



MUCP FINAL DESIGN SHOWCASE

2022-2023



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PANDEMIC IMPACT ON MAIN STREET- LIBERTY VILLAGE

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Team

Karen Chapple

Supervisor

BACKGROUND

As Toronto's own "Silicon Valley," Liberty Village (LV) has a predominant adult population and can be divided into two halves: an industrial (West Liberty) side and residential (East Liberty) side. Nestled within the west of the Downtown Toronto core, LV is enclosed by Dufferin Street, King Street W, Strachan Avenue, and both the Lakeshore West and Kitchener GO lines. With a set of unique demographics and a diverse business landscape, its main street offers an ideal opportunity for civic infrastructure reactivation and the further reimagination of the streetscape.

PROBLEM STATEMENT

CUI identifies the need for urban re-growth and revitalization of the LV main street post-pandemic. Therefore, for our project, we are challenged to interpret the state of the main street to understand how this community can be strengthened. Subsequently, we produced a three-part design intervention seeking to address several issues of the main street exacerbated by the pandemic: lack of pedestrian connectivity, reduced visitorship, and scarcity & underutilization of civic infrastructure

DESIGN INTERVENTIONS

Our interventions are conceptualized around CUI's three-pronged approach: placemaking & programming, enrichment of civic infrastructure, and main street connectivity. Utilizing this strategy, our design intervention consists of three parts that each specifically addresses the issues outlined within our problem statement:

Modular Street Furniture System

This modular system seeks to increase utilization of the LV streetscape and to further enrich its civic infrastructure stock. Its units are versatile and can be deployed in various settings. For instance, a small cluster can be assembled linearly along a sidewalk or curb to offer streetside seating, or a larger and more irregularly shaped cluster can be assembled within a park to provide picnic space.

Pop-Up Street Market

A pop-up street market will help revitalize the Allan A. Lamport Stadium Park, support local businesses that were impacted by the pandemic, and serve to placemake the community. Taking place along the side street adjacent to the park, the street market will utilize existing civic infrastructure like the stadium, the green space, and the parking lot. A public event can be held in the stadium with a street market taking place simultaneously, attracting passers-by from Liberty Street and King Street. This also allows local businesses to promote themselves. We also propose that half the parking lot be designated as a 'pop-up' space for food trucks. Our modular street furniture could be deployed within this space, as well as throughout the park or outside the storefronts of adjacent local businesses.

Green Main Streets

A new green space corridor and pedestrian bridge connection along the south side of Liberty Village aiming to increase pedestrian access to the neighborhood and support the local demographic. Serving as a secondary 'main street' designated for bikers and foot access, this green space forms a new east-west connection. Additionally, creating a pedestrian bridge across the rail corridor increases access to and from the entertainment district to the south, and generates a new major north-south connection.





CONVERTING VACANCY TO RECONNECTION VIA COMMUNITY CENTRE CONSTRUCTION

Chyna Hui, Owen Lee, Scott Liang, Abigale MacEwen
Team

Karen Chapple
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PROJECT DESCRIPTION + OBJECTIVES

COVID-19 has impacted our societies immensely, altering the ways in which people interact with urban physical spaces throughout the city of Toronto. In collaboration with the Canadian Urban Institute, our project revolves around studying the impact of COVID-19 on the people and businesses of Spadina Avenue. An iconic area for its unique culture and social groups, it is also home to Toronto's biggest Chinatown. Economic, social, and cultural aspects were considered in our research, as well as the diverse stakeholders that live and operate in this space. The design solution we propose aims to support the restoration of Spadina Avenue in its on-going recovery and growth as a community by revitalizing existing spaces.

PROBLEM STATEMENT

The team created a design research plan to gain an understanding of the current situation and history of Spadina Ave. The plan consisted of; a literature review, physical site visits, interviews, drawings, and observations. The research indicated many common experiences and pain-points among various stakeholders such as residents, business owners (restaurants, supermarkets, etc), and Spadina Rd visitors. It was imperative to consider many aspects of their experiences, beyond economic struggles, but the social and cultural

impacts that have occurred following Covid-19 as well. Anti-Asian hate, gentrification, and increasing population of displaced peoples were some of the identified major issues that were concluded from our research. Our team used quantitative and qualitative methods to examine the pandemic impacts (enviro-nics data and interviews with the community centre and the BIA).

FINAL DESIGN SOLUTIONS

It was evident that due to Covid-19 and other economic effects, the number of vacant units on Spadina Avenue has increased in the past few years. Intersecting this with the ongoing fears of increasing gentrification of the area, our team proposed a solution in efforts to alleviate these concerns and support the community. Our solution aims to revitalize an existing vacant space at Dragon City Mall into a community centre which can be actively used as a hub for members of the community. This plan effectively targets multiple pain-points identified in our research, such as increasing fears of gentrification and loss of identity and history, and decreasing foot traffic after Covid-19 began. This allows for a celebration of culture, and creating a safe space for not only Spadina avenue community members, but for external stakeholders. Programs and activities to learn about Chinatown culture and history creates a stronger sense of community, belonging and bonding as well as increases visitors and foot traffic to various local businesses to boost economic growth as well.



SMALL BUSINESS DIGITAL CARBON FOOTPRINTING

Monique Barker, Ananmay Sharan, Ruofan Chen,
Rutvik Gupta

Team

Taylor Brydges

Supervisor

OVERVIEW

A design intervention for a Toronto based startup: CarbonGraph, who are building a Carbon Footprint calculation software product. The intervention focuses on redesigning and improving the user experience, accuracy and usability of the supply chain data entry process, a vital part of the Carbon Footprint calculation, specifically designed for food manufacturing companies, who are one of CarbonGraph's target customers.

PROBLEM

The process of inputting all the necessary supply chain information for Carbon Footprint calculation was unintuitive and manually performed using spreadsheet software which led to an inconvenient and awkward user experience for most businesses to use, especially those with limited time or financial resources. This resulted in dissatisfaction for them as well as for CarbonGraph, as they were forced to designate team members to work with businesses to enter the information manually, taking up vital human resources and time, which are crucial as a startup.

