

PART 1 - GENERAL

1.1 REFERENCES

- .1 U.S. Environmental Protection Agency (EPA)/Office of Water.
- .2 EPA 832/R-92-005-92, Storm Water Management for Construction Activities, Chapter 3.
- .3 Ontario Environmental Protection Act
- .4 Canadian Environmental Protection Act
- .5 Transportation of Dangerous Goods Act
- .6 City of Ottawa Sewer Use By-law No. 2003 – 514.

1.2 BASIS OF PAYMENT

- .1 The lump sum price shall be full compensation for all labour, materials and equipment to do the work.

1.3 DEFINITIONS

- .1 Environmental Pollution and Damage: presence of chemical, physical, biological elements or agents which adversely affect human health and welfare; unfavourably alter ecological balances of importance to human life; affect other species of importance to humankind; or degrade environment aesthetically, culturally and/or historically.
- .2 Environmental Protection: prevention/control of pollution and habitat or environment disruption during construction. Control of environmental pollution and damage requires consideration of land, water, and air; biological and cultural resources; and includes management of visual aesthetics; noise; solid, chemical, gaseous, and liquid waste; radiant energy and radioactive material as well as other pollutants.

1.4 FIRES

- .1 Fires and burning of rubbish on site not permitted.

1.5 DISPOSAL OF WASTES

- .1 Do not bury rubbish and waste materials on site unless approved by Departmental Representative.
- .2 Do not dispose of waste or volatile materials, such as mineral spirits, oil or paint thinner into waterways, storm or sanitary sewers.

1.6 DRAINAGE

- .1 Provide Erosion and Sediment Control Plan identifying type and location of erosion and sediment controls provided. Ensure plan includes monitoring and reporting requirements to assure that control measures are in compliance with erosion and sediment control plan, Federal, Provincial, and Municipal laws and regulations.
- .2 Provide temporary drainage and pumping required to keep excavations and site free from water.
- .3 Ensure pumped water into waterways, sewer or drainage systems is free of suspended materials.

1.7 SITE CLEARING AND PLANT
PROTECTION

- .4 Control disposal or runoff of water containing suspended materials or other harmful substances in accordance with local authority requirements.
- .1 The Contractor must install appropriate means necessary to avoid any damage (physical or chemical) to trees, in any way whatsoever. Contractor must protect and preserve trees. This also includes exhaust emitted by equipment and vehicles.
- .2 Therefore, it is the responsibility of the Contractor and Subcontractors to be fully aware of existing conditions and exact locations of crown trunk and the roots of trees.
- .3 It is forbidden for the Contractor and the Subcontractors to mark with paint or fix objects in any way whatsoever to trees.
- .4 Protect trees, plants and sodded areas on site and adjacent properties as indicated. No construction work or storage of material is allowed under the tree crown, to dripline. No construction work, storage or circulation is allowed outside of the work zone limit.
- .5 Protect trunk of tree identified on plans and on site by the Departmental Representative. by means of wood pieces placed vertically, measuring 1.8m high starting at ground level, fixed in place with a steel belt.
 - .1 For trees with DBH (Diameter at Breast Height) less than 15 cm, use wood pieces with following dimension: 2" x 3". The space allowed between each wood piece should never exceed 3 centimetres.
 - .2 For trees with DBH (Diameter at Breast Height) greater than 15 cm, use wood pieces with following dimension: 2" x 4". The space allowed between each wood piece should never exceed (3) centimetres.
 - .3 Contractor must place between tree trunk and wood pieces a padded layer and must get material approved by Departmental Representative prior to installation.
- .6 Signage shall never be placed on trees. Electric or other wires must never pass through trees.
- .7 Protect roots of designated trees to dripline during excavation and site grading to prevent disturbance or damage. Avoid unnecessary traffic, dumping and storage of materials over root zones.
- .8 Minimize stripping of topsoil and vegetation. Restrict tree and vegetation removal to areas indicated or designated by Departmental Representative. Refer to plans and specifications for indications on vegetation to be removed or protected. All tree stumps are to be maintained. All trees to be removed or pruned will be identified on site. All trees not identified to be removed must be protected.
- .9 Work, storage or traffic should never be held beyond the contract limit line.

