



# **TERMS OF REFERENCE**

**TRANSPORTATION MASTER PLAN STUDY**

# **1.0 EXECUTIVE SUMMARY**

## **1.0 SUMMARY OF THE REQUIREMENTS**

The Town of Halton Hills, in the Regional Municipality of Halton, is part of the Greater Toronto Area. Greenfield growth and intensification is planned for Halton Hills to 2031 through the recently completed Region of Halton Sustainable Halton planning process. Along with the growth, new road infrastructure will be required. Future Capital investments in infrastructure will require a prudent and detailed approach to achieving the transportation needs of the Town to accommodate existing and future development. Improvements will be needed to the existing transportation system. A master plan is needed for the Town to accomplish these objectives. The Town will be looking at updating the existing transportation system policies and standards with the master plan and integrating policies related to active transportation into the Official Plan. This study will develop a Town-wide Transportation Demand Model based on the Regional model. There will be coordination with Halton Region in their concurrent Transportation Master Plan development now underway. Any proponent must show in their proposal that they are independent from potential conflicts of interest related to current and future potential Ontario Municipal Board Hearings, such as the appeal of the Halton Hills Official Plan or engaged to undertake significant land development interests in Halton Hills.

## **PROJECT OR PROGRAM REQUIREMENTS**

### **2. MUNICIPAL SITUATION/OVERVIEW**

#### **2.1 INTRODUCTION**

The Town of Halton Hills is seeking a consultant (team) to develop a Halton Hills Transportation Master Plan (HHTMP). The consultant (team) will collect and analyze information to develop current and future transportation needs.

The vision and principles of the Town's transportation system should be to:

- Balance the travel needs of residents and provide them with choices
- Provide a healthy community by supporting healthy and active lifestyles
- Support economic growth in the industrial/commercial sectors/areas while providing appropriate routes for truck traffic
- Itemize infrastructure requirements to build and maintain the system in 5-year increments 2011, 2016, 2021, 2026 and 2031
- Include Transportation principles relating to safety, access, mobility and the environment

## 2.2 STRATEGIC DIRECTION

The Town of Halton Hills, in the Regional Municipality of Halton, is part of the Greater Toronto Area. Growth continues in and around the Town. Increased transportation needs are forecast for the future. Future capital investments in infrastructure will require a prudent and detailed approach to achieving the transportation needs of the Town to accommodate existing and future development. Improvements will be needed to the existing transportation system. A master plan is needed for the Town to accomplish these objectives. It will be up to the proponent to apprise themselves of the details of the:

- Growth Plan for the Greater Golden Horseshoe
- Provincial Policy Statement
- Greenbelt Plan
- Niagara Escarpment Plan
- Metrolinx Regional Transportation Plan – The Big Move
- Bill 163 (Metrolinx Act)
- Transportation Provincial Policy Statement (when released)
- Ministry of Transportation GTA West corridor planning study
- Ministry of Transportation Niagara to GTA corridor planning study
- Halton Region Official Plan Amendment 38
- Halton-Peel Boundary Area Transportation Master Plan Study
- Halton-Peel Winston Churchill Boulevard improvements between 5 Side Road/Embleton Road and River Drive/Mayfield Road
- Halton Region Trafalgar Road from 10 Side Road to Highway 7 study
- Halton Hills Official Plan
- Halton Hills Intensification Study
- The GO Station and the Mill Street Corridor Secondary Plan
- Halton Hills Gateways Policy
- Cycling Master Plan (Draft version)
- Roundabout Policy (Draft version)
- Traffic Calming Protocol
- Trails and Cycling Master Plan Study

Aside from planned growth assigned to Halton Hills to the 2031 planning horizon, a significant increase in population is projected in the surrounding municipalities of Milton, Caledon and Brampton. The increased use of the transportation system in Halton Hills has already created a strain on the existing road conditions. In order to maintain the infrastructure to keep pace with growth, a review of the existing conditions is required. Recent population and employment forecasts have been developed by the Region of Halton through the Sustainable Halton planning process and Regional Official Plan Amendment No. 38. The future transportation needs can be forecast from these population and employment forecasts for 2021 and 2031.

