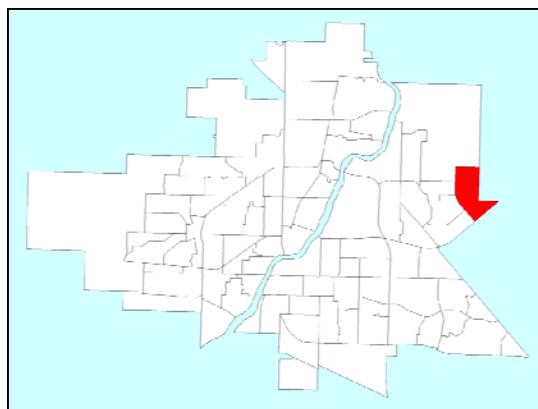


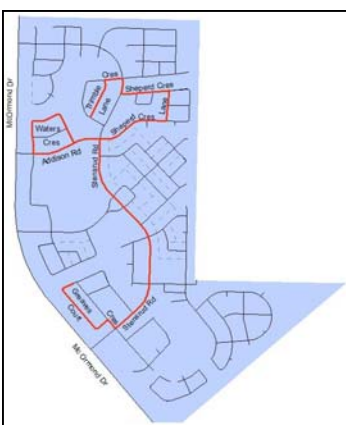
# Willowgrove



The **Smart Cities, Healthy Kids** research project looks for solutions to childhood obesity by investigating how neighbourhood design affects children's ability to be physically active. Research suggests that safety from traffic and crime, the presence of destinations and built features supporting an active lifestyle (eg. parks, playgrounds, and bike lanes), a neighbourhood's attractiveness, and its accessibility are all very important in determining whether people will be active there. To determine which Saskatoon neighbourhood designs are the most supportive of active living, researchers walked each neighbourhood in Saskatoon in the summer months of 2009/2010, collecting data on these areas using two research surveys: the Neighbourhood Active Living Potential (NALP) and the Irvine-Minnesota Inventory (IMI).



*Willowgrove in Saskatoon*



*NALP Route Map*

**NALP** consists of 22 items within four areas: Activity Friendliness, Safety, Density of Destinations, and Universal Accessibility. Using this method, observers rated each item on a 6-point scale after walking a pre-defined route in each neighbourhood that connected 10 randomly-selected street segments. The route, typically 4 to 5 kilometres in length, is shown in red on the map.

**IMI** consists of a 229-item inventory of neighbourhood features within five areas: Attractiveness, Diversity of Destinations, Pedestrian Access, Safety from Traffic, and Safety

from Crime. Twenty percent of street segments in each neighbourhood were randomly selected and observed. Each segment is the two facing sides of a street block and is indicated by a numbered flag on the map.



*IMI Segments Map*

The NALP tool is more subjective in nature and takes into account the impression of the entire neighbourhood based on the systematic observations of the researchers. In contrast, the IMI is more objective in nature and is based on observations of each individual segment. The following report will discuss how the characteristics of Willowgrove compare to Saskatoon neighbourhoods in general.

**Smart Cities Healthy Kids**

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# Willowgrove Overview

Willowgrove is located on the eastern edge of Saskatoon and is bordered by McOrmand Drive, Highway 5, agricultural land, and the boundary of Saskatoon. Willowgrove was developed under Plan Saskatoon, a development plan adopted in 1998 as a result of community wide consultation on development and growth policies. Plan Saskatoon introduced sustainable development principles, Local Area Plans for existing neighbourhoods, and a Formal Concept Planning process for all new neighbourhoods. New

forms of neighbourhood development were encouraged, including a minimum average density of 5 units per acre, housing variety, neighbourhood commercial sites, infill development, affordable housing, and mixed uses in core neighbourhoods and formal industrial areas. Willowgrove tried to incorporate sustainable development principles in the neighbourhood design through higher density, and introduced new housing forms, neighbourhood commercial, and well-defined pedestrian areas.



*Willowgrove entrance monument*



*Sidewalks separate from road by grass buffer*

## Safety

We rated each neighbourhood according to the presence or absence of certain neighbourhood elements that increase or detract from a feeling of personal security. Observing both the physical and social characteristics of the neighbourhood, security was measured both in terms of traffic and crime. These ratings suggest whether safety concerns affect an individual's active living decisions in their neighbourhood.

