Executive Summary

A. What is Switching Gears?

Switching Gears is Oakville’s Transportation Master Plan (TMP) Update. Switching Gears is about developing a practical, sustainable long-term plan to guide the town’s transportation system to meet the needs of anticipated growth to 2031.

A TMP is a comprehensive master plan study that includes the review of the existing transportation system within the town, incorporates future population and employment growth forecasts identified in the Livable Oakville Plan, and provides recommendations for the required evolution of the future transportation network that will be necessary to support the demand generated. In Switching Gears, a variety of options were investigated:

- Public transit system and network improvements.
- Active transportation (pedestrian and cycling) initiatives and network improvements.
- Road network capacity improvements that highlight public transit opportunities.
- Travel demand management practices and requirements.
- Transit-supportive land use planning and travel demand management policies.

B. Growth Objectives and Sustainability

B.1 Environmental Sustainability

The town is actively involved in the consideration of the environment when reviewing new development growth through the Livable Oakville Plan policies, zoning by-laws, community and urban design guidelines and development review processes. Community building objectives, such as those in North Oakville and the other growth areas south of Dundas Street, aim to decrease automobile dependency while promoting alternative travel modes to increase sustainability and reduce impacts to air quality. Environmental resources, including green space and natural heritage features are preserved, protected and enhanced whenever possible in decision-making processes.

Through the adoption of a community-development strategy that induces a change in behaviour by residents and employers/employees towards the environment, increased efficiencies can be achieved through energy savings and decreased consumption of resources resulting in healthier communities. Policies direct growth to include compact, higher density, transit-supportive and walkable.
developments that are supportive of both residential and employment uses in the growth areas, as designated within the Livable Oakville Plan and the North Oakville Secondary Plans.

**B.2 Economic and Financial Sustainability**

Community well-being is linked to economic development and socio-economic conditions that attract businesses. The increase in residential and employment opportunities serve as a driving force in the economic and financial sustainability of the town. By focusing on a development strategy that promotes transit, cycling and walking while decreasing automobile use, the need for costly infrastructure expansion over the longer-term is reduced.

**B.3 Community and Cultural Sustainability**

Community building will be managed to preserve established residential neighbourhood communities while directing mixed-used, higher density growth to designated growth areas and North Oakville as identified in the Livable Oakville Plan and the North Oakville Secondary Plans. Established residential communities in Oakville, particularly older neighbourhoods in Bronte, Old Oakville and Eastlake have a number of built heritage features, including buildings, street patterns and historical character. The characteristics of these established communities can be protected by focusing growth to areas that can accommodate infill and intensification to satisfy residential and employment targets. This can be achieved with efforts to increase public transit, cycling and walking through infrastructure improvements.

**C. Planned Growth**

The Town of Oakville is expected to grow by approximately 72,000 people and 37,000 jobs in the next twenty years. The Region of Halton Best Planning Estimates project a future 2031 population of 246,400 and employment of 128,400. More than half of this growth will occur within the greenfields of North Oakville or adjacent to several planned transit corridors.

The remainder of the town’s growth will be directed to designated growth areas, primarily Midtown Oakville, the Uptown Core and Palermo Village, which are located at key intersections along transit corridors and are planned to develop as higher density, mixed use and transit-supportive communities with distinct characters. With the exception of Downtown Oakville, which is intended to accommodate very minimal growth, the secondary growth areas (Kerr Village, Bronte Village) are projected to accommodate moderate growth in support of “main street” development and lower order transit service.
D. Problem and Opportunity Statement

The Town of Oakville needs a transportation system that will accommodate growth to 2031, incorporating the planning framework from the Livable Oakville Plan and the North Oakville Secondary Plans. An opportunity exists to plan a transportation system which:

- is safe, efficient and accessible with choices in mobility,
- fosters the use and development of a sustainable transportation network,
- provides a public transit system that can offer a real alternative to private automobile use, and
- provides a network of on- and off-road pedestrian and cycling facilities that allow the use of active transportation modes as an alternative to the automobile.

E. Public Consultation

Switching Gears incorporates transportation, land use planning and a financial strategy which respects the social, environmental and economic goals as defined by the Livable Oakville Plan and other town and provincial strategies.

From the outset of the study, a communication plan was prepared to guide the consultation process with the following objectives:

- To ensure that town residents, the business community and other stakeholders are made aware of the importance of the transportation master plan initiative and kept informed and up-to-date about study components, progress and opportunities for input.
- To create meaningful and strategically appropriate opportunities for public and stakeholder engagement over the course of the study.
- To foster an environment that is conducive to substantive dialogue, a respectful, informed and productive discussion of transportation-related issues and the town’s future.
- To inspire confidence in the transportation master plan development process and in the town’s implementation and management of it.
- To present a well-integrated and seamless project progression that ensures consistency of word and action, demonstrates positive momentum and minimizes contentious issues.
- To establish and reinforce realistic expectations regarding feasible transportation-related choices and the manner in which stakeholder input will be considered/acted upon.

A comprehensive communication plan was implemented for Switching Gears using a variety of tools to inform the community, including direct mail, a
webpage hosted on the town’s website, dedicated project email addresses and phone numbers, social media (Facebook, Twitter), newspaper advertisements and town press releases. Notification to the public included a Notice of Commencement, two Public Open House notices, two newsletters, and three fact sheets.

F. Alternative Solutions

To accommodate planned growth within Oakville and achieve/maintain the Town of Oakville transportation level-of-service standards, a strategy for managing transportation supply and demand will be required. Alternatives considered included a range of modes and strategies for both travel demand and supply. The following travel demand management, active transportation, transit and road capacity solutions were considered.

F.1 Travel Demand Management Alternatives

Travel demand management (TDM) initiatives represent low-cost options that require limited public infrastructure investment, help optimize the use of available infrastructure and are more environmentally sustainable. The following alternatives were considered as components of the strategy for accommodating planned growth:

1. Continued efforts of initiatives in consultation with Smart Commute Halton are anticipated to maintain the proportion of residents, students and employees not commuting by single occupant cars. This alternative is seen as the Trend TDM Scenario:
   a. Promotion and support of reduced single occupant vehicle use through carpool programs.
   b. Promotion of reduced auto ownership and driving as a primary mode of travel through carshare programs.
   c. Promotion of transit and employer-subsidized transit programs.
   d. Promotion and support of telecommuting and live-work oriented developments.
   e. Promotion and support of peak spreading (temporal demand management).

2. In order to further reduce peak hour travel by up to an additional 3%, new and more proactive initiatives will be required resulting in a High TDM Scenario. This would include additional staff resources of at least one full time equivalent staff to focus on the demand management initiatives with reduction targets.
F.2 Active Transportation Alternatives

Specific strategies for achieving growth in walking and cycling as a commuter mode during peak periods, representing an additional 3% share of trip making, the High AT Scenario will require the following:

a. Promotion of active transportation home-to-work commuting through the development of the network as per the Active Transportation Master Plan (ATMP), introduction of development policies regarding bicycle trip end facility requirements and marketing strategies.

b. Promotion of walk and cycle to school programs through outreach programs, such as the Safe Routes to School program.

c. Provision of bicycle parking throughout the town, through government investment at public locations and development investment through approval requirements.

F.3 Transit Alternatives

These Oakville Transit strategies noted below reflect varying levels of investment and operating cost commitments:

1. Strategies that may be considered to maintain an overall 6% transit share, Business As Usual Transit Scenario, include:

   a. Expand transit service to North Oakville with cycling and pedestrian connections to transit.
   
b. Introduce higher frequency bus service on Trafalgar Road and Dundas Street to achieve high local transit mode share and inter-municipal service to offset the lack of GO Rail service in North Oakville.
   
c. Maintain peak period service frequency on primary routes of 10 minutes and peak period frequency on secondary and local routes of 20 minutes as per the Oakville Transit Service Design Standards.
   
d. Provide bicycle racks on the expanded bus fleet.
   
e. With support of the Ministry of Transportation, expand park and ride facilities and transit service to these facilities.
   
f. Structure routes to optimize utilization of the transit system.
   
g. Improve care-A-van and expand specialized transit services to North Oakville to serve people with disabilities.

2. In addition to those initiatives listed above, other strategies that may be necessary to achieve a doubling of the transit share to 12%, Transit Growth Scenario, include:
a. Improve customer service, e.g. provide passenger information at transit stops.
b. Introduce local transit marketing campaigns.
c. Provide dedicated transit lanes on rapid transit corridors (Dundas Street, Trafalgar Road, and Highway 407 consistent with the Halton Region BRT Studies) and HOV lanes on other primary corridors.
d. Highway 403 Transitway (Midtown Oakville to Mississauga Highway 403 Transitway).
e. Provide queue jump lanes for transit vehicles at key intersections.
f. Introduce express/shuttle bus service in growth areas.
g. More frequent GO Rail and GO Bus service.
h. Introduce transit signal priority measures.

3. In addition to those initiatives listed above, other strategies that may be necessary to achieve Halton Region’s target of 20% transit share, **High Transit Growth Scenario**, include:
   a. Introduce high frequency rapid transit services (5-minute headways or better).
   b. Comprehensive inter-regional transit marketing campaigns including social media strategies.
   c. Coordination with comprehensive TDM initiatives including parking strategies.
   d. Improve technology and amenities, e.g. on transit vehicles.
   e. Provide seamless inter-municipal transit to Mississauga, Burlington and Milton.
   f. Provide transit stop/station enhancements.
   g. Provide enhanced station amenities.
   h. GO-Metrolinx Express Rail along the Lakeshore line.

**F.4 Road Network Alternatives**

Currently approved Environmental Assessment (EA) projects include: Wyecroft Road (Bronte Creek crossing), Kerr Street (CN rail grade separation and widening from Speers Road to North Service Road), Speers Road (widening to 5 lanes from Bronte to Kerr Street), North Service Road (widening and extension from Eighth Line to Ford Drive) and Third Line (construction from Dundas Street to the North Oakville Transportation Corridor). In addition to these EA approved projects, the following network improvement alternatives were considered to address a range of capacity and mobility needs:

1. **Widen Town Arterials**: Widen town arterial road and major collector road corridors to provide additional capacity to supplement the provincial and
Region of Halton road network. Roads under consideration include: Burloak Drive, Great Lakes Boulevard, Iroquois Shore Road, Kerr Street, Sixth Line, Speers Road-Cornwall Road, South Service Road and Wyecroft Road.

2. **Growth Area Infrastructure**: Introduce new links and widened corridors within growth areas (Midtown Oakville) including: new connections such as an east-west collector road in south Midtown (Cross Avenue Extension) and an extension of Iroquois Shore Road, new crossings of the QEW (for priority lanes, active transportation and general purpose lanes) and widening town arterial road and major collector road corridors within Midtown.

3. **New Barrier Crossings**: Introduce new crossings of Sixteen Mile Creek, Highway 403 south of Dundas Street and Bronte Creek (currently approved).

4. **Widen Town Collectors and Residential Minor Arterial Roads**: Supplement the provincial, regional and town arterial road network with the widening of collector roads and residential minor arterial roads. Roads under consideration have direct residential frontage.

5. **Expanded Provincial Highway Infrastructure**: The town anticipates that the Ministry of Transportation will provide improvements that are seen by the town as current needs, including the widening of Highway 403 from QEW to Highway 407 and the completion of ramps at the QEW / Highway 403 interchange. In addition, consideration was given to the need for additional road capacity on QEW across Sixteen Mile Creek and the need for the extension of High Occupancy Vehicle (HOV) lanes on the QEW.

**F.5 Alternatives to Address Rail Crossing Exposure**

To address the growth in traffic (both rail and road) at at-grade crossings, consideration was given to grade separation solutions to manage the exposure to safety-related risks and delay. The merits of new grade-separated road-rail crossings were considered at the CN rail crossing of Kerr Street, Fourth Line, Chartwell Road and Burloak Drive relative to the benefits and cost risk.

**F.6 Traffic Operational Policies**

The efficiency of the road system is in part related to the signal timing operations and practices. Frequent reviews and modifications to the signal timing plans for key corridors can contribute to improved level-of-service. Proactive signal timing improvement programs represent an alternate accommodation of traffic growth.
G. Evaluation of Alternatives

Each alternative and sub-alternative solution was assessed to determine their effectiveness in resolving growth-related needs of the population and employment targets to the year 2031. The evaluation of the alternatives included measures of sustainability, transportation levels of service and efficiency, socio-economic impacts and opportunities, natural heritage impacts, and cost/benefit assessment.

It has been determined that no one solution will address the capacity needs and meet the strategic direction of the town. A combination of alternatives is required and the preferred solution includes:

1. **High Travel Demand Management Growth** through outreach programs and marketing of alternative travel behaviour to reduce peak hour auto travel by 3%.

2. **High Active Transportation Growth** through infrastructure and service investment, including the design of streets for active travel modes, to reduce auto travel by an additional 3%.

3. **High Transit Growth** through infrastructure, service investment, transit priority and coordinated service and fares (to 20% transit share).

4. **Infrastructure Improvements** including the widening of town arterial roads, improvements within the Midtown Oakville growth area, new town road barrier crossings of Highway 403 and Sixteen Mile Creek, and regular optimization of the traffic signal system (in cooperation with the Region of Halton and Ministry of Transportation). The plan will also rely on improvements to the regional road system and provincial highway network including an additional widening of the QEW over Sixteen Mile Creek.

5. **Road Network Strategies** complement the recommended TDM, active transportation, transit and infrastructure improvements by improving the overall transportation network in the future. These include a complete street policy, new traffic impact assessment guidelines, accessibility guidelines, traffic control guidelines, traffic calming measures, a goods movement strategy and a grade separation screening tool.
H. **Recommended Plan**

The long-term recommendations presented in the update of the Oakville TMP – Switching Gears focuses on improvements to address existing and future transportation needs and opportunities. The recommended plan integrates the following elements:

- Land use and transportation planning.
- Travel demand management strategies.
- Cycling and pedestrian facilities.
- Transit service expansion, transit priority measures.
- Road network capacity improvements.
- Urban sustainable design standards.

Implementation of intensification and growth directives as set out in the provincial growth plan is the catalyst for creating an environment in which changes to travel patterns and modal choices can occur.

H.1 **Travel Demand Management**

Recommended strategies and initiatives to optimize the use of available infrastructure include continued efforts of TDM initiatives in consultation with Smart Commute Halton. To further reduce peak hour travel, new and more proactive initiatives are also recommended which would require additional resources of at least one full time equivalent staff.

Altogether, recommended initiatives and strategies include:

- Promotion and support of reduced single occupant vehicle use through carpool programs.
- Promotion of reduced auto ownership and driving as a primary mode of travel through carshare programs.
- Promotion of transit and employer-subsidized transit programs.
- Promotion and support of telecommuting and live-work oriented developments.
- Promotion and support of peak spreading (temporal demand management).
- Increases to public parking facility rates.
- Introduction of private paid parking for specific defined land uses and site conditions.
- Reduced or shared parking requirements for specific land uses.

The appropriateness and effectiveness of parking TDM strategies will need to be studied further by the Town of Oakville to assess impacts to businesses,
convenience to residents and potential increase of illegal parking or migration of parking onto private property.

### H.2 Active Transportation

Active transportation represents sustainable travel modes through the ATMP adopted by Council in 2009. The ATMP includes a comprehensive network of bicycle routes, sidewalks and multi-use trails.

Recommended strategies for active transportation include adopting strategies and initiatives beyond those of the town’s ATMP network of bicycle routes, sidewalks and multi-use trails. Additional strategies include:

- Promotion of home-to-work commuting through the development of the network as per the ATMP, introduction of development policies regarding bicycle trip end facility requirements and marketing strategies.
- Promotion of walk and cycle to school programs through outreach programs.
- Provision of bicycle parking throughout the town, through government investment at public locations and development investment through approval requirements.

