



Scarborough Centre
*on
the* **move**



SCARBOROUGH CENTRE ON THE MOVE
TRANSPORTATION MASTER PLAN

- EXECUTIVE SUMMARY -
MARCH 2018

Transportation Planning/Engineering (Project Lead):



Land Use/Urban Design/Public Consultation:

The **Planning** Partnership

Online Public Consultation:



Transportation Safety:



Archaeological Assessment:



Environmental Site Assessment:



Urban Design:

PERKINS
+ WILL



Executive Summary

E.1 Introduction

Over the past several decades, Scarborough Centre has grown into a hub for population, employment and transportation for the Greater Toronto Area (GTA). The Scarborough Centre Secondary Plan and subsequent detailed planning documents have laid out the guiding vision for the anticipated growth, as more than 40,000 residents and 23,000 jobs are expected to be accommodated in the Centre over the next 30 years.

The success of Scarborough Centre in the future will be dependent upon its ability to accommodate this growth, as it must ensure the physical infrastructure keeps pace with increasing demand. More specifically, challenges related to traffic congestion and the associated auto-dependence require the transportation network to be planned and designed to facilitate population and employment growth in the Centre, while providing safe, convenient, and sustainable choices for all.

The Scarborough Centre on the Move Transportation Master Plan (SCTMP) has been developed to clarify transportation-related policy objectives for the Centre, and is informed by public and stakeholder input. Building upon the existing planning framework, the SCTMP provides the detailed transportation policies, initiatives, strategies and implementation priorities necessary to develop Scarborough Centre into a vibrant mixed-use urban hub.

Study Area

The study area is bounded by Midland Avenue to the west, Markham Road to the east, Ellesmere Road to the south, and Highway 401 to the north as shown in Figure E.1. Also shown in Figure E.1 is the Scarborough Centre Secondary Plan Area, as the SCTMP recommendations will inform the Secondary Plan policy updates.

Figure E.1: SCTMP Study Area and Scarborough Centre Secondary Plan Area



Vision for Scarborough Centre

The Scarborough Centre Secondary Plan provided the framework for planning in Scarborough Centre, and defined objectives related to becoming a mixed-use urban centre where jobs, housing, services, recreational amenities, and transit are concentrated. Consistent with these objectives, the SCTMP envisions that:

The Scarborough Centre transportation network will develop in a way that supports the creation of a diverse, attractive and safe mixed-use community which is easily accessible by all modes of transportation. This will be achieved by creating an easily navigable and fine-grained street network which provides infrastructure and amenities for all street users. This transportation network will be fully integrated into the regional transportation system, including the transit, pedestrian and cycling networks, and provide clear and easy connections to the surrounding communities.

Study Process and Methodology

The SCTMP has been prepared in accordance with the Municipal Class Environmental Assessment (MCEA) process and Transportation Master Plan (TMP) process. The TMP was conducted following five project phases:

1. Review Existing Conditions
2. Identification of Alternatives
3. Evaluation of Alternatives
4. Preferred Transportation Network
5. Scarborough Centre on the Move Transportation Master Plan

The SCTMP is about developing a long term and implementable plan to guide the Centre's transportation system to meet the needs of anticipated growth to 2041. To achieve the vision of a multi-modal hub that encourages transit-oriented development and provides a variety of connected transportation options, Scarborough Centre requires a significant transformation and evolution. The SCTMP plan is framed around four key strategies, or "pillars" that must come together to achieve the vision:

- Pillar One: Encourage Active Modes of Transportation
- Pillar Two: Support Transit and Innovative Mobility Solutions
- Pillar Three: Reduce Single-Occupant Vehicle Use
- Pillar Four: Integrate Land Use and Transportation

Public Consultation

Developing the SCTMP also included an extensive community consultation program. A public engagement and consultation plan was developed, which included a wide range of communication methods and opportunities for public involvement. Throughout the study process, participants shared their thoughts by speaking with team members one-on-one, listening to presentations conducted by the project team, engaging in brainstorming activities, and providing feedback through comment sheets and an online survey tool called MetroQuest.

E.2 Current & Future Conditions

Existing Conditions and Trends

Upon review of the existing street network, many challenges and constraints were identified, including an inconsistent active transportation network and large blocks that limit connectivity for pedestrians and cyclists. The large amount of surface parking (20% of the study area), irregular intersections, and lack of minor streets and connections also contribute to an unattractive and uncomfortable travel environment.

Due to an environment that is not pedestrian-friendly, the active transportation mode share is lower in Scarborough Centre (2%) than in the City of Toronto as a whole (7%). It is evident that automobile travel is the preferred mode of transportation to and from Scarborough Centre, as 66% of trips are drivers and 15% are passengers. Similar findings are shown for trips that occur internally within Scarborough Centre. The transit mode share for all trip purposes is 15%; however, the transit mode share specifically for commuting is 38%. Over time, these travel trends have remained relatively stable, with very little change in vehicle ownership, possession of a driver's license, or modal split since 1996.

Future Conditions

As set out by the Official Plan, future growth in the Centre is expected to result in a total of 40,000 residents and 23,000 jobs in the next 30 years. This projection is equivalent to a density of 350 people and jobs per hectare, which is double the existing density of 170.3 people and jobs per hectare currently living and working in the Centre.

To accommodate the future growth and travel demand in Scarborough Centre, changes to the transportation network are already underway. Namely, an extension of the Bloor-Danforth Subway (Line 2) from Kennedy Station to Scarborough Centre was recently approved to replace the existing, and aging, rapid transit infrastructure (Line 3 –Scarborough) and to improve transit service and capacity in the context of a growing population.

Ongoing transit investment across the City of Toronto aims to integrate services and create transit regional connections within and between communities and major destinations. In addition to the SSE, a number of high-order transit routes have been recommended that would improve the connectivity of Scarborough Centre to surrounding communities.

Problem and Opportunity Statement

Based on the review of existing conditions, current policy context, and public feedback, opportunities and constraints were identified for the study area as they relate to the vision for Scarborough Centre. The following Problem and Opportunity Statement was then developed:

As one of Toronto's four 'Centres', Scarborough Centre is a key location within the city that combines jobs, housing and services in a dynamic mixed-use setting supported by excellent transit accessibility. Located at the heart of Scarborough, the area is expected to be a magnet for future growth over the coming decades.

Currently, Scarborough Centre is less than the sum of its parts:

- *The existing transportation network is designed to favour vehicular movement as is defined by big blocks that result in longer travel distances;*
- *Bridges, ramps and grade-separations are barriers to walking and cycling;*
- *Dedicated infrastructure for cyclists is lacking;*
- *Crosswalks are distantly spaced, sidewalks are often too narrow, missing or located in a way that does not support a vibrant and walkable public realm; and*
- *Development parcels are large and not serviced in a manner that supports a finer grain in the urban fabric.*

Given significant public and private investments planned for the area, an opportunity exists to evolve the transportation network in a manner that better supports the policies outlined in the Scarborough Centre Secondary Plan. Key opportunities include developing a fine-grained street network that is safe, accommodates all users and reduces travel distances. Giving priority to infrastructure required to enhance walking, cycling and transit will help build connections throughout the centre as well as to the surrounding community and beyond. Improved transportation facilities, complemented by better wayfinding, land use diversity and an inviting public realm, will provide greater accessibility to the area's many amenities. The Transportation Master Plan will help guide growth and ensure the emergence of a vibrant, walkable and connected Scarborough Centre.

E.3 Guiding Principles

As part of the City’s Official Plan Transportation Policies Review, a framework was developed to address the impacts of today’s traffic congestion issues, and shape Toronto into the vibrant and attractive city described in the Official Plan. The framework was focused on three key themes to guide transportation decision-making: Serving People, Strengthening Places, and Supporting Prosperity. These three themes were further defined into eight principles which were used to develop and evaluate transportation network solutions in the SCTMP, as presented in Figure E.2.

Figure E.2: SCTMP Guiding Principles



Each guiding principle was accompanied by key questions for consideration for Scarborough Centre’s transportation network, along with a set of criteria and measures used to qualify the response to each question. The evaluation questions, criteria, and measures are presented in Table E.1.

Table E.1: Evaluation principles and Associated Questions, Criteria, and Measures

Principle	Question	Criteria	Measure
Choice	Does it promote a shift towards sustainable modes of transportation?	Pedestrian and cycling infrastructure	Kilometres of sidewalks and dedicated cycling lanes within the Centre
	Does it provide an efficient and integrated transportation network for all users?	Integration between modes of transportation	Types of transfer points that allow for efficient mixed-mode travel
Experience	Does it support an attractive and vibrant public realm and sense of place?	Appropriate street type and design that accommodates all modes of transportation	Identify the street type and its adherence to the design principles outlined in the Complete Streets Guidelines
	Does it allow for the convenient and safe movement of users of all modes of transportation?	User-friendly signage and wayfinding; active transportation connections	Assessment of the following wayfinding signage components: directional/ locational, introduction, identification, and vehicle and pedestrian signage to enhance connections to key origins/ destinations
Social Equity	Does it provide for opportunities to improve connectivity to work, school and other destinations?	Changes in accessibility to desired destinations	Number of connections
	Does it accommodate all users, including vulnerable street users?	Improves mobility for vulnerable users	Compliance with Accessibility for Ontarians with Disabilities Act (AODA)
Healthy Neighbourhoods	Does it support the mixed-use and transit-oriented vision of the Secondary Plan?	Reflects planning policies	Compliance with the vision of the Scarborough Centre Secondary Plan as outlined in policies relating to transportation and mobility
	Does it create a transportation network and block plan that supports a vibrant urban centre?	Consistency with mixed-use principles	Simplified grid/street network (average block size)
Shaping the City	Does it improve connectivity and access within the Centre and to/ from surrounding communities?	Review of impact to safety and comfort for all modes	Road diets, safe pedestrian and cycling crossing locations, the operation of bus routes/stops in the Centre and the removal of channelized right turns and ramps
	Does it encourage and support active and sustainable modes of transportation?	Incentive measures to promote active modes of transportation	Number of transportation demand management (TDM) measures
Public Health & Environment	Does it minimize the impact on the natural environment and cultural heritage?	Impact on area ecology, built/ cultural heritage and areas with archaeological potential	Size of area and number of features affected
	Does it support and enhance the open space network?	Improves open space connections in the study area	Number of connections to open space areas for all modes of transportation
Affordability	Is it economically feasible to implement (considering full life cycle costs, impact to utilities, durability and future expansion opportunities)?	Implements improvements considering full life cycle costs, impact to utilities, durability and future expansion opportunities	Capital, operating, and maintenance costs
Supporting Growth	Does it encourage public and private investments?	Unlocks the potential for development	Size/number of new development properties and accessibility to transit
	Does it allow for the safe and efficient movement of goods?	Strategic movement of goods in the Centre	Number of designated and segregated truck routes in the study area

E.4 Transportation Network Alternatives

Development and Evaluation of Network Alternatives

Three future transportation network alternatives were identified for the study area: Existing Conditions, Current Policy Framework, and Emerging Vision

Alternative 1: Existing Conditions (Figure E.3) or the “Do Nothing” alternative is used as a reference to compare proposed network changes against. In essence, it is the transportation network found today in the study area.

