



Hamilton

2019 CITYLAB ANNUAL UPDATE (CM19003)

May 1, 2019



- CityLAB is an innovation hub that brings together student, academic, and civic leaders to co-create a better Hamilton for all.
- CityLAB matches students and faculty with City staff to develop innovative solutions to city-identified projects that align with the City's Strategic Priorities.



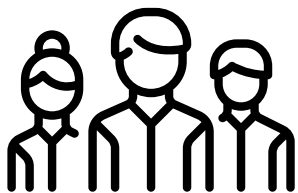
- Overview of program to date and highlighted student projects
- Successfully completed its second year of operation
- Program currently expires December 2019
- Extension request to May 2022





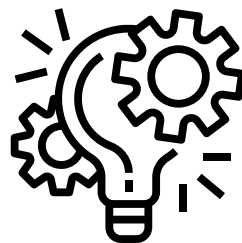
By the numbers

People



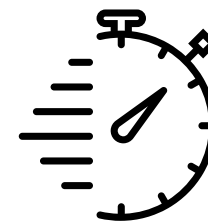
400 + students
49 City staff
38 faculty members

Projects



45 completed
projects

Time



16,000 + student hours
600 City staff hours



Example projects

Completed projects have addressed a wide variety of pressing issues including housing, environmental sustainability/climate change, seniors isolation, and social and digital inclusion



See more at www.citylabhamilton.com/projects

Bridging the Digital Divide

Exploring the Opportunities for Public Wi-Fi in Hamilton

Students:

Justin Hayter, Michael Doan, Murray Lang

Staff Member:

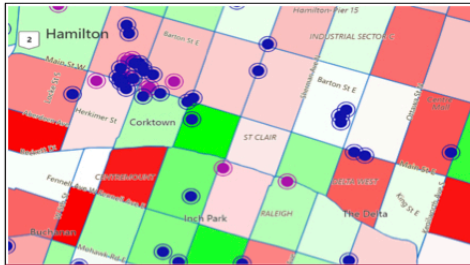
Andrea McKinney, Chief Digital Officer
Joe Fazzari, Infrastructure and Operations Manager

Instructor:

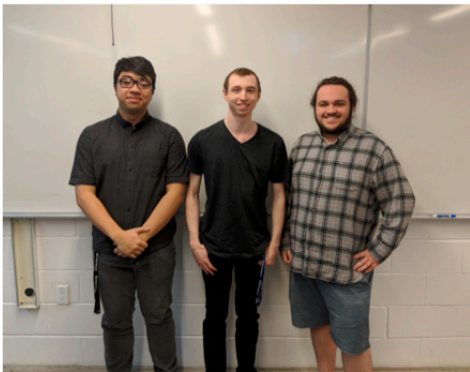
Mark Yendt, Electrical and Computer Engineering Technology

Course and Department:

Software Engineering Project – COMP-CO867



Our Map Design taken from our application



Problem: Internet access is increasingly becoming a necessity. It's used to access educational, social and community resources; to stay connected, to pay for programs and services, and even navigate the city. Yet not everyone can afford access to data plans and some people are being left behind. And while there are free publically available hotspots they aren't always easy to find. There also may be additional assets in the community that could be leveraged to enable access but there isn't a way to plan where new spots should be created.

Challenge: Can we make public WiFi spots easy to locate, and then use that information to plan where there are opportunities for new locations?

Goal: Build a multi-purpose model that is based on a variety of data sources. That enables:

- Residents to easily see where City and library WiFi is available
- Shows where municipal assets are available to enable WiFi
- Identifies areas of the community that would benefit from service

Progress:

- **Collected** data from the City of Hamilton
- **Collated** multiple sources of data (City of Hamilton Open Data, Hamilton Public Library etc)
- **Implemented** data into our application
- **Designed** graphic user interface with room to improve on filters
- **Built** framework to enable expansion to satisfy multiple use cases

Next Steps:

- **Consult and Explore** with the City of Hamilton to further develop design, content, and further collaboration
- **Provide** related documentation of developed software

What Makes a Home?