### H.3 Transit

Oakville Transit provides short and long-distance mobility through the town for all residents. It is the objective of the town to develop Oakville Transit into a competitive alternative mode to auto travel. To achieve this objective and accommodate growth in Oakville, recommended strategies include:

- Expand transit service to North Oakville with cycling and pedestrian connections to transit.
- Introduce higher frequency bus service on Trafalgar Road and Dundas Street to achieve high local transit mode share and inter-municipal service to offset the lack of GO rail service in North Oakville.
- Maintain peak period service frequency on primary routes of 10 minutes and peak period frequency on secondary and local routes of 20 minutes as per the Oakville Transit Service Design Standards.
- Provide bicycle racks on the expanded bus fleet.
- With support of the Ministry of Transportation, expand park and ride facilities and transit service to these facilities.
- Structure routes to optimize utilization of the transit system.
- Improve care-A-van service and expand specialized transit services to North Oakville to serve people with disabilities.
- Improve customer service, e.g. provide passenger information at transit stops.
• Provide dedicated transit lanes on rapid transit corridors (Dundas Street, Trafalgar Road, and Highway 407 consistent with the Halton Region BRT Studies) and HOV lanes on other primary corridors.
• Highway 403 Transitway (Midtown Oakville to Mississauga Highway 403 Transitway).
• Provide queue jump lanes for transit vehicles at key intersections.
• Introduce express/shuttle bus service in growth areas.
• More frequent GO Rail and GO Bus service.
• Introduce transit signal priority measures.
• Introduce high frequency rapid transit services (5-minute headways or better).
• Comprehensive transit marketing campaigns.
• Coordination with comprehensive TDM initiatives including parking strategies.
• Improve technology and amenities, e.g. on transit vehicles.
• Provide seamless inter-municipal transit to Mississauga, Burlington and Milton.
• Provide transit stop/station enhancements.
• Provide enhanced station amenities.
• GO-Metrolinx Express Rail along the Lakeshore line.

H.4 Infrastructure Improvements

Solutions that are based on managing auto travel demand are not anticipated to address the over 40% growth within the Town of Oakville. Infrastructure improvements that support the movement of transit, cycling, pedestrians as well as vehicles are also anticipated to be required. The infrastructure specific recommendations are summarized below and illustrated in Figure H-1.

Arterial road network improvements include:
• Burloak Drive (Superior Court to Wyecroft Road) grade separation at CN rail and widen to 6 lanes.
• Cornwall Road (Chartwell Road to Morrison Road) widen to 4 lanes.
• Great Lakes Boulevard (Rebecca Street to Burloak Drive) widen to 4 lanes.
• Highway 403 mid-block crossing (Ninth Line to Bristol Circle).
• Kerr Street (Speers Road to north of QEW) grade separation at CN rail and widen to 4 lanes.
• North Service Road (Joshuas Creek Drive to Ford Drive) realignment and new 4-lane roadway.
• Sixth Line (Dundas Street to New Burnhamthorpe Road) widen to 4 lanes.
• Speers Road-Cornwall Road (Bronte Road to Trafalgar Road) widen to 6 lanes.
South Service Road (Third Line to Fourth Line) widen to 4 lanes.
- Wyecroft Road (Burloak Drive to RRL) widen to 4 lanes.
- Wyecroft Road (RRL to Bronte Road) grade separation at Bronte Creek and new 4 lanes.
- Wyecroft Road (Bronte Road to Third Line) widen to 4 lanes.
- Wyecroft Road (Fourth Line to Weller Court) widen to 4 lanes.
- Wyecroft Road (Sinclair Road to Kerr Street) widen to 4 lanes.

In the Midtown Growth area, network improvements include:
- Chartwell Road (South Service Road to Cornwall Road) widen to 4 lanes.
- Cross Avenue Extension from Trafalgar Road to Royal Windsor Drive.
- Eighth Line (North Service Road to Iroquois Shore Road) widen to 4 lanes.
- Iroquois Shore Road (Trafalgar Road to Eighth Line) widen to 4 lanes.
- Priority lane / active transportation crossing of the QEW (Iroquois Shore Road to Cross Avenue) new road.
- QEW crossing (Iroquois Shore Road to Cross Avenue) new 4-lane road.
- Royal Windsor Drive / QEW interchange improvements.
- Trafalgar Road / QEW interchange improvements.

Recommended improvements to provincial infrastructure include:
- Highway 403 (QEW to Highway 407) widening.
- Completion of ramps at the QEW / Highway 403 interchange.
- Widen QEW with an additional lane per direction across Sixteen Mile Creek (as an alternative to the North Service Road Extension crossing of Sixteen Mile Creek).
- Extend QEW HOV lanes to Winston Churchill Boulevard.

Additional locations where road-rail grade separation should be planned include:
- Chartwell Road at CN rail.
- Fourth Line at CN rail.

In light of the traffic demands through the town’s network, infrastructure improvements will be necessary to address goods movement, access, and complete streets concepts. The following additional improvements are recommended:
- Cornwall Road (Ford Drive to Winston Churchill Boulevard) widen to 4 lanes
- Lakeshore Road (East Street to Dorval Drive) reconstruction to urban standard
- New Burnhamthorpe Road (Tremaine Road to Bronte Road) new 4 lanes
Figure H-1: Recommended Network

Legend
- Regional Road Improvements from Halton TMP
- Recommended Network Elements
- Approved Town Improvements
- Structure
- Rail Grade Separation
H.5 Roadway Network Strategies

In consideration of the town’s objective for a safe transportation system and accommodating growth in a manner that maximizes capacity on the existing and future infrastructure, transportation system management solutions – such as coordinated and/or adaptive signal timings – should be employed on the arterial corridors to meet real-time demand. The recommended strategies include:

- Adopt a road design and complete streets policy.
- Adopt new traffic impact assessment guidelines.
- Conduct a review of accessibility guidelines.
- Review and improve traffic control measure guidelines (e.g. signal optimization, roundabouts).
- Continue to apply traffic calming measures.
- Develop a goods movement strategy in collaboration with Halton Region.
- Adopt a screening method for grade separation (road-rail and pedestrian-road).

I. Implementation and Funding

To address those elements of the plan that are outside the jurisdiction of the town, it will be necessary for the town to continue to liaise and provide input into these external projects and developments which will help guide the success of the plan. For the town to realize any significant improvement to transit service levels, the provincial and regional road sections must be delivered to provide key transit corridor infrastructure. As well, public transit improvements by Metrolinx/GO Transit are paramount to meeting the modal split targets (such as increasing the service frequency and introducing express rail services) and the success of Midtown Oakville’s proposed mobility hub.

The Town of Oakville will be initiating an update of its development charge program, which will reflect the recommendations of the plan as well as the improvement priorities. For the town to fund this plan, a review of the improvements triggered by growth within the town that are eligible for funding through the town’s development charge and region’s development charge by-laws is necessary. It will also be necessary for the town to continue to seek additional funding alternatives to complement the capital and operating funding requirements.
J. Monitoring

To assess the progress of Switching Gears and related goals of evoking change in travel behaviour, a monitoring program has been developed to assess progress on project delivery and travel demand. The monitoring plan, using current data collection and reporting programs supplemented by town surveys, will be based on the following:

- **What we have built** – Percentage of infrastructure projects completed based on the capital program in comparison to the TMP.
- **Who we have served** – Increases in transit service coverage, active transportation route coverage, and TDM support services used.
- **How many we have influenced** – Number and percentage of residents and employees that have modified their travel behaviour to reduce auto demand during peak hours.

It will continue to be crucial for the town’s TMP – Switching Gears, and the Livable Oakville Plan to be reviewed regularly to track the progress in the delivery and use of all modes of transportation.

K. Next Steps

Within the Livable Oakville Plan and the North Oakville Secondary Plans the town has developed and adapted many of the land use planning principles necessary to achieve a sustainable community. To continue to meet the town’s goals, the land use plans must be supported with complementary sustainable transportation planning strategies. The recommendations in Switching Gears provide this compatible transportation framework to achieve the town’s vision.

The town should continue to update its TMP every five years. This will ensure that the plan is up to date with respect to growth targets, infrastructure improvements, and it will allow opportunities to introduce new concepts or technologies to assist with the development of the transportation system.
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Appendix 6  Costs

Appendix 7  Phasing Strategy
1.0 Introduction

1.1. What is Switching Gears?

Switching Gears is Oakville’s Transportation Master Plan. Switching Gears is about developing a practical, long-term plan to guide the town's transportation system to meet the needs of anticipated growth to 2031. The study identifies the transportation needs for Oakville and considers a diverse range of options to satisfy future travel demands.

A transportation master plan (TMP) is essentially a strategic plan for the town’s transportation system — it informs and directs policies and infrastructure initiatives. A TMP considers growth in population and employment, and the infrastructure improvements that are needed to ensure viable travel.

Switching Gears will help create a more balanced transportation system, including:
- Public transit system and network improvements.
- Active transportation (pedestrian and cycling) initiatives and network improvements.
- Road network capacity improvements that highlight public transit opportunities.
- Travel demand management (TDM) practices and requirements.
- Transit-supportive land use planning and travel demand management policies.
1.2. **Objective of a Transportation Master Plan**

Transportation master plans (TMPs) are long-range plans that coordinate transportation infrastructure, services and operational practices with anticipated community growth. The Transportation Association of Canada’s (TAC) *Best Practices for the Technical Delivery of Long-Term Planning Studies in Canada* defines a long-term transportation plan as “a document that identifies the needs for transportation infrastructure, services or programs for an urban area, commonly over a horizon of 10+ years or even longer”. Typically, it is a plan developed based on an estimation of forecasted traffic or travel, the identification of needs in transportation capacity or services, the assessment of alternate scenarios to meet these needs, and the selection of a recommended Transportation Plan.

Transportation master plans provide the technical rationale for other planning processes. TMPs can provide the needs assessment for new infrastructure and services for existing and future conditions that help define Development Charges associated with new development. TMPs can provide the needs assessment for the planning approvals of specific infrastructure improvements assessed through the Municipal Class Environmental Assessment (EA) Process; specifically, the requirements of phases 1 and 2 of the Class EAs. TMPs may also provide the technical rationale for Official Plan Amendments identifying new corridors or policies in the municipal Official Plan (The Livable Oakville Plan). Switching Gears provides the basis for key future environmental assessment studies and official plan designations, as required. TMPs can also identify the need for enhanced or new programs, policies, or by-laws to support community transition to more sustainable transportation options.

1.3. **Study Approach**

Switching Gears has been developed as a transportation master plan within the context of existing transportation infrastructure and travel characteristics in conjunction with community characteristics and environmental conditions. This strategy balances travel needs with community needs and natural heritage system needs within the framework of the policies of the Livable Oakville Plan and the fiscal objectives of the town.

Switching Gears has been developed to complement the planned infrastructure set out in the Metrolinx Regional Transportation Plan “The Big Move” and the Region of Halton Transportation Master Plan “Road to Change”. The plan focuses on town-related responsibilities and jurisdictional authority.
Switching Gears has also been developed in recognition of the current state of the Town of Oakville and the anticipated growth. It considers the existing land use patterns and established neighbourhoods, the environment and natural heritage features, the extent of the current transportation system and the ability of the transportation system to accommodate existing and future travel demands. Transportation problems and opportunities have been defined based on these needs and constraints.

Transportation solutions have been developed and assessed with guidance from town policy, including the strategic direction of Vision 2057 that has sustainability as the underlying town theme and objective. Specifically, the solutions strive to:
- Create it! – Develop a transportation system that meets the needs of growth.
- Preserve it! – Maintain and protect environmental sustainability.
- Live it! – Provide mobility while protecting for sustainable communities.
- Afford it! – Develop a financially sustainable plan for the town.

The transportation solutions have been evaluated based on the ability to meet the objectives of transportation service, natural heritage protection, community development and protection and sustainable town expenditure.

Figure 1-1 illustrates the Switching Gears study process. The background paper on the transportation master plan approach is included in Appendix 1A.

Figure 1-1: Study Approach
1.4. Consultation

A comprehensive consultation process was undertaken to gather community and stakeholder input within the master plan process. The following section documents the public and stakeholder consultation process for Switching Gears. From the outset of the study, a communication plan was prepared to guide the consultation process with the following objectives:

- To ensure that town residents, the business community and other stakeholders are made aware of the importance of the transportation master plan initiative and kept informed and up-to-date about study components, progress and opportunities for input.
- To create meaningful and strategically appropriate opportunities for public and stakeholder engagement over the course of the study.
- To foster an environment that is conducive to substantive dialogue, a respectful, informed and productive discussion of transportation-related issues and the town’s future.
- To inspire confidence in the TMP development process and in the town’s implementation and management of it.
- To present a well-integrated and seamless project progression that ensures consistency of word and action, demonstrates positive momentum and minimizes contentious issues.
- To establish and reinforce realistic expectations regarding feasible transportation-related choices and the manner in which stakeholder input will be considered/acted upon.

A variety of tools were used to inform the community, including direct mail, a webpage hosted on the town’s website, dedicated project email addresses and phone numbers, social media (Facebook, Twitter), newspaper advertisements and town press releases. Notification to the public included a Notice of Commencement, two Public Open House notices, two newsletters, and three fact sheets.

1.4.1. Technical Agencies

Relevant technical agencies were invited to participate in the Technical Agencies Committee (TAC). The TAC consisted of town staff, staff from Halton Region and adjacent local municipalities, provincial ministries, transit authorities, conservation authorities, utilities, emergency services, and other affected agencies. Three TAC meetings were held on the dates and locations described below:

- The first TAC meeting was held on September 14, 2011, at River Oaks Recreation Centre and provided an overview of the Switching Gears study
purpose and scope. Participants were given the opportunity to indicate their interests in the project.

- The second TAC meeting was held on February 29, 2012, at Oakville Town Hall and provided a briefing of the background papers in development and identification of key elements for the plan.
- The third TAC meeting was held on April 19, 2012, at Oakville Town Hall. The study team presented the status of background papers, modelling of transportation trends and alternatives, road network options and consultation activities.

A presentation was provided at each TAC meeting and was followed by a discussion period where attendees could ask questions and receive further information. Summaries of each TAC meeting are included in Appendix 1B.

1.4.2. Stakeholders

Stakeholders from special interest groups, residents’ associations and members of the public were invited to become part of the Stakeholders Group. Three Stakeholder meetings were held on the dates and locations described below:

- The first Stakeholders meeting was held on September 14, 2011, at the Trafalgar Room at Oakville Town Hall and provided an overview of the Switching Gears study purpose and scope. Participants were given the opportunity to indicate their interests in the project.
- The second Stakeholders meeting was held on February 29, 2012, at Oakville Central Public Library. The study team presented a briefing of the background papers in development and identification of key elements for the plan.
- The third Stakeholders meeting was held on April 19, 2012, at the Trafalgar Room at Oakville Town Hall. The study team presented the status of background papers, problem and opportunity statement, alternative solutions, modelling of transportation trends and alternatives, road network options and consultation activities.

A presentation was provided at each Stakeholders meeting and was followed by a discussion period. Summaries of each Stakeholders meeting are included in Appendix 1B.
1.4.3. Public

Public Open House

Two public open houses, as required by the master plan process, were held to inform the public of the study activities and provide opportunities for the public to ask questions and obtain further information from the study team.

The first public open house was held on October 19, 2011 from 6:30 to 9:00 PM at Oakville Town Hall. The public open house was the first point of contact with the general public to provide an overview of existing (and planned) conditions and to request input on issues, concerns and opportunities. A formal presentation was delivered, followed by a facilitated discussion period. Opportunities were provided for the public to review the information provided on display boards in an open house format where members of the public could interact with the study team.

The second public open house was held on May 16, 2012 from 6:30 to 9:00 PM at the Oakville Town Hall. Following up from the first public open house, a formal presentation and information display boards provided an overview of the preliminary preferred alternative, which included travel demand management, active transportation, transit and road components. A facilitated discussion provided opportunities for the public to provide input. After the meeting was adjourned, members of the public were invited to review the display boards in an open house format and interact with the study team.

Summaries of each public open house were prepared, documenting the public consultation activities, comments received and next steps. The public open house summaries are included in Appendix 1B.

Interviews / Online Survey

A survey was developed to gather additional feedback and public opinions outside of the formal consultation process, and were conducted in-person and online. In-person survey locations were selected based on consultation with the town, with the objective of obtaining a range of demographics and travel modes. A total of 379 surveys were completed, including 232 in-person/paper surveys and 147 online surveys. The average time needed to complete the survey ranged from 3 to 5 minutes. Details of the pedestrian intercept (in-person) surveys, including locations and dates, are described below:

- March 15, 2012, from 5:00 to 8:00 PM, at Oakville Central Public Library.
- March 15, 2012, from 5:00 to 8:00 PM, at Glen Abbey Community Centre / Public Library.
February 2013

- March 16, 2012, from 6:00 to 9:00 AM, at Oakville GO Station.
- March 22, 2012, from 11:00 AM to 2:00 PM, at Sheridan College.

Paper surveys were also distributed to a multicultural seniors group (at their request) and 19 completed surveys were collected during their meeting on April 27, 2012.

An online survey with the same content as the pedestrian intercept surveys was posted on the Town of Oakville website linked from the project page from March 9, 2012 to May 11, 2012.

A copy of the survey questionnaire and summary of the responses are included in Appendix 1B.