Alternative 2: Current Policy Framework (Figure E.4) identifies future transportation conditions outlined in previous planning work, including planned improvements from the Scarborough Centre Secondary Plan, McCowan Precinct Plan, Civic Precinct Implementation Plan, and Scarborough Centre Public Space & Streetscape Master Plan. It also includes the future extension of TTC Line 2 to Scarborough Centre.

Alternative 3: Emerging Vision (Figure E.5) was developed in consultation with the public to address issues that remained outstanding from the current policy framework and the existing Scarborough Centre context. The Emerging Vision builds upon the design framework for the McCowan Precinct Plan by proposing a simplified street network for the entire Centre area, which allows for a more walkable block pattern and still provides opportunity for development. It develops a comprehensive street network for all precincts and includes connections between precincts and to/from surrounding communities.

Each of the three network alternatives – Existing Conditions, Current Policy Framework, and Emerging Vision – were evaluated based on the evaluation framework of key questions, criteria, and measures. The evaluations measures were used to determine if the alternatives met, partially met, or did not meet the specified criteria.

The MetroQuest online survey was also used during this stage of the study to receive feedback on the transportation network alternatives being evaluated. Participants were asked to rank the top five evaluation principles that were most important to them. It was determined from this exercise that all eight principles were equally important, as only marginal differences existed between the options. Therefore, all eight principles were weighted equally during the evaluation. A summary of the evaluation results is presented in Table E.2.