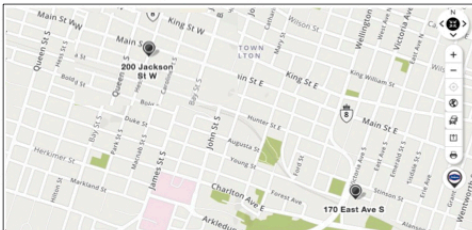
An Understanding of What Home Means to Residents at CityHousing

Students:
Rebekah Clark, Cassandra Heidbuurt, Maria Spyksma, Alex Van Ommen and Alyssa Zilney

City Housing Representative:
Christine Filinski *Community Relations Worker*

Instructors:
Jim R. Vanderwoerd and Hennie Schoon

Course and Department:
CTS-410 Core Capstone Experience



Locations of the buildings where data was gathered
Taken from mapquest.com



Exterior of 170 East Ave (left) and 200 Jackson (right)
Taken from google.com/maps

Problem: Safety, resident engagement, and health are key areas of concern for CityHousing residents. Further, in the studies that were consulted while researching, three specific needs were highlighted: the importance of feeling safe, rested, and connected to community. Through these specific needs and challenges, it was clear that determining what “home” meant to residents and what aspects of “home” were important to them would help serve future projects and policies regarding their lives. CityHousing has already given residents a physical structure to inhabit, but the goal of this project was primarily focused on finding a residents’ sense of home and whether CityHousing was able to meet those needs in spite of limited resources.

Challenge: What makes a home for CityHousing residents’ at 170 East Ave and 200 Jackson?

Goal Area: Healthy Neighbourhoods

Progress:

- Researched the importance of home, and other social factors surrounding a sense of “home”.
- Created a comparative survey that was distributed to residents at 170 East Ave and 200 Jackson.
- Recorded and analyzed survey data to find general trends, areas for improvement, and areas of success in the delivery of individuals’ needs of housing.

Next Steps: A summary of the research findings will be stored and shared with future students as well as CityHousing in order to provide opportunity for further investigation in this area. Areas of further investigation should focus on comfort and security, as they proved to be recurring themes throughout data analysis.



REDEEMER
UNIVERSITY COLLEGE





Hamilton Culture Quest

Embark on a quest to collect virtual artifacts that tell the story of our city.

Students:
Conor Hailes & Zachary Sojnocki

Staff Member:
Nancy Prochuk, Exhibit and Program Coordinator
City of Hamilton Civic Museums

Instructor:
Andrew Spearin
Course and Department:
Computer Engineering



Conor, Nancy, and Zach taking in the inspiration of Gore Park fountain, the starting point of our Quest for Water. (Photo by Andrew Spearin)

Problem: In the pursuit of inclusivity and community building it is important to knit the various stories of our past together, thus creating an understanding of a greater whole. Hamilton Civic Museums are limited in their ability to speak to the greater history of Hamilton due to the nature of their physical spaces.

Challenge: How can we utilize Augmented Reality technology to engage visitors of Hamilton's public spaces into viewing the city as a virtual museum; to view history hiding in plain sight?

Goal: Healthy neighborhoods are those who feel ownership in their environment as well as feel heard and respected. It is the hope with this app we can tell others' stories and create an environment of inclusivity and connectivity within our city.

Progress: Our prototype is in development to tell the *Quest for Water* story. Artifacts from the museum collection have been scanned using the photogrammetry process. As the prototype takes shape, we are starting to integrate content and enable on-location augmented reality.

Next Steps: Extend the 'quest' framework we have created with the app to extend historical storytelling to areas such as Indigenous, Military, Immigration, Architecture, and more.



MOHAWK COLLEGE

- 24 challenges submitted for the upcoming semester
- View the upcoming challenges on our website at www.citylabhamilton.com



Design of Rainwater Harvesting System

McQuesten Urban Farm

**Jashanjot Singh
Samra**
Master of Engineering
Design

Sahil Garg
Master of Engineering
Design

Faculty Lead :
Dr. Zobia Jawed
jawedz@mcmaster.ca



Issues and Opportunities

An effective design of rainwater harvesting system to support community needs and reduce reliance on municipal water systems

