

EXISTING PLANT MATERIAL

**1 General**

**1.1 RELATED WORK**

.1 Coordinate the requirements of this section with all other sections, including but not limited to:

- .1 Section 01560 Environmental Protection
- .2 Section 02070 Demolition, Removal and Salvage
- .3 Section 02210 Rough Grading

**1.2 QUALITY CONTROL**

.1 **City of Saskatoon, Parks Branch** to approve excavations, protection methods, removal, relocation or pruning of existing trees and other plant materials located on public property, before Work start-up.

- .1 Supply an Environmental Protection Plan prior to commencement of Work, to include proposed Plant Protection measures.
- .2 Trees within or adjacent to the Work require a Tree Protection Zone (TPZ) during construction by means of a protective barrier or fencing.
- .3 Activities which are likely to injure or destroy the tree are not permitted within the TPZ.
- .4 Tree pruning or root cutting of trees on public City of Saskatoon property may only be done by Urban Forestry staff or a certified Arborist approved by **City of Saskatoon, Parks Branch**.

**1.3 INSPECTIONS**

.1 **City of Saskatoon, Parks Branch** is required to inspect the site to review and verify all existing plant materials designated for protection, removal, and relocation, before work start-up.

.1 Photo record all existing plant materials (to remain) before start of Work.

.2 Notify **City of Saskatoon, Parks Branch** for inspection of:

- .1 Excavations adjacent to existing trees and other plant material.
- .2 Protection methods for existing plant materials to remain.
- .3 Removal, relocation or pruning of existing plant materials to remain.

.3 Notification is required, within 48 hours of the Work commencing for emergency excavations, construction, or where repair is undertaken within the TPZ of existing tree or other plant materials.

#### 1.4 FINES AND PENALTIES

- .1 Unauthorized excavations, removal, relocation or pruning in part or whole of existing plant material at or adjacent to the Work is not allowed and will result in a fine or penalty assessed against the Contractor to include:
  - .1 Activity that causes damage to, or results in the removal of any existing tree or plant material, without prior review and approval of such activity or Work.
- .2 The Contractor is responsible for damages resulting from unauthorized work to any existing tree as per City of Saskatoon **Council Policy No. C09-011, *Trees on Public Property*** or City of Saskatoon **Bylaw No. 7767, *Recreation Facilities and Parks Bylaw***.
  - .1 The Contractor is responsible to monitor all Sub-Contractors as restitution for all damages found to be solely upon the Contractor.
- .3 Restitution for damages to, or removal of, plant material is required assessed on the value of plant material as determined using formulae described by the International Society of Arboriculture ***Guide for Plant Appraisal***, current edition.
  - .1 **City of Saskatoon** to supply a Certified Arborist, according to the International Society of Arboriculture (ISA), to perform the assessment and evaluate damages. Damages may include the cost of repair, removal and replacement as determined by such assessment.
  - .2 Contractor is responsible for costs to plant material resulting from the assessment.

#### 1.5 CONSTRUCTION ACCESS, PARKING AND STORAGE

- .1 Comply with all requirements of the ***Public Service Vehicles Act***.
  - .1 Use construction access/egress routes as approved by **City of Saskatoon, Parks Branch** and as indicated on the Environmental Protection Plan.
- .2 If site access is required within the Tree Protection Zone (TPZ) of existing trees, Tree Protection Barriers and Hoarding will be required.
  - .1 Methods of protection to be shown on the Environmental Protection Plan and are subject to approval by **City of Saskatoon, Parks Branch** prior to start of Work.
- .3 Pre-designate Parking areas at each Construction site.
  - .1 Parking of vehicles or machinery within the TPZ of trees is not permitted.
  - .2 Parking is allowed only where designated on the Environmental Protection Plan.
  - .3 Soil aeration of compacted areas is required after completion of Work.
  - .4 Wood mulch layer may be required to distribute weight.

**EXISTING PLANT MATERIAL**

- .4 Store equipment, topsoil or other Construction materials outside extent of TPZ and as indicated on the Environmental Protection Plan.

**2 Products**

**2.1 PROTECTIVE FENCING AND HOARDING**

- .1 A protective barrier or fencing will be required to keep vehicles and equipment away from plant materials.
  - .1 Standard snow fence: 1200 min. height of either orange plastic mesh or wooden slats in clean and unbroken condition.
  - .2 Plywood sheeting: 12.5 thick, 1200 min. height in sound undamaged condition.
  - .3 Hoarding: 39 x 89 x 2400 boards secured vertically at 300 intervals around the tree trunk with strapping as indicated.
  - .4 T Post: 35mm gauge, 1800-2400 height heavy duty steel. Extend bottom of support min. 450 into sub-grade.
  - .5 Wood Post: 1800 height min., 75 – 100 diameter, treated with preservative (creosote unacceptable).