Figure E.3: Existing Conditions Transportation Network

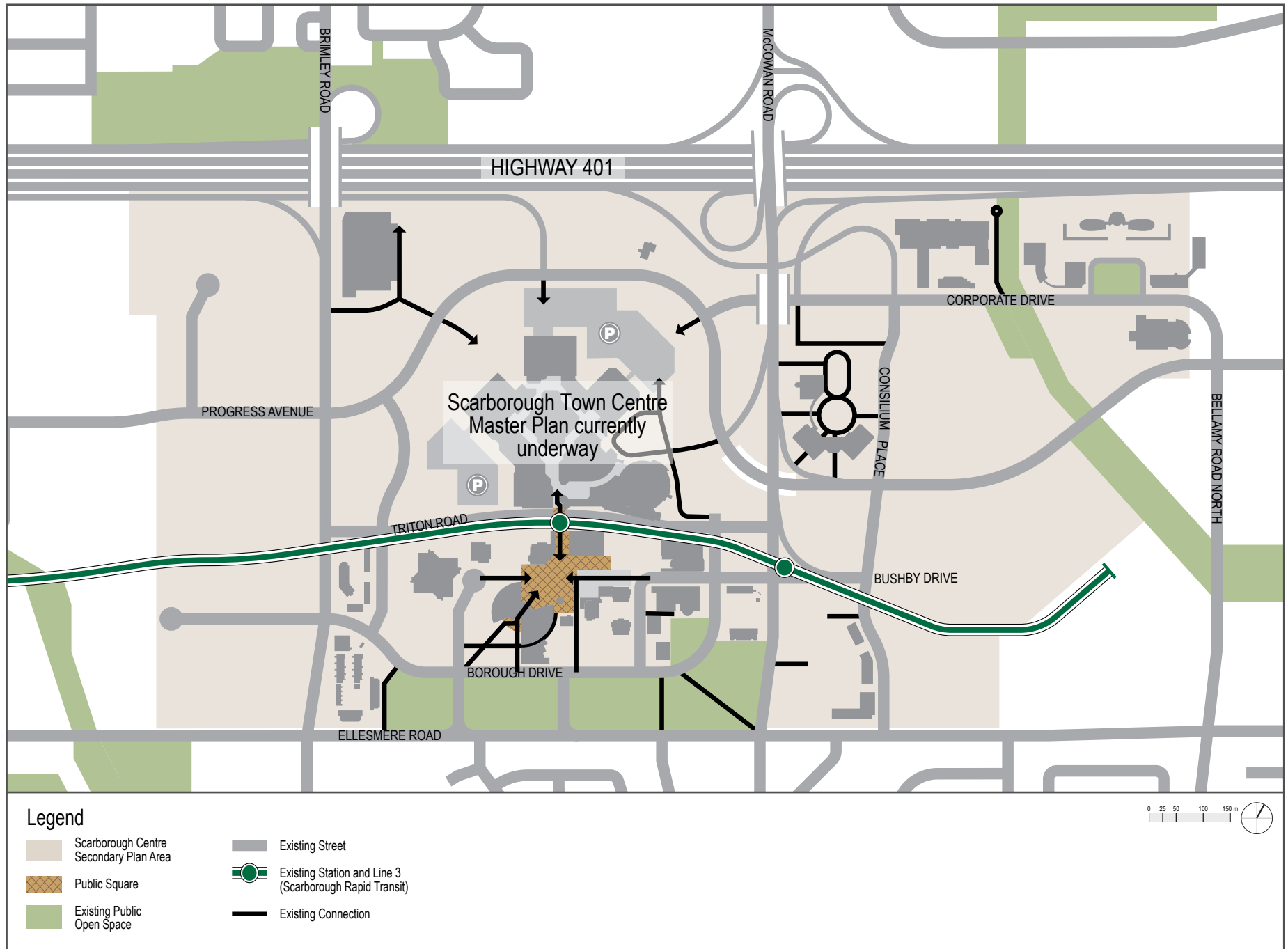


Figure E.4: Current Policy Framework Transportation Network

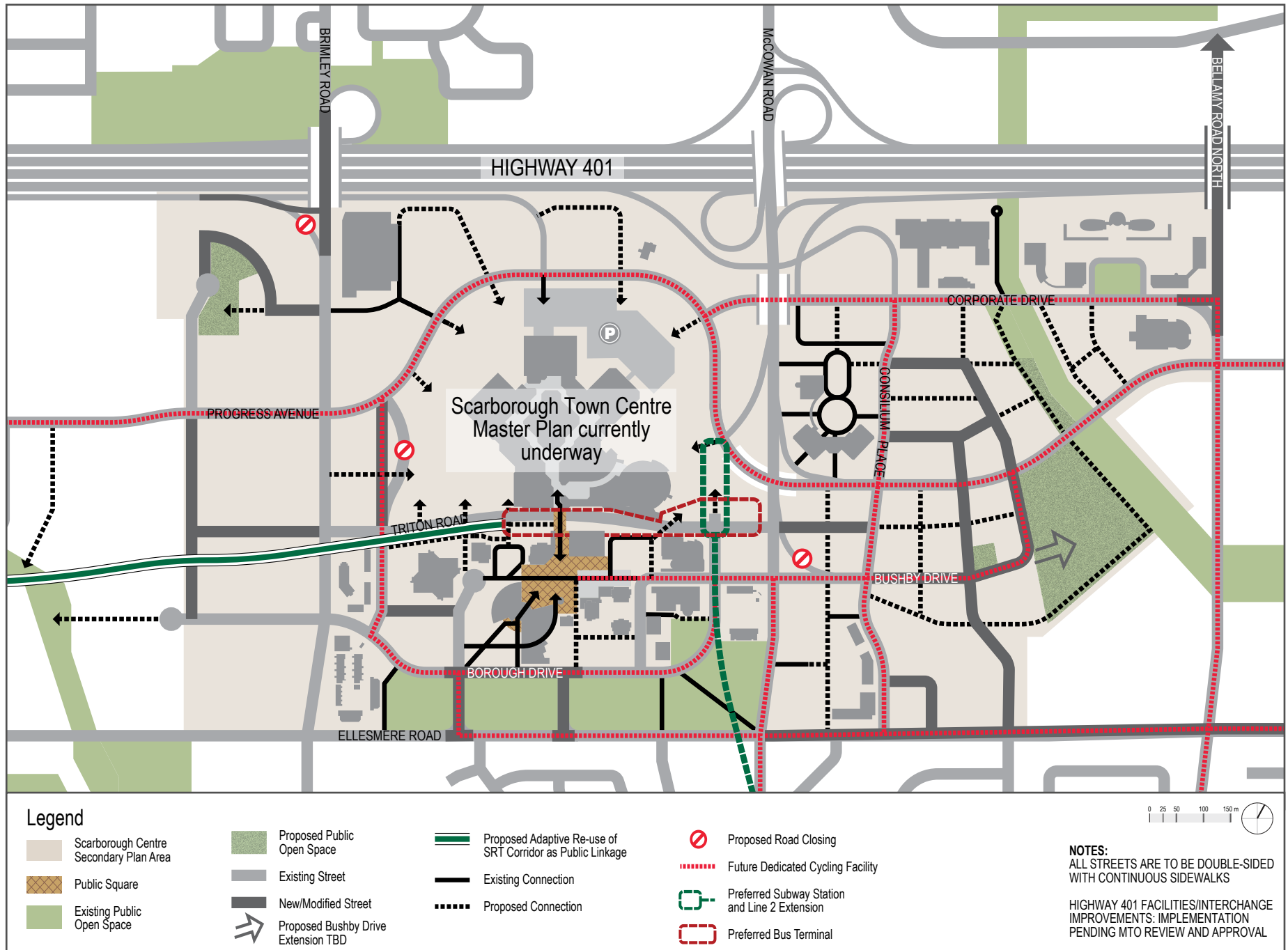
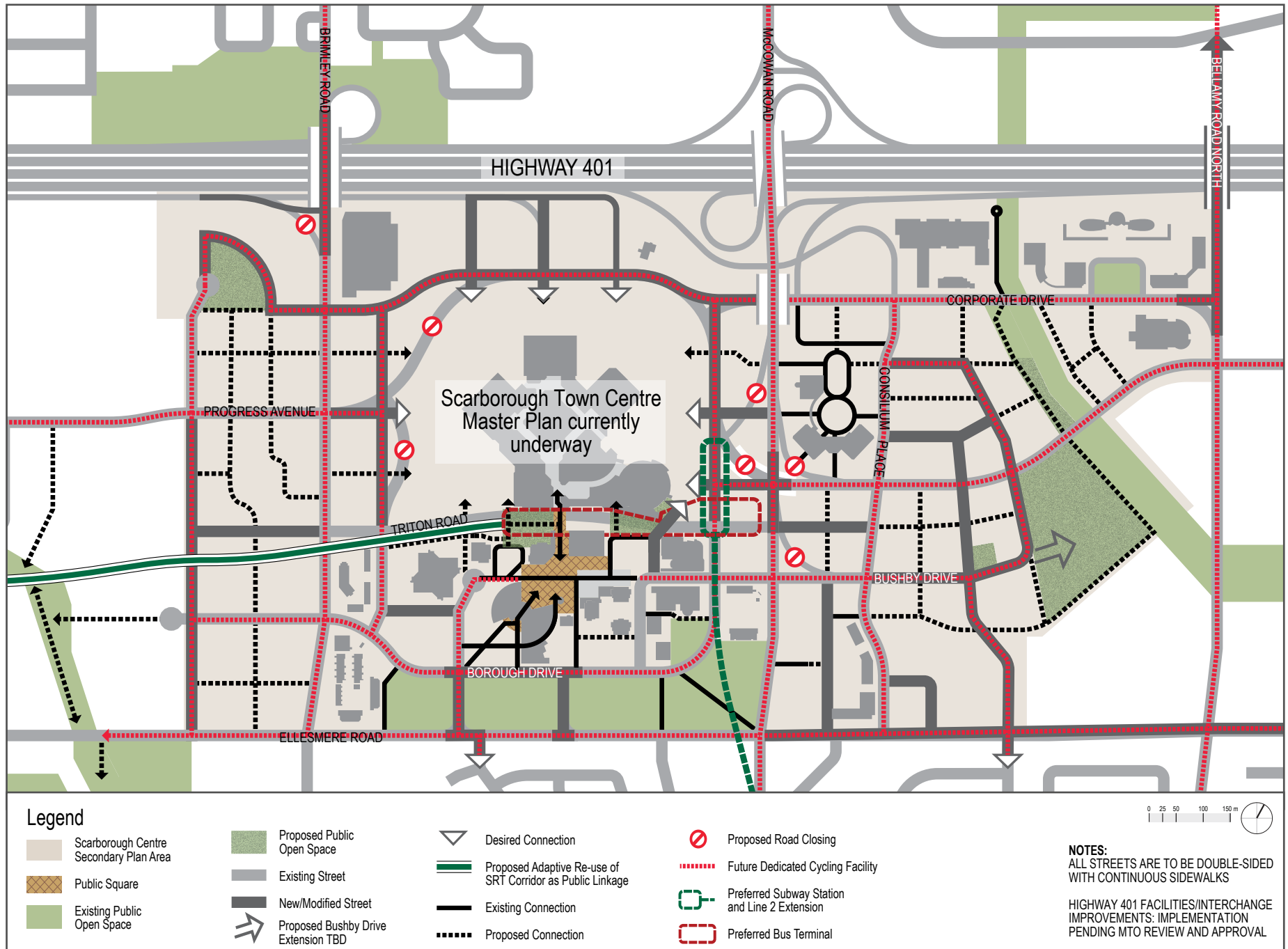




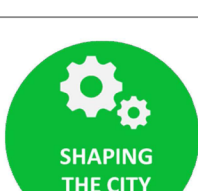





Figure E.5: Emerging Vision Transportation Network



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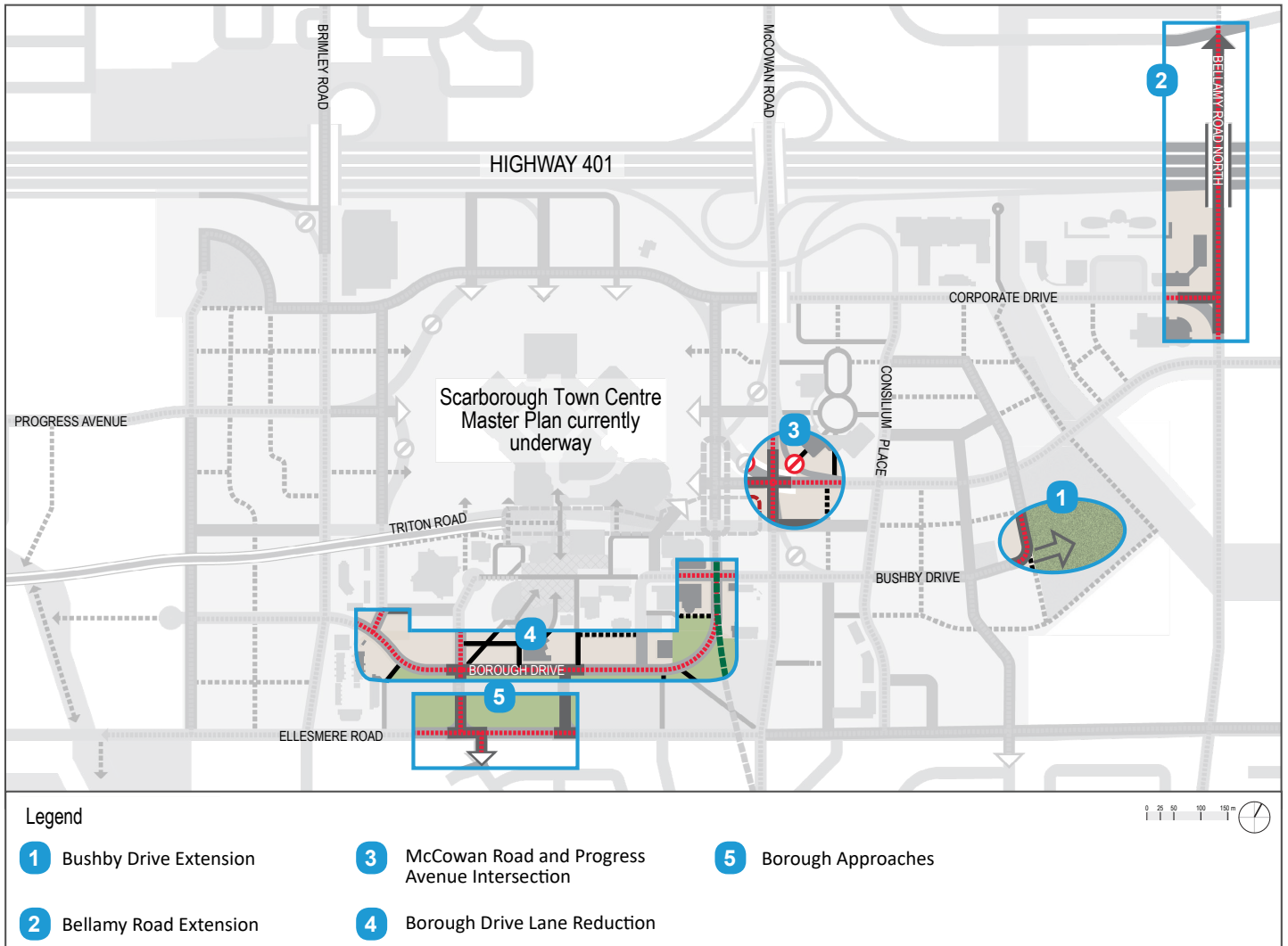
Table E.2: Summary Evaluation Matrix of Network Alternatives