Focus Group

A focus group comprised of volunteer members of the public met to participate in a facilitated discussion, aimed to supplement collected survey data. The focus group members were recruited from the list of survey respondents who indicated that they were interested in participating. The main purpose of the meeting was to gather information and opinions regarding transportation-related issues and obtain potential solutions from individuals who use the Oakville transportation network on a regular basis.

Main topics of discussion included:
- Transportation issues facing the current transportation network.
- Challenges/opportunities facing the current transportation network.
- Potential solutions for the town’s long-term transportation network.
- Preferred transportation solutions of participants.

The meeting was held at Oakville Town Hall on Tuesday, April 10, 2012. A total of seven participants were present for the focus group meeting.

A summary of the Focus Group meeting is included in Appendix 1B.
2.0 Study Context

2.1 Natural Environment

Background documents on natural heritage features within the town were reviewed with consideration to transportation facilities and infrastructure. Relevant documents include the town’s Environmental Strategic Plan (2011 Update), Oakville Wildlife Strategy (2011 Draft), the Greenbelt Plan, Halton Regional Environmentally Sensitive Areas Consolidation Report (April 2005), and the Glenorchy Master Plan. The review of the natural environment context is documented in Appendix 2A.

Additionally, as part of Switching Gears, a Natural Environment Opportunities and Constraints Report (April 2012) was prepared by LGL Limited (see Appendix 2A). This report provides an outline of the natural environment features, as well as opportunities and constraints created by the existing natural environment on the transportation network. As part of the assessment, environmental background information was gathered and reviewed with specific emphasis on the significance and sensitivity of natural environmental features within the Town of Oakville.

The principal constrained areas for transportation facilities are:

- North-south valleylands along watercourses.
- North Oakville Natural Heritage System, which provides an west-east natural habitat.
- Bronte Creek valleylands and Provincial Park.

It is noted that species at risk along transportation corridors and their alternatives should be assessed in avoiding impacts to Endangered, Threatened and Special Concern Habitat.

On-going initiatives at the town include the State of the Environment Report, which measures key environmental indicators, the town’s Ecological Footprint assessment, Climate Change Adaption Strategy and environmentally sustainable initiatives in Council’s Strategic Plan.

2.2 Community Characteristics

The characteristics of Oakville’s existing communities provided the context from which a vision for the future can be developed. The nature and structure of the neighbourhoods, employment areas, commercial centres, institutional uses and recreational destinations that comprise Oakville define the existing view of the
community. These elements of the urban structure may require change and require preservation to facilitate growth in a “livable” manner.

The development of the transportation system over the next twenty years and beyond should have regard for the demographic characteristics and future trends specific to the Town of Oakville and the related needs of the community. The existing community characteristics, cultural features and town demographics are documented in Appendix 2B.

2.2.1. Existing Land Uses

The existing Urban Structure in Oakville includes residential areas, employment areas, commercial areas and undeveloped lands. The undeveloped lands include lands designated as the parkway belt and greenbelt, future residential, future employment and North Oakville. The existing and planned urban structure is illustrated in Figure 2-1.

Figure 2-1: Urban Structure

Source: The Livable Oakville Plan
2.2.2. Residential Areas

Existing Residential Areas

Oakville’s residential areas are comprised of a number of established residential communities that have developed from the initial 19th Century settlements of Downtown Oakville to the on-going developing neighbourhoods of Palermo West. The character of these communities vary from curvilinear street systems of recent development to the traditional road grids of the town’s original plan of settlement based on the mouth of the Sixteen Mile Creek.

The established residential areas in Oakville, south of Dundas Street, were reviewed to identify the community layout, key destinations, street character and supporting road and trail system. Each community is served by a system of collector or minor residential arterial roads (typically with 20 to 26 metre right-of-ways) that contribute to the community character. In many instances, these roads are “places” within the community, which is an element of the urban character that is supported and encouraged through the policies of the Livable Oakville Plan.

North Oakville Designated Residential Areas

The planned communities of Glenorchy and Joshua Meadows in the North Oakville East and West Secondary Plans are currently undeveloped “greenfield” areas. The North Oakville Secondary Plan identifies these future residential communities as “transit first” developments with a primary focus on transit travel.

2.2.3. Employment Areas

Employment lands represent a wide range of economic uses including industrial operations, manufacturing and distribution, warehousing, research and development, commercial, institutional and accessory retail uses. A profile of the town’s employment base is summarized as follows:

- The majority of the town’s jobs are located along the QEW corridor.
- The Ford Motor Company is the largest private sector employer, with approximately 3,500 employees.
- Other auto-related businesses are located in Oakville.
- Approximately 8,800 jobs are located in major offices in the employment areas, along the QEW corridor and the downtown.

The Livable Oakville Plan policies recognize the importance of employment lands. There is a vision for employment areas to be conducive to transit use.
Currently, a large percentage of employment lands is within proximity to the Lakeshore GO Rail corridor, and is well served by transit.

### 2.3. Existing Transportation System

Switching Gears was developed within the context of the existing transportation system consisting of roads and highways, railway services, transit services, and the active transportation network. The understanding of the existing service together with committed future services provided the basis for identifying system solutions to best accommodate town growth. The characteristics of the existing transportation system are documented in Appendix 2C Transportation System.

#### 2.3.1. Roads and Highway Network

The Ministry of Transportation (MTO) has jurisdiction over the provincial highway network, which includes the QEW / Highway 403 corridor in south Oakville and the Highway 407 corridor in northern Oakville. Highway 407 is operated as a toll facility by 407ETR. The MTO manages access to these highways and the municipal crossing roads in the immediate vicinity of the highways.

A grid of major arterials within Oakville is under the jurisdiction of Halton Region. Figure 2-2 illustrates the jurisdictions of the arterials and freeways in the Oakville road system. The Town of Oakville is responsible for the multi-purpose and minor arterial, collector and local roads providing community connection and land access. The Town of Oakville is also responsible for the sidewalks and off-road trails on all roads within the town.

**Figure 2-2: Regional Road Network**

Source: Region of Halton, Regional Road Network Map, January 2012
2.3.2. Railway Services

The CN Railway Oakville Subdivision is a 3-track east-west corridor in southern Oakville. It provides freight service and access to adjacent industrial uses. The rail lines are also used by GO Transit and VIA Rail for passenger travel.

2.3.3. Transit System

The Town of Oakville is well served by Oakville Transit and GO Transit services, as well as VIA Rail. Oakville Transit is the local transit service provided within the town, while GO Transit is an inter-regional commuter-based transit service provider for the Greater Toronto and Hamilton Area (GTHA), with services provided through Oakville that connect to other regional destinations.

**Oakville Transit – Conventional Service**

Oakville Transit provides local bus service on 27 regularly scheduled routes\(^1\) with an additional 7 routes specifically serving secondary schools in the town. Most routes operate on a 20-30 minute frequency during weekday peak periods, and a 20-60 minute frequency during off-peak periods and weekends.

The majority of routes originate from either the Oakville or Bronte GO Stations, however, additional cross-town services are also provided. Select routes also provide service into the adjacent municipalities of Burlington and Mississauga. A map of the current Oakville Transit system (effective September 2011) is illustrated in **Figure 2-3**.

**Oakville Transit – Specialized Transit Services (care-A-van)**

Oakville Transit provides a door-to-door transportation service called “care-A-van” for persons with physical functional mobility challenges. The service is provided Monday through Friday between 6:00 AM and 12:00 AM, Saturdays from 7:00 AM to 12:00 AM and Sundays / Statutory Holidays between 8:00 AM and 8:00 PM for persons travelling within the urban area of Oakville.

**Oakville Transit – Special Services (School Specials / Senior Specials)**

Oakville Transit provides “school special” service to area high schools in the town, connecting various neighbourhoods with local high schools. Conventional transit vehicles are used for the “school special” services.

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\(^1\) Based on Oakville Transit service effective September 2011.
Figure 2-3: Oakville Transit System Map

Source: Oakville Transit, September 2011
Oakville Transit also offers specialized transit services to three senior residences in the town on select days of the week. These services generally operate during the day between 9:00 AM and 4:00 PM, with approximately four to five trips per day, providing service between seniors’ residences and area shopping malls.

2.3.4. GO Transit Services

GO Transit provides intra-regional rail and bus service to three existing Oakville-area stations:
- Bronte GO Station (southwest Oakville).
- Oakville GO Station (central Oakville).
- Clarkson GO Station (southwest Mississauga).

The Town of Oakville is served by four GO Transit services:
- Route 1: Lakeshore West GO Rail line.
- Route 19: Oakville / North York Bus Service.
- Route 20: Milton / Oakville Bus Service.
- Route 46: Highway 407 West Bus Service.

2.3.5. VIA Rail

VIA Rail provides regular inter-city train service between Oakville and other destinations on the Windsor-Quebec City corridor, Niagara Falls and the United States. Select VIA trains stop at Oakville Station, which is also shared with GO Transit.

2.3.6. Active Transportation Network

The Town of Oakville has five types of existing facilities to accommodate the travel of pedestrians and cyclists:
- Concrete sidewalks (off-road, pedestrian-use only).
- Asphalt multi-use trails (off-road, in boulevard).
- Granular major trails (off-road, parks and open space).
- Cycle lanes (on-road, cycle-use only).
- All public roadways (with the exception of provincial highways).

The town’s off-road major trail system includes the north-south Bronte, Sixteen Mile and Joshuas Creek Trails, as well as the east-west Waterfront Trail and Cross-town Trail. The Waterfront Trail along Lake Ontario, is a major provincial facility that extends across Oakville. It is facilitated primarily as a signed cycling route on Lakeshore Road with sections of parallel off-road trails associated with Bronte Harbour, Coronation Park, Oakville Harbour and occasionally within...
Lakeshore Road boulevards. The existing active transportation network is shown in Figure 2-4.

2.3.7. Travel Demand Management

Introducing Travel Demand Management (TDM) in the Town of Oakville can help to reduce traffic congestion, travel times and pollution, while supporting active transportation. The goal of TDM is to reduce the number of single occupant vehicles travelling during peak congestion periods by promoting the use of alternative modes of transportation, including carpooling, transit, walking, cycling and alternative work arrangements.

To help reduce traffic congestion and improve air quality, the Town of Oakville is participating in the Smart Commute Initiative, Canada’s largest transportation demand reduction program with participation across the entire GTHA. The Smart Commute Halton program initiatives currently available include:

- Carpool / ride-matching service.
- Preferential carpool parking.
- Emergency ride home program.
- Improved transit service.
- Sale of transit tickets/passes.
- Bike lockers.
Figure 2-4: Existing Active Transportation Facilities
2.4. Future Transportation System

A number of commitments have been made at the regional and town level for new transportation infrastructure. In addition, there are key provincial infrastructure needs that the town sees as current needs. These improvements are seen as part of the “base condition” reflecting initiatives anticipated to be in place by 2031. Switching Gears assessed future operating conditions and needs with these improvements in place. If the provincial and regional initiatives are not implemented, then there will likely be a need for additional town transportation infrastructure and services.

2.4.1. Halton Region Transportation Master Plan

The Halton Region Transportation Master Plan (TMP), “Road to Change”, has developed a transportation strategy for infrastructure improvements to address the needs of the region. The planned improvements to the year 2031 is summarized in Table 2-1 and illustrated in Figure 2-5. The Oakville Transportation Master Plan is developed in recognition of these regional commitments.

The Halton Region Transportation Master Plan includes the recommendation for Bus Rapid Transit (BRT) service on Dundas Street and Trafalgar Road. Environmental assessment studies are on-going for these corridors.

A regional active transportation master plan, is also underway that would set forth the policies, infrastructure and strategic direction for encouraging increased cycling and walking on regional facilities and in partnership with area municipalities.
Table 2-1: Region of Halton Planned Improvements in Oakville

<table>
<thead>
<tr>
<th>Corridor</th>
<th>Location</th>
<th>Lanes</th>
<th>Year Start</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bronte Road</td>
<td>Speers Road to Highway 407</td>
<td>6 lanes</td>
<td>2025</td>
</tr>
<tr>
<td>Burloak Drive</td>
<td>Harvester Road to Upper Middle Road</td>
<td>6 lanes</td>
<td>2029</td>
</tr>
<tr>
<td>Dundas Street</td>
<td>Bronte Road to Highway 403</td>
<td>6 lanes (for HOV/RBL)</td>
<td>2012</td>
</tr>
<tr>
<td>Neyagawa Boulevard</td>
<td>Dundas Street to Burnhamthorpe Road</td>
<td>4 lanes</td>
<td>2012</td>
</tr>
<tr>
<td>Ninth Line</td>
<td>Upper Middle Road to Highway 407</td>
<td>4 lanes</td>
<td>2012-24</td>
</tr>
<tr>
<td>North Oakville Corridor</td>
<td>Regional Road 25 to Ninth Line</td>
<td>4 lanes</td>
<td>2012-18</td>
</tr>
<tr>
<td>North Service Road</td>
<td>Burloak Drive to Bronte Road across Bronte Creek</td>
<td>4 lanes</td>
<td>2031</td>
</tr>
<tr>
<td>Trafalgar Road</td>
<td>Leighland Avenue to North Boundary</td>
<td>6 lanes (for HOV/RBL)</td>
<td>2014-16</td>
</tr>
<tr>
<td>Upper Middle Road</td>
<td>Bronte Road to Winston Churchill Boulevard</td>
<td>6 lanes</td>
<td>2015-27</td>
</tr>
<tr>
<td>Winston Churchill Boulevard</td>
<td>Upper Middle / QEW to Dundas Street</td>
<td>6 lanes</td>
<td>2029</td>
</tr>
</tbody>
</table>

Source: Halton Region Transportation Master Plan, September 2011

Figure 2-5: Halton Region TMP Recommended Network
2.4.2. Oakville Roads Capital Program

Improvements to the Town of Oakville road network have been identified through previous transportation master plan studies and approved through the class environmental assessment process. These corridors, shown in Figure 2-6 include:

- Wyecroft Road (Bronte Creek crossing).
- Kerr Street (CN rail grade separation and widening from Speers Road to North Service Road).
- Speers Road (widening to 5 lanes from Bronte Road to Kerr Street).
- North Service Road (widening and extension from Eighth Line to Ford Drive).
- Third Line (construction from Dundas Street to the North Oakville Transportation Corridor).
- Sixth Line (reconstruction to a 4-lane urban roadway from New Burnhamthorpe Road to Dundas Street).
- Great Lakes Boulevard (widening and resurfacing to a 4-lane urban roadway from Burloak Drive to Rebecca Street).
- Cornwall Road (reconstruction and widening to a 4-lane urban roadway from Chartwell Road to Morrison Road).

Figure 2-6: Planned Road Improvements by Town
2.4.3. Oakville Active Transportation Master Plan

The Town of Oakville Active Transportation Master Plan (ATMP), September 2009, developed a town-wide cycling and pedestrian system that links all communities in the town. The vision for town’s ATMP study states:

The Town of Oakville is a pedestrian and cycling supportive community that encourages active transportation for both utilitarian and recreational travel through:

- Ensuring that every street accommodates pedestrians and cyclists;
- Established promotional and educational policies and programs including a coordinated marketing strategy to encourage active transportation year-round;
- A town-wide visible and connected active transportation network of on-road and off-road facilities designed with safety in mind that are comfortable, convenient, and accommodate the needs of existing and future users; and
- Approved Official Plan policies and associated strategies which recognize that great places require pedestrian and cycling friendly land development and streetscape design that supports the Town of Oakville’s vision to become the most livable town in Canada.

The recommended active transportation master plan, as adopted in the Livable Oakville Plan, is illustrated in Figure 2-7.

2.4.4. Metrolinx Regional Transportation Plan

In November of 2008, Metrolinx adopted a Regional Transportation Plan (RTP) for the Greater Toronto and Hamilton Area (GTHA), entitled The Big Move: Transforming Transportation in the Greater Toronto Area and Hamilton. The Plan calls for a multi-modal transportation system as illustrated in Figure 2-8. A number of initiatives are set forth in the Big Move Plan and are considered in the development of the Switching Gears plan:

- Midtown Oakville Mobility Hub planned around the Oakville GO station.
- Express Rail along the Lakeshore West commuter rail line.
- Rapid Transit (BRT, LRT, AGT)² along Trafalgar Road between Midtown Oakville and Highway 407.
- Rapid Transit (BRT, LRT, AGT) along Dundas Street across Oakville.
- Rapid Transit along (BRT, LRT, AGT) the Highway 403 corridor.
- BRT in mixed traffic, along the Highway 407 corridor across Oakville.

