

ST. CLAIR AVENUE WEST TRANSPORTATION MASTER PLAN

FROM KEELE STREET TO OLD WESTON ROAD



JULY 2019

Table of Contents

Executive Summary	i
1.0 INTRODUCTION	1
1.1 Background.....	1
1.2 Study Area.....	1
1.3 Environmental Assessment Process.....	1
1.3.1 The Ontario Environmental Assessment Act.....	3
1.3.2 Municipal Class Environmental Assessment.....	3
1.3.2.1 The Transportation Master Plan.....	8
1.3.2.2 Part II Orders.....	8
1.3.3 Public Work Class Environmental Assessment.....	9
1.3.4 The Canadian Environmental Assessment Act.....	10
1.4 Related / Adjacent Studies and Projects.....	10
1.5 Planning Policy Framework.....	12
1.5.1 Provincial Policy Framework.....	12
1.5.1.1 Accessibility for Ontarians with Disabilities Act.....	12
1.5.1.2 The Planning Act.....	12
1.5.1.3 Growth Plan for the Greater Golden Horseshoe (2017) ...	12
1.5.2 City of Toronto Policy Framework.....	13
1.5.2.1 City of Toronto Official Plan (Adopted by Council 2002; Approved, in part, by the Ontario Municipal Board in June 2006 & June 2015).....	13
1.5.2.2 Toronto Pedestrian Charter (2002).....	13
1.5.2.3 Cycling Network 10 Year Plan (2016).....	13
1.5.2.4 Vision Zero (2017).....	14
1.5.2.5 Complete Streets Guidelines (2014).....	14
2.0 IDENTIFIED PROBLEMS AND OPPORTUNITIES	15
2.1 Problems and Opportunities.....	15
2.2 Accommodating Planned Growth and Community Revitalization .	16
2.3 Problem and Opportunity Statement.....	16

3.0	EXISTING CONDITIONS	17
3.1	Natural Environment	17
3.1.1	Vegetation	17
	Exhibit 3-1: Description of Vegetation Communities	18
3.1.2	Wildlife	22
3.1.3	Avifauna	22
3.1.4	Species at Risk and Species of Conservation Concern	23
3.1.5	Fish and Fish Habitat	24
3.1.6	Contamination	26
3.1.7	Groundwater and Geotechnical Investigation	27
3.1.8	Soil	33
3.2	Socio-Economic Environment	34
3.2.1	Demographic Profile	34
3.2.2	Land Use	35
3.2.3	Noise and Vibration	37
3.2.4	Air Quality	37
3.3	Cultural Environment	38
3.3.1	Archaeological Resources	38
3.3.2	Built Heritage and Cultural Heritage Landscapes	39
3.4	Municipal Servicing and Utilities	49
3.4.1	Transportation Features	49
3.4.2	Roadway Network	49
3.4.3	Public Transit	50
3.4.4	Cycling	53
3.4.5	Pedestrian Facilities	55
3.5	Existing Traffic Conditions	57
3.5.1	Traffic Simulation Study Area and Period	57
3.5.2	Existing Traffic Operations Assessment - Aimsun	57
3.5.3	Existing Traffic Operations Assessment - Synchro	59
3.6	Safety and Traffic Calming Reporting	62
4.0	Evaluation of Alternatives	63
4.1	Alternative Planning Solutions to the Undertaking	63

4.2	Alternatives Background.....	64
4.3	Planning Alternatives Analyzed.....	66
4.3.1	Alternative 1: Widen St. Clair Avenue West between Keele Street and Old Weston Road.....	69
4.3.2	Alternative 2: Extend Gunns Road from Weston Road to Union Street.....	70
4.3.3	Alternative 3: Extend Davenport Road to Lloyd Avenue	71
4.3.4	Alternative 4: Extend Keele Street to the Gunns Road extension (in conjunction with Alternative 2 – Gunns Road extension)	72
4.3.5	Alternative 5: Extend Davenport Road to Improved Union Street (in conjunction with Alternative 4 – Keele Street and Gunns Road Extensions).....	77
4.3.6	Alternative 6: Extend Davenport Road to West Toronto Street.....	78
4.3.7	Alternative 7: Extend Gunns Road to connect to the extension of Davenport Road between the Kitchener GO Rail corridor and Union Street.....	79
4.3.8	Alternative 8: Extend Keele Street to connect to the extension of Davenport Road between the Kitchener GO Rail corridor and Union Street.....	80
4.4	Evaluation Criteria	81
4.5	Preliminary Screening	83
4.5.1	Transportation Efficiency	83
4.5.2	Constructability	85
4.5.3	Neighbourhood Traffic.....	86
4.5.4	Summary of Alternative Screening.....	87
4.6	Natural, Cultural and Socio-Economic Environments Considerations.....	88
5.0	IDENTIFICATION OF THE RECOMMENDED PLAN	91
5.1	Design Parameters	93
5.2	St. Clair Avenue West Widening.....	94
5.3	Gunns Road Extension.....	96
5.4	Keele Street Extension	98
5.5	Davenport Road Extension	100
5.6	Union Street Improvement	101