Municipality	Population			Employment		
	2006	2021*	2031	2006	2021	2031
Burlington	171,000	179,000	193,000	88,000	119,000	106,000
Oakville	171,000	220,000	255,000	82,000	104,000	127,000
Milton	56,000	157,000	238,000	28,000	81,000	114,000
Halton Hills	58,000	65,000	94,000	20,000	32,000	43,000
Halton Region	456,000	621,000	780,000	218,000	336,000	390,000

\*Subject to change

### 2.3 Current Infrastructure

The Town will provide traffic counts and signal timings for the multi-purpose arterial, minor arterial and collector roads in Halton Hills. The Region is currently undertaking the development of a Halton Transportation Master Plan. There will be information sharing as it becomes available. It is expected the Town Consultant (team) will coordinate with the Region of Halton on its Transportation Master Plan Study. The Region is responsible for all major arterial roads in Halton Hills. The Ministry of Transportation is responsible for Highway 7 (except for the connecting link sections in Acton and Georgetown) through Halton Hills and for Highway 401 and Highway 407 at the south limits of the Town.

### 2.4 Transportation Demand Model

#### Model Development

The proponent will develop a transportation demand model based on the Regional model. A sub-area for Halton Hills will be developed from the Regional model. The Town model will be calibrated and validated for use in Halton Hills. The Town model will load in the new land use showing the planned growth comprised of existing and new Designated Greenfield Area and intensification to the 2031 planning horizon. The Halton EMME/3 Model is overseen by AECOM (formerly TSH) and access to the Region model will be coordinated with this consultant.

#### Land Use

The horizon years will be in 5-year increments with 2011 being the base year. The model will meet the planned growth and intensification requirements for the year 2021 and will show the system requirements needed by the year 2031. Information from the HHTMP will be used to update the proposed road, sidewalk and cycling reconstruction program and the Town's development charges by-law.

## Analysis

The model will be able to provide screenline analysis at the boundaries and mid-municipality and provide sensitivity to all areas of the Town. A select link analysis will be functional at the local and regional levels. The analysis will define capacities for sidewalks, bikeways, multi-use pathways, urban roads, and rural roads and show the impacts of heavy vehicles on the system.

## Assessment

The model will develop an assessment of the road, cycling and pedestrian needs by horizon year 2011, 2016, 2021, 2026 and 2031. It will indicate the number of lanes, bikeways, sidewalks and multiuse pathways required on the main line of the street. At intersections, the model will be able to show the needed:

- Turn lanes
- Signalization
- Stop control
- Rural upgrades (such as flashing beacons)

A current road classification system should be an output to the HHTMP development. Active transportation needs will be assessed including on-street needs, off-street needs and the ability to identify and assess the needs in special study areas.

## Highway Capacity Manual method

The Town of Halton Hills has jurisdiction over twenty-four (24) fully-signalized intersections, five (5) intersection pedestrian signals and two (2) pedestrian crossovers. A model should be developed to analyze the existing and future road conditions using the Synchro traffic signal software based on the 2000 Highway Capacity Manual method. The model will review three (3) signalized intersections on Maple Avenue that are currently under the jurisdiction of Halton Region.

The analysis will identify any needed new traffic signal corridors and traffic signals and indicate the existing and future level of service of the existing traffic signals and corridors. The existing traffic signal corridors include:

- Guelph Street/Main Street North (Hwy 7)
- Mountainview Road
- Main Street South/Eighth Line
- Maple Avenue (Regional road that will be transferred to Halton Hills)
- Queen Street/Young Street/Mill Street East (Hwy 7)
- Main Street (Acton)
- River Drive/17 Side Road

The analysis of these corridors must also consider the interaction of cyclists and pedestrians along with any specific improvements related to the non-auto user.

## **2.5 The Functional Road Network**

Roads are the backbone of Halton Hills' transportation system, and affect the Town's economic well-being. They serve automobile and truck needs, with an ever increasing focus on cyclist and pedestrian traffic. The Town faces increasing pressures from the surrounding population growth to accommodate road infrastructure improvements. Geographical features limit the road network's potential to adequately service, in particular, the east-west network demands.

### Road Classifications

Analyze the existing road classification system and recommend changes or updates if required. The 2031 road network will be analyzed for recommended changes to the classification system. The system will be shown in a map form as part of the study. There should be an analysis of the rural roads to determine how they are best classified in the new system. An existing staff report on right of way for local rural roads will be made available to the proponent. The analysis should take into consideration the Cycling Master Plan, the Trails Master Plan and how bicycles and pedestrians will interact with vehicles in the new active transportation network. The existing classifications and right of way widths can be found in the Town's Official Plan.