² Type of rapid transit technology to be confirmed through planning studies. BRT – Bus Rapid Transit, LRT – Light Rail Transit, AGT – Automated Guideway Transit.
Figure 2-7: Active Transportation Master Plan

Source: The Livable Oakville Plan
GO Transit has developed a $1.7 billion capital plan to deal with growth on its rail and bus system until 2016. The plan features the following initiatives:

- $580 million for GO TRIP (rail) expansion, which includes track improvements on Lakeshore West GO line to allow for more frequent service, increased reliability and extension of service hours.
- $35 million for expansion of parking capacity, including improvements to the parking structure currently being built at the Oakville GO Station.
- $500 million investment in new rail equipment, including coaches, locomotives and maintenance facilities.
- $165 million for bus rapid transit routes.
- $37 million for new buses.

The improvement of the service on the Lakeshore West GO line, in particular, featuring extended service hours and faster travel, aims to provide a more convenient and reliable link between Oakville (and the other municipalities to the west) and Toronto.
2.4.5. Ministry of Transportation – Provincial Highways Program

The Ministry of Transportation is currently conducting an Environmental Assessment for Highway 403 and QEW from Highway 407 to Trafalgar Road. The province has not made commitments for improvements within this study area. However, the Town of Oakville sees the need for the completion of the QEW / Highway 403 interchange (with ramps between the north and the east) and the widening of Highway 403 (from Highway 407 to QEW) as a current now need.

Switching Gears has been developed on the basis that these improvements will be in place prior to 2031, so as not to overstate the required town infrastructure. It is noted that the Region of Halton TMP, “Road to Change” also anticipated the need for these provincial improvements prior to 2031.

2.5. Travel Characteristics

Travel patterns within the town have been derived from the most recent available (2006) Transportation Tomorrow Survey (TTS) data and previous TTS data. A full summary of travel characteristics is included in Appendix 2D.

2.5.1. Hourly Travel Demand

For trips originating in Oakville, the AM period has a distinct peak hour. The PM has a broader peak period with peaking in both the mid-afternoon (after school) and late afternoon (after work). Figure 2-9 illustrates the hourly variation in trip-making for all trips originating in Oakville.

Historical data indicates that Oakville has experienced significant growth in peak hour travel in the AM peak hour. Growth has also occurred, to a lesser extent, in the midday and late evening time periods.
2.5.2. Modal Share

Travel to and from Oakville is largely dominated by the private automobile (both single-occupant and multi-occupant vehicles). The automobile modal share ranges from 80% for AM peak period outbound trips to 92% for PM peak period outbound trips. GO Rail has the next highest share in the peak directions ranging from 6% of PM inbound trips to 8% of AM outbound trips. Walk/cycle mode share is strong at 8% of AM trips and 4% of PM trips. Local transit, as noted in TTS database, has steady use in both peak periods at 2% for inbound and outbound trips during each of the peak periods. The 2006 trips by mode are summarized in Table 2-2.

Table 2-2: Modal Share Summary

<table>
<thead>
<tr>
<th>Mode</th>
<th>AM Peak Period</th>
<th></th>
<th>PM Peak Period</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Outbound</td>
<td>Inbound</td>
<td>Outbound</td>
<td>Inbound</td>
</tr>
<tr>
<td>Automobile</td>
<td>79.5%</td>
<td>85.8%</td>
<td>91.9%</td>
<td>86.9%</td>
</tr>
<tr>
<td>Local Transit</td>
<td>1.6%</td>
<td>2.1%</td>
<td>1.8%</td>
<td>1.3%</td>
</tr>
<tr>
<td>GO Rail</td>
<td>8.0%</td>
<td>0.8%</td>
<td>0.8%</td>
<td>6.4%</td>
</tr>
<tr>
<td>Walk/Cycle</td>
<td>7.5%</td>
<td>7.9%</td>
<td>4.1%</td>
<td>3.8%</td>
</tr>
<tr>
<td>Other</td>
<td>3.4%</td>
<td>3.4%</td>
<td>1.5%</td>
<td>1.5%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: TTS

The high automobile mode share is supported by the high rate of vehicle ownership for Oakville. In 2006, the average ownership was 1.76 vehicles per household, up from 1.73 in 2001. The vehicle ownership in Oakville is higher than the average ownership for the Greater Toronto Area (GTA) at 1.40 vehicles per household (or 1.68 vehicles per household excluding Toronto).
2.5.3. Origin-Destination Patterns

There is a high degree of “self-containment” in Oakville, i.e. a high percentage of trips that originate in Oakville and which are also destined to Oakville. TTS survey data indicates that 56% to 61% of all trips during the peak periods originating in Oakville are destined to Oakville. The majority of trips leaving Oakville are destined to nearby municipalities within Halton Region or Peel Region, particularly to Mississauga. Oakville also has a significant commuter pattern with the City of Toronto. The trip distribution is summarized in Table 2-3 for the AM and PM peak periods.

Table 2-3: Trip Distribution for Oakville Trips

<table>
<thead>
<tr>
<th>Destination or Origin</th>
<th>AM Peak Period</th>
<th>PM Peak Period</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Outbound</td>
<td>Inbound</td>
</tr>
<tr>
<td>Downtown Toronto</td>
<td>9.7%</td>
<td>0.5%</td>
</tr>
<tr>
<td>Rest of Toronto</td>
<td>6.2%</td>
<td>3.4%</td>
</tr>
<tr>
<td>Durham Region</td>
<td>0.0%</td>
<td>0.3%</td>
</tr>
<tr>
<td>York Region</td>
<td>1.2%</td>
<td>0.9%</td>
</tr>
<tr>
<td>Caledon</td>
<td>0.1%</td>
<td>0.2%</td>
</tr>
<tr>
<td>Brampton</td>
<td>1.5%</td>
<td>1.6%</td>
</tr>
<tr>
<td>Mississauga</td>
<td>16.1%</td>
<td>12.8%</td>
</tr>
<tr>
<td>Peel Region</td>
<td>17.7%</td>
<td>14.7%</td>
</tr>
<tr>
<td>Halton Hills</td>
<td>0.3%</td>
<td>1.0%</td>
</tr>
<tr>
<td>Milton</td>
<td>1.0%</td>
<td>2.0%</td>
</tr>
<tr>
<td>Oakville</td>
<td>57.2%</td>
<td>60.5%</td>
</tr>
<tr>
<td>Burlington</td>
<td>4.3%</td>
<td>10.1%</td>
</tr>
<tr>
<td>Halton Region</td>
<td>62.8%</td>
<td>73.6%</td>
</tr>
<tr>
<td>City of Hamilton</td>
<td>2.0%</td>
<td>5.8%</td>
</tr>
<tr>
<td>Niagara Region</td>
<td>0.3%</td>
<td>0.8%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: TTS

2.5.4. Trip Length by Mode

More than 60% of all trips originating in Oakville are less than 10 km in length. This is consistent with the findings that most trips are local trips within Oakville. For almost all distances, the predominant mode is the automobile except for the 31-40 km cohort where more people take GO Rail than any other mode (most trips in this distance range are destined to Downtown Toronto).
For trips less than 10 km in length, the combined walk-cycle-other mode has a 17% mode share in the AM peak period. The overall average trip length is similar in both the AM and PM periods at 12.3 km and 12.6 km. Trip lengths (straight line distance) are presented in Figure 2-10 and Figure 2-11.

The existing travel characteristics in Oakville show that there is significant potential to change travel behaviour. A high proportion of travel demand is shorter-distance trips within the town that have the potential to be made by walking, cycling or transit. There is also a strong commuter linkage between Oakville and Burlington that has potential for increased transit usage similar to the pattern observed between Oakville and Mississauga.

**Figure 2-10: Trip Length by Mode – AM Peak Period**

![AM Trips Originating in Oakville](image)

Source: TTS

**Figure 2-11: Trip Length by Mode – PM Peak Period**

![PM Trips Destined to Oakville](image)

Source: TTS
2.6. **Existing Transportation Conditions**

Transportation conditions, including the ratio of travel demand to transportation capacity, provide the basis for current and future traffic and transportation system needs. Appendix 2E provides a summary of current and future traffic conditions.

2.6.1. **Existing Conditions – Screenlines**

Current traffic conditions were assessed crossing key boundaries (screenlines) including rivers and municipal boundaries. Analysis at screenlines can typically identify some of the key capacity constrained locations. Five screenlines reflecting the crossing of Sixteen Mile Creek and the existing urban boundary, are illustrated in **Figure 2-12**. Observed traffic volumes for the road sections at these screenlines, based on existing traffic counts from the town (2009 to 2011) and 2011 Cordon Count data, were compared to capacities typically associated with road links based on the roadway environment, design and number of lanes.

**Table 2-4** and **Table 2-5** summarize the observed traffic at the screenlines for the AM and PM peak hours. Road sections crossing the screenlines with a volume to capacity ratio greater than 0.90 have been identified in red.

Existing capacity constraints are evident crossing the west of Sixteen Mile Creek and west of Bronte Road, particularly within the QEW corridor.

**Figure 2-12: Screenline Locations**

---

**Legend**
- Screenline locations

---

**Source:** Town of Oakville | Cole Engineering Group Ltd

---

February 2013
Table 2-4: Existing (2009-2011) AM Screenline Summary

<table>
<thead>
<tr>
<th>Description</th>
<th>Existing (2009-2011) AM Peak Hour</th>
<th>Eastbound/ Northbound</th>
<th>Westbound/ Southbound</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Volume (veh/hr)</td>
<td>Capacity (veh/hr)</td>
<td>V/C Ratio</td>
</tr>
<tr>
<td>West of Bronte Road Screenline</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dundas Street</td>
<td>2,042</td>
<td>1,900</td>
<td>1.07</td>
</tr>
<tr>
<td>QE W</td>
<td>5,165</td>
<td>5,100</td>
<td>1.01</td>
</tr>
<tr>
<td>Rebecca Street</td>
<td>691</td>
<td>950</td>
<td>0.73</td>
</tr>
<tr>
<td>Lakeshore Road</td>
<td>794</td>
<td>1,900</td>
<td>0.42</td>
</tr>
<tr>
<td>TOTAL</td>
<td>8,692</td>
<td>9,850</td>
<td>0.88</td>
</tr>
<tr>
<td>West of Sixteen Mile Creek</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dundas Street</td>
<td>1,745</td>
<td>1,900</td>
<td>0.92</td>
</tr>
<tr>
<td>Upper Middle Road</td>
<td>1,423</td>
<td>1,800</td>
<td>0.79</td>
</tr>
<tr>
<td>QE W</td>
<td>6,840</td>
<td>5,100</td>
<td>1.34</td>
</tr>
<tr>
<td>Wyecroft Road</td>
<td>478</td>
<td>750</td>
<td>0.64</td>
</tr>
<tr>
<td>Speers Road</td>
<td>1,316</td>
<td>1,500</td>
<td>0.88</td>
</tr>
<tr>
<td>Rebecca Street</td>
<td>476</td>
<td>850</td>
<td>0.56</td>
</tr>
<tr>
<td>Lakeshore Road</td>
<td>787</td>
<td>850</td>
<td>0.93</td>
</tr>
<tr>
<td>TOTAL</td>
<td>13,065</td>
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<td>1.02</td>
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<tr>
<td>West of Winston Churchill Boulevard Screenline</td>
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<td></td>
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</tr>
<tr>
<td>Dundas Street</td>
<td>1,159</td>
<td>1,900</td>
<td>0.61</td>
</tr>
<tr>
<td>Upper Middle Road</td>
<td>501</td>
<td>1,500</td>
<td>0.33</td>
</tr>
<tr>
<td>QE W</td>
<td>3,656</td>
<td>5,400</td>
<td>0.68</td>
</tr>
<tr>
<td>Royal Windsor Drive</td>
<td>1,103</td>
<td>1,900</td>
<td>0.58</td>
</tr>
<tr>
<td>Lakeshore Road</td>
<td>468</td>
<td>950</td>
<td>0.49</td>
</tr>
<tr>
<td>TOTAL</td>
<td>6,887</td>
<td>11,650</td>
<td>0.59</td>
</tr>
<tr>
<td>South of Dundas Street Screenline</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bronte Road</td>
<td>645</td>
<td>1,900</td>
<td>0.34</td>
</tr>
<tr>
<td>Third Line</td>
<td>678</td>
<td>1,500</td>
<td>0.45</td>
</tr>
<tr>
<td>Fourth Line</td>
<td>32</td>
<td>600</td>
<td>0.05</td>
</tr>
<tr>
<td>Neyagawa Boulevard</td>
<td>560</td>
<td>1,700</td>
<td>0.33</td>
</tr>
<tr>
<td>Sixth Line</td>
<td>363</td>
<td>1,700</td>
<td>0.21</td>
</tr>
<tr>
<td>Trafalgar Road</td>
<td>316</td>
<td>1,900</td>
<td>0.17</td>
</tr>
<tr>
<td>Eighth Line</td>
<td>269</td>
<td>850</td>
<td>0.32</td>
</tr>
<tr>
<td>Ninth Line</td>
<td>158</td>
<td>850</td>
<td>0.19</td>
</tr>
<tr>
<td>TOTAL</td>
<td>3,021</td>
<td>11,000</td>
<td>0.27</td>
</tr>
<tr>
<td>South of South Service Road/CN Rail Screenline</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bronte Road</td>
<td>1,273</td>
<td>1,900</td>
<td>0.67</td>
</tr>
<tr>
<td>Third Line</td>
<td>1,011</td>
<td>1,700</td>
<td>0.59</td>
</tr>
<tr>
<td>Fourth Line</td>
<td>542</td>
<td>1,500</td>
<td>0.36</td>
</tr>
<tr>
<td>Dorval Drive</td>
<td>1,021</td>
<td>2,550</td>
<td>0.40</td>
</tr>
<tr>
<td>Kerr Street</td>
<td>496</td>
<td>1,700</td>
<td>0.29</td>
</tr>
<tr>
<td>Trafalgar Road</td>
<td>552</td>
<td>2,550</td>
<td>0.22</td>
</tr>
<tr>
<td>Chartwell Road</td>
<td>102</td>
<td>700</td>
<td>0.15</td>
</tr>
<tr>
<td>Maple Grove Drive</td>
<td>396</td>
<td>400</td>
<td>0.99</td>
</tr>
<tr>
<td>Ford Drive</td>
<td>427</td>
<td>1,700</td>
<td>0.25</td>
</tr>
<tr>
<td>TOTAL</td>
<td>5,820</td>
<td>14,700</td>
<td>0.40</td>
</tr>
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</table>
Table 2-5: Existing (2009-2011) PM Screenline Summary