5.7	Traffic Operations	103
	5.7.1 Network Performance – Aimsun Modelling	103
	5.7.2 Intersection Performance – Synchro Assessment.....	104
5.8	Pedestrian Access Improvements.....	104
5.9	Cycling Access Improvements	109
5.10	Transit Improvements.....	111
5.11	Municipal Services and Utilities	111
5.12	Staging of Improvements	113
5.13	Cost Estimates	115
6.0	CONSULTATION AND ENGAGEMENT.....	116
6.1	Notification	116
	6.1.1 Study Consultation	117
	6.1.2 Public Consultation Events.....	117
	6.1.3 Potentially Impacted Property Owners.....	118
6.2	Stakeholder Consultation.....	119
	6.2.1 Toronto Transit Commission (TTC).....	131
	6.2.2 Hydro One and Infrastructure Ontario.....	132
	6.2.3 Turnberry Residents Association	132
6.3	Agency and Stakeholder Meetings.....	133
	6.3.1 Technical Advisory Committee	133
	6.3.2 Metrolinx	133
	6.3.3 Toronto Transit Commission	133
	6.3.4 Constructability Workshops.....	134
	6.3.5 CP Section	134
	6.3.6 Utilities	134
	6.3.7 Toronto and Region Conservation Authority.....	134
	6.3.8 Hydro One and Infrastructure Ontario.....	135
	6.3.9 Impacted Property Owner Meetings	135
	6.3.10 SmartTrack St. Clair-Old Weston Station Stakeholder Meetings.....	135
	6.3.11 Public Event #1.....	136
	6.3.12 Public Event #2.....	138
	6.3.13 Indigenous Community Engagement.....	141

7.1	Natural Environment.....	142
	7.1.1 Designated Features	142
	7.1.2 Vegetation	145
	7.1.3 Wildlife	145
	7.1.4 Species of Conservation Concern	146
	7.1.5 Fish and Fish Habitat	148
	7.1.6 Tree Inventory.....	149
	7.1.7 Contamination and Waste Management	154
	7.1.8 Groundwater	155
	7.1.9 Soil.....	158
7.2	Socio-Economic Environment	158
	7.2.1 Land Use and Property Impact.....	158
	7.2.2 Noise and Vibration.....	161
	7.2.3 Air Quality	163
	7.2.4 Traffic and Safety	164
	7.2.5 Active Transportation	166
7.3	Cultural Environment.....	167
	7.3.1 Archaeological Resources	167
	7.3.2 Built Heritage and Cultural Heritage Landscapes	168
7.4	Permits and Approvals	170
	7.4.1 Municipal.....	170
	7.4.2 Provincial	171
	7.4.3 Federal	172
	7.4.4 Rail Authorities.....	172
	7.4.5 Hydro One	173
7.5	Summary of Identified Concerns and Mitigation / Commitments to Future Work.....	173

List of Exhibits

Exhibit 1-1: Study Area	2
Exhibit 1-2: Municipal Class Environmental Assessment Process.....	6
Exhibit 1-3: Study Process	7
Exhibit 3-1: Description of Vegetation Communities	18
Exhibit 3-2 a: Existing Natural Environment.....	20
Exhibit 3-2 b: Existing Natural Environment.....	21
Exhibit 3-3: Summary of Historic Species of Conservation Concern	23
Exhibit 3-4 a: Areas of Potential Environmental Concern	28
Exhibit 3-4 b: Areas of Potential Environmental Concern	29
Exhibit 3-4 c: Areas of Potential Environmental Concern	30
Exhibit 3-5: Borehole and Monitoring Well Locations	30
Exhibit 3-6: Land Use Designations	30
Exhibit 3-7: Summary of Existing Cultural Heritage Resources	40
Exhibit 3-8 a: Existing Cultural Heritage Resources	46
Exhibit 3-8 b: Existing Cultural Heritage Resources.....	47
Exhibit 3-8 c: Existing Cultural Heritage Resources	48
Exhibit 3-9: Existing Public Transit Services.....	51
Exhibit 3-10: Existing Cycling Facilities	54
Exhibit 3-11: Existing Pedestrian Facilities.....	56
Exhibit 3-12: Existing Weekday AM Peak Hour Traffic Conditions (Ext. Area).....	58
Exhibit 3-13 Existing Weekday AM Peak Hour Volumes (Study Area)	60
Exhibit 3-14 Existing Lane Configurations (Study Area)	61
Exhibit 3-15 – Existing Intersection Operations	62
Exhibit 4-1: Map Illustrating Alternatives 1 to 5.....	67
Exhibit 4-2: Map Illustrating Alternatives 6 to 8.....	68
Exhibit 4-3: Keele Street Extension Alternative 1.....	73
Exhibit 4-4: Keele Street Extension Alternative 2.....	74
Exhibit 4-5: Keele Street Extension Alternative 3.....	75
Exhibit 4-6: Keele Street Extension Alternative 4.....	76
Exhibit 4-7: Evaluation Criteria	81
Exhibit 4-8: Transportation Efficiency Ranking Within Study	84
Exhibit 4-9: Alternatives 1 to 5	84

