

| SPECIFICATIONS | | | | | | | | | |
|---|--|--|--|--|--|--|--|--|--|
| A. GENERAL | | | | | | | | | |
| i) Upland and flood fringe plantings are generally stable and should not need much maintenance or re-establishment. Shoreline fringe areas are harder to establish because of frequent wetting and drying. It is expected that this vegetation might require some re-establishment during the Contractor's three-year maintenance period. Therefore, the Contractor should include a contingency for the re-establishment of aquatic plantings and some shoreline fringe plantings during the maintenance period. | | | | | | | | | |
| Planting methods can be separated into three main categories, based on three principal habitat zones in the pond system: (1) uplands and flood fringe, (2) shoreline fringe, and (3) shallow and deep water. | | | | | | | | | |
| B. UPLAND / FLOOD FRINGE | | | | | | | | | |
| i) Planting shall include ground cover (grasses and herbs) and woody shrubs and trees. | | | | | | | | | |
| ii) If possible, planting shall be done in the spring, after water levels have stabilized. | | | | | | | | | |
| iii) Ground cover shall be installed either by hydroseeding or by using a custom seed mix in a nutrient-rich medium impregnated in a geojute, biodegradable blanket. | | | | | | | | | |
| iv) Shrubs and trees shall be planted manually, as per the applicable details. If geojute is used, openings in the material shall be made for each plant. | | | | | | | | | |
| * These specifications are an adaptation of recommendations found in <i>Stormwater Management Planning and Design Manual</i> , MOE, 2003 | | | | | | | | | |
| C. SHORELINE FRINGE | | | | | | | | | |
| i) Shoreline fringe plantings shall be carried out in mid-May to early June, after water levels have stabilized. Geojute mat shall be used for seed mixture protection (and the protection of a soil nutrient medium, if required) in this zone of water level fluctuation. Shrubs and trees shall be planted through openings cut in the mat. | | | | | | | | | |
| D. SHALLOW WATER (<0.5m) & DEEP WATER (>0.5m) | | | | | | | | | |
| i) Shallow water (<0.5m) shall be planted with emergent plants where the water is less than 0.3m deep, and with a mix of emergent and submergent vegetation in depths between 0.3m and 0.5m. The Contractor should note that the establishment of plantings in this zone will likely require special work and monitoring, both in the short and long term. Deep water (>0.5m) shall be planted solely with submergent vegetation. | | | | | | | | | |
| ii) Emergent vegetation shall be planted by hand. Plants shall consist of young shoots (sprigs and/or plugs), and shall be at least 10cm tall. Planting shall be done in late May to early June. | | | | | | | | | |
| iii) Submerged, rooted plants (including pondweeds) shall, if planted in late spring to early summer, be planted as mature vegetation. Plantings in early spring (or fall) shall be vegetative propagules (such as turions or rhizome plugs), which can germinate in the spring or overwinter and begin growing the following spring. | | | | | | | | | |
| iv) Water lilies shall be planted either directly into the substrate or pre-planted in biodegradable pots and then installed in the substrate. | | | | | | | | | |
| v) Cottails is a floating macrophyte that can be put in the pond at any time in the growing season. | | | | | | | | | |
| E. WARRANTY | | | | | | | | | |
| i) Refer to Standard No. 705 and 706 for Warranty Requirements | | | | | | | | | |
| TOWN OF CALEDON | | | | | | | | | |
| STORMWATER MANAGEMENT FACILITY PLANTING SPECIFICATIONS STANDARD NOTES | | | | | | | | | |
| NO. REVISION APRD DATE STANDARD No. 707 | | | | | | | | | |
| 2 STANDARD No.718 NOW 707 JAN 18 | | | | | | | | | |
| 1 STANDARD No. 1177.01 NOW 718 JUNE 08 | | | | | | | | | |
| APRD C.C. DATE JUNE 08 | | | | | | | | | |
| DRAWN: abal SCALE: NTS | | | | | | | | | |