DESIGN CONSIDERATIONS

We considered two main categories of approaches: a software, technology based solution, or a more research focused case study approach, eventually deciding on a hybrid approach that created a high fidelity design prototype. We followed a 7 Step UX Design workflow: Problem Definition, Research & Insight Gaining, Analysis & Ideation, Information Architecture & User Flows, Low Fidelity Prototyping, High Fidelity Prototyping & User Testing. A main component involved conducting a qualitative interview with Riverside Foods, from which we derived insights to use in our design process. We also took part in monthly workshops, consulted academic literature and public policy documents, as well as scheduled meetings with our community partners and supervisors. We identified three main research domains during our UX workflow:

- **Users:** How GTA-based food manufacturing companies work and stages of the product supply chain that create carbon emissions.
- **Carbon Footprint Calculation:** We researched methods for carbon footprint calculation: GHG Protocol and data types used for footprint calculation.
- **CarbonGraph Platform:** How current users interact with the digital platform, and how the carbon footprint calculation logic behind the platform worked in order to fit our design into the platform.

DESIGN INTERVENTION

Based on our qualitative interview and research, we defined user personas to help create an interface that caters to food manufacturers supply chains. Then, we created information architectures that outline the structure of the final interface and help us organize the content and features in a logical and intuitive way. We then designed the low-fidelity, hand sketched wireframes to visualize the layout and structure of the interface and identify any usability issues and make adjustments to the design. Finally, we created a high fidelity design prototype that interacts with a food manufacturer's product supply chain, lifecycle, customer usage, and packaging allowing for the use of various data sources, types and processes, in order for them to enter information about their products into CarbonGraph and calculate their products' carbon footprint. We hope to have helped CarbonGraph improve their overall product design, as they can incorporate our design and research into upcoming features.

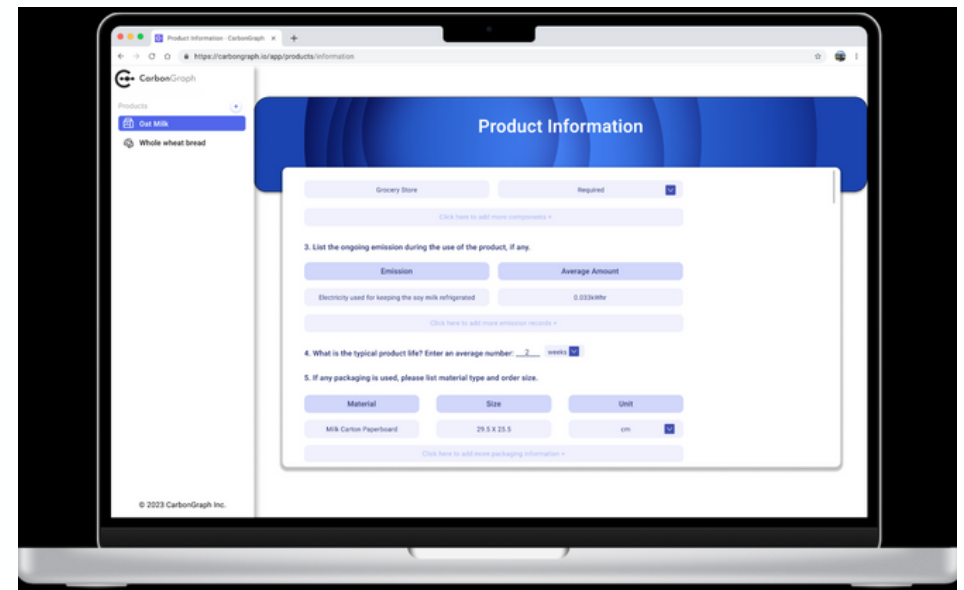
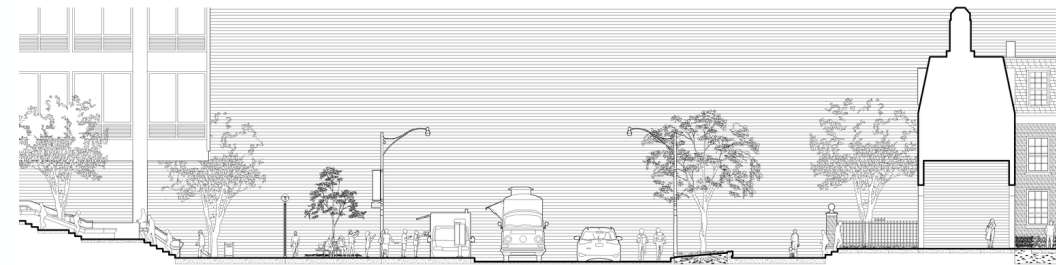
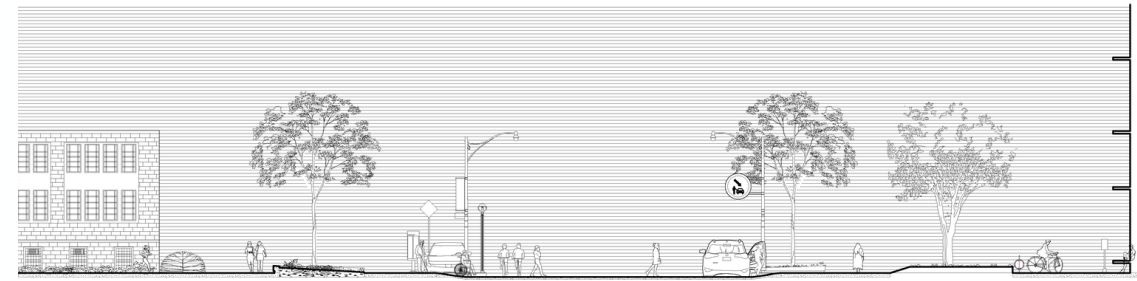


Figure 1. High Fidelity User Interface Prototype



CURBS FOR MOBILITY USERS

Hongxuan Wang, Runqun Zheng, Hongyuan Hua

Team

David Roberts

Supervisor

BACKGROUND + STATEMENT OF NEED

Many cities are currently striving to better understand how curbs can contribute to sustainable and friendly urban public spaces. With this in mind, our MUCP team worked under the supervision of Stefanny Perez and Jacob Malleau of IBI Group Inc., and Professor David Roberts to conduct a curbside study on the University of Toronto St. George campus. IBI Group Inc. is a global leader in consulting for urban environments, with an award-winning portfolio of products used to help define the cities of tomorrow. Our MUCP team combined multidisciplinary approaches in their backgrounds of architecture, computer science, sociology, human biology, and urban studies to determine new infrastructural and policy ideas in developing a curbside management strategy for equitable curb use and sustainable mobility at the University of Toronto. When surveying the campus grounds during our initial curb study, we found that curb spaces at the St. George campus do not meet adequate thresholds in creating a campus for people of all abilities and mobility methods. Our design interventions begin with depicting these inadequacies in accessibility in a transparent light. From this, we also provide a visualization of key curb design features that showcase how we can make specific curbs at the St. George campus accessible.

