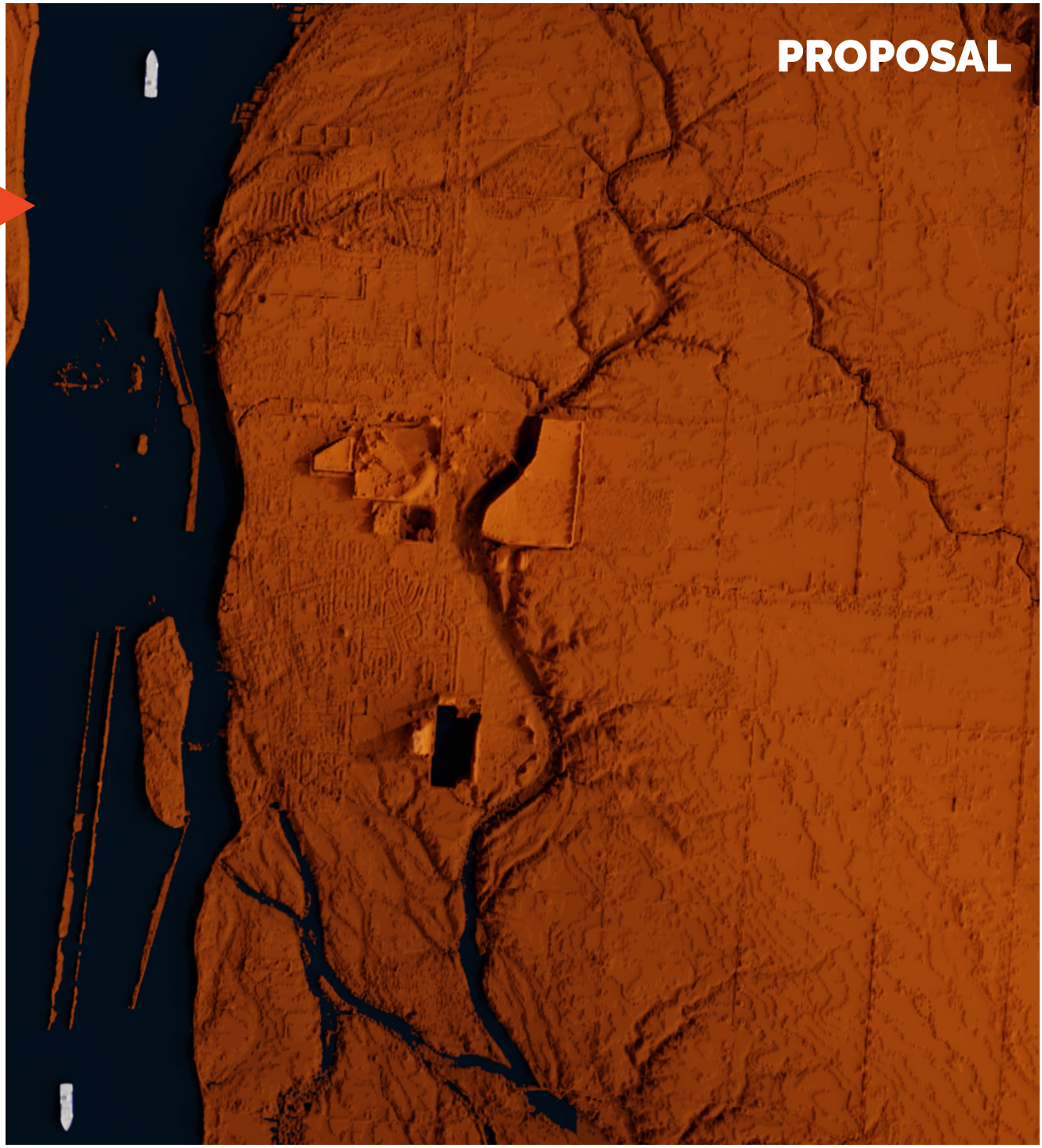


RFP: T00-2022-002

TRANSPORTATION MASTER PLAN

TOWN OF AMHERSTBURG

2022

06/14

TYLin MOBYCON

TYLin

June 14, 2022

Attention: To whom it may concern

Town of Amherstburg
271 Sandwhich St S,
Amherstburg, ON
N9V 2A5

TRANSPORTATION MASTER PLAN

The evolution of a community is built upon the interaction of people. They meet friends on streets, shop at businesses, and their skills provide value to the economy. How this all combines within the nexus of a community's daily life is a primary challenge of good town and network design. How do we maximize the interactions between people and places while minimizing friction?

This is a question that will underscore the development of this Transportation Master Plan study as our team takes a detailed look at the Amherstburg community to address stakeholder concerns and mobility constraints. In preparing this bid, members of our team conducted research on the town and reviewed council meeting minutes to understand its unique context. Through this we learned about Amherstburg's historic contributions and its transition from manufacturing to tourism and retirement; a reality that we understand needs to balance development and commercial growth while maintaining the character and sense of place within the community that has been crafted over centuries.

TYLin is proud to be partnering with Mobycon to provide Amherstburg with this proposal for Transportation Master Planning services. TYLin is a top 40 global engineering consulting firm founded in 1954 with a specialty in bridge design, water resources, road design, and mobility planning. TYLin's founder Tung-Yen Lin was a contributer to the research and development of pre-stressed concrete in the 1940's; an innovative mindset that has guided the company toward involvement in major bridge works globally in the Americas, Europe, and Asia. We believe this skill-set will add value to our mobility analysis within the context of Amherstburg's unique geography.

Mobycon is a Dutch-North American sustainable mobility design firm that started in 1987. They are leaders in safe, innovative and sustainable mobility design solutions having contributed to the Dutch Sustainable Safety approach developed in the 1990s that has become an international standard of traffic safety. Combined, our teams unite leading technical, design, and safety expertise that is not only locally experienced, but also brings international perspectives too.

Our respective teams have confirmed that there are no real or perceived conflicts of interest should we be awarded this opportunity. We are excited to work with the Amherstburg community to develop a plan that will address today's needs, adapt to tomorrow's, and inspire the future.

BRANDON ORR, MCIP, RPP
Mobility Planning Lead @ TYLin

P: 647 459-6109
E: brandon.orr@tylin.com

DALE DIONNE, P.Eng.
Sector Lead Transportation @ TYLin

P: 905 738-5700 x504
E: dale.dionne@tylin.com

TABLE OF CONTENTS

PROPONENTS

We have combined the technical engineering and planning strengths of TYLin with the human-scaled design and active transportation expertise of Mobycon. Both will be supported by 'Ground Truth' data provided by Urban SDK and Traffic Logix to obtain detailed travel insights at no additional cost to the Town.

The organization chart below summarizes key team members with brief bios for leads provided on the following pages. Company profiles are provided in **Appendix B**, and supporting staff bios and team CVs are provided in **Appendix E**.

TYLin x Ground Truth

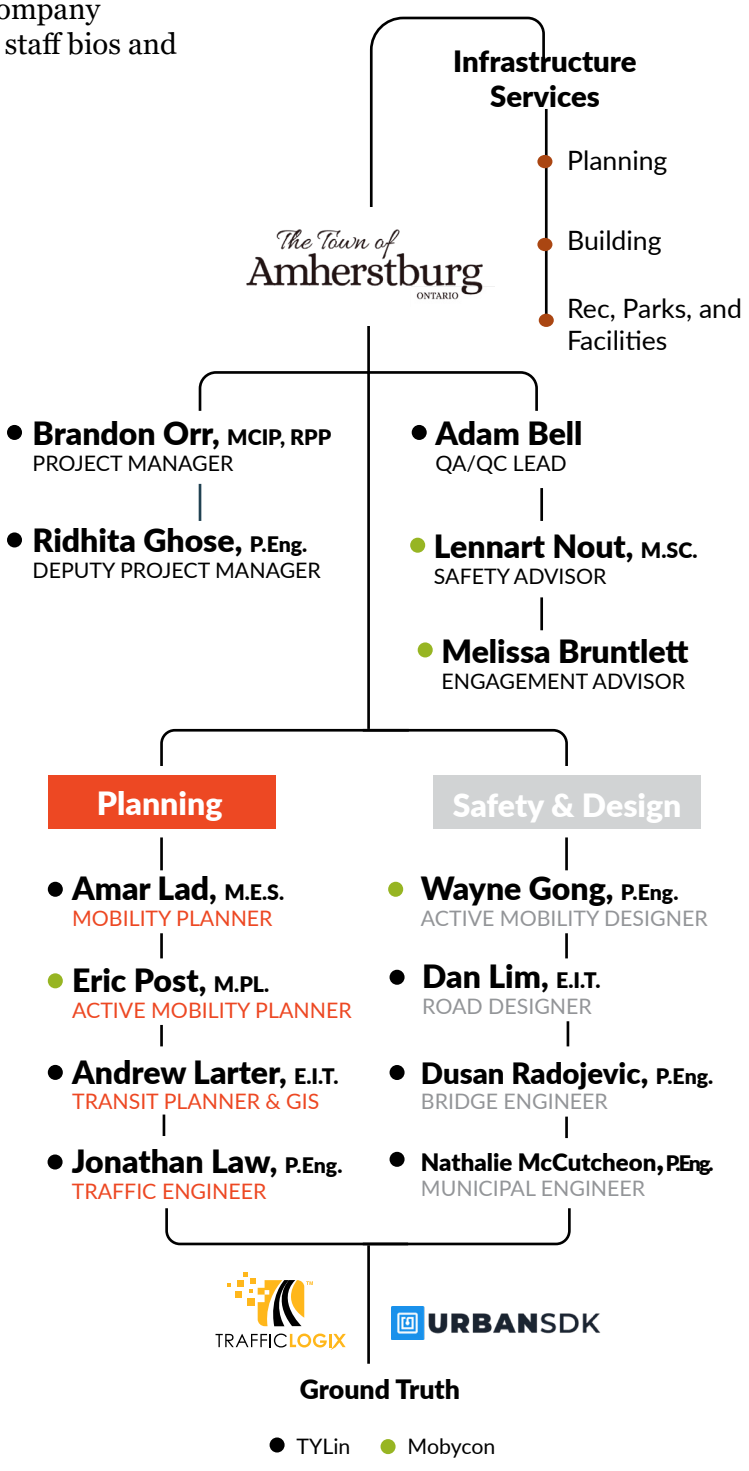
TYLin is a top 40 globally recognized full-service infrastructure consulting firm founded in 1954 that is committed to providing innovative, cost effective, and constructible designs. Our local offices in Vaughan and Whitby, ON have over 160 staff who are supported by a bench of 3,000 employees globally. TYLin will be the prime consultant responsible for managing the study and will contribute technical expertise in mobility planning, municipal servicing, smart cities, and sustainability.

Our services provide other advantages including our partnership with Traffic Logix and Urban SDK. The former is a global leader of ITS since 1995, delivering traffic counting, speed enforcement, and parking sensor technology. The latter is a data platform for cities founded in 2018 that sources mobility location data through anonymous metadata. Together they give us 'Ground Truth' a platform that will provide supplementary volume and distribution data for this study at no added cost.

MOBYCON

Mobycon is a Dutch-North American sustainable mobility design firm that started in 1987 and that has expanded globally with staff in Ontario. They are a leader in safe, innovative and sustainable mobility design solutions having contributed to the Dutch Sustainable Safety approach developed in the 1990s that is an international standard of traffic safety.

Mobycon and TYLin have a well established partnering history. They will assist in planning and design of active transportation and safety recommendations, as well as provide input into consultation and urban design policies.



REFERENCES

Reference letters for project experience is provided in **Appendix A** of this proposal and additional projects are provided in **Appendix B**.

Thunder Bay Mobility Hub Precinct Master Plan

Thunder Bay, ON // Jul 2021 - Jan 2022

TYLin provided mobility planning services to the City of Thunder Bay to assess the feasibility of relocating the existing Water Street transit terminal to a more centralized location within the City's North Core community. This work was a result of detailed analysis TYLin conducted through the Thunder Bay North Core Streetscape Master Plan that had identified operational, ridership, and urban design constraints with the existing facility.

Origin-destination and smart travel data were provided by our data partners Urban SDK to inform trip distribution trends along with a transit rider survey to quantify the multi-modal benefits of the terminal relocation. This study also used this data to develop supporting multi-modal infrastructure and land use policies for the whole North Core Community to integrate with the relocated terminal. Conceptual specifications, costing, and funding opportunities were also identified.

PROJECT STAFF INVOLVED:

- Adam Bell (Director)
- Brandon Orr (PM)
- Ridhita Ghose (DPM)
- Dan Lim (Designer)
- Amar Lad (Planner)
- Andrew Larter (Planner/GIS)
- Jonathan Law (Engineer)

Scan or click to read

Reference:

Brad Loroff // Manager - Transit Services

City of Thunder Bay
570 Fort William Rd,
Thunder Bay, ON P7B 2Z8

P: 807 684-2187

E: brad.loroff@thunderbay.ca

Lakeview Village Development Master Plan

Mississauga, ON // 2017 - Ongoing

Since 2017 TYLin has provided engineering services for Lakeview Village, a planned sustainable and smart community of 8,000 residential units and over 700,000 ft² of employment space to be built at the former Lakeview Generating Station site on the Mississauga waterfront.

From a mobility perspective, the site's location constrained options for connecting the planned development with existing GO Rail and planned rapid transit routes. TYLin conducted research on autonomous vehicle, micro-mobility, transit, freight consolidation, and smart parking options to evaluate their applicability toward navigating site constraints.

The plan is a multi-modal one that balances and supports integration between transit and other complimentary modes of travel to integrate the community to its surroundings and respect its past industrial heritage. The site is still being refined through municipal negotiations.

PROJECT STAFF INVOLVED:

- Adam Bell (Senior Advisor)
- Brandon Orr (Technical Lead)
- Ridhita Ghose (Engineer)
- Dan Lim (Designer)
- Amar Lad (Planner)
- Andrew Larter (Planner/GIS)
- Jonathan Law (Engineer)

Reference:

Brian Sutherland // Project Manager

Argo Development Corp.
4900 Palladium Way, Unit 105,
Burlington, ON L7M 0W7

P: 416 576-1330

E: brian@argoland.com

Thunder Bay North Core Streetscape Master Plan

Thunder Bay, ON // Oct 2020 - Jan 2022

TYLin led the multi-modal mobility analysis component of the Thunder Bay North Core Streetscape Plan Study. This project presented an opportunity to rethink the North Core (Downtown) outwards from Red River Road as the central spine of a revitalized community. With wide rights-of-way (ROW) and under-utilized parking structures, the numerous socio-economic challenges presented opportunities to place an emphasis on transit and active transportation improvements to tackle mobility and affordability challenges. This also aligned with public realm aspirations to make North Core more walkable and pedestrian-oriented.

A challenge was to garner public support for the project which envisioned re-balancing streetscape and parking space within the precinct to create more public realm. The study tested a pilot of recommended solutions during Summer 2021 and feedback was collected from the public to identify systemic impacts that contributed to design decisions.

PROJECT STAFF INVOLVED:

- Adam Bell (Director)
- Brandon Orr (PM)
- Ridhita Ghose (DPM)
- Dan Lim (Designer)
- Amar Lad (Planner)
- Andrew Larter (Planner/GIS)
- Jonathan Law (Engineer)

Reference:

Guy Walter // Landscape Architect

City of Thunder Bay
111 Syndicate Ave S,
Thunder Bay, ON P7E 6S4

P: 807 630-5485

E: guy.walter@thunderbay.ca

Canmore Integrated Transportation Plan Update

Canmore, AB // May 2017 - June 2018

Canmore is a resort town in the Rocky Mountains with a population of over 14,000. The Town wanted to better manage the increasing number of tourists arriving by automobile and provide attractive sustainable transportation facilities for local residents.

Mobycon was engaged by the Town of Canmore to provide a policy update for Canmore's 2014 Integrated Transportation Plan. Revisions to the plan included the need to develop an overall vision for re-defining the future transportation network; identify opportunities to improve the transportation network; develop a complete streets design guideline; and develop short- and long-term intersection and corridor improvements.

Recommendations included simplifying the street classification system, providing design guidelines, clarifying the multi-modal targets for the next 10-15 years as well as an implementation plan for short-term and long-term improvements.

PROJECT STAFF INVOLVED:

- Lennart Nout (Technical Lead)

Reference:

Andy Esarte // Manager of Engineering

Town of Canmore
902 7th Avenue,
Canmore, AB T1W 3K1

P: (403) 678-1545

E: aesarte@canmore.ca

Ottawa AT Network Principles Study

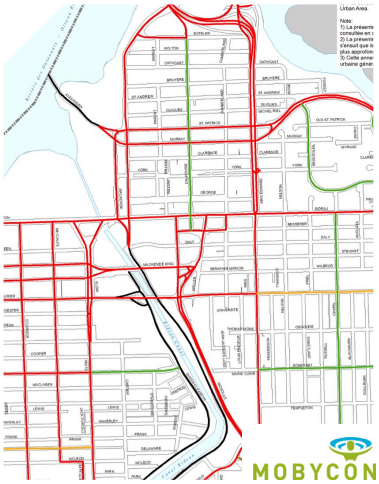
Ottawa, ON // August 2018 - June 2019

In preparation for the upcoming Master Plan update, the City of Ottawa engaged Mobycon to perform a background study with recommendations. The City had identified a number of challenges they experienced during the implementation of cycling facilities. The existing Transportation Master Plan included a wide variety of planning classifications for road types and they were unsure how to prioritize these classifications during the implementation of the plan. This posed a particular challenge in high-conflict areas.

Mobycon developed a document that identifies how to design the various transportation networks while at the same time mitigating conflicts at points of intersection. It also outlines a set of design principles and guidelines developed contextually for the City of Ottawa. The design standards created will ultimately be used by the City to draw from when developing their 2019-2022 TMP.

PROJECT STAFF INVOLVED:

- Lennart Nout (Technical Lead)



Reference:

Robert Grimwood // Senior Project Manager, Sustainable Transportation

City of Ottawa
110 Laurier Ave W,
Ottawa, ON K1P 1K1

P: (613) 580-2424 x28757

E: robert.grimwood@ottawa.ca

Statewide Non-Motorized Network Plan

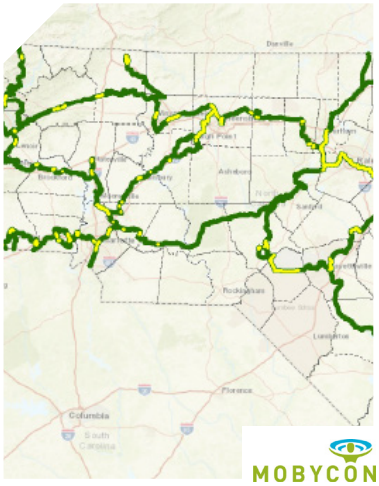
North Carolina, USA // March 2020 - March 2021

The North Carolina Department of Transportation (NCDOT) wanted to establish a Statewide Non- Motorized Network Plan, consisting of greenways, trails, and limited on-road connections. The goal was to support low-stress travel between urban/town centers, state parks, recreation areas, and state and national forests. Naturally this involved designing a network through rural areas and challenging terrain to connect statewide.

Mobycon, with partners Stewart, was retained to develop this statewide plan. One of the primary outcomes of this planning process included a non-motorized network map that connects all 100 counties within North Carolina. Additionally, an action-oriented network plan and 5-year implementation strategy was developed to summarize goals, processes, and methods to help NCDOT move forward in developing this regional network.

PROJECT STAFF INVOLVED:

- Lennart Nout (Technical Lead)



Reference:

Jake Petrosky

North Carolina Department of Transportation (NCDOT)
223 S West Street, Suite 1100,
Raleigh, NC 27603

P: (919) 866-4812

E: jpetrosky@stewartinc.com

KEY TEAM MEMBERS

Brandon Orr MCIP, RPP

TYLin

Project Manager

E: brandon.orr@tylin.com | P: 647 459-6109

With over ten years of professional planning experience in multi-modal mobility, Brandon has led eight (8) master planning studies for communities of varying sizes, and contributed to regional and provincial transit, land use, and goods movement models. From Iqaluit, to Tampa, to Toronto, his international experience has exposed him to varying challenges that have shaped his holistic approach; focusing on getting more out of what you already have prior to considering invasive works.

Through his planning career, as well as his parallel career as a hockey referee for over 16 years, Brandon has learned to resolve conflict by opening a dialogue and setting priorities so that a vision can be carved together. This has allowed him to excel at facilitating public consultation so engagement can be solution-driven.

His academic planning specialization in land use and transportation gives him a perspective that helps him blend mobility and land use planning to complement one another to achieve a study vision that will have community support.

RESPONSIBILITY: Brandon will be the primary point of contact for the consultant team and will be responsible for coordinating technical activities and deliverables. He will also lead engagement presentations and will be supported by our engagement advisor, Melissa Bruntlett, and deputy project manager, Ridhita Ghose, to coordinate technical and consultation tasks. He will also be supported by senior advisors and technical leads to conduct quality checks.

EXPERIENCE:

- Niagara-on-the-Lake TMP (PM)
- Ottawa Public Bike Parking Strategy (PM)
- Sidewalk Labs Quayside Master Plan (Technical Lead)
- Ontario Commercial Vehicle Survey (Modeller)
- Niagara Region TMP (Modeller)

Ridhita Ghose P. Eng.

TYLin

Deputy Project Manager

Ridhita is a professional engineer with experience in traffic engineering, environmental assessments, and municipal class EA project coordination. Ridhita and Brandon are currently working together to manage the Southeast Courtice Road EA in Clarington, Ontario and Ridhita provided deputy project manager support to Brandon Orr through TYLin's recent studies in Thunder Bay showing a proven record of delivering together. Ridhita's technical and project coordination experience will be valuable in coordinating study materials and tasks. Ridhita is also experienced in organizing and facilitating public engagement, a role she is assisting Brandon with for the Bell Blvd / North Front Street Corridor Strategy currently underway in Belleville, ON.

RESPONSIBILITY: Ridhita will be responsible for supporting the project manager in coordinating study materials, public engagement, and tasks between staff and consulting teams. She will be guided by Melissa Bruntlett, our Engagement Advisor, and will be responsible for maintaining a stakeholder list, comment log, and ensuring study compliance with the MCEA process.

EXPERIENCE:

- Thunder Bay Mobility Hub Precinct Master Plan (DPM)
- Thunder Bay Streetscape Precinct Master Plan (DPM)
- Southeast Courtice Road EA (Deputy PM)

Adam Bell

TYLin

QA/QC Lead

Adam brings 18 years of experience in the operations, planning, design and construction of public infrastructure having worked in both the consulting and municipal sector through the Town of Oakville. He has established himself as a recognized leader in road safety, harmonizing traditional engineering with new approaches to better integrate urban design and mobility.

Adam is President of the Ontario Traffic Council (OTC), a member of the Editorial Board for the Canadian Association of Road Safety Professionals (CARSP), and on the Expert Advisory Board for the Child Active Transportation Safety and the Environment (CHASE) Study.

RESPONSIBILITY: Adam will provide senior guidance on road safety and conduct QA/QC for technical outputs.

EXPERIENCE:

- Hamilton Vision Zero Strategy (PM)
- St. Catharine's TMP (Senior Advisor)

Wayne Gong P.Eng.

MOBYCON

Senior Active Mobility Designer

Wayne possesses 10 years of public and private experience, offering project management and integrated transportation planning and design expertise in active mobility. He has led network planning and corridor design projects across North America by providing holistic and context-sensitive mobility solutions. His in-depth understanding of the project life-cycle and evidence-based approach enable him to work effectively with partners and stakeholders to apply Dutch inspired best practices. Wayne is currently leading Mobycon's team in delivering the spine cycling network in Guelph, ON.

RESPONSIBILITY: Wayne will be responsible for leading and guiding active transportation planning, design, and policy recommendations. He will also be assist with engagement.

EXPERIENCE:

- Guelph Cycling Network Expansion (Deputy PM)
- Ottawa ATMP (Technical Advisor)

Lennart Nout M.SC.

MOBYCON

Senior Safety Advisor

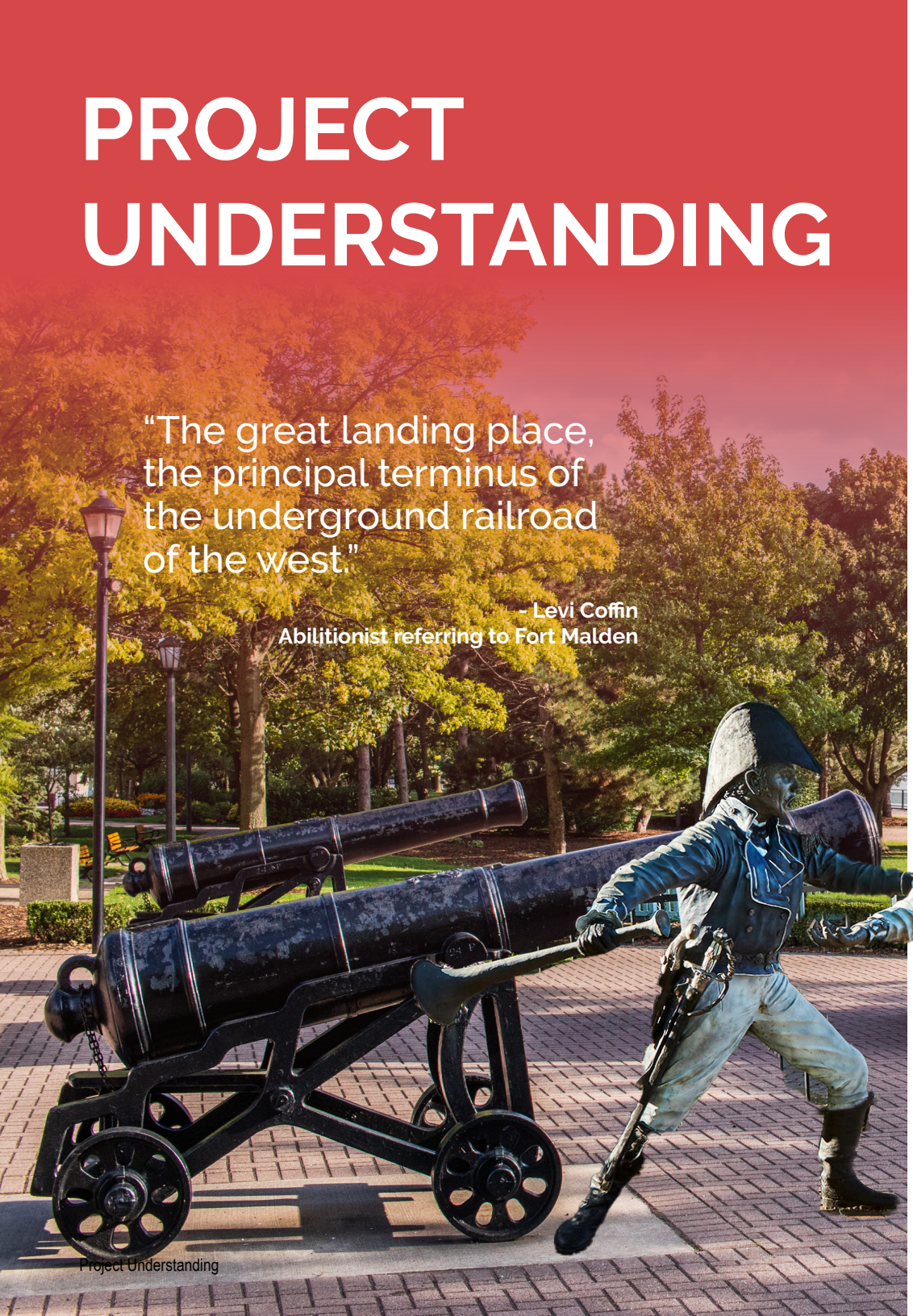
Lennart is a senior active mobility design specialist with over ten years of experience in infrastructure design, transport and land-use planning in both New Zealand and The Netherlands. His experience includes bicycle network design, bicycle safety, transit integration, complete street design, protected intersections, integrated transport planning, parking management, strategic mobility plans and public transport projects. Prior to joining Mobycon, he worked as a consultant in New Zealand, where he was involved in customizing Dutch knowledge to the local context. Now Lennart applies these skills for international clients in Canada, the US and the UK. His combination of Dutch education and international experience make him ideally suited for adapting best practice to local environments.

RESPONSIBILITY: Lennart will be responsible for providing senior guidance for sustainable mobility and road safety analysis.

EXPERIENCE:

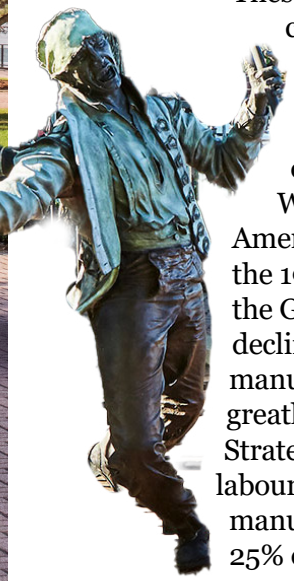
- Protected Intersection Training, Toronto 2018 (Teacher)
- New Framework for Urban Mobility (Royal Dutch Touring Club)

PROJECT UNDERSTANDING



AMHERSTBURG
ONTARIO, CANADA
EST. 1796

Amherstburg is a historical town with a long and varied past. The land upon which the community resides was historically settled by First Nations, including the Ojibwe, Odawa, Potawatomi, Huron-Wendat, and Wyandot peoples, who were followed by the French and British until the Town's formal establishment in 1796, making it one of the oldest settlements in Ontario. Its position at the mouth of the Detroit River was a military advantage that led to the construction of Fort Malden (now a national historic site). The area would later be the setting of major battles between the British and Americans during the War of 1812, skirmishes between Upper and Lower Canada, and serve as an important terminus on the Underground Railroad until the end of the American Civil War; a fact that the Amherstburg Freedom Museum pays homage to today.