NATURALIZATION SEEDING

LOCATION OF SEED TYPES ARE NOTED ON PLAN

SEED WITH THE FOLLOWING SEED MIXTURES
AS SUPPLIED BY ONTARIO SEED COMPANY (1-800-465-5849)
OR APPROVED EQUAL

TYPE 1

UPLAND:

CUSTOM UPLAND MIX

CANADIAN WILD RYE (*Elymus canadensis*) 15%
BOTTLEBRUSH GRASS (*Eleus hystrix*) 25%
VIRGINIA WILD RYE (*Elymus virginicus*) 15%
FOX SEDGE (*Carex vulpinoidea*) 15%
COMMON MILKWEED (*Asclepias syriaca*) 5%
WILD BERGAMOT (*Monarda fistulosa*) 5%
NEW ENGLAND ASTER (*Aster novae-angliae*) 5%
EARLY GOLDENROD (*Solidago juncea*) 5%
BROWN EYED SUSAN (*Rudbeckia triloba*) 5%
EVENING PRIMROSE (*Oenothera biennis*) 5%

SEED RATE: 22-25 kg/ha

NURSE CROP

ANNUAL RYE GRASS (*Lolium multiflorum*)
SEED RATE: 28kg/ha

TYPE 3

WETLAND

OSC # 8175 - FACW WETLAND MIXTURE

BEBB'S SEDGE (*Carex bebbii*) 1%
BLUE LOBELIA (*Lobelia siphilitica*) 1%
BLUE VERVAIN (*Verbena hastata*) 4%
BLUNT BROOM SEDGE (*Carex scoparia*) 1%
BONSET (*Eupatorium perfoliatum*) 1%
FOX SEDGE (*Carex vulpinoidea*) 22%
GREEN BULRUSH (*Scirpus atrovirens*) 8%
HEATH ASTER (*Aster pilosus*) 1%
LURID SEDGE (*Carex lurida*) 10%
NEW ENGLAND ASTER (*Aster novae-angliae*) 1%
PURPLE STEMMED ASTER (*Aster purpureus*) 1%
SOFT RUSH (*Juncus effusus*) 1%
SPOTTED JOE PYE WEED (*Eupatorium maculatum*) 1%
SQUARE STEMMED MONKEY FLOWER (*Mimulus ringens*) 1%
SWAMP MILKWEED (*Asclepias incarnata*) 1%
TALL MANNA GRASS (*Glyceria grandis*) 1%
VIRGINIA WILD RYE (*Elymus virginicus*) 40%
WOOLGRASS (*Scirpus cyperinus*) 1%

SEED RATE: 22-25 kg/ha

NURSE CROP

ANNUAL RYE GRASS (*Lolium multiflorum*)
SEED RATE: 28kg/ha

SWM POND MASTER PLANT LIST

PROJECT NAME:
DIXIE ROAD NORTH (ABAL 3415)

In the event of a discrepancy between the planting plan
and the plant list quantities, the planting plan shall govern.