RESEARCH PROCESS

To better understand this problem and design our intervention, our research process consisted of: data collection, data analysis and literature review. Our data collection and analysis methods use ArcGIS, Field Maps and CurblQ technology to document the curbs and curb usage on the St George campus. Field Maps is a collaborative mapping technology that we used to survey the University of Toronto St. George campus, mapping key infrastructural assets. ArcGIS together with CurblQ were used to navigate and understand existing curbside regulations. We digitized regulations and assets via data QCing via CurbGIS (to account for quality control) and verification. Then, the processed data was used to upload map layers into CurblQ for easier visualization. We also intersected our ArcGIS surveying of the campus with a literature review on previous curb study impacts and accessibility.

DESIGN INTERVENTIONS

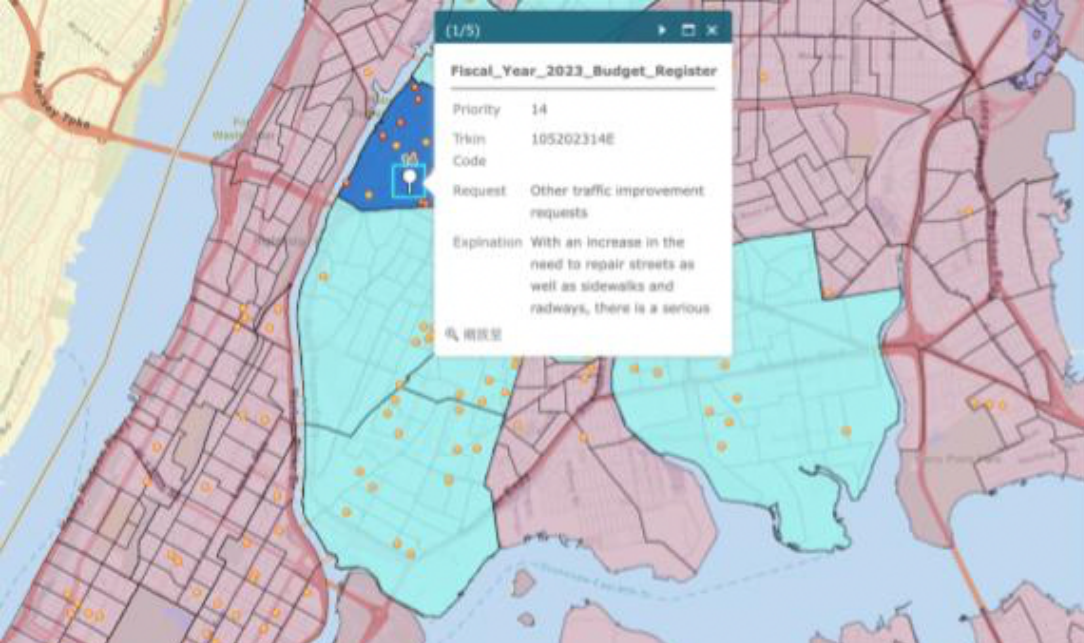
From this, we created two deliverables:

Our first deliverable includes the comparison of two maps:

- (a) a map of the existing University of Toronto St. George campus
- (b) a map that includes our vision of an accessible campus.

This second map is our first intervention as it will highlight key design features that showcase how we can make specific curbs of the St. George campus accessible. Our second deliverable is the creation of a curb management strategy booklet specifically focusing on accessibility. This provides a detailed summary of our design features, and research approach that we took towards these designs.

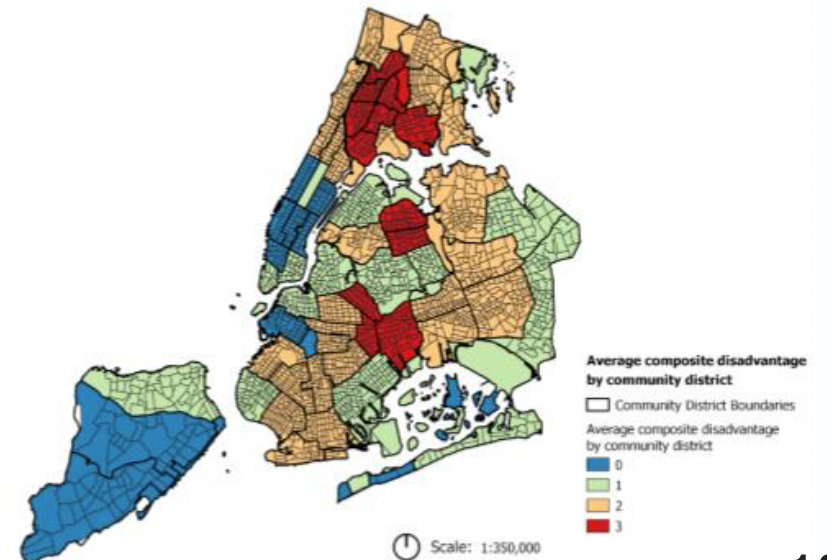
We plan to share these two deliverables with the Urban Data Centre and the AODA (Accessibility for Ontarians with Disabilities) office at the University of Toronto. We believe that they can be used to forward transparency in curb allocation/usage across the St. George Campus. We hope that this project will contribute to improving campus accessibility, forwarding key policy and urban planning recommendations for all people.



DESIGN PROCESS & FINAL SOLUTION

To address this the team did an extensive literature review of the Neighbourhood Activation Study, using these reviews to create our own touchpoint definition of disadvantaged communities. From this definition and state and federal metrics, we produced a set of maps that identified concentrations of disadvantage within NYC neighbourhoods, identifying three Community Districts of relevance: Brooklyn CB4, Bronx CB5, Queens CB3. We then reviewed the Community District Needs Statements from the past 5 years, and the subsequent responses from the Office of Management Budget to gain an in-depth understanding of the interagency weaknesses in collaboration and communication in NYC. The team created a questionnaire that was sent to Community Boards (CB) to gain a preliminary understanding of their respective knowledge and experience. 80% of respondents understood and agreed that their communities were experiencing disadvantage according to the identified definitions. These CBs were then interviewed, providing us with a more in-depth qualitative understanding about the capital budget process, some of the weaknesses of it, and the frustration experienced by district managers.

As a result of our extensive research and collaborations with Community Districts, the team identified that interagency collaboration is essential to resolving the knowledge transfer gap. We produced a prototype for a collaborative online platform that would allow government agencies and Community Districts to communicate throughout the Capital Budget process. Due to software restrictions and time constraints, the outcome of our project ends with our research and prototype. This work offers a blueprint to build, develop, distribute, and refine the platform for its eventual implementation across New York City.