<table>
<thead>
<tr>
<th>Description</th>
<th>Volume (veh/hr)</th>
<th>Capacity (veh/hr)</th>
<th>V/C Ratio</th>
<th>Volume (veh/hr)</th>
<th>Capacity (veh/hr)</th>
<th>V/C Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>West of Bronte Road Screenline</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dundas Street</td>
<td>1,141</td>
<td>1,900</td>
<td>0.60</td>
<td>1,753</td>
<td>1,900</td>
<td>0.92</td>
</tr>
<tr>
<td>QEW</td>
<td>6,826</td>
<td>5,100</td>
<td>1.34</td>
<td>8,641</td>
<td>5,100</td>
<td>1.69</td>
</tr>
<tr>
<td>Rebecca Street</td>
<td>488</td>
<td>950</td>
<td>0.51</td>
<td>607</td>
<td>950</td>
<td>0.64</td>
</tr>
<tr>
<td>Lakeshore Road</td>
<td>406</td>
<td>1,900</td>
<td>0.21</td>
<td>797</td>
<td>1,900</td>
<td>0.42</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>8,861</td>
<td>9,850</td>
<td>0.90</td>
<td>11,798</td>
<td>9,850</td>
<td>1.20</td>
</tr>
<tr>
<td><strong>West of Sixteen Mile Creek</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dundas Street</td>
<td>1,419</td>
<td>1,900</td>
<td>0.75</td>
<td>1,827</td>
<td>1,900</td>
<td>0.96</td>
</tr>
<tr>
<td>Upper Middle Road</td>
<td>1,468</td>
<td>1,800</td>
<td>0.82</td>
<td>2,143</td>
<td>1,800</td>
<td>1.19</td>
</tr>
<tr>
<td>QEW</td>
<td>7,472</td>
<td>5,100</td>
<td>1.47</td>
<td>8,627</td>
<td>5,100</td>
<td>1.69</td>
</tr>
<tr>
<td>Wyecroft Road</td>
<td>316</td>
<td>750</td>
<td>0.42</td>
<td>452</td>
<td>750</td>
<td>0.60</td>
</tr>
<tr>
<td>Speers Road</td>
<td>918</td>
<td>1,500</td>
<td>0.61</td>
<td>1,519</td>
<td>1,500</td>
<td>1.01</td>
</tr>
<tr>
<td>Rebecca Street</td>
<td>400</td>
<td>850</td>
<td>0.47</td>
<td>684</td>
<td>850</td>
<td>0.80</td>
</tr>
<tr>
<td>Lakeshore Road</td>
<td>492</td>
<td>850</td>
<td>0.58</td>
<td>850</td>
<td>850</td>
<td>1.00</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>12,485</td>
<td>12,750</td>
<td>0.98</td>
<td>16,102</td>
<td>12,750</td>
<td>1.26</td>
</tr>
<tr>
<td><strong>West of Winston Churchill Boulevard Screenline</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dundas Street</td>
<td>1,505</td>
<td>1,900</td>
<td>0.79</td>
<td>1,227</td>
<td>1,900</td>
<td>0.65</td>
</tr>
<tr>
<td>Upper Middle Road</td>
<td>273</td>
<td>1,500</td>
<td>0.18</td>
<td>846</td>
<td>1,500</td>
<td>0.56</td>
</tr>
<tr>
<td>QEW</td>
<td>5,723</td>
<td>5,400</td>
<td>1.06</td>
<td>4,014</td>
<td>5,400</td>
<td>0.74</td>
</tr>
<tr>
<td>Royal Windsor Drive</td>
<td>801</td>
<td>1,900</td>
<td>0.42</td>
<td>1,015</td>
<td>1,900</td>
<td>0.53</td>
</tr>
<tr>
<td>Lakeshore Road</td>
<td>244</td>
<td>950</td>
<td>0.26</td>
<td>526</td>
<td>950</td>
<td>0.55</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>8,546</td>
<td>11,650</td>
<td>0.73</td>
<td>7,628</td>
<td>11,650</td>
<td>0.65</td>
</tr>
<tr>
<td><strong>South of Dundas Street Screenline</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bronte Road</td>
<td>682</td>
<td>1,900</td>
<td>0.36</td>
<td>1,063</td>
<td>1,900</td>
<td>0.56</td>
</tr>
<tr>
<td>Third Line</td>
<td>716</td>
<td>1,500</td>
<td>0.48</td>
<td>567</td>
<td>1,500</td>
<td>0.38</td>
</tr>
<tr>
<td>Fourth Line</td>
<td>45</td>
<td>600</td>
<td>0.08</td>
<td>30</td>
<td>600</td>
<td>0.05</td>
</tr>
<tr>
<td>Neyagawa Boulevard</td>
<td>422</td>
<td>1,700</td>
<td>0.25</td>
<td>443</td>
<td>1,700</td>
<td>0.26</td>
</tr>
<tr>
<td>Sixth Line</td>
<td>244</td>
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<td>0.14</td>
<td>210</td>
<td>1,700</td>
<td>0.12</td>
</tr>
<tr>
<td>Trafalgar Road</td>
<td>895</td>
<td>1,900</td>
<td>0.47</td>
<td>390</td>
<td>1,900</td>
<td>0.21</td>
</tr>
<tr>
<td>Eighth Line</td>
<td>227</td>
<td>850</td>
<td>0.27</td>
<td>313</td>
<td>850</td>
<td>0.37</td>
</tr>
<tr>
<td>Ninth Line</td>
<td>203</td>
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<td>0.24</td>
<td>145</td>
<td>850</td>
<td>0.17</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>3,434</td>
<td>11,000</td>
<td>0.31</td>
<td>3,161</td>
<td>11,000</td>
<td>0.29</td>
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<tr>
<td><strong>South of South Service Road/CN Rail Screenline</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bronte Road</td>
<td>1,067</td>
<td>1,900</td>
<td>0.56</td>
<td>631</td>
<td>1,900</td>
<td>0.33</td>
</tr>
<tr>
<td>Third Line</td>
<td>768</td>
<td>1,700</td>
<td>0.45</td>
<td>1,061</td>
<td>1,700</td>
<td>0.62</td>
</tr>
<tr>
<td>Fourth Line</td>
<td>676</td>
<td>1,500</td>
<td>0.45</td>
<td>398</td>
<td>1,500</td>
<td>0.27</td>
</tr>
<tr>
<td>Dorval Drive</td>
<td>1,206</td>
<td>2,550</td>
<td>0.47</td>
<td>1,058</td>
<td>2,550</td>
<td>0.41</td>
</tr>
<tr>
<td>Kerr Street</td>
<td>781</td>
<td>1,700</td>
<td>0.46</td>
<td>688</td>
<td>1,700</td>
<td>0.40</td>
</tr>
<tr>
<td>Trafalgar Road</td>
<td>2,527</td>
<td>2,550</td>
<td>0.99</td>
<td>1,598</td>
<td>2,550</td>
<td>0.63</td>
</tr>
<tr>
<td>Chartwell Road</td>
<td>50</td>
<td>700</td>
<td>0.07</td>
<td>25</td>
<td>700</td>
<td>0.04</td>
</tr>
<tr>
<td>Maple Grove Drive</td>
<td>416</td>
<td>400</td>
<td>1.04</td>
<td>455</td>
<td>400</td>
<td>1.14</td>
</tr>
<tr>
<td>Ford Drive</td>
<td>303</td>
<td>1,700</td>
<td>0.18</td>
<td>379</td>
<td>1,700</td>
<td>0.22</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>7,794</td>
<td>13,700</td>
<td>0.57</td>
<td>6,293</td>
<td>13,700</td>
<td>0.46</td>
</tr>
</tbody>
</table>
2.6.2. Existing Conditions – Intersection Operations

The 2011 Oakville Road System Report documents the traffic operations at signalized intersections under the town’s jurisdiction. Based on the assessment completed by the town, most intersections under the town’s jurisdiction operate at level-of-service (LOS) C or better. Seven intersections operate at LOS D:

- Bronte Road / Rebecca Street.
- Third Line / North Service Road.
- Third Line / South Service Road-Wyecroft Road.
- Third Line / Speers Road.
- Third Line / Rebecca Street.
- Dorval Drive / Rebecca Street.
- Kerr Street / Speers Road.

Intersections operating at LOS D are typically reviewed by the town to identify current constraints. Opportunities for future improvements are considered and conditions are monitored to determine the need for implementing improvements.

When conditions fall below LOS D to E or F, improvements are implemented, if feasible, to address operational delay. One intersection, the Cross Avenue/Speers Road intersection operates at LOS E/F.

Generally, the town’s signalized intersections are operating at acceptable levels. It is recognized that many of the major signalized intersections within Oakville are under the jurisdiction of Halton Region.
2.7. **Future Base 2031 Traffic Conditions**

2.7.1. **Projected Land Use Growth**

The North Oakville Secondary Plan designates significant growth in population and jobs in Oakville. The Livable Oakville Plan identifies primary growth areas for employment and population: Uptown Core, Palermo Village, Kerr Village, Bronte Village and Downtown Oakville and Midtown Oakville (the provincially designated Urban Growth Centre).

The Best Planning Estimates (BPE) growth allocations, prepared by Halton Region under the framework of *Places to Grow*, include the following for the Town of Oakville:

- 41% increase in population, from 174,800 persons in 2011 to 246,400 persons in 2031.
- 41% increase in employment, from 91,000 jobs in 2011 to 128,400 jobs in 2031.
- Of the total population growth, 40% will occur in growth areas and corridors and 51% will occur in the new urban expansion areas (e.g. North Oakville). For employment, 14% of the growth will occur in growth areas and corridors, while 52% of new jobs will be located in new urban expansion areas (e.g. North Oakville).

These growth parameters were the basis for the development of the town’s Transportation Forecasting Model used to project future travel demands. Appendix 2F summarizes the development of the transportation model.

2.7.2. **Future Base 2031 Traffic Conditions – Screenlines**

The anticipated volumes for the year 2031 were reviewed to identify future potential constraints to the road network. The base 2031 traffic conditions road network includes EA approved improvements that will soon be under construction.

Table 2-6 summarizes the 2031 traffic forecasts for the PM peak hour. All road sections with a volume to capacity ratio greater than 0.90 (90% of typical capacity) have been identified in red.

Figure 2-13 and Figure 2-14 graphically illustrate the 2031 PM peak direction (northbound and westbound) screenline volume to capacity ratios.
### Table 2-6: 2031 Base Conditions Screenline Summary

<table>
<thead>
<tr>
<th>Description</th>
<th>2031 PM Peak Hour</th>
<th>2031 PM Peak Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Eastbound/ Northbound</td>
<td>Westbound/ Southbound</td>
</tr>
<tr>
<td></td>
<td>Volume (veh/hr)</td>
<td>Capacity (veh/hr)</td>
</tr>
<tr>
<td>West of Bronte Road Screenline</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dundas Street</td>
<td>1,304</td>
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<tr>
<td>North Service Road</td>
<td>1,014</td>
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<tr>
<td>QEW</td>
<td>6,922</td>
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<tr>
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<tr>
<td>Rebecca Street</td>
<td>854</td>
<td>950</td>
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<tr>
<td>Lakeshore Road</td>
<td>578</td>
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<td>TOTAL</td>
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<td>14,650</td>
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<td>West of Sixteen Mile Creek Screenline</td>
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<td>Dundas Street</td>
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<td>West of Winston Churchill Boulevard Screenline</td>
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<td>Beryl Road</td>
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<th>Description</th>
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<tr>
<td></td>
<td>Eastbound/ Northbound</td>
<td>Westbound/ Southbound</td>
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</tr>
<tr>
<td></td>
<td>Volume (veh/hr)</td>
<td>Capacity (veh/hr)</td>
<td>V/C Ratio</td>
<td>Volume (veh/hr)</td>
<td>Capacity (veh/hr)</td>
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<td><strong>0.64</strong></td>
<td>16,226</td>
<td>26,950</td>
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<td>South of South Service Road/CN Rail Screenline</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bronte Road</td>
<td>911</td>
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<tr>
<td>Third Line</td>
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<td>0.62</td>
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<td>Fourth Line</td>
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<td>1,500</td>
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<td>Dorval Road</td>
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<td>1,624</td>
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<td>Kerr Street</td>
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<td>Trafalgar Road</td>
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<td>Ford Drive</td>
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<td><strong>0.72</strong></td>
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<td>17,150</td>
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</table>
Figure 2-13: 2031 Base Conditions Northbound Screenlines

Figure 2-14: 2031 Base Conditions Westbound Screenlines
The future 2031 traffic forecasts show that traffic volumes on the QEW will continue to be capacity constrained and will further extend to the Winston Churchill Boulevard screenline. At the Sixteen Mile Creek screenline, Dundas Street and Speers Road will operate above capacity with high demand in both the eastbound and westbound directions. Rebecca Street and Lakeshore Road also will operate at or above capacity thresholds.

High growth is anticipated north of Dundas Street under the future condition resulting in high increases in north-south traffic volumes. At the Dundas Street screenline, Highway 403 will operate with capacity constraint in the southbound direction, while at the South Service Road/CNR screenline, northbound on Trafalgar Road, Ford Drive, and Winston Churchill Boulevard will operate at or above capacity.

Further, Figure 2-15 and Figure 2-16 illustrates the volume to capacity ratios by link for the 2031 future base road network. In addition to those road sections identified in the screenline review above, several additional sections will operate at or above capacity along the following east-west corridors:
- Dundas Street.
- Upper Middle Road.
- QEW.
- Rebecca Street.
- Lakeshore Road.

Several sections will operate at or above capacity on the following north-south corridors:
- Bronte Road.
- Third Line.
- Dorval Road.
- Neyagawa Boulevard.
- Trafalgar Road.
- Ford Drive.
- Highway 403.

In general, many of the major arterials within the town will be operating near or above capacity under future 2031 conditions. It is also noted that a number of collector and residential minor arterial road links will have volumes that are expected to approach capacity (i.e. volume to capacity ratio will be greater than 0.90).
Figure 2-16: 2031 Future Volume to Capacity Ratio (2 of 2)
3.0 Problem and Opportunity Statement

3.1. Policy and Urban Growth Objectives

The Province of Ontario, Region of Halton and Town of Oakville policies guide the problems and opportunities articulated in Switching Gears.

The province’s Places to Grow legislation and the Metrolinx Regional Plan identify desired land use and transportation objectives for the Town of Oakville that include development of an Urban Growth Centre and Mobility Hub within Midtown. These objectives have been incorporated into the Livable Oakville Plan.

The Region of Halton has established a high transit modal share objective of 15-20% within its Official Plan policies. The regional transportation master plan, Road to Change, includes a 20% transit modal share within the Town of Oakville.

The town, through the Livable Oakville Plan, has set out the direction for growth and land use planning, with an emphasis on transit-supportive, mixed-use and walkable neighbourhoods. The North Oakville Secondary Plans define the lands north of Dundas Street as a “transit first” community, with the intent of achieving high transit mode share targets.

3.2. Transportation Needs

Within the 20-year time horizon, the town is expected to experience capacity constraints given the current percentage of travel by auto, the future growth in transportation demand and the committed transportation improvements. Additional transportation solutions are required to maintain levels of service at acceptable levels.
3.3. **Problem and Opportunity Statement**

Based on the operational needs, the socio-economic and natural environment constraints and policy direction of the town, a problem and opportunity statement was developed for Switching Gears.

*The Town of Oakville needs a transportation system that will accommodate growth to 2031, incorporating the planning framework from the Livable Oakville Plan and the North Oakville Secondary Plans. An opportunity exists to plan a transportation system which:*

- is safe, efficient and accessible with choices in mobility,
- fosters the use and development of a sustainable transportation network,
- provides a public transit system that can offer a real alternative to private automobile use, and
- provides a network of on- and off-road pedestrian and cycling facilities that allow the use of active transportation modes as an alternative to the automobile.

Switching Gears needs to incorporate transportation, land use planning and a financial strategy which will respect the social, environmental and economic goals as defined by the Livable Oakville Plan, the North Oakville Secondary Plans and other town and provincial strategies.
4.0 Policy Direction

4.1. Growth Objectives and Sustainability

4.1.1. Environmental Sustainability

The town is actively involved in the consideration of the environment when reviewing new development growth through the Livable Oakville Plan policies, zoning by-laws, community design guidelines and development review processes. Community building objectives, such as those in North Oakville and the other growth areas, aim to decrease automobile dependency while promoting alternative travel modes to increase sustainability and reduce impacts to air quality. Environmental resources, including green space and natural heritage features are preserved, protected and enhanced whenever possible in the decision-making process.

Through the adoption of a community-development strategy that induces a change in behaviour by residents and employers/employees towards the environment, increased efficiencies can be achieved through energy savings and decreased consumption of resources resulting in healthier communities. The development of sustainable transportation solutions will have regard for designated environmental heritage features. Appendix 4A summarizes the related policies on sustainability of the natural environment.

4.1.2. Community and Cultural Sustainability

Community sustainability includes both the preservation of established residential neighbourhoods and business communities, and creating new livable neighbourhoods. This includes directing mixed-use, higher density growth to designated growth areas as identified in the Livable Oakville Plan and developing transit-oriented and walkable communities in growth areas and greenfield development areas. Policies related to community sustainability are summarized in Appendix 4B.

Established residential communities in Oakville, particularly older neighbourhoods in Bronte, Old Oakville and Eastlake have a number of built heritage features, including buildings, street patterns and historical character. By focusing growth to areas that can accommodate infill and intensification to satisfy residential and employment targets and advancing efforts to increase public transit, cycling and walking through infrastructure improvements, the characteristics of the established communities can be protected.
The provincial planning framework, Places to Grow (2006), establishes where and how municipalities like Oakville will accommodate additional population and employment. The Midtown Oakville growth area is the town’s most significant centre for intensification. It is a designated “urban growth centre” under Places to Grow and has been identified as an “anchor mobility hub” under Metrolinx Regional Transportation Plan – The Big Move. It is envisioned that Midtown will redevelop as a transit-oriented hub, with new transit connections and development that achieves a minimum gross density of 200 people and jobs per hectare by 2031. **Figure 4-1** illustrates a development concept for Midtown.

**Figure 4-1: Midtown Oakville 2031 Development Concept**

Source: Figure 64, Draft Midtown Business & Development Plan, Town of Oakville, 2008

### 4.1.3. Economic and Financial Sustainability

The economic well-being of the town is linked to economic development and socio-economic conditions that attract businesses. By maintaining an efficient transportation system, the town will support efficient access to employment areas necessary for the delivery of goods and services, while managing transportation cost of business.

An efficient and balanced transportation system, including transit, walking and cycling in addition to auto capacity, will support opportunities for residential and employment development. Furthermore, a development strategy that promotes transit, cycling and walking, while decreasing automobile use, has the potential to reduce the need for additional road infrastructure and related property and capital costs.