| KEY | QUANTITY (SWM A) | QUANTITY (SWM A1) | QUANTITY (SWM B) | QUANTITY (SWM G) | BOTANICAL NAME | COMMON NAME | CALIFER | HEIGHT | SPREAD | ROOT | REMARKS | SPACING |
|------------------|------------------|-------------------|------------------|------------------|-------------------------|---------------------|---------|--------|--------|-------------|---------------|---------|
| DECIDUOUS TREES | | | | | | | | | | | | |
| A | - | - | - | 3 | ACER RUBRUM | RED MAPLE | 45mm | 3000mm | 1200mm | W.B. | EQUAL FORM | ---- |
| AI | - | - | 2 | 5 | ACER RUBRUM | RED MAPLE | ---- | 1750mm | ---- | 15 gal. POT | ---- | ---- |
| B | 5 | 3 | 4 | 4 | ACER SACCHARINUM | SILVER MAPLE | 60mm | 3500mm | 1500mm | W.B. | EQUAL FORM | ---- |
| BI | 4 | 3 | 7 | 4 | ACER SACCHARINUM | SILVER MAPLE | ---- | 1750mm | ---- | 15 gal. POT | ---- | ---- |
| D | 1 | - | 2 | 2 | CARYA OVATA | SHAGBARK HICKORY | 60mm | 3500mm | 1500mm | W.B. | EQUAL FORM | ---- |
| DI | 2 | - | 3 | 3 | CARYA OVATA | SHAGBARK HICKORY | ---- | 1750mm | ---- | 15 gal. POT | ---- | ---- |
| E | 2 | - | 1 | 2 | POPULUS BALSAMIFERA | BALSAM POPLAR | 45mm | 2000mm | 1200mm | W.B. | EQUAL FORM | ---- |
| EI | 3 | 2 | 5 | 10 | POPULUS BALSAMIFERA | BALSAM POPLAR | ---- | 2000mm | ---- | 15 gal. POT | ---- | ---- |
| F | 5 | 2 | 2 | 2 | QUERCUS BICOLOR | SWAMP WHITE OAK | 50mm | 3000mm | 1200mm | W.B. | EQUAL FORM | ---- |
| FI | 3 | 2 | 1 | 2 | QUERCUS BICOLOR | SWAMP WHITE OAK | ---- | 1500mm | ---- | 15 gal. POT | ---- | ---- |
| G | 2 | - | - | 1 | QUERCUS MACROCARPA | BUR OAK | 45mm | 3000mm | 1200mm | W.B. | EQUAL FORM | ---- |
| GI | 3 | 2 | - | 3 | QUERCUS MACROCARPA | BUR OAK | ---- | 1750mm | ---- | 15 gal. POT | ---- | ---- |
| H | 5 | 4 | 5 | 4 | QUERCUS RUBRUM | RED OAK | 50mm | 3000mm | 1500mm | W.B. | EQUAL FORM | ---- |
| HI | 2 | - | - | 2 | QUERCUS RUBRUM | RED OAK | ---- | 1500mm | ---- | 10 gal. POT | ---- | ---- |
| K | 4 | 3 | 4 | 5 | SALIX NIGRA | BLACK WILLOW | 40mm | 2000mm | 1200mm | W.B. | EQUAL FORM | ---- |
| KI | 2 | 3 | 4 | 3 | SALIX NIGRA | BLACK WILLOW | ---- | 1500mm | ---- | 1 gal. POT | ---- | ---- |
| N | 4 | 2 | 4 | - | QUERCUS BICOLOR | AMERICAN ELM | 50mm | 3500mm | 1500mm | W.B. | EQUAL FORM | ---- |
| NI | 2 | - | - | - | QUERCUS BICOLOR | AMERICAN ELM | ---- | 1750mm | ---- | 15 gal. POT | ---- | ---- |
| CONIFEROUS TREES | | | | | | | | | | | | |
| M | 15 | 12 | 9 | 11 | PICEA GLAUCA | WHITE SPRUCE | ---- | 2000mm | ---- | W.B. | SPECIMEN | ---- |
| P | 13 | 6 | 18 | 8 | PINUS STROBUS | EASTERN WHITE PINE | ---- | 2000mm | ---- | W.B. | SPECIMEN | ---- |
| Q | 25 | 15 | 20 | 25 | THUJA OCCIDENTALIS | WHITE CEDAR | ---- | 1750mm | ---- | F. POT | SPECIMEN | ---- |
| DECIDUOUS SHRUBS | | | | | | | | | | | | |
| aa | 80 | - | 20 | 55 | AMELANCHIER LAEVIS | SMOOTH SERVICEBERRY | ---- | 1500mm | ---- | 7 gal. POT | MULTI-STEM | 1500mm |
| bb | - | - | - | 70 | CORNUS RACEMOSA | GRAY DOGWOOD | ---- | 500mm | ---- | 3 gal. POT | MIN. 10 STEMS | 1000mm |
| cc | 175 | 110 | 125 | 140 | CORNUS SERICEA | RED OSIER DOGWOOD | ---- | 600mm | ---- | 3 gal. POT | MIN. 10 STEMS | 1000mm |
| cd | 45 | 95 | 120 | 90 | DIERVILLA LONGERA | BUSH HONEYSUCKLE | ---- | 400mm | ---- | 3 gal. POT | MIN. 10 STEMS | 1000mm |
| ee | 105 | 115 | 40 | 100 | RHUS TYPHINA | STAGHORN SUMAC | ---- | 500mm | ---- | 3 gal. POT | ---- | 1000mm |
| ff | 45 | 50 | 75 | 50 | ROSA BLANDA | MEADOW ROSE | ---- | 500mm | ---- | 2 gal. POT | MIN. 10 STEMS | 1000mm |
| gg | 35 | 60 | 130 | 95 | SAMBUCUS CANADENSIS | COMMON ELDERBERRY | ---- | 500mm | ---- | 1 gal. POT | MIN. 10 STEMS | 1000mm |
| hh | 150 | 85 | 110 | 100 | PHYSOCARPUS OPULIFOLIUS | COMMON NINEBARK | ---- | 500mm | ---- | 3 gal. POT | MIN. 10 STEMS | 1000mm |
| jj | 140 | 55 | 140 | 120 | SALIX DISCOLOR | RUSBY WILLOW | ---- | 600mm | ---- | 3 gal. POT | MIN. 10 STEMS | 1000mm |