- .10 The Contractor must protect all Juglans cinera (Butternuts) from possible damages, except those indicated as having to be removed in plans and specifications. Significant habitat for butternut is generally defined as a minimum 25 m radius around the trunk of each Juglans cinera (Butternut) to preserve. No negative impacts are permitted within or adjacent to significant habitat for an endangered species under the provisions of the Planning Act and Provincial Policy Statement. Any encroachment within the 25 m setback must be approved by the Departmental Representative.
- .11 The Contractor must comply with all current standards to dispose of ash tree branches and wood.
- .12 The Contractor must cover all Juglans cinera (Butternut), Fraxinus (Ash) and Ulmus Americana (Orme d'Amérique) stumps that have been cut down with 30cm of topsoil.
- .12 The Contractor must cover all Juglans cinera (Butternut), Fraxinus (Ash) and Ulmus Americana (American Elm) stumps that have been cut down with 30cm of topsoil.
- .13 In case of damage to branches during the construction work, all the damaged branch will have to be removed upon favourable notice from the Departmental Representative, and following his instructions.
- .14 Under no circumstances may the fence be attached to trees.
- .15 No dismantling of fences will be tolerated prior to the completion of work.
- .16 The use of products on cuts, wounds or injuries on trees is prohibited.
- .17 All protection measures and devices for trees described in this section of the current book of specifications must be kept in good condition by the Contractor during the duration of contract period.
- .18 The Departmental Representative is the only person competent enough to determine the need or not for the application and required period of application for tree protection measures.
- .19 The Contractor shall immediately repair any broken tree protection measures.
- .20 The Departmental Representative will verify the upkeep of tree protection measures and whether instructions described in this current book of specifications have been met. If necessary, the Departmental Representative may issue directives that General Contractor and his Subcontractors must comply to.
- .21 Tree protection work should be entirely removed once all construction and landscaping work have been entirely completed.

- .22 Tree protection measures must be removed so as to not to cause damage to the adjacent trees and woodlands.
- .23 Tree protection measures must be removed under the supervision of the Departmental Representative.
- .24 The contractor is responsible for the disposal of tree protection measures, in accordance with the regulations, standards and laws in force. Contractor must cover all costs associated with disposal of tree protection measures.
- .25 It is prohibited at all times to spill in or on the soil any substances that may be harmful to the health of trees and other plants.
- .26 The use of all substances for weed removal is prohibited at all times.
- .27 Under no circumstances may the contractor use salt or any other material to control dust during the duration of the work.
- .28 The contractor will be required to rebuild at his own expense all work non-compliant with requirements stated in this current book of specifications and in drawings.
- .29 The Departmental Representative will regularly verify that all work comply with the specifications present in drawings and in current book of specifications.
- .30 Whenever soil, concrete, pumped water, deleterious substances or chemicals (liquid, gaseous or solid) are spilled near trees to protected and preserved, the Departmental Representative will ask for corrective measures to be implemented immediately in order to remedy the situation, at the expense of the contractor.
- .31 Whenever machinery or materials are stored or moved even temporarily outside areas Departmental for that purpose on the drawings, the Departmental representative will ask for corrective measures to be implemented immediately in order to remedy the situation, at the expense of the contractor.

1.8 DAMAGE TO TREES

- .1 Whenever there is damage to a tree intended to be preserved and protected, the Departmental Representative will require that Contractor implements corrective measures necessary to remedy the situation. If corrective measures cannot be implemented by Contractor, Departmental Representative will charge to Contractor the value of the damages.

1.9 WORK EXECUTED NEAR BODIES OF WATER

- .1 At all times prevent the runoff of materials and products into water courses.
- .2 The Contractor must conform to current norms and standards with regards to products used near water courses.

1.10 PROTECTION OF
HERITAGE ELEMENTS

- .1 Protect in accordance with 013591 – Historic – Protection Measures.
- .2 The Contractor must protect the retaining walls located at the top and at the bottom of the slope, the remains of Lover's Walk, the north perimeter wall, the north perimeter walkway in stone, the staircase, the monuments, the site furnishing, the buildings, the interpretation and signage panels, the rock outcrops and all items identified on plans and in specifications.
- .3 No works, permanent or temporary can affect the elements to protect in their appearance and stability. The Contractor can not use the protected elements for anchoring, stockpiling or can not alter the elements to protect.

1.11 POLLUTION CONTROL

- .1 Maintain temporary erosion and pollution control features installed under this Contract.
- .2 Control emissions from equipment and plant to local authorities' emission requirements.
- .3 Cover or wet down dry materials and rubbish to prevent blowing dust and debris. Provide dust control for temporary roads and temporary granular parking lots.

1.12 NOTIFICATION

- .1 Departmental Representative will notify Contractor in writing of observed noncompliance with Federal, Provincial or Municipal environmental laws or regulations, permits, and other elements of Contractor's Environmental Protection plan.
- .2 Contractor, after receipt of such notice, shall inform Departmental Representative of proposed corrective action and take such action for approval by Departmental Representative.
 - .1 Do not take action until after receipt of written approval by Departmental Representative.
- .3 Departmental Representative will issue stop order of work until satisfactory corrective action has been taken.
- .4 No time extensions granted or equitable adjustments allowed to Contractor for such suspensions.

PART 2 - PRODUCTS

2.1 PRODUCTS

- .1 The Contractor must foresee temporary signage and measures to protect the vegetation during the construction works.

PART 3 - EXECUTION

3.1 MISE EN OEUVRE

- .1 No construction work is allowed beyond the work zone limit.

3.2 CLEANING

- .1 Clean in accordance with Section 017411 - Cleaning.
- .2 Waste Management: separate waste materials in accordance with Section 017421 - Construction/Demolition Waste Management and Disposal.
- .3 Ensure public waterways, storm and sanitary sewers remain free of waste and volatile materials disposal.

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