Principle	Question	Alternative 1: Existing Conditions	Alternative 2: Current Policy Framework	Alternative 3: Emerging Vision
 <p>CHOICE</p>	Does it promote a shift towards sustainable modes of transportation?	No Does not provide adequate amount of sidewalks (6.7 km) and dedicated cycling lanes (0 km)	Partially Provides for increased sidewalks (10 km) and dedicated cycling lanes (5 km)	Yes Identifies the most sidewalks (15 km) and dedicated cycling lanes (15 km)
	Does it provide an efficient and integrated transportation network for all users?	No Favours automobile travel	No Does not comprehensively address the study area, or efficiently incorporate proposed transit investments	Yes Identifies connections between the study area and surrounding communities to transit investments via walking and cycling
 <p>EXPERIENCE</p>	Does it support an attractive and vibrant public realm and sense of place?	Partially Provides some sense of place on segments of Borough Drive, Albert Campbell Square and main entrance to mall	Partially Provides for an improved sense of place through mixed land use, with a focus on the pedestrian and cycling experience	Yes Builds upon Alternative 2 and defines street types based on Complete Streets Guidelines
	Does it allow for the convenient and safe movement of users of all modes of transportation?	No Favours automobile travel through existing street design. Lacks wayfinding and active transportation connections	No Identifies a pedestrian network, but does not define a wayfinding and signage strategy	Yes Provides a defined and unique strategy for the Centre, specifying wayfinding improvements to street design
 <p>SOCIAL EQUITY</p>	Does it provide for opportunities to improve connectivity to work, school and other destinations?	Partially Key routes and transit stations are not well-connected to key origins/destinations	Partially Some improved connections to key origins/destinations	Yes Adds new connections for the entire Centre
	Does it accommodate all users, including vulnerable street users?	Partially Does not fully comply with AODA, but does provide accessibility ramps in Albert Campbell Square and provides elevators in Scarborough Centre TTC Station	Partially Does not improve all accessibility deficiencies in the network	Yes Complies with AODA with regards to transportation network
 <p>HEALTHY NEIGHBOURHOODS</p>	Does it support the mixed-use and transit-oriented vision of the Secondary Plan?	No Does not achieve the objectives set out by the provincial and municipal policies	Partially Complies with planning policies, but identifies further work is required for planning complete transportation network and facilities	Yes Builds upon Alternative 2 and related planning policies, recommending a master plan for new transportation facilities throughout the study area
	Does it create a transportation network and block plan that supports a vibrant urban centre?	No Encourages automobile travel through large blocks and street design	Partially Provides guidelines for intersection spacing to encourage pedestrian activity for the McCowan Precinct	Yes Proposes a fine-grained transportation network for the entire Centre
 <p>SHAPING THE CITY</p>	Does it improve connectivity and access within the Centre and to/from surrounding communities?	No Does not provide adequate connections within Scarborough Centre and to/from surrounding communities	Partially Creates policy framework for improving connectivity	Yes Reconfigures transportation network for better connections between Scarborough Centre and surrounding communities
	Does it encourage and support active and sustainable modes of transportation?	Partially Provides few transportation demand management (TDM) measures	Partially Provides general TDM recommendations only	Yes Identifies strategies for car share, bike share, demand-responsive transit, and outreach programs that encourage the use of active modes of transportation
 <p>PUBLIC HEALTH & ENVIRONMENT</p>	Does it minimize the impact on the natural environment and cultural heritage?	Yes Does not impact existing natural environmental and cultural heritage	Partially May impact ecology, built/cultural heritage or areas with archaeological impact	Partially Potential greater impact on ecology, built/cultural heritage or areas with archaeological impact
	Does it support and enhance the open space network?	Partially Maintains existing open spaces, but does not propose new open space connections	Yes Promotes enhancements to the natural environment to improve the livability and sense of place in the Centre	Yes Offers new connections to parks and open spaces throughout the Centre
 <p>AFFORDABILITY</p>	Is it economically feasible to implement (considering full life cycle costs, impact to utilities, durability and future expansion opportunities)?	Yes Does not require investment for transportation network changes, but requires operating and maintenance costs	Partially Requires some investments from public and private sector	Partially Requires greater investment from public and private sector
 <p>SUPPORTING GROWTH</p>	Does it encourage public and private investments?	Partially Provides some potential for development on large parcels of land	Partially Improves development potential in the Centre	Yes Improves development potential in the Centre and maximizes connections and accessibility to the proposed public investments in transit
	Does it allow for the safe and efficient movement of goods?	No Does not address the movement of goods and designated truck routes	No Does not address the movement of goods and designated truck routes	Yes Provides designated truck routes that are more efficient and separated from non-motorized traffic

Refinement of the Preliminary Preferred Alternative

Based on the evaluation criteria, and input from the public and key stakeholders, Alternative 3: Emerging Vision was determined to be the recommended transportation network to be carried forward for further assessment and refinement. The preliminary preferred alternative then underwent a series of modifications and refinements. Certain refinements of the Emerging Vision’s Transportation Network were identified as requiring further study. They are shown in Figure E.6.

Figure E.6: Refinement of the Preliminary Preferred Alternative



Further evaluation was conducted during this stage of the study, where options for each of the five network modifications were evaluated based on the study’s eight guiding principles and were presented to the public for feedback. A summary of the evaluation results is shown in Table E.3.

Table E.3: Summary of Network Modification Evaluation Results

Network Modification	Option 1	Option 2	Option 3
1. Bushby Drive Extension	To Progress Avenue	To Bellamy Road	To Markham Road
2. Bellamy Road Extension	Ends at Corporate Drive	North over Highway 401 to Milner Avenue	
3. McCowan Road and Progress Avenue Intersection	McCowan Road and Progress Avenue Overpass	McCowan Road and Progress Avenue At-Grade	
4. Borough Drive Lane Reduction	Borough Drive with Four Lanes	Borough Drive with Two Lanes	
5. Borough Approaches	Maintain Both Approaches	Maintain Borough Approach West	Maintain Borough Approach East

Legend:

Least Preferred
 More Preferred
 Most Preferred

The preferred network modification options were presented to the public for feedback. The resulting preferred network consists of the following network modifications:

1. Bushby Drive Extension to Bellamy Road
2. Bellamy Road Extension to Milner Avenue
3. McCowan Road and Progress Avenue At-Grade
4. Borough Drive with Two Lanes (Omni Drive to Town Centre Court)
5. Maintain Borough Approach West

These network modifications were then applied to each of the four network layers – Walking and Cycling Network, Transit Network, Street Network, and Block Plan. The four network layers correspond with the four study pillars – Encourage Active Modes of Transportation, Support Transit and Innovative Mobility Solutions, Reduce Single-Occupancy Vehicle Use, and Integrate Land Use and Transportation.

E.5 Pillar One - Encourage Active Modes of Transportation

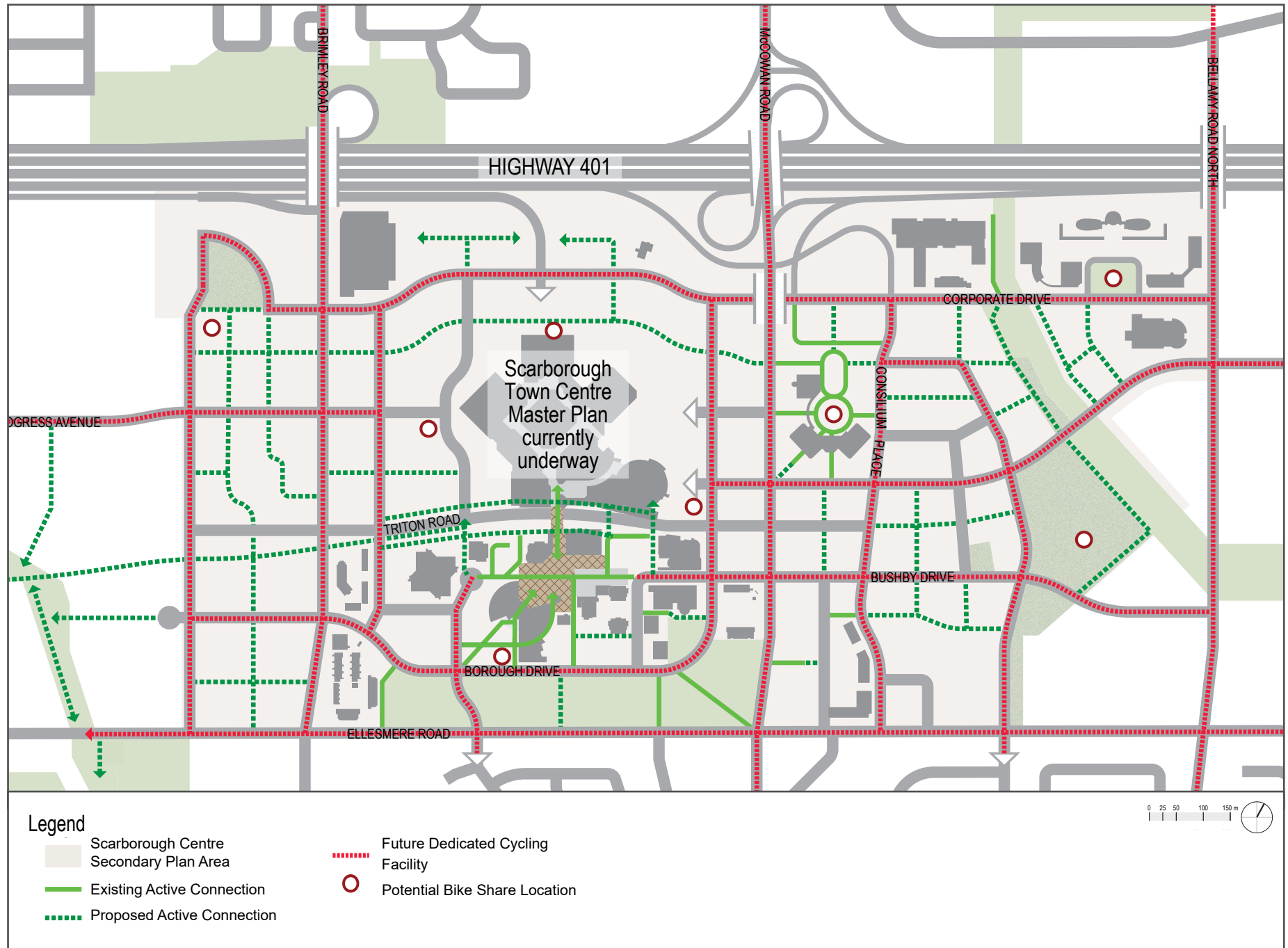
The first study pillar is the adoption of plans and infrastructure that promote an increase in active modes of transportation, whether for commuting, discretionary trips, or for leisure. Active modes of transportation include all human-powered modes including, but not limited to, walking, cycling, use of personal mobility devices such as wheelchairs, skateboarding, and inline skating.

To compete with motorized travel options, walking and cycling must be recognized as safe and convenient modes of travel. Prioritizing the safety of cyclists by designing safe cycling infrastructure and reducing conflicts for all street users is critical for improving travel choices and accomplishing the benefits of Complete Streets. As emphasized in the City of Toronto Complete Streets Guidelines, streets should be designed for all modes to develop connected networks and provide attractive travel choices. Enhancing connections and infrastructure for active modes not only elevates walking and cycling as viable travel options, but also improves transit as a travel option.

Currently in Scarborough Centre, the pedestrian network is largely characterized by missing or discontinuous sidewalks, high traffic speeds, and lack of physical separation between sidewalks and streets. The large development blocks and complex intersections are further barriers to active mobility.