**3 Execution**

**3.1 REMOVALS**

- .1 **City of Saskatoon, Parks Branch** to determine extent of removals required for all existing plant materials as identified on drawings, or as directed.
  - .1 Trees that are dead, dying, diseased, and/or posing a hazard to public safety to be removed.
  - .2 Ensure adjacent plant material is protected from falling trees, stockpiled debris, or cutting of roots during removal of plant material.
    - .1 Remove cut waste material from site and disposal off site per regulations.
  - .3 Grind out stumps and roots from cleared area and remove all debris from site and dispose off site per regulations.

**3.2 PROTECTION**

- .1 Plant material not subject to removal requires protection during construction. Plant material is not to be subject to unnecessary destruction, loss and damage.
- .2 Trees of historic significance or of special landscape value may require additional protection as directed by the **City of Saskatoon, Parks Branch**.
- .3 Construction work around unprotected trees is prohibited.

**EXISTING PLANT MATERIAL**

- .4 Refer to the chart below for determining the Tree Protection Zone (TPZ):

**Tree Protection Zones:**

Trunk Diameter(DBH) <sup>1</sup>	Minimum Protection Distances Required <sup>2</sup> Whichever of the two is greater:
<10 cm	The drip line <sup>3</sup> or 1.8 m
11 – 40 cm	The drip line or 2.4 m
41 – 50 cm	The drip line or 3.0 m
51 – 60 cm	The drip line or 3.6 m
61 – 70 cm	The drip line or 4.2 m
71 – 80 cm	The drip line or 4.8 m
81 – 90 cm	The drip line or 5.4 m
91 – 100+cm	The drip line or 6.0 m

<sup>1</sup>Diameter of tree trunk taken at 1.4m above the ground.

<sup>2</sup>Tree Protection Zone distances are to be measured from the outside edge of tree base.

<sup>3</sup> Drip line is defined as the area beneath the outer most branches of a tree and may be limited by an existing paved surface, provided the existing paved surface remains intact throughout the Construction work.

- .1 Some trees and site conditions may require a larger TPZ at the discretion of **City of Saskatoon, Parks Branch**.
- .2 Grading change, storage of materials or equipment is not permitted within the TPZ.
- .3 Damage to plant material within TPZ must be reported to **City of Saskatoon, Parks Branch** within 48 hours of occurrence for assessment and decision on actions required
- .4 For construction activity within 3-5m of plant material, use a standard snow fence with T Post supports.
- .5 For construction activity within 1-3m of plant material use plywood sheeting with T Post or Wood Post supports.
- .6 For construction activity within 1m of trees use Hoarding.
- .5 Trees within TPZ are required protected by means of a Tree Protection Barrier as indicated.
  - .1 Installation of Tree Protection Barrier is required before start of Work..
  - .2 Locate all support posts and bracing used to secure the Tree Protection Barrier outside the TPZ.
  - .3 Removal of **Tree Protection Barrier** requires written approval from **City of Saskatoon, Parks Branch**
- .6 Enhanced **Root Protection** may be required at vehicle access routes and within

designated parking areas.

### 3.3 EXCAVATIONS ADJACENT TO EXISTING PLANT MATERIAL

- .1 Locate and stake line of proposed underground services/utilities or any required excavations adjacent to existing plant materials.
  - .1 Approvals for Work within **TPZ** of existing plant materials are required from **City of Saskatoon, Parks Branch**.
  - .2 Excavate with extreme caution as follows:
    - .1 Avoid damage to anchor roots, which provide upright support for the tree and minimize damage to the tree.
    - .2 Prune exposed tree roots immediately with a sharp tool for a clean cut.
    - .3 Cover exposed roots with a tarp to prevent drying.
    - .4 Maintain continuous soil moisture to 600mm depth within TPZ of trees affected by excavation until backfilled
    - .5 Backfill excavation within 24 hours and water immediately with sufficient quantity of water
- .2 Tunnel proposed underground service/utilities at min. 600mm depth if within 3m of existing plant material TPZ.
- .3 Excavations within three (3) m radius of existing plant materials may be permitted on one side ONLY.
  - .1 Carefully expose all tree roots by trenching to 600mm depth before excavation.
- .4 Excavations closer than three (3) m of existing plant materials are not permitted.