SPECIFICATIONS

A. GENERAL

i) These Specifications are to be read in conjunction with the General Conditions of the contract, as prepared by and available at the offices of _____.

ii) Prior to commencing work, the Contractor shall:

1. Become familiar with the plans, details, and specifications of this project.
2. Visit the site to ascertain and take account of existing conditions and any deviations from the plans in work by others, and
3. Finalize all design alternatives in consultation with the Consulting Landscape Architect.

iii) Prior to excavating, the Contractor shall verify the location of all underground utilities. In the event of a conflict between a proposed tree location and an underground service, the exact location of the tree shall be determined on site by the Consulting Landscape Architect and/or the Town's representative.

iv) The Contractor shall, at his or her own expense, repair any damage to existing utilities, structures, facilities, etc. done in the performance of his work.

v) All site work shall conform to the *Canadian National Master Construction Specifications*, a copy of which can be obtained from Construction Specifications Canada, 31 Adelaide Street East P.O. Box 36, Toronto M5C 2H8; Tel: 1-844-427-2867; Email: admin@csccanada.ca. It is the responsibility of the Contractor to be thoroughly familiar with these specifications and their implications for this project.

B. PLANT MATERIAL

i) All plants shall be installed true to specified names, sizes, grades, etc., and shall conform to the standards of the Canadian Nursery Landscapes Association.

ii) All plants shall be nursery grown and sourced from a hardiness zone appropriate to site conditions, as published by Agriculture Canada, titled "Map of Plant Hardiness Zones in Canada".

iii) In the event of a discrepancy in plant quantity between the Planting Plan and the Plant List, the Planting Plan shall govern.

iv) The Contractor shall make plants available for inspection by the Consulting Landscape Architect and/or the Town's representative prior to shipping to the site. This does not limit the right of the Consulting Landscape Architect and/or the Town's representative to later reject plant material that is of poor quality, damaged during shipping or installation, performing poorly while the guarantee period is still in effect, or otherwise does not conform to the specifications.

v) Plant substitutions must be approved in writing by the Town and the Consulting Landscape Architect prior to delivery of the material to the site. All substitutions shall be recorded on the as-recorded drawings and planting chart.

