APPENDIX M

Tree Inventory
November 30, 2017

Attn: Gillian Thompson
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Transportation Planning
WSP Canada Group Limited

Re: McKay Road and Salem Road – Environmental Assessment
Existing Conditions – Tree Assessment Memo

Introduction
WSP Canada Group Limited has been retained by the City of Barrie to undertake an Environmental Assessment (MCEA) Study, and prepare an Environmental Study Report (ESR) to meet the requirements of a Schedule ‘C’ project. This MCEA study will evaluate McKay Road East, Lockhart Road and Salem Road. The elements of the EA involve:

- New interchange at McKay Road and Highway 400;
- New highway crossing at Lockhart / Salem Road and Highway 400;
- Conceptual design of trunk watermains and trunk wastewater sewers surrounding the crossings and interchange;
- Conceptual design of the Salem Water reservoir and pumping station;
- Conceptual design of drainage works associates with the road widenings and road works.

The design team is undertaking an analysis of the preferred alternatives to be incorporated into the ‘draft’ ESR. The Natural Heritage / Natural Hazard Impact Assessment component of the ESR, required an assessment of Endangered or threatened species, and assessment of natural heritage corridors and features.

A site visit was November 9, 2017 to screen for Endangered or threatened woody species and provide a general assessment of vegetation within:

1. Southbound on-ramp to Highway 400 from McKay Road East;
2. Widening of McKay Road East (west and east sides of Highway 400) up to the limit of the study area;

3. South side of Lockhart Road, east of Highway 400.

4. Proposed Storm water Management Pond, Reservoir and widening of Salem Road;

The purpose of the assessment was to identify species, range of size and quantity.

Discussion

The section has been separated by the tree assessment location noted above. Refer to the attached ‘Tree Assessment Plans’ (Plates 1 to 6) for the location and tree grouping references.

No woody endangered or threatened species were observed within any of the study areas noted above

1. Southbound on-ramp to Highway 400 from McKay Road East

On the south side of McKay Road East between Highway 400 and the farm field there is a triangular shaped woodlot. Vegetation was assessed within the road widening (Tree grouping ‘A’) and proposed on ramp location (Tree Grouping ‘B’).

Tree grouping ‘B’ is located within the limits of the on ramp and consists of deciduous trees that range in size from <10 to 150cm DBH, with an average of 10-25cm DBH. Along the edge adjacent to the farm field, the occasional Basswood (*Tilia americana*), Staghorn Sumac (*Rhus typhina*), American Elm (*Ulmus americana*) and White Ash (*Fraxinus americana*) and to a lesser extent Black Cherry (*Prunus serotina*) and Manitoba Maple (*Acer negundo*). Trees immediately adjacent to the field, showed signs of decline and mortality. Within the interior there is an abundance of Scots Pine and sporadic amount of Sugar Maple (*Acer saccharum*), Manitoba Maple, Staghorn Sumac, American Elm and Largetooth Aspen (*Populus grandidentata*). One ±150cm DBH Sugar Maple was observed within this area.

2. **Widening of McKay Road (West and East sides of Highway 400)**

On the south side of McKay Road East on the west side of Highway 400, Tree grouping ‘A’ is located at the north edge of the triangular shaped woodlot. West of the highway are roadside trees within the frontage of rural properties (Tree groupings ‘C’, & ‘D’).

Tree grouping ‘A’, consists of predominantly coniferous trees with an infrequent amount of deciduous trees that range in size from <10 to 35cm diameter at breast height (DBH),
a majority of which between 10-20cm DBH. Scots Pine (*Pinus sylvestris*) was abundant with the occasional Trembling Aspen (*Populus tremuloides*), White Ash and a rare amount of Black Cherry and American Elm. Tree health ranges between good and poor; a majority observed to be in good condition. Signs of decline and defects were observed on a small amount of trees.

Trees within Tree grouping ‘C’ are located within the frontage of 36 McKay Road East and within the right of way limit, ranging in size from 10 to 50cm DBH and consist of Scots Pine, Silver Maple (*Acer saccharinum*), Manitoba Maple, Siberian Elm (*Ulmus pumila*) and Willow (*Salix spp.*). The Willow and Manitoba Maple displayed signs of poor tree form, trunk wounds / damage and some decline. Along the south side of Mckay Road East there is a row of Scots Pine that range in size from 10-20cm DBH (Tree grouping ‘D’).

3. **South side of Lockhart Road, east of Highway 400**

Vegetation within this limit was assessed between the terminus of the cul-de-sac to the top of slope of the highway (Tree grouping ‘E’) and along the south side of Lockhart Road to the study area limit (Tree grouping ‘F’).