AGING INFRASTRUCTURE

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Team

Taylor Brydges

Supervisor

BACKGROUND

In collaboration with Town+Gown:NYC, the student team worked to formulate a solution to the systemic gaps evident within the New York City capital budget process. This project aims to address the interagency and local community knowledge transfer gaps that have historically resulted in missed opportunities to prioritize community needs within the Capital Budget.

PROBLEM STATEMENT

We recognize the main problem as the disconnect between governmental agencies implementing fund distributions in NYC's disadvantaged communities. This creates a chronic gap between infrastructural provisions to communities versus what is needed for community resilience.

Guidebook for Master-Planned Communities



Samuel Rose
Team

Taylor Brydges
Supervisor

BACKGROUND

Smart Density is an architectural and urban planning firm founded in 2016 that upholds a robust and straightforward vision: to promote increased urban density in the areas where it is most required, while contributing to exceptional urban environments. The firm acknowledges the necessity of re-evaluating traditional suburban ideals and embracing a more interconnected, denser future for our cities. Realizing this vision entails more than merely designing outstanding buildings; it also involves driving the conversation toward the potential for more dense, sustainable, and liveable neighborhoods.

STATEMENT OF NEED

The city of Toronto's population swells at around a 0.94% increase year after year. The need for a manageable development strategy to accommodate and house Toronto's growing populous, is evident. The cities current practice of privatized higher-income development cannot sustain the needs of population influx and contributes to the displacement and fortification of the metro area. As singular individuals our ability to enact change on the urban environment is dwarfed. The modes to enacting change may then involve community outreach, engaging the public discourse, and extending sympathy for densification. Therein the project should aim to shift the narrative surrounding new developments, to re-frame the process as a potential site of prosperity. To influence the development standards and zoning by-law in the City of Toronto

RESEARCH PROCESS

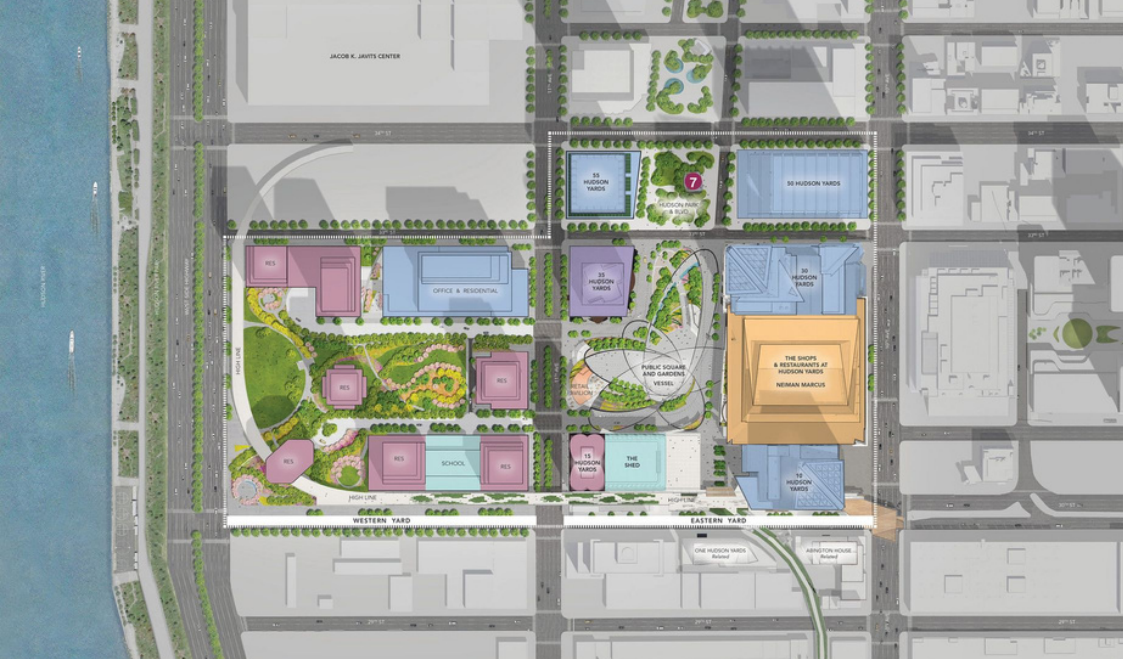
To communicate this vision the document will cover a series of recent and ongoing precedent studies from around the world. To form a basis of 9 viable, sustainable, and livable master-planned developments. The plans are selected based on the criteria: An understanding of local context; Site organization and planning; Mobility and connectivity, transit networks, pedestrianization, cyclist infrastructure; The quality of open space, with individual dimensions characters and contributions; Mixed-use, community services, accessibility; Environmental design and Integration of heritage or preexisting infrastructure. The analysis is co-produced by myself and the community partner. By creating a detailed site model, including floor plates, zoning typification, and drafting of each masterplan to accompany the research contribution from Smart Density.

DESIGN INTERVENTION

A Guidebook of best practices for master planned communities, referencing international case studies which exhibit density and sustainable practice while retaining a vibrant at-grade experience. The precedents are examined within the scope of Toronto's planning and housing policy, to position the city within a global narrative, to dissuade criticism of large-scale development, and to engender the potential of a better future.



HafenCity, Hamburg Germany. Isometric Study Zoning and Distribution.



FINAL DESIGN SOLUTIONS

Our guidebook includes four examples of master planned communities from different locations worldwide. Our research began with a closed literature review on density, sustainability and quality of life in urban planning. We initially selected 10 master plans that incorporated these principles. These master plans have different backgrounds and a variety of outcomes. From this list, we selected four master plans that we believed had the most potential for Toronto. Using our research, we analyzed each master plan according to the extent of applicability in the city of Toronto and 3 principles of subjective quality of life: access to public space, amount of green space, and access to public transportation. After this analysis, we determined a single feature from each plan that held the potential for Toronto. Our analysis was also informed by Toronto's Housing Policy and the City of Toronto's "Strong Neighbourhood Strategy" to learn how we can apply the knowledge from other countries' master plans to Toronto. We are especially thankful for the support from 7N Architects and KPF Architects in providing visual aids for our final product.