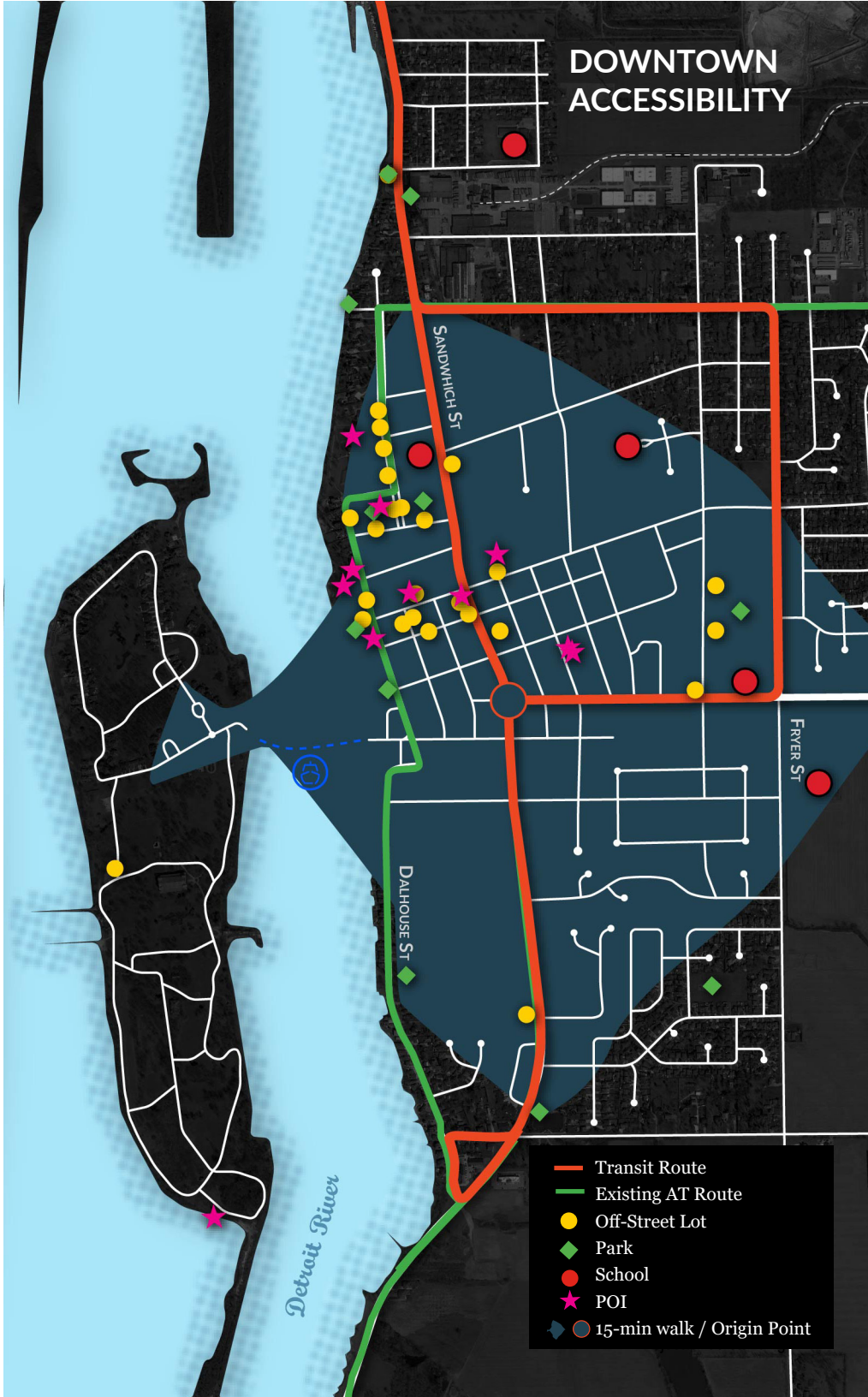


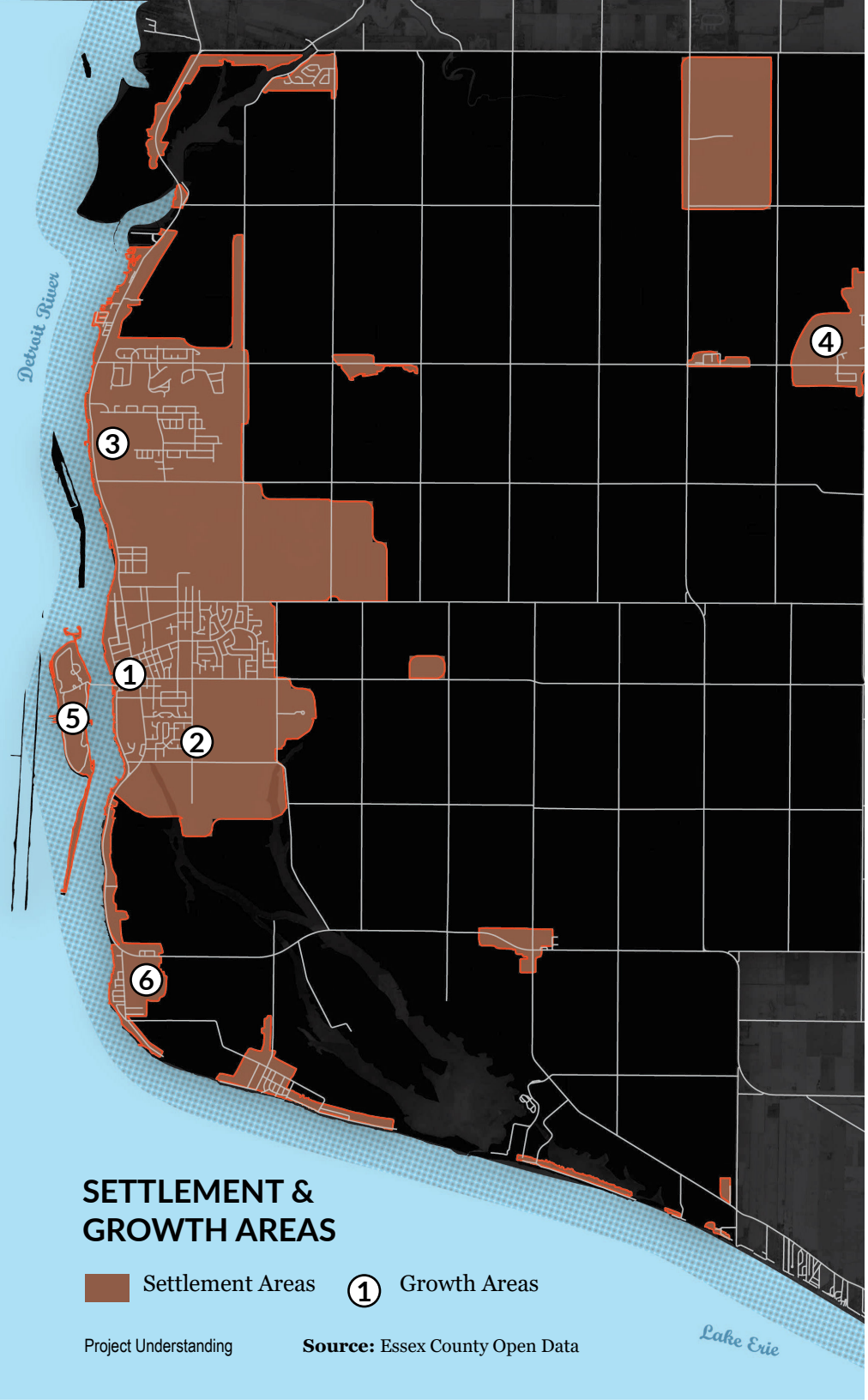
These events have contributed to the Town's culture and economic growth over the years as battlegrounds grew into international partnerships. What once gave Amherstburg a military advantage, also gave it an economic one. Located only 30 minutes from the Detroit-Windsor border crossing, the busiest in North America, the Town attracted manufacturing through the 1900s due to its proximity to cities around the Great Lakes. However, regional population declines in the American 'Rust Belt' and offshore manufacturing led to a regional decline which greatly affected the Town. The Council's 2016 Strategic Plan identified that only 4% of the total labour demand in the community was associated with manufacturing and utility-based operations, a nearly 25% decline since the sector peaked decades prior.

Today manufacturing is outpaced by agriculture, tourism, and retirement. The town is in proximity to the largest concentration of vegetable greenhouses in North America and has seen the emergence of new winery and cannabis industries. The reliance on crops and weather conditions places these industries at risk to climate change; an important consideration given Ontarians' annual carbon footprint is equal to 4.0 tonnes of GHGs, 25% of which are related to transportation. We have the tools to mitigate our environmental impacts, but they cannot be solved by developing a plan for mobility in a silo. It requires a holistic approach that integrates with land use to balance our impacts on the natural environment; an asset which contributes greatly to the Town's growing tourism industry.

Amherstburg's municipal website notes tourist visitations growing 20% annually due to its historical attractions, parks, gardens, and award-winning festivals. The River Lights Festival which centres around Navy Yard Park (shown on the **previous page**), voted the best park or garden in Windsor-Essex in 2020 and 2021, along with other festivals like the recently introduced 'Uncommon' Festival are contributing to an elevated offering that is attracting tourists both domestically and internationally, but how these tourists access Amherstburg can also have unintended impacts on local residents.

Small communities often have a limited amount of space for parking, which can present a challenge when accommodating growing tourist demand without many transport alternatives. In some cases, there may not be enough parking spaces to meet the demand, which can lead to congestion and frustration for both tourists and residents. In other cases, parking may be available, but it may be located far from popular destinations, making it inconvenient for visitors. Our team understands that the Town reached out to consultants in 2019/2020 requesting information on conducting a parking study for the downtown due to increasing tourist demand. There are a variety of ways to address these challenges, such as enhancing first/last-mile connections to periphery parking, shifting local vehicular demand to sustainable modes, creating additional parking spaces, providing shuttle services, or implementing a parking permit system. The **figure to the right** highlights that virtually the entire downtown is within a 15-minute walk of planned transit presenting an opportunity to shift demand onto transit with AT connections. It will be imperative to consider the needs of both tourists and residents in a manner that maintains the community's character.





We understand that in May of 2021, a lobby group called Thrive was launched with the goal of steering Amherstburg towards a more vibrant and sustainable post-pandemic future, including a proposal that suggests taking advantage of Essex Power Corporation's financial incentives towards the implementation of EV charging stations. This is an idea that merits consideration through this Transportation Master Plan to determine how emerging technologies like this can be integrated with development zoning and policies.

The Town has identified the following areas for residential development as shown in the **figure to the left**:

1. Old Town of Amherstburg
2. Lands immediately to the south of the old Town
3. Land north of Texas Road
4. McGregor
5. Bois Blanc Island
6. Amherst Point

A review of planned developments reveals a trend toward low-rise housing as well as luxury builds like the Bois Blanc Island resort which plans 200 low-rise homes including a private ferry, marina, and beach. This underscores the higher than average incomes in Amherstburg in comparison to Essex County as a whole. Recent developments near the Kingsbridge subdivision have raised concerns locally about low-density developments and their negative impacts on traffic congestion and housing affordability which are key considerations for mobility because high-income households are more likely to own multiple vehicles, have a greater ability to influence municipal policy decisions, and could lead to unintended disadvantages for low-income individuals who may only comprise a minority of the community.

Mobility plays a critical role in accessing essential services and employment, but more importantly, it connects us to our community and shapes how we live. International conflicts are putting inflationary pressures on gas and affecting supply chains globally which are chipping into the pockets of Amherstburg residents and prospective tourists alike. Income data reveals that 25% of households in Amherstburg earned less than $50,000 in 2016, indicating a need to consider how transit and active mobility options such as bicycle and pedestrian infrastructure could help reduce the cost to access opportunities and services within the community. In synergy with this, sustainable options also provide a means for residents who are unable to drive such as the young or elderly; an important consideration given the town's aging population.

Source: Essex County Open Data

Amherstburg grew by over 2,500 new residents since 2016 which is a 7.2% change that outpaced overall growth rate in the Windsor Census Metropolitan Area (6%). A review of the community's age distribution reveals that the population cohort above 65 years of age grew to comprise 21% of the population today, whereas this age group accounted for 18% in 2016. The continued aging of the population will require the Town to consider how mobility can adapt to changing demands from residents to maintain a good quality of life.

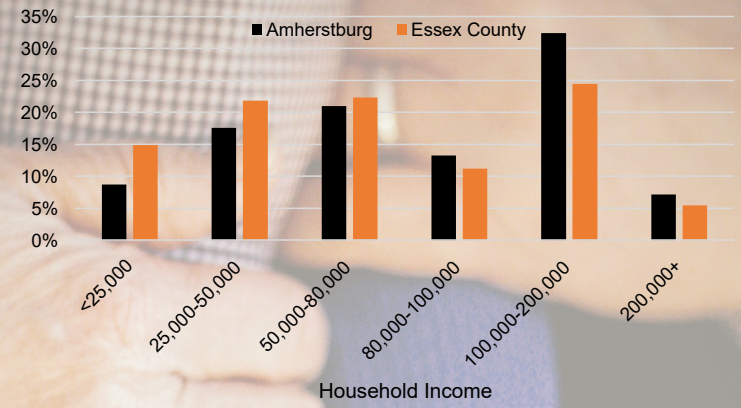
One such consideration is the effects of mobility on health. A 2021 Canadian study on the impacts of neighbourhood walkability on the onset of multi-morbidity (the rate of disease in a population) suggests that less walkable environments are associated with a 14% greater risk of multi-morbidity compared to their peers in more walkable surroundings. This emphasizes the need to not only consider the functional aspect of mobility, but its health benefits too.

First/last-mile connections to transit and destinations are another example where walkable design can help create safe, comfortable, and direct active connections to schools and bus stops to enhance the experience for young and elderly residents alike. Windsor Transit's two-year pilot program planned in September of this year will see a bus stop in the Town three times a day, seven days a week, travelling along Sandwich Street, the Kingsbridge subdivision, and the new high school. This presents an opportunity to orient an integrated network of pedestrian and cycling connections to this service in tandem with the County Wide Active Transportation System (CWATS).

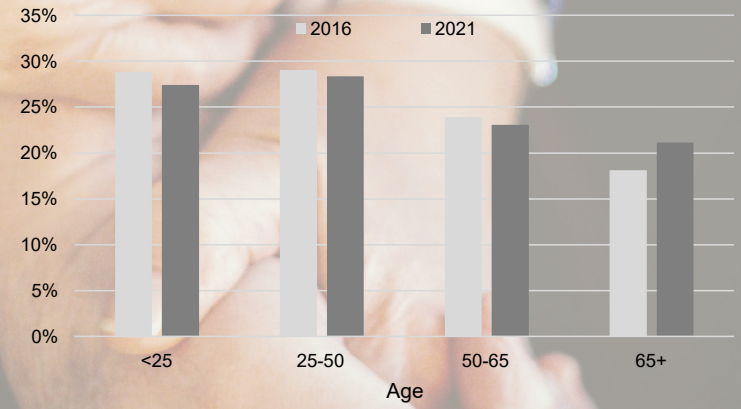
We are excited to work with the Amherstburg community to develop a plan that will navigate today's challenges, adapt to tomorrow's, and inspire the future.

Let us show you how we can help.

2016 CENSUS INCOME DISTRIBUTION



2016/21 CENSUS AGE DISTRIBUTION | AMHERSTBURG



Source: Statistics Canada 2016/2021 Community Profile

PROJECT MANAGEMENT

PM APPROACH

Brandon Orr is the proposed project manager and primary point of contact who will be responsible for coordinating consultant team deliverables and sending out monthly invoices. He will be supported by our proposed deputy project manager, Ridhita Ghose, who's experience doing project coordination for MCEA studies will ensure the process is adhered to and inputs are organized. They will be complemented by Wayne Gong who will be the primary contact for Mobycon.

MEETINGS & PROGRESS UPDATES

The project schedule will be updated regularly, and monthly progress meetings will be held with Town staff. Agendas will be circulated in advance and minutes will be provided within 3 days for review. **Monthly Steering Committee meetings** will be via teleconference and last 1 hour.

For engagement we have incorporated two (2) public open houses, and two (2) Online surveys. For all sessions, materials will be provided for municipal staff review at least one week ahead.

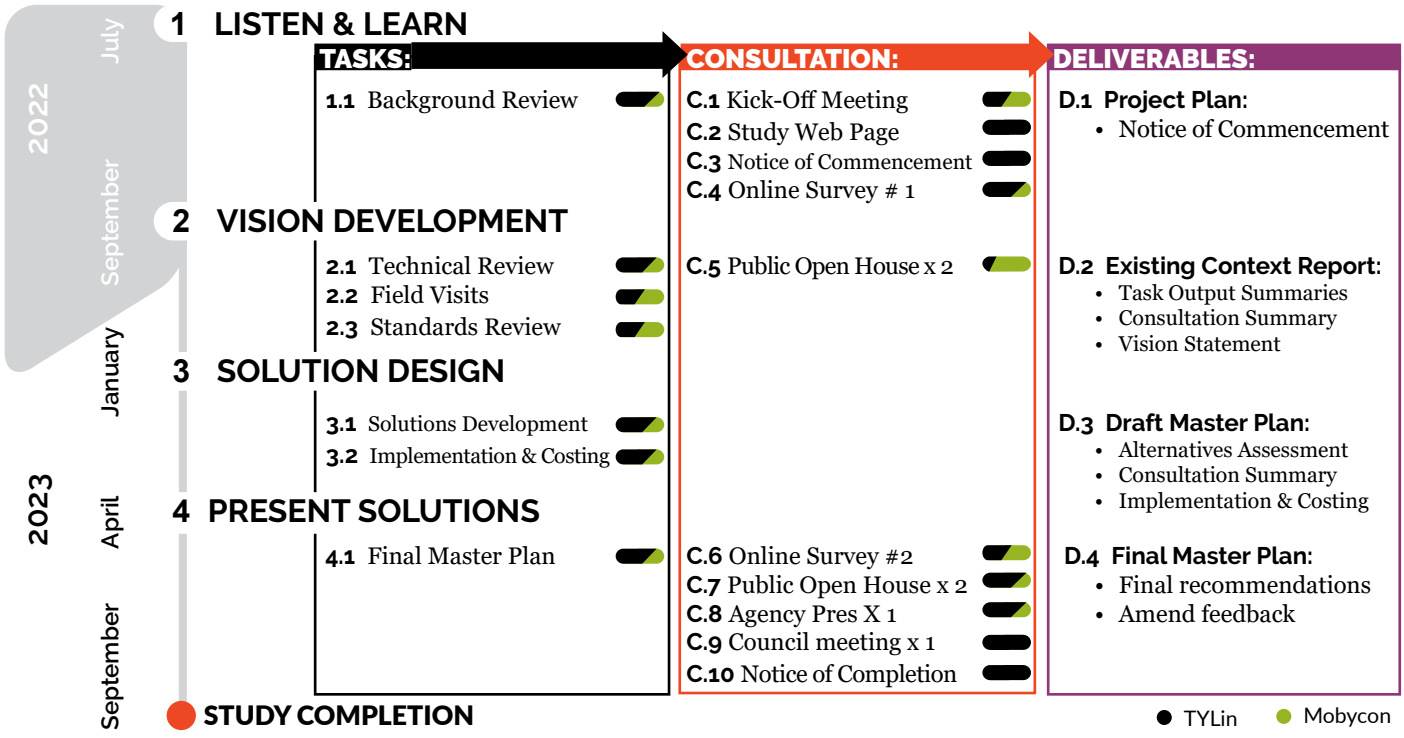
We have also incorporated one (1) senior staff meeting to discuss the draft final report with government agencies, and one (1) council meeting for adoption.

QUALITY CONTROL

A QA/QC approach has been developed in partnership with Mobycon. Work and deliverables will be reviewed by the management team as well as senior advisors to ensure that comments from review meetings are consistently addressed. Our QA/QC lead, Adam Bell will provide an independent review of study outputs at key intervals including:

- Reviewing background data, guidelines and submission requirements, agency approval processes and requirements, and design standards.
- Developing review pipelines for deliverables.
- Maintaining a list of study deliverables, the date it was prepared and reviewed, the author, the name of the reviewer, and the date it was submitted.
- Maintaining a Log to track issues and responses.

Below is an abbreviated work plan and schedule with proposed completion by the end of September 2023 to give a buffer should an issue arise.



WORK PLAN

① LISTEN & LEARN

C.1 KICK-OFF MEETING

A kick-off meeting will be held with the Town's project team to commence the study. This will provide an opportunity to confirm communication protocols, discuss public engagement preferences, identify available inputs, and obtain study insights and Town vision for the Transportation Master Plan (TMP) that could not be conveyed through the RFP. Leads from TYLin and Mobycon will attend.

C.2 STUDY WEBSITE

TYLin will coordinate with the Town to prepare the study page on 'Let's Talk Amherstburg' so that materials and information can be disseminated throughout the study. As a value-add, TYLin proposes to make a study logo and some marketing materials that can be shared through the Town's social media to generate excitement for the study.

C.3 NOTICE OF COMMENCEMENT

After finalizing the project engagement website TYLin will prepare a Notice of Commencement for the Town's review and disseminate it to stakeholders, First Nations, and the public once amended. It is assumed that the Town will provide an initial list of stakeholders and distribute mailing notices through municipal channels.

1.1 BACKGROUND REVIEW & DATA

The consultant team will review relevant Town, County, and Provincial reference documents.

TYLin will establish an FTP and coordinate with staff to identify technical data gaps with the following inputs comprising our initial request:

COMMUNITY:

- Aerial ortho-imagery
- Land uses, parcels, and building footprints
- Planned development areas shapefile
- Future population and employment projections

CONNECTIVITY:

- Mobility-related shapefiles
- 5-year historical collision data
- Truck restriction shapefile
- Available AADT and traffic counts
- Recent traffic impact studies
- Accessible Transit ridership
- Available Taxi Ridership Data

SUSTAINABILITY:

- Public Lake Access shapefile
- Bridges / culverts shapefile
- Digital elevation map or contours shapefile
- Street tree data and/or shapefiles
- Parks, open space, natural heritage system, natural Interest, and hazard lands shapefiles

C.4 ONLINE SURVEY #1

While the background review is underway, TYLin will conduct a 30-day online survey to obtain insights into the existing context and vision for the community. It will include questions about demographics, visioning, parking constraints, general travel trends, and preferences to assist in identifying issues, successes, and opportunities.

Public feedback will be summarized and included in the Existing Context Report that is proposed to be delivered in Phase 2 of the work plan.

A draft survey will be provided for municipal staff review one week prior to the targeted release date to incorporate comments without affecting schedule.

D.1 PHASE 1 DELIVERABLES

The only deliverable that will be provided in Phase 1 is the Notice of Commencement. The background review output will be consolidated and placed into an Existing Context Report that will be delivered in Phase 2. This is done so that the background review can be combined with technical data and public feedback in Phase 2 to give a more rounded assessment.

"We as a council need to step forward a little bit more and be willing to take on some of these projects if we truly believe in affordable housing."

- Deptuy Mayor Leo Meloche | Windsor Star Sept 14, 2020

② VISION DEVELOPMENT

Phase 2 focuses on conducting technical and spatial analysis to identify constraints and opportunities. This will be complemented by field visits to verify analysis, as well as a review of guidelines and standards. This is also when more in-depth consultation begins to develop the master plan vision statement. A value-added benefit of our exclusive partnership with Urban SDK is that we can use their platform to create dashboards of study technical data for public dissemination at no added cost.

2.1 TECHNICAL REVIEW

Existing conditions tasks will be sub-divided between three pillars: Community, Connectivity, and Sustainability. For all demographic analysis we will use the latest available data and update them based on 2021 Census data as released.

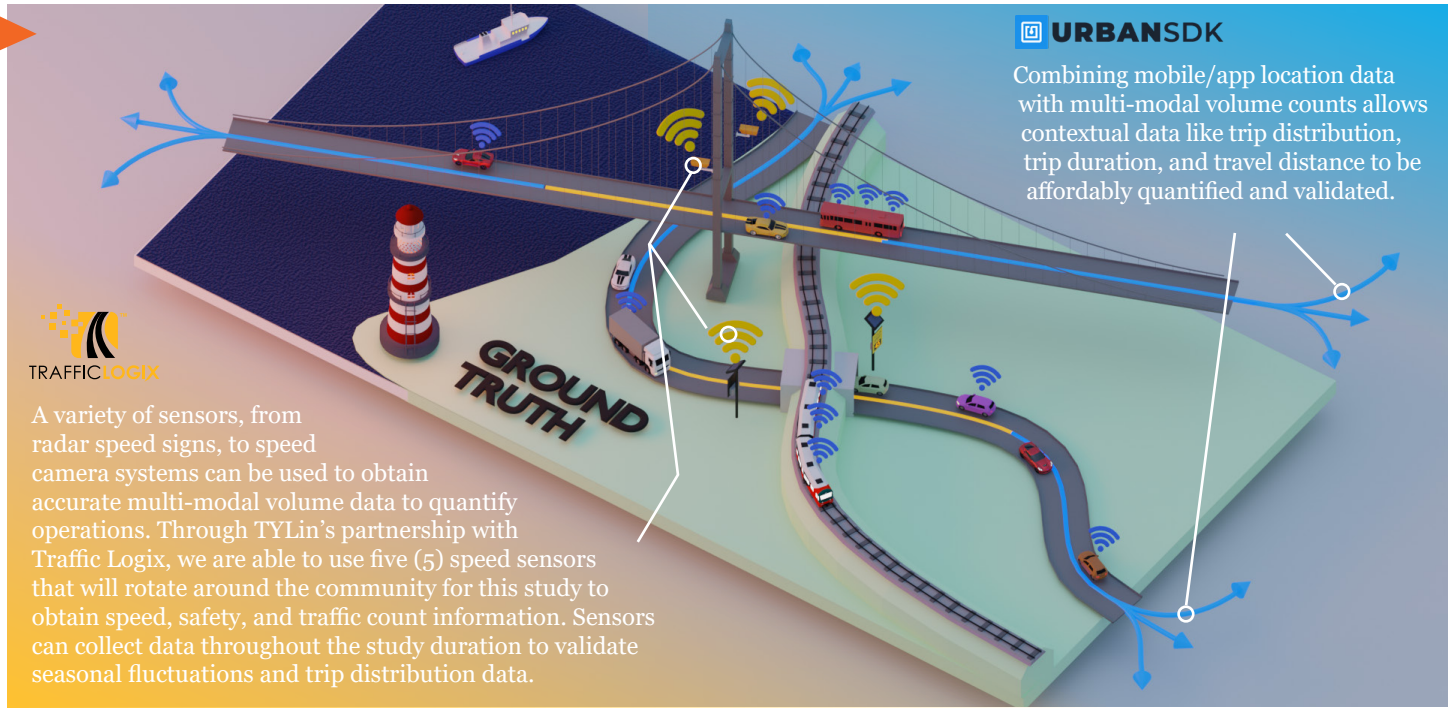
The analysis within each study pillar includes:

COMMUNITY:

- **Income Distribution & Social Equity**: Census income distribution will be mapped and disaggregated to subdivision level by TYLin. This will be important to ensure land use, public realm, and mobility solutions are reflective of the income differences and constraints within the community, so that everyone has fair access and representation within the Master Plan.
- **Age Distribution**: TYLin will assess community-wide census data pertaining to age distribution. The data will be mapped and disaggregated to identify nuanced differences or unique age pockets which will be valuable in tailoring active and transit solutions that are amenable to the young and elderly, and others who often cannot drive.
- **Population & Employment Density**: Densities will be mapped, quantified, and disaggregated to the subdivision level by TYLin. There is a positive correlation between higher densities and transit ridership making denser areas natural candidates for transit considerations.
- **Land Use**: TYLin and Mobycon will jointly evaluate land use, building type, and second home rates to provide context to where commuter and seasonal mobility focus should be placed. Commercial areas are likely to attract some commuter and regional demand, but can also experience added pressures during the summers with tourist stopovers.
- **Historical & Future Growth**: Historical development builds, and population & employment growth will be reviewed by TYLin, and summarized pulling from the latest DC study, census data, and Official Plan Review.

CONNECTIVITY:

- **Data Collection:** As a value-add we propose using five (5) traffic logix speed sensors and rotate them around the community throughout the study duration to obtain 'Ground Truth' data. This will help evaluate safety hot spots and validate seasonal trip distribution data. It will also serve as a template for the Town to continue monitoring traffic post-study. We also have included provisions for up to ten (10) parking surveys for parking analysis.
- **Roadway Volumes:** TYLin will assess seasonal weekday vehicular volumes to highlight major corridors and quantify network capacities. Available traffic counts will be combined with 'Ground Truth' data to quantify seasonal changes.
- **Intersection Operations:** Available counts and 'Ground Truth' data will be used by TYLin to develop a traffic model for the weekday and weekend peak hour. This model will include intersection analyses to quantify delay, queues, and volume-to-capacity (v/c) ratios. The peak season, as determined through the roadway volumes analysis, will be modeled. Should critical data be missing/needed, it will be collected.
- **Roadway Collisions:** Historical collision data will be reviewed by TYLin and heat-mapped to assess hot spots in relation to collision rate per million vehicles, expected number of collisions based on volume, and vehicle-to-vulnerable road user collisions.
- **Origins & Destinations:** Seasonal trip distribution data supported by 'Ground Truth' data will be used to compare seasonal demand to, from, and within Amherstburg. This will allow differences in tourism demand to be quantified between winter and summer so that seasonal solutions can be explored. It will also clarify travel distances to inform multi-modal options.
- **Road Hierarchy:** TYLin & Mobycon will review the road classifications and associated design speeds and compare the value of flow vs public space to identify opportunities to encourage complete streets. As part of this, street typologies will be linked to road classifications.
- **Truck Restrictions:** TYLin will review municipal truck restrictions, 'Ground Truth' data, and road network orientation to determine which corridors trucks are naturally funnelled along and cross-reference these routes with roadway collisions and congestion levels to identify network risks.
- **Parking:** TYLin has included provisions for up to ten (10) parking surveys that will be used in combination with 'Ground Truth' data to estimate and compare seasonal public vehicle and bike parking demand.
- **Transit Ridership:** TYLin will review transit stop and route ridership across the network including local and Provincial transit routes to identify gaps between the Town and major urban centres.



- **Active Mobility**: Mobycon will review existing and planned pedestrian, cycling, and trail corridors. This review will also consider demographic and topographic data to identify gaps, constraints, and opportunities across town.

SUSTAINABILITY:

- **Environmental Review**: As a value-add, TYLin will review topographic conditions, and site drainage. The review will map and describe high points and low points, key environmental features to be protected such as natural heritage features, and built features in hazard areas. This affects infrastructure lifespan, where it can go, and the size of our carbon footprint.

2.2 FIELD VISITS

Using the results of the technical review in Task 2.1, TYLin will consult Mobycon to identify value-added field visit focus areas and observe what residents experience including:

- **Safety**: note street design elements such as wide lane widths, unclear pedestrian crosswalks, or disorganized cycling lane design at intersections that could present an issue for road safety.
- **Views and Vistas**: identifying landmarks, natural features, or views to be preserved and enhanced through mobility connections.
- **Desire lines**: any unplanned routes or paths that are used by pedestrians in preference to or in the absence of a designated alternative.

2.3 STANDARDS REVIEW

The team will review government standards including:

- Municipal Design Standards
- Comprehensive Zoning By-Law Requirements
- Parking Requirements
- Municipal Official Plans
- Municipal Class EA Requirements
- Existing Access Management Standards

Town standards will be compared with County, Provincial and industry standards to identify gaps and recommend updates.

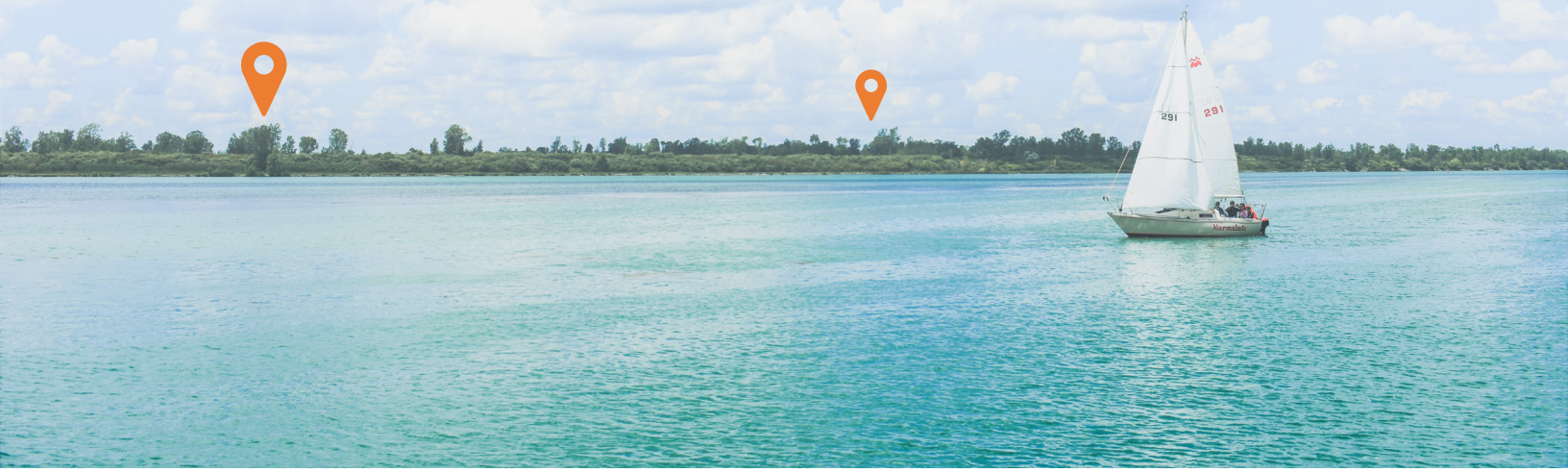
C.6 PUBLIC OPEN HOUSE #1 X 2

The first open house will be held either in-person, or virtually depending on the Town's preference. Existing analysis, stakeholder feedback, and the draft vision and objectives will be presented. TYLin proposes conducting a 30-45 minute presentation followed by a 1-2 hour discussion for a total length of 3 hours that will be held twice: one at mid-day, and another in the evening.