Vegetation within Tree grouping ‘E’ consists of a clump of young Staghorn Sumac, Scots Pine, Black Locust (*Robinia pseudoacacia*) and Manitoba Maple that range in size from <10 to 40cm DBH. There is an intermittent amount of young Black Locust (<10cm DBH) along the south side of the road (Tree grouping ‘F’).

4. **Proposed Stormwater Management Pond, Reservoir and widening of Salem Road**

On the south side of Salem Road there is a mixed deciduous / coniferous woodlot located approximately from Norris Road to Highway 400. This woodlot continues on the north side separated by Salem Road and bounded by existing commercial to the east and north. Vegetation along Salem Road and within the limits of the proposed Storm water Management Pond and Reservoir have been separated into 10 tree groupings (G to P) commencing on the south side of Salem Road just east of Norris Drive.

Within the limit of the road widening, up to 30m from the edge of the dirt road and within the limits of the proposed SWM pond, the species composition varies. As such, vegetation was assessed in five (5) groupings (G to K). Species, size and quantity are outlined below:
• **Tree grouping ‘G’**: Consists of an abundance of Red Oak (*Quercus rubra*), a frequent amount of White Pine (*Pinus strobus*) and a small amount of Sugar Maple (*Acer saccharum*) and White Ash, that range in size from 5 to 30cm DBH, with an average of 15-20cm DBH.

• **Tree grouping ‘H’**: Consists of the occasional Red Oak, White Pine, Staghorn Sumac, White Birch (*Betula papyrifera*) and single row of Austrian Pine (*Pinus nigra*) that range in size from 15-25cm DBH. A majority of the Austrian Pine are located under hydro lines and have been topped (stem cut at a defined height).

• **Tree grouping ‘I’**: Frequent amounts of Sugar Maple and Staghorn Sumac and the occasional Trembling Aspen are located within this grouping. Trees range in size from <10 to 25cm DBH.

• **Tree grouping ‘J’**: This portion of the woodlot is coniferous forest. Staghorn Sumac (<10cm DBH) is dominant along the edge, with an abundance of White Spruce (*Picea glauca*), White Pine and Red Pine (*Pinus resinosa*) that range in size from 10 to 40cm DBH. A small amount of Sugar Maple, White Birch and Trembling Aspen were observed along the edge (10-25cm DBH).

• **Tree grouping ‘K’**: South of groupings ‘H’ and ‘I’ there is a small valley where the canopy is generally open. The Storm water Management Pond is proposed within this area. White Pine ranging in size from 10 to 25cm DBH was found to be frequent along the edges of the forest and south of the groupings ‘H’ and ‘I’. The occasional White Birch, Eastern Cottonwood (*Populus deltoides*), Scots Pine and Red Oak, that range in size from 5 to 25cm DBH were observed within the open canopy area and along the edge of the forest.

The woodlot on the north side of Salem Road, adjacent to the existing commercial properties is a mixed coniferous / deciduous forest. As the vegetation composition varies, the assessment has been separated into three (3) groupings (L to N). Species, size and quantity are outlined below:

• **Tree grouping ‘L’**: Along the slope there is a frequent amount of Red Oak and Sugar Maple (10-35cm DBH), the occasional American Beech (*Fagus grandifolia*) and White Ash (<10 to 30cm DBH), and a small amount of Willow, Basswood, Black Walnut (*Juglans nigra*), Ironwood (*Ostrya virginiana*), Trembling Aspen and Largetooth Aspen that range in size from 5 to 30cm DBH.

• **Tree grouping ‘M’**: Along the top of slope between the crest to the limit of the existing commercial properties there is an abundance of Scots Pine ranging in size from ±10 to 25cm DBH. The occasional Sugar Maple, Trembling Aspen and White Birch was also observed in this grouping (<10 to 20cm DBH).
• Tree grouping ‘N’: this grouping consists of an abundance of coniferous trees. Scots Pine is abundant throughout the grouping (±10 to 25cm DBH). The occasional young White Pine and White Ash were also observed in this grouping (<10 to15cm DBH). Small intermittent clumps of young Eastern Red Cedar (Juniperus virginiana) and White Spruce (<10cm DBH) were observed along the top of slope.

West of the woodlot, there is a small woodlot / clump of trees within the property limits of 60 Salem Road. Tree grouping ‘O’ consists of an abundance of Red Oak (<10 to 20cm DBH), an occasional amount of Sugar Maple, Staghorn Sumac and White Poplar (Populus alba) along the edge (<10 to 15cm DBH), and a small amount of Red Cedar.

Tree grouping ‘P’ is a hedgerow on the west side of 60 Salem Road. The assessment includes up to 30m from the edge of pavement. A frequent amount of Red Oak was observed within the hedgerow (<10 to 20cm DBH) with the occasional White Poplar (<10cm DBH) and a small amount of young Chokecherry (Prunus virginiana).

Yours truly,
WSP Canada Group Limited

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