vi) The Contractor shall use standard industry methods for planting trees and shrubs. Trees shall be turned to give the best appearance if adjacent to streets or pathways. They shall also be guyed or staked immediately after planting and as detailed on the drawings.

specifications continued on next panel ...

| | | | | | | | | | |
|---|--|--|--|--|--|--|--|--|--|
| TOWN OF CALEDON | | | | | | | | | |
| NATURALIZATION SPECIFICATIONS STANDARD NOTES PART 1 | | | | | | | | | |
| NO. REVISION APRD DATE STANDARD No. 704 | | | | | | | | | |
| 2 STANDARD No. 715 NOW 704 JUNE 18 | | | | | | | | | |
| 1 NOTES EDIT, STANDARD No. 1175.01 NOW 715 JUNE 08 | | | | | | | | | |
| APRD C.C. DATE JUNE 08 | | | | | | | | | |
| DRAWN: abal SCALE: NTS | | | | | | | | | |

SPECIFICATIONS

continued from previous panel

C. BED PREPARATION

i) The Contractor shall scarify the sides and bottom of excavated tree pits and shrub beds prior to backfilling. Due to the heavy clay soil in the Bolton area, tree and planting beds shall be backfilled to the specified depths with:

2 Parts "triple mix," delivered to the site, to be well-mixed with ...

1 Part local topsoil (viz., subdivision topsoil that has been removed and stockpiled.) If topsoil is unavailable, topsoil with clay content shall be imported and mixed with triple mix.

ii) Tree pits shall be constructed with saucers and mulch as detailed.

D. TOPSOIL AND FINE GRADING

i) The Contractor shall place 100mm of rich topsoil on approved subgrades. Topsoil shall be imported when insufficient amounts are available on site.

ii) Minor grade deficiencies and irregularities shall be eliminated prior to seeding.

E. HYDROSEEDING

i) The Contractor shall apply 2280 kg/ha fibre mulch over the newly seeded area to form a uniform, blotter-like ground cover that allows the absorption and percolation of water.

ii) The area seeded in a single day shall not exceed the area that can be mulched that same day.

iii) The Contractor shall apply the specified seed mixture using accepted industry methods for hydroseeding and at rates recommended by the seed supplier. The type and rate of fertilizer application shall be as recommended in the topsoil test report for the particular area being seeded.

F. PRELIMINARY ACCEPTANCE

i) When landscaping is completed, the Consulting Landscape Architect shall submit a Certificate of Completion for Preliminary Acceptance to the Town of Caledon certifying that all landscape works have been completed in accordance with the approved plans.

ii) Upon receipt of the Certificate of Completion, the Town Staff will conduct a preliminary inspection of the site and, provided that the works are in satisfactory condition, will grant preliminary acceptance of the landscaping.

specifications continued on next panel ...

| | | | | | | | | | |
|---|--|--|--|--|--|--|--|--|--|
| TOWN OF CALEDON | | | | | | | | | |
| NATURALIZATION SPECIFICATIONS STANDARD NOTES PART 2 | | | | | | | | | |
| NO. REVISION APRD DATE STANDARD No. 705 | | | | | | | | | |
| 2 STANDARD No. 716 NOW 705 APR 19 | | | | | | | | | |
| 1 STANDARD No. 1175.02 NOW 716 JUNE 08 | | | | | | | | | |
| APRD C.C. DATE JUNE 08 | | | | | | | | | |
| DRAWN: abal SCALE: NTS | | | | | | | | | |

SPECIFICATIONS

continued from previous panel

G. INTERIM ACCEPTANCE

i) One year after Preliminary Acceptance is granted by the Town, the Consulting Landscape Architect shall submit a Certificate of Completion for Interim Acceptance to the Town of Caledon certifying that all maintenance requirements as outlined in Section G and in accordance with the approved plans have been completed.

ii) Upon the receipt of the Certification of Completion, Town Staff will conduct an interim inspection of