The Town of Oakville will require funds to meet the operating requirements of recommended transportation solutions. This includes transit operations, staffing and disbursement costs of programs and transportation studies. The life-cycle maintenance requirements of new infrastructure should also be incorporated into the asset management strategy of the town. **Appendix 4C** summarizes the town practices related to asset management and financial sustainability.
4.1.4. Transportation Service Sustainability

Level-of-service is a measure describing operational conditions of the transportation system (intersection, road link, transit system or route, directness of active transportation corridors) and the perceived condition by the system users. Municipalities enact level-of-service standards as the basis of assessing the level of social convenience of travel and determining the need for transportation improvements. The Town of Oakville applies standards for traffic conditions consistent with professional guidelines as well as those adopted by other jurisdictions in the Greater Toronto Area.

Appendix 4D summarizes the current and recommended level-of-service practices for the Town of Oakville including operational and planning level-of-service for roads, the Transit Service Design Standards and the need to establish level-of-service policies for walking and cycling.
5.0 Alternative Solutions

5.1 Capacity Related Solutions

To accommodate planned growth within Oakville and achieve/maintain the Town of Oakville transportation level-of-service standards, a strategy for managing transportation supply and demand is required. Alternatives considered included a range of modes, “choices in mobility” as articulated in the problem and opportunity statement, and strategies for both travel demand and supply. Noise and air quality management objectives, which were considered, are documented in Appendix 5H.

Four families of solutions were considered in addressing transportation opportunities, including travel demand management, active transportation, transit and road capacity.

5.1.1 Travel Demand Management Alternatives

Travel demand management (TDM) initiatives represent low-cost options that require limited public infrastructure investment, help optimize the use of available infrastructure and are more environmentally sustainable. The following alternatives, identified in Appendix 5D, were considered as components of the strategy for accommodating planned growth:

1. Continued efforts of initiatives in consultation with Smart Commute Halton are anticipated to maintain the proportion of residents, students and employees not commuting by single occupant cars. This alternative is seen as the Trend TDM Scenario, and will require:
   a. Promotion and support of reduced single occupant vehicle use through carpool programs.
   b. Promotion of reduced auto ownership and driving as a primary mode of travel through carshare programs.
   c. Promotion of transit and employer-subsidized transit programs.
   d. Promotion and support of telecommuting and live-work oriented developments.
   e. Promotion and support of peak spreading (temporal demand management).

2. In order to further reduce peak hour travel by up to an additional 3%, new and more proactive initiatives will be required resulting in a High TDM Scenario. This would include additional staff resources of at least one full
time equivalent staff to focus on the demand management initiatives with reduction targets.

5.1.2. Active Transportation Alternatives

Specific strategies for achieving growth in walking and cycling as a commuter mode, during peak periods, are summarized in Appendix 5F. These represent the potential for a shift of up to 3% of auto trips to active transportation. A High AT Scenario, will require:

a. Promotion of active transportation home-to-work commuting through the development of the network as per the ATMP, introduction of development policies regarding bicycle trip end facility requirements and marketing strategies.

b. Promotion of walk and cycle to school programs through outreach programs.

c. Provision of bicycle parking throughout the town, through government investment at public locations and development investment through approval requirements.

5.1.3. Transit Alternatives

Three strategies were considered for transit solutions. The strategies noted below, and identified in Appendix 5A, reflect varying levels of investment and operating cost commitments:

1. Strategies that may be considered to maintain an overall 6% transit share, Business As Usual Transit Scenario, include:

a. Expand transit service to North Oakville with cycling and pedestrian connections to transit.

b. Introduce higher frequency bus service on Trafalgar Road and Dundas Street to achieve high local transit mode share and inter-municipal service to offset the lack of GO Rail service in North Oakville.

c. Maintain peak period service frequency on primary routes of 10 minutes and peak period frequency on secondary and local routes of 20 minutes as per the Oakville Transit Service Design Standards.

d. Provide bicycle racks on the expanded bus fleet.

e. With support of the Ministry of Transportation, expand park and ride facilities, and transit service to these facilities.

f. Structure routes to optimize utilization of the transit system.

g. Improve care-A-van, and expand specialized transit services to North Oakville to serve people with disabilities.
2. In addition to those initiatives listed above, other strategies that may be necessary to achieve a doubling of the transit share to 12%, **Transit Growth Scenario**, include:
   a. Improve customer service, e.g. provide passenger information at transit stops.
   b. Introduce local transit marketing campaigns.
   c. Provide dedicated transit lanes on rapid transit corridors (Dundas Street, Trafalgar Road, Highway 407 consistent with the Halton Region BRT Studies) and HOV lanes on other primary corridors.
   d. Highway 403 Transitway (Midtown Oakville to Mississauga Highway 403 Transitway).
   e. Provide queue jump lanes for transit vehicles at key intersections.
   f. Introduce express/shuttle bus service in growth areas.
   g. More frequent GO Rail and GO Bus service.
   h. Introduce transit signal priority measures.

3. In addition to those initiatives listed above, other strategies that may be necessary to achieve Halton Region transit target of 20% transit share, **High Transit Growth Scenario**, include:
   a. Introduce high frequency rapid transit services (5-minute headways or better).
   b. Comprehensive inter-regional transit marketing campaigns including social media strategies.
   c. Coordination with comprehensive TDM initiatives including parking strategies.
   d. Improve technology and amenities, e.g. on transit vehicles.
   e. Provide seamless inter-municipal transit to Mississauga, Burlington and Milton.
   f. Provide transit stop/station enhancements.
   g. Provide enhanced station amenities.
   h. GO-Metrolinx Express Rail along the Lakeshore line.
5.1.4. Road Network Capacity Alternatives

Five alternative road network strategies were considered to meet level-of-service targets, support sustainability of economic activity, community accessibility and convenience of residents and visitors to the Town of Oakville. The road system strategy is in addition to committed Town of Oakville and Region of Halton road improvements and anticipated improvements to Highway 403 and the Highway 403 / QEW interchange.

The road system alternatives are a combination of Ministry of Transportation and Town of Oakville roadways as identified in Appendix 5M. The road capacity network alternatives are shown in Figure 5-1.

1. Widen Town Arterials:
   a. Burloak Drive (Superior Court to Wyecroft Road) grade separation at CN rail and widen to 6 lanes.
   b. Great Lakes Boulevard-Burloak Drive (Rebecca Street to Superior Court) widen to 4 lanes
   c. Iroquois Shore Road (Trafalgar Road to Eighth Line) widen to 4 lanes
   d. Kerr Street (Speers Road to north of the QEW) widen to 4 lanes
   e. Sixth Line (Dundas Street to North Oakville Corridor) widen to 4 lanes
   f. Speers Road-Cornwall Road (Bronte Road to Trafalgar Road) widen to 6 lanes.
   g. South Service Road (Third Line to Fourth Line) widen to 4 lanes.
   h. Wyecroft Road (Burloak Drive to Bronte Drive) new 4 lanes.
   i. Wyecroft Road (Bronte Road to Third Line) widen to 4 lanes.
   j. Wyecroft Road (Fourth Line to Weller Court) widen to 4 lanes.
   k. Wyecroft Road (Sinclair Road to Kerr Street) widen to 4 lanes.

2. Add Growth Area Infrastructure, by introducing new links and widened corridors within Midtown:
   a. Chartwell Road (South Service Road to Cornwall Road) widen to 4 lanes.
   b. Cross Avenue Extension from Trafalgar Road to Royal Windsor Drive.
   c. Eighth Line (North Service Road to Iroquois Shore Road) widen to 4 lanes.
   d. Iroquois Shore Road Extension to Royal Windsor Drive, new 4 lane roadway.
   e. Royal Windsor Drive / QEW interchange improvements.
   f. Trafalgar Road / QEW interchange improvements.
   g. New QEW crossing (Iroquois Shore Road to Cross Avenue).
   h. New priority lane / active transportation crossing of the QEW (Iroquois Shore Road to Cross Avenue).
3. **Provide New Barrier Crossings** to address capacity needs across Sixteen Mile Creek and Highway 403:
   a. Crossing of Sixteen Mile Creek (either North Service Road or a further widening of the QEW).
   b. Highway 403 mid-block crossing north of Upper Middle Road (Ninth Line to Bristol Circle).

4. **Widen Town Collectors and Residential Minor Arterials** to maximize capacity and address anticipated deficiencies:
   a. Lakeshore Road (Bronte Road to Third Line) widen to 4 lanes, or Rebecca Street (Bronte Road to Third Line) widen to 4 lanes.
   b. Nottinghill Gate (North Service Road to Pilgrims Way) widen to 4 lanes.
   c. River Oaks Boulevard (Neyagawa Boulevard to Sixth Line) widen to 4 lanes or River Glen Boulevard (Neyagawa Boulevard to Sixth Line) widen to 4 lanes.
   d. Sixth Line and McCraney Street (Upper Middle Road to Trafalgar Road) widen to 4 lanes, or Sixth Line and Leighland Avenue (Upper Middle Road to Trafalgar Road) widen to 4 lanes, or Eighth Line (Upper Middle Road to Iroquois Shore Road) widen to 4 lanes.

5. **New Provincial Infrastructure** in addition to the widening of Highway 403 from QEW to Highway 407 and the completion of ramps at the QEW / Highway 403 interchange:
   a. Widen QEW with an additional lane per direction across Sixteen Mile Creek (as an alternative to the North Service Road Extension crossing of Sixteen Mile Creek).
   b. Extend QEW HOV lanes to Winston Churchill Boulevard.
Figure 5-1: Road Network Capacity Alternatives
5.2. Implementation Strategies

A number of implementation strategies were considered to accommodate the TDM, active transportation, transit and road capacity alternatives. They are discussed in the following sections.

5.2.1. Road-Rail Grade Separations

Road-rail grade separation warrants necessary to assess the increase in exposure of road and rail traffic conflicts were considered, and are identified in Appendix 5L. In addition to the planned grade separations of Burloak Drive and Kerr Street at CN rail crossings, additional locations under consideration are:

- Chartwell Road at CN rail crossing.
- Fourth Line at CN rail crossing.

5.2.2. Road Design Standards and Complete Streets

Improvements to the transportation network through road design practices will assist in accommodating growth and the goals of the Livable Oakville Plan and North Oakville as a livable community. Recommendations for changes to the town’s road design standards are identified in Appendix 5B. In general, the recommended changes relate to improvements to accessibility needs, pedestrian and cycling needs, urban design character, transit priority, complete street concepts, and roundabouts.

5.2.3. Goods Movement

Goods movement impacts the transportation network and can become a significant issue, especially when growth and associated additional traffic is expected. An efficient transportation network should focus not only on how to move people from one point to another, but also on goods movement and the mitigation of associated impacts to local communities.

A strategic goods movement network would facilitate the increasing demand for goods movement throughout the town. A holistic planning approach should be promoted by the town, to improve the integration of goods movement and people movement, making the best use of the road and rail transportation networks throughout the day. A number of factors, as detailed in Appendix 5K, should be considered in order to develop an efficient, multi-modal network. Such a network could reduce the impact of goods movement on local communities and the environment, including noise, air emissions and safety, and could improve the efficiency of goods movement in Oakville.
By balancing the needs of residents and other commuters with the economic needs and responsibilities of the town, an effective goods movement system can be implemented and monitored.

5.2.4. Traffic Calming

Traffic calming is the term used to describe both passive and physical measures that aim to address speeding concerns, alter driver behaviour, optimize overall traffic operations, and improve safety and livability for all road users within neighbourhoods. As documented in Appendix 5J, the Town of Oakville has been proactive in addressing undesirable traffic characteristics by implementing traffic calming initiatives and measures in a number of neighbourhoods.

The existing traffic calming policies and guidelines for retrofit situations and new developments, are exhaustive in their content, as they offer concise information and processes involved in traffic calming planning and implementation. The town should continue to apply these guidelines to identify areas that warrant traffic calming, and continue to proactively plan other measures to be employed in new developments. It should be noted that when considering traffic calming measures, the impacts to road safety, emergency vehicles, cyclists and transit service should be considered.

5.2.5. Accessibility

The town, through its Guidelines for Design of Accessible Facilities, the Accessibility Plan, Transit Accessibility Plan and other initiatives is making a conscious effort to ensure compliance with the Accessibility for Ontarians with Disabilities Act (AODA) as summarized in Appendix 5G.

The town’s Accessibility Policy MS-ACC-002 expresses commitment to eliminating barriers and improving accessibility for persons with disabilities to afford equal opportunities and the provision of integrated programs and services where possible, in a manner that respects dignity and independence.

Transportation facilities are being made accessible by providing easier-to-read signage, curb cuts, connected walkways, low-floor and fully accessible transit buses, expansion of the care-A-van fleet and supportive programs. Specific goals achieved by the town include the continuous removal of barriers to the disabled, increased community awareness, training and advisory committee activities. The annual Accessibility Plan provides an overview of issues and opportunities to identify, remove and prevent barriers. Achieving and maintaining a fully accessible town is a continual process.
5.2.6. Parking Management

Effective parking management strategies can result in better land use practices and assist in reducing congestion. Parking strategies can be effective in promoting transit, supporting active transportation, and therefore aiding in a more efficient flow of traffic through the town and contributing to a more livable community.

It is recommended that the town undertake a comprehensive study of parking policies and operations and establish an overall town parking strategy. The study should specifically assess the merits of parking supply and pricing approaches as travel demand management initiatives. In general, the resultant strategy should include:

- A review of parking supply requirements for development, identification of reduced parking supply in growth areas and opportunities for shared parking.
- Public parking supply in growth areas including the downtown.
- Bicycle parking requirements, including bicycle lockers and end of trip amenities.

Appendix 5E summarizes parking issues to be specifically addressed in the parking strategy.

5.2.7. Transportation Impact Management

The development of Transportation Impact Assessment (TIA) guidelines for the town is recommended in order to provide a standardized framework to assess traffic impacts of new developments. By developing TIA guidelines, the town can eliminate or reduce variances in terms of quality and approach due to technical inconsistencies.

Recommendations for TIA guidelines are provided in Appendix 5C. The recommendation considers current practices of the town, as well as Halton Region, City of Mississauga, City of Hamilton, City of Niagara Falls, City of Cambridge and City of London.
6.0 Evaluation of Alternatives

6.1 Evaluation Criteria

The study team, in consultation with the public through the outreach, identified the evaluation criteria and associated measures that addressed public concerns, corporate sustainability objectives and typical measures associated with the environmental assessment process. Table 6-1 summarizes these criteria.

Table 6-1: Evaluation Criteria

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transportation service</td>
<td>• Pedestrian / cycling accommodation</td>
</tr>
<tr>
<td></td>
<td>• Transit operations</td>
</tr>
<tr>
<td></td>
<td>• Level-of-service</td>
</tr>
<tr>
<td></td>
<td>• Mobility and accessibility</td>
</tr>
<tr>
<td>Natural environment</td>
<td>• Potential for impact to natural heritage</td>
</tr>
<tr>
<td></td>
<td>• Potential for impact to water and air quality</td>
</tr>
<tr>
<td></td>
<td>• Potential for impact to terrestrial features and habitat</td>
</tr>
<tr>
<td>Socio-economic</td>
<td>• Development objectives and economic growth</td>
</tr>
<tr>
<td></td>
<td>• Community impact management (traffic infiltration, cultural, noise)</td>
</tr>
<tr>
<td>Cost effectiveness</td>
<td>• Capital costs</td>
</tr>
<tr>
<td></td>
<td>• Operating costs</td>
</tr>
</tbody>
</table>
6.2. **Evaluation**

6.2.1. **Transportation Assessment**

The performance and impacts of the alternative solutions were evaluated using the transportation service criteria described above. Table 6-2 presents the evaluation of alternatives against transportation criteria.

The alternatives with high active transportation, high TDM and high transit have similar impacts to transportation service in that they reduce overall automobile demand thus improving level-of-service for all users. The high transit alternative has the greatest potential to reduce automobile usage and thus the greatest benefit to transportation service.

The road capacity alternatives have the similar impacts to transportation service, but to varying degrees, with each alternative providing some relief to capacity constrained areas.

6.2.2. **Natural Environment Assessment**

The performance of the alternative solutions against the natural environment criteria are presented in Table 6-3.

Alternatives which reduce automobile usage, i.e. high active transportation / TDM and high transit, have the least impact on the natural environment and may provide some benefits to air quality.