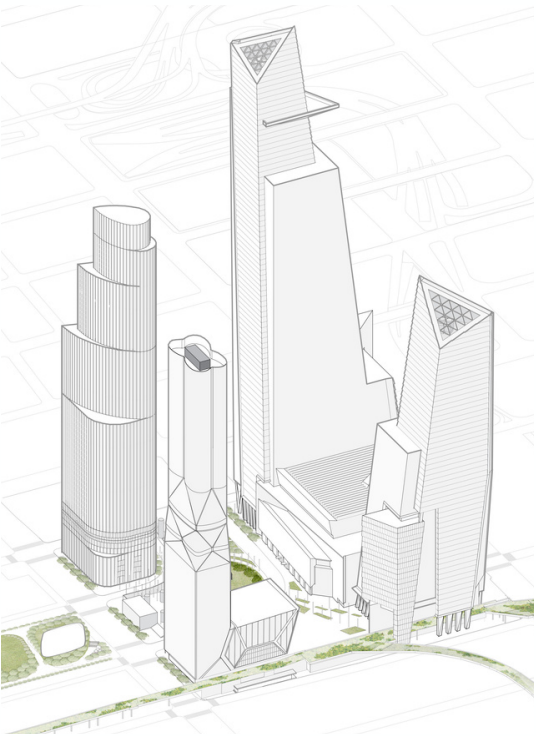
MASTER PLANNING GUIDEBOOK FOR TALL COMMUNITIES

Ella Levin, Janice Wong, Wei Tao, Ka Chun Man, Aidan Brogan
Team

Taylor Brydges
Supervisor

PROJECT DESCRIPTION

Our team created a guidebook to examine how contemporary, master planned, dense neighbourhoods can impact the growth of cities. As urban populations continue to rise, cities are experiencing housing shortages and have resorted to constructing high-rise buildings with high population density to meet the demand. Our team has concentrated on discovering ways to promote density without jeopardizing the welfare and sustainability of urban communities, with a special focus on implications for Toronto. This guidebook can be used as a resource for urban planners and developers located in Toronto to gain a better understanding of how different master plan designs could be potentially applied to the City of Toronto



A drawing of the central buildings in Hudson Yards, New York, displaying the vast amounts of green space available to its inhabitants.

The master plans we selected for our guidebook are as follows: Hudson Yards (New York), Elements (Hong Kong), Nordhavn (Copenhagen), Fountainbridge (Edinburgh). The stand-out features we identified are respectively: mixed-use space (Hudson Yards), transit-oriented (Elements), Waterfront development (Nordhavn), green and public space (Fountainbridge). In highlighting what each plan does well, developers and urban planners can implement similar features in future Toronto developments to promote density in a way that is sustainable and supportive of high quality of life. We hope the variety of these master planned neighbourhood can also help future guidebook users on discovering different ways, approaches or models to develop neighbourhoods with master plans.

GREEN FLEET STRATEGY FOR THE CITY OF VAUGHAN

Muhammad Khan

Team

Taylor Brydges

Supervisor

BACKGROUND

Currently, the City of Vaughan's municipal fleet, with 480 vehicles, has annual fuel consumption of 850,000 liters to provide various city services and produces 1,996 metric tons greenhouse gas (GHG) emissions. Vaughan's Fleet Management Services is currently working on their Green Fleet Strategy to reduce the City's carbon footprint.

PROBLEM OUTLINE

As a responsible public sector organization, the City must adhere to derive maximum value from tax dollars. The City's fleet is a mix of old and new vehicles with an average age of 8.76 years, and different operational requirements across the organization. The proposed solution must include a multidisciplinary approach while achieving the congruence among cost, operational performance and after sales and service availability.

OBJECTIVE

To help the City understand leading practices in green fleet initiatives across comparable municipal organizations by reviewing relevant literature, and developing recommendations for Vaughan's Green Fleet Strategy.

REQUIREMENTS

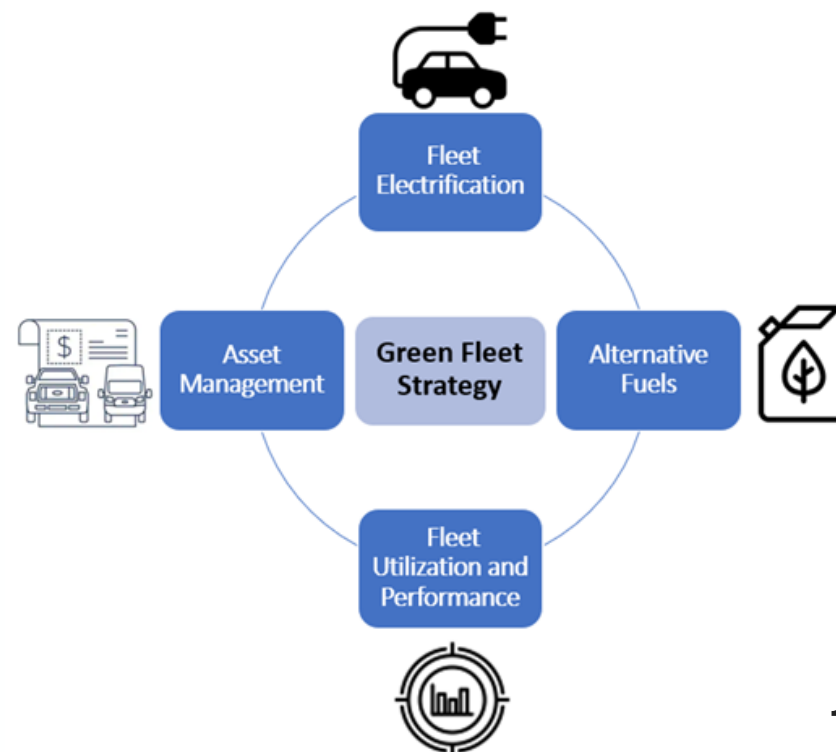
Our research process for the Green Fleet Strategy involved a jurisdictional scan, survey analysis, and collaborative research to inform our final recommendations for the City of Vaughan.

1. Jurisdictional scan: conducted a jurisdictional scan to identify successful green fleet initiatives implemented by other municipalities in Ontario, with a focus on learning from their experiences to inform our recommendations for the City of Vaughan.
2. Survey analysis: to understand how municipalities financed their initiatives, we sent a survey to municipalities across Ontario.
3. Collaborative research: we used a collaborative research approach that involved iterative feedback from City of Vaughan stakeholders throughout the mixed-methods research process, informing our final recommendations.

DESIGN INTERVENTION

We identified four areas of interventions for the City of Vaughan's Green Fleet Strategy:

1. Fleet Electrification: One of the most effective ways to reduce the environmental impact of a fleet is to transition to electric vehicles (EVs). This could involve gradually replacing internal combustion engine (ICE) vehicles with EVs as they reach the end of their lifecycle.
2. Alternative Fuels: Fuel is a critical component of any municipal fleet – it is the driving force behind the vehicles. Creating a sustainable fleet involves more than replacing every fuel-powered vehicle with an electric vehicle; rather, municipalities such as Vaughan can benefit from alternative and renewable fuels, in addition to fuel-saving measures.
3. Fleet Utilization and Performance: Using a data-based approach with tools like Geotab, Vaughan can track key performance indicators across their fleets, like idling times & fuel consumption. This will allow managers to identify areas of reducing GHG emissions.
4. Asset Management: Vaughan can monitor its fleet size, expenses, and environmental impact, and use this information to make better decisions about its fleet. By doing so, the City can reduce its environmental impact, while also saving money and being more efficient in its operations.



