

Memorandum

To Dana Glofcheskie, P.Eng. (City of Mississauga) Page 1

CC Leslie Green (City of Mississauga), Tammy Dow (AECOM), Diana Addley (AECOM)

Subject Creditview Road EA Preliminary Design – Streetscape and Landscape Plan

From Sara Taylor, AECOM

Date	January 6, 2015	Project	
		Number	60304588

Overview

The overall purpose of the Creditview Road Environmental Assessment (EA) study has been to investigate the need for additional north-south road capacity and intersection and safety improvements for Creditview Road, a Major Collector Road within the City of Mississauga. To address the future needs of the corridor, an evaluation of five alternatives was undertaken and a Preliminary Preferred Alternative was selected. This Preliminary Preferred Alternative is expected to support traffic operations in the study area to the year 2031 and potentially beyond. The City will implement a monitoring program on Creditview Road to ensure the road continues to meet the needs of the community. If and when additional capacity is required, a Long-term Solution will be implemented. This plan is limited to the Preliminary Preferred Alternative.

The Streetscape and Landscape Plan was developed as part of the EA study using a context sensitive approach based upon natural and cultural heritage influences, sustainability aspirations and complete streets opportunities. The objectives of the Streetscape and Landscape Plan included:

- Improving active transportation opportunities and connections to adjacent neighbourhoods and open spaces;
- Balancing the functional and aesthetic requirements of pedestrians, cyclists, transit, vehicles and the natural environment;
- Enhancing the existing Cultural and Natural Heritage features including the former Harris Lands area, the Credit River and Credit Meadows Park;
- Enhancing the natural and scenic route qualities along Creditview Road with new tree species and vegetative planting;
- Identifying opportunities to enhance the City parkland;
- Restoration of the natural environment using appropriate tree, shrub and herbaceous species throughout the corridor; and,
- Incorporating plantings into the central island of roundabouts as a means of enhancing the natural and scenic route qualities.

Tree Preservation Plan

As described in the Tree Inventory Assessment prepared as part of this EA study, all existing trees within the study area were inventoried and assessed by AECOM Certified Arborists. Tree species,

size, health and condition were recorded and taken into consideration during the design process. The objective of retaining and protecting as many existing trees as possible was a factor in the selection of the Preliminary Preferred Alternative. Special consideration was given to the preservation of identified significant/mature trees. A Tree Preservation Plan was prepared to illustrate the existing trees and those which are required to be removed as a result of construction activities and tree protection measures for the trees that will remain. Components of the Tree Preservation Plan include:

- A Tree Protection Zone (TPZ) will be established prior to construction to protect the remaining trees. Root damage will be minimized to the extent possible. Tree protection fencing will be constructed along the limits of the TPZ to ensure protection of trees and their root zones.
- Root pruning will occur prior to the start of construction and under the supervision of a Certified Arborist.
- Any roots severed during construction will be cut cleanly to minimize decay and entry points for disease.
- Limbs and/or branches will be pruned prior to construction, where it is expected that they could be damaged or interfere with construction, under the supervision of the contract administrator.
- A summary of the existing tree status within the project area is as follows:
 - Trees to be preserved (*trees and their associated TPZ's are not impacted by proposed grading or construction activities*): 90
 - Tree to be impacted (*trees that are located beyond 1.5 m of grading or construction activity, but where the TPZ of the tree falls within the grading or construction limit; these trees are to be retained*): 70
 - Trees to be removed due to the road construction: 288
 - Trees removed as part of the 2015 Noise barrier Wall construction: 102

Streetscape and Landscape Plan

The Streetscape and Landscape Plan has been developed for the Preliminary Preferred Alternative to restore the natural environment within the study area and to compensate for vegetation removals, as well as to enhance the overall cultural, aesthetic and scenic value of the corridor. It should be noted that the proposed planting locations will be confirmed during detailed design, at which time the precise location of utilities, sidewalks and multi-use trails will be confirmed. Components of the Streetscape and Landscape Plan include:

- Trees that will be removed or damaged during construction will be replaced in appropriate locations. Trees will be replaced at a 2:1 ratio along the corridor as much as possible. If all planting opportunities within the boulevard have been exhausted, additional tree compensation planting may be considered in nearby parks and natural areas. Opportunities to plant additional trees to improve the diversity of age and species within the project area were considered.
- If and when the Long-term Solution for Creditview Road is implemented, additional compensation plantings that cannot be accommodated within the ROW will be planted on adjacent City owned park lands.
- Replacement plantings include native tree species where appropriate. Other important considerations in the selection of tree and shrub species include tolerance of urban conditions (heat, drought, pollution, salt spray and soil salts) and size restrictions due to overhead wires.

- In areas with overhead wire (hydro) constraints, tree species with smaller, compact forms have been selected.
- On the east side of the corridor the plantings have been designed to enhance the existing natural features and complement the existing woodlot/ Harris Lands.
- Proposed plant species within the roundabout islands have been selected for their hardiness, attractiveness (multi-season interest) and low-maintenance qualities.
- Significant tree species (e.g. Sugar Maple, Red Oak, Bur Oak, Black Oak) will be planted where appropriate. *Black Oak (Regionally Rare species) were observed in the study area. While no impacts to these trees are anticipated as a result of construction activities, they have been included in the Proposed Plant List if future replacement is required.*
- The Streetscape and Landscape Plan recommends planting 60mm caliper trees deciduous canopy trees in typical boulevard areas, and 45mm caliper smaller form deciduous trees for areas where overhead wires are present. Trees with these calipers generally have the best success rate and overall health as compared to trees planted at a more mature stage.
- A summary of the proposed plant quantities in the Streetscape and Landscape Plan is as follows, with further details provided in the table below. It should be noted that as new plantings are placed down the slope and away from urban conditions in the study area, the tree mix will change to reflect the connecting naturalized area, to the extent possible:
 - Deciduous Canopy Tree: 104
 - Small Deciduous Tree: 442
 - Coniferous Tree: 30
 - Deciduous Shrubs: 60
 - Coniferous Shrubs: 184
 - Perennials/Ornamental Grasses: 270 sq.m. (average of 3 plants/1 sq.m. = 810)
 - Overall Proposed trees: 576 (meets 2:1 replacement ratio goal)

Creditview Road EA Proposed Plant List:

Location Legend:

H - under hydro wires; S - streetscape; N - natural areas; R - roundabouts

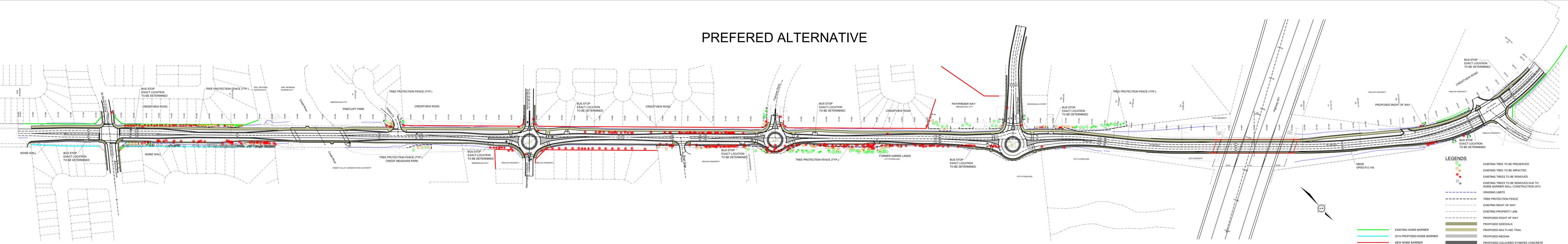
Botanical Name	Common Name	Location	Comments
Deciduous Trees			
Acer ginnala	Amur Maple	S, H	Tolerates urban conditions; fall colour; suckers
Amelanchier laevis	Allegheny Serviceberry	S, H	Native; flowers; fall colour
Acer x freemanii 'Autumn Blaze'	Autumn Blaze Maple	S	Fast growing; fall colour; moderate salt tolerance
Acer rubrum	Red Maple	S, N	Native; fall colour; prefers moist acidic soil
Acer saccharum	Sugar Maple	S, N	Native; fall colour; not salt tolerant
Carya ovata	Shagbark Hickory	N	Native; prefers rich moist soil; litter potential from fruit
Celtis occidentalis	Common Hackberry	S, N	Native, hardy tree.
Fagus grandifolia	American Beech	N	Native; wide-spreading; low-branching; fall colour
Gymnocladus dioicus	Kentucky Coffee Tree	S, N	Litter potential from large fruit pods and leaves