### Design Guidelines and Rights of Ways

Provide detailed corridor design guidelines including suggested road design standards and road cross sections for all types of road classifications. Set a standard for road design and road widths in new developments. These will include pedestrian/bicycle sidewalk and pathways standards. Analyze the existing right of ways and recommend changes for the current system and for the 2031 transportation system. The rights of ways will be shown in a map form as part of the study.

The study should provide right of way width requirements and design elements, including road widths, for the different classifications of roads in Halton Hills:

- Multipurpose arterials
- Minor arterials
- Collector roads
- Local roads

The study should account for automobile, truck, cyclist and pedestrian needs.

### Area Specific Analysis

- Maple Avenue from Trafalgar Road to Mountainview Road needs to be reviewed relative to truck traffic and cycling issues
- Mountainview Road from Guelph Street to Eden Place has issues regarding cycling, parking, speeding, truck traffic and commuter traffic
- The east-west connection from Halton Hills to Brampton will need to be reviewed to integrate the findings of the Halton-Peel Boundary Area Transportation Master Plan Study and Planning work in Brampton
- Review Eighth Line and Tenth Line from Steeles Avenue to 10 Side Road to determine the need for reconstruction and widening for automobiles and trucks and to meet cyclist and pedestrian needs
- Review the adequacy of the 17 Side Road and Fourth Line truck route
- Winston Churchill Boulevard from 32 Side Road to Mayfield Road needs to be reviewed in conjunction with the Regions of Halton and Peel to determine what role, if any it should have in the Town's local road network or if it should be part of the Regional road network
- Main Street and Mill Street in Acton left and right turn lane improvements and the cycling requirements need to be addressed
- Review the rural roads that are surface treated to determine at what time the roads need to be reconstructed or upgraded to asphalt surfaced roadways (such as 5 Side Road from Fourth Line to Winston Churchill Boulevard; Fourth Line from 17 Side Road to 5 Side Road; 10 Side Road from Region Road 25 to Trafalgar Road; and 15 Side Road from Town Line to Trafalgar Road)

### Confirm a 10 Year Forecast for Road Improvements

Review the capital forecast for the Town to determine what transportation construction projects should be the highest priority within the new transportation master plan. The annual forecast for growth will be updated by staff by August of 2010 for the ten year period 2011 to 2021.

### Recommend a Forecast to 2031

Certain transportation construction projects to the years 2016 are included in the Town's development charges by-law. This by-law will be changed in 2011 to reflect the projects in the Transportation Master Plan to 2031.

### Integration with the Region of Halton Transportation Master Plan

The proponent will provide connectivity to the Region of Halton Master Transportation Plan, specifically in the development of the Transportation Demand Model and integration of road classifications and rights of ways for Regional roads.

## **2.6 Roundabouts**

Halton Region is currently working with Area Municipalities to develop a Roundabout policy. The Town supports the use of Roundabouts, since they have been proven to reduce societal cost when compared to the cost of installing and maintaining traffic signals or unwarranted all-way stop signs.

The proponent will evaluate the use of roundabouts on Multi-purpose Arterial, Minor Arterial and Collector roads, as well as traffic circles on Local roads.

## **2.7 Active Transportation**

The Town has several on-going projects to improve Active Transportation. Active Transportation is considered one of the key quality of life aspects for the Town of Halton Hills. The successful proponent will incorporate ongoing and past studies and the aspect of safety in communities that are key components of Active Transportation.

### Cycling Master Plan

The Town is currently developing a Cycling Master Plan to support active transportation and to reduce pressures exerted by automobile use on the road network. The proponent will evaluate a draft Cycling Master Plan to support future road network.

### Walking

Walking helps to improve public health, preserve the environment and reduce pressures on the road network. The Town is actively involved in the Active Safe Routes to School (ASRTS) program with the Public and Catholic School Boards. The program encourages students and parents to walk to schools through educational measures, attitude shift and infrastructure improvements. The Town has also recently approved a Pedestrian Charter which should be reviewed as part of the Transportation Master Plan.

Pedestrian safety is paramount for the Town. The proponent will determine a number of supportive measures to incorporate the goals of the program within the pedestrian route network including existing network of sidewalks in Town.

