

PART 1 - GENERAL

1.1 RELATED SECTIONS

- .1 Section 011400 - Work Restrictions
- .2 Section 013530 - Health and Safety Requirements
- .3 Section 013543 - Environmental Procedures
- .4 Section 024113 - Selective Site Demolition

1.2 BASIS OF PAYMENT

- .1 The arboriculture work required to manage the undesirable vegetation will be measured per unit price as described below. The unit price will be for full compensation for all labour, materials and equipment to do the work, including machinery and all related costs and expenses.
 - .1 ITEM 2: Tree removal, cross-cutting of stumps, shredding or disposal (if diseased) of branches and disposal of wood of trees with a DBH of 1 to 20 cm – multi-trunk trees for which each tree has a DBH of 1 to 20 cm count as one tree – will be paid based on the actual quantities measured on site and the unit prices in the unit prices stated in the Bid and Acceptance Form.
 - .2 ITEM 3: Tree removal, cross-cutting of stumps, shredding or disposal (if diseased) of branches and disposal of wood of trees with a DBH of 21 to 30 cm – multi-trunk trees for which each tree has a DBH of 21 to 30 cm count as one tree – will be paid based on the actual quantities measured on site and the unit prices in the unit prices stated in the Bid and Acceptance Form.
 - .3 ITEM 4: Pruning, shredding or disposal (if diseased) of branches and disposal of wood of trees with a DBH of 1 to 20 cm – multi-trunk trees for which each tree has a DBH of 1 to 20 cm count as one tree – will be paid based on the actual quantities measured on site and the unit prices in the unit prices stated in the Bid and Acceptance Form.
 - .4 ITEM 5: Pruning, shredding or disposal (if diseased) of branches and disposal of wood of trees with a DBH of 21 to 30 cm – multi-trunk trees for which each tree has a DBH of 21 to 30 cm count as one tree – will be paid based on the actual quantities measured on site and the unit prices in the unit prices stated in the Bid and Acceptance Form.
- .2 The arboriculture work described below and required to manage the undesirable vegetation will be include in the lump sum. The lump sum will be for full compensation for all labour, materials and equipment to do the work, including machinery and all related costs and expenses.
 - .1 The pruning of trees and shrubs for the installation of the life line including the shredding or disposal (if diseased) of branches and disposal of wood is included in the lump sum.
 - .2 The cutting and removal of shrubs and the shredding of branches and disposal of wood will be included in the lump sum price.
 - .3 The control of clump shoots and root suckers every 3 weeks and the shredding or disposal (if diseased) of branches will

- be included in the lump sum price.
 - .4 The removal and eradication of tree seedlings will be included in the lump sum.
 - .3 Include in items where required: the removal and disposal of all material not shredded in wood mulch, according to applicable norms, and the removal of extra mulch from the construction site. Mulch to be stored according to specifications.
 - .4 Departmental Representative will not approve payment for work not identified as required beforehand by the Departmental Representative.
 - .5 Include in items when required the cost of snow removal necessary to perform the work.
- 1.3 STANDARDS FOR WORK
 - .1 Unless otherwise specified in another article of this section of specifications, the following standards are to be respected for all arboriculture work:
 - .1 Pruning : Best Management Practices – Tree Pruning (Revised 2008)
- 1.4 DRAWINGS AND SPECIFICATIONS
 - .1 Documents (drawings, specifications, project specifications, schedules and appendices) are complementary and must be accepted as a whole. They explain and complement each other with the aim of defining the work to be performed.
 - .2 All that would be omitted by some but indicated by the other and which would be required for the completion of the work, in accordance with the clear intention of the so-called contract documents, must be executed by the Contractor without additional cost.
- 1.5 SCOPE OF WORK
 - .1 Arboriculture works to be achieved are listed on the plans.
 - .2 However, the Departmental Representative does not commit to perform the work with respect to the quantities of trees indicated in the tender form nor in the list on the plans. The Departmental Representative reserves the right to enforce more, or less, or none of the work presented in the various categories. No minimum quantity of trees on which work should be made is guaranteed to the contractor.
 - .3 The final list of trees requiring arboriculture work will be provided by the forestry engineer about 15 days before the beginning of the work of arboriculture.
- 1.6 DOCUMENTS TO SUBMIT
 - 1 The Contractor must submit the following documents prior to beginning the work:
 - .1 List of all machinery and description
 - .2 Drawings, sealed by an Engineer, indicating the location and installation of the cranes
 - .3 List of employees with their qualifications
 - .4 Work plan and schedule
 - .5 Proof of insurance