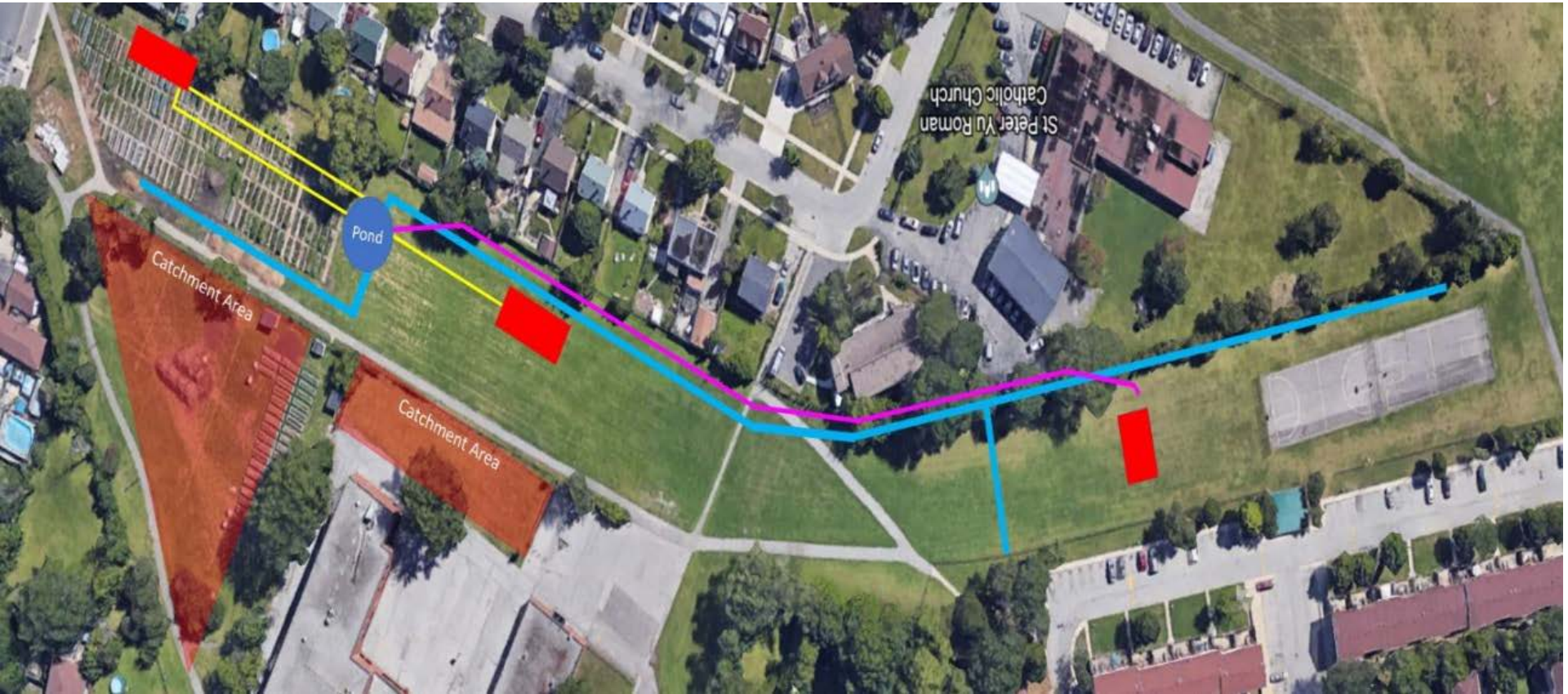
Issues

- Increase in community irrigation needs
- Inefficient systems that need better designs for meeting Irrigation Demand
- Greater reliance on Municipal water systems

Opportunities

- Reviewing and optimizing existing designs to introduce cost-effective rainwater harvesting systems
- Doubling onsite water storage to 62,000 liters to reduce reliance on Municipal water systems
- Implementing this new system for 2019 farming season for a stronger and sustainable community

Proposed Rainwater Harvesting System Design



New Transportation Lines



Existing Pipeline



New Rainwater Storage Area

The King William Street Opening Project



How can we turn a car centric space into a place for people?



Solution: Reclaim the space through temporarily closing the street to cars and opening it to people who walk or bike



Survey

96% of

respondents supported or strongly supported the street opening.

Key elements include:

- Access to Patio Space
- Public Art
- Social Space
- Food and Drink
- Street Performances and Busking

MobilityLAB Meeting

Health

- Homelessness and gentrification
- Age-friendly
- Transit and Health

Economic

- Marketable destination
- Costs of the opening
- Safety, delivery access, insurance, construction

Policy

- Police presence
- Smoke-free
- Timing

Environmental

- Air quality
- SoBi hubs
- Active Transportation

Charrette

Vision

Create a healthy, sustainable and economically vibrant destination with a sense of community.



Report

The King William Street Opening Study Report



Using our work from the semester we wrote a ~100-pg report to:

- Summarize our outreach work with the community.
- Rationalize and Propose a novel street opening in Hamilton.
- Set precedent for street openings across Hamilton.
- Draft next steps and future opportunities for continuation of the project.

Parking Lot Inventory Team



Smoke-Free Team



Outreach Presentations

- Presented to McMaster Public Health Association and Bay Area Climate Change Summit
- Shows the interdisciplinary and multi-factored applications of our street opening. Not only is it relevant for improving health but it is also relevant for improving our environment.



Summary: Realizing the potential of CityLAB

- Effective and willing collaboration between staff, students, and faculty
- Multi-phase projects that build towards implementation
- Opportunities to share with other community partners to move initiatives forward





Hamilton

THANK YOU