- Out of a possible highest rating of 10, Willowgrove rated **7.49** for Safety from Traffic, above Saskatoon's average rating of **6.06**. (IMI)
- Out of a possible highest rating of 10, Willowgrove rated **9.69** for Safety from Crime, above Saskatoon's average rating of **8.46**. (IMI)
- Out of a possible highest rating of 6, Willowgrove rated **3.75** for Safety, below Saskatoon's average rating of **3.81**. (NALP)

Willowgrove's safety ratings suggest that pedestrian and vehicular travel areas are well defined and easy to safely navigate and that there are only a few elements that reduce feelings of personal security. For example, marked pedestrian crossings were only in place at the main intersections. However, sidewalks on many streets are separated from the road by a grass buffer strip. Further, the pathways through linear parks are designed for pedestrian travel that is completely separate from traffic. In terms of safety from crime, well maintained homes, minimal graffiti, and plenty of opportunities for casual surveillance of the street by home owners all contribute to the perception of personal security. However, there were some concealed areas in construction zones that could be used for lurking.



*Pedestrian Crossing sign*



## Destinations

We rated each neighbourhood according to the number, diversity, and density of its destinations. These ratings suggest whether destinations in a neighbourhood can motivate deliberate, localized active living choices by providing a place to go and a means to interact with others.

- Out of a possible highest rating of 10, Willowgrove rated **2.00** for Diversity of Destinations, below Saskatoon's average rating of **6.26**. (IMI)



*Future site of Neighbourhood Commercial*



*Playground in Wallace Park*

- Out of a possible highest rating of 6, Willowgrove rated **3.06** for Density of Destinations, below Saskatoon's average rating of **3.92**. (NALP)

Willowgrove's destination ratings suggest that there are some destinations of a limited variety. For example, although Willowgrove is not yet complete, observed destinations include several parks with playgrounds. Development plans also include a neighbourhood commercial square.

## Activity Friendliness

We rated the activity friendliness of each neighbourhood based on specific features that encourage or present barriers to an active lifestyle. These ratings suggest whether a neighbourhood assists or limits the opportunities for physical activities such as walking, cycling, or skateboarding.

- Out of a possible highest rating of 10, Willowgrove rated **5.16** for Pedestrian Access, above Saskatoon's average rating of **5.08**. (IMI)



*Linear Park*



*Pathways through parks increase connectivity*

- Out of a possible highest rating of 6, Willowgrove rated **3.92** for Activity Friendliness, above Saskatoon's average rating of **3.67**. (NALP)

These activity friendliness ratings suggest that Willowgrove has both supports and obstructions for pedestrians. For example, well maintained sidewalks were present on both sides of most streets. Further, wide streets provide adequate room for cyclists. Although a street design with several crescents can typically limit the route choices and access for pedestrians and cyclists, pathways through linear parks provide additional connections throughout the neighbourhood.

## Attractiveness

We rated each neighbourhood based on specific features that could potentially increase or decrease the attractiveness of the neighbourhood. This rating suggests whether the level of attractiveness for each neighbourhood itself can encourage or discourage individuals to participate in an active lifestyle.

- Out of a possible highest rating of 10, Willowgrove rated **4.66** for Attractiveness, below Saskatoon's average rating of **4.80**. (IMI)



*Repetitive architectural style*

Willowgrove's attractiveness rating suggests that both attractive and unattractive features are present in the neighbourhood. For example, although two distinct architectural styles are present in different areas of the neighbourhood, the architectural aesthetic can appear repetitive. Further, no shade is available for pedestrians because street trees are too young. However, pleasant landscaping, linear park space, and nature features considerably increase the attractiveness of the neighbourhood.

## Universal Access

We rated the universal accessibility of each neighbourhood according to the presence or absence of specific features that help or prevent safe movement for those with mobility, visual, or hearing impairments. These ratings suggest whether people with reduced mobility are able to travel in the neighbourhood safely without assistance.

- Out of a possible highest rating of 6, Willowgrove rated **3.83** for Universal Accessibility, above Saskatoon's average rating of **2.19**. (NALP)



*Curb cut*

This universal accessibility rating indicates that Willowgrove has some elements that enable safe movement for those with reduced mobility. For example, many sidewalks in Willowgrove are mountable, and there are curb cuts present at all observed intersections. However, none of the observed pedestrian crossings are adapted for individuals with visual or hearing impairments.

**The principal investigator for this project is Nazeem Muhajarine, PhD. For a complete list of contributing researchers, partner organizations, project staff, and more information, please visit our website: [www.smartcitieshealthykids.com](http://www.smartcitieshealthykids.com)**

**If you have any further questions about the project, please contact our research co-ordinator [tracy.ridalls@usask.ca](mailto:tracy.ridalls@usask.ca) or call 966-2237.**



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