Botanical Name	Common Name	Location	Comments
Malus cultivars	Crab Apple	S, H	Select disease-resistant cultivars with persistent fruit to avoid litter issues (i.e. 'Donald Wyman', 'Prairiefire', 'Snowdrift', 'Sugar Tyme' or M. x zumi 'Calocarpa')
Quercus macrocarpa	Bur Oak	S, N	Native, hardy tree; spring planting required
Quercus rubra	Red Oak	S, N	Fall colour; spring planting
Quercus velutina	Black Oak	N	Regionally rare; spring planting
Syringa reticulata 'Ivory Silk'	Ivory Silk Lilac	S, H	Compact form, showy flowers
Coniferous Trees			
Picea glauca	White Spruce	N	Native, hardy tree.
Shrubs			
Cornus sericea 'Farrow'	Arctic Fire Dogwood	R	Compact form, non-suckering; winter interest
Cornus stolonifera	Red Osier Dogwood	R	Native shrub; winter interest
Juniperus horizontalis 'Wiltonii'	Blue Rug Juniper	R	Hardy; salt tolerant; silver-blue foliage
Juniperus sabina 'Tamariscifolia'	Tamarix Juniper	R	Hardy; spreading form
Symphoricarpos albus	Snowberry	R	Native, hardy, white berries
Spiraea nipponica 'Snowmound'	Snowmound Spirea	R	Hardy, drought tolerant, showy flowers
Arctostaphylos uva-ursi	Bearberry	R	Evergreen groundcover
Perennials and Ornamental Grasses			
Helictotrichon sempervirens 'Saphirsprudel'	Sapphire Blue Oat Grass	R	Hardy; low-maintenance; blue foliage
Hemerocallis 'Stella D'Oro'	Stella D'Oro Daylily	R	Hardy; low-maintenance; long bloom period
Panicum virgatum 'Rotstrahlbusch'	Red Ray Switch Grass	R	Hardy; red fall colour
Sedum x 'Autumn Joy'	Autumn Joy Sedum	R	Hardy; drought tolerant

Location Legend:

H - under hydro wires; S - streetscape; N - natural areas; R - roundabout

PREFERRED ALTERNATIVE



- LEGENDS**
- EXISTING TREE TO BE PRESERVED
 - EXISTING TREE TO BE IMPACTED
 - EXISTING TREES TO BE REMOVED
 - EXISTING TREES TO BE REMOVED DUE TO NOISE BARRIER WALL CONSTRUCTION 2015
 - GRADING LIMITS
 - TREE PROTECTION FENCE
 - EXISTING RIGHT OF WAY
 - EXISTING PROPERTY LINE
 - PROPOSED RIGHT OF WAY
 - PROPOSED SIDEWALK
 - PROPOSED MULTI-USE TRAIL
 - PROPOSED MEDIAN
 - EXISTING NOISE BARRIER
 - 2015 PROPOSED NOISE BARRIER
 - NEW NOISE BARRIER
 - PROPOSED COLOURED STAMPED CONCRETE

AECOM		CONSULTANTS		HORIZONTAL / VERTICAL CONTROL MONUMENTS		DIGITAL INFORMATION		No. DATE		REVISIONS		INITIAL SIGNED		MISSISSAUGA		CREDITVIEW ROAD CLASS EA TREE PRESERVATION PLAN PLAN - STA. 8+037 TO STA. 10+487	
DESIGN	DRAWN	CHECKED	CONTRACT No.	SCALE: 1:50	DATE:	DRAWING NUMBER	SHEET										