A discussion period will allow attendees and consultants to discuss issues with the option to visit 'Let's Talk Amherstburg' to provide further comment and explore additional background materials. If the event is in-person it is assumed that the Municipality will obtain a facility for the meeting.

D.2 PHASE 2 DELIVERABLES

All of the technical analysis conducted in Phases 1 & 2 as well as the stakeholder feedback summaries will be consolidated into one Existing Context Report. It is expected that the Town will take two (2) weeks to review the report after which feedback will be amended and uploaded to the study web page.



③ SOLUTION DESIGN

Phase 3 will focus on forecasting and developing solutions to constraints that align with local and regional plans; the essence of our mobility planning practice.

3.1 SOLUTIONS DEVELOPMENT

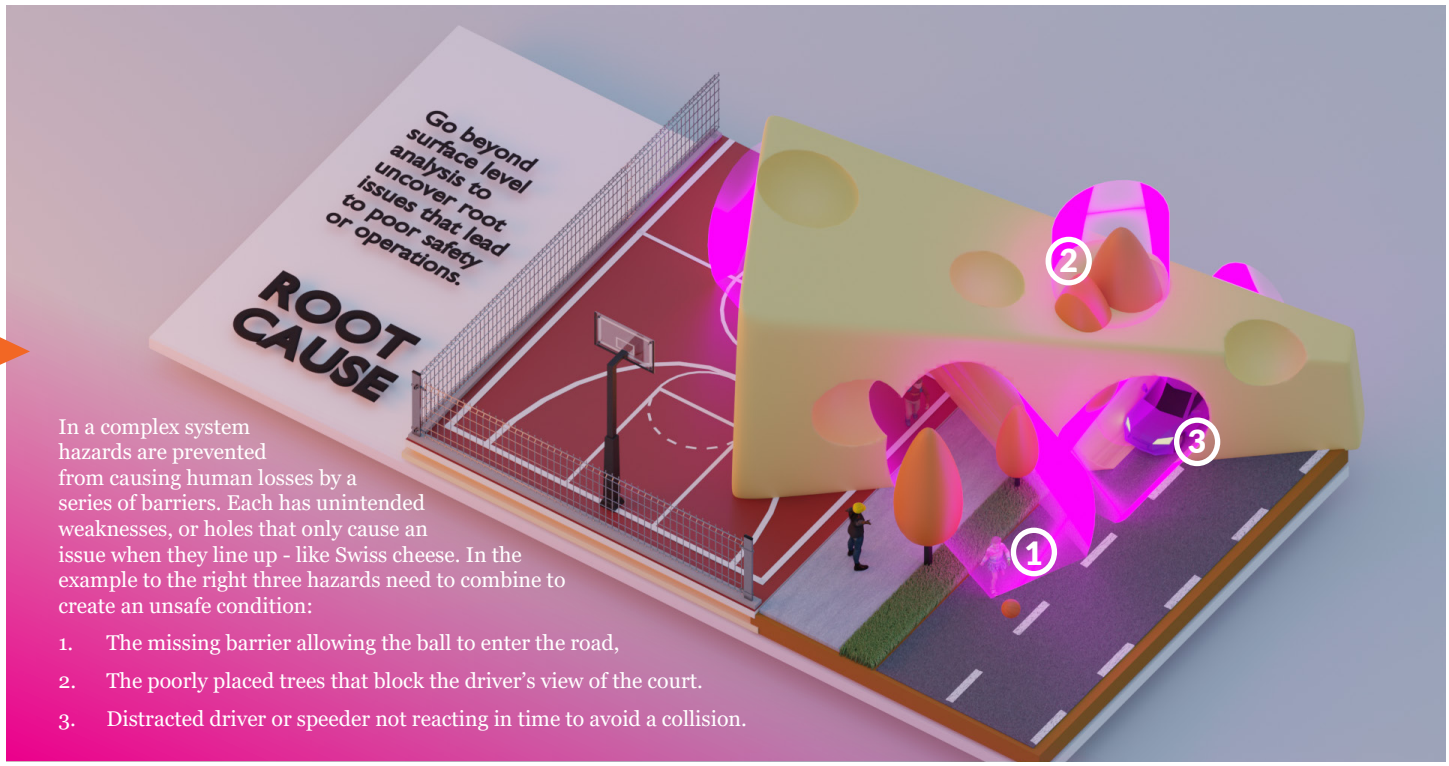
Holistic solutions will be developed and assessed against our three (3) study pillars (Community, Connectivity, and Sustainability) and based on the performance metrics, vision, and objectives developed in Phase 2. The solutions will include a town-wide assessment and a more detailed assessment of the 'downtown core' that will include:

- **Traffic Forecasting**: TYLin will develop traffic forecasts to quantify anticipated future constraints for short (0-5 years), medium (5-10 years), and long-term (10+ years) horizons through the year 2040. Future trip estimates will be based on a mixture of estimated pop/emp growth and broader regional and provincial economic growth. Each horizon will be assessed and tested using Traffic modelling software to quantify impacts.
- **Active Mobility**: Mobycon will leverage their international and local active mobility expertise to support the development of age-friendly pedestrian, cycling, and trail network planning by balancing context and flow to meet people's utility and recreational demands. This will also include strategies for emerging options such as e-scooters and e-bikes.
- **Transit**: TYLin and Mobycon will engage Transit and Accessibility stakeholders to assess commuter transit opportunities between the Town and Major urban centres. New Provincial interest through the Southwestern Ontario Transportation Plan may present opportunities for regional connections to reduce tourism crush loads during the summer. Several transit options will be assessed and compared based on estimated ridership, GHG reductions, and cost.
- **Truck Routes**: TYLin will review existing and future truck traffic routes within the Town's in combination with 'Ground Truth' data to develop, test, and recommend truck restriction, load, or route changes. It will be important to consider ongoing Provincial and Federal investments in the 'Gordie Howe International Bridge' that will increase commercial demand through the region.
- **Smart Mobility Strategy**: TYLin has a partnership with the Urban Robotics Foundation (URF) which is involved in the development of the ISO 4448 series, a standard that sets the parameters and procedures for automated motor vehicles at the curbside, and the movement of robotic service vehicles within pedestrian spaces. This has given our team leading insights into emerging autonomous technology that will allow us to develop a whitepaper that researches market conditions and identifies possible policies that should be considered to proactively address their arrival. For technologies that are more mature, we can identify possible locations where pilots can be conducted to test their effectiveness.

- **One-Way Streets**: TYLin will review the function and suitability of existing downtown one-way streets through a review of traffic flows and urban design principles.
- **Road Classification & Cross-Sections**: Opportunities for enhancing road classification standards will be identified and new updated cross-sections will be developed incorporating complete streets and 'Vision Zero' principles; balancing multi-modal needs to enhance safety and update the Town's Official Plan. The updated road classification and cross-sections will be developed by establishing land use typologies and establishing modal priorities for each.
- **Policy Development**: TYLin and Mobycon will jointly develop or update the following policies:
  - **Transportation Demand Management (TDM) Policy**: As a value-add we will review existing zoning requirements and identify gaps where TDM policies could complement development while mitigating growth in vehicular demand. We will develop a policy that identifies TDM measures that can be considered through development, and we will provide criteria to assist in selecting measures. This policy will also include mechanisms for allowing parking or other site elements to be modified to support sustainability.
  - **Intersection Implementation Policy**: As a value-add we will develop an intersection hierarchy and process for the Town to receive, evaluate, and decide on new intersection requests, inclusive of regular and AT-priority roundabouts, as well as pedestrian crosswalks. The policy will align with TMP objectives and will specifically consider how multi-modal operations should be incorporated into the intersection design and warrants.
  - **Traffic Calming Policy**: Development of traffic calming measures and design standards that are scaled to the different road classification types to eliminate roadway fatalities. As a value-add our team will upgrade this task into a full Vision Zero Safety Strategy so that a cohesive pipeline of calming solutions can be linked with a systemic safety strategy that can be measured to monitor success.

3.2 DRAFT IMPLEMENTATION & COSTING

Alternative solutions will be placed into implementation horizons based on their relevant triggers or synergies with other improvements. We propose to phase them based on the horizons used for forecasting. Each solution's capital costs will be estimated and EA class requirements identified. We are aware of proposed changes to the EA Act by the Province and are able to adapt if adopted.



In a complex system hazards are prevented from causing human losses by a series of barriers. Each has unintended weaknesses, or holes that only cause an issue when they line up - like Swiss cheese. In the example to the right three hazards need to combine to create an unsafe condition:

1. The missing barrier allowing the ball to enter the road,
2. The poorly placed trees that block the driver's view of the court.
3. Distracted driver or speeder not reacting in time to avoid a collision.

Rural communities differ from their urban counterparts in several ways including significant seasonal fluctuations in demand between winter and summer and a greater variety of additional road users including off-road vehicles, heavy agriculture machinery, water vessels, and truckswhich must be considered through infrastructure design.

D.3 PHASE 3 DELIVERABLES

The deliverable will be the Draft Master Plan which will include the technical analysis of draft solutions, as well as draft implementation and costing. Analysis will be accompanied with a summary of stakeholder feedback and study vision statement to provide a rationale and recommend a preferred suite of solutions. It is expected that the Town will take two weeks to review the report after which comments will be amended and the draft report will be uploaded to the study page for public review.

4 PRESENT SOLUTIONS

This phase will conduct in-depth consultation on draft solutions to refine the draft Master plan for adoption.

C.8 ONLINE SURVEY #2

TYLin will conduct a 30-day online survey to present the draft Master Plan to the public and obtain feedback. A summary of responses will be included in the final plan.

A draft of the online survey will be provided one week prior to targeted release date so that Town comments can be incorporated without affecting schedule.

C.9 PUBLIC OPEN HOUSE #2 X 2

The second public open house will be held either in-person or virtually similar to the first open house. Draft recommendations, stakeholder feedback, and preliminary concepts will be presented to the public. Attendees will be directed to the study web page to provide comment on the materials. This open house will be held while the Online Survey #2 is live.

C.10 PRESENTATION TO AGENCIES

TYLin will present key technical analysis, feedback, and recommendations to senior staff at relevant government agencies including MTO, County of Essex, Windsor Transit, First Nations, and neighbouring communities. This will allow agencies to provide direct input toward the final report.

C.11 COUNCIL MEETING

TYLin will present key technical analysis, feedback, and recommendations to council. This will allow councillors to provide input toward the final report.

4.1 FINAL MASTER PLAN

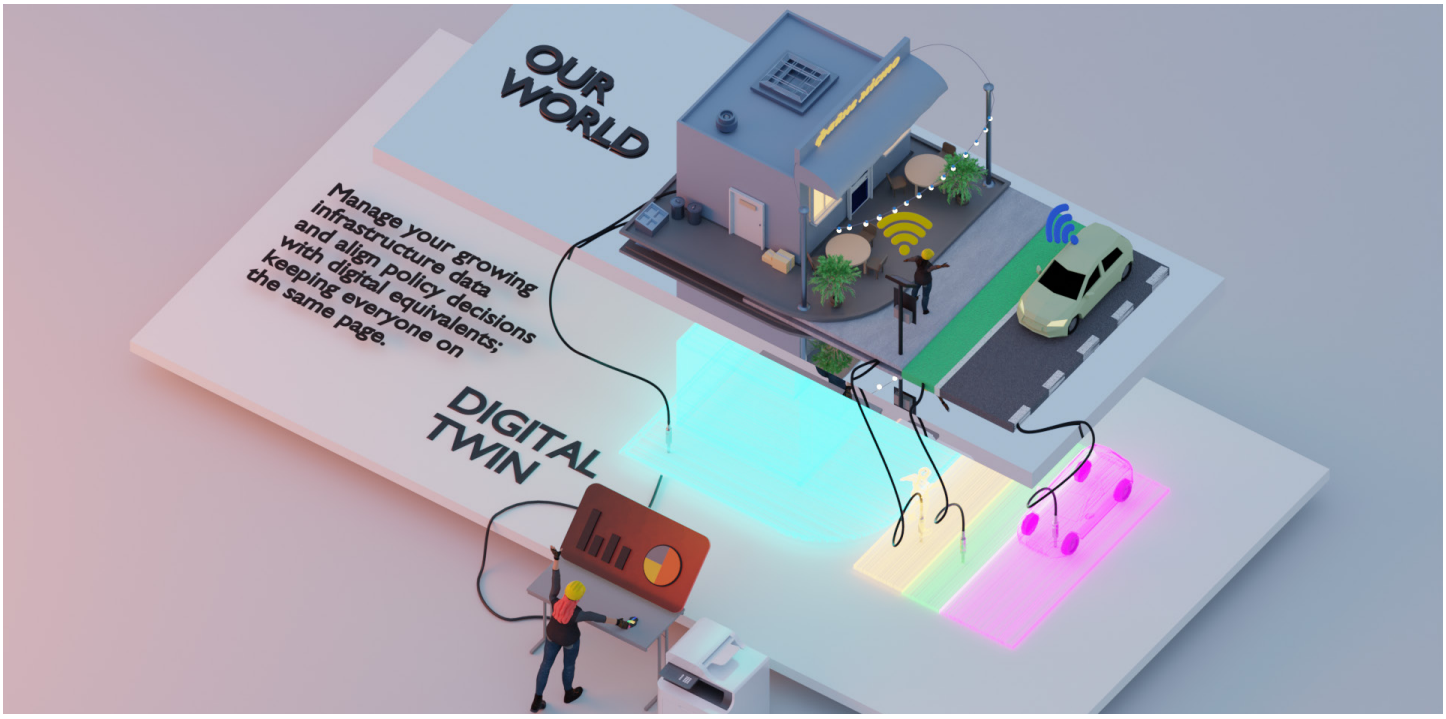
After the Council meeting, all stakeholder feedback will be logged and responded to. Changes to the final master plan will be noted and amended into the final plan for submission to the Ministry of Environment for approval.

C.12 NOTICE OF COMPLETION

Once adopted by council, TYLin will prepare a Notice of Completion and will disseminate it to stakeholders; signalling formal Study completion.

D.4 PHASE 4 DELIVERABLES

The final Master Plan will be the primary deliverable, followed by the Notice of Completion that will be submitted to required agencies and stakeholders.



VALUE-ADDED OPTIONS

The best plan is the one that gets built. Our motivation is to yield results that lead to tangible quality of life enhancements for Amherstburg residents. TYLin proposes to elevate this Master Plan into an integrated traffic data collection implementation, monitoring, and management program that spans the subsequent 2 years after plan adoption, including assisting the Town in writing tender documents for TMP solutions. Knowledge gathered through this study will allow us to design better terms and more effectively tap into government grants to reduce municipal costs.

Digital Twins

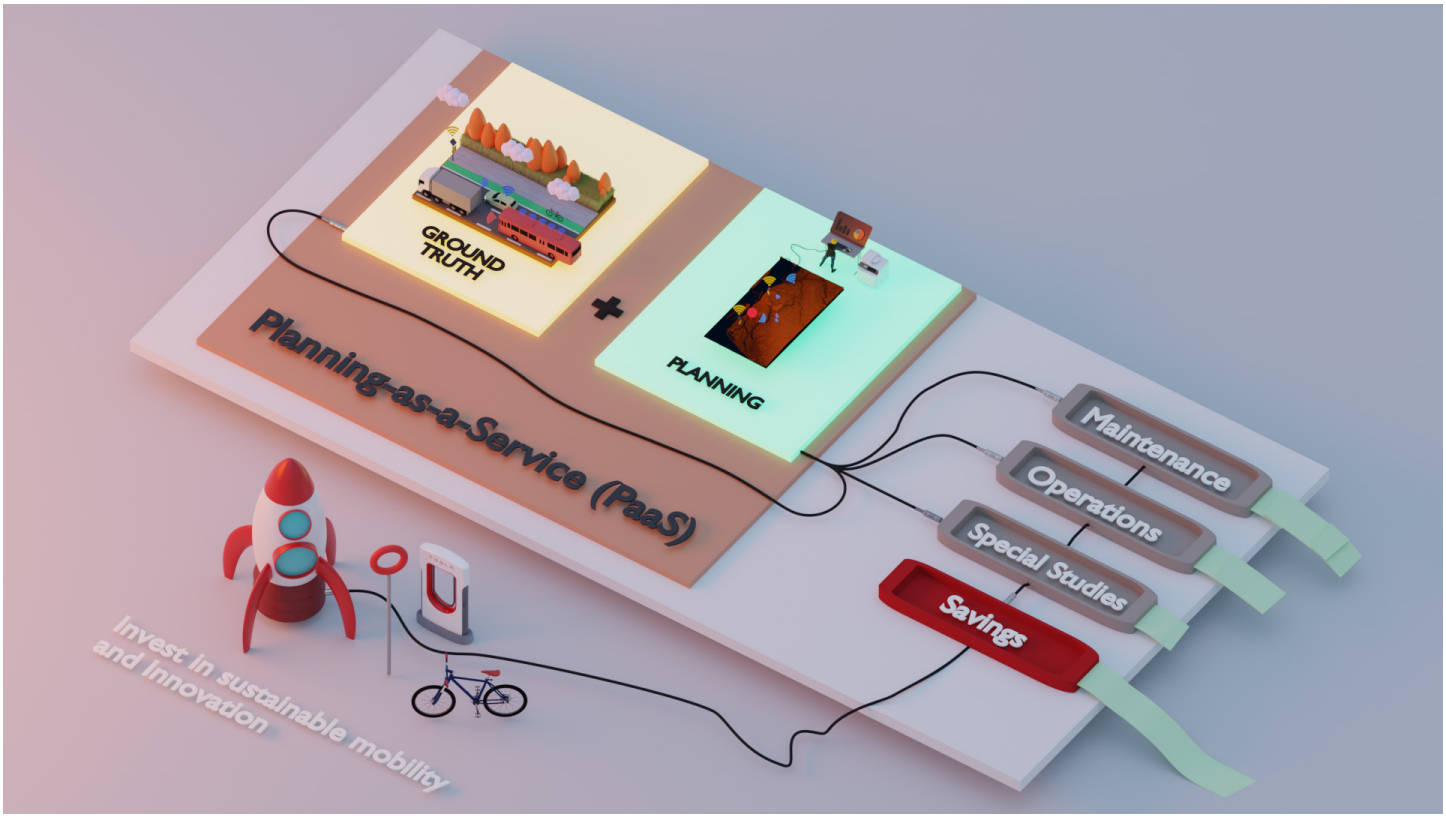
For an optional fee, TYLin and Urban SDK propose to jointly develop a digital twin of Amherstburg's multi-modal transportation system leveraging data generated through the TMP. This will include developing a standard coding convention for stipulating roadway, sidewalk, bike lane, and transit elements and coding them into a digital equivalent format for the Town. The proposed data format will be able to be imported into 3D, spatial, and statistical analysis software.

This is particularly useful for maintaining an accurate link between Municipal Policy or By-Laws and physical infrastructure. For instance, curb restrictions that change by month, day, or hour can be difficult to code into a spreadsheet; presenting a challenge for sharing this data with other staff, emergency services, or the public.

The data can be put on an Open Data portal for public benefit and could even connect to a digital permit system to reduce municipal administrative costs related to parking tickets, curbside patio permits, truck load permits, or other needs.

Furthermore, maintaining an accurate digital twin of your network will lay a foundation for Vehicle-to-Vehicle (V2V), and Vehicle-to-Infrastructure (V2I) communication so connected and autonomous vehicles can communicate with town infrastructure.

This will also allow real-time count and origin-destination data to be linked to digital twins so that collected data and analysis can be efficiently collated, filtered, and used across municipal departments for development applications. Urban SDK's platform and dashboards are proposed to be used to store and maintain digital twins and create a web portal where data can be filtered and downloaded.



Planning-as-a-Service (PaaS) Program

For an optional fee, TYLin proposes developing and operating an integrated traffic data collection implementation, monitoring, and insights program to manage and maintain accurate traffic, truck, cycling, and transit data for 2 years after the completion of the transportation master plan. We refer to this as Planning-as-a-Service (PaaS)

PaaS focuses on developing and operating a robust, cost-effective, and accurate traffic monitoring program by leveraging our exclusive partnerships with Traffic Logix and Urban SDK. The former is a global leader of Intelligent Transport Systems (ITS) since 1995, delivering innovative traffic counting, enforcement, and parking sensors. The latter is a data confidence platform for smart cities founded in 2018 and which sources mobility location data through anonymous metadata.

Through these partnerships we are able to combine accurate ground truth counts from Traffic Logix sensors to expand anonymized origin-destination location data samples from Urban SDK so that accurate city-wide volumes and distributions can be obtained, maintained, and updated cost-effectively.

Through this TMP we will be using a rotating set of 5 counting devices that will rotate around the community to obtain accurate count data. This process can be continued post-study to flow into this PaaS program. In addition to this, our exclusive partnership with Urban SDK will allow us to use their origin-destination data for the purposes of this Master Plan at no additional cost. This will allow the Town to get a sense for the value that this combination of data brings prior to committing to a 2-year PaaS program.

We propose to develop a monitoring plan, implement it, and update it annually for two years based on key performance indicators developed in partnership with the Town. We also propose to assist the Town in tendering TMP-related projects during this time.

The benefits of this approach include expediting development application decision-making, proactively addressing and monitoring immediate infrastructure needs, and flagging and triaging long-term needs for the next Transportation Master Plan. More importantly is that this data is also vital to understanding and monitoring economic trends like tourism flows more frequently.

We have provided additional details on our proposed PaaS program within **Appendix D**.

TIME-TASK MATRIX

Our proposed distribution of labour resources are provided in the time-task-matrix below with TYLin accounting for 69% of the effort and Mobycon accounting for 31%.

- TYLin
- Mobycon

	Management & Senior Advisory					Planning				Safety & Design				TOTAL HOURS
	Project Manager Brandon Orr	**Deputy Project Manager** Ridhita Ghose	**QA/QC Lead** Adam Bell	**Active Mobility Advisor** Lennart Nout	**Engagement Advisor** Melissa Bruntlett	**Mobility Planner** Amar Lad	**Active Mobility Planner** Eric Post	**Transit Planner / GIS** Andrew Larter	**Traffic Engineer** Jonathan Law	**Active Mobility Designer** Wayne Gong	**Road & Transit Designer** Dan Lim	**Bridge Engineer** Dusan Radojevic	**Municipal Engineer** Nathalie McCutcheon	
Utilization Rate	11%	13%	4%	3%	5%	8%	11%	15%	6%	14%	10%	2%	2%	
01 Listen & Learn	**11**	**35**	**4**	**2**	**15**	**12**	**12**	**28**	**8**	**11**	**12**	**2**	**2**	**154**
C.1 Kick-Off Meeting	4	4	4	2						2				**16**
C.2 | Study Web Page	1	8			4			8						**21**
C.3 | Notice of Commencement	1	8			2									**11**
1.1 | Background Review & Data	1	4				12	12	12	8	6	12	2	2	**71**
C.4 | Online Survey #1	1	8			8			8						**25**
Monthly Steering Meetings	1	1								1				**3**
PM and QA/QC	2	2			1					2				**7**
02 Vision Development	**26**	**35**	**12**	**12**	**16**	**36**	**68**	**76**	**28**	**71**	**68**	**8**	**8**	**464**
2.1 | Technical Review	8	4	4	4		16	24	32	24	16	16	4	4	**156**
2.2 | Field Visits x 2	1	8					24	24		24	24			**105**
2.3 | Standards Review	2	4	4	4		16	16	16		16	24	4	4	**110**
C.5 | Public Open House #1 x 2	8	12			12	4	4	4	4	8	4			**60**
Monthly Steering Meetings	3	3								3				**9**
PM and QA/QC	4	4	4	4	4					4				**24**
03 Solution Design	**20**	**16**	**12**	**12**	**4**	**22**	**24**	**38**	**24**	**28**	**16**	**6**	**6**	**228**
3.1 | Solutions Development	8	4	8	8		16	24	32	24	16	16	4	4	**164**
3.2 | Implementation & Costing	4	4				6		6		4		2	2	**28**
Monthly Steering Meetings	4	4								4				**12**
PM and QA/QC	4	4	4	4	4					4				**24**
04 Present Solutions	**57**	**51**	**10**	**8**	**20**	**16**	**10**	**24**	**8**	**35**	**6**	**1**	**1**	**226**
C.6 | Online Survey #2	1	8			4			8						**21**
C.7 | Public Open House #2 x 2	8	12			12	4	4	4	4	8	4			**60**
C.8 | Presentation to Senior Staff	8	4	1	1						8				**22**
C.9 | Council Meeting	8	4	1	1						8				**22**
4.1 | Final Master Plan	24	12	4	2	2	12	6	12	4	4	2	1	1	**86**
C.10 | Notice of Completion	1	4			2									**7**
Monthly Steering Meetings	3	3								3				**9**
PM and QA/QC	4	4	4	4						4				**20**
TOTALS	**114**	**137**	**38**	**34**	**55**	**86**	**114**	**166**	**68**	**145**	**102**	**17**	**17**	**1,072**

SCHEDULE

Task Name	Start	Finish
01 Listen & Learn		
Contract Execution!	Fri 7/15/22	Fri 7/15/22
C.1 Kick-Off Meeting	Thu 7/21/22	Thu 7/21/22
C.2 | Study Web Page	Fri 7/22/22	Thu 8/4/22
C.3 | Notice of Commencement	Fri 7/22/22	Thu 8/4/22
D.1 | Notice of Commencement	Thu 8/4/22	Thu 8/4/22
1.1 | Background Review & Data	Fri 8/5/22	Fri 9/9/22
C.4 | Online Survey #1	Fri 8/5/22	Fri 9/9/22
Monthly Steering Committee Meetings	Fri 9/16/22	Fri 9/16/22
02 Vision Development		
2.1 | Technical Review	Fri 8/26/22	Mon 11/7/22
2.2 | Field Visits	Tue 10/11/22	Mon 10/24/22
2.2 | Standards Review	Mon 9/26/22	Mon 11/14/22
C.5.1 | Open House Prep	Tue 11/1/22	Mon 11/21/22
C.5.2 | Open House #1 x 2	Mon 11/21/22	Mon 11/21/22
D.2.1 | Report Documentation	Tue 11/22/22	Mon 12/19/22
D.2.1 | Existing Context Report Deliverable	Mon 12/19/22	Mon 12/19/22
Monthly Steering Committee Meetings	Mon 10/17/22	Fri 12/9/22
03 Solution Design		
3.1 | Solutions Development	Tue 12/20/22	Fri 3/24/23
3.2 | Implementation & Costing	Mon 3/13/23	Mon 4/24/23
D.3.1 | Report Documentation	Mon 3/27/23	Tue 5/23/23
D.3.2 | Draft Master Plan Deliverable	Tue 5/23/23	Tue 5/23/23
Monthly Steering Committee Meetings	Wed 1/18/23	Fri 5/12/23
04 Present Solutions		
C.6 | Online Survey #2	Wed 5/24/23	Tue 6/27/23
C.7 | Public Open House #2 x 2	Tue 5/30/23	Tue 5/30/23
C.8 | Presentation to Agencies	Tue 6/13/23	Tue 6/13/23
C.9 | Council Meeting	Tue 8/8/23	Tue 8/8/23
D.4.1 | Report Documentation	Wed 6/28/23	Tue 9/19/23
D.4.2 | Final Master Plan	Tue 9/19/23	Tue 9/19/23
C.10 | Notice of Completion	Tue 9/26/23	Tue 9/26/23
Monthly Steering Committee Meetings	Fri 6/16/23	Fri 9/15/23

The study is planned to commence in July 2022 and end in September 2023 to give some buffer in case issues arise so that we can stay committed to delivering by December 2023.

A - REFERENCE LETTERS

CITY OF Thunder Bay
Superior by Nature

COMMUNITY SERVICES DEPARTMENT

TRANSIT SERVICES DIVISION
570 Fort William Road
Thunder Bay, ON P7B 2Z8

Tel. (807) 684-3744
Fax. (807) 345-5744

April 29, 2022

To whom it may concern,

This letter is to provide a client reference for TYLin with regards to services provided for the Thunder Bay Transit Hub Feasibility Study which started in August 2021 and was completed in January 2022.

TYLin was selected to prepare this study due to their work on the North Core Streetscape Master Plan that had stimulated conversation around the possibility of relocating our existing transit terminal in North Core. TYLin had prepared some preliminary value-added analysis through the Streetscape Master Plan that had identified several constraints for the existing terminal including limited walking access given natural and physical constraints, as well as transit operational constraints and redundancies in the existing network due to the hub & spoke nature of the existing system that requires vehicles to provide overlapping service and deviate to start and end their journey at the terminal.

The existing terminal had been located along North Core's Waterfront for many years, and through that time there had been internal municipal conversations revolving around the possibility of re-developing the lands for other municipal needs such as a convention centre. Another component was Thunder Bay Transit's ongoing route optimization program that was shifting service away from the current hub & spoke system to one that was more oriented around corridors with elevated frequencies, and lastly, Thunder Bay's North Core has been experiencing several socio-economic challenges creating a newfound municipal desire to explore opportunities to rejuvenate and enhance the Downtown Core. These elements created an enticing prospect to explore how a relocated mobility hub within North Core could not only improve transit services but also pay dividends towards enhancing public realm, land use planning, and multi-modal access to the local BIA through first/last-mile connections.

TYLin provided detailed origin-destination and smart travel data to inform trip distribution trends along with a transit rider survey at the terminal to obtain rider input and to quantify the benefits of streamlining service toward a relocated terminal. The final report provided an assessment of six different transit terminal designs, developed a phasing approach for two of the design options, developed a supporting multi-modal infrastructure network around the terminal, quantified the benefits, and developed preliminary costing/funding approaches for the recommended solution.

The City of Thunder Bay was pleased with the timeliness, extent of the technical analysis, and attention to detail that TYLin provided through the study. The project manager we worked with was Brandon Orr, who maintained communication and frequent status update meetings throughout the expedited timeline (5 months). TYLin developed solutions for the transit terminal relocation, but also created a holistic multi-modal mobility plan to integrate with broader municipal objectives. This study has since resulted in a new inter-departmental dialogue on transit and mobility needs within North Core and conversations are currently underway to explore next steps in terms of potential integrations with land use and municipal servicing.