Alternatives with capacity improvements have the potential to impact the natural environment. However, it is noted that the arterials identified for widening are in built-up areas of the town. Additionally, increased capacity will reduce congestion and may have a positive impact on air quality.
### Table 6-2: Evaluation – Transportation Service

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Travel Demand Alternatives</th>
<th>Road Capacity Alternatives</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High Active Transportation / High TDM</td>
<td>Widen Arterials</td>
</tr>
<tr>
<td></td>
<td>High Transit</td>
<td>Widen Arterials</td>
</tr>
<tr>
<td>Pedestrian and cycling accommodation</td>
<td>• Promotes active transportation</td>
<td>• Widen Arterials may discourage pedestrians and cyclists from using the corridors</td>
</tr>
<tr>
<td></td>
<td>• Initiatives support and encourage walking and cycling</td>
<td></td>
</tr>
<tr>
<td>Transit operations</td>
<td>• Improved connections for pedestrians / cyclists to access transit</td>
<td>• Potential for improved transit operations on widened arterials</td>
</tr>
<tr>
<td></td>
<td>• Significant improvements to transit infrastructure</td>
<td></td>
</tr>
<tr>
<td>Level-of-service</td>
<td>• Reduction in auto demands resulting in improved level-of-service for all users including goods movement</td>
<td>• Provides capacity relief to major arterials</td>
</tr>
<tr>
<td></td>
<td>• Significant reduction in auto demands resulting in improved level-of-service for all users including goods movement</td>
<td>• Improves service for the movement of people and goods</td>
</tr>
<tr>
<td></td>
<td>• Provides capacity relief to major arterials</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Improves service for the movement of people and goods</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Provides capacity relief to Trafalgar Road corridor</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Provides additional north-south and east-west capacity in the Midtown for the movement of people and goods</td>
<td></td>
</tr>
</tbody>
</table>

**Note:** The table above outlines the evaluation of transportation service criteria under different Alternatives. The criteria include Pedestrian and cycling accommodation, Transit operations, and Level-of-service. Each Alternative is evaluated for its impact on various aspects such as active transportation, transit operations, and level-of-service.
Table 6-2 cont.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Travel Demand Alternatives</th>
<th>Road Capacity Alternatives</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High Active Transportation / High TDM</td>
<td>Growth Area Infrastructure</td>
</tr>
<tr>
<td></td>
<td>High Transit</td>
<td>New Barrier Crossings</td>
</tr>
<tr>
<td></td>
<td>Widen Arterials</td>
<td>Widen Collectors / Residential Minor Arterials</td>
</tr>
<tr>
<td>Mobility and accessibility</td>
<td>• Increased network connections and accessibility for pedestrians / cyclists</td>
<td>• Accommodates transit hub</td>
</tr>
<tr>
<td></td>
<td>• Increased transit frequency and service that benefits all users</td>
<td>• Provides crossing opportunities of Sixteen Mile Creek and hwy 403 for all users</td>
</tr>
<tr>
<td></td>
<td>• Widened arterials may discourage pedestrians / cyclists from using the corridors</td>
<td>• Widened corridors may be a barrier to pedestrians / cyclists</td>
</tr>
<tr>
<td></td>
<td>• Provides crossing opportunities of QEW for all users</td>
<td></td>
</tr>
<tr>
<td>Criteria</td>
<td>Travel Demand Alternatives</td>
<td>Road Capacity Alternatives</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>----------------------------</td>
<td>----------------------------</td>
</tr>
<tr>
<td></td>
<td>High Active Transportation / High TDM</td>
<td></td>
</tr>
<tr>
<td>Potential for impacts to natural heritage</td>
<td>• No significant impacts</td>
<td>• Potential for impacts along widened arterials</td>
</tr>
<tr>
<td>Potential for impacts to water and air quality</td>
<td>• Reduced traffic congestion resulting in reduced impacts to air quality</td>
<td>• Potential for impacts with new crossing of Sixteen Mile Creek</td>
</tr>
<tr>
<td>Potential for impacts to terrestrial features and habitat</td>
<td>• No significant impacts</td>
<td>• Reduced traffic congestion resulting in reduced air quality impacts</td>
</tr>
</tbody>
</table>

| Potential for impacts to natural heritage                              | • No significant impacts | • Potential for impacts along widened arterials |
| Potential for impacts to water and air quality                          | • Reduced traffic congestion resulting in reduced impacts to air quality | • Potential for impacts in Midtown |
| Potential for impacts to terrestrial features and habitat              | • No significant impacts | • Reduced traffic congestion resulting in reduced air quality impacts |

Table 6-3: Evaluation – Natural Environment
6.2.3. Socio-economic Environment Assessment

The performance of the alternative solutions against the socio-economic criteria are presented in Table 6-4.

In general, all of the alternative solutions play a role in meeting the development and growth objectives of the town. However, widening of collector and residential minor arterial roads will have the greatest impact on existing communities.

6.2.4. Cost Assessment

The performance of the alternative solutions against cost effectiveness criteria are presented in Table 6-5.

Investment in active transportation and TDM are relatively low compared to the level of investment in transit and road network infrastructure required of the other alternative solutions.
### Table 6-4: Evaluation – Socio-economic Environment

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Travel Demand Alternatives</th>
<th>Road Capacity Alternatives</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High Active Transportation / High TDM</td>
<td>High Transit</td>
</tr>
<tr>
<td>Development objectives and economic growth</td>
<td>• Supports the goals and objectives of the town for a livable community</td>
<td>• Meets goals and objectives of transit-first community for North Oakville</td>
</tr>
<tr>
<td>Community impact management (traffic infiltration, cultural, noise)</td>
<td>• Minimal negative impacts to the community</td>
<td>• Minimal negative impacts to the community</td>
</tr>
<tr>
<td>Criteria</td>
<td>Travel Demand Alternatives</td>
<td>Road Capacity Alternatives</td>
</tr>
<tr>
<td>------------------------</td>
<td>----------------------------</td>
<td>---------------------------</td>
</tr>
<tr>
<td></td>
<td>High Active Transportation / High TDM</td>
<td>High Transit</td>
</tr>
<tr>
<td>Capital costs</td>
<td>• Moderate investment in active transportation infrastructure</td>
<td>• Significant investment in transit infrastructure</td>
</tr>
<tr>
<td></td>
<td>• Potential for funding opportunities / partnerships</td>
<td>• Potential for funding opportunities / partnerships</td>
</tr>
<tr>
<td></td>
<td>• Low cost investment in TDM initiatives</td>
<td></td>
</tr>
<tr>
<td>Operating costs</td>
<td>• Staff resources required to support active transportation and TDM initiatives</td>
<td>• Increased annual transit operating costs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Potential for funding opportunities / partnerships</td>
</tr>
</tbody>
</table>
6.2.5. Summary of Findings

Based on the assessment of traffic impacts, environmental impacts and capital and operating costs, it has been determined that no one solution will address the capacity needs and meet the strategic direction of the town. The following are the elements recommended for Switching Gears – Oakville’s Transportation Master Plan:

1. **High Travel Demand Management Growth** through outreach programs, marketing of alternative travel behaviour to reduce peak hour auto travel by 3%.
2. **High Active Transportation Growth** through infrastructure and service investment, including the design of streets for active travel modes, to reduce auto travel by an additional 3%.
3. **High Transit Growth** through infrastructure, service investment, transit priority and coordinated service and fares (to 20% transit share).
4. **Infrastructure Improvements** including the widening of town arterial roads, improvements within the Midtown Oakville growth area, new town road barrier crossings of Highway 403 and Sixteen Mile Creek, and regular optimization of the traffic signal system (in cooperation with the Region of Halton and Ministry of Transportation). The plan will also rely on improvements to the regional road system and provincial highway network including an additional widening of the QEW over Sixteen Mile Creek.
5. **Road Network Strategies** complement the recommended TDM, active transportation, transit and infrastructure improvements by improving the overall transportation network in the future. These include a complete streets policy, new traffic impact assessment guidelines, accessibility guidelines, traffic control guidelines, traffic calming measures, a goods movement strategy and a grade separation screening tool.

Figure 6-1 illustrates the capacity constraints and deficiencies of the 2031 base road network with trend mode shares for active transportation, TDM and transit. Significant deficiencies exist and there is a need for arterial widenings, Midtown improvements and barrier crossings of Highway 403 and Sixteen Mile Creek.

With the proposed combination of elements for the recommended scenario, capacity constraints are reduced, however there will be remaining needs as shown in Figure 6-2. The needs include improved access to GO stations, additional capacity crossing Highway 403 and additional east-west capacity (e.g. QEW widening).
Figure 6-1: 2031 Base Network and Trend Demands

Figure 6-2: Recommended Network and High AT / TDM / Transit Demands
7.0  Recommended Strategy

The recommended long-term Transportation Plan for the Town of Oakville focuses on improvements to address existing and future transportation needs and opportunities.

The recommended plan integrates the following elements:
- Land use and transportation planning.
- Transportation demand management strategies.
- Cycling and pedestrian facilities.
- Transit service expansion, transit priority measures.
- Road network capacity improvements.
- Urban sustainable design standards.

Implementation of intensification and growth directives as set out in the provincial growth plan is the catalyst for creating an environment in which changes to travel patterns and modal choices can occur.

7.1.  Travel Demand Management

Recommended strategies and initiatives to optimize the use of available infrastructure include continued efforts of TDM initiatives in consultation with Smart Commute Halton. To further reduce peak hour, new and more proactive initiatives are also recommended which would require additional resources of at least one full time equivalent staff.

Altogether, recommended initiatives and strategies include:
- Promotion and support of reduced single occupant vehicle use through carpool programs.
- Promotion of reduced auto ownership and driving as a primary mode of travel through carshare programs.
- Promotion of transit and employer-subsidized transit programs.
- Promotion and support of telecommuting and live-work oriented developments.
- Promotion and support of peak spreading (temporal demand management).
- Increases to public parking facility rates.
- Introduction of private paid parking for specific defined land uses and site conditions.
- Reduced or shared parking requirements for specific land uses.

These combined efforts strive to achieve a reduction in peak hour auto travel by up to 3%.
The appropriateness and effectiveness of parking TDM strategies will need to be studied further by the Town of Oakville to assess: impacts to businesses, convenience to residents and potential increase of illegal parking or migration of parking onto private property.

7.2. **Active Transportation**

Active transportation represents sustainable travel modes through the ATMP adopted by Council in 2009. The ATMP includes a comprehensive network of bicycle routes, sidewalks and multi-use trails.

Recommended strategies for active transportation include adopting strategies and initiatives beyond those of the town’s ATMP network of bicycle routes, sidewalks and multi-use trails. Additional strategies include:

- Promotion of home-to-work commuting through the development of the network as per the ATMP, introduction of development policies regarding bicycle trip end facility requirements and marketing strategies.
- Promotion of walk and cycle to school programs through outreach programs.
- Provision of bicycle parking throughout the town, through government investment at public locations and development investment through approval requirements.

These combined efforts strive to achieve a reduction in peak hour auto travel by up to an additional 3%.

7.3. **Transit**

Oakville Transit provides short and long-distance mobility through the town for all residents. It is the objective of the town to develop Oakville Transit into a competitive alternative mode to auto travel. To achieve this objective and accommodate growth in Oakville, recommended strategies include:

- Expand transit service to North Oakville with cycling and pedestrian connections to transit.
- Introduce higher frequency bus service on Trafalgar Road and Dundas Street to achieve high local transit mode share and inter-municipal service to offset the lack of GO Rail service in North Oakville.
- Maintain peak period service frequency on primary routes of 10 minutes and peak period frequency on secondary and local routes of 20 minutes as per the Oakville Transit Service Design Standards.
- Provide bicycle racks on the expanded bus fleet.
- With support of the Ministry of Transportation, expand park and ride facilities and transit service to these facilities.
• Structure routes to optimize utilization of the transit system.
• Improve care-A-van and expand specialized transit services to North Oakville to serve people with disabilities.
• Improve customer service, e.g. provide passenger information at transit stops.
• Provide dedicated transit lanes on rapid transit corridors (Dundas Street, Trafalgar Road, and Highway 407 consistent with the Halton Region BRT Studies) and HOV lanes on other primary corridors.
• Highway 403 Transitway (Midtown Oakville to Mississauga Highway 403 Transitway).
• Provide queue jump lanes for transit vehicles at key intersections.
• Introduce express/shuttle bus service in growth areas.
• More frequent GO Rail and GO Bus service.
• Introduce transit signal priority measures.
• Introduce high frequency rapid transit services (5-minute headways or better).
• Comprehensive inter-regional transit marketing campaigns including social media strategies.
• Coordination with comprehensive TDM initiatives including parking strategies.
• Improve technology and amenities, e.g. on transit vehicles.
• Provide seamless inter-municipal transit to Mississauga, Burlington and Milton.
• Provide transit stop/station enhancements.
• Provide enhanced station amenities.
• GO-Metrolinx Express Rail along the Lakeshore line.

These combined efforts strive to achieve a transit mode share up to 20%.

7.4. Roads

To maximize capacity on the existing infrastructure, transportation system management solutions – such as coordinated and/or adaptive signal timings – should be employed on the arterial corridors to meet real-time demand.

Solutions that are based on managing auto travel demand are not anticipated to address the over 40% growth within the Town of Oakville. Road improvements are also anticipated to be required.

The road-specific recommendations are summarized below and illustrated in Figure 7-1.
Figure 7-1: Recommended Network

Legend:
- Black: Regional Road Improvements from Halton TMP
- Red: Recommended Network Elements
- Blue: Approved Town Improvements
- Pink: Structure
- Gray: Rail Grade Separation
Arterial network improvements include:

- Burloak Drive (Superior Court to Wyecroft Road) grade separation at CN rail and widen to 6 lanes.
- Cornwall Road (Chartwell Road to Morrison Road) widen to 4 lanes.
- Great Lake Boulevard (Rebecca Street to Burloak Drive) widen to 4 lanes.
- Highway 403 mid-block crossing (Ninth Line to Bristol Circle).
- Kerr Street (Speers Road to north of QEW) grade separation at CN rail and widen to 4 lanes.
- North Service Road (Joshuas Creek to Ford Drive) realignment and new 4-lane roadway.
- Sixth Line (Dundas Street to New Burnhamthorpe Road) widen to 4 lanes.
- Speers Road (Bronte Road to Trafalgar Road) widen to 6 lanes.
- South Service Road (Third Line to Fourth Line) widen to 4 lanes.
- Wyecroft Road (Burloak Drive to RRL) new 4 lanes.
- Wyecroft Road (RRL to Bronte Road) grade separation at Bronte Creek and new 4 lanes.
- Wyecroft Road (Bronte Road to Third Line) widen to 4 lanes.
- Wyecroft Road (Fourth Line to Weller Court) widen to 4 lanes.
- Wyecroft Road (Sinclair Road to Kerr Street) widen to 4 lanes.

In the Midtown Growth area, network improvements include:

- Chartwell Road (South Service Road to Cornwall Road) widen to 4 lanes.
- Cross Avenue Extension from Trafalgar Road to Royal Windsor Drive.
- Eighth Line (North Service Road to Iroquois Shore Road) widen to 4 lanes.
- Iroquois Shore Road (Trafalgar Road to Eighth Line) widen to 4 lanes.
- Priority lane / active transportation crossing of the QEW (Iroquois Shore Road to Cross Avenue) new road.
- QEW crossing (Iroquois Shore Road to Cross Avenue) new 4-lane road.
- Royal Windsor Drive / QEW interchange improvements.
- Trafalgar Road / QEW interchange improvements.

Recommended improvements to provincial infrastructure include:

- Highway 403 (QEW to Highway 407) widening.
- Completion of ramps at the QEW / Highway 403 interchange.
- Widen QEW with an additional lane per direction across Sixteen Mile Creek (as an alternative to the North Service Road Extension crossing of Sixteen Mile Creek).
- Extend QEW HOV lanes to Winston Churchill Boulevard.

In consideration of the town’s objective for a safe transportation system, accommodating growth in a manner that maintains safe transportation
infrastructure requires vigilance in the management of areas of high conflict and where conflict presents the potential for high frequency and severity of collisions. These conflicts can be managed in a responsive manner through a monitoring of high collision locations as a regular operational process of the town. Recommendations for improvement include a proactive road-rail grade separation funding and investment strategy that relies on cost sharing opportunities with rail authorities that plans improvements based on the timing of traffic growth reaching exposure thresholds of road traffic and rail traffic interaction.

Additional locations where road-rail grade separation should be planned include:
- Chartwell Road at CN rail.
- Fourth Line at CN rail.