### 3.4 RELOCATION

- .1 **City of Saskatoon, Parks Branch** presence is required for relocation of existing plant materials.
- .2 Dig tree hole with same hydraulic tree spade as used to transplant plant material.
- .3 Scarify wall of planting holes before relocating and remove any water from planting hole before tree placement.
- .4 Using hydraulic tree spade, dig plant material with a firm natural cone of root system of sufficient diameter and depth to ensure full recovery of the plants.
  - .1 Transplant by tree spade using the following guidelines:

**EXISTING PLANT MATERIAL**

<b>Tree Spade (size)</b>	<b>Maximum tree calliper (DBH)<sup>1</sup></b>	<b>Tree Height</b>
1350 mm (44")	75 mm (3")	3.0 - 3.6 m (10-12')
1500 mm (60")	100 mm (4")	3.0 - 3.6 m (10-12')
1650 mm (66")	150 mm (6")	3.6 - 4.2 m (12-14')
2100 mm (84")	200 mm (8")	4.2 - 4.8 m (14-16')

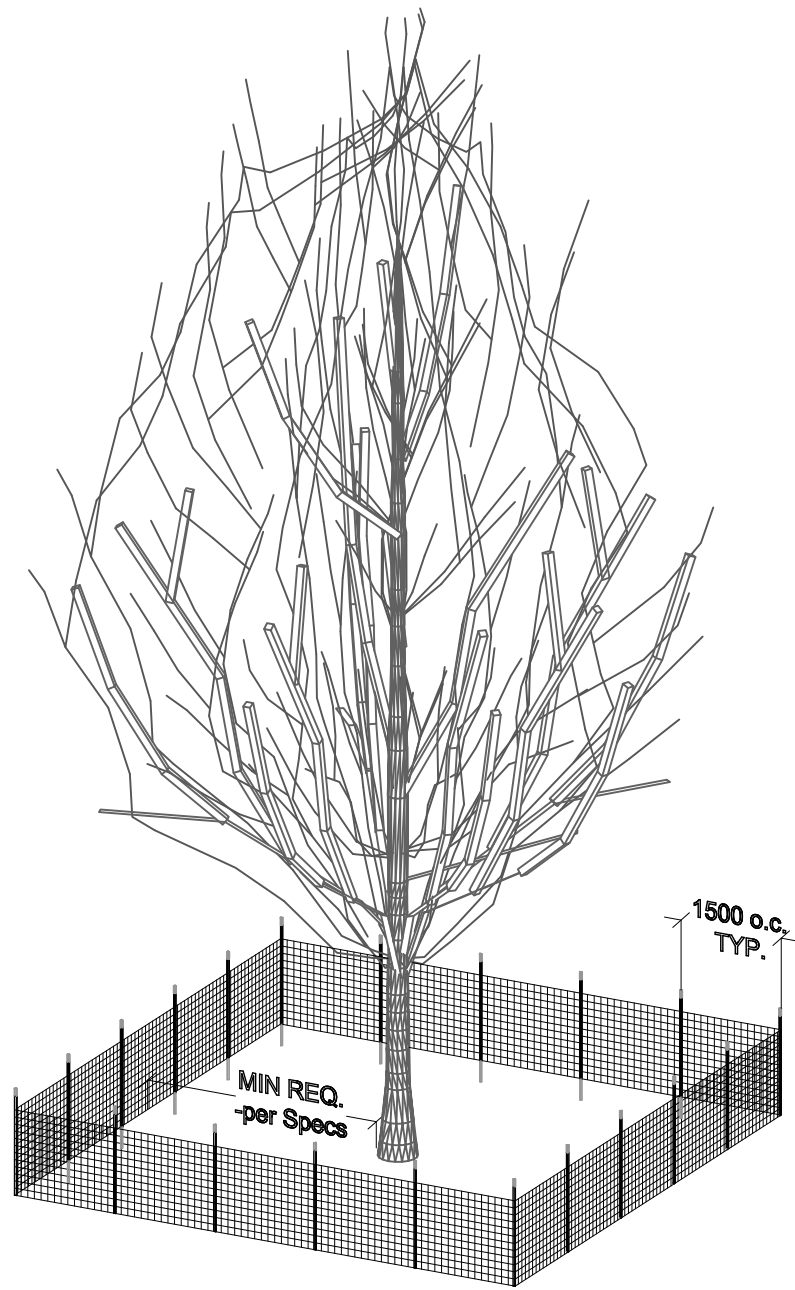
<sup>1</sup>Diameter of tree trunk taken at 1.4 m above the ground.

- .2 Transplanting of trees greater than 8" caliper is prohibited.
- .5 Install tree plumb and at locations per drawings, provide tree support, see details.
- .6 Water immediately after planting with sufficient quantity of water and continue establishment maintenance per Contract.

**3.5 PRUNING**

- .1 **City of Saskatoon, Parks Branch** to inspect existing plant material and determine extent of pruning required done by certified Arborist.
- .2 Pruning of Elm trees during the annual pruning ban from April 1 to August 31 is prohibited.
  - .1 Dispose of Elm tree cuttings at approved waste facility per regulations.
- .3 **City of Saskatoon, Parks Branch** to perform pruning requirements for existing plant materials posing hazard to public safety.