The recommended walking and cycling network (Figure E.7) proposes new active connections that contribute to a comprehensive grid network that is pedestrian and cyclist-friendly.

Figure E.7: Recommended Walking and Cycling Network



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As illustrated in the pedestrian walkshed images (Figure E.8 and Figure E.9), the recommended active transportation network improves the permeability of the network, making it possible to travel approximately 50% farther within the same time.

Figure E.8: Existing Network Five and Ten-Minute Walkshed, from the Future Line 2 - Scarborough Subway Extension

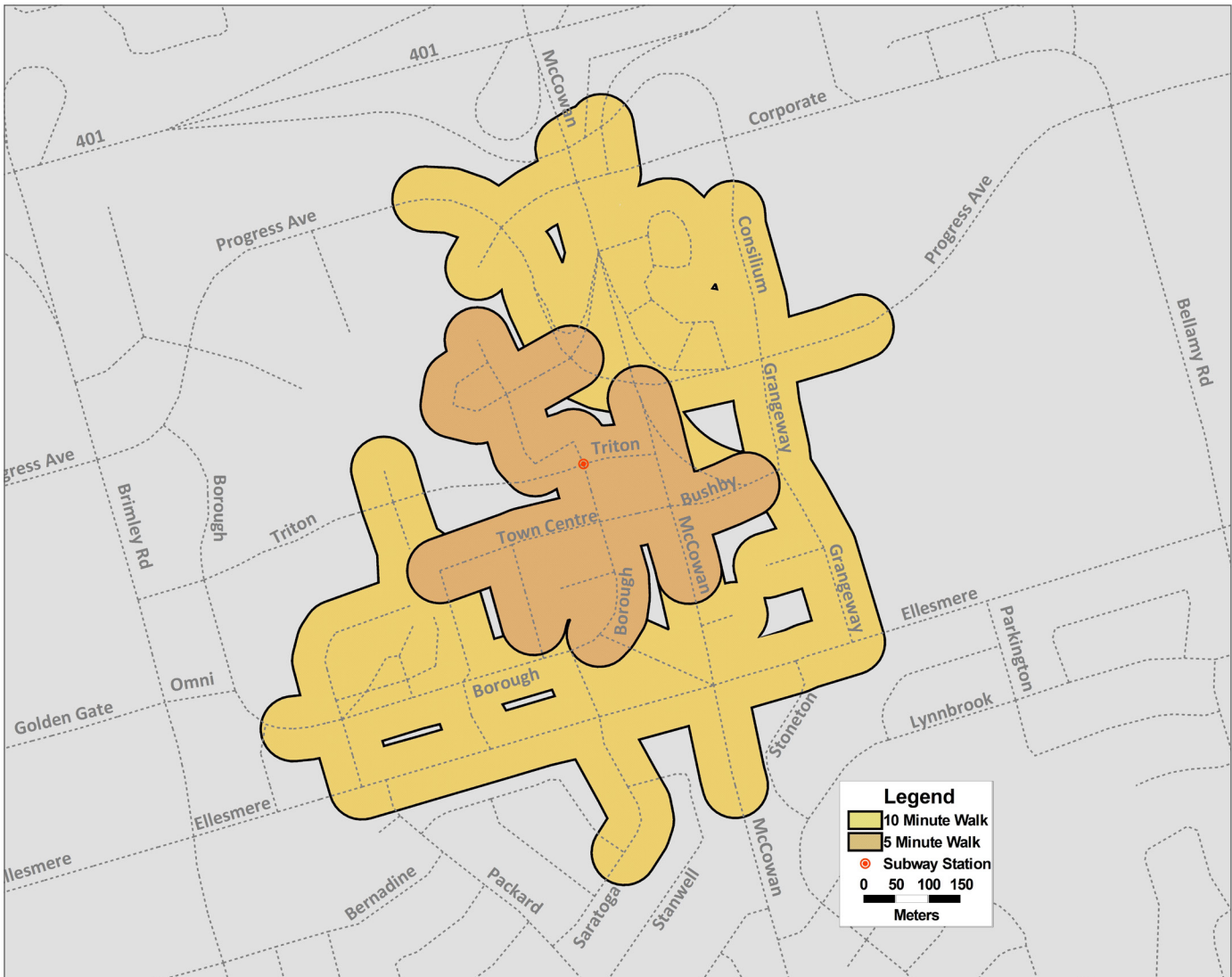
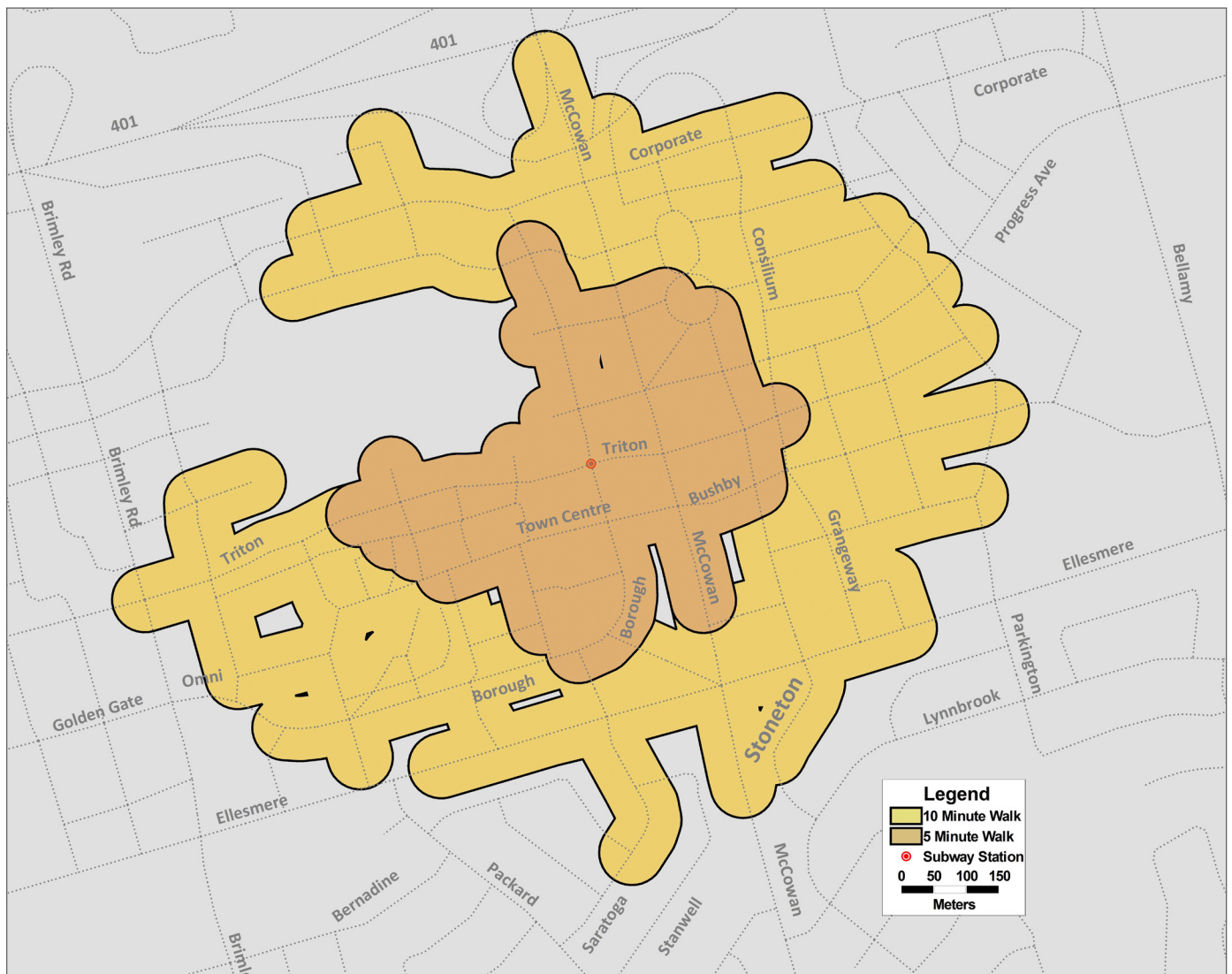


Figure E.9: Recommended (Right) Network Five and Ten-Minute Walkshed, from the Future Line 2 - Scarborough Subway Extension



E.6 Pillar Two - Support Transit & Innovative Mobility Solutions

The second study pillar is the promotion of transit and innovative mobility solutions to move more people through the transportation system efficiently. One benefit of supporting sustainable transportation is giving mobility choices to residents and visitors, and further, a more affordable choice. Transit provides access to society and the economy, particularly for those with low incomes who cannot afford to own and maintain a personal vehicle. Transit service helps integrate individuals into communities and regions to allow overall participation in employment opportunities and other activities. While active modes of transportation are affordable for short trips within the Centre, transit provides connections beyond the Centre, to the broader city and region.

Transit investment and integrated networks for all modes also attract population and economic growth into surrounding areas. The Official Plan describes Scarborough Centre as a focal point for such development, with plans to improve its regional gateway function. The mix of employment, housing, retail, services, and natural environment features all make the Centre an attractive area for future growth and investment.

The existing transit system consists of strong transit services via rapid transit (Line 3 – Scarborough) and local and regional bus routes. This includes 14 TTC bus routes (regular and express routes), 4 GO-Transit Buses, regional transit services (Greyhound, Coach Canada and Megabus).

To support growth in the Centre, the aging infrastructure of the existing TTC Line 3 – Scarborough will be replaced by an extension of Line 2 to Scarborough Centre. Additional proposed transit improvements include Durham-Scarborough Bus Rapid Transit (BRT), McCowan Rapid Transit, and a new Scarborough Centre bus terminal. The recommended transit network is shown in Figure E.10.

Transit priority segments are identified in the Official Plan as corridors where priority measures are implemented to increase the efficiency of the transit network, including reserved or dedicated transit lanes, transit signal priority, or limiting on-street parking. The SCTMP recommends protecting for high-order surface transit along Ellesmere Road (Durham-Scarborough BRT) and McCowan Road (McCowan Rapid Transit). Major transit interchanges are shown in areas where high bus stop utilization has been observed and/or at the intersection of transit corridors. Active transportation amenities, such as wide sidewalks, bicycle parking, and benches should be considered in these locations during detailed design in order to promote walking and cycling to transit and help overcome the first-mile/last-mile problem.