PARTICIPATORY JUSTICE FOR HEAT RESILIENCY

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Fadi Masoud
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PROBLEM STATEMENT

Our community partner, the Region of Peel stated the need for us to approach the lack of heat resilience interventions and communications in the neighbourhood of Malton. Specifically, our challenge is to use participatory justice frameworks and project design to support our community partner through the task of increasing heat resilience among vulnerable groups and individuals. From our work over the course of this project, we found the lack of heat-resilient infrastructure, two-way communication between government and grassroots leaders, and participation of vulnerable communities to be major problems in responding to extreme heat effectively. In Malton specifically there is great susceptibility to extreme heat and many underrepresented and marginalised communities. Thus, there is an imperative need for developing adequate heat protocols in the region that are equitable and community centred.

HOW TO BE HEAT SAFE IN MALTON

FEELING THE HEAT? HERE ARE SOME SIMPLE TIPS TO HELP YOU STAY SAFE IN HOT WEATHER

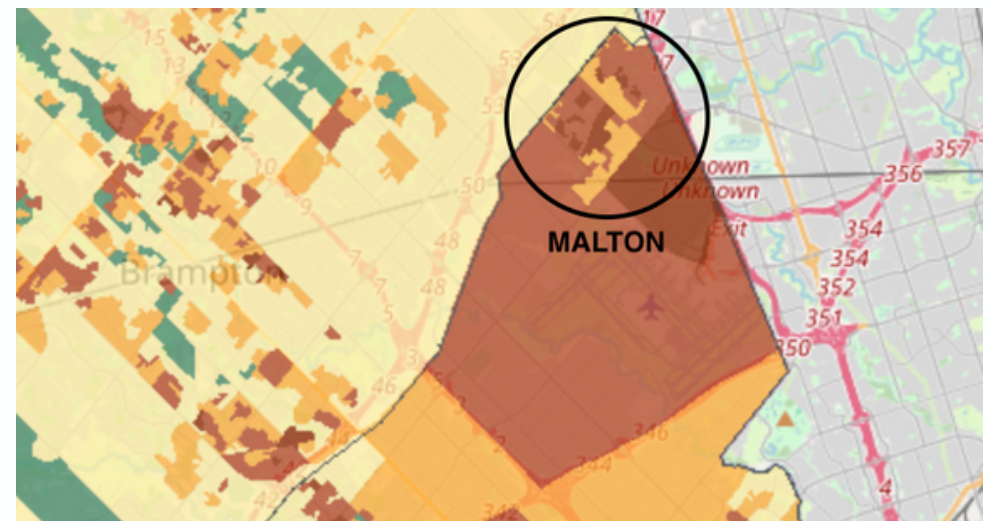
HEAT EXHAUSTION
Heavy sweating
Cold clammy skin
Faint weak pulse
Dizziness/Fainting
Nausea/Vomiting
Weakness
Headaches
Muscle Cramps

HEAT STROKE
Elevated body temperature
Fast strong pulse
HOT red skin
Dizziness
Nausea/Vomiting
Confusion
Headaches
Loss of consciousness

WHO IS MOST VULNERABLE?
Infants & young children
Seniors 65+
People who are pregnant
People with pre-existing health conditions
People with mobility limitations
People who are unhoused
People who work outside/in hot environments

WHERE TO FIND HEAT ALERTS
Public Alerts Environment Canada
peelregion.ca
mississauga.ca
@PeelPublicWorks

HEAT RELATED ILLNESS IS A MEDICAL EMERGENCY. PLEASE SEEK MEDICAL ATTENTION OR CALL 911.



RESEARCH PROCESS

In this project, we express the necessity of both a top-down and bottom-up approach. In the top-down approach we gather important information from academic articles and government publications to communicate key information about extreme heat to communities and residents. As part of the bottom-up approach we seek the experiences of those who are already living and working on the ground to respond to local crises and build community resilience. We consulted with local leading experts in the field of creating community resilience, allowing us to better understand the needs of communities from a bottom-up lens. Both these approaches will enable us to address heat resiliency in Malton in a way that focuses on collaboration, reciprocity, and trust.

DESIGN INTERVENTIONS

The desired outcome for the project involves two facets:

1. Educating Peel Region decision-makers on what needs to be done to combat extreme heat and how to, as a formal institution, work alongside communities in a way that centres their needs.
2. We also aim to communicate with communities what resources are available to them before, during, and after an extreme heat event and what interventions they can advocate for from the Region of Peel and City of Mississauga to attend to their heat-related needs. In the former category, we developed a white paper that discusses heat resiliency in Malton. In the latter category, we created several public-facing infographics that focus on empowering the population of Malton with knowledge of the resources available to them as well as resources they can advocate for from formal institutions. We also put together a survey that can be distributed by Peel to learn more about residents' preparedness in the event of extreme heat as well as their concerns and needs.



Welcome, Rita!

Select the "Get Started" Button to receive personalized learning recommendations. Not quite sure what to do? Select the video on the right!

Get Started



SILVER TSUNAMI

Kaavya Punn, Min Jung, Shae-Linn Davies

Team

Kate Mulligan

Supervisor

OBJECTIVES

As one of the leading entities in IT services, consulting and business solutions organizations, the Community Partner, Tata Consultancy Services (TCS), sought support from the student team to conduct research and design an accessible digital platform. The intent was to introduce a digital platform template to institutions that provide services to older adults aged 60+, including those with varying levels of financial literacy as they transition into later retirement. Digital experiences are often unintuitive, with complex user interfaces that do not provide clear instructions or feedback. This especially can hinder a demographic that is potentially beginning to experience changes in cognition. With a focus on design thinking methodology, the team sought to create a digital platform that is easy-to-use, educational, and web-accessible, along with an accompanying design guide for industries that choose to integrate the platform into their programs.