Sincerely,

Brad Loroff
Manager – Transit Services
City of Thunder Bay

May 2nd 2022

Lakeview Village Reference Letter – TYLin

To whom it may concern,

This letter has been prepared to provide a client reference for TYLin with regards to transportation planning and engineering services provided for the Lakeview Village Development in the City of Mississauga.

Lakeview Village is a master planned, mixed-use development that will be located on the Mississauga waterfront at the site of the former Lakeview Generating Station. Lakeview Village will revitalize the waterfront though the construction of approximately 8,000 residential units, up to 2,000,000 square feet of employment space (office, retail, research & development, etc.), a public school, cultural lands, and parks. Lakeview Village will be a model of green and sustainable urban living; a place where people can connect with Lake Ontario and live, work, and play on the waterfront.

TYLin (formerly TMIG) joined a consortium of firms in 2017 to plan and design this attractive and vibrant community with a scope of work which includes sustainability, energy, transportation, municipal servicing, and stormwater management. TYLin's team of planners and engineers have designed services and facilities that are accessible, cultural, livable, and connected.

As part of a desire to achieve net zero energy, TYLin prepared a comprehensive Sustainability Strategy Report with a focus on Energy, Waste, Water, Healthy Living and Smart City Innovation, and explored the development of District Energy and Vacuum Waste Management opportunities.

TYLin's mobility team planned the transportation network within the Lakeview Community, including dedicated active transportation pathways, the roadway network hierarchy, transit solutions and parking to make for a connected community that accommodates all modes of transportation. TYLin prepared a Transportation Considerations Report in support of the Master Plan and development Zoning By-law Amendment Application, as well as supporting documents including a Transportation Demand Management and Parking Strategy Report, Intersection Design and Fire Vehicle Movement Memos, Parking and Transit strategy reports. TYLin also led coordination with the City of Mississauga to develop robust parking strategies for new parking standards within the Zoning By-law to reduce automobile dependency and support the master planned community's sustainability strategy.

Lakeview Community Partners Limited was pleased with the timeliness, extent of the technical analysis, and attention to detail that TYLin provided through the development of the Master Plan and subsequent studies and submissions. The staff we have worked with have consistently maintained communication, frequent status updates, and quality deliverables throughout the extensive project timeline. Looking ahead we are pleased to continue collaborating with TYLin on several innovative mobility solutions for transit and goods movement within the community and conversations are currently underway to detail next steps for this development.

Brian Sutherland

Brian Sutherland,

Vice President of Argo Development Corporation

29 April 2022

To whom it may concern,

This letter is to provide a client reference for Mobycon with regards to services provided for the City of Ottawa's Network Principles Study which began in August 2018 and was completed in June 2019.

The Network Principles Study was initiated by the City in preparation for the upcoming Transportation Master Plan (TMP) Update. The City had identified how its transportation networks had evolved over many years essentially without consideration of the implications of how they overlap and in many cases conflict. It was noted that new transportation networks were usually planned by developers, and the City lacked guidance for street layouts and for how to develop networks that provide good connectivity while at the same time encouraging sustainable modes of transportation. Roadway classifications identified corridors and networks for cycling, goods movement (trucks), and transit as well as design designations such as traditional main streets. However, there was a lack of guidance and cohesion on how these functions and classifications related to one another and what the implications were when they overlapped or intersected.

Mobycon was retained by the City due to their knowledge of international best practices and expertise in transportation network planning to balance both "place" and "flow" functions in a network. Mobycon developed a framework to help the City improve its road typologies and reconcile the varied needs of different user types. The framework also supports the City's objective of increasing walking, cycling, and transit mode shares. The study identified gaps and potential inconsistencies within City policies and planning documents that could be addressed in the TMP Update. The guidance developed is now being used by the City in the development of the updated TMP.

The City of Ottawa is happy with the services provided by Mobycon. The consultant team, which included Lennart Nout, maintained communication and frequent status updates throughout the study to ensure the City's project team was informed and that results were suitable to the local Ottawa context.

Robert Grimwood, P.Eng. (Project Manager, Network Principles Study)
Senior Engineer, Strategic Asset Management
Capital Planning and Strategic Asset Management Unit
Asset Management Service | Infrastructure and Water Services Department | City of Ottawa
100 Constellation Drive, 6th Floor (east) | Ottawa, Ontario | K2G 6J8
E. robert.grimwood@ottawa.ca | T. (613) 580-2424 x28757 | F. (613) 560-6068

902 – 7th Avenue
Canmore, Alberta T1W 3K1
(403) 678 - 1500

Date: May 5, 2022

To Whom It May Concern

Re: Mobycon Letter of Reference

To whom it may concern,

This letter is to provide a client reference for Mobycon with regards to services provided for the Town of Canmore's Integrated Transportation Plan (ITP) Update which began in May 2017 and was completed in June 2018.

As a small resort town in the Rocky Mountains, Canmore deals with constraints to expanding road networks, while receiving high visitor traffic volumes. As a result, Canmore has focused on multi-modal traffic solutions for decades, culminating in our 2013 Integrated Transportation Plan.

In 2017, the Town embarked on a bold update to the plan, targeting a major shift in travel mode by 2030. In order to support the Town with planning efforts the Town retained Stantec Engineering supported by sub-consultant Mobycon. The 2018 update required specialized expertise to advise on many elements of the plan in order to reach our targets, specifically around walk, cycle, and transit policy, planning and infrastructure design.

Mobycon, working as subconsultants, supported public and stakeholder engagement to establish a vision and mode share targets. With this foundation set, they delivered a multi-modal network assessment for the existing and future transportation scenarios to identify issues and gaps that needed to be addressed to achieve the goals and objectives of the updated plan. Their recommendations to simplify the street classification system and associated design guidelines for each street type has contributed to the creation of a consistent and coherent transportation network. In addition, their work on clarifying multi-modal targets and developing an implementation plan with short- and long-term improvements has been, and will continue to be, valuable in developing a transportation network that allows for residents and visitors to navigate the community using alternative modes. The plan was adopted unanimously by Council.

After the plan's adoption, Mobycon has continued to serve the Town directly, through a standing offer agreement. Through that work they continue to provide concept planning, project design, development reviews, and general support services. This has ensured implementation of municipal and developer work in a way that is consistent with our strategic plans and goals.

We are please with Mobycon's services and can recommend them highly for your integrated transportation planning and active transport design needs.

B - COMPANY PROFILES

TYLin

Connecting people, places, & ideas

TYLin is a globally connected and collaborative engineering company with 3,000+ professionals worldwide. With 58 offices across the Americas, Europe, and the Asia Pacific, we deliver world-class infrastructure to public and private clients through technical excellence and innovation.

What sets us apart

WE CREATE CONNECTIONS THAT ELEVATE COMMUNITY

TYLin designs infrastructure solutions connecting people, places, and ideas by:

- Enhancing conventional designs with smarter, more resilient systems.
- Connecting gridlocked populations with better means of mobility.
- Stewarding precious resources with sustainable solutions.
- Solving unique challenges with innovative and technically advanced approaches to elevate communities.

AT OUR FOUNDATION, TYLIN IS

APPROACHABLE PEOPLE

Our diverse teams focus on understanding our clients' objectives while collaborating to provide seamless project delivery with a tailored approach.

PROVEN CAPABILITIES

We apply multi-disciplinary capabilities, technical excellence, and a lifecycle approach to deliver creative, resilient, and effective solutions.

GLOBAL EXPERIENCE

From innovative multi-modal designs and complex transportation projects to iconic bridges and buildings, our portfolio spans the full range of sectors in advanced mobility infrastructure, smart buildings, and sustainable water solutions.

WHAT DRIVES US

Client Focused
We strive to always give our clients the best solutions.

Integrity
We do the right thing in an ethical, fair, and sustainable way.

Collaboration
We bring a diverse and inclusive team, working together towards technical excellence.

Innovation
We strive to create new and better ways to solve our clients' toughest challenges.

2020 ENGINEERING NEWS-RECORD (ENR) RANKINGS

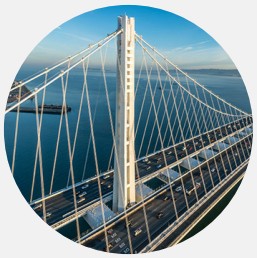
#38 Top 500 Engineering Firms	#11 Transportation	#11 Highways
#11 Bridges	#15 Mass Transit & Rail	#23 Airports

What we do

As a global engineering firm, we connect our clients with innovative thinking and advanced technical expertise to deliver inter-disciplinary services solving their toughest challenges throughout a project's lifecycle.

Consulting
Engineering
Planning
Management
Design

Who we serve



TRANSPORTATION
- Aviation
- Bridge
- Port + Marine
- Rail + Transit
- Roads + Highways

BUILDINGS
- Commercial
- Education
- Healthcare
- Government
- Science + Technology

WATER
- Drinking Water
- Wastewater
- Water Resources

Connected to success

TYLin is a member of a global alliance of consulting and engineering firms, with unique and complementary specializations, serving the building, transportation, and water sectors.

Together, we provide our clients with the resources and reach of a truly global company and the innovative thinking and deep focus of a best-in-class specialty firm.

Our alliance enables us to tailor and scale our solutions to our client's specific needs. Through technical excellence, local knowledge, and future insight we empower positive change in our communities and for our planet.

DAR GROUP

TYLin is a member of the Dar Group (www.dargroup.com), a privately owned international network of professional services firms with over 17,670 employees in 297 offices across over 100 countries

The Dar Group is dedicated to the planning, design, engineering and project management of facilities, installations and structures that elevate the sustainable advancement of communities worldwide.

A GLOBAL ALLIANCE

TYLin · INTEGRAL · LEA · Ross&Baruzzini · gpo · Sam Schwartz · Silman · MAFFEIS engineering

TYLin

Prospect Point Restoration
photo credit: James Cavanaugh

CLIENT
New York State Office of Parks, Recreation and Historic Preservation (NYS OPRHP)

PROJECT DATES
Transformation Initiative - 2012 - 2018

Visitor Center - 2019 - (est. Jun 2023)

CONSTRUCTION COSTS
Transformation Initiative - $40M
Visitor Center - $46M

AWARDS

2021 ASCE Outstanding Civil Engineering (OCEA) Award

2021 ASCE OCEA Honor Award, the 2019 ACEC Engineering Excellence Honor Award

2019 ACEC NY Engineering Excellence Diamond Award in the Special Projects category

2018 ENR Best of the Best Renovation/Restoration Project Award

2018 ENR Best Renovation/ Restoration Project Award

NIAGARA FALLS STATE PARK, NY

Niagara Falls State Park Transformation Initiative and Visitor Center

TYLin was retained by NYS OPRHP for a multi-year term agreement for the Niagara Falls State Park Transformation Initiative, a comprehensive capital rehabilitation and improvement plan (completed 2018), and a separate multi-year term agreement for the new Visitor Center (ongoing). TYLin's responsibilities include overall program management and project management involving the following disciplines site and civil engineering, landscape architecture, architecture, geotechnical engineering, structural engineering, environmental engineering, electrical and mechanical engineering, code compliance, and surveying.

SPECIFIC FACILITIES & INFRASTRUCTURE RELATED WORK

In addition to overall program management, TYLin's work encompasses three new building structures on Goat Island and a New Visitor Center at the Park to enhance the overall visitor experience. Following an extensive program analysis, additional restrooms and improved information/ticketing facilities were deemed necessary. Portable kiosks in the area were replaced with permanent structures that enhance the historic architectural vocabulary of the park, while taking into consideration the park's historic and natural setting, and the site's operational requirements. Specific projects include:

New Visitor Center – TYLin is leading this $46M project providing overall project management; site, structural, mechanical, and electrical engineering; and building energy modeling and code compliance services. The new 28,000 sf center incorporates ticketing, interpretive exhibits, dining,

New Visitor Center Rendering
rendering credit: GWWO

a gift shop, and a separate restroom building. The existing Administration Building is also being renovated to include multi-purpose rooms, administrative offices, and back-of-house loading. Estimated completion date is March 2023.

Comfort Station/Information Building - The building provides ticketing, information, and restroom facilities and complements the Pavilion and Elevator Buildings with the use of stone veneers, round columns, and exposed rafters.

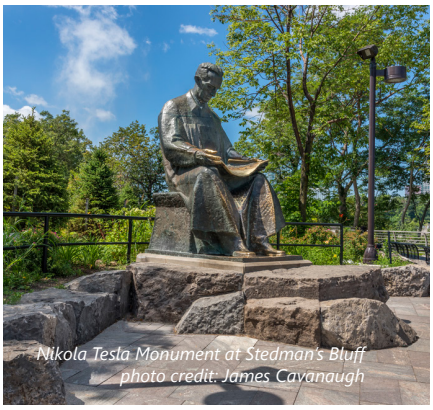
Ticketing Building and Cave of the Winds Entry - This new formalized entry to the Cave of the Winds Experience is approximately 43 ft by 21 ft and functions as a gateway and a point-of-sale ticketing opportunity. The gable ends of the arch harmonize with the gable ends of the Comfort Station; round columns were incorporated as well as stone veneer.

Retail Building - Two retail kiosks that conflicted with the historic architecture on Goat Island were removed and replaced with the new 37 ft x 23 ft structure incorporating the same aesthetic and materials as the other two buildings.

Administration Building
photo credit: James Cavanaugh

Cave of the Winds Entry and Ticketing Building
photo credit: James Cavanaugh

Terrapin Point Reconstruction includes landscape architecture design and rehabilitation at major Park features and key overlook access that is ADA accessible. Work included various degrees of geotechnical and slope stability work; pathway and retaining wall reconstruction; pedestrian railing replacement; plantings and site furnishings; and site lighting and irrigation. TYLin led a team of five firms on this exciting and transformative project.



Nikola Tesla Monument at Stedman's Bluff
photo credit: James Cavanaugh

Regional Administration Building Roof Replacement Designed the replacement of the copper roofing system for this 9,000 sf historic building.

Three Sisters Islands Landscape Improvements Project Preparation of Stormwater Pollution Prevention Plan and Pedestrian Bridge Rehabilitation.

Prospect Point and Lower Grove – Landscape and Facilities Improvements – Preparation of design and construction documents for overlook and viewing improvements, including specialty pavement areas, plantings, trails, trail and river accent lighting, automatically operated irrigation system, new safety railing and Trolley Shelter.

North Shore Trails (Goat Island) – Trail Improvements - Preparation of design and construction documents for trail with overlooks and lighting, including upgrade for ADA access.

Luna Island Pedestrian Bridge – Detailed inspection including concrete cores and preparation of report recommending rehabilitation of the bridge stone façade and replacement of railing. Inspection work was involved rigging for access under the bridge and was conducted during the night to avoid conflict with ongoing Luna Island construction and Hurricane Deck tourist use.

Supplemental Topographic Survey and Mapping of the Prospect Point, Lower Grove trails, North Shore trails, Cave of the Winds and Terrapin Point areas, and Parking Lots 1 and 2 to facilitate design work in these areas.

Parking Lots 1 and 2 Upgrades – Planning and design of parking lot layout improvements and state-of-the-art Parking Access and Revenue Control System (PARCS). PARCS is a fully automated, machine readable system, with voice communication for patron service. The AVI and bar code


Parking Lot 2
photo credit: James Cavanaugh


Prospect Point
photo credit: James Cavanaugh


Luna Pedestrian Bridge
photo credit: James Cavanaugh

technology system is the first fully automated software programmable, state-of-the art facility in the NYS Parks system, and is being used as the model system for parks throughout the state.

Cave of the Winds Plaza – Landscape and Facilities Improvements – Preparation of design and construction documents for improvements, including the Cave of the Winds Plaza area, Stedman's Bluff, the Gorge Rim Trail, the Top of the Falls Restaurant area, and Terrapin Point.


Niagara Scenic Trolley Stop
photo credit: James Cavanaugh

Goat Island / Cave of the Winds Plaza Area Improvements - As part of the overall Park improvement project, TYLin designed a new sanitary sewer and pump station system to serve Goat Island. Work included analysis of the existing sanitary system, and preparing alternative for upgrades and improvements to provide a sanitary sewage collection and transmission system that was effective, cost efficient, easy to maintain and in compliance with governing NYSDEC requirements. The selected system that was designed includes a new suction lift pump station to replace three aging and inefficient existing pump stations, along with 800 linear feet of sanitary force mains and 2000 linear feet of gravity sewer main. The new system was designed with an emergency power generation service to the pump station. The new collection and conveyance system replaces the existing aged sanitary sewer laterals with new pipe to eliminate groundwater infiltration, reduce maintenance costs, and precludes the need for disruptive repairs in the improved site.

COMPANY PROFILE

MOBYCON

PLAN • DESIGN • LEARN

Mobycon is a Dutch-Canadian consultancy specializing in developing and implementing innovative and sustainable mobility solutions nationally and internationally. As a multi-disciplinary team of traffic engineers, urban planners, economists, and human geographers, Mobycon delivers diverse, integrated mobility products and consulting services. Our work supports the development of healthy, connected, liveable communities working to reduce car dependence.

With over 30 years history operating in the Netherlands and across Europe, Mobycon began actively applying Dutch knowledge to support mobility innovation in North America in 2012. Three years later, Mobycon launched our office in Ottawa, Canada in the spring of 2015. This local presence allows us to provide support on the delivery of projects across the North American market.

Mobycon focuses on working with local partners, applying decades of knowledge and experience to help our clients develop tailor-made, local solutions that maximize safety and accessibility for the mobility of all users. Our approach to addressing complex planning, design and policy challenges relies on bridging the gaps between the *Hardware* of high-quality infrastructure, the *Software* of programs and engagement and the *Orgware* of institutions and process.

As more cities prioritize improved sustainability and liveability, Mobycon is prepared to provide expert service and support. Our knowledge about walking and cycling planning, public transportation, mobility management/TDM, parking & traffic, and road safety are the tools needed to help cities realize their potential.

SERVICE AREAS

In response to the growing demand for Dutch and European knowledge about urban design, bicycle and pedestrian planning, road safety and integrated mobility, Mobycon delivers projects in the following areas across North America:

PLANNING	Integrated networks and facilities including: bicycle and pedestrian networks, master plans, implementation strategies.
DESIGN	Innovative multimodal facilities including: complete streets, shared space, slow streets, cycle tracks, multi-use pathways, protected intersections, roundabouts.
TRAFFIC SAFETY	Research, evaluation and countermeasure development, drawing on the success of Sustainable Safety to focus on improving traffic environments for vulnerable road users.
POLICY & RESEARCH	Focusing on a variety of topics in the field of mobility including: design manual development and guidance, establishing metrics for program evaluation, integrated mobility solutions investigation.
ENGAGEMENT & CAPACITY BUILDING	Through the delivery of: masterclasses and workshops, collaborative co-design, public consultation, education and encouragement strategies, cycling and walking audits, leading study tours in the Netherlands.

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204 Lebreton Street North • Ottawa, ON • Canada K1R 6Y8 • +1 (613) 216-2332 • info@mobycon.com
www.mobycon.com

Vaughan Pedestrian and Bicycle Master Plan Update

Vaughan, ON

PLAN • DESIGN • LEARN

Project Type	Pedestrian and Bicycle Master Plan Update
Client	City of Vaughan
Timeline	April 2017 – October 2019
Budget	$118,000
Contact	Dorothy Kowpak, Project Manager, Active and Sustainable Transportation
Address	2141 Major Mackenzie Dr., Vaughan, ON
Telephone	1 (905) 832-8585 x8812
Email	Dorothy.Kowpak@vaughan.ca

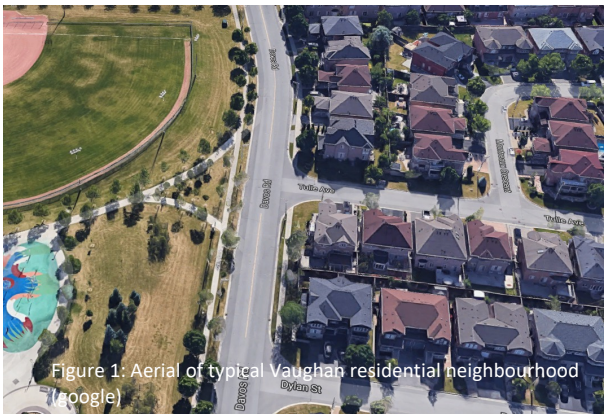

Figure 1: Aerial of typical Vaughan residential neighbourhood (Google)

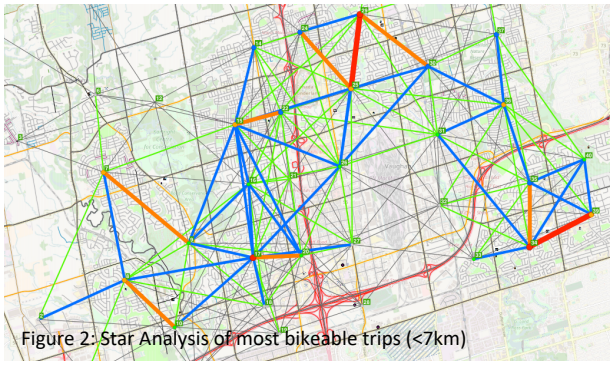

Figure 2: Star Analysis of most bikeable trips (<7km)

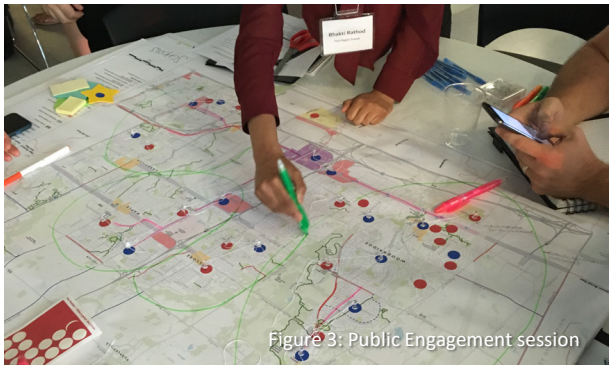

Figure 3: Public Engagement session

PROJECT OVERVIEW

The City of Vaughan had identified a need to update their Pedestrian and Bicycle Master Plan (PBMP) in order to match and surpass active transportation trends in neighbouring communities. Specific emphasis was placed on developing a network implementation strategy that was high impact. As one of the fastest growing municipalities in the region, they were eager to develop an updated PBMP that addressed current needs while planning ahead to the anticipated increase in population.

Mobycon, working with partner CIMA+ and LURA were engaged to review the existing PBMP and provide recommendations to update the plan. A significant goal included adjusting the plan to include a comprehensive AAA cycling network, addressing gaps in the existing network, and reviewing policies and practices. The team also included input on the development of the Vaughan Metropolitan Centre, the new downtown and urban centre for the community.

OUR APPROACH

Mobycon and CIMA worked together to provide a thorough execution of the project. Along with reviewing the existing plan, intensive public engagement was undertaken to gain a more complete understanding of the needs and desires of the residents.

A network design using the Star Analysis method was undertaken. The approach was used both as a technical tool and an engagement tool with local stakeholders to identify key links in the city for active transportation.

The various networks were then prioritized into an implementation plan with 5- and 10-year horizons. These were focused primarily on connecting community through the development of the comprehensive network, followed by expanding it to the greater city area. The team also reviewed existing policies and programs, making recommendations to support the targets which were included in the updated PBMP.

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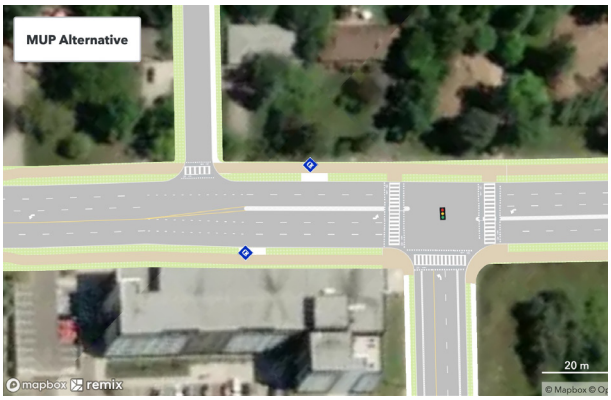
Ref #: 5732

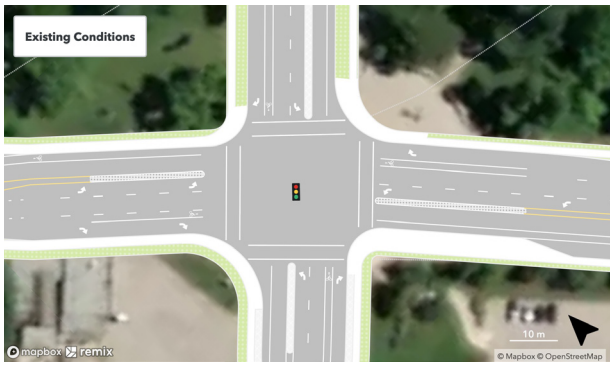
ICIP Cycling Network Expansion

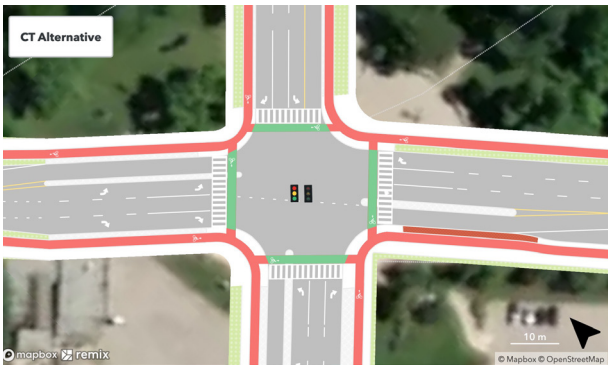
Guelph, ON

PLAN • DESIGN • LEARN

Project Type	Conceptual Design Study
Client	City of Guelph
Timeline	July 2021 – July 2022 (expected)
Contact	*Contact information not included as the project is ongoing
Address	
Telephone	
Email	
Budget	$94,200







PROJECT OVERVIEW

The City of Guelph received an Investing in Canada Infrastructure Program (ICIP) grant to undertake a conceptual design study for 13 km of protected cycling infrastructure on three major corridors connecting downtown Guelph to surrounding neighbourhoods.

Mobycon, working alongside partner Dillon Consulting, was retained to develop a total of 12 concept designs, four alternatives for each corridor. Additionally, we supported community engagement and communications efforts to help ensure designs were reflective of public and stakeholder desires.

The project is not yet complete and the design alternatives are being evaluated by the project team and key stakeholders before Mobycon continues with the refinement of the preferred designs for each corridor.

OUR APPROACH

Mobycon employed the wed-based design software Remix to develop the concept designs. Designs created in this software are visually appealing and easily understood by a non-technical audience, an important consideration when consulting with stakeholders and the general public.

We first developed the base case in the software, creating a digital representation of the existing conditions along each corridor in the study. From there, design alternatives could be developed efficiently by modifying the existing conditions to add cycling infrastructure, narrow vehicle lanes, or widen sidewalks. A protected bike lane, multi-use path, and cycle track option was developed for each corridor, applying national and international best practices. Mature trees, surface utilities, property and operational impacts are also taken into consideration.

Following the completion of the alternatives evaluation and consultation with the public, a final concept design will be developed and refined for each corridor.

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Ref #1246

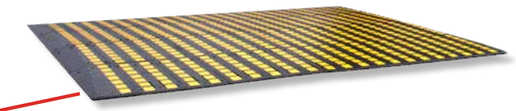
Solutions for **safer streets** and **simplified parking**

OPENSPACE COUNTING SOLITIONS

Smart sensors embedded into speed humps or directly into road surfaces detect and count each vehicle that enters or exits your lot. The sensors communicate wirelessly to data collectors and signs to display real time occupancy to parkers.

FOLDING VARIABLE MESSAGE SIGN

Display custom messages wherever and whenever they are needed with the most portable, durable, and easy to use message sign on the market.



SPEED TABLE

Designed for roads where you want to maintain traffic flow while impeding speeders, speed tables are ideal for keeping traffic moving safely. The extended length slows drivers to safe speeds without the abrupt slowing associated with speed bumps.

SPEED CUSHIONS

For roads where both speeding and emergency response are a concern, speed cushions offer a low-cost solution that slows cars while letting ambulances and fire engines pass without reducing speeds.

SAFEPACE SPEED SIGN

Displaying vehicle speeds in bright LED digits, the SafePace speed display signs alert drivers to their speeds while reminding them of current speed limits. They are an effective tool to slow cars down, even miles down the road.

GUARDIAN AWARENESS SPEED CAMERA SYSTEM

Capturing time-stamped images of speeding vehicles, the Guardian Awareness camera system integrates with any SafePace sign, giving you access to data on who, when, and where speeding is occurring to help you better enforce speed limits.

LOGIX ITS

Solutions for **safer streets** and **simplified parking**

At Logix ITS, we strive to protect people as they travel and support them when they arrive. Our solutions create safer streets for all road users and help them park quickly and efficiently when they reach their destinations.

TRAFFICLOGIX

ALL TRAFFIC SOLUTIONS

With the most robust product offering on the market, we offer everything companies, communities, and cities need to **slow traffic down and prevent crashes and fatalities**. Our traffic calming solutions include over 10 models of radar feedback and variable message signs, traffic counters, speed cameras, and recycled rubber speed humps and curbing. Our solutions are cloud connected, so you can control your signs, access detailed traffic data, and adjust settings from anywhere.

Parking LOGIX

The market leader in parking occupancy systems, Parking Logix enhances the parking experience with OpenSpace, an innovative parking counting solution. OpenSpace is the **simplest, most accurate, and most affordable parking guidance platform in the world**. Wireless sensors gather detailed parking data and share it with users on variable message signs, company websites, and integrated apps. Drivers avoid the stress and hassle of looking for parking with guidance that helps them find available spots quickly and efficiently.

INDUSTRIES WE SERVE

The traffic calming solutions of choice for over 8000 cities, law enforcement agencies, communities, and corporations across North America and around the world.