The multi-use pathways shared by pedestrians and cyclists encourage active transportation and recreational use. The multi-use pathways constructed on Main Street South/Eighth Line and 10 Side Road arterial roads provided a safer and more enjoyable environment for pedestrians and novice and child cyclists due to separation from motor vehicles.



The proponent will examine a development of multi-use pathway system and/or sidewalks and bikeways along the arterial road network. The system will be part of the implementation of the Town's Pedestrian Charter.

### Trails Master Plan

The proponent will review the Trails Master Plan in efforts to establish a viable pedestrian and cycling network to encourage active living.

## **2.8 Truck Route System**

The proponent will review current truck traffic patterns and determine a need for a truck route system. Particular attention is required to address significant truck volumes generated by the aggregate industry. The proponent should be aware of a potential expansion of the Acton Quarry (Dufferin Aggregates).

## **2.9 Traffic Calming**

The Town developed a Traffic Calming Protocol to provide its residents with a safer road network, and with a goal to restore roads to their original functions.

The proponent will review the Traffic Calming Protocol and ascertain its role in the future transportation network.

## **2.10 Meetings, Workshops and Public Information Centres**

It will be up to the proponent to determine the number of Steering Committee meetings and Public Information Centres in their proposal. The minimum numbers required in the proposal will be:

- 5 Steering Committee meetings
- 2 Public Information Centres
- 1 Council Workshop at the beginning of the study
- 1 Council presentation to inform of the alternatives and the process to select the preferred alternative
- 1 Council presentation at the end of the process for approval of the study

## **3. REQUIREMENTS AND PROJECT SCOPE**

### **3.1 PROJECT SCOPE, BUDGET AND TIME-FRAMES**

The exact project scope will be determined by the consultant's knowledge of similar work on Transportation Master Plan Studies. The study shall be in compliance with all the legislative requirements of a Master Plan study through

the Environmental Assessment processes. Any proponent must show in their proposal that they are independent from potential conflicts of interest related to current and future potential Ontario Municipal Board Hearings, such as the appeal of the Halton Hills Official Plan or engaged to undertake significant land development interests in Halton Hills. The project is to be completed by the end of Summer 2011.

### **3.2 PROJECT REQUIREMENTS**

#### Project Deliverables

The project deliverables, the Halton Hills Transportation Master Plan, will include:

- A Transportation Demand Model that is
  - Based on the Regional model
  - Accommodates land use changes
  - Provides screenline and select link analyses
  - Produces roadway capacities and classifications
- Signalized and Non-signalized Intersections Review that will
  - Compile traffic count data, signal timings and lane configurations for the study intersections
  - Review corridor systems and organize the Town's intersections into logical groups for analysis
  - Calibrate and analyze signalized intersections using the Synchro 7.0 model. This analysis will include A.M. peaks, Off peaks and P.M. peak periods
  - Analyze rural intersections using the Town's All-way Stop Control Warrant
  - Identify short-term and long-term intersection improvements/remedial measures at critical locations
- An analysis of the existing road classification system and recommendations regarding appropriate changes
- An analysis of the proposed 2031 road network, make recommendations regarding appropriate new road classifications and show these on maps of the Town
- An analysis of the proposed 2031 road network and recommend areas for designation as future road corridors
- Proposed standards and guidelines for road designs and road widths for all types of road classifications keeping in mind the active transportation needs for cycling and walking
- An analysis of the existing rights of ways and provide a recommended schedule of right of ways to 2031. The right of way widths will be shown on maps of the Town
- Complete area specific analysis of road sections detailed in the study project requirements
- Confirmation of the 10 year forecast for road improvements from 2011

- Recommendations regarding a forecast for road improvements from 2021 to 2031
- Developing a roundabout policy for the Town that is compatible with Regional policy
- Determining how the new Transportation Master Plan will accommodate cycling as envisioned in the Cycling Master Plan
- Determining how pedestrian traffic is safely accommodated in the Transportation Master Plan and show how pedestrian traffic can link to the walking trails developed by Recreation and Parks in the Trails and Cycling Master Plan
- Recommending a truck route system for the Town, if a need is determined, for the current network and to 2031
- Determining a guideline for the installation of traffic calming devices in conjunction with the Town's Traffic Calming Protocol