Exhibit 4-10: Alternatives 6 to 8	84
Exhibit 4-11: Alternative 7A Concept.....	86
Exhibit 4-12: Summary of Alternative Screening Recommendations.....	87
Exhibit 5-1: Recommended Improvements Key Map	92
Exhibit 5-2: St. Clair Avenue West Widening	94
Exhibit 5-3: Typical Cross-section of Widened St. Clair Avenue West.....	94
Exhibit 5-4: Gunns Road Extension.....	96
Exhibit 5-5: Typical Cross-section of Gunns Road Extension	96
Exhibit 5-6: Cross-section of a Typical Multi-use Trail	97
Exhibit 5-7: Keele Street Extension	98
Exhibit 5-8: Typical Cross-section of Keele Street Extension.....	99
Exhibit 5-9: Cross Section of a Typical Street and Bike Lane	99
Exhibit 5-10: Davenport Road Extension	100
Exhibit 5-11: Typical Cross-section of Davenport Road Extension.....	100
Exhibit 5-12: Union Street Improvement	102
Exhibit 5-13: Typical Cross-section of Improved Union Street.....	102
Exhibit 5-14: Traffic Performance of the Recommended Package of Improvements (AIMSUN Model).....	103
Exhibit 5-15: Do Nothing 2031 Traffic Volumes.....	105
Exhibit 5-16: 2031 Traffic Volumes with Recommended Improvements	106
Exhibit 5-17: Traffic Performance of the Recommended Package of Improvements (Synchro Model).....	107
Exhibit 5-18: Future Lane Configurations	108
Exhibit 5-19: Proposed Pedestrian Facility Network.....	109
Exhibit 5-20: Proposed Cycling Facility Network	110
Exhibit 5-21: Preliminary Bus Route Map with SmartTrack Station (2025)	112
Exhibit 5-22: Improvement Staging Order.....	113
Exhibit 5-23: Cost Estimates of Recommended Improvements.....	115
Exhibit 6-1: External Agency Participation	122
Exhibit 6-2: Summary of Key External Agency and Public Comments Received during PE #1 and Responses	137
Exhibit 6-3: Summary of Key External Agency and Public Comments Received during PE #2 and Responses	139
Exhibit 7-1: Preliminary Impacts to Lavender Creek Ravine and Natural Feature	144

Exhibit 7-2: Emission Comparison at St. Clair / Keele / Weston Intersection 163
**Exhibit 7-3: Summary of Identified Concerns and Proposed Mitigation and
Commitments to Future Work..... 174**

List of Appendices

- A Natural Environment Memo**
- B Arborist Report**
- C-1 Phase One Environmental Site Assessment (Study Area)**
- C-2 Phase One Environmental Site Assessment (153 Weston Road)**
- D Soil and Groundwater Management Plan**
- E-1 Noise Memo**
- E-2 Toronto Municipal Code, Chapter 591, Noise**
- E-3 Toronto Municipal Code, Chapter 363, Vibrations from Construction Activity**
- F-1 Stage 1 Archaeological Assessment Report**
- F-2 Stage 1 -2 Archaeological Assessment Report**
- F-3 Stage 1-2 Archaeological Assessment Report, Record of Indigenous Engagement**
- G Cultural Heritage Existing Conditions and Impact Assessment Report**
- H Utility Report**
- I-1 Traffic Operational Analysis Report**
- I-2 Transportation Analysis Summary**
- J Long-Term Alternatives Evaluation Matrix**
- K-1 Evaluation of Potential TTC Streetcar Stop Below St. Clair Rail Bridge**
- K-2 Gunns Road Extension Alternatives Evaluation Memo**
- K-3 Keele Street Extension Re-Alignment Option Evaluation**
- K-4 Davenport Road Alignment Evaluation**
- L-1 Detail Design: St. Clair Avenue West**
- L-2 Detail Design: Gunns Road Extension**
- L-3 Detail Design: Keele Street Extension to Gunns Road**
- L-4 Detail Design: Davenport Road – Union Street Extension**
- M-1 Record of Consultation**
- M-2 St. Clair West Conceptual Constructability Review Workshop Memo**
- N Environmental Impact Statement for The Proposed Keele Street Extension**