Airports


Oil & Energy


Heavy Industrial


Corporate Campuses


Private Communities


Distribution Centers


Municipalities


Automotive Manufacturing

Law Enforcement

URBANSDK

Origin-Destination

Indexed data for daily vehicle, bicycle, walking and truck counts

Transportation Planning Metrics

Trip Counts

Connected vehicle trips indexed by origin, destination, and mode

Distance

Distance traveled between starting, ending, and waypoint

Travel Time

Five-year rolling average of travel times by period, month, and year

Speed

Last reported speed and average speed by hour, day, month, year

Location

Accurate location data for trucks, vehicles, and pedestrians

Time Periods

Travel times segmented by hour, day, month, and year

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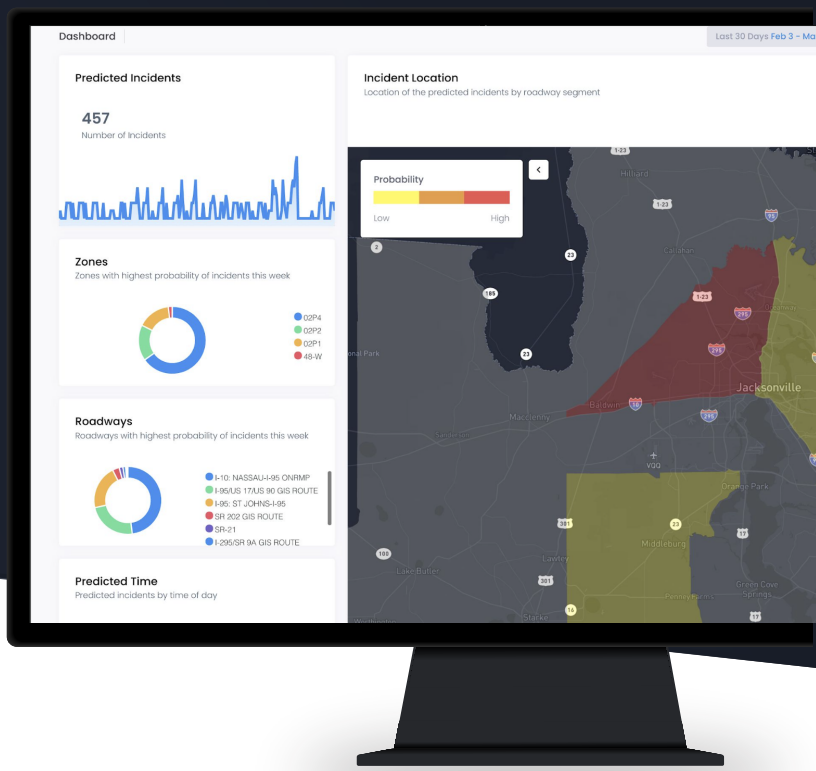
URBANSDK

Safety Reporting

Integrated mobility analytics to make better decisions in real-time and for the future



Traffic Safety Metrics

Crash Reporting

Automate crash and incident reports from existing analytics

Predictive Modeling

Identify crash rates, crash risk, and top hotspots for daily/monthly review

Data Cleaning

Index and normalize historical data for 3 years to improve linear referencing

Analysis Workspace

User analysis and configurable reporting dashboards

Developer API

Real-world data for application development, planning, and analysis

Developer Hours

Service hours for implementation and reporting metrics customization

sales@urbansdk.com
+1 (904) 337-9836

METROPLAN ORLANDO

DATA PLATFORM FOR PERFORMANCE MONITORING

ORLANDO, FL

By utilizing Urban SDK's platform, MetroPlan Orlando has been able to aggregate data; configure, automate, and publish performance measures dashboards and maps; embed scorecards and annotations for interactive public communication in any website; and manage a data warehouse for regional partners. In contracting Urban SDK, MetroPlan Orlando increased its efficiency, accuracy, and reporting capabilities by leveraging a larger collection of data.

Using Urban SDK's platform has enabled the MetroPlan team to conduct more thorough studies of the Greater Orlando Area — including speed and reliability reporting, and crash analysis. The data presented and consolidated by Urban SDK has helped officials make data-driven decisions and identify planning priorities within the planning area. MetroPlan Orlando has also utilized Urban SDK to publish dynamic maps and dashboards to public-facing sites. This has helped officials tell their story to constituents and showcase travel patterns throughout Central Florida.

SCOPE OF SERVICES

Safety Measurements
Monitoring safety measures throughout the region

Travel patterns
Tracking speed and reliability measures

Thorough road analysis
Performing granular analysis on state roads, arterials, and connectors

Data implementation
Implementing more big data to complement current FDOT data

QUICK FACTS

REFERENCE

Lara Bouck

Sr. Transportation Engineer

(407) 481-5672 Ext. 309
lbouck@metroplanorlando.org

250 S Orange Ave #200
Orlando, FL 32801

INITIATIVES

Regional collaboration

Increased data access

Public reporting

CONTRACT VEHICLE

Sole Source

metroplan orlando
A REGIONAL TRANSPORTATION PARTNERSHIP

sales@urbansdk.com
+1 (904) 337-9836

URBANSDK

FLORIDA DEPARTMENT OF TRANSPORTATION

REAL-TIME PERFORMANCE MEASURES

JACKSONVILLE, FL

In an effort to streamline consistency, increase the speed of access to future data visualization, and make cost-effective choices, the Florida Department of Transportation (FDOT) District 2 has partnered with Urban SDK to license a platform of real-time performance measures. Through our work with FDOT District 2, we have provided a configurable analytics tool to automate corridor analysis, standardize performance measures reporting, and streamline statewide data visualization.

By automating performance measures and analysis with access to an accurate, extensive global data exchange for traffic, safety, weather, ride-share, carriers, and consumer apps, as well as local, state, and federal open datasets, Urban SDK eliminated FDOT's need for data silos. We also created a real-time index of integrated data.This allowed for automation of performance measure analysis and reporting to optimize services.

SCOPE OF SERVICES

Simplified data management
Eliminate data silos to create a real-time index of integrated data for predictive analytics

Integration of services
Connect data across mobility service providers and transportation IoT

Optimization of performance measures
Automate performance measure analysis and reporting to optimize services

Travel patterns
Index real-time traffic counts, safety, transit ridership, and travel speeds on arterials

QUICK FACTS

REFERENCE

Pete Vega

TSM&O Director

904-360-5300
pete.vega@dot.state.fl.us

2198 Edison Avenue
Jacksonville, FL 32204

FDOT DISTRICT

District 2

INITIATIVES

Data management

Faster reporting

Corridor analysis

CONTRACT VEHICLE

Subcontracting

Teaming Partner

Metric Engineering

FDOT

C - COMMUNITY STEWARDSHIP

COMMUNITY STEWARDSHIP

ENVIRONMENTAL STEWARDSHIP

At TYLin, our mission is to deliver the highest quality solutions to build healthy and sustainable communities, while adding value to our clients' projects. We believe both physical and mental health of our community members are intrinsically connected to the environment they live and work in and therefore, our solutions shape the health of our communities for future. In addition to ensuring our planning, engineering, and designing practices are sustainable in a way that encourages communities to live a healthier life through design.

From an administrative perspective, simple solutions of paperless and virtual meetings will be held where possible to limit our carbon footprint. Since the beginning of the COVID-19 pandemic, TYLin and our clients have become accustomed to a multitude of meeting software packages, including Microsoft Teams which worked well for both sides. TYLin has also hosted virtual public and stakeholder meetings to positive feedback.

TYLin has earned numerous awards for sustainable design. Most notably, we were awarded the 2018 OPWA Public Works Project of the Year Award – Environment, $2 to $10 Million Category for Elgin Mills Greenway, as well as the 2012 OPWA Public Works Project of the Year Award – Structures Greater than $10M for Sherbourne Common (Waterfront Toronto). These projects contributed to our recognition as leaders in the design and implementation of LID practices for stormwater management and have been applying our expertise to large infrastructure projects for more than a decade.

While our work on sustainable design projects has a positive impact on our towns and cities, TYLin knows that smaller changes matter too. In November of 2020, TYLin staff initiated a new Sustainability Committee, with a mission to bring forth sustainable living awareness within our organization through education and practice. The sustainability committee holds virtual events to educate and encourage discussion amongst our employees to talk regarding current environmental trends and facts in the world. It works as a reminder to every one of the works that is still required to protect our people and the planet. The committee also publishes articles in the TYLin monthly newsletter about topics varying from recycling practices, difference between the various types of plastics, water contamination etc. Looking ahead, the committee is connecting with Smart Commute, a program to help employers explore and support different commute choices such as cycling, carpooling and transit.

COMMUNITY STEWARDSHIP

TYLin has a long-standing social committee, supporting our staff to stay socially connected and give back to our community. We support our employees through charitable contributions as we believe giving is a form of expressing gratitude. It has also shown to help with mental health and being mindful of our place in the world. In the past year, our teams have run two very successful campaigns for Water for People Canada and United Way; TYLin proudly matched 100% of the contributions for both campaigns. We plan to continue to hold campaign weeks for both non-profit organizations in the future, as well as explore opportunities to contribute to many more charitable organizations.

BUILD

TYLIN INTERNATIONAL

INCLUSION AND DIVERSITY

TYLin believes firmly in supporting and advocating for diversity, equity, and inclusion. In October 2017, TYLin's Vaughan office formed a Diversity and Inclusion (D&I) Committee with the aim of identifying opportunities for corporate and individual contributions that, in general, would allow us to increase social awareness and give back to the local community. The D&I group met monthly to discuss opportunities and to engage TYLin staff in learning initiatives.

In 2020, TYLin established BUILD, an employee-led group with a mandate to gain a deeper understanding of diversity, equity, and inclusion and develop programs to advance change for the betterment of our people, our clients, and our communities. BUILD stands for:

- **Bridging the Gap:** Connecting communities. Being receptive to new ideas, experiences, and people to learn and grow with one another.
- **Unifying the Company:** Bringing everyone together and cultivating a sense of "One Vision". Acknowledging different perspectives while sharing and maintaining common goals.
- **Including Everyone:** Ensuring everyone feels part of the team. Building an inclusive workplace of which we are proud.
- **Leveling the Playing Field:** Providing equitable opportunities to everyone. Empowering through education, support, and encouragement.
- **Diversifying:** Recruiting, retaining, developing, and investing in talent across an array of individuals.

To achieve these goals, TYLin utilizes BUILD Ambassadors, extensions of the BUILD initiative in each office, acting as passionate advocates who:

- Further a culture of acceptance, belonging, and respect.
- Foster an environment where staff respect each other and build on each other's views.
- Introduce new hires to BUILD and keep staff updated on BUILD activities and resources.
- Leverage teambuilding and includion-related opportunities and events.

TYLin is proud to support four BUILD Ambassadors in our local office, including a members of the proposed study team, **Ridhita Ghose** and **Amar Lad**, who are our local office's BUILD ambassadors.

TYLin kicked-off the first Building Bridges in our Communities (BBC) Week from September 27 to October 1, 2021, by partnering with Feed Ontario to support the communities where we work. Our mission for this event was to build and sustain lasting relationships with other organizations, causes, and people based on our ideas, hope, and shared humanity. To accomplish that, TYLin offices across North America partnered with nonprofit organizations in their local communities to participate in a day of service.

D - PAAS PROGRAM CONCEPT


Planning-as-a-Service (PaaS) Solution
TYLin
TRAFFICLOGIX
URBANSDK

TRAFFICLOGIX

Traffic Logix is a global leader of ITS solutions since 1995, delivering innovative traffic counting, enforcement, and parking sensors. Their sensors are used across the world including locally in Ottawa and across Canada, as well as internationally including in Calcutta, India.

Role: Traffic Logix will be the hardware provider for the multi-modal counting technology solution. This hardware will allow a continuous source of detailed, reliable volume data for all type of mobility flows.

Accurate Multi-Modal Volume Counts

URBANSDK

Urban SDK was founded in 2018 and provides a data confidence platform for smart cities that also sources mobility location data through anonymized metadata to accelerate more confident decisions.

Role: Urban SDK's data confidence platform will allow us to combine mobile location data samples and expand them based on physical count data derived through Logix sensors. This will allow us to quantify trip distributions, average trip distances, and trip durations.

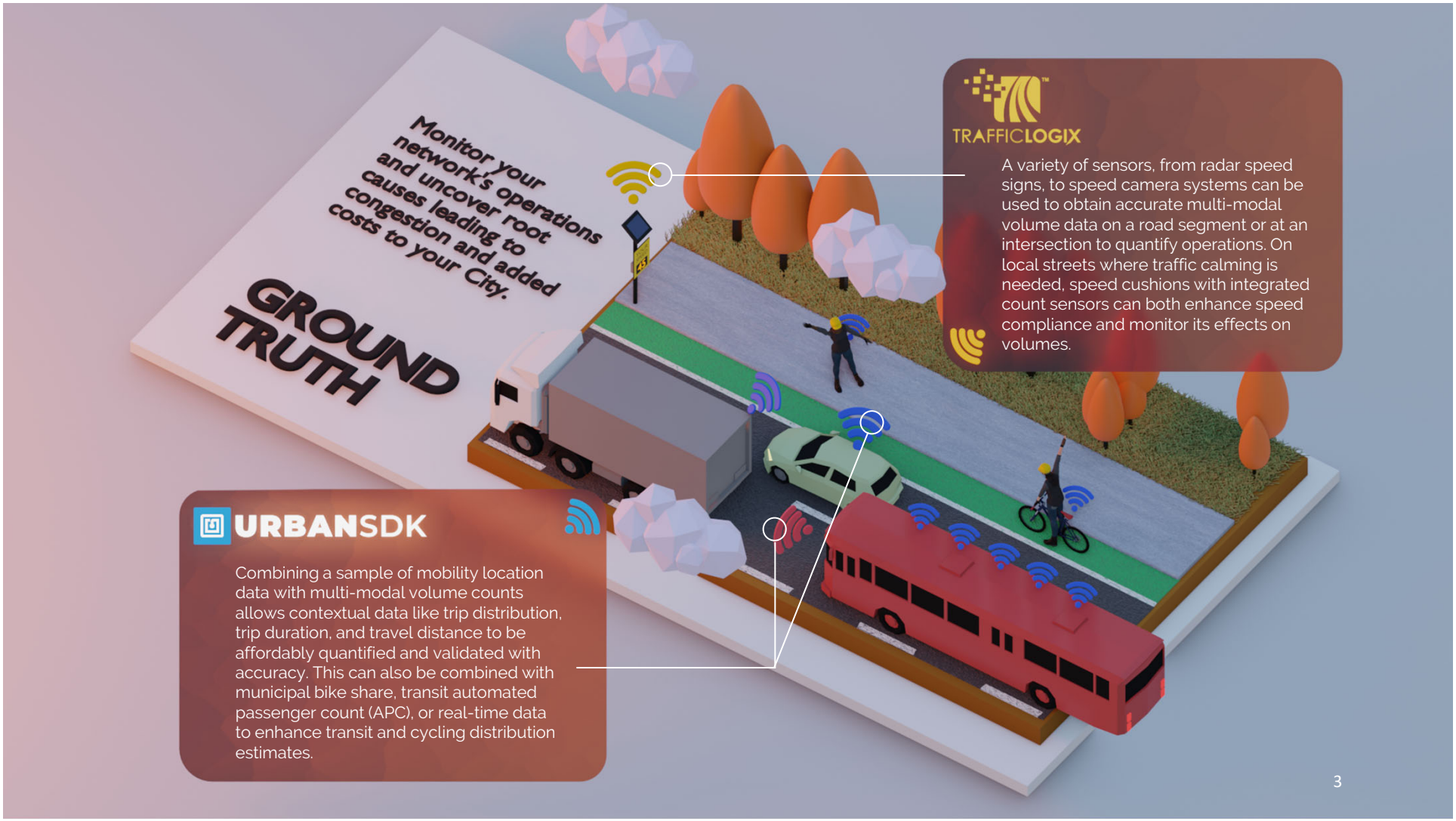
Dashboard & Mobility Origin-Destination Data

TYLin

TYLin is a top 35 globally recognized full-service infrastructure consulting firm with over 3,000 professionals working throughout the Americas, Europe, and Asia. Members of our team have worked with municipal, regional, and state-level clients and are involved in dialogue through the Ontario Traffic Council (OTC) and the Urban Robotics Foundation (URF).

Role: TYLin will be responsible for managing the study and will contribute technical expertise for validating and obtaining insights from collected data.

Management, Validation, Analytics, and QA/QC


Monitor your network's operations and uncover root causes leading to congestion and added costs to your City.
GROUND TRUTH
TRAFFICLOGIX
A variety of sensors, from radar speed signs, to speed camera systems can be used to obtain accurate multi-modal volume data on a road segment or at an intersection to quantify operations. On local streets where traffic calming is needed, speed cushions with integrated count sensors can both enhance speed compliance and monitor its effects on volumes.
URBANSDK
Combining a sample of mobility location data with multi-modal volume counts allows contextual data like trip distribution, trip duration, and travel distance to be affordably quantified and validated with accuracy. This can also be combined with municipal bike share, transit automated passenger count (APC), or real-time data to enhance transit and cycling distribution estimates.
3


GROUND TRUTH
TRAFFICLOGIX
Embedded parking sensors and variable message signs (VMS) can be used to monitor vehicular parking demand, and when integrated with volume and speed data, can be used to inform development and precinct parking policy needs.
URBANSDK
Mobility location data can be used to understand parking demand distribution, monitor curbside management, and balance public parking needs for cars, bikes, and emerging micromobility options.
The added context allows municipal staff to more effectively understand the potential impacts of flexible curbside infrastructure like temporary patios, public art installations, or special event closures.
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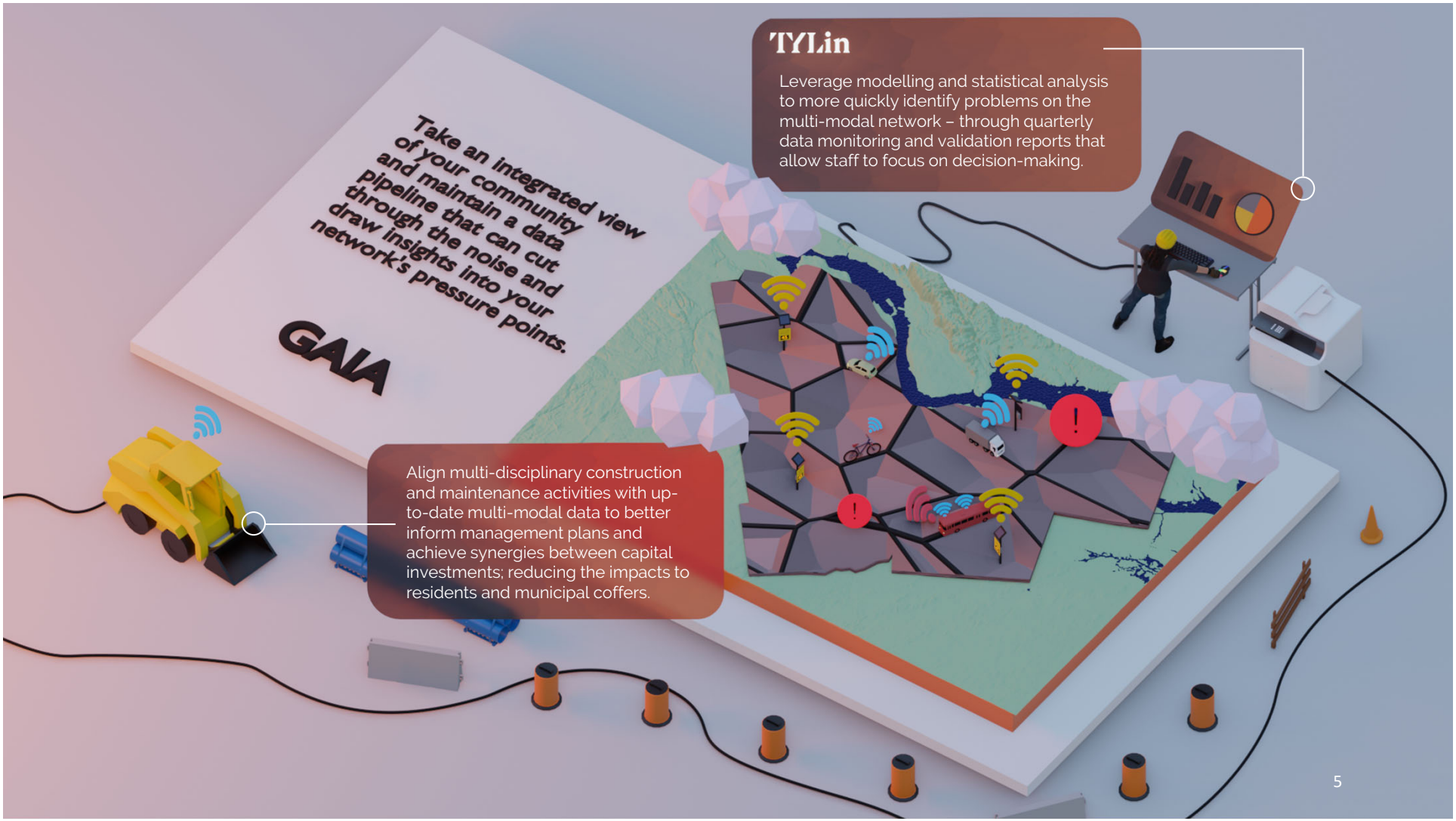
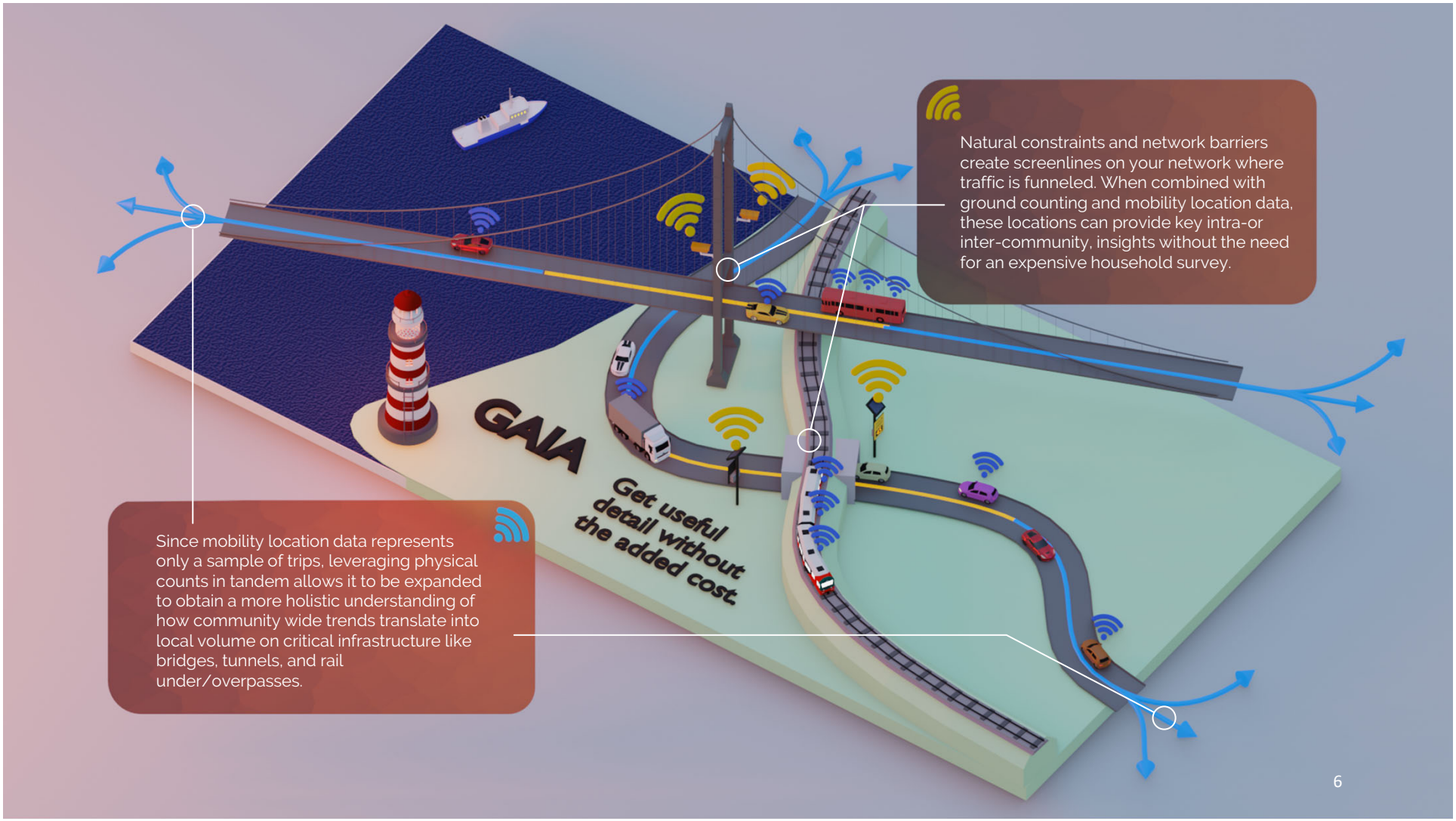
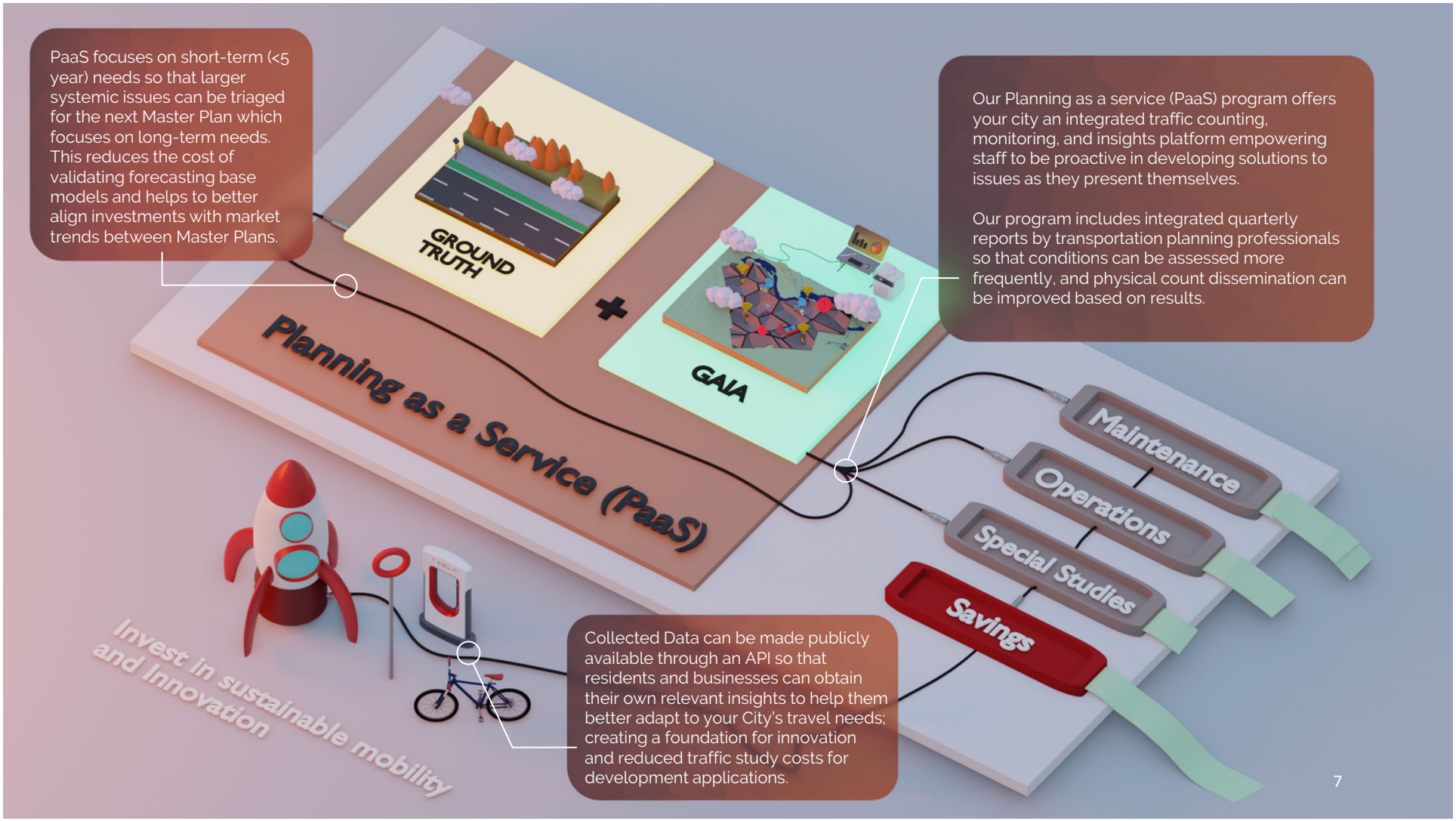
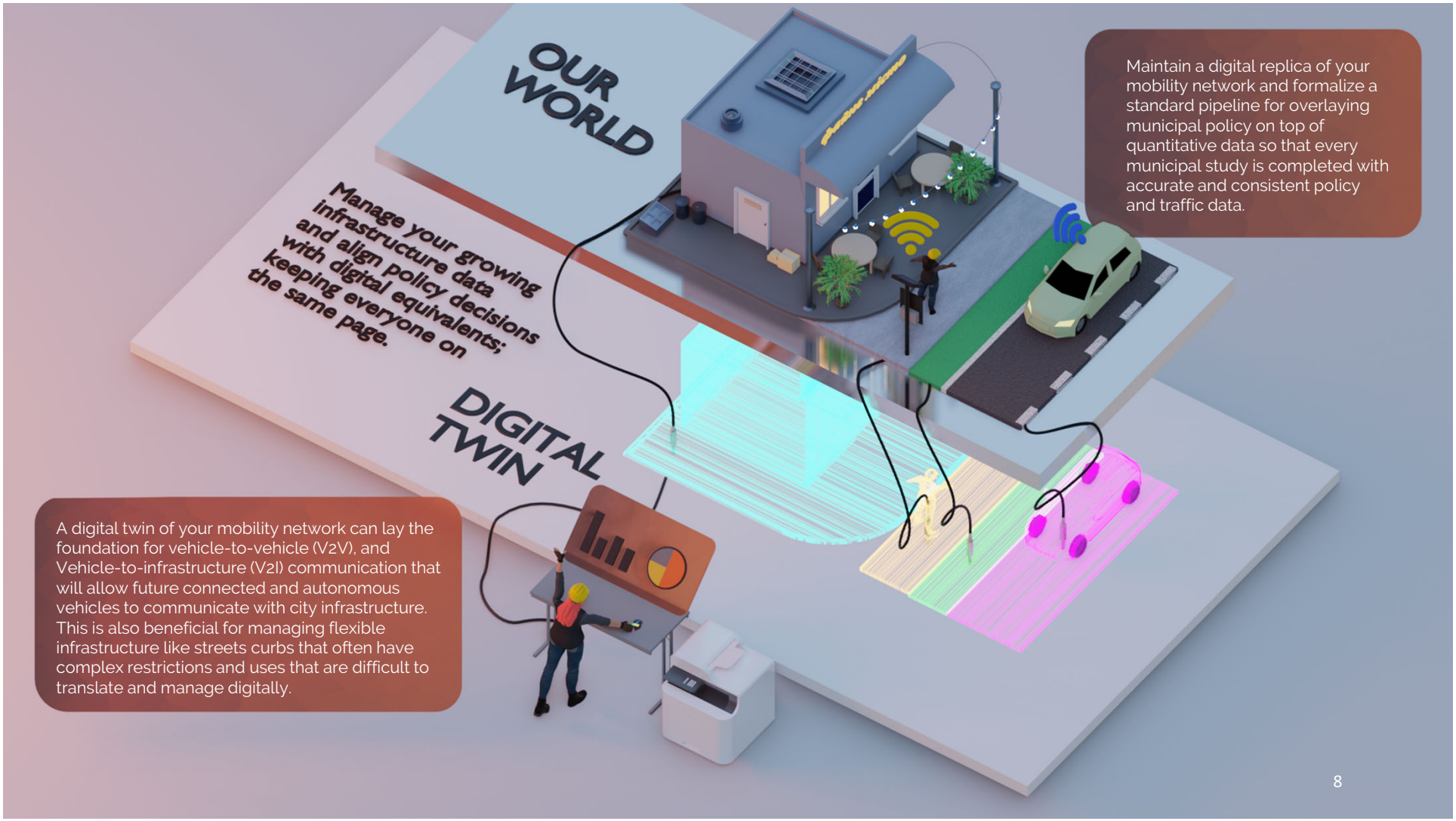

TYLin
Leverage modelling and statistical analysis to more quickly identify problems on the multi-modal network – through quarterly data monitoring and validation reports that allow staff to focus on decision-making.
Take an integrated view of your community and maintain a data pipeline that can cut through the noise and draw insights into your network's pressure points.
GAIA
Align multi-disciplinary construction and maintenance activities with up-to-date multi-modal data to better inform management plans and achieve synergies between capital investments; reducing the impacts to residents and municipal coffers.
5