- 1.7 QUALITY OF WORK 1 Special attention must be paid to the quality of work. The Departmental Representative construction supervision does not release the Contractor from his responsibilities to carry out the full execution of the required works.
- 1.8 WORK SCHEDULE .1 As specified in plans and specifications
- 1.9 SECURITY .1 From the beginning of the construction work until it's completion, the Contractor must ensure complete public safety.
- .2 The Contractor must comply with all applicable norms and recommendation of sections 013530 – Health and Safety.
- .3 The Contractor shall be responsible of the payment of all mandatory contributions and deductions required by applicable bills.
- 1.10 PROTECTION OF .1 Structure, existing works and goods:
STRUCTURES, EXISTING
WORK, GOODS AND
ACCESS TO PROPERTY
- .1 The Contractor must, at his expense, protected and refurbish, to the satisfaction of their owner, all installations and goods, structures and other works, including trees, shrubs, lawn, plants, private and public properties that he encounters, damages or puts at risk during the construction work.
- .2 If the damages caused can not be repaired, the Contractor will have to assume full responsibility, going from partial compensation for the value to replacement of objects or trees involved.
- .3 In all cases, the Contractor must inform the Departmental Representative of damages he has caused or dangers he has created by his work or during these and indicated what actions have been taken with regards to these.
- .4 All associated costs related to the rehabilitation of trees, shrubs and other amenities or damaged sites must be assumed by the Contractor.
- .5 After all rehabilitation work has been done, a tree or a shrubs wounded, broken or damaged may show residual depreciation engaging the responsibility of the Contractor for a partial financial compensation of the damaged trees or shrubs.
- .6 The residual depreciation of a damaged tree or shrub, even after rehabilitation, will be evaluated using the evaluation methods by the International Society of Arboriculture (ISA) with the expertise of a representative designated by the Departmental Representative.
- .7 The work will executed and the complaints considered and resolved by the Contractor with the required tact required to maintain good relations between neighbouring owners, citizens and the federal government.
- .8 The Contractor can not engage the Departmental Representative' s responsibility for payments of damages, compensation, favours, etc.
- .2 Property of the Government of Canada:
.1 The trees on which work is required are located on sites that

are the Property of the Government of Canada.

- .2 The Contractor must limit as much as possible his operations and the circulation of his vehicles and employees to the limit of the Federal Government property.
- .3 All the planned work has to take place within the Federal Government property limit. At no time can the Contractor can encroach on private property to execute his work.
- .4 During the construction work, the Contractors must expect to to encounter obstacles limiting their machinery access such as hedges, mineral surfaces and amenities, lawns, construction sites, paths, etc. These conditions are considered normal for the realisation of a project such as the one described in the present specifications and they will not justify additional payments.
- .5 During the construction work, the Contractor can not use rolling stock in private alleys or parking.

1.11 RECLAMATIONS

- .1 When there is a claim against the Contractor or when the Contractor has a debt obligation that can translate in a monetary responsibility for the Departmental Representative or constitute a cost on a property or good that belongs to the federal government, the Departmental Representative has the right to guarantee itself, in capital, interest and fees, against a claim or debt obligation, by retaining the required sums from all amounts due or to become due to the Contractor, or by obtaining from the Contractor appropriate certificates and warranties.
- .2 If a claim or a debt obligation is established after the Departmental Representative has issued all payments to the Contractor, the Contractor must reimburse all amounts in capital, costs and interests that the Departmental Representative has had to disburse by reason of the Contractor's default.

1.12 EMERGENCY MEASURES

- .1 If there are situations that the Contractor can not address or that he refuses to which require, in the view of the Departmental Representative, urgent measures to protect the public, existing structures and works during the execution of the work, up until the final reception of the work, the Departmental Representative can take necessary measures to address these situations.
- .2 Such expenses are the charge of the Contractor and can be deducted from the amounts that are or can become due to him

PART 2 - PRODUCTS

NOT USED

**PART 3 – EQUIPEMENT AND
WORKFORCE**

- 3.1 MACHINERY, EQUIPEMENT
AND TOOLS .1 The Contractor must have all machinery, equipment, tools and labour necessary for the implementation of arboriculture work.
- 3.2 WORKFORCE .1 For pruning, guying and removal work, Contractor must provide following equipment and machinery:
- .1 A minimum or two trucks equipped with a closed box for the shredding of the branches, each with a minimal capacity of 10 cubic metres.
 - .2 A trailer mounted industrial chipper unit. The chipper must be able to shred branches at least 20 cm in diameter.
 - .3 The Contractor must provide trucks and all necessary tooling, material, labour and monitoring necessary to complete the work described in the drawings.
- .2 The workforce provided by Contractor must consist of 2 to 3 employees, including 1 for driving the truck:
- .1 A tree trimmer and team leader who is skilled with “cable” work.
 - .2 A tree trimmer who is skilled with “cable” work.
 - .3 A worker to work on the ground.

