Fact Sheet # 5: Existing and Proposed Traffic in Midhurst

1) Traffic Study Requirements

a) Traffic Studies must be completed in a strategic manner in accordance with guidelines issued by the Ministry of Transportation, Transportation Research Board and the Institute of Transportation Engineers. In particular, the following is a brief overview of the process for the completion of Traffic Studies:

i) Obtain Traffic Data for the for A.M. and P.M. peak hours on the primary roads to accurately determine existing traffic throughout the community;

ii) Create a computer model using Ministry of Transportation approved software in accordance with the "Highway Capacity Manual" prepared by the Transportation Research Board;

iii) Calculate the Traffic "Trips" to and from the proposed developments, in accordance with the "Trip Generation Manual" prepared by the Institute of Transportation Engineers;

iv) Calculate the Impacts on the road network utilizing the AM and PM peak hours;

v) The peak hour analysis should be undertaken for

- Existing traffic conditions;
- Existing traffic conditions plus background growth;
- Existing traffic conditions plus background growth plus development generated traffic;

vi) Identify improvements to accommodate the proposed growth on the existing road network utilizing the A.M. and P.M. peak hours;

2) Midhurst Traffic Studies

a) Detailed Traffic Studies, prepared in support of the Midhurst Secondary Plan, were completed as part of the Midhurst Phase 1 & 2 Master Transportation Plan and were approved in 2009. The Phase 1 & 2 Master Plan identified specific road upgrades/improvements that needed to be completed to accommodate the development of the Midhurst Secondary Plan.

b) At the initiation of the Phase 3 & 4 Class EA, updated 2013 traffic data was collected. In addition, the traffic data that was collected in 2013 has been increased annually by 1% to allow for background growth since 2013. The 1% background annual growth rate was based upon actual MTO observed traffic growth along Highway 26 north of Barrie between 2006 and 2010.

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c) During Phase 3 the traffic models were further refined to accommodate the proposed improvements to Highway 400/Forbes Rd intersection in lieu of the previously (Phase 1 and 2 Master Plan) proposed new Pooles Road partial interchange. In addition; the traffic models have been updated to reflect the proposed staging of the developments.

d) The latest Traffic Studies have confirmed that the proposed traffic from the Midhurst Secondary Plan can be accommodated.

In particular, the Traffic models confirm that the capacity of the "reconstructed" existing streets including Pooles Road, St Vincent Street, Finlay Mill Road, Carson Road, with 1 lane in each direction and improvements at key intersections, can accommodate the proposed traffic from the new developments. In conjunction with the reconstruction of these streets, sidewalks and bike lanes will be incorporated into the design.

e) During the completion of Phase 3 the alternatives of extending Carson Road between Hwy 26 and St Vincent St and extending Russel Rd southerly and westerly to connect with the dead end of Jodies Lane to provide additional relief were both analysed. However, neither of these alternatives provided sufficient benefit from a traffic standpoint to offset the major constraints relating to both topographic and/or environmental features along the proposed routes. Therefore; alternatives are not being recommended.

f) The extension of Anne Street North from Carson Road to Highway 26 was not identified in the Phase 1 & 2 Master Plan completed in 2009, as being necessary to accommodate the Midhurst Secondary Plan traffic. In addition, the extension would result in environmental impacts to a natural area including the crossing of the Minesing/Little Lake wildlife corridor. Therefore, the extension of Anne Street North from Carson Road to Highway 26 is not considered as part of this Class EA process.

g) In accordance with Ministry of Transportation's "Geometric Design Standards" and the Transportation Research Boards "Highway Capacity Manual" roads are not designed for the infrequent events and/or extreme worst case scenarios. In particular, in accordance with these guidelines, a rural road is typically designed to accommodate for the 30th Peak Hour of traffic throughout a year and similarly for urban roads a design of between the 10th and 20th Peak Hour of traffic throughout a year is common practice. Therefore, the development of Traffic models utilizing am and pm weekday Peak Hours from the proposed

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developments, as opposed to using traffic counts for events such as holiday long weekend traffic bypassing Hwy 400 and coming through Midhurst, is appropriate.

h) The Midhurst Traffic model includes trips from the new development areas in Doran North and South to and from the shopping areas at the north end of Barrie, via St. Vincent St and/or Bayfield St. The Traffic model assumes that trips from Doran Road and Russel Road areas with an origin or destinations further south than the Hwy 400 & Bayfield St Intersection will use the Forbes / Hwy 400 route link, as the shortest time route. It should be noted that this assumption is based upon actual time trips for travelling from an origin on Doran Road and the destination of Hwy 400/Bayfield Street intersection, with route 1 being through the existing streets in Midhurst and the existing streets in the north end of Barrie and route 2 being Russell Road and Highway 400.

i) The costs associated with the reconstruction of all Municipal road projects identified within the Midhurst Class EA will be borne by the Midhurst Developers Group. The only exception to this is the proposed Craig Road Extension which is included in the Township Development Charges Projects.

j) Signs along St Vincent will be included in the designs, notifying drivers of the seasonal migration of turtles.

k) The Traffic models indicate satisfactory Levels of Service (LOS) for the intersection of St. Vincent and Jodie's Lane with stop control on Jodie's Lane and design horizon traffic for the year 2041 as Level of Service B with average delay of 15 to 20 seconds. Therefore, delays to exit/enter driveways along St Vincent St and/or Pooles Road will be similar.

l) The need for inclusion of sidewalks and bike lanes on key existing roads through Midhurst was identified in the Phase 1 & 2 Master Plan and has been reiterated by a large number of respondents throughout the Class EA process. Therefore, the reconstruction of the key existing streets will include sidewalks and bike lanes. However, the location and specifics of these on each road will be determined during the detailed engineering design in the future.

m) The detailed Traffic Model has confirmed that the identified road improvements can accommodate the proposed traffic from the new developments. Any increase in traffic on the secondary roads adjacent to these roads will be minor and well within the capacity of the existing road. In particular, the model has identified the following:

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i) An increase in traffic along Spence Avenue from approximately 21 vehicles in the peak hour in 2013 to 107 by 2041 due to development. However, this is still considered light traffic for a two lane street and as such no improvements are proposed along Spence Avenue.

ii) Park Trail will not be a route preferred over the proposed completion of the link between Gill Road and St. Vincent.

iii) Silverwood Crescent and Frid Street will not be a preferred route over Pooles to St. Vincent unless significant delays are occurring at that intersection and that is why we propose signalization at Pooles and St. Vincent.

iv) Wattie Road to Green Pine Road to St. Vincent does serve as an east/west route to Finlay Mill Road and the Hwy 26 corridor and we have assigned traffic to that route from Doran South development area. The traffic model shows an increase in traffic during the peak hour in 2013 from 175 to 302 as two-way peak hour traffic in 2041. This is well within the capacity of the existing two lane road and as such no improvements are proposed along Wattie Road.