Natural constraints and network barriers create screenlines on your network where traffic is funneled. When combined with ground counting and mobility location data, these locations can provide key intra-or inter-community, insights without the need for an expensive household survey.
GAIA
Get useful detail without the added cost.
Since mobility location data represents only a sample of trips, leveraging physical counts in tandem allows it to be expanded to obtain a more holistic understanding of how community wide trends translate into local volume on critical infrastructure like bridges, tunnels, and rail under/overpasses.
6

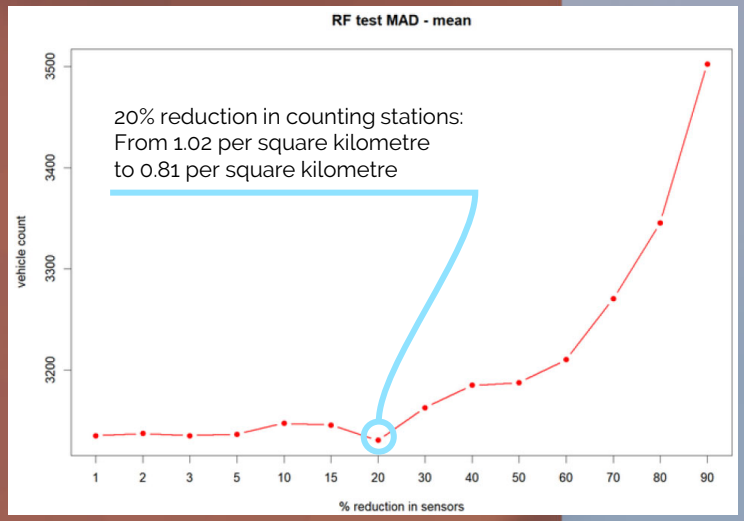

PaaS focuses on short-term (<5 year) needs so that larger systemic issues can be triaged for the next Master Plan which focuses on long-term needs. This reduces the cost of validating forecasting base models and helps to better align investments with market trends between Master Plans.
GROUND TRUTH
GAIA
Planning as a Service (PaaS)
Our Planning as a service (PaaS) program offers your city an integrated traffic counting, monitoring, and insights platform empowering staff to be proactive in developing solutions to issues as they present themselves.
Our program includes integrated quarterly reports by transportation planning professionals so that conditions can be assessed more frequently, and physical count dissemination can be improved based on results.
Maintenance
Operations
Special Studies
Savings
Invest in sustainable mobility and innovation
Collected Data can be made publicly available through an API so that residents and businesses can obtain their own relevant insights to help them better adapt to your City's travel needs; creating a foundation for innovation and reduced traffic study costs for development applications.
7


OUR WORLD
Manage your growing infrastructure data and align policy decisions with digital equivalents; keeping everyone on the same page.
DIGITAL TWIN
Maintain a digital replica of your mobility network and formalize a standard pipeline for overlaying municipal policy on top of quantitative data so that every municipal study is completed with accurate and consistent policy and traffic data.
A digital twin of your mobility network can lay the foundation for vehicle-to-vehicle (V2V), and Vehicle-to-infrastructure (V2I) communication that will allow future connected and autonomous vehicles to communicate with city infrastructure. This is also beneficial for managing flexible infrastructure like streets curbs that often have complex restrictions and uses that are difficult to translate and manage digitally.
8

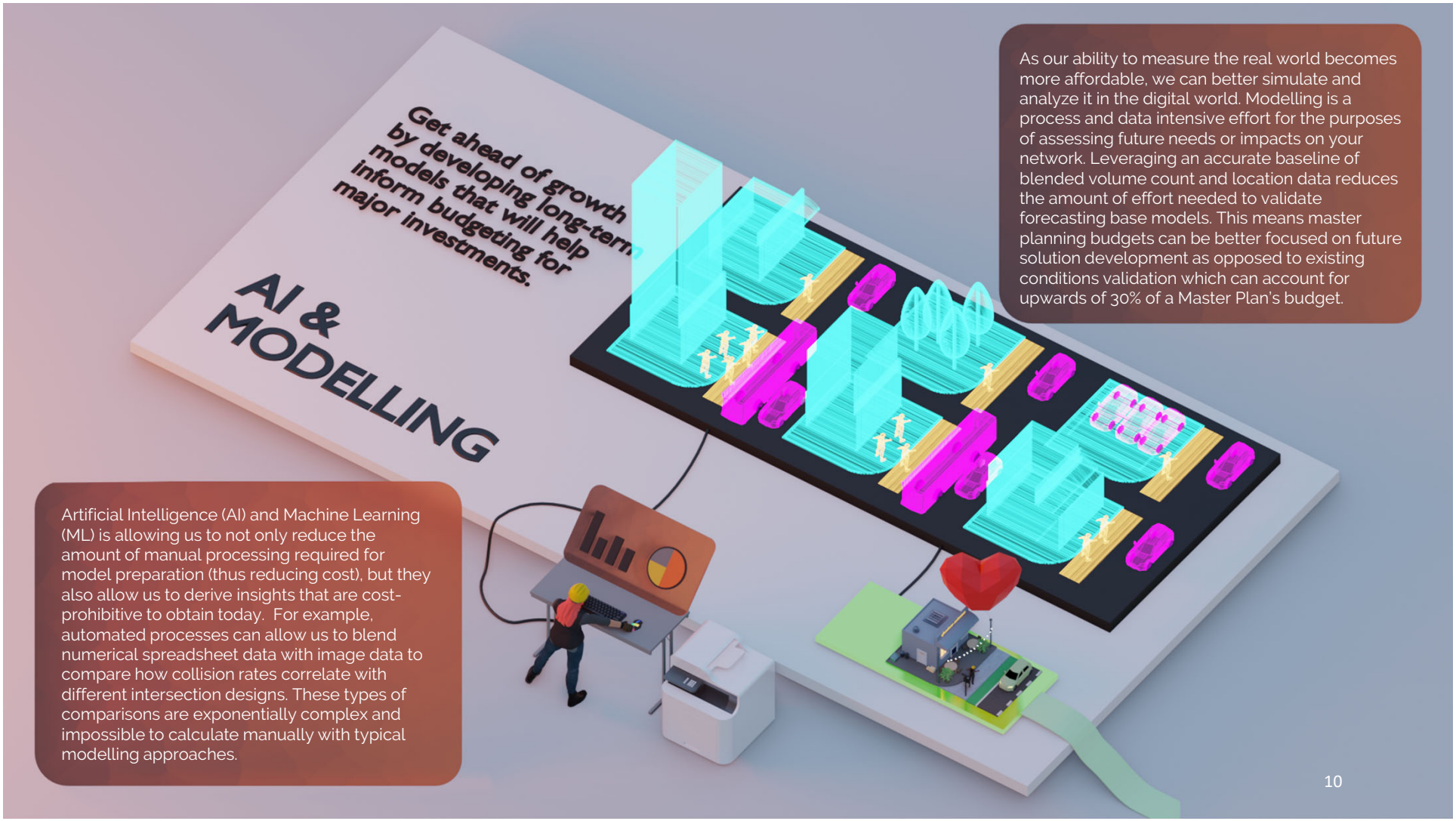
DIGITAL TWINS: A VALUE PROPOSITION

Research has been conducted by Urban SDK using Traffic Logix counting stations in the City of Toronto to determine how many counting stations are needed to validate Urban SDK traffic count data to a desired degree of accuracy.

- *20% fewer* counting stations than were already in place on the City's roads were needed for Urban SDK's mobile data achieve similar accuracy compared to only using 100% counting stations without location data.
- This works by judiciously selecting natural screenline locations, like natural features and network barriers, to place counting stations and create a continuously-updated digital twin of your transportation network.
- The value of this digital twin lies in the ability to provide accurate traffic data across a geography using a smaller sample of counting stations at a reduced cost, while providing added insights into trip distribution that cannot be derived through counts alone.
- This creates a *flexible*, *scalable*, and more *affordable* solution for your mobility data needs.



Data source: Urban SDK



As our ability to measure the real world becomes more affordable, we can better simulate and analyze it in the digital world. Modelling is a process and data intensive effort for the purposes of assessing future needs or impacts on your network. Leveraging an accurate baseline of blended volume count and location data reduces the amount of effort needed to validate forecasting base models. This means master planning budgets can be better focused on future solution development as opposed to existing conditions validation which can account for upwards of 30% of a Master Plan's budget.

Artificial Intelligence (AI) and Machine Learning (ML) is allowing us to not only reduce the amount of manual processing required for model preparation (thus reducing cost), but they also allow us to derive insights that are cost-prohibitive to obtain today. For example, automated processes can allow us to blend numerical spreadsheet data with image data to compare how collision rates correlate with different intersection designs. These types of comparisons are exponentially complex and impossible to calculate manually with typical modelling approaches.

E - CURRICULUM VITAE

SUPPORT STAFF BIOS

Melissa Bruntlett

MOBYCON

Engagement Advisor

Melissa Bruntlett is a communications and engagement advisor focusing on urban mobility and sustainable cities. She is also co-author of Building the Cycling City: The Dutch Blueprint for Urban Vitality and Curbing Traffic: The Human Case for Fewer Cars in Our Lives. She believes it is imperative to build cities that work for every citizen, and uses her experience as an urban mobility advocate, engagement advisor, writer, and media producer to communicate the human perspective of sustainable transport. As a member of Mobycon's International Team, Melissa supports the development of our international markets. She works with public and private partners in Europe and North America to develop communications and engagement strategies, provides workshops and knowledge sharing, performing market and demographic research, and advising on how cities and regions can take a holistic and equitable approach to mobility planning. Her work includes communications and school travel planning programmes in Canada.

EXPERIENCE:

- Guelph Cycling Network Expansion (Engagement)
- Nanaimo Commercial Street Master Plan (Engagement)

RESPONSIBILITY: Melissa will provide senior guidance to Brandon and Ridhita through the development and dissemination of the TMP engagement process. Her international experience will give our team a key perspective on new ways to approach engaging and obtaining feedback.

Amar Lad M.E.S.

TYLin

Mobility Planner

Amar Lad is a mobility planner and project manager within TYLin's mobility planning group. He is experienced in the development of mobility master plans, public realm & streetscape studies, active transportation, TDM plan studies, by-law and municipal strategy reviews, development charge (DC) study reviews, and the conception of innovative autonomous and micro-mobility solutions. Amar has been critical to the development of mobility planning, DC charge studies, and smart mobility planning for the Lakeview Village Master Plan.

Amar also has an academic bechalors degree in Architecture, and a masters degree in Planning that allows him to blend mobility planning with urban design and land use to develop holistic network solutions.

EXPERIENCE:

- Thunder Bay Mobility Hub Precinct Master Plan (Mobility Planner)
- Thunder Bay Streetscape Precinct Master Plan (Mobility Planner)

RESPONSIBILITY: Amar will be responsible for leading multi-modal travel demand and trip distribution analysis. He will also be responsible for developing smart mobility solutions that are integrated with mobility recommendations.

Eric Post M. PL.

MOBYCON

Active Mobility Planner

Eric is an active mobility planner in Mobycon's Ottawa office. He holds a bachelor's degree in environmental science and geography and is a graduate of the Master of Urban and Regional Planning program at Queen's University. Eric supports on a variety of sustainable planning, policy, and design projects across North America from the development of mobility hub cycling networks, to concept design, and the assessment of COVID public space measures. He also has experience in policy research and public engagement from his time as a planning intern with the City of Hamilton and from the completion of an honours thesis studying the perceptions of electric vehicles. Eric is passionate about sustainability and livability and believes a greater shift to active modes of transportation is crucial for their integration.

RESPONSIBILITY: Eric will provide technical support in developing sustainable network and policy solutions, and will help facilitate stakeholder ride-along and walk-along sessions.

EXPERIENCE:

- Guelph Cycling Network Expansion (Planner)
- Winniped Pedestrian and Cycling Strategies Update (Planner)

Andrew Larter E.I.T.

TYLin

Transit Planner & GIS

Andrew is a Transportation Planner with over three years of experience in mobility planning and traffic engineering. He has developed transportation models, forecasted and modelled travel demand, and handled geospatial analysis and graphic design for various traffic impact studies, transportation master plans, environmental assessments, and collision analyses.

Andrew applies his experience in scientific computing and software development to develop programming solutions for the unique challenges. Most recently, Andrew applied his transit and spatial systems knowledge to develop the Gap Analysis for the Vaughan Transportation Master Plan. An exercise that was critical in identifying problem areas on the network using a mixture of operational and spatial information. This methodology was also later applied to the Thunder Bay Mobility Hub Precinct Master Plan that TYLin completed in January 2022.

RESPONSIBILITY: Andrew will be responsible for transit planning and spatial analysis, as well as maintaining and validating study data. He will also assist in modelling should the need arise for GIS/coding capabilities.

EXPERIENCE:

- Vaughan Transportation Master Plan Update (Transit Planner)
- Metrolinx Station Access Plan (Transit Planner)
- Thunder Bay Mobility Hub Precinct Master Plan (Transit Planner)

Jonathan Law P.Eng.

TYLin

Traffic Engineer

Jonathan is a Project Manager with our Traffic Engineering group. He has over five years of experience in a range of transportation engineering projects, with a focus on transportation demand management, traffic, parking, loading and transportation planning. He has experience in traffic operational analyses in both the private and public sector as well as working on transportation planning documents for Cities. He is also well versed in transportation demand management plans and parking strategies.

RESPONSIBILITY: Jonathan will be responsible for leading traffic operational analysis including coordinating with the region to obtain modelling outputs. Jonathan will also be responsible for developing roadway improvements and will contribute to the development of traffic policy recommendations.

EXPERIENCE:

- Thunder Bay Mobility Hub Precinct Master Plan (Traffic Engineer)
- Thunder Bay Streetscape Precinct Master Plan (Traffic Engineer)

Dan Lim E.I.T.

TYLin

Mobility Designer

Dan is an Engineer-in-Training (EIT) with over 2 years of transportation engineering/planning consulting experience from working on various residential, commercial, mixed-use, industrial, and public related projects, backed by several years of co-op internships during his post secondary education.

Dan has been exposed to traffic forecasting, modelling, and has experience in producing various transportation design elements using AutoCAD. He has experience in developing road cross sections and conceptual road designs for Transportation Master Plans. During his 2 years of experience in the Transportation industry, he has been exposed to 100+ private developments and ensured safety and functionality for each site plan application.

RESPONSIBILITY: Dan will support the development of road cross-sections, and will contribute to road and intersection hierarchy updates, as well as develop the associated cross-section typicals and designs.

EXPERIENCE:

- Thunder Bay Mobility Hub Precinct Master Plan (Mobility Planner)
- Thunder Bay Streetscape Precinct Master Plan (Mobility Planner)

Dusan Radojevic P. Eng.

TYLin

Sector Manager Bridges

Dusan Radojevic has 27 years of structural engineering experience working on complex infrastructure projects, including more than 20 years working on long-span cable-supported bridges. He has comprehensive experience in design, analysis, erection engineering and rehabilitation of cable-supported bridges. Previously, he held positions of Technical Director and Team Leader for multi-disciplinary bridge projects, effective in working with clients and subconsultants. His proven leadership track record and ability to successfully and efficiently lead design teams, and coordinate project activities with contractors and other clients has led to successful delivery of such projects as the Gordie Howe International Bridge in the US/Canada and the Angus Macdonald Bridge in Nova Scotia.

RESPONSIBILITY: Dusan will provide advisory guidance on mobility solutions that involve bridge infrastructure and will assist with cost estimating.

EXPERIENCE:

- Gordie Howe Internation Bridge, Windsor, ON (Technical Director)
- Sam Houston Tollway Ship Channel Bridge, Texas, USA (Lead)

Nathalie McCutcheon P. Eng.

TYLin

Director Municipal Engineering

Nathalie is the Director of Municipal Services at TYLin with 24 years of experience in municipal and environmental design. She has managed environmental assessments, preliminary and detailed design of transportation projects, and preliminary and detailed design of water and wastewater projects throughout the GTA.

Nathalie is also working with Brandon Orr and Ridhita as a project director for the Southeast Courtice Rd EA in Clarington, ON showing a proven team that knows how to work together.

RESPONSIBILITY: Nathalie will provide advisory guidance on environmental and servicing impacts of mobility solutions, and provide advisory guidances for the development of infrastructure costing.

EXPERIENCE:

- Vaughan Metropolitan Centre Municipal Servicing Plan (Lead)
- City of Toronto, Yonge Street and Front Street Watermain ans Sewer Improvements (Lead)

TYLin

Brandon Orr, MCIP, RPP

PROJECT MANAGER

Brandon has over ten years of professional planning experience in the design, development, and analysis of Regional and Municipal Transportation and Transit Master Plans which has exposed him to various multi-modal challenges at the micro, meso, and macro levels. Brandon's experience includes working in both urban and rural settings; designing commuter and recreational facilities (and being able to combine both in a single network) and leveraging transit network design to help communities across Ontario provide broader mobility options.

Brandon has led several Transportation Master Plans (TMPs) through the Municipal Class Environmental Assessment process (MCEA) including eight (8) TMPs in the past four years in Canada for communities such as Niagara-on-the-Lake, Orillia, St. Thomas, Perth, Clarence-Rockland, Iqaluit, and Midland. Beyond these projects Brandon has also been involved in provincial goods movement/cross-border movement studies and the development of regional and large metropolitan TMPs.

YEARS OF EXPERIENCE
10

YEARS WITH TYLIN
1

EDUCATION
Bachelor of Environmental Studies, University of Waterloo, 2014

CERTIFICATIONS
WHMIS Training, 2016

Accessibility for Ontarians with Disabilities, 2016

MEMBERSHIPS
Member, Canadian Institute of Planners, October 12, 2016 - Present

Vice Chair, Young Professionals in Transportation, September, 2013 - November 2019

Member, Urban Land Institute, September, 2009 – Present

PUBLICATIONS
What Business Are Airports Really in? (Journal Article). Journal of Airport Management Vol. 15, No.2 114-127, May 10, 2021

Curb Management: A Practical Start to Implementing Smart Mobility in Your Community (Industry Magazine Article), Ontario Traffic Council, August 20, 2021

PRESENTATIONS
Curbside Management in an Autonomous World (Conference Presentation). Association of Commuter Transportation (ACT) Canada Summit 2019, 2019

PROJECT EXPERIENCE

Town of Niagara-on-the-Lake, Niagara-on-the-Lake Transportation Master Plan | Niagara-on-the-Lake, ON, Canada
Project Manager for the development of a multi-modal transportation master plan that assisted the community in leveraging a variety of different mobility options to accommodate growth over the next ten (10) years. One of the major components of this study was the spread-out nature of Niagara-on-the-Lake's (NOTL) urban settlements that are all connected by regional arterial roads. This project included developing a suite of Automobile, Transit, Cycling, Pedestrian, and Smart Mobility Infrastructure recommendations to enhance connectivity and access across the community.

City of Iqaluit, Iqaluit Transportation Master Plan | Iqaluit, NU, Canada
Project Manager for the transportation master plan for the community. Given Iqaluit's location within the arctic, multi-modal transportation means something a little different with the propensity for snowmobiles and ATVs to be used as means for daily commuting, along with a variety of natural elements that present a challenge for mobility including arctic temperatures, limited marine access through most of the year, poor water drainage throughout the community, limited space within roadway right-of-ways to widen existing corridors, and considerable elevations between the various residential communities surrounding the downtown core. This transportation master plan evaluated and developed recommendations for roadway, active transportation, snowmobile/ATV, transit, and taxi recommendations to support the City's growth over the next decade. Infrastructure recommendations were supported by policies that provided recommendations for traffic calming, pedestrian/cyclists safety, Goods Movement, Parking Management, and Complete Streets. These were developed through collaborating with the local community via a comprehensive engagement strategy that included a week long engagement in town to engage the public, council, local businesses, and other key stakeholders.

Ottawa Bike Parking Strategy | Ottawa, ON, Canada
Development of bicycle parking recommendations that focused on linking bicycle parking with cycling activity and land uses. A variety of internal and external stakeholders across the City of Ottawa were engaged to develop a mixture of physical, policy and strategic recommendations to support cycling with bike parking. Brandon was the project manager for this study and was responsible for coordinating with the client and stakeholders, as well as managing the project budget and outputs.

City of Orillia, Orillia Multi-Modal Transportation Master Plan | Orillia, ON, Canada
The study involved coordinating with the Ministry of Transportation for Ontario, and Simcoe County with considerations given to regional facilities such as Highways 11 and 12. The study reviewed vehicular, transit, and active transportation facilities to develop multi-modal solutions to accommodate Orillia's future growth. The variation between summer and winter traffic was a key consideration to account for the cottage nature of the city's surrounding area and the high levels of traffic that this would generate. Brandon was the project manager involved in coordinating with the City of Orillia, as well as Provincial and County stakeholders. Brandon was also responsible for the day-to-day activities and analysis conducted.

Thunder Bay Mobility Hub Precinct Master Plan | Thunder Bay, ON, Canada
Project Manager for mobility planning services to the City of Thunder Bay to assess the feasibility of relocating the City's existing transit terminal to a more centralized location to better serve the City's North Core Waterfront. This work was a result of detailed analysis TYLin conducted through the Thunder Bay North Core Waterfront Streetscape Master Plan that had identified operational, ridership, and urban design constraints with the existing terminal facility. Brandon was responsible for technical task completion, coordination, and client communication.

City of Tamp Transportation Network Company (TNC) and Micro-Mobility Master Plan | Tampa, FL, United States
Brandon was involved in the development of smart mobility and micro-mobility solutions, particularly to address curbside constraints in downtown Tampa, Florida. Brandon led the development of a curbside model for the study area, as well as the development of mobility solutions to address constraints associated with transportation network companies and micro-mobility.

Master Innovation Development Plan, Quayside Development Sidewalk Labs | Toronto, ON
Brandon was a mobility technical lead involved in the development of smart mobility solutions and transportation planning including Dynamic/Automated curbside analysis, Multi-modal parking analysis, Smart Freight analysis, and Transportation operation analysis. Sidewalk Labs plan for the Toronto Waterfront includes an innovative vision for a smart community supported by sustainable transportation options to improve on the neighbourhood development formula.

Niagara Region Transportation Master Plan | Niagara, ON, Canada
Niagara Region commissioned the development of a Regional Transportation Master Plan (TMP) to define policies, programs, and infrastructure improvements required to address transportation and growth needs from today through to 2041. The TMP will address a number of focus areas such as: Integrating Transportation and Land Use, Connecting the Region, Active Transportation, Goods Movement and the Economy, and Healthy Communities. The plan is also looking at a complete streets component. Brandon was involved with designing and developing a new traffic area zone system for transportation demand models in the Region to serve as the future zone system. Brandon was also involved in public engagement and summarized public input to be used in recommendations to the Region. In addition, Brandon's academic knowledge of transportation demand management and complete streets principles led to his involvement in the Active Transportation and Public Engagement components of the project.

Sidewalk Robot Advisory Services | Toronto, ON, Canada
TYLin, through the Urban Robotics Foundation (URF), provided mobility advisory services to several robotics operators including TinyMile, Quantum Robotic Systems Inc., Kevares Autonomous Services, and Humanizing Robotics. Advisory services revolved around roadway safety analysis and recommendations to enhance the safe operation of sidewalk robots and align with ongoing ISO 4448 standards being developed. Advisory on First/Last-Mile Freight opportunities was also provided to understand the net benefits that sidewalk robots can bring to the community in terms of balancing goods delivery.

TYLin

Ridhita Ghose, P.Eng.

DEPUTY PROJECT MANAGER

Ridhita is a professional engineer with experience in traffic engineering, environmental assessments, and municipal class EA project coordination. As part of her responsibilities, she provides study deputy management support and consultation leadership for mobility-related studies and environmental assessments.

Ridhita also has technical skills that helps her manage technical tasks including through experience gained in using traffic simulation modelling software packages to conduct network operational analysis. Her technical experience also includes work-zone analysis, traffic analysis report writing, engineering design manual updates, and construction management studies.

YEARS OF EXPERIENCE
6 Years

YEARS WITH TYLIN
2 Years

EDUCATION
B.Eng, Civil Engineering (with specialization in Transportation Engineering) Ryerson University, 2015

LICENSE
Professional Engineer, Ontario #00222226

CERTIFICATIONS
Joint Health and Safety Committee Training, 2021

AODA Customer Service Training, 2020

Workplace Violence and Harassment Training (Bills 168 and 132), 2020

AODA Understanding Human Rights, 2020

WHMIS, 2020

Worker Health and Safety in 4 Steps, 2020

COVID-19 Training, 2020

AIMSUN – Introduction and Advanced Course

AFFILIATIONS
Professional Engineers of Ontario

PROJECT EXPERIENCE

Town of Oakville, Oakville Development Charges Study Update & Oakville TMP Update
Traffic Analyst responsible for updating the traffic data using TTS for the TMP Update, and prepared presentation slides for the TMP Public Information Centre.

City of Belleville, Bell Boulevard & North Front Street Corridor Strategy | Bellville, Ontario, Canada
TYLin is conducting a mobility assessment of two strategic corridors within the City of Belleville that are each affected by different land use contexts. Bell Boulevard is surrounded by large format commercial (Big Box Retail) and industrial land uses which has resulted in large impermeable street blocks and need to historically expand vehicle lanes. While North Front Street, which runs perpendicular to Bell Boulevard, is the primary north-south corridor from Highway 401 into the City Core. This distinction has resulted in a historical development pattern tied to smaller, more compact lots that have resulted in the current configuration of commercial strip plazas that are struggling to compete with their big box alternatives along Bell Boulevard. TMIG's mobility analysis is leveraging innovative smart travel data from our technology partners Urban SDK to understand how both corridors are used and where new opportunities can be found. Detailed data including trip distributions, average trip distance differences, and trip purposes are being assessed and validated with intersection counts to understand the nature in which both corridors are used. This data will be used to inform land use plans and urban design concepts for each corridor and inform the development of multi-modal network connections and road cross-sections that will be more complete to balance various modes of mobility, accommodate future land growth opportunities, reduce environmental impacts, and enhance roadway safety.

City of Thunder Bay, Thunder Bay Waterfront and Streetscape Plan Study | Thunder Bay, Ontario, Canada
The project involves working with architects to reshape and revamp the downtown streetscape to emphasize walkability, more greenery, and building "flexible streets" that can host events, markets, and patios. Ridhita is one of the project engineers, helping to ensure the proposed design changes on the roadway are able to continue to provide good and safe traffic operations within the City's north downtown core. She also is responsible for coding the traffic model in Synchro and analyzing the results to ensure any proposed improvements and streetscape design will not hamper traffic operations within the north downtown core. Finally, she helps prepare materials for any public and technical agency meetings such as presentations, exhibits, reports, memos etc.

Delta Urban on Behalf of the Landowner's Group and the Municipality of Clarington, Southeast Courtice Road EA | Courtice, Ontario, Canada
Project engineer for this on-going project. Ridhita thoroughly reviewed all background materials from the recently completed Southeast Courtice Road Secondary Plan in order to identify the scope of work for this roads EA project. She is responsible for all coordination with the co-proponents, the

sub-consultants and coordinate between the various design teams on this project. She will also prepare all presentation materials for technical agencies, assist in developing all the design alternatives, develop the evaluation criteria and assess the alternatives against the established criteria, review the design in detail, review sub-consultant's reports in order to summarize it in the final project file, document and mitigate potential property impacts.

Public Consultation will be a big part of this project - Ridhita will be responsible for preparing public consultation materials such as Study Notices, PIC display boards, corresponding with public and technical stakeholders, utility companies, and subconsultants, and writing public documents such as Environmental Assessment Reports.

York Region, Detailed Design for Southeast District Patrol Yard and Household Hazardous Waste Depot
Ridhita was the Traffic Analyst for this project, which included preparing a detailed design for the planned development. Responsibilities included gathering traffic data such as traffic counts and signal timing plans, balancing raw data for coding VISSIM based micro simulation model, analyzing existing and future traffic operational deficiencies, establishing necessary signal modifications required to accommodate future demand, and summarizing capacity and level of service analysis results.

City of Toronto, Glen Road Pedestrian Bridge Rehabilitation Environmental Assessment (EA) | Toronto, Ontario, Canada
This project includes investigating alternatives to address the deteriorating conditions of the pedestrian bridge located on Bloor Street approximately between Sherbourne Street and Parliament Street. As a traffic analyst, responsibilities include reviewing traffic data, pedestrian data, signal timing plans, local transit data, developing and adjusting parameters on Synchro and VISSIM models to reflect existing and future traffic conditions, analyzing the impacts of traffic management plans, recommending signal timing adjustments to address work zone related impacts, summarizing capacity and level of service results, and writing the traffic analysis report. Ridhita was the traffic analyst.

Elgin County, Terrace Lodge Redevelopment Traffic Impact Study | Elgin, Ontario, Canada
Ridhita was the technical support. This project included reviewing existing traffic conditions and future conditions after the proposed redevelopment, which involves constructing a new building. Responsibilities as a technical support included processing and balancing raw data, developing Synchro model for capacity analysis, performing level of service analysis using SimTraffic simulation, conducting a left-turn lane and traffic signal warrant analysis based on the GDSOH guidelines, and writing the TIS Brief Report.

MTO Eastern Region / Town of Carleton Place, Highway 7/15 Intersection Improvement Environmental Assessment and Preliminary Design Study | Carleton Place, Ontario, Canada
Ridhita was an EIT in this project and helped with identifying improvements to the Highway 7 / Highway 15 and Highway 7 / McNeely Avenue intersections to meet interim and long term transportation needs. She also reviewed accesses for commercial entrances and intersections to Highway 7 and Highway 15 to ensure safe and efficient traffic operations and to support on-going and proposed development of surrounding lands while considering all road users including active transportation and recreational trail users.

Her duties included identifying intersection improvement alternatives, evaluating short list of alternatives, writing the existing geometric conditions report (after collecting existing geometric conditions information such as vertical and horizontal curves, taper length, guiderail inventory etc.) and coordinating project team/client meetings including preparing materials for Public Information Centre (PIC).

TYLin

Adam Bell

DIRECTOR OF MOBILITY PLANNING

Adam is TYLin's Director of Mobility Planning. He brings nearly two decades of experience in the operations, planning, design and construction of transportation infrastructure. He has worked in both the consulting and municipal sectors with a primary focus on transportation planning and safety initiatives.

Throughout his career, Adam has been at the forefront of technical innovation and has established himself as recognized leader in road safety, active transportation, and emerging transportation technologies, harmonizing traditional engineering with unique, new approaches. Adam is President of the Ontario Traffic Council (OTC). He is also member of the Editorial Board for the Canadian Association of Road Safety Professionals (CARSP) and is on the Expert Advisory Board for the Child Active Transportation Safety and the Environment (CHASE) Study.