In light of the traffic demands through the town’s network, infrastructure improvements will be necessary to address goods movement, access, and complete streets concepts. The following improvements are recommended:
- Cornwall Road (Ford Drive to Winston Churchill Boulevard) widen to 4 lanes
- Lakeshore Road (East Street to Dorval Drive) reconstruction to urban standard
- New Burnhamthorpe Road (Tremaine Road to Bronte Road) new 4 lanes
8.0 Costing and Financial

8.1. Capital and Operating Costs

A high-level review has been undertaken to estimate the financial investment requirements to achieve the recommendations of Switching Gears. The investment requirements are separated into:

- Total capital expenditures to 2031.
- Annual operating costs after full implementation of Switching Gears.

The investment requirements by strategy are summarized in Table 8-1 and Table 8-2.

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Total Capital Investment to 2031</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roads and Related</td>
<td>$ 656,780,000</td>
</tr>
<tr>
<td>Transit</td>
<td>$ 101,262,000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual Operating Cost at Full Implementation</td>
</tr>
<tr>
<td>Transit</td>
</tr>
<tr>
<td>$ 27,700,000</td>
</tr>
<tr>
<td>Active Transportation Implementation and Resources</td>
</tr>
<tr>
<td>$ 110,000</td>
</tr>
<tr>
<td>Travel Demand Management Marketing, Outreach and Resources</td>
</tr>
<tr>
<td>$ 155,000</td>
</tr>
</tbody>
</table>

A more detailed breakdown of costs by category is presented in Appendix 6.

These estimates have been prepared to provide a high-level overview of the investment requirements. Total capital cost estimates are gross figures and further costing analysis was undertaken as part of the town’s Development Charge By-law Update.

The cost of operating the future transit system will also be a significant challenge. The net annual operating costs (after fare box revenue) associated with the recommendations for transit is estimated to increase by $27.7 million. This amount is based on an average recovery to cost ratio (r/c ratio) of 47% (current r/c ratio at approximately 30%). The increase to 47% does reflect an achievable goal for a mature transit system assuming the planned expansion is implemented at the local and inter-regional level. However, even at the higher recovery rate, the net funding requirements will represent a challenge if it is left to be funded by the local tax base.
8.2. Development Charge Funding

Improvements triggered by growth within the town are eligible for funding through the town’s development charge (DC) and region’s DC by-laws. The Town of Oakville is undertaking an update of its DC program, which will reflect the recommendations and improvements of Switching Gears as well as improvement priorities.

Under the Development Charges Act 1997, transit costs eligible for development charges must be reduced by 10%. Further, as a soft service, the service level which is to be funded by development charges cannot exceed the average service level provided in the municipality over the 10-year period immediately preceding the preparation of the background study. The funding gap caused by these two constraints will challenge the town’s ability to fund the transit component of the TMP.

8.3. Partnerships

The recommended transportation solution involves Ministry of Transportation, GO Transit / Metrolinx, the Region of Halton and Smart Commute Halton in addition to the town. These agencies represent partners in the delivery of the necessary transportation infrastructure and initiatives.

The Region of Halton has established a policy objective of 20% transit modal share within the Halton Transportation Master Plan and the Halton Official Plan. This objective will require high transit participation in Oakville and investment in capital and operations for Oakville Transit necessary to achieve the regional goals.

Metrolinx has identified transit infrastructure improvements through The Big Move – The Regional Transportation Plan. A key focus of The Big Move is service to mobility hubs including Midtown Oakville. Metrolinx is currently completing the Midtown Mobility Hub Study. Access to and from the Midtown Mobility Hub and supporting GO Rail service by all modes will be key to its success. The town and Metrolinx will need to be partners in this endeavour.

Travel Demand Management initiatives are currently promoted through Smart Commute Halton. Growth centres in Oakville and particularly Midtown Oakville represent significant opportunities for TDM successes.
8.4. **Funding Sources**

The Town of Oakville has recent cooperation from senior levels of government in the funding of transportation infrastructure, through the Canada *Infrastructure Stimulus Fund* and provincial *Gas Tax Fund*. Provincial investment in the Oakville Transit facility, shelters and fleet and bicycle racks has contributed to improved service. Opportunities for further funding through these programs should be investigated. Other funding sources may include:

- **Building Canada Fund** – the Government of Canada has committed to working with partners and stakeholders to develop a long-term plan for public infrastructure. The program “centres around five themes: infrastructure and the economy, infrastructure and the environment, infrastructure and stronger communities, financing infrastructure, and planning and sustainability”.

- **Ontario Bus Replacement Program** – A multi-year capital funding program that supports the replacement of municipal transit buses.

- **Metrolinx Partnerships Program** – Metrolinx provided funding in 2011 to agency partners for projects that would advance Metrolinx’s strategic priorities.

- **Metrolinx BikeLinx Program** – A one-time investment for bicycle related infrastructure funding to enhance the links between active transportation and public transit. Must be used to purchase and install bicycle racks on buses.

8.4.1. **Other Financing Solutions**

In the quest to stabilize transit funding, municipalities across North America have been looking into innovative ways of generating additional transit revenues. The menu of potential solutions includes:

- **Joint Development Transaction** – Transit-oriented Public Private Partnership (P3) ventures for investments in high-order transit service.

- **Sponsorship Funding of Infrastructure** – Collect corporate investment for naming rights or marketing opportunities associated with new infrastructure.

- **Farebox Revenue Bonds** – Issue debt bonds by the transit agency guaranteed by revenues collected by operation of the transit system.
9.0 Implementation

9.1. Infrastructure Phasing Strategy

Switching Gears has been developed as a practical guide for implementing transportation improvements, policies and related investment strategies. The recommendations of this plan will be phased over the 20-year time horizon based on transportation need during interim years and the funding strategies linked to the on-going Development Charge By-law Update. The phasing strategy is included in Appendix 7.

It is acknowledged that the timing of transportation demand and the need for improvements is influenced by changing economic and political conditions that affect the rate of development. In recognition of this fact, it is anticipated that the transportation master plan will be updated in the future and that the timing of improvement priorities may change. Furthermore, the timing and scope of transportation investments might change subject to availability of funding, results of Environmental Assessment studies, or other factors. However, it is noted that the vision and strategy presented in Switching Gears is not anticipated to change.

9.2. Midtown Class Environmental Assessment

A number of improvements have been recommended within the Midtown Oakville planning area. These improvements include the widening of arterial roads, new road links, interchange improvements, active transportation connections and road infrastructure to better accommodate transit priority. These improvements are in addition to the GO Rail station improvements planned by GO Transit / Metrolinx.

These road-related improvements and active transportation links will be addressed through a separate Class Environmental Assessment (EA) study undertaken by the Town of Oakville. The Midtown Class EA study has been initiated and is anticipated to be completed in 2013.
9.3. Monitoring Plan

To assess the progress of Switching Gears and related goals of evoking change in travel behaviour and modal choice, a monitoring plan is recommended. The monitoring plan will be a comprehensive data reporting strategy, using current data collection and reporting programs supplemented by town surveys. The objectives of the monitoring plan will be to guide the implementation of the plan and the development of future transportation master plan updates by determining:

- **What we have built** – Percentage of infrastructure projects completed based on the capital program in comparison to the TMP.
- **Where and how quickly are we growing** – Increases in volume of travel for all modes.
- **Who we have served** – Increases in transit service coverage, active transportation route coverage, and TDM support services used.
- **How many we have influenced** – Number and percentage of residents and employees that have modified their travel behaviour to reduce auto demand during peak hours.

The recommended monitoring plan will rely on observed data measured against set performance targets within the TMP. Switching Gears interim reporting will include annual to 5-year reporting driven by available data. Data sources will include summaries of the capital roads program (annually), Oakville Road System Report (annually), transit ridership counts (annually), intersection traffic counts including active transportation (annually or biennially), cordon count data collection (biennially, or triennially), Transportation Tomorrow Survey (every 5 years).

Supplementary data collection should be considered including:
- Road user surveys of travel characteristics and modal choice.
- Supplementary town cordon count program to monitor travel for the Midtown and crossings of major barriers such as Sixteen Mile Creek.

Table 9-1 below summarizes the recommended indicators, measures data for available targets, and identifies a reporting schedule.

The performance indicator menu should be enhanced by measures to estimate the public’s interest and participation in active transportation and TDM. Town-wide or focus group surveys can also be considered.
Table 9-1: Recommended Monitoring and Performance Plan

<table>
<thead>
<tr>
<th>Measures</th>
<th>Data Collection</th>
<th>Schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Oakville Transit ridership</td>
<td>Ridership counts</td>
<td>Annually</td>
</tr>
<tr>
<td>2) GO Transit trips</td>
<td>Ridership counts</td>
<td>Annually</td>
</tr>
<tr>
<td>3) Transit modal share</td>
<td>TTS Data</td>
<td>5 year interval</td>
</tr>
<tr>
<td>4) Walking modal share</td>
<td>TTS survey</td>
<td>5 year interval</td>
</tr>
<tr>
<td>5) Projects complete</td>
<td>Capital Program</td>
<td>Annually</td>
</tr>
<tr>
<td>6) Cycling modal share</td>
<td>TTS survey</td>
<td>5 year interval</td>
</tr>
<tr>
<td>7) Projects completed</td>
<td>Capital program</td>
<td>Annually</td>
</tr>
<tr>
<td>8) Projects complete</td>
<td>Capital Program</td>
<td>Annually</td>
</tr>
<tr>
<td>9) Intersection level-of-service</td>
<td>Roads Report</td>
<td>Annually</td>
</tr>
<tr>
<td>10) Link and screening v/c</td>
<td>Count Programs</td>
<td>Annually</td>
</tr>
<tr>
<td>11) -</td>
<td>TMP Update</td>
<td>5 year interval</td>
</tr>
</tbody>
</table>

9.4. Next Steps

Within the Livable Oakville Plan and the North Oakville Secondary Plans, the town has developed and adapted many of the land use planning principles necessary to achieve a sustainable community. To continue to meet the town’s goals, the land use plans must be supported with complementary sustainable transportation planning strategies. The recommendations in Switching Gears provide this compatible transportation framework to achieve the town’s vision.

The town should continue to update its transportation master plan every five years. This will ensure that the plan is up to date with respect to growth targets, infrastructure improvements, and it will allow opportunities to introduce new concepts or technologies to assist with the development of the transportation system.
This glossary is to assist readers of Switching Gears – Oakville’s Transportation Master Plan – with terms and wording associated with the study.

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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</thead>
<tbody>
<tr>
<td>Accessibility for Ontarians with Disabilities Act (AODA)</td>
<td>This Act expresses commitment to eliminating barriers and improving accessibility for persons with disabilities to afford equal opportunities and the provisions of integrated programs and services where possible, in a manner that respects dignity and independence.</td>
</tr>
<tr>
<td>Active Transportation</td>
<td>Human-powered methods of transportation, such as walking and cycling, for utilitarian and recreation purposes.</td>
</tr>
<tr>
<td>Active Transportation Master Plan (ATMP)</td>
<td>A plan that was adopted by Council in 2009 and includes a comprehensive network of bicycle routes, sidewalks and multi-use trails.</td>
</tr>
<tr>
<td>Automated Guideway Transit (AGT)</td>
<td>A fully automated, driverless, grade-separated transit system in which vehicles are automatically guided along a “guideway”.</td>
</tr>
<tr>
<td>Bus Rapid Transit (BRT)</td>
<td>A fast, frequent bus service with fewer stops than local bus service and may travel its own dedicated bus lane.</td>
</tr>
<tr>
<td>Care-A-Van</td>
<td>Door-to-door transportation service for persons with physical functional mobility challenges.</td>
</tr>
<tr>
<td>Compact Urban Form</td>
<td>A land use pattern that encourages efficient use of land, walkable neighbourhoods, mix of land uses (residential, retail, workplace and institutional all within one neighbourhood), proximity to transit and reduced need for infrastructure.</td>
</tr>
<tr>
<td>Employment Area</td>
<td>An area designated in the Official Plan for business and economic activities including, but not limited to, manufacturing, warehousing, offices, and associated retail and ancillary facilities.</td>
</tr>
<tr>
<td>Environmental Assessment (EA)</td>
<td>A planning and design process defined by the Environmental Assessment Act legislated by the Province. The EA Act governs all public undertakings that have the potential to affect the natural, social, and/or cultural environments.</td>
</tr>
<tr>
<td>High Occupancy Vehicle (HOV)</td>
<td>A vehicle carrying a driver and one or more passengers. Dedicated lanes for HOV may be designated for vehicles carrying 2+ or 3+ persons.</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
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</table>
| Intensification                               | The development of a property, site or area at a higher density in an existing built-up area through:  
  a. Redevelopment, including the reuse of brownfield sites.  
  b. Development of vacant and/or underutilized lots.  
  c. Infill development.  
  d. Expansion or conversion of existing buildings. |
<p>| Level-of-service                              | A measure describing operational conditions of an element of the transportation system (intersection, road link, transit route etc.), and the perceived condition by the users.                                         |
| Light Rail Transit (LRT)                      | A form of public transportation using a steel-tracked fixed guideway that operates primarily along an exclusive right of way and has vehicles capable of operating as a single unit or as multiple units coupled together. |
| Mode Share                                    | Percentage of travellers using a particular type of transportation mode (i.e. transit, automobile, etc.).                                                                                                    |
| North Oakville Transportation Corridor        | A new east-west transportation corridor planned for North Oakville to alleviate congestion experienced on some of the main connecting roadways in this area.                                                       |
| Places to Grow Act                            | The Ontario government’s program to plan for growth and development in a way that supports economic prosperity, protects the environment and helps communities achieve a high quality of life. The Growth Plan for the Greater Golden Horseshoe, 2006, has been prepared under the Places to Grow Act. |
| Public Private Partnership (P3)               | An alternative method, usually long-term arrangement, for procuring large and complex public infrastructure projects aimed to improve the delivery of these projects by achieving better value, timeliness and accountability to taxpayers. |
| Technical Agencies Committee (TAC)            | A group consisting of representatives from the town, Halton Region, adjacent local municipalities, provincial ministries, transit authorities, conservation authorities, utilities, emergency services, and other affected agencies. |
| The Livable Oakville Plan                     | The town's Official Plan, which contains goals, objectives and policies to manage and direct growth and development in the town.                                                                               |
| Traffic Impact Assessment (TIA)               | A systematic and scientific study conducted to analyze the impact of the traffic generated by a new development on the surrounding transportation system. It is generally required to support the transportation aspects of a proposed development that has the potential to generate significant amounts of pedestrians, bicycle trips, transit users, and vehicular traffic. |</p>
<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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<tr>
<td>Transit First</td>
<td>A policy that promotes transit use through community design, including an emphasis on ensuring that transit is available in the early stages of development.</td>
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<tr>
<td>Transit Oriented Design</td>
<td>A plan to accommodate mixed-use residential and commercial uses, which incorporates features to encourage transit ridership. Development is usually centred around a transit station or stop, with relatively high-density development closer to the centre with progressively lower-density development spreading outward.</td>
</tr>
<tr>
<td>Transit Signal Priority (TSP)</td>
<td>An operational strategy that facilitates the movement of in-service transit vehicles, either buses or streetcars, through traffic-signal controlled intersections. Priority treatments include passive priority, early green (red truncation), green extension, actuated transit phase, phase insertion, phase rotation, and adaptive/real-time control.</td>
</tr>
<tr>
<td>Transit-supportive Design</td>
<td>Refers to design principles that makes transit more accessible to users, such as roads laid out in a grid network, pedestrian-friendly built environment along roads to encourage walking to transit, and improved access between arterial road and interior blocks in residential areas.</td>
</tr>
<tr>
<td>Transit-supportive Development</td>
<td>Refers to development that makes transit viable and improves the quality of the experience of using transit. Often refers to compact, mixed use development that has a high level of employment and residential densities to support frequent transit service.</td>
</tr>
<tr>
<td>Transportation Association of Canada (TAC)</td>
<td>TAC is a national association with a mission to promote the provision of safe, secure, efficient, effective and environmentally and financially sustainable transportation services in support of Canada’s social and economic goals.</td>
</tr>
</tbody>
</table>
| Transportation Corridor                               | A thoroughfare and its associated buffer zone for passage or conveyance of vehicles or people. A transportation corridor includes any or all of the following:  
  a. Major roads, arterial roads, and highways for moving people and goods.  
  b. Rail lines/railways for moving people and goods.  
  c. Transit rights-of-way/transitways including buses and light rail for moving people. |
| Transportation Tomorrow Survey (TTS)                  | A comprehensive travel survey conducted in the Greater Toronto and Hamilton Area (GTHA) once every five years. |
| Travel Demand Management (TDM)                         | A set of strategies that promotes more efficient use of the transportation system by influencing travel behaviour by mode, time of day, frequency, or cost. Sharing a ride, working from home, and shifting work hours are examples of TDM strategies. |