E.7 Pillar Three - Reduce Single-Occupancy Vehicle Use

Pillar Three is related to the policy objectives of reducing single-occupancy vehicles. A number of solutions are proposed in the Secondary Plan, including car-share and transportation demand management (TDM) programs to reduce auto-dependency, and consideration of parking supply reductions where appropriate. The Scarborough Centre on the Move Transportation Master Plan aims to build upon this idea to create an overall transportation network that accommodates all modes of transportation, changing the Centre's modal split.

Reducing automobile use, and subsequently reducing congestion, has environmental and economic benefits, as well as public realm advantages that can help create a sense of place in the Centre. Freeing up roadway space for alternative modes of transportation allows greater numbers of people to move through the network more efficiently, while also allowing public realm improvements. Wide tree-lined boulevards, multi-use paths or cycling facilities, and other streetscape improvements can be accommodated through this reallocation of right-of-way space.

Automobile use is currently the most prevalent mode of transportation for moving to/from and within the Centre. Overall, the majority of intersections in the study area are operating at an acceptable level of service, which contributes to the attractiveness of driving. However, significant traffic constraints were observed at certain intersections, including Markham Road and Ellesmere Road, as well as McCowan Road and Ellesmere Road, during AM and PM peak hours. The circuitous street pattern, large blocks, and lack of active connections to/from surrounding communities all contribute to high levels of automobile use in the Centre.

The recommended street network accommodates automobiles by providing a simplified grid that increases route options. This street network also supports development, improves walkability, and provides safer cycling opportunities. The recommended street network is shown in Figure E.11.