YEARS OF EXPERIENCE
18 Years

YEARS WITH TYLIN
3 Years

EDUCATION
Management Studies, McMaster University, 2008

Transportation Engineering Technology, Mohawk College, 2003

LICENSE
A.Sc.T., Ontario

CERTIFICATIONS
WHMIS 2015 Training, 2019

AODA Understanding Human Rights, 2019

AODA Customer Service Training, 2019

Workplace Violence and Harassment Training (Bills 168 and 132), 2019

Worker Health and Safety in 4 Steps, 2019

Supervisor Health and Safety in Awareness in 5 Steps, 2019

AFFILIATIONS
Ontario Traffic Council

Institute of Transportation Engineers

Transportation Association of Canada

Canadian Association of Road Safety Professionals

Ontario Vision Zero Alliance

Ontario Road Safety Forum

PROJECT EXPERIENCE

City of Belleville, Bell Blvd & North Front St Corridor Strategy | Belleville, Ontario, Canada
Transportation, Roads & Highways | Design-Bid-Build | Project Director
Mobility project director for an assessment of two strategic corridors to improve operational and connectivity issues within the City of Belleville.

City of Thunder Bay, Transit Hub Relocation Study | Thunder Bay, Ontario, Canada
Transportation, Roads & Highways | Design-Bid-Build | Transportation Lead
Mobility project director to assess the feasibility of relocating a primary transit terminal to a more centralized location to better serve the City's North Core community.

Lakeview Community Partners, Lakeview Village Development | Mississauga, Ontario, Canada
Transportation, Roads & Highways | Design-Bid-Build | Transportation Lead
Mobility project director for a comprehensive transportation and parking study for a mixed-use, sustainable waterfront community situated on the former Lakeview Power Plant lands.

City of St. Catharines, Transportation Master Plan | St. Catharines, Ontario, Canada
Transportation, Roads & Highways | Design Phase Only | Senior Advisor and Safety Lead
Senior Advisor and Safety Lead for the most recent Transportation Master Plan in St. Catharines, Ontario.

Hamilton Strategic Road Safety Committee, Vision Zero Safe Systems Manual | Hamilton, Ontario, Canada
Transportation, Roads & Highways | Design Phase Only | Project Lead
Project Lead for Hamilton Strategic Road Safety Committee's Vision Zero program. This project involved the development of the Terms of Reference and Safe Systems Manual for Vision Zero.

Town of Whitby, Mid-Block Arterial EA and Preliminary Design | Whitby, Ontario, Canada
Transportation, Roads & Highways | Design-Bid-Build | Transportation Lead
Senior mobility advisor for the Mid-Block Arterial EA and preliminary and functional design of a recommended arterial road network identified in the 2017 Brooklin Transportation Master Plan.

Town of Thunder Bay, Waterfront Streetscape Plan Study | Thunder Bay, Ontario, Canada
Transportation, Roads & Highways | Study/Analysis/Reporting | Transportation Lead
Mobility project director for the study and preparation of a detailed sustainable Waterfront Streetscape Plan.

Waterfront Toronto, Port Lands Precinct Project | Toronto, Ontario, Canada
Transportation, Roads & Highways | Design-Bid-Build | Transportation Lead
Transportation Lead for the strategic development of roadway, LRT, and active transportation infrastructure.

City of Hamilton, Vision Zero Action Plan | Hamilton, Ontario, Canada
Transportation, Roads & Highways | Design Phase Only | Project Lead
Project Lead for a groundbreaking transportation injury prevention project in Ontario.

City of Hamilton, Complete Streets Neighbourhood Plans | Hamilton, Ontario, Canada
Transportation, Roads & Highways | Design Phase Only | Project Lead
Project Lead for a program to retrofit neighbourhoods with traffic calming and active transportation measures.

North York General Hospital, Hospital Master Plan | Toronto, Ontario, Canada
Transportation, Roads & Highways | Design Phase Only | Project Lead
Project Lead providing input related to parking, active transportation, transit, and safety.

Mohawk College, Campus Master Plan | Hamilton, Ontario, Canada
Transportation, Roads & Highways | Design Phase Only | Project Consultant
Project Consultant providing input related to parking, active transportation, transit, and safety.

Casa Loma, Casa Loma Mobility Review | Toronto, Ontario, Canada
Transportation, Roads & Highways | Study Phase Only | Project Lead
Project Lead for a study of increasing mobility demands due to a sharp increase in special events and impacts to the surrounding residential area.

Metrolinx, Regional Express Rail Station Design Standards Review | Toronto, Ontario, Canada
Transportation, Roads & Highways | Design-Bid-Build | Transportation Planning Lead
Transportation Lead for a comprehensive review of the 2017 Design Requirements Manual and the GO Station Access Plan for pick-up / drop-off facilities, EV charging stations, and AT facilities.

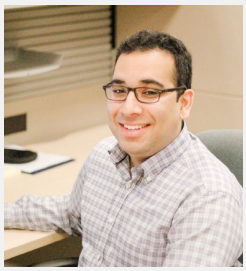
Ministry of Transportation Ontario, Highway 427 Extension, Link 427 | Brampton, Ontario, Canada
Transportation, Roads & Highways | Design Phase Only | Project Lead
Project Lead for future operations, construction staging, and traffic management planning.

Town of Halton Hills, Glen Lawson Road Environmental Assessment | Halton Hills, Ontario, Canada
Transportation, Roads & Highways | Study Phase Only | Project Lead
Project Lead on a study to improve a rural intersection immediately abutting conservation lands.

Block 59 Landowners Group, Block 59 Street "A" Environmental Assessment | Brampton, Ontario, Canada
Transportation, Roads & Highways | Design-Bid-Build | Project Lead
Project Lead for a primary connecting roadway link through two creek crossings, a pipeline, a hydro corridor, and the future Highway 427.

Canadian Automobile Association, Best Practices in School Zone Safety | Toronto, Ontario, Canada
Transportation, Roads & Highways | Design Phase Only | Project Lead
Project Lead to research school zone safety in jurisdictions throughout Ontario.

TYLin



Amar Lad, M.E.S.

MOBILITY PLANNER

Amar is a Mobility Planner at TYLin with experience in wide-ranging transportation planning studies for both public and private sector clients. With a passion for innovation and forward-thinking strategies, Amar provides creative perspectives to complex transportation challenges.

With experience leading a range of planning projects, Amar is experienced in project management, network analysis and optimization, consultation, and visual communication. He brings a diverse skill set through his experience in various disciplines of urban planning including land use planning and development, transportation demand management, urban renewal, and governance.

Amar has led the development of Secondary Plans, Waterfront and Streetscape Plans, Transit and Active Transportation Plan studies, and developed Transportation Demand Management Plans for small and large-scale developments. He has also been a core team member for Traffic Impact Studies in rural, suburban, and urban areas and led numerous Parking Studies including by-law and municipal strategy review, parking utilization analysis, and the conception of innovative mixed-use shared parking strategies for new urban spaces.

Amar's industry knowledge and engagement in emerging enable him to provide comprehensive solutions to future needs.

YEARS OF EXPERIENCE
7 Years

YEARS WITH TYLIN
3 Years

EDUCATION
M.E.S., Planning, York University, 2019

B.A. Honours, Architecture, Urban Studies, Economics, University of Toronto, 2015

CERTIFICATIONS
Anti-Bribery Training, 2021

COVID-19 Employee Health & Safety Training, 2020

AODA Customer Service Training, 2019

Workplace Violence and Harassment Training (Bills 168 and 132), 2019

AODA Understanding Human Rights, 2019

Worker Health and Safety in 4 Steps, 2019

WHMIS, 2019

AFFILIATIONS
Canadian Institute of Planners, CIP

Ontario Professional Planners Institute, OPPI

Urban Land Institute, Toronto, ULI Toronto

Ontario Traffic Council, OTC

Canadian Association of Road Safety Professionals (CARSP)

PROJECT EXPERIENCE

City of Belleville, Bell Boulevard & North Front Street Corridor Strategy | Belleville, Ontario, Canada
TYLin is conducting a mobility assessment of two strategic corridors within the City of Belleville that are each affected by different land use contexts. Bell Boulevard is surrounded by large format commercial (Big Box Retail) and industrial land uses which has resulted in large impermeable street blocks and need to historically expand vehicle lanes. While North Front Street, which runs perpendicular to Bell Boulevard, is the primary north-south corridor from Highway 401 into the City Core. This distinction has resulted in a historical development pattern tied to smaller, more compact lots that have resulted in the current configuration of commercial strip plazas that are struggling to compete with their big box alternatives along Bell Boulevard. TYLin's mobility analysis is leveraging innovative smart travel data from our technology partners Urban SDK to understand how both corridors are used and where new opportunities can be found. Detailed data including trip distributions, average trip distance differences, and trip purposes are being assessed and validated with intersection counts to understand the nature in which both corridors are used. This data will be used to inform land use plans and urban design concepts for each corridor and inform the development of multi-modal network connections and road cross-sections that will be more complete to balance various modes of mobility, accommodate future land growth opportunities, reduce environmental impacts, and enhance roadway safety.

City of Thunder Bay, Thunder Bay Waterfront and Streetscape Plan Study | Thunder Bay, Ontario, Canada
Transportation Planner for the preparation of a detailed Waterfront Streetscape Plan, and an Implementation and Phasing Strategy for the Streetscape Plan, based on traffic modelling forecasts, parking utilization studies, public stakeholder surveys, and traffic sensitivity analysis for various proposed streetscape improvements. The analysis examined the impacts of pedestrianized zones and one-way streets within the urban core, types of on-street parking, transit and emergency vehicle circulation, and active transportation connectivity in the study area.

Lakeview Village Community Partners Ltd. for the City of Mississauga, Lakeview Village Transportation Innovation and Parking Standards | Mississauga, Ontario, Canada

Transportation, Roads & Highways | Design-Bid-Build | Transportation Planner

Lakeview Village is a mixed-use development that will be located on the Mississauga waterfront at the site of the former Lakeview Generating Station. Lakeview Village will revitalize the waterfront though the construction of approximately 8,000 residential units, up to 2,000,000 square feet of employment space (office, retail, research & development, etc.), a public school, cultural lands, and parks. Lakeview Village will be a model of green and sustainable urban living; a place where people can connect with Lake Ontario and live, work, and play on the waterfront.

Amar is the Mobility Planner leading the development of advanced transit solutions and the integration of emerging autonomous transportation technologies throughout the study area road network. Amar has also developed robust parking strategies with future-ready parking standards within Zoning By-law amendments to reduce automobile dependency and support the master planned community's sustainability strategy to make a multi-modal and connected community.

City of Toronto, Re-Imagining Yonge Street (Sheppard to Finch) EA Study | Toronto, Ontario, Canada

Transportation, Roads & Highways | Design-Bid-Build | Transportation Planner

Transportation Planning Student for feasibility study of opportunities to improve the streetscape and public realm for all users including pedestrians, cyclists, motorists, and transit. The study examined Yonge Street from Sheppard Avenue to the Finch Hydro Corridor. The phase examined the implementation of cycling facilities on service roads parallel to Yonge Street. Specific tasks included the graphic redesign of PIC boards, supporting the development of evaluation matrices, analyzing survey data and ridership statistics from relevant case studies in Toronto and Vancouver, and collecting public feedback during the public consultation process.

Municipality of Clarington, Soper Springs Secondary Plan FSR | Clarington, Ontario, Canada

Transportation Planner for Road Network, Active Transportation and Transit portions of the study, to create a Secondary Plan and Zoning By-law that conforms to and implements the Clarington Official Plan, the Durham Region Official Plan, and Provincial policies and plans. It will also follow the recommendations from the Soper Creek Main and East Branches Subwatershed Plan.

City of Toronto, Sidewalk Robot Advisory Services | Toronto, Ontario, Canada

Transportation, Roads & Highways | Design-Bid-Build | Transportation Planner

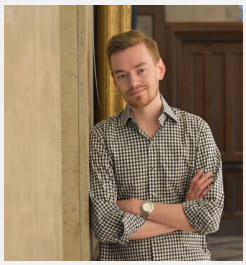
TYLin, through the Urban Robotics Foundation (URF), provided mobility advisory services to several robotics operators including TnyMile, Quantum Robotic Systems Inc., Kevares Autonomous Services, and Humanizing Robotics. Advisory services revolved around roadway safety analysis and recommendations to enhance the safe operation of sidewalk robots and align with ongoing ISO 4448 standards being developed. Advisory on First/Last-Mile Freight opportunities were also provided to understand the net benefits that sidewalk robots can bring to the community in terms of balancing goods delivery.

City of Thunder Bay, Thunder Bay Transit Hub Relocation Study | Thunder Bay, Ontario, Canada

Transportation, Roads & Highways | Design-Bid-Build | Transportation Planner

TYLin is providing mobility planning services to the City of Thunder Bay to assess the feasibility of relocating the city's existing transit terminal to a more centralized location to better serve the City's North Core community. This work was a result of detailed analysis TYLin conducted through the Thunder Bay North Core Streetscape Master Plan that had identified operational, ridership, and urban design constraints with the existing terminal facility. Amar was responsible for multi-modal planning analysis, transit route circulation analysis, and draft urban design concepts for the relocated transit terminal.

TYLin



Andrew Larter, BASc, BSc, EIT

MOBILITY PLANNER

Andrew is a Mobility Planner with over four years of experience in transportation planning and traffic engineering. He has developed transportation models, forecasted and modelled travel demand, and handled geospatial analysis and graphic design for various traffic impact studies, transportation master plans, corridor and streetscape studies, and active transportation plans. Andrew applies his experience in scientific computing and software development to develop programming solutions for the unique challenges posed by transportation projects.

YEARS OF EXPERIENCE
5 Years

YEARS WITH TYLIN
1 Year

EDUCATION
BASc, Civil Engineering with focus on Transportation Engineering, University of Toronto, April 2020

BSc, Physics and Mathematics, University of Toronto, April 2016

CERTIFICATIONS
First Aid Certification, 2021

WHMIS Training, 2016

Accessibility for Ontarians with Disabilities, 2016

AFFILIATIONS
Professional Engineers of Ontario (PEO), Engineer-in-Training

PROJECT EXPERIENCE

City of Belleville, Bell Boulevard & North Front Street Corridor Strategy | Belleville, Ontario, Canada
TYLin is conducting a mobility assessment of two strategic corridors within the City of Belleville that are each affected by different land use contexts: Bell Boulevard and North Front Street. As big data analyst for TYLin's mobility planning team, Andrew is leveraging innovative smart travel data from our technology partners Urban SDK, including trip distributions, average trip distances, and trip purposes, to understand how both corridors are used and where new opportunities can be found. This data will be used to inform land use plans and urban design concepts for each corridor and inform the development of multi-modal network connections and road cross-sections that will be more complete to balance various modes of mobility, accommodate future land growth opportunities, reduce environmental impacts, and enhance roadway safety.

City of Thunder Bay, Thunder Bay Downtown Streetscape & Transit Terminal Relocation Feasibility Study | Thunder Bay, Ontario, Canada
Andrew served as transportation planner and big data analyst for the multi-modal mobility analysis components of the Thunder Bay North Core Waterfront Streetscape Plan Study and the Thunder Bay Transit Terminal Relocation Feasibility Study. Collectively, these projects present an opportunity to rethink the North Core (Downtown) outwards from Red River Road as the central spine of a revitalized core, anchored by a re-located downtown terminal for Thunder Bay Transit. In this role, Andrew synthesized smart travel data from Urban SDK with demographics and land use data from Statistics Canada and the City to lay out a planning and business case for re-locating the transit terminal and revitalize the transportation network of the North Core.

City of Vaughan, Vaughan Transportation Plan Update | Vaughan, Ontario, Canada
As part of the development of its Vaughan Transportation Plan (VTP), a blueprint for moving people and goods across a safe and efficient multi-modal network for the next 20 years, the City of Vaughan undertook an innovative Gap Analysis exercise, identifying problem areas in Vaughan's transportation network. Approaching the analysis from a system-wide perspective ensures that transportation improvements address a systemic lack of choice rather than localized capacity constraints.

Andrew was responsible for developing and implementing the Gap Analysis methodology. This process has included such diverse tasks as geospatial analysis of Vaughan's multi-modal transportation network and its socio-geographic context, coding and updating future scenarios for the Vaughan travel demand forecasting model using Inro EMME, and preparing presentation materials for internal and external stakeholders.

Metrolinx, Station Access Plan Update | Toronto, Ontario, Canada
As lead modeller, Andrew was primarily responsible for developing and implementing a methodology to update the Station Access Plan Model – a multinomial logit mode choice model which forecasts station access mode shares of GO commuter rail customers. Andrew re-calibrated the model by estimating global and alternative-specific coefficients based on updated GO Rail Passenger Survey data, updated the model itself using new data inputs from the Greater Golden Horseshoe travel demand forecasting model and ancillary data sources, and handled model runs and results iteration.

Metrolinx, Ontario Line Technical Advisor | Toronto, Ontario, Canada
Andrew took on a diverse set of roles and responsibilities throughout the course of the fast-moving and ongoing Ontario Line project, a brand-new 15-stop subway line running from Exhibition Place to the Ontario Science Centre through the heart of the City of Toronto. He was a key member of the consultant team focused on planning and designing the Maintenance and Storage Facility, being chiefly responsible for employment impact analysis. He also evaluated station design options for the downtown and north segments of the line from transportation, employment, and public realm perspectives; analyzed traffic options for York Street; and coordinated weekly Touchpoint meetings including staff from the Technical Advisor team, Metrolinx, Infrastructure Ontario, and other public and stakeholder agencies.

City of Toronto, Sidewalk Robot Advisory Services | Toronto, Ontario, Canada
TYLin, through the Urban Robotics Foundation (URF), provided mobility advisory services to several robotics operators including TinyMile, Quantum Robotic Systems Inc., Kevares Autonomous Services, and Humanizing Robotics. Advisory services revolved around roadway safety analysis and recommendations to enhance the safe operation of sidewalk robots and align with ongoing ISO 4448 standards being developed. Advisory on First/Last-Mile Freight opportunities was also provided to understand the net benefits that sidewalk robots can bring to the community in terms of balancing goods delivery.

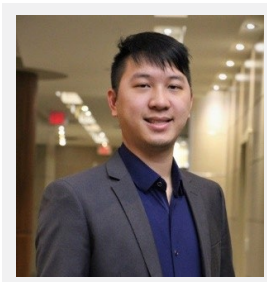
Sidewalk Labs Toronto, Sidewalk Labs Quayside Mobility Analysis | Toronto, Ontario, Canada
The Mobility Analysis focused on forecasting the multi-modal transportation impact and needs of the future Sidewalk Labs Quayside community on Toronto's eastern waterfront, including the requirements posed by removal of road links and integration of innovative transportation technology including automated vehicles, cargo drones, and e-scooters.

As Transportation Engineering Intern, Andrew was responsible for conducting multi-modal trip assignment and distribution across the Quayside network, including development of methodology for quick multi-modal operations analysis without the aid of modelling software. He also interfaced with the client's software development team to make use of cutting-edge travel demand forecasting software being developed by Sidewalk Labs.

City of Clarence-Rockland, Clarence-Rockland Multi-Modal Transportation Master Plan | Clarence-Rockland, Ontario, Canada
The City of Clarence-Rockland, a bilingual municipality to the east of the City of Ottawa, sought to develop its first multi-modal transportation master plan (MTMP) to focus transportation investments and guide development within its growing community, balancing the needs of its sizeable urban and rural populations.

In his role as Transportation Engineering Intern, Andrew was responsible for extensive background research, traffic analysis, and geospatial analysis/mapping for the MTMP. He also developed code to collect and analyze data obtained from an online transportation needs survey open to the City's residents, as well as contributed to the authoring of the report.

TYLin



Jonathan Law, P.Eng.

Traffic Engineer

Jonathan is a Project Manager with our Traffic Engineering group. He has over five years of demand management, traffic, parking, loading and transportation planning. He has experience in traffic operational analyses in both the private and public sector as well as working on transportation planning documents for Cities. He is also well versed in transportation demand management plans and parking strategies.

YEARS OF EXPERIENCE
5 Years

YEARS WITH TYLIN
1

EDUCATION
Bachelor of Engineering, Ryerson University

LICENSE
Professional Engineer, Ontario # 100509666

AFFILIATIONS
Member, Professional Engineers Ontario

Member, Smart Commute Markham Richmond Hill Advisory Committee

TRAINING
Accessibility for Ontarians with Disabilities Act (AODA), 2016

Workplace Hazardous Materials Information System (WHMIS), 2016

PROJECT EXPERIENCE

Transportation Planning
Jonathan has completed a variety of transportation planning studies. This ranges between small scale studies such as parking analyses to assistance throughout larger scale projects such as transportation master plans and Environmental Assessments'. Preparation of these studies utilize Jonathan's knowledge of transportation practices including safety, transportation demand management and driver behaviours.

- 99 Blue Jays Way Parking Justification Study, 99 BJW Residences Inc.
- Alcona Parking Study Update, Town of Innisfil
- Barrie Multi-Modal Transportation Master Plan, City of Barrie
- Toronto Transportation Re-Organization, City of Toronto
- Hamilton Vision Zero, City of Hamilton

Transportation Engineering Studies
Jonathan has experience in preparing a variety of complex traffic engineering studies and analyses. These studies utilize Jonathan's comprehensive knowledge of transportation engineering principles.

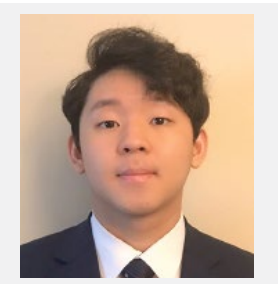
- York Region Safety Retainer, York Region
- Transportation Infrastructure Capacity Study, CAA Lands, City of Brampton
- Temporary Traffic Signal Study, 3 Structures Design, Ministry of Transportation Ontario
- Peer Review – Tollendale Village 2 Traffic Impact Study, Town of Innisfil
- Rossland Road Traffic Detour Plan, Town of Whitby
- Car Elevator Operations Analysis, Eden Oaks Homes, City of Toronto
- Traffic Signal Justification Study, 7437 7439 7441 Kingston Road, City of Toronto

Traffic Impact Studies and Transportation Demand Management Plans
Jonathan has prepared many traffic impact study, each of which includes a review of the existing and future traffic operations as well an assessment of traffic control and roadway modifications as mitigation measures that would be appropriate to improve traffic conditions. Additionally, transportation demand management plans are prepared in support of these studies to identify and recommend appropriate TDM measures that could be implemented to reduce automotive trips.

- 1656 Green Lane West, Traffic Impact Study
- 1656 Green Lane Northwest, Traffic Impact Study
- Woodbine Employment Lands, Traffic Impact Study
- 6501-6559 Mississauga Road, Traffic Impact Study
- Ambria-Newstone Road Alignment and Configuration 212-222 Steeles Avenue West, Internal Road Network Memo and Traffic
- Impact Study
- Branthaven Lakeview Block 1, Traffic Impact Study
- Bombardier EA Traffic Operations Assessment, Peel Region
- 5995 14th Avenue Traffic Operations & Safety Assessment

- 12153 Woodbine Avenue, Transportation Mobility Plan, Worldwide Home Furnishing, Town of Whitcurch-Stouffville
- Traffic Impact Study, 250 Church Street, CentreCourt, City of Toronto
- Transportation Study, Baker District Development, Windmill Developments, City of Guelph
- Traffic Impact Study Update, 2 Carlton Street, Carlton Tower Limited, City of Toronto
- Transportation Study, 73 Ontario Street, Richmond & Mary Development Inc., City of Oshawa
- Traffic Impact Study, Dundas and Shorncliffe, Pinnacle International/Mondiale Development Ltd., City of Toronto
- Transportation Impact Study, Ladies Golf Club, 2526574 Ontario Limited, City of Markham
- Transportation Mobility Plan, Canada's Wonderland Hyatt, City of Vaughan
- Traffic Brief and Transportation Demand Management, Forest Hill Homes, City of Markham
- Traffic Impact and Transportation Demand Management Study, 177-197 Woodbridge Avenue, City of Vaughan
- Traffic Impact Study, Four X Developments, City of Brampton
- Traffic Impact Study, Aurora GO Station Expansion, Town of Aurora
- 186 Old Kennedy Transportation Mobility Plan, Time Development Group, City of Markham
- Traffic Impact and Parking Study, U-Haul Milton, Town of Milton
- Traffic Impact Study, Oxford Homes Mt. Albert Village, Town of East Gwillimbury

TYLin



Dan Lim, E.I.T.

ROADS/MOBILITY DESIGNER

Dan is an Engineer-in-Training (EIT) with over two years of transportation engineering/planning consulting experience from working on various residential, commercial, mixed-use, industrial, and public related projects, backed by several years of co-op internships during his post-secondary education.

Dan has been exposed to traffic forecasting, modelling, and has experience in producing various transportation design elements using AutoCAD and SketchUp. He has experience in developing road cross sections and conceptual road designs for Transportation Master Plans and transit hub studies. Through his experience in the Transportation industry, he has been exposed to 100+ private developments and ensured safety and functionality for each site plan application.

YEARS OF EXPERIENCE
5 Years

YEARS WITH TYLIN
1 Year

EDUCATION
B.A.Sc., Civil Engineering, University of Waterloo, 2020

CERTIFICATIONS
AODA Customer Service Standards Training
COVID-19 Employee Health and Safety Training
Understanding Human Rights Training (AODA Edition)
WHMIS 2015 Training
Worker Health and Safety Awareness in 4 Steps
Workplace Violence and Harassment Training for Employees (Ontario)

MEMBERSHIPS
Professional Engineers of Ontario (EIT)

PROJECT EXPERIENCE

City of Belleville, Bell Boulevard & North Front Street Corridor Strategy | Belleville, ON, Canada
TYLI is conducting a mobility assessment of two strategic corridors within the City of Belleville that are each affected by different land use contexts. Bell Boulevard is surrounded by large format commercial (Big Box Retail) and industrial land uses which has resulted in large impermeable street blocks and need to historically expand vehicle lanes. While North Front Street, which runs perpendicular to Bell Boulevard, is the primary north-south corridor from Highway 401 into the City Core. This distinction has resulted in a historical development pattern tied to smaller, more compact lots that have resulted in the current configuration of commercial strip plazas that are struggling to compete with their big box alternatives along Bell Boulevard. TYLI's mobility analysis is leveraging innovative smart travel data from our technology partners Urban SDK to understand how both corridors are used and where new opportunities can be found. Detailed data including trip distributions, average trip distance differences, and trip purposes are being assessed and validated with intersection counts to understand the nature in which both corridors are used. This data will be used to inform land use plans and urban design concepts for each corridor and inform the development of multi-modal network connections and road cross-sections that will be more complete to balance various modes of mobility, accommodate future land growth opportunities, reduce environmental impacts, and enhance roadway safety.

City of Thunder Bay, Thunder Bay Streetscape Master Plan Study | Thunder Bay, ON, Canada
Transportation Planner for the multi-modal mobility analysis component of the Thunder Bay North Core Waterfront Streetscape Plan Study. This project presents an opportunity to rethink the North Core (Downtown) outwards from Red River Road as the central spine of a revitalized core.

Lakeview Village Community Partners Ltd. for the City of Mississauga, | Mississauga, ON, Canada
Lakeview Village is a mixed-use development that will be located on the Mississauga waterfront at the site of the former Lakeview Generating Station. It will revitalize the waterfront though the construction of approximately 8,000 residential units, up to 2,000,000 square feet of employment space (office, retail, research & development, etc.), a public school, cultural lands, and parks. Lakeview Village will be a model of green and sustainable urban living; a place where people can connect with Lake Ontario and live, work, and play on the waterfront.

Dan has developed the Pavement Marking Signage Plan for the entire Lakeview Village area, and as well as a Functional Road Plan to ensure maneuverability of design vehicles within the public intersections. Dan has also developed several conceptual road designs along Lakeshore Road East which is expected to be expanded to implement the dedicated Bus Rapid Transit (BRT) corridor.

City of Thunder Bay, Thunder Bay Terminal Feasibility Study | Thunder Bay, ON, Canada
Mobility Planning group provided services to the City of Thunder Bay to assess the feasibility of relocating the city's existing transit terminal. The team proposed to relocate the existing bus terminal to a more centralized location to better serve the City's north Core community, and as well as re-routing city bus to provide an efficient transit network for the users.
Dan has developed the new transit terminal design that will support a more transit-oriented and walkable North Core. A 3d-model SketchUp was developed to show how the vibrant transit terminal will fit in within the existing community. Various terminal design options were presented to the client to achieve an optimal output design.

Slate / Choice Properties, Plan Dixie (Dixie Outlet Mall Master Plan) | Mississauga, ON, Canada
Designer for the entire network conceptual road plan. Prepared multiple cross-sections for each Public Right-of-Way. Drafted multiple design options that would be most suitable for the community.

MTO / EDCO (EllisDon / Coco JV), QEW / Credit River Improvement Project (ATMS/ITS Department) | Toronto, ON, Canada
Transportation Designer responsible for the development of detailed designs of Intelligent Transportation Systems (ITS) works for a multimillion-dollar MTO design project, assisting Project Lead Designer and Project manager as a designated drafter. Dan drafted ITS Layout plans, Wiring, and Communication Schematics drawings, Construction details for 4-stages of construction throughout 50%, 90%, 100% submissions.

WSIM Group, Woodside Square Master Plan | Toronto, ON, Canada
Designer for the conceptual road plan. Produced multiple cross sections for client to discuss with the project team and recommended the optimal design.

Medallion Corporation, 2345 Finch Avenue West | Toronto, ON, Canada
Conducted a full Site Plan review for a 2000+ units multi-use residential buildings. Identified safety concern points for loading area and multiple parking levels. Re-designed parking ramp to improve circulation for vehicle traffic.

City of Toronto, Beth Sholom Synagogue Addition and Renovation | Toronto, ON, Canada
Transportation Designer for site plan review and ensured functionality and safety of all users accessing the new parking lot. Developed multiple public road lay-by options to the client to meet with city standards.

City of Toronto, 175 Wynford Drive | Toronto, ON, Canada
Transportation Designer for site plan review for 3 mixed-use condominium hotel buildings. Redesigned underground loading bay to meet with city standard while mitigating conflict points to improve safety.

City of Toronto, Gore Meadows Community Centre Expansion | Toronto, ON, Canada
Transportation Designer for site plan review and redeveloped internal transportation elements to comply with municipal zoning by-law requirements.

City of Toronto, CIBC Square (141 Bay Street) | Toronto, ON, Canada
Transportation Designer for identifying sub-standard parking spaces for all levels of parking. Identified multiple design solutions such as justifying small-car spaces through swept path and door-opening analyses.

Simcoe County, 710 Balm Beach Road Traffic Impact Study | Simcoe County, ON, Canada
Undertook traffic analysis, swept path analysis, and analyzed intersection capacity in support of a revision the Official Plan and Site Plan application.

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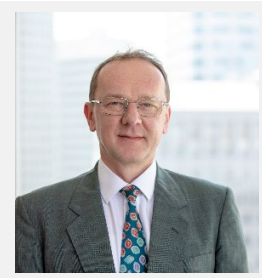

Dusan Radojevic, P.Eng., PhD

Bridge Engineer

Dusan Radojevic has 27 years of structural engineering experience working on complex infrastructure projects, including more than 20 years working on long-span cable-supported bridges. He has comprehensive experience in design, analysis, erection engineering and rehabilitation of cable-supported bridges. Previously, he held positions of Technical Director and Team Leader for multi-disciplinary bridge projects, effective in working with clients and subconsultants. His proven leadership track record and ability to successfully and efficiently lead design teams, and coordinate project activities with contractors and other clients has led to successful delivery of such projects as the Gordie Howe International Bridge in the US/Canada and the Angus Macdonald Bridge in Nova Scotia.

