal cross or pedestrian traffic exists, can create a dangerous condition as drivers can become frustrated and start not obeying the traffic signals. Therefore, to balance safety considerations, several intersections were reverted back.

At 115 intersections throughout the city, accessible pedestrian signals are included as part of the overall traffic signal infrastructure. Accessible pedestrian signals, when activated, provide a chirp sound to indicate to a visually impaired person they have a walk signal to cross an east-west street, or a cuckoo sound to indicate a walk signal is shown to cross a north-south street. Today, it is not possible to eliminate this requirement of a visually impaired person from having to touch the infrastructure. This inequity has been raised to the Administration since COVID-19 struck society.

The Administration has researched this issue and has identified touchless accessible pedestrian pushbutton technology, which provides a safe alternative to pressing conventional pedestrian pushbuttons for all users including visually impaired individuals. Instead of requiring the button to be pushed to activate the walk signal, touchless pushbuttons only require movement between 1-4 inches from the face of the assembly. A radar sensor within the unit will sense the movement and alert the traffic controller that a pedestrian is desiring to cross. An added benefit of the audible part of the pushbutton is that accommodation is easily made for visually impaired users.



Scope and Budget

This application to the Canada Healthy Communities Initiatives is for the installation of touchless accessible pedestrian signals for between one to twenty intersections. The cost per intersection is as follows:

8 touchless accessible pedestrian pushbuttons ($600/each)	=	$ 4,800
1 control unit	=	3,500
Labour (City Staff)	=	4,200
Total per intersection	=	$ 12,500
Cost for 20 intersections	=	$250,000

Evaluation Criteria Alignment

This project demonstrates alignment with the funding application as follows:

Healthy Communities Initiative Themes

Aligns with 'improved mobility options' by:

- Providing adaptation that permits physical distancing;
- Providing a solution to increase safe social connectivity through improved walkability; and
- Improving crosswalk safety.

Project Rationale

Responds to the impacts of COVID-19 according to local needs and context

- Provides equity to visually impaired people who will also no longer have to touch a pedestrian signal.

Considers public health measures in project design

- Safe social distancing measures will be enhanced, as well as minimizing touching of shared spaces.
- Easily scalable in project scope.

If applicable, considers collaborators or partners to strengthen the project

- The Alliance for Equality of Blind Canadians and the City of Saskatoon Accessibility Advisory Committee will be approached for the application.

Community Engagement

Demonstrates meaningful community engagement, including with those disproportionately affected by COVID-19 and considers equity

- Through the City of Saskatoon Accessibility Advisory Committee, ongoing discussions are held addressing issues with traffic signal infrastructure to improve equity, and recently addressing COVID-19.

Demonstrates local leadership in decision-making and project delivery

- If funding is received, the Administration will develop the priority locations for the infrastructure with the Alliance for Equality of Blind Canadians.

Outcomes

Demonstrates knowledge of community pressures and needs

- The project has been requested by the public in support of providing equity in addressing COVID-19 risks.

Demonstrates a plan, if applicable, to sustain the project long term

- The project would seek sustaining funding in the 2022-2023 multi-year budget as part of the Traffic Signals Infrastructure, and the installation of more locations in the future.

Considers a plan to capture community impact, including gathering stories and lessons learned for future projects, where applicable

- Through the City of Saskatoon Accessibility Advisory Committee feedback and lessons learned would be collected for future installations.

Project Implementation and Readiness

Provides a responsible budget including clear costing, procurement decisions and equity considerations

- As a large amount of the cost are materials, there is low risk to project budget creep.
- Procurement will be done in alignment with the City's Procurement Policy.
- The infrastructure will be installed in consultation with the Alliance for Equality of Blind Canadians.

Demonstrates the project can be completed in realistic timelines

- Project materials can be ordered upon funding approval, and installation can begin upon receipt of the materials.
- The project is not dependent on weather conditions.