DESIGN PROCESS AND FINAL DESIGN

The design process uncovered that older adults tend to face unique digital and financial literacy challenges and thus need tailored options to support their user experience. Current digital platforms often provide inconsistent accessibility provisions. Additionally, since the Community Partner sought a B2B solution, there was a need to design with them, their clients (i.e., banking institutions), and the end-user (i.e., older adults) in mind. As a result, the final design includes a web accessibility-compliant digital prototype fit for tablets (see Figure 1). In addition, the student team has created a comprehensive guide on how to design and iterate on a similar platform, including recommendations for usability testing. Deliverables can be accessed with the QR code (Figure 2).

The prototype emulates a customisable website, with accessibility, goal-setting and learning platform features. Assumedly attached to one's bank login information, users can view a condensed or detailed version of the website, set learning goals, and access learning content. In addition, users can personalize their view of the platform including specifying how much suggested content vs general content is displayed. They will be able to leverage accessibility features including provisions for scalable text (making text font larger or smaller), changing colour contrast, and underlining and/or highlighting links and headers. The accompanying design guide provides insight into the design thinking methodology that was applied to the project including literature review and prototyping requirements for future reference.

IMPACT & RECOMMENDATIONS

This intervention specifically looks at how organizations can create more accessible and tailored digital learning experiences. This project, including the literature review, design guide, and prototype can serve as a template for the Community Partner and their clients seeking to invest their resources in designing innovative digital platforms. While this intervention was designed with a target demographic of older adults, and thematically focused on goal-setting for financial literacy, the framework that has been developed can be reviewed and applied to design solutions for other sectors and populations as well.



Figure 2. QR Code



Moss Park is one of Toronto's most overlooked and underfunded neighbourhoods with a large Black youth population, which could be directly impacted by our intervention.

YOUTH EMPLOYMENT EQUITY IN GREEN JOBS

Yusra Shafi, Justin Chan, Muhammad Raza

Team

Kate Mulligan

Supervisor

BACKGROUND + PROJECT DESCRIPTION

In collaboration with the Canadian Council for Youth Prosperity (CCYP), this project focused on analysing the causes and factors contributing to the low participation of Black youth in the Heritage Institutions sector (primarily, parks, nature reserves and green spaces) to determine the scope of opportunities, or lack thereof. The approach considers the socio-economic and systemic barriers to entry in the field. Our preliminary analysis identified that the root cause is low levels of equity in the hiring process as well as access to opportunities to be successful in the field. The main goal was to understand the problem, analyse potential solutions and target key professionals in order to provide CCYP with credible data-supported information for their pilot project. Therefore, the recommended intervention is based on creating more opportunities for Black youth in the spheres of inclusivity and engagement at organisations.

DESIGN PROCESS + FINAL DESIGN

The project involves a multifaceted design approach and is an intervention based on literature reviews and expert advice from senior members in the sector. Experts from the Equity, Diversity, and Inclusion field (EDI) across Toronto and Canada were interviewed,

highlighting important structural and systemic issues present in hiring processes as well as limited access to opportunities for Black youth. These issues included inaccessibility to targeted education streams, hiring networks, technical knowledge, and apprenticeships. A guidebook has been compiled from the information and advice received to serve as our final report on the issue. This consists of 4 main sections:

1. **Comprehensive introduction** to the issue (including stakeholders, areas of interest and different aspects of the issue: economic, social, and political).
2. **Academic literature review** embedded in the report which looks at similar interventions globally and draws parallels with them.
3. **Survey** that can be used to guide CCYP in their future research within Black youth communities across Toronto.
4. **Recommendations** based on equitable and ethical hiring practices based on consultations with professionals in the field championing EDI and Anti-Black racism (City of Toronto, Green Career Centre).

MOVING FORWARD

Exposure to these green jobs will improve Black youth's overall technical skills, long-term career feasibility, and increase their chances beyond their local communities. Ultimately, it is crucial not to disregard that improving Black youth participation in the green job field is a long and complex journey. The process must be guided by consultation, equity, and care.



DESIGN INTERVENTION + IMPACT

Improving road permeability through inclusive and iterative design interventions targeting walkability and cyclability, in conjunction with more investments in public green space, will improve social connectivity along this commercial street and maintain its economic vitality through increased foot traffic. This design intervention comprises two components derived from an equity-focused, bottom-up design approach developed through qualitative survey and interview responses from local stakeholders. Component A proposes road improvements including bike lanes, widened sidewalks, and tree planting to support active transportation. Bike lanes are important forms of civic infrastructure to improve traffic flow and safety, while also increasing foot traffic for local businesses. Widened sidewalks encourage more pedestrian activity along the street, enabling more shoppers to frequent the street's businesses and participate in social interaction.

PANDEMIC IMPACT ON MAIN STREET-KENNEDY

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Team

Karen Chapple

Supervisor

PROJECT DESCRIPTION + OBJECTIVES

This project seeks to understand how civic infrastructure investments can support main streets in building resilience in a post-pandemic context.

The civic infrastructure along Kennedy Road, particularly our area of focus, Dorset Park, is underutilized in terms of public spaces like sidewalks and parks. Although this main street has many commercial businesses, the street struggles to encourage visitors to stay longer, as customers commonly arrive in personal vehicles, park their vehicles to enter a store, and leave shortly thereafter. Improvements to road permeability, which refers to the restriction or ease of movement for various visitor across a street, is one common concern among local stakeholders who want to visit without having to endure severe traffic congestion and insufficient road safety conditions for pedestrians and cyclists.

This main street also has poor neighbourhood social connectivity, with a representative from the Kennedy Road Business Improvement Area (BIA) noting that they have a limited number of public spaces to host social gatherings that can also operate as community placemaking sites. Currently, the Kennedy BIA has one main community centre that functions as a placemaking site for residents, but there is a lack of public green space designed for social gathering.



Before: Intersection at Kennedy Rd

After: Intersection at Kennedy Rd with proposed design

Component B focuses on developing green infrastructure, including trees along sidewalks to reduce urban heat island effect from dense expanses of pavement, while also improving comfort for pedestrians and cyclists. Our intervention also proposes a multi-use park and community garden as a placemaking site for community-led events that improves social connectivity, and promotes the mental and physical well-being of local stakeholders through food security initiatives.



Aerial rendered view of proposed park and community garden along Kennedy Rd and Forbes Rd



investigate business types and intersection characteristics. Secondary research included a contemporary analysis of the area that included previous pedestrianization case studies, existing assessments, investment policies, and strategies; and analyzing mobility data and patterns from Environics Analytics of the area.