YEARS OF EXPERIENCE
27

YEARS WITH TYLIN
1

EDUCATION
Ph.D., Civil Engineering, University of Belgrade

M.Sc., Civil Engineering, University of Belgrade

B.A.Sc., Civil Engineering, University of Belgrade

LICENSE
Professional Engineer, British Columbia # 25534, Scotia #9688, Alberta #200815

AFFILIATIONS
Association of Professional Engineers and Geoscientists of British Columbia (BC), Canada

Association of Professional Engineers of Nova Scotia (NS), Canada

Association of Professional Engineers and Geoscientists of Alberta (AB), Canada

TRAINING
Workplace Violence and Harassment, 2020

WHMIS, 2020

PROJECT EXPERIENCE

Gordie Howe International Bridge | Windsor, Ontario, Canada and Detroit, Michigan, USA
Technical Director/Technical Advisor and Lead Review Engineer for this record-breaking 853 m (2,799-ft-long) main span cable-stayed bridge in North America. The signature main span cable-stayed bridge will be the longest cable-stayed bridge in North America when complete. Dr. Radojevic's role was to provide technical leadership and assistance to the design team for design of the stay cable system, stay cable damping and de-icing systems, and overall expert review of the bridge design.

Sam Houston Tollway Ship Channel Bridge | Harris County, Texas, USA
Lead, Independent Design Check. This is a 402 m (1,320 ft) long main span cable-stayed bridge with a total main bridge length of 829 m (2,720 ft). It consists of twin towers which are connected at deck level and at the top, and twin separated concrete box girder superstructures with a total bridge deck width of 50 m (163 ft). The bridge design and construction sequence considered traffic staging and removal of the existing bridge which will be in service until the southbound deck of the new bridge is constructed. Dr. Radojevic led the independent design check of the towers and superstructure construction sequence staging. Dr. Radojevic was also involved as an expert technical advisor for checking of various bridge components.

Kosciuszko Bridge Phase 2 | New York City, New York, USA
Technical Director responsible for the erection engineering and design of temporary works for a 290 m (952-ft-long), 186 m (609-ft-long) main span cable-stayed bridge. This bridge features a single tower. The bridge features a steel-concrete composite deck and a 84 m (276-ft-tall) tower with two separate tower legs. Dr. Radojevic was responsible for directing the analysis and design teams for development of the erection engineering scheme and design of temporary works. During construction, he was involved in leading the team to monitor the geometry of the bridge and provide as needed miscellaneous assistance to the contractor.

Angus L. Macdonald Bridge | Halifax Nova Scotia, Canada
This bridge comprises 762-m-long (2,500 ft) suspension spans with a 441-m-long main span and 585-m-long (1,918 ft) approaches. After the Lion's Gate Bridge, this was only the second time that a suspension bridge had its suspended spans, including the hangers, completely replaced while continuing to allow regular traffic flow in-between deck segment replacements. Following its replacement, the entire superstructure was raised 3.0 m at midspan to allow for more shipping clearance.

Dr. Radojevic was the Technical Director and EOR responsible for the final design of the new structure, and the development of the erection scheme for the suspended span's deck replacement. He was responsible for the detailed design of the replacement of the entire three lane suspended

structure, including the trusses and hangers. He also directed the design and erection engineering teams, supervised the analysis of the completed bridge, directed the erection analysis, and coordinated all design and erection engineering tasks. During construction, Dr. Radojevic and his team supported the contractor with the necessary analysis support, presence in the field, and other engineering assistance to help the contractor to complete the construction on schedule.

Throgs Neck Bridge | New York City, New York, USA
The Throgs Neck Bridge is operated by TBTA and connects Bronx and Queens. The bridge is comprised of a 2,868-ft-long (874 m) suspension bridge with a main span length of 543 m (1,780 ft), and 2,417 m (7,929 ft) approach viaducts. Dr. Radojevic was the Expert Reviewer to provide value engineering and constructability review comments for the rehabilitation and seismic retrofit of the approach spans substructure and superstructure.

Alex Fraser Bridge | Vancouver, British Columbia, Canada
Technical Director for stay cable replacement for a 465-m-long main span cable-stayed bridge that was not originally designed for cable replacement works. The Alex Fraser Bridge is a 465-m-long main span cable-stayed bridge with a total main bridge length of 930.5 m. In 2017 the BC Ministry of Transportation and Infrastructure decided to replace one of the stay cables with a spare cable that was available from the time of original construction. The major challenge in replacing a cable for this bridge was that the bridge was not originally designed for cable replacement. In addition, any impacts on bridge users during the stay cable replacement operations needed to be minimized. Dr. Radojevic was responsible for directing the team to design the stay cable replacement sequence and analyze the bridge and perform checks of bridge elements to maintain safety during the cable replacement operations.

Çanakkale 1915 Bridge | Canakkale, Turkey
Technical Director for the superstructure design check. This suspension bridge is the world record breaking suspension bridge with a total suspended length of 3,563 m which includes a 2,023-m-long main span (world record) and two 770-m-long side spans. The towers are made of steel and stand 304 m tall above the caissons. The suspended steel deck consists of twin box girders with a clear gap of 9 m between the girders for improved aerodynamic performance. The box girders are joined with discrete cross beams every 24 m for typical deck segments. Dr. Radojevic was the Technical Director responsible for independent checking of the suspended superstructure. He led a team to perform a design check of the box girders, orthotropic deck, cross girders, diaphragms, suspender connections, various ancillary support elements, maintenance walkway, and connections for the bearings and buffers.

Abraham Lincoln Bridge | Louisville, Kentucky and Jeffersonville, Indiana, USA
Technical Director for the erection engineering of a 2,106-ft-long five-span cable-stayed bridge. The $237 million Ohio River Bridge Downtown Crossing is a 642 m (2,106 ft) three-tower cable-stayed bridge with two center spans of 229 m (750 ft) each and two side spans of 92 m (303 ft) each. The main bridge structure and will carry six 12 ft lanes and two 12 ft shoulders as part of a larger overall project valued at $860 million. The scope of the project included the conceptual, bid and final design of the entire river bridge (including foundations and anchor piers), design of temporary works, erection engineering and construction services. Dr. Radojevic was the Technical Director for the erection engineering design for the bridge. His key responsibilities included providing a technical lead role to the erection engineering team and coordinating and leading the erection analysis and design teams. His role included direction and supervision of the erection analysis, definition of erection sequences, definition of stay cable stressing stages, design of select temporary works, review of erection engineering drawings and reports for the contractor, and geometry control during construction.

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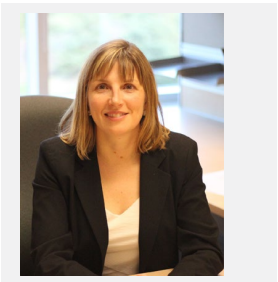

Nathalie McCutcheon, P.Eng

MUNICIPAL ENGINEER

Nathalie is the Director of Linear Water services at TYLin with 26 years of experience in municipal and environmental design. She has managed environmental assessments, preliminary and detailed design of transportation projects, and preliminary and detailed design of water and wastewater projects throughout the GTA. Nathalie's success on projects is due to her emphasis on technical excellence, effective communication, and persistent collaboration.

Nathalie has worked as a senior project manager in both the private- and public-sectors. She obtained valuable experience and insight on how the public-sector operates during her time working for Durham Region. As a result, she has a thorough understanding of how municipalities address and respond to inquiries from the public, residents, and councilors, and she understands the fiscal responsibility to provide good quality services to communities. This unique experience has provided Nathalie with insight on how to navigate both the clients' needs and the requirements of the municipalities.

YEARS OF EXPERIENCE
26 Years

YEARS WITH TYLIN
10 Years

EDUCATION
B.A.Sc., Engineering Science, Civil Environmental Engineering, University of Western Ontario, 1996

Diploma in Public Administration, University of Western Ontario, 2014

LICENSE
Professional Engineer, Ontario, #90496167

CERTIFICATIONS
WHMIS 2015 Training, 2017

AODA Understanding Human Rights, 2017

AFFILIATIONS
Professional Engineers of Ontario

PROJECT EXPERIENCE

City of Toronto, Lower Jarvis Watermain and Sanitary Sewer Replacement | Toronto, ON, Canada
QA/QC Manager for this assignment to replace the existing 300mm dia. watermain with a 400mm dia. PVC pipe on Lower Jarvis Street from Queens Quay East to The Esplanade; and replace the existing 300mm dia. Sanitary sewer with a 500mm dia. PVC pipe from 10m south of Lakeshore Boulevard east to 127m north of Lakeshore Boulevard (north of CN/Metrolinx Rail Bridge).

City of Toronto, Yonge Street and Front Street Watermain and Sewer Improvements | Toronto, ON, Canada
QA/QC Manager for the preliminary design, detailed design, construction administration and inspection of the 430m of 900mm-dia. and 92m of 1200mm-dia. sanitary sewer installation, and replacement of 985m of 150mm watermain with 400mm watermain. Sewers are being designed using microtunnelling methodologies to reduce impact to vehicular and pedestrian traffic, transit and existing utilities. As the project is located in the heart of the City of Toronto, traffic management, staging and frequent coordination and communication with key stakeholders is critical to project success.

York Region, Keswick South | Keswick, ON, Canada
Project Engineer for the Schedule 'B' Class EA, detailed design, contract administration, and inspection. Works included 8km of trunk 750mm CPP feedermain from an existing trunk watermain on Woodbine Avenue to the West Park Heights Reservoir, 1.5km of trunk sanitary sewers, including connections to the Keswick WWTP, 7km of twin 400 / 500mm sanitary forcemains constructed from the Joe Dales SPS to the Keswick WPCP, upgrades to the Joe Dales SPS, and 5km of road reconstruction on Woodbine Avenue.

City of Pickering, Sandy Beach Sanitary Sewer and Watermain Replacement | Pickering, ON, Canada
Nathalie is the Project Manager on this assignment for the replacement of 515m of 300mm diameter watermain on Sandy Beach Road. The watermain has experienced a number of breaks over the years. The watermain will be replaced via open cut construction and will be relocated from the boulevard to the road. The watermain will cross an existing box culvert. A steel liner will be jack and bored under the concrete culvert and the new watermain will be pulled through. The existing 500mm diameter sanitary sewer currently crossed the Krosno Creek over 3 CSPs which have experienced erosion and maintenance issues in the past. The sanitary will be replaced with a

525mm diameter sanitary sewer under the creek and the 3 CSPs will be removed. Construction staging plan for the removal of the culverts, sewer installation and restoration of the creek have been prepared. TRCA permit and PTTW will be required prior to construction.

Durham Region, West Shore Basement Flooding Mitigation | Pickering, ON, Canada
Regional Project Manager for the detailed design of trunk sanitary sewers in the West Shore area, where 1,500m of trunk sanitary sewer were upsized from 400mm-diameter to 750mm-diameter in a congested right-of-way. The upsizing of the sanitary sewer was to alleviate basement flooding in the area. Hydraulic modelling was completed to confirm the sizes of the trunk sewers. CCTV was completed on all sanitary laterals to assess their condition. The project included replacement of all sanitary laterals and the installation of trunk sewer through the Frenchman's Bay Wetland, which was owned by TRCA. Coordination with the City of Pickering and extensive consultation with residents was required.

Durham Region, Brock Road Watermain | Pickering, ON, Canada
Regional Project Manager for the in-house detailed design of a 300mm-diameter watermain from Bayly Street to Plumber Road in the City of Pickering. The design included the replacement of 300m of existing 300mm watermain that had reached the end of its service life. All valves, fire hydrants, and services were also replaced. Brock Road is a Type-A arterial with access to Highway 401 just north of the project. Traffic staging plans were prepared to close one southbound lane of traffic to accommodate construction. Services were directional drilled across Brock Road to minimize impact to traffic.

Durham Region, Bloor Street Watermain | Oshawa, ON, Canada
Regional Project Manager for the detailed design of a 1,050mm-diameter feedermain from Stevenson Road to Ritson Road, connecting the Whitby Supply Plant to the Oshawa Water Supply plant. The design included the installation of 2.3km of feedermain within a heavily congested right-of-way, a tunnelled section under a pedestrian tunnel, and open cut construction across the Oshawa Creek with creek diversions.

Durham Region, Thornton Road North Watermain | Oshawa, ON, Canada
Regional Project Manager for the detailed design of a 1,200mm-diameter feedermain from Wentworth Street to Champlain Avenue. The design included the installation of 1km of feedermain on City of Oshawa ROW, CN ROW, MTO ROW, and within the Oshawa GO Transit Station parking lot, requiring extensive consultation and coordination with these parties. The project included 115m of tunnel under Highway 401.

Durham Region, Harmony Road Feedermain and Road Reconstruction | Oshawa, ON, Canada
Regional Project Manager for the in-house detailed design and tender package for the 900mm 800m-long CPP feedermain from Taunton Road to Coldstream Drive. Utilized open cut construction, which required the development of detailed staging plans due to high traffic volumes in the area.

Durham Region, Thornton Road North Water Wastewater Main and Road Reconstruction | Oshawa, ON, Canada
Regional Project Manager for the in-house detailed design and tender package for the 300mm watermain and 450mm trunk sanitary sewer from Taunton Road to Conlin Road. The project included open cut construction of 450mm trunk sewer at a depth of 8m to 10m deep, as well as dewatering which required coordination of a Permit To Take Water application and monitoring of domestic wells.

MOBYCON

CURRICULUM VITAE

WAYNE GONG, P.ENG.

Senior Active Mobility Designer

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w.gong@mobycon.com

EDUCATION

Simon Fraser University
Burnaby, BC, Canada
Next Generation Transportation Certificate (2016)

University of Alberta
Edmonton, AB, Canada
Bachelor of Civil Engineering – Specializing in Transportation Engineering (2013)

SKILLS & EXPERIENCE

Walking and *Cycling Planning*
Complete Streets Design
Transportation Planning and Engineering
Cycling Infrastructure Design
Bicycle Network Planning
Traffic Safety
Urban Design
Public Transport Planning
2D and 3D Design
Public Engagement and Facilitation

PROFESSIONAL EXPERIENCE

Integrated Mobility Specialist/Transportation Engineer
Mobycon Corp.
Ottawa, ON, Canada | 2020 – present

Senior Engineer, Building Great Neighbourhoods and Open Spaces
City of Edmonton
Edmonton, AB, Canada | 2017 – 2019

Project Engineer/Manager, Transportation Planning & Design
City of Edmonton
Edmonton, AB, Canada | 2013 – 2017

Co-op Student, LRT Design and Construction
City of Edmonton
Edmonton, AB, Canada | 2012

SELECTED EXPERIENCE

Cycling Network Expansion Study
City of Guelph, ON – 2021 - Ongoing
Deputed project manager to develop conceptual designs for a spine cycling network for the city of Guelph, providing safe and direct corridors for travellers in all ages and abilities between downtown Guelph and suburban communities.

McIntyre Drive Traffic Calming Design Project
City of Whitehorse, YT – 2021 - Ongoing
Concept design lead to apply international best practices for speed control and traffic calming measures and propose Whitehorse's first protected bike lane for the collector road in the First Nations community.

Purple Line Comprehensive Multi-modal Corridor Plan
San Diego Association of Governments, CA, USA – 2020 - Ongoing
Active Transportation lead in a multi-disciplinary team to develop and assess strategies to address congestions and mobility equity within the South Bay to Sorrento area, in line with the region's 5 Big Moves transportation vision.

ACCREDITATIONS

Professional Engineers Ontario – *Professional Engineer*

Institute of Transportation Engineers – *Member*

ADDITIONAL INFORMATION

Experienced with Synchro, AutoCAD, MicroStation, ArcGIS and Adobe Suite

IAP2 Emotion, Outrage and Public Participation Training

Board Member of CITE National Capital Section
2021 – Present

Liaison of TAC Active Transportation Integrated Committee and Vision Zero Subcommitee
2020 – Present

Road Safety online course
TU Delft
2021

Transforming Urban Mobility online program
University College London
2020

Board Member of CITE Northern Alberta Section
2014 – 2019

Chair and founding member of Grower's Dozen Community Garden
2016 – 2019

Next-up Climate Leadership Program 2016

Volunteer at Bike Edmonton
2014 – 2019

Trilingual: English, Cantonese and Mandarin

Amorebieta-Txorierri Cycle Highway Peer Review
Province of Bizkaia, Spain - 2021
Undertook an in-depth peer review for the preliminary design of the EU funded cycle highway on the mountainous outskirts of Bilbao, the capital city of Bizkaia, to ensure user safety, comfort and connectivity between villages and employment hubs along the 10-kilometre-long facility.

Ottawa Active Transportation Master Plan Update
City of Ottawa, ON - 2020 - 2021
Mobycon's role is centred around setting strategic directions for the plan update as well as identifying key methodologies to evaluate and identify the cycling and pedestrian networks and prioritization of projects.

Teepee Town Low Traffic Neighbourhood Network Study
Town of Canmore, AB - 2020
Project manager for developing two distinct visions for Teepee Town as a "Low Traffic Neighbourhood" or "Woonerf", refining roadway network and creating conceptual designs in order to meet the area redevelopment plan requirements and achieve target mode shares set by the Town's transportation master plan.

Laurel Greenway Intersection Design Study
City of Waterloo, ON - 2020
Technical lead for examining the six key intersections along Laurel Trail, including background review and developing intersection treatment concepts to improve their safety, connectivity and functionality for trail users of all ages and abilities.

Lillington, NC Bicycle and Pedestrian Plan
Stewart, NCDOT, USA - 2020
Subconsultant to Stewart in delivering a bicycle and pedestrian plan for the Townn of Lillington, North Carolina, connecting important recreational destinations to a downtown network with a series of recommendations for traffic calming, slow streets, protected bikeways, and paths.

Neighbourhood Renewal Projects*
City of Edmonton, AB - 2017 - 2019
Advised on urban design analysis, leading in-house designers to prepare preliminary and detailed designs and providing construction support for many mature neighbourhood renewal projects. Special focus included: collision and speeding record review, pedestrian and cycling gap analysis, active modes facility upgrades within neighbourhoods and beyond for improved safety and network connectivity; and researching and refining bicycle facility and traffic calming design and construction procedures in constrained environments.

City-wide Active Modes Improvement Program*
City of Edmonton, AB - 2017 - 2019
Planned and designed multi-use paths, sidewalks and bus stop connnectors to address active transportation network gaps and accessibility concerns, while mitigating utility and environmental conflicts.

*denotes projects completed with other employers

MOBYCON

CURRICULUM VITAE

LENNART NOUT, M.SC.

Senior Active Mobility Advisor

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CONTACT

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+31 15 214 7899
l.nout@mobycon.com
@lennartnout

EDUCATION

University of Groningen
Groningen, Netherlands
Master of Science – Environmental & Infrastructure Planning
2009 – 2010

University of Groningen
Groningen, Netherlands
Bachelor Degree in Urban Planning
2005 – 2009

SKILLS & EXPERIENCE

Walking and Cycling Planning

Workshop Facilitation

Cycling Infrastructure Design

Bicycle Network Planning

Urban Design

Design Guide Review and Development

2-D and 3-D Design

PROFESSIONAL EXPERIENCE

Urban Mobility Specialist
Mobycon B.V.
Delft, The Netherlands | 2016 – present

Transport Planner
MRCagney Pty. Ltd.
Auckland, New Zealand | 2014 – 2016

Transport Planner/Engineer
Flow Transportation Specialists
Auckland, New Zealand | 2011 – 2013

SELECTED EXPERIENCE

Coaching in the Montava Development
Montava, Fort Collins, Colorado, 2021 - present
Active Transportation Coach for the new sustainable community, Montava. Montava aims to build the most bicycle-friendly development to date in the US.

Coaching World Resource Institute Partner Communities
World Resource Institute, 2021
Mobycon coach supporting the development of a cycling network in Addis Ababa.

Improving Safety and Connectivity for All Road Users
Town of Jackson, WY - 2021
Project consultant for the redesign of a critical connection in Jackson's bicycle network. The corridor connected a protected bikeway on the south of town to an elementary school, and downtown Jackson. Mobycon provided short term and long term solutions to evolve as adjacent land continues to be developed.

Streets as Places Virtual Training, PPS & Mobycon
Online – 2020
Lennart was one of the key facilitators and lecturers during the first virtual Streets as Places masterclass, organized in a joint effort by PPS & Mobycon. During a three-week masterclass, over 100 participants learned how to create better streets, and applied their newfound knowledge to a case study of their choosing.

WORKSHOPS & WEBINARS

Building for Bikes: The Dutch Approach to Junction Design – *International Healthy Street Conference, Edinburgh, UK*

Protected Intersections & Roundabouts – *SANDAG, San Diego, CA*

Traffic Calming & Network Design – *City of Eugene, OR*

Micromobility – *Webinar*

Shared Path Design – *APBP, Online*

Winnipeg Walk Bike Project Workshop – *City of Winnipeg, MB*

Bow Valley Trail Protected Intersection Design
Town of Canmore, Alberta, Canada – 2020
Mobycon provided a peer review of the detailed design for the first fully protected intersection in Alberta. The review included an optimization of the signal phasing, bicycle detector technology and near-side signal placement.

Mobycon Webinar Series
Online – 2020
Co-initiator and curator of the Mobycon Webinar series around Dutch cycling policy, infrastructure and planning. Also led the first digital study tour using a 360 degree camera.

Railway Avenue Redesign
Town of Canmore, Alberta, Canada – 2019
Mobycon was asked to redesign one of their main streets to better cater for people walking and cycling. Based on an innovative Dutch design principle, Mobycon produced a conceptual redesign including several protected intersections, a climate-proof design and greatly improved safety for both pedestrians, cyclists and car drivers.

Protected Intersection Training
City of Toronto, Ontario, Canada – 2018
Delivery of two half-day protected intersection design workshops for the City of Toronto. Including interactive, hands-on session to design a protected intersection within the city. Included a diverse group of 50 participants per session comprised of both city staff and local stakeholder organizations.

Developer of StreetSketch
Mobycon, Netherlands – 2017
Mobycon has developed a spin-off of the popular street design tool “Streetmix” to better incorporate Complete Street design options. This enhanced version allows citizens, city planners and engineers to quickly develop prototype cross sections to communicate their ideas in a realistic fashion. This tool not only enhances the consultation process, but also allows designers to quickly test different design options for multi-modal streets.

New Framework for Urban Mobility
ANWB (Royal Dutch Touring Club) – 2016
Part of the study team and workshop leads for a new approach to street design, as commissioned by the Royal Dutch Touring Club. This innovative approach integrates spatial quality with the required traffic function of a street to deliver a more comprehensive set of street typologies that reflect the urban fabric. The framework proposes four different street typologies and speed limits to deliver safe, high quality public spaces.

MOBYCON

CURRICULUM VITAE

MELISSA BRUNTLETT

Engagement Advisor

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EDUCATION

Ryerson University
Toronto, ON, Canada
Bachelor of Applied Arts
1999 – 2003

TRAINING

BYPAD Auditors' Training
Institut für verkehrpädagogik
Certified Bicycle Auditor
2021

RELEVANT PUBLICATIONS

Curbing Traffic: The Human Case for Fewer Cars in our Lives
Co-Author; Published by Island Press, 2021

Building the Cycling City: The Dutch Blueprint for Urban Vitality
Co-Author; Published by Island Press, 2018

PROFESSIONAL EXPERIENCE

Communications and Engagement Advisor
Mobycon, B.V.
Delft, the Netherlands | 2019 – present

Co-Founder
Modacity
Delft, the Netherlands | 2014 – present

Digital Media Specialist
Urban Systems Ltd.
Vancouver, BC, Canada | 2016 – 2019

SELECTED EXPERIENCE

Women Mobilize Women Consultant
GIZ for Transformative Urban Mobility Initiative (TUMI), International – 2022-present
Providing consulting services for Women Mobilize Women (WMW), a TUMI initiative focused on the women in mobility and the empowerment of women in the field and in society through transportation initiatives. Key tasks include research and development of 4-5 short papers, review of WMW policies and strategies for future development, and capacity building within the global network of professionals and organisations.

Commercial Street Master Plan
City of Nanaimo, Canada – 2022-present
Working with Toole Design, supporting stakeholder engagement and leading online engagement and communications development of final report outlining redesign strategy of historic downtown corridor in Nanaimo, BC.

GIZ Safe Way to School Concept
Batumi, Georgia – 2021 – present
Mobycon engaged by GIZ and Batumi City Hall to implement a pilot tactical urbanism installation at one school to contribute to a safer trip to school. Includes in-person engagement, installation of the temporary tactical urbanism treatment, and development and execution of a communications strategy for both stakeholder and public engagement.

SKILLS & EXPERIENCE

Professional Writing & Copywriting

Graphic Design

Photography

Project Management

Digital Media Management

Conference and Event Marketing and Promotion

Study Tours

SPEAKING & CONFERENCES

Nationaal Conferentie Duurzame Mobiliteit (2021)

Nationaal Voetgangers Congres *(2021)*

Ontario Traffic Council: Transportation Planning Symposium *(2021)*

WalkBikePlaces (2021)

US National Bike Summit (2021

WRLDCTY Digital Festival *(2020)*

International Cargo Bike Festival *(2019)*

London Walking and Cycling Conference *(2019)*

Winter Cycling Congress *(2019)*

Australian Walking and Cycling Conference *(2018)*

CARSP Conference *(2018)*

PechaKucha Vol. 45 Vancouver *(2018)*

UBC SCARP Symposium *(2018)*

Pro Walk Pro Bike Pro Place *(2016)*

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World Resource Institute (WRI) Consulting and Advisory services for Cycling
International – 2022
Working with member cities in Brazil, USA, Asia, Mobycon provides a number of consulting services included cycling data analysis and use strategies, COVID-19 response temporary and pop-up cycle ways mapping and communications, and Dutch and international best practice around cycling infrastructure and policy.

Protected Bikeway Study
Guelph, Canada – 2021 – present
Working with Canadian partners Dillon Consulting, role includes the development of a communications and engagement strategy for both stakeholder engagement and public engagement events. Working closely with the communications and engagement team, developing a comprehensive communications plan that will serve as the guidance for communications throughout the project, from initial consultation to final delivery of protected bikeway designs and planning.

8 80 Cities Canadian Healthy Urban Policy Implementation Digital Workshop
Online – 2021
Development and delivery of an online workshop for city delegates from three major Canadian cities. Workshop featured a 360-degree digital study tour of the neighbourhood of Leidsche Rijn, a greenfield development in Utrecht, focusing on the integration of sustainable transport in a variety of practices and land-use types. Particular attention was paid to how the planning of walking, cycling and public transport networks enable greater flexibility in transport options, improving equitable access and comfort, particularly for women, children, the elderly and individuals living with disabilities. Attention was also given to treatments that improve ecological, transport, and economic resilience.

Mobycon Academy Webinar Series
Online – 2020 – present
Development, production and management of online learning platform featuring webinars, digital study tours, interviews, etc. Provides online education tools to a global audience. Responsibilities include scheduling, webinar production, graphic design, communications and marketing efforts through social media, websites, newsletters and presentation content.

Regional Mobility Plan
Region of Cévennes Gangeoises and Suménoises, France – 2019 – present
As a part of developing a regional mobility plan for the Region, Mobycon partnered with EvoPods to deliver recommendations focused on improving walking and cycling. Working with regional demographics and existing attitudes towards active transportation, Melissa developed a communications plan the Region could execute throughout the project and for future project stages.

PPS + Mobycon Digital Masterclass: Reimagining Streets as Places
Online – 2020
Melissa was one of the key facilitators during the first streets as places masterclass, organized in a joint effort by PPS & Mobycon. She was responsible for managing the production of digital content for Mobycon, and delivering a short lecture on marketing and communications for sustainable travel. During the three-week masterclass, over 100 participants learned how to create better streets, and applied their newfound knowledge to a case study of their choosing.

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CURRICULUM VITAE

ERIC POST, M.PL.

Active Mobility Planner

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EDUCATION

Queen's University
Kingston, ON, Canada
Master of Urban and Regional Planning
2018 – 2020

Trent University
Peterborough, ON, Canada
Bachelor of Science – Honours Environmental Science and Geography
2014 – 2018

SKILLS & QUALIFICATIONS

ArcGIS

AutoCAD

SketchUp

PROFESSIONAL EXPERIENCE

Junior Integrated Mobility Consultant
Mobycon Corp.
Ottawa, ON, Canada | 2020 – present

Planner (Summer Student)
City of Hamilton
Hamilton, ON, Canada | 2019

Assistant Water Resources Technician
Ontario Ministry of Natural Resources and Forestry
Peterborough, ON, Canada | 2018

SELECTED EXPERIENCE

Protected Bikeway Study
City of Guelph, ON – 2021 – present
The City is seeking to expand their cycling network with dedicated facilities on three main corridors connecting the City with the surrounding area. Mobycon prepared four alternative conceptual designs for each of the three study corridors.

Citywide Transportation Study
City of Whitehorse, YT – 2021 – present
Responsible for advising the lead consultant on active transportation considerations on a variety of topics in addition to research into incorporating alternative transportation like micromobility and electric vehicles into the City's transportation master plan.

Bow Valley Trail MUP and Intersection Concept
Town of Canmore, AB – 2021 – present
Mobycon was retained to develop conceptual designs for cycling facilities on Bow Valley Trail and the BVT/17 Street intersection to connect to an existing protected intersection to the south and future planned facilities on 17 Street.

CONFERENCES & WORKSHOPS

Reimagining Streets as Places Virtual Masterclass – *Project for Public Spaces (2020)*

Planning and Autonomous Vehicles – *OPPI Conference, Toronto, ON (2019)*

Retrofitting Suburbs for Millennials – *OPPI Conference, Toronto, ON (2019)*

Cycle Greater Sudbury: Discussion of Infrastructure Implementation – *OPPI Conference, Sudbury, ON (2018)*

Innisfil Transit: Powered by Uber – *OPPI Conference, Sudbury, ON (2018)*

Communities on the Move Tactical Urbanism Workshops
University of North Carolina Centre for Health Promotion – 2021
Supported workshop facilitation and consensus building for local residents to improve walkability in their neighbourhood with temporary, tactical urbanism interventions.

Safety Scan at Ogilvy Square
City of Ottawa, ON – 2020 – 2021
Identified and mapped bicycle/automobile conflicts for three facility options to close a gap in the cycling network. Developed countermeasures to mitigate conflicts.

Winnipeg Pedestrian and Cycling Strategies Update
City of Winnipeg, MB – 2020 – 2021
Assisted in the identification of new issues and opportunities to inform recommendations for improvements to the Pedestrian and Cycling Strategy.

Purple Line Comprehensive Multi-modal Corridor Plan
San Diego Association of Governments, CA, USA – 2020 – present
Conducted background research and developed cycle network recommendations with GIS. This work informed the development of strategies to address congestion and mobility equity within the South Bay to Sorrento area, in line with the region's transportation vision.

NCHRP 15-78 Urban and Suburban Roadway Cross Section Reallocation
National Cooperative Highway Research Program, USA – 2020 – present
Provided research support in the development of a guidebook which seeks to provide evidence-based measures to evaluate the reallocation of road space. Included an international peer exchange and summary of international best practice.

UBC Campus Traffic Safety Plan
University of British Columbia, BC – 2020 – 2021
Assisted in background review including the review of existing plans and policy. The project assessed strategies by which the client can design public space on and around campus to reduce the risk of vehicle-ramming attacks.

Downtown Peterborough COVID Measures Evaluation
Peterborough Downtown Business Improvement Area – 2020 – 2021
Coordinated people counts, developed a survey for business owners, and conducted best practice research to assess the strengths and weaknesses of COVID measures implemented in downtown Peterborough.