PART 4 – EXECUTION

- 4.1 ON-SITE TREE IDENTIFICATION .1 The identification of trees on which to intervene and the nature of required work will be done by the Departmental Representative prior to beginning of the work.
- 4.2 WORK PLAN .1 Within 10 working days notice to the effect that the contract will be awarded, the Contractor must submit in writing to the Departmental Representative a complete work plan describing inter alias the periods (days or weeks) and areas (or groups of trees) where he has run its work.
- .2 This work plan will be subject to validation and approval by the Departmental Representative. If educational or academics activities happen to coincide in certain areas and/or at certain dates (or times), the Departmental Representative may require changes to the work plan to meet the constraints associated with the requirements of these educational and academic activities. The Contractor will be required to make the necessary changes and to comply with the demands of the Departmental Representative.
- 4.3 NOTICE FOR SECURITY WORK 1 The Contractor must confirm to Departmental Representative within three working days of the date at which he will be beginning and/or resuming work.
- .2 Areas where pedestrian or vehicular traffic is more important – namely the pedestrian path along the Rideau Canal and the Ottawa River - and where arboriculture works are planned, coordination must be carried out between the contractor and the Departmental Representative.

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| 4.4 <u>WORK SCHEDULE</u> | .1 | The normal work schedule is specified in section 011400 - Work Restrictions. |
| 4.5 <u>CELL PHONE</u> | .1 | The contractor and his representative (or foreman, team leader, etc.) must provide a cell phone number where it is possible to join at any time during working hours. |
| 4.6 <u>COMMUNICATION WITH PEOPLE</u> | .1 | In its communication, the Contractor must act with tact and professionalism. |
| 4.7 <u>CONTRACTOR'S REPRESENTATIVE</u> | .1 | The Contractor shall designate in writing a representative (or foreman, team leader, etc.), for the duration of the work. Contractor's representative must have the relevant training arboriculture work. The representative shall insure proper implementation of the work. |
| 4.8 <u>WORKER'S SAFETY</u> | .1 | The contractor is responsible for providing to employees all information and equipment necessary for their protection during the performance of arboriculture work, and in safe conditions. The contractor must also make sure that the instructions and safety rules are understood and must commit to ensure that they are seen and respected by its employees. In particular, workers on the ground must wear a safety vest at all time. |
| | .2 | The Contractor must comply at all times with security measures identified in the specifications. |
| 4.9 <u>ON-SITE SAFETY</u> | .1 | The Contractor is solely responsible for on-site security, for the adequate protection of workers and staff, and the public in general, as well as for the protection of goods, materials and equipment. |
| | .2 | The Contractor shall, at all times and at his own expense, maintain the level of order and cleanliness required for the safety of staff and the public on the work site. |
| | .3 | The Contractor will be responsible for the provision and installation of adequate signage on work site as well as any installation of barriers or fencing limiting access to work areas. |
| | .4 | If necessary, the Contractor shall provide flagmen specifically assigned to the signalling of work near work site. |
| 4.10 <u>CLIMBING SPURS</u> | .1 | Notwithstanding what may be stated in the reference standards, the use of climbing spurs (spikes) is strictly forbidden for work other than removal or during air rescue. |
| 4.11 <u>WOUND DRESSING</u> | .1 | The use of wound dressing products on cuts, wounds or injuries is prohibited in all circumstances. |
| 4.12 <u>CLEANING</u> | .1 | Immediately after arboriculture work has been completed, or at the least at the end of each workday, the contractor shall make sure that the site has been properly cleaned and left unsoiled, i.e. free of leaves, branches, logs, tree trunks, wood chips and grubbing residues. |
| | .1 | The picking up of residues on planted or grassy surfaces must be done with utmost care; i.e. With a portable |

- ("blower"), a leaf rake or any other method giving equivalent results or better.
- .2 The picking up of residues on hard surfaces (pavement, asphalt, paving stones, etc.) must be done with utmost care; i.e. With a portable ("blower"), a leaf rake or any other method giving equivalent results or better.
 - .3 In the case of the snow-covered surfaces, the picking up of residues should be done in such a way as to avoid accumulations of debris deemed too important by the Departmental Representative.
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- .2 The Contractor organise all materials and equipment in a safe and orderly manner on the site.
 - .3 If the Departmental Representative discovers debris that were left on site, outside the staging area, and not picked up at the end of the working day, penalties may be applied on the performance bond.
 - .4 The Contractor can store debris from pruning and removal work in the staging area during the arboriculture work. The debris must be evacuated and the staging area as well as all existing finished surfaces must be cleaned and restored every year, at the end of the arboriculture work carried out that year.