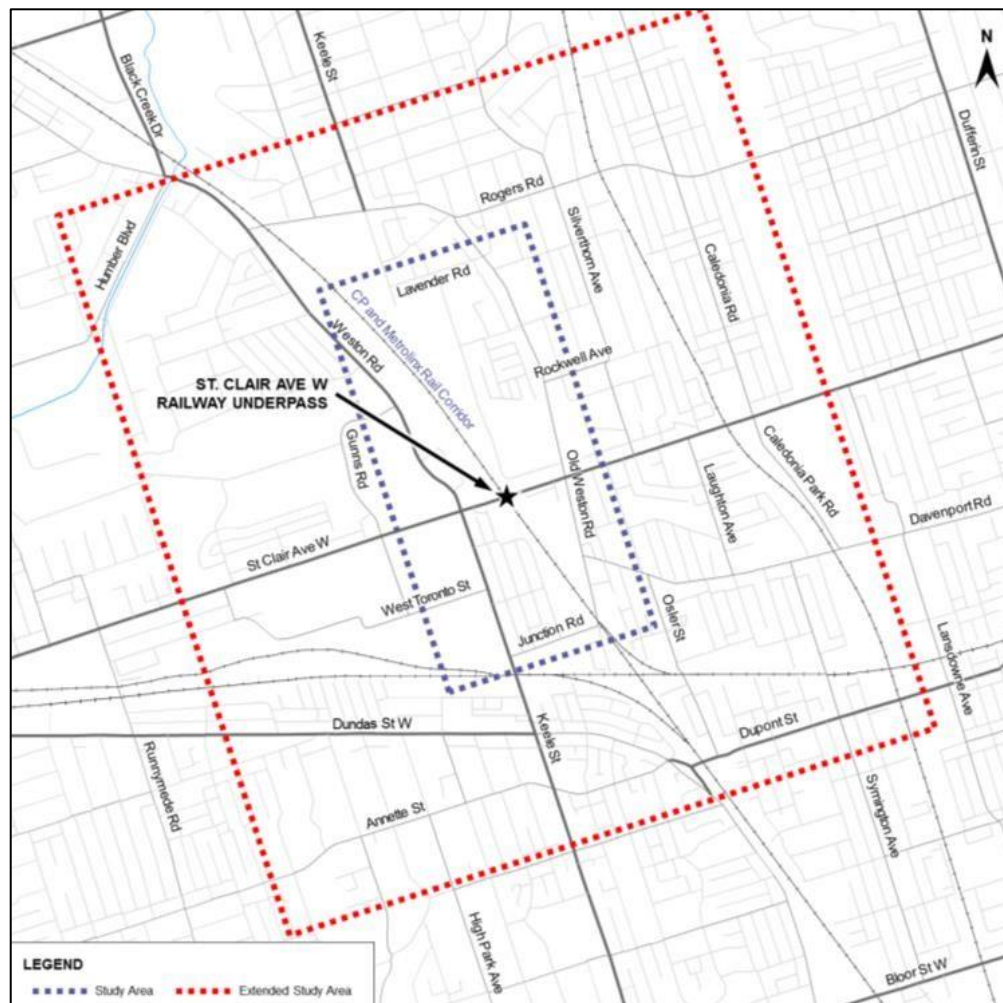
Executive Summary

1.0 Introduction

In 2012, the City of Toronto undertook a Functional Planning Study (FPS) to investigate short-term and long-term solutions to improve traffic congestion concerns on St. Clair Avenue West, from Keele Street to Old Weston Road. The *St. Clair Avenue at the Georgetown GO Underpass Transportation Infrastructure Planning Study Report* was completed in June 2015.

The City of Toronto initiated a Transportation Master Plan (TMP) study following the Municipal Class Environmental Assessment (EA) process in September 2015, to identify area-wide infrastructure improvements that address traffic congestion on St. Clair Avenue West between Keele Street and Old Weston Road. **Exhibit E-1** is a map of the study area showing both the extended and primary study areas for the project.

Exhibit E-1: Study Area



Municipal infrastructure projects are subject to the Ontario *Environmental Assessment Act* (EA Act). The Environmental Assessment (EA) is an approved self-assessment process under the EA Act for a specific group or “class” of projects. Projects are considered approved subject to compliance with an approved EA process. The Municipal Class Environmental Assessment (Municipal Engineers Association October 2000, as amended in 2007, 2011 and 2015) applies to municipal infrastructure projects including roads, bridges, water and wastewater.