Figure E.10: Recommended Transit Network

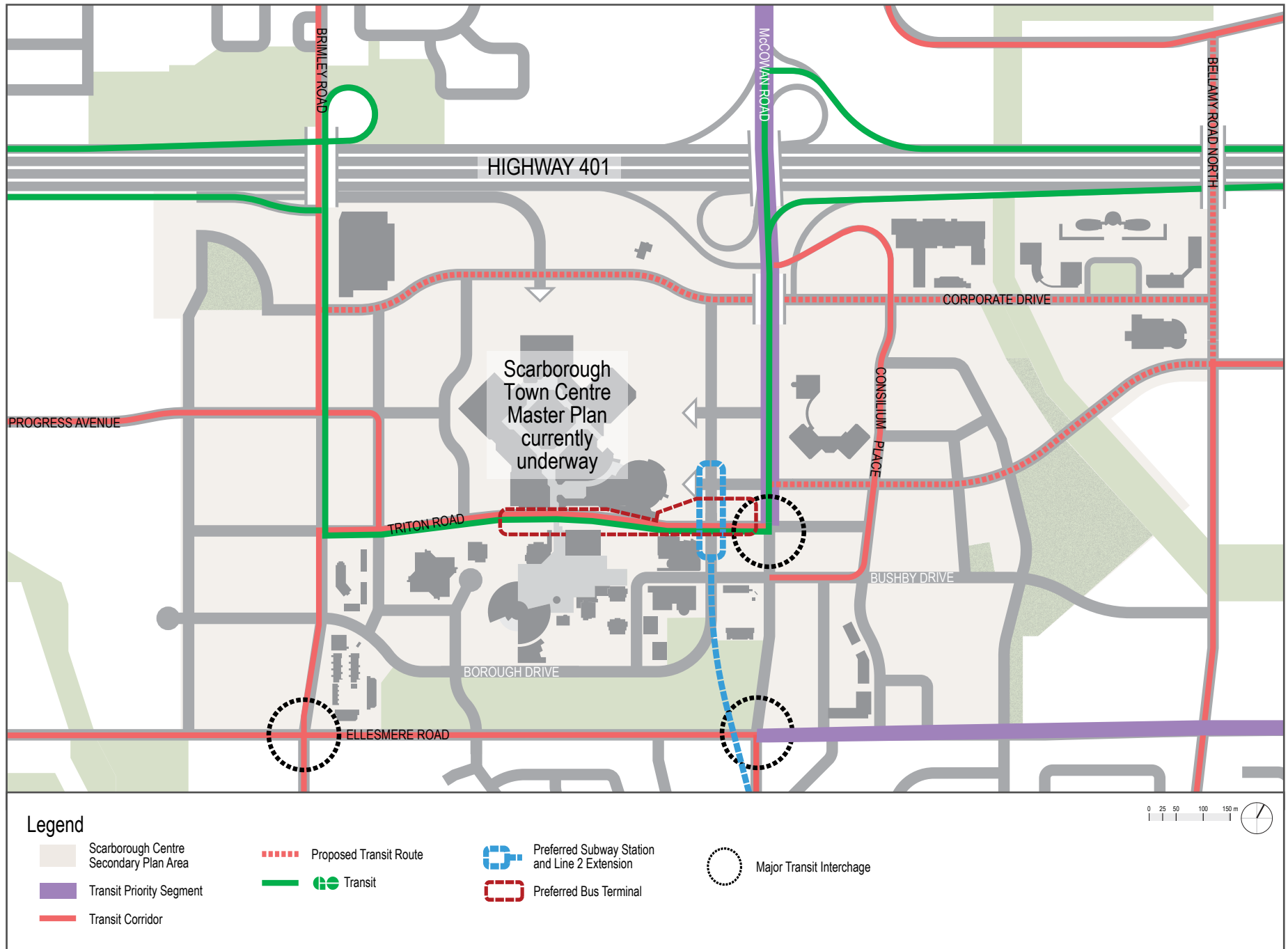


Figure E.11: Recommended Street Network

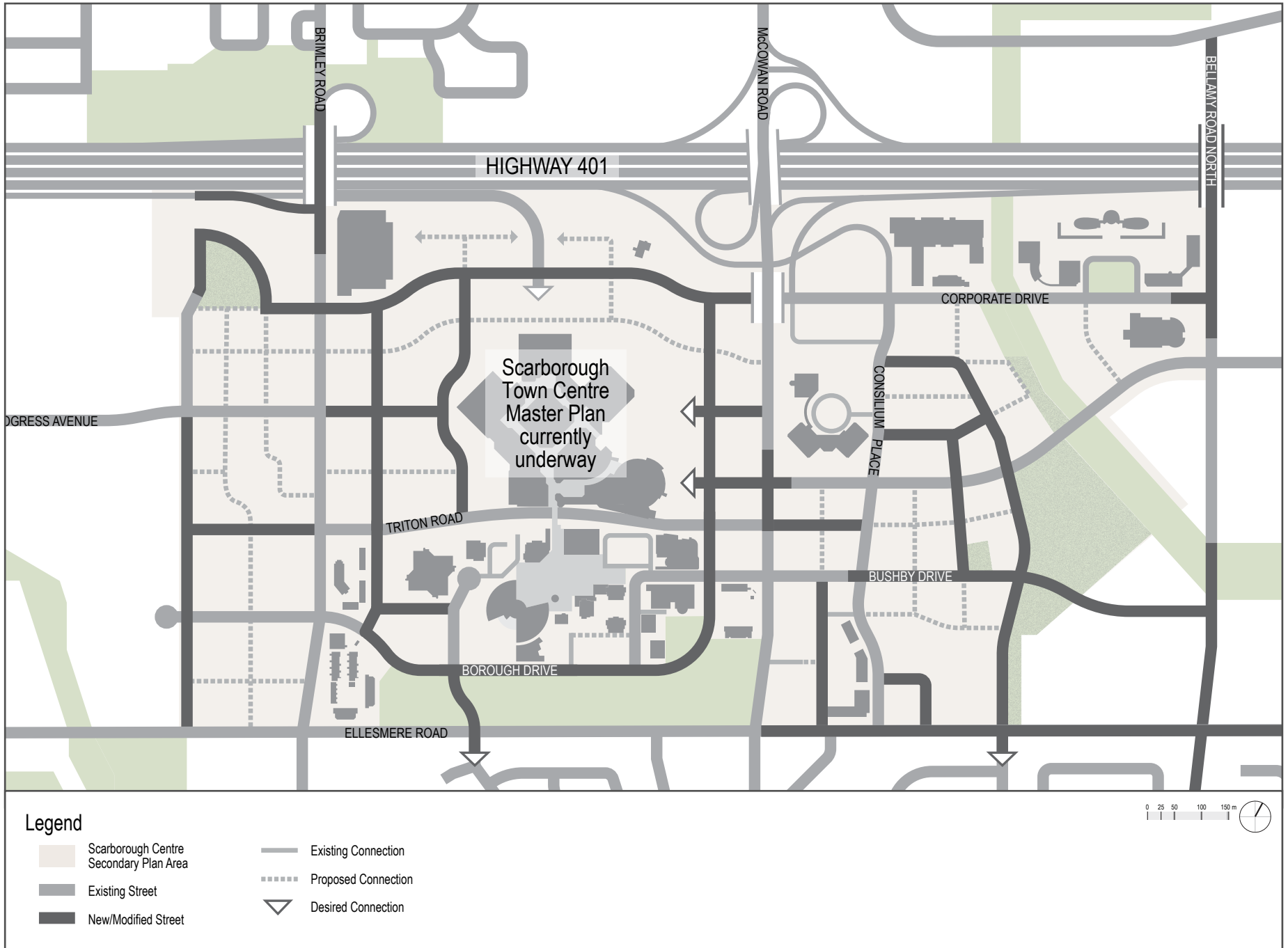


Figure E.12: Recommended Block Plan

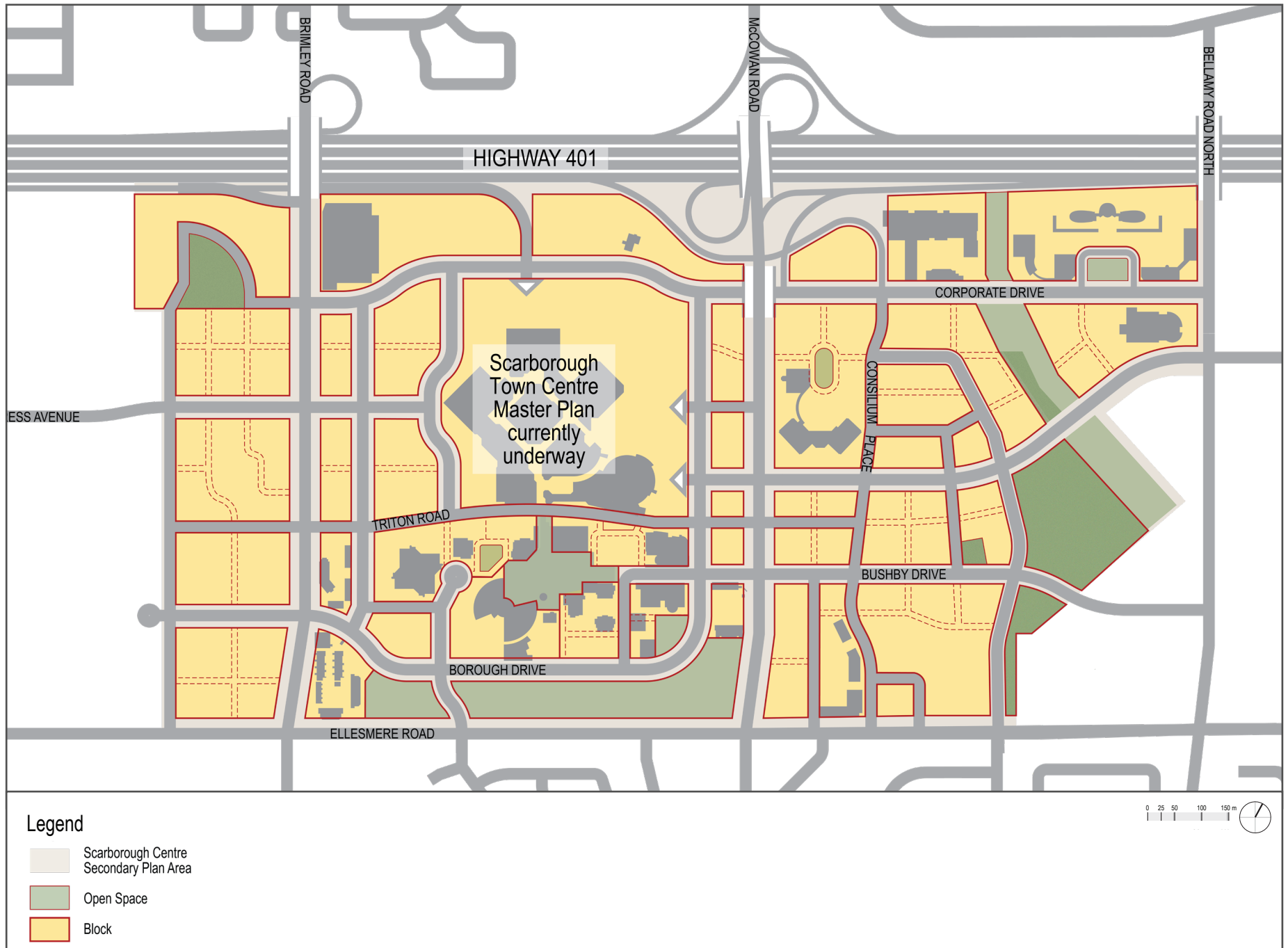
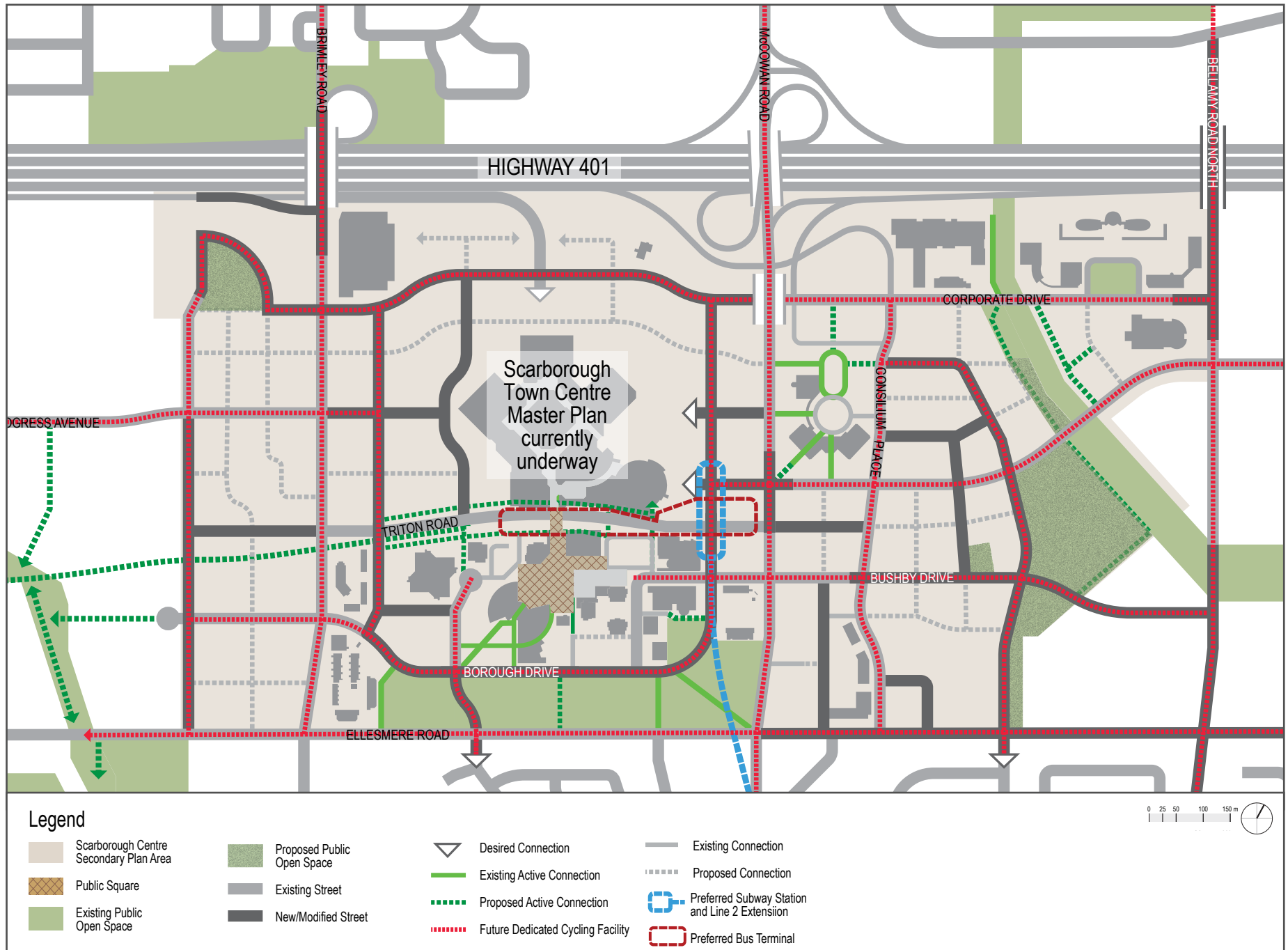


Figure E.13: Recommended Transportation Network



E.8 Pillar Four - Integrate Land Use & Transportation

The fourth pillar focuses on the relationship between land use and transportation. A transportation network sets the foundation for how an area will develop. Small development blocks in an urban centre encourage higher density mixed-use development that is transit-supportive and walkable, whereas large development blocks segregate land uses at lower densities and promote automobile reliance.

As new communities are developed and cities are redeveloped, a rethinking of planning is possible. Instead of planning for cars, building sustainable urban communities can create compact and connected neighbourhoods with overall reduced travel times and congestion. The resulting benefit is the efficient movement of people to goods and goods to people. Communities that are well-served by public transit and active modes, and that provide a mix of land uses, create better access and subsequently facilitate economic activity.

The existing land use designations in the study area support automobile use through separated land uses that result in longer travel distances. The McCowan and Brimley Precincts are primarily dominated by large industrial lands, while retail and residential uses are concentrated in the Town Centre Commercial and Civic Precincts. In the Official Plan and Secondary Plan, it is envisioned that the Centre will evolve over time into a mixed-use urban centre.

The layout and design of transit and land use systems (buildings, streets, and open space) can improve the integration of transit facilities into the community, creating a more comfortable and vibrant environment for pedestrians, cyclists, and transit users. The recommended block plan is shown in Figure E.12.

The SCTMP recommends development blocks of 80-120 metres to support mixed-use development, including retail, employment, institutional, residential and public spaces. The simplified grid network will increase connections to transit for all modes and improve the ability to conduct daily trips using active and sustainable modes of transportation.

E.9 Recommended Transportation Network

Recommended Network

The preferred network layers (i.e. active network, transit network, street network, and block plan) were combined to create the recommended transportation network shown in Figure E.13. The composite network ensures that improvements for each mode are being considered in conjunction with other modes, and that proposed changes not only benefit one type of user, but the transportation network as a whole.