- 4.13 REMOVAL
- .1 For all removal work, the Contractor must use the appropriate method with respect to the environment in which he is operating in order to avoid damage to property (grassy areas, flowerbeds, etc.), goods (cars, etc), as well as to buildings, other infrastructure and injury to passers-by.
 - .2 Where removed tree is not subjected to grubbing work, the stump must then be sawn closest to the ground.
 - .3 Certain tasks within the work zone limit can be done with a crane to remove trees from the wooded areas, as long as the Contractor complies with the restrictions regarding the location of the crane.
- 4.14 CROSS-CUTTING STUMPS
- 1 The stumps must be cut closest to the ground by means of a mechanical chainsaw.
 - .2 All cross-cut sections of stumps must be removed and transported off-site.
 - .3 The stumps of Juglans cinera (Butternut), Fraxinus (Ash) and Ulmus americana (American Elm) must be covered with 30cm of topsoil.
- 4.15 PRUNING
- .1 All pruning work should be carried out in compliance with standard requirements referred to in the specifications.
 - .2 Pruning work on trees identified for this purpose include the following tasks:
 - .1 Security pruning (for trees hanging above the Rideau Canal footpath or lawn).
 - .2 Sanitary pruning (for branches that are diseased).
 - .3 Heightening of the tree crown for large developing trees : to 4,5m above vehicular roads, pedestrian paths and lawns.
 - .4 Pruning to create light wells (existing desirable indigenous trees and newly planted trees.).
 - .5 Pruning to facilitate the installation of the lifeline.
 - .3 All the clearing and heightening work of the tree crowns must be done with directional cuts, in order to provide an adequate clearing for a period of three (3) years.
 - .4 For all the clearing and heightening work on the tree crowns, all branches interfering with the zones to be cleared will have to be removed normally, no matter what their diameter is.
 - .5 There is no systematic thinning of the treetops.
- 4.16 CONTROL OF SHOOTS AND SUCKERS
- .1 During the growing season, from May 15 to September 15 of every year, the Contractor must remove all stump shoots and root suckers around the tree stumps of every previously removed tree. This operation must be repeated every 3 weeks. No mechanical chain chainsaw may be used for this work.

- 4.17 REMOVAL OF PRUNING, REMOVAL, AND GRUBBING RESIDUES
- .1 All residues of pruning, removal and stump - wood chips, logs, Earth, etc. – resulting from arboriculture work must be removed from site of the work to an appropriate location, approved by Departmental Representative at the expense of the Contractor.
- .2 Departmental Representatives must be fully aware of sites where residues will be placed.
- .3 When wood from Fraxinus (Ash) are encountered, the Contractor shall dispose of residues in compliance with Ministerial Order for the Emerald Ash Borer issued by the Canadian Food Inspection Agency, affecting the whole the Ottawa region, as well as applicable provincial and municipal regulations. All additional costs resulting from the application of these procedures must be covered entirely by the Contractor.
- .4 All applicable norms related to the treatment of stumps and residues of Juglans cinera (Butternut) and Ulmus Americana (American Elm) must be followed.
- 4.18 REMOVAL OF SEEDLINGS
- .1 Once per year, and three times during the contract, the Contractor must remove by hand all seedling of Fraxinus (Ash), Acer platanoides (Norway Maple) and Acer negundo (Manitoba Maple) as well as any other seedling identify by the Departmental Representative.
- 4.19 DANGEROUS TREES
- .1 If, when executing their work, the Contractor or his employees notice that a tree could possibly pose a threat to the safety of the public, the latter is required to notify as promptly as possible the Departmental Representative.
- 4.20 DAMAGE TO PRIVATE PROPERTY
- .1 If the Contractor, during the execution of the work, causes damage to a building, infrastructure or a vehicle belonging to the federal Government or any other (private or public) individual, the Contractor must pay for the full repair (or offer full compensation) as soon as possible, and to the full satisfaction of the Departmental Representative or the owner in question. The costs incurred by the damage are the sole responsibility of Contractor.
- 4.21 NON-COMPLIANT WORK
- .1 The Contractor will be required to restart at his own expense all work that was executed in a way that is deemed with the present book of specifications.
- .2 The Departmental Representative will regularly check that the work is carried out in accordance with the provisions of the present specifications.

***** END OF SECTION *****