This study has been carried out according to the Municipal Class Environmental Assessment (MCEA) process following Approach #3 of the Municipal Master Plan Process. As per the Approach #3 Master Plan process, this Transportation Master Plan (TMP) documents the following four of five phases of the MCEA process for the Schedule ‘C’ road projects investigated:

- **Phase 1:** identify the problem or opportunity
- **Phase 2:** identify alternative solutions
- **Phase 3:** examine alternative methods of implementing the preferred solution
- **Phase 4:** prepare and file the Transportation Master Plan (TMP)

As part of the St. Clair Avenue West TMP study, the City is completing the Ministry of Infrastructure (MOI) Public Work Class Environmental Assessment process specifically for property requirements at 153 Weston Road.

This TMP has been completed to evaluate and select infrastructure improvements and outline an implementation strategy. The TMP documents the study process; the existing natural, cultural and socio-economic factors; a summary of stakeholder consultation undertaken; generation of alternatives; evaluation and selection of the preferred alternative; potential environmental effects; and proposed mitigation measures. The study was carried out under the direction of senior staff of the City of Toronto and managed by WSP on behalf of the City. External technical agencies and stakeholders were consulted throughout the project as well.

2.0 Consultation

The consultation program was extensive; it is documented in **Section 6.0** and the detailed public consultation reports available in **Appendix M**. External agencies, including the Toronto and Region Conservation Authority, Infrastructure Ontario, Metrolinx, TTC, utilities, emergency service providers, Local Councillors, other potentially interested stakeholders, all property owners in the vicinity of the study area, and specifically impacted property owners were consulted and engaged during the study. Members of the public were also notified of the study through local newspaper publications and the City’s website, and were invited to contact the project team to join the project mailing list and provide input throughout the study.

Indigenous Community engagement is documented in **Section 6.5**. Indigenous communities have expressed a low level of concern in the project to the Project Team.

Key points of contact during the study included:

- **Notice of Study Commencement:** September 10, 2015
- **Notice of Public Event #1:** November 17, 2015
- **Public Event #1:** December 2, 2015
- **Notice of Public Event #2:** June 7, 2018
- **Public Event #2:** June 23, 2018 and June 25, 2018

3.0 Existing Conditions

Section 3.0 provides a summary of the existing conditions in the study area, including socio-economic environment, cultural environment, and transportation.

Natural Environment

Section 3.1 documents the existing natural environment within the study area.

There are limited natural environment features within the study area, due to its urbanized nature. The main natural environment in the study area is the Lavender Creek ravine and vegetated area south of the terminus of Keele Street, just south of Lavender Road. This natural feature is protected under the City of Toronto Ravines and Natural Features By-law, and is a Toronto and Region Conservation Authority (TRCA) regulated area.

Wildlife habitat is limited due to the developed nature of the study area. While the majority of wildlife observed are tolerant of humans and development, one (1) species-at-risk (SAR) was observed during July 2018 field investigations. Barn Swallow (SAR) nests were observed on the wooden structures at 153 Weston Road. No other potentially present SAR identified by the Ministry of Natural Resources and Forestry (MNRF) are considered likely to be found within the study area.

There is one (1) water feature within the study area, located within the natural feature south of the existing Keele Street terminus. This water feature was determined to function as indirect fish habitat by contributing flow to direct fish habitat downstream. Correspondence with TRCA in 2017 confirmed this water feature is not a fisheries habitat.

Socio-Economic Environment

Section 3.2 provides a summary of the socio-economic environment within the study area.

The City of Toronto Zoning By-Law 569-2013 designates the lands within the study area as predominantly “Residential” and “Employment Industrial”, with pockets of ‘Commercial Residential’ and ‘Open Space’. The rail corridor that runs north-south through the study area is zoned as “Utility and Transportation”.

Cultural Environment

Section 3.3.1 provides a summary of the Stage 1-2 archaeological assessments completed for the study. While the majority of the area has been cleared of archaeological potential, there are additional areas with deeply buried archaeological potential that will require further testing in the next design phase.

Section 3.3.2 provides a summary of the built-heritage resources, cultural heritage landscapes, and areas with archaeological potential within the study area. Cultural Heritage Existing Conditions and Impact Assessment Memos were completed for the study (**Appendix G**).

Twenty-two (22) cultural heritage resources were identified during the survey of the study corridor. Of the 22 cultural heritage resources, only one property was designated under Part IV of the *Ontario Heritage Act (By-law 599-83)* within the study area: the Heydon House Hotel (1834 St. Clair Avenue West).