This recommended transportation network contains the following proposed projects:

1. Area-Wide Policy Updates
2. Interim Project: Borough Drive Lane Reduction
3. Finer Local Streets and Connections
4. Progress Avenue and McCowan Road Intersection Normalization
5. Progress Avenue and Corporate Drive Reconfiguration
6. Elimination of Bushby Drive to McCowan Road Ramp
7. Borough Drive Lane Reduction
8. Borough Approach East and West Reconfiguration/Consolidation
9. Durham-Scarborough Bus Rapid Transit (BRT)
10. Brimley Road and Highway 401 Interchange Reconfiguration
11. Rapid Transit Infrastructure/Corridor Repurposing
12. Satellite Bike Share Expansion
13. Cycling Network
14. Bushby Drive Extension to Bellamy Road
15. McCowan Rapid Transit
16. Bellamy Road Extension to Milner Avenue

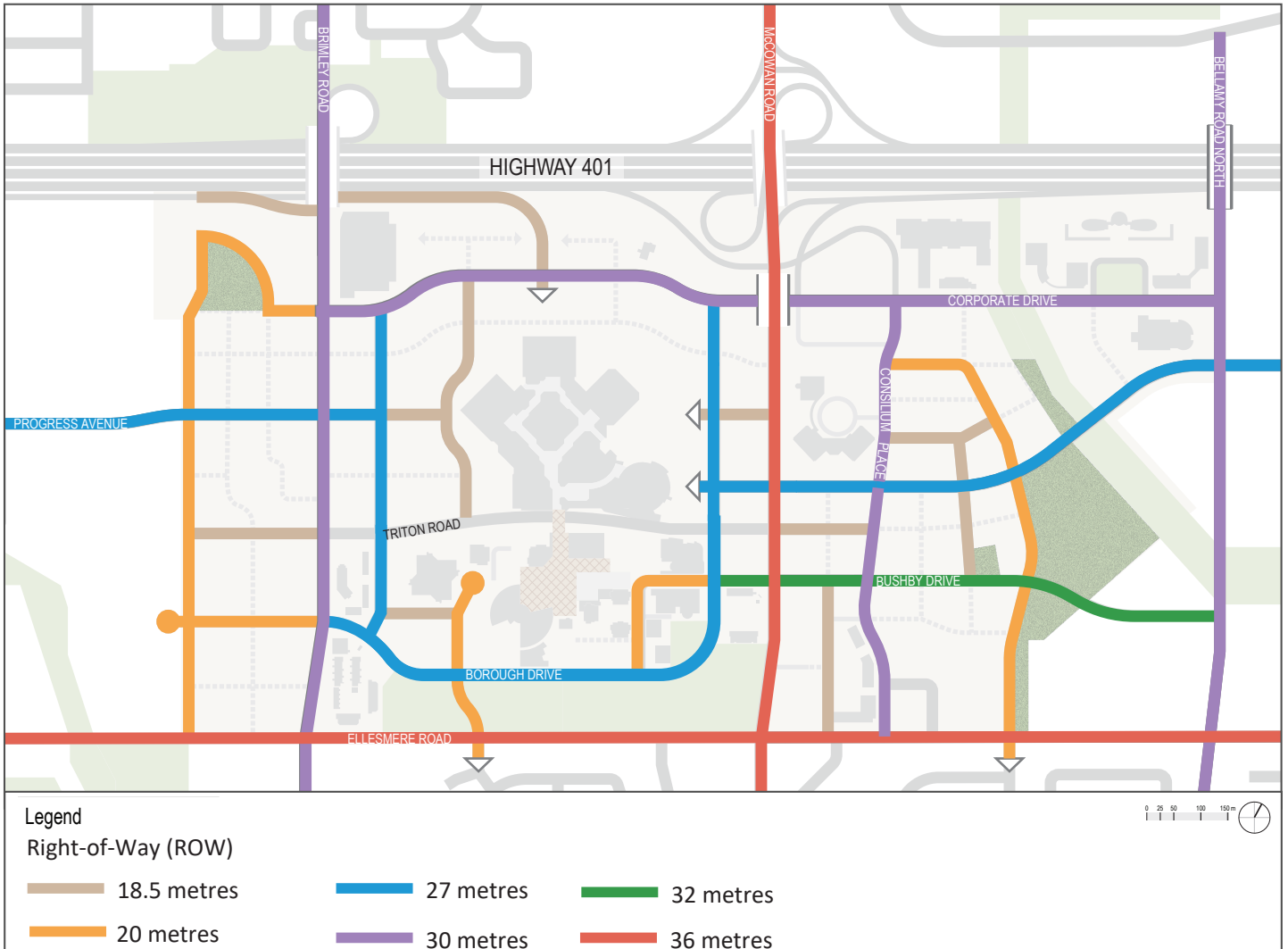
Design Criteria & Draft Preliminary Cross-Sections

The SCTMP applies a Complete Streets approach to the recommended transportation network. A Complete Streets approach is a design framework that aims to facilitate safe and comfortable travel for all users. In addition to providing infrastructure for all modes (pedestrians, cyclists, transit users, and drivers), a Complete Streets approach seeks to integrate the roadway with streetscape elements, adjacent land uses, and the community to provide an attractive environment for street users and change the Centre's modal split. This SCTMP presents conceptual cross-sections and design elements that draw from design criteria outlined in the City of Toronto Complete Streets Guidelines (2016), the City of Toronto Road Engineering Design Guidelines (2017), The Toronto Streetscape Manual, Accessibility for Ontarians with Disabilities Act (AODA), Ontario Traffic Manual (OTM) Book 18, and Toronto Green Streets Technical Guidelines (2017).

The SCTMP is a visionary document intended to demonstrate a balanced and attractive transportation network for all users. The cross-sections recommended as part of the SCTMP therefore do not contain dimensions for individual components. Cross-sections are conceptual and were developed to assist in achieving Complete Street principles and establishing minimum right-of-way widths. The actual widths of street elements (e.g., cycle facilities, etc.) shown in the conceptual cross-sections may need to be revised in Phases 3 and 4 of a future Environmental Assessment (EA) process and/or at detailed design.

Although the cross-sections are conceptual in nature and do not provide specific dimensions for each element, the SCTMP recommends ROW widths that are able to achieve the conceptual cross-sections. The recommended ROW widths for the SCTMP transportation network is shown in Figure E.14.

Figure E.14: Recommended Right-of-way Widths



E.10 Implementation & Next Steps

Project Prioritization

To achieve the long-term vision for Scarborough Centre to horizon year 2041, it is important to consider which projects are of highest priority and how they can be realistically implemented through the mechanisms and processes that are in place. The infrastructure improvements recommended as part of the Scarborough Centre on the Move Transportation Master Plan should be implemented in a logical way that minimizes its overall disruption to the surrounding communities and everyday users. Four implementation phases emerged: Quick Wins, Short-Term Projects, Medium-Term Projects, and Long-Term Projects, as shown in Table E.4.

Table E.4: SCTMP Project Phasing

Phase	Timing	Projects
Quick Win	0-2 years	<ol style="list-style-type: none"> 1. Area-Wide Policy Update 2. Interim Project: Borough Drive Land Reduction
Short-Term	0-10 years	<ol style="list-style-type: none"> 3. Finer Local Streets and Connections 4. Progress Avenue and McCowan Road Intersection Normalization 5. Progress Avenue and Corporate Drive Reconfiguration 6. Elimination of Bushby Drive to McCowan Road Ramp 7. Borough Drive Land Reduction 8. Borough Approach East and West Reconfiguration/Consolidation 9. Durham-Scarborough Bus Rapid Transit (BRT)
Medium-Term	10-20 years	<ol style="list-style-type: none"> 10. Brimley Road and Highway 401 Interchange Reconfiguration 11. Rapid Transit Infrastructure/Corridor Repurposing 12. Satellite Bike Share Expansion 13. Cycling Network 14. Bushby Drive Extension to Bellamy Road
Long-Term	20+ years	<ol style="list-style-type: none"> 15. McCowan Rapid Transit 16. Bellamy Road Extension to Milner Avenue

Funding Strategy

To best achieve the vision for Scarborough Centre, it is integral that implementation and funding be coordinated between the City, local and regional transit agencies, private investors, and other funding partners. Table E.5 outlines potential funding sources for each project, with the aim of effectively coordinating funds with other agencies and ongoing projects.

Table E.5: Potential Funding Sources

Phase	Projects	Potential Funding Sources
Quick Win (0-2 years)	1. Area-Wide Policy Updates	City/Property Owner
	2. Interim Project: Borough Drive Lane Reduction	City
Short-Term (0-10 years)	3. Finer Local Streets and Connections	Property Owner
	4. Progress Avenue and McCowan Road Intersection Normalization	City/TTC/Property Owner
	5. Progress Avenue and Corporate Drive Reconfiguration	City/TTC/Property Owner
	6. Elimination of Bushby Drive to McCowan Road Ramp	City
	7. Borough Drive Lane Reduction	City/Property Owner
	8. Borough Approach East and West Reconfiguration/Consolidation	City
	9. Durham-Scarborough Bus Rapid Transit (BRT)	Metrolinx/TTC/DRT
Medium-Term (10-20 years)	10. Brimley Road and Highway 401 Interchange Reconfiguration	City/MTO
	11. Rapid Transit Infrastructure/Corridor Repurposing	City
	12. Satellite Bike Share Expansion	City/Toronto Parking Authority/Partnerships
	13. Cycling Network	City/Property Owner
	14. Bushby Drive Extension to Bellamy Road	City/Property Owner
Long-Term (20+ years)	15. McCowan Rapid Transit	TTC/Metrolinx
	16. Bellamy Road Extension to Milner Avenue	City/MTO

Monitoring

Monitoring and reporting on the effectiveness of the Scarborough Centre on the Move Transportation Master Plan is necessary to ensure that the planned initiatives are progressing well, and align with the vision for the Centre, City, and Region. Ongoing monitoring and assessment will evaluate travel behaviour and operations to help move the plan forward and adjust priorities as needed. As the transportation network and character of the area changes, and as new innovations and technologies are introduced, this plan must adapt its priorities and projects accordingly. Transportation impact studies, corridor studies, and a Transportation Monitoring Program will be used to evaluate and track changing patterns, growth, traffic conditions, and development.

E. 11 Conclusions

The Scarborough Centre on the Move Transportation Master Plan and recommended transportation network presents a framework that provides a balanced transportation system for all users. The overall transportation network proposed through this plan acts as a transportation demand management (TDM) measure for creating a vibrant and sustainable multi-modal urban centre. With networks and strategies to support all four pillars, the vision for Scarborough Centre as a multi-modal hub that offers a variety of reliable and connected transportation options can be realized. The four study pillars and strategies to support the vision for Scarborough Centre are shown in Figure E.15.

Figure E.15: Strategies to Achieve the Vision for Scarborough Centre