DESIGN INTERVENTIONS

Through building a holistic approach to addressing the changing priorities of DT Yonge, our interventions reflect the social, physical, cultural, and economic transformative demands of the users of the streets, as well as serve marginalized populations. Our physical design-based intervention includes developing more pedestrianized secondary streets to enhance the city's connectivity. This includes the implementation of complete streets catering to pedestrians, bikers, and public transit, as well as woonerfs that support spacious slow streets with reduced traffic. Our program-based changes work to support existing permanent civic sites by encouraging more permanent placemaking activities and lasting impacts. These community-focused programs are informed by DT Yonge's unique character, existing strengths, and resident interests. Municipal investments include a push to partner with municipal governors to increase social housing and safe injection sites. This can also mean differentiated tax rates and subsidized rent between different types of businesses and building zones. These three interventions work in tandem to develop physical and social infrastructure that addresses issues of community identity, safety, walkability, inclusivity, mental health, capacity building and promoting local artists and businesses. We hope to reimagine a space that is reflective of the diverse and changing demands of its users.



PANDEMIC IMPACT ON MAIN STREET- DOWNTOWN YONGE

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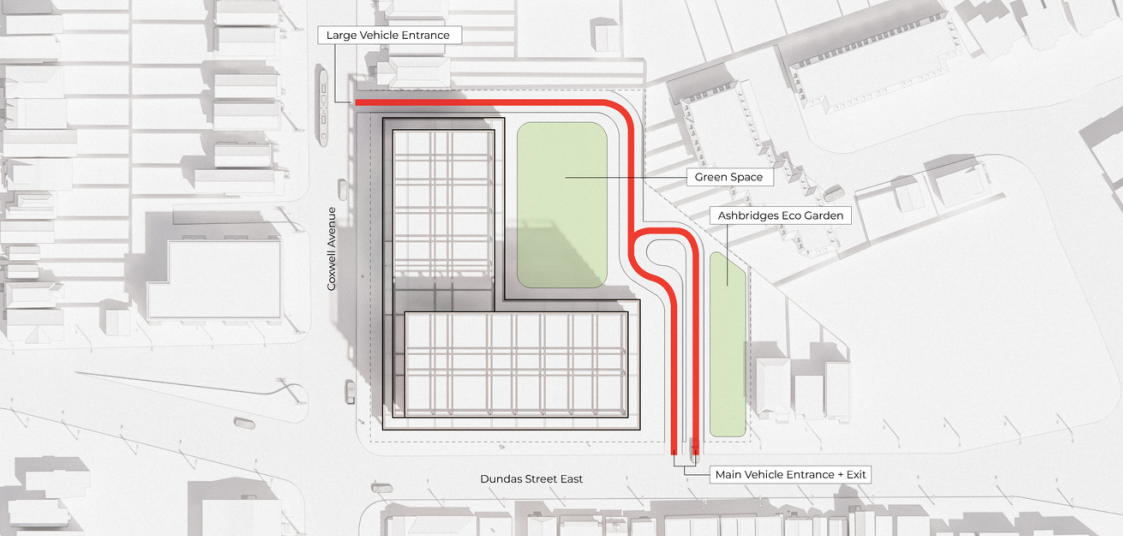
Supervisor

PROJECT DESCRIPTION + OBJECTIVES

Downtown Yonge is an essential part of Toronto's identity due to its central role in the city's overall diverse cultural landscape, transportation network, and economic development. There is existing civic infrastructure that contributes to the historical and civic significance of the street and enhances the vitality of the public realm. However, due to the impacts of COVID-19, Downtown Yonge has experienced problems that have halted its urban life and local community endurance, changing the priorities of the street. From our research, we have identified that the current infrastructures do not reflect the transformative demands of the changing main street. Those demands include a change in the street's typical mobility patterns that indicate it becoming more 'locally based'; a significant lack of streetscapes and corridors due to its car-centric streets that do not accommodate the large population and heavy pedestrian flow; and safety and inclusion issues that exacerbate crime cases.

RESEARCH PROCESS

We conducted a mixed methods research approach to understand the needs, and pain points of Downtown Yonge. Our process began by interviewing local businesses, students from TMU, Downtown Yonge BIA, and CUI members to determine the impact of the main street from the COVID-19 pandemic. Moreover, we conducted a corridor observation of the street to



IMPACT DESIGN: A Holistic Design with Purposes

The design is a thoughtful approach to addressing various challenges that can arise in urban development projects. By prioritizing economic viability, community solidarity, sustainability, and transportation, the project offers a blueprint for future housing developments to follow.

Economic viability is achieved through the inclusion of 232 units, ensuring a sufficient number of residents to support the complex's operation and maintenance costs. Onto aesthetics, the grid facade and set-back cascading form also create an aesthetically pleasing environment that appeals to potential residents and blends well with the surrounding community. Community solidarity is maintained by minimizing the visual impact of the complex and incorporating design elements that promote social interactions. The community garden, large open green space, retail spaces, cafes and planned residential amenities encourage socialization and foster a sense of belonging among residents and neighbours. Inclusive design is achieved through planning a diverse array of bedroom units to accommodate varied household needs.

Environmental sustainability is a core focus of the design, with the use of CLT for construction, reducing the project's overall carbon footprint. Additionally, the 250-bike storage design encourages more eco-friendly transportation options. Retaining the original community gardens and designing the site's public spaces with landscaping, such as lawns, can add permeable surfaces to the site to reduce the urban heat island effect. Specifically, plants and vegetation absorb GHG emissions from the city to mitigate the pollution. Closely related to environmental sustainability, transportation interventions, such as the simple u-turn exit on Dundas Street, help to minimize traffic congestion, noise pollution and air pollution; these interventions improve the livability and enjoyability of the neighbourhood.

Overall, the design takes on a holistic approach to urban development, showcasing how thoughtful interventions can successfully address and balance economic viability, community solidarity, sustainability and transportation.



REIMAGINING COXWELL AND DUNDAS

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AN URBAN CHALLENGE

The City of Toronto has initiated the 'HousingNowTO 2030' action plan to construct 40,000 units of affordable housing on underutilized city-owned sites. '101 Coxwell Avenue' has been identified to be part of the Housing Now program for providing new affordable housing in the neighbourhood. Our project team is tasked to

- Conduct background analyses of the catchment site
- Devise multiple development alternatives that include planning justification for massing

Political, Social and Economic Contexts The team took on extensive processes to understand the challenge comprehensively and mobilize resources efficiently in the solution proposal. Geographic and demographic analyses enabled knowledge of the site nexus with the City and the needs of prospective residents. Further contextualizing the social, political and economic realities of the challenge, the team researched policy initiatives, funding programs and the interrelations between housing with other contemporary urban challenges. These processes enabled effective, efficient solutions. Finally, the team presented a proposal to diverse groups of stakeholders, including management and architectural experts, local politicians and an Aboriginal organization.



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