Transportation

Existing transportation networks and conditions are documented in Section 3.5 of the Transportation Master Plan (TMP). Currently transportation connections for pedestrians, cyclists and vehicles are limited through the study area. The single travel lane per direction of St. Clair Avenue under the Metrolinx Kitchener GO rail corridor is the only continuous east-west vehicular / pedestrian link. In the case of incidents in this block of St. Clair, there is a risk of gridlock in the transportation system. This also results in circuitous trips throughout the study area, adding to turning volumes and queuing at intersections, and adding to emergency response times. Pedestrians are not well-served by the existing network: there are no connections between St. Clair Avenue and the adjacent streets between Weston Road and Old Weston Road, and no crossings of the rail corridor except at Rogers Road, St. Clair Avenue, and Old Weston Road. The distances between crossing points are well in excess of 500 metres.

There are no cycling connections through the study area. Cycling facilities such as the Lavender Creek trail on the west and Davenport Road bike lanes on the east reach to the edges of the study area, but cyclists are exposed to vehicular conflicts in the study area and must use circuitous routes. This inhibits cycling activity.

An assessment of existing traffic conditions indicates a poor level of service at the intersections of St. Clair Avenue with Weston Road/Keele Street and Old Weston Road. Queuing is extensive during peak periods.

In summary, the existing transportation network provides a poor level of service to all modes through this area, and offers little access to development areas or the planned SmartTrack station north of St. Clair Avenue.

4.0 Problems and Opportunities

St. Clair Avenue West is a heavily-used road in the City of Toronto that generally features two lanes of traffic in each direction alongside the dedicated TTC streetcar right-of-way (ROW). In the area of the railway underpass between Keele Street / Weston Road and Old Weston Road, the bridge span limits the roadway to one traffic lane in each direction (plus one dedicated streetcar lane per direction)

Section 2.0 provides the identified problems and opportunities for this study.

Problem and Opportunity Statement

The north/south rail corridor in the vicinity of St. Clair Avenue West between Keele Street and Old Weston Road limits east/west movement for cyclists, pedestrians and vehicles. This results in issues of congestion and connectivity.

The Transportation Master Plan will evaluate alternatives to improve movement using existing and potential new road connections for the benefit of all modes of travel.

5.0 Alternatives and Evaluation

Section 4.0 documents the evaluation of the alternative planning solutions to the undertaken, and the alternatives considered for the study, as well as the evaluation criteria used to evaluate the alternatives.

The feasibility and effectiveness of the alternatives were evaluated in both the FPS and TMP based on these criteria: property impacts, transportation planning, cultural environment, natural environment, transportation / operations / engineering / constructability, and estimated construction cost. These evaluation criteria were refined with input from stakeholders including the public.

Seven (7) alternative planning solutions to the undertaken were considered, including:

- **A:** “Do Nothing”
- **B:** High Occupancy Vehicle Lane
- **C:** Mixed Streetcar and General Purpose Lane
- **D:** Build New Road Connections
- **E:** Widen Existing Road
- **F:** Build New Pedestrian and Cycling Facilities
- **G:** Transit Improvements

Based on the high-level screening, Alternative Planning Solutions A, D, E, F and G were carried forward in the evaluation.

Alternatives

With consideration of the recommendations from the FPS, consultation with the City team, and feedback received during Public Information Centre (PIC) #1, a total of eight alternatives were established as follows:

- **Alternative 1:** Widen St. Clair Avenue West between Keele Street & Old Weston Road
- **Alternative 2:** Extend Gunns Road from Weston Road to Union Street
- **Alternative 3:** Extend Davenport Road to Lloyd Avenue
- **Alternative 4:** Extend Keele Street to connect to the Gunns Road extension
- **Alternative 5:** Extend Davenport Road to improved Union Street, extend Keele Street and extend Gunns Road
- **Alternative 6:** Extend Davenport Road to West Toronto Street
- **Alternative 7:** Extend Gunns Road to connect to the extension of Davenport Road between the Kitchener GO Rail corridor and Union Street
- **Alternative 8:** Extend Keele Street to connect to the extension of Davenport Road between the Kitchener GO Rail corridor and Union Street

Based on the evaluation, Alternatives 1 and 5 were selected as the recommended improvements for the study.

6.0 Recommended Improvements

Section 5.0 provides a detailed description of the recommended improvements for the St. Clair Avenue West Transportation Master Plan, and their contributions to the study area. Based on the evaluation completed, the following improvements were recommended:

- Widen St. Clair Avenue West;
- Extension of Gunns Road from Weston Road to Union Street;
- Extension of Keele Street south of Gunns Road extension; and
- Extension of Davenport Road from Old Weston Road to improved Union Street.

All recommended improvements will accommodate multiple modes of transportation, including pedestrians and cyclists.

Transportation Assessment

The transportation effects of the alternatives were modelled using the AIMSUN computer software, a microsimulation program. The model simulated traffic throughout the study area, for the weekday a.m. peak period. The operational performance of the improvements was compared to the “Do Nothing” scenario for the planning horizon of 2031, incorporating all known information regarding development and traffic growth. The recommended improvements are projected to result in measurable improvements over do-nothing, decreasing delay at the St. Clair / Weston and St. Clair / Old Weston intersections and throughout the network. Total travel time and stopped time are also expected to decrease, reflecting the greater efficiency of the network.

The proposed package of improvements will also have multimodal transportation benefits, summarized as follows:

- Comprehensive network of pedestrian connections, including sidewalks and ramps to connect St. Clair Avenue to adjacent local streets;
- Comprehensive network of cycling facilities to connect to all existing facilities and provide safe access throughout the study area;
- Enable access to the planned St. Clair-Old Weston SmartTrack Station for TTC buses, pedestrians and cyclists; and
- Enhanced emergency services vehicle access throughout the study area.

Construction Staging

The project will be undertaken in coordination with the replacement of the rail bridge over St. Clair Avenue, which is needed in the immediate term to accommodate electrification of the GO service and other rail improvements. Thus the first element to be constructed will be the widening of St. Clair Avenue.

The other project components will be completed subsequently. The extensions of Gunns Road and Keele Street should be completed together, to minimize the potential for traffic infiltration into residential neighbourhoods. The Davenport Road extension would follow.

Property Requirements

Property required for each of the improvements have been identified, and consultations have been conducted with the property owners. Property requirements are identified in **Section 7.0** of the TMP.

Costs

The capital costs of the improvements have been estimated based on the designs. The cost is identified in **Section 5.13** of the TMP. These costs are inclusive of the road work, active transportation, transit, utility and structural costs. These costs are exclusive of

property acquisition costs, which are to be finalized through the detailed design stage. It should also be noted that these costs do not include those associated with the St. Clair-Old Weston SmartTrack Station. The overall cost estimate for the recommended improvements is \$219M.

7.0 Environmental Impacts and Recommended Mitigation Measures and Commitment to Future Work

Potential impacts, concerns, recommended mitigations, commitments to future works, and other permits and approvals for the recommended improvements are outlined in **Section 7.0**, and summarized in **Table E-2**.

Table E-2: Potential Environmental Impacts and Recommended Mitigation Measures and Commitments to Future Work

Anticipated Impact	Recommended Mitigation Measure and Commitment to Future Work
<p>Natural Environment</p> <ul style="list-style-type: none"> • Loss of vegetation and trees and associated impacts to wildlife • Impacts to species-at-risk habitat • Impacts to TRCA regulated area and lands designated under the City of Toronto Ravine and natural feature protection By-Law • Impacts to contributing fish habitat • Impacts to properties with high and moderate potential for environmental contamination 	<ul style="list-style-type: none"> • Tree preservation and compensation plans for impacts to the natural feature south of the Keele Street terminus shall be refined and updated in the next design phase, in correspondence with TRCA and City of Toronto Ravines and Natural Features Office. • The potential to cause serious harm to fish risk will be reviewed during the next design phase. • Additional groundwater and geotechnical work will be required during the next design phase to confirm geological and hydrogeological conditions within the study and identify potential impacts to groundwater during and following construction. • Groundwater and Soil Management Plan should be developed and based on the recommendations developed as part of this TMP, and implemented during construction. • Further Phase Two ESAs be completed for all impacted properties determined to be of high or medium APEC in order to determine the soil and groundwater quality at the locations of the APECs.
<p>Cultural Environment</p> <ul style="list-style-type: none"> • Direct and indirect impacts to built-heritage resources and cultural heritage landscapes 	<ul style="list-style-type: none"> • All previously undisturbed areas, and locations with archaeological potential must be cleared prior to the start of construction. • Should previously unknown or unassessed deeply buried archaeological resources be uncovered during development, they may be a new archaeological site and therefore subject to

Anticipated Impact	Recommended Mitigation Measure and Commitment to Future Work
<ul style="list-style-type: none"> • Areas with archaeological potential existing within the study area • Unanticipated discovery of archaeological or human remains 	<p>Section 48 (1) of the <i>Ontario Heritage Act</i>. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed archaeologist to carry out archaeological fieldwork, in compliance with the <i>Ontario Heritage Act</i>.</p> <ul style="list-style-type: none"> • A Cultural Heritage Evaluation Report shall be completed at the ABC Lumber facility at 153 Weston Road, and the ten impacted of worker houses on the west side of Old Weston Road at Davenport Road to determine its eligibility for listing or designation under Part IV of the OHA and inclusion on the City of Toronto Heritage Register. • A Heritage Impact Assessment should be completed at the Heydon House Hotel prior to construction activity
<p>Socio-Economic Environment</p> <ul style="list-style-type: none"> • Property impacts as a result of the recommended improvements • Contaminated groundwater and soils • Creation of noise, vibration and dust during construction 	<ul style="list-style-type: none"> • Compensation to private property owners will be provided as part of property acquisition process. • Construction activities will comply with the City of Toronto noise control and vibration by-law. Should exemptions to the noise by-law be required, the appropriate application should be made to City Council.
<p>Traffic Operations and Design</p> <ul style="list-style-type: none"> • Need to maintain emergency service access • Traffic interruptions and delays during construction • Concerns with neighbourhood traffic 	<ul style="list-style-type: none"> • Construction staging for the St. Clair Avenue widening must ensure that emergency service access is maintained at all times. • Following construction of the recommended improvements, the City will monitor traffic volume, speed and collisions to determine if changes to local streets are needed to ensure safe and efficient transportation.
<p>Active Transportation Design</p>	<ul style="list-style-type: none"> • Details of the cross-ride designs and cycling treatments along the roads influenced by this TMP will be refined and established. • Bike troughs are required for the three sets of stair connections along St. Clair Avenue West leading to Townsley Street, Davenport Road and Mulock Avenue.

Anticipated Impact	Recommended Mitigation Measure and Commitment to Future Work
	<ul style="list-style-type: none"> • Pedestrian crosswalks and active transportation-related signage need to be designed at all study intersections as per the Ontario Traffic Manual. • Opportunities to refresh pavement markings should be investigated for intersections in the vicinity of the recommended improvements. • Opportunities to enhance active transportation facilities through roads with retaining walls and underpasses should be investigated through murals, art, street lighting placement, and railings – based on input from the City. • Curb cuts and tactile warning strip indicators along the two Hydro access roads should be provided where they intersect with the sidewalk and multi-use trail • Opportunities to connect the proposed cycling facilities to existing or future facilities should be investigated. • Opportunities to reduce intersection radii based on refined surface transit routes should be investigated. • Active transportation facilities should be coordinated between the various stakeholders including work related to the St. Clair-Old Weston SmartTrack Station. • Additional pedestrian connections such as sidewalks along Townsley Street should be investigated.
<p>Utilities</p> <ul style="list-style-type: none"> • Need to coordinate with utilities regarding existing and future locations 	<ul style="list-style-type: none"> • There are potential conflicts with existing utility locations. Further consultation with the utility agencies will be required during the next design phase.
<p>Rail Authorities</p>	<ul style="list-style-type: none"> • Coordinate and seek rail corridor access permits, flagging, construction submittals for both Metrolinx and Canadian Pacific Rail’s review.
<p>Permitting and Approvals</p> <ul style="list-style-type: none"> • Permits, approvals, and exemptions need to be sought in the next design phase 	<ul style="list-style-type: none"> • Obtain a permit to injure, destroy or remove trees under the City of Toronto’s Trees By-law. • Obtain a permit under the City of Toronto’s Ravine and Natural Feature Protection By-law. • If it is determined during Detail Design that the construction works will not adhere to the City of

Anticipated Impact	Recommended Mitigation Measure and Commitment to Future Work
	<p>Toronto noise by-law (Chapter 591, City of Toronto Municipal Code), a noise by-law exemption will be sought during the next design phase.</p> <ul style="list-style-type: none"> • An amendment to the City of Toronto's City-Wide Zoning By-law 569-2013 may be required for the proposed new roads. • A Road Occupancy Permit will be required for the construction period, which will be obtained prior to the initiation of the construction. • A permit from TRCA would be required prior to any development/site alteration within the TRCA regulated area (<i>O.Reg. 166/06</i>). • Obtain an exemption to the <i>Endangered Species Act</i> for barn swallow, and develop and implement mitigation requirements associated with the exemption in accordance with the ESA. • A PTTW and EASR registration is required if dewatering greater than 50,000 L/day is required. • Archaeological clearance must be obtained from the Ministry of Tourism, Culture and Sport prior to the start of construction. • Potential permitting requirements under the <i>Species at Risk Act</i> will be reviewed during the next design phase. If required, a SARA permit will be obtained prior to construction. • Hydro One and Infrastructure Ontario approval for proposed works on 153 Weston Road. The approval in principal obtained from Hydro One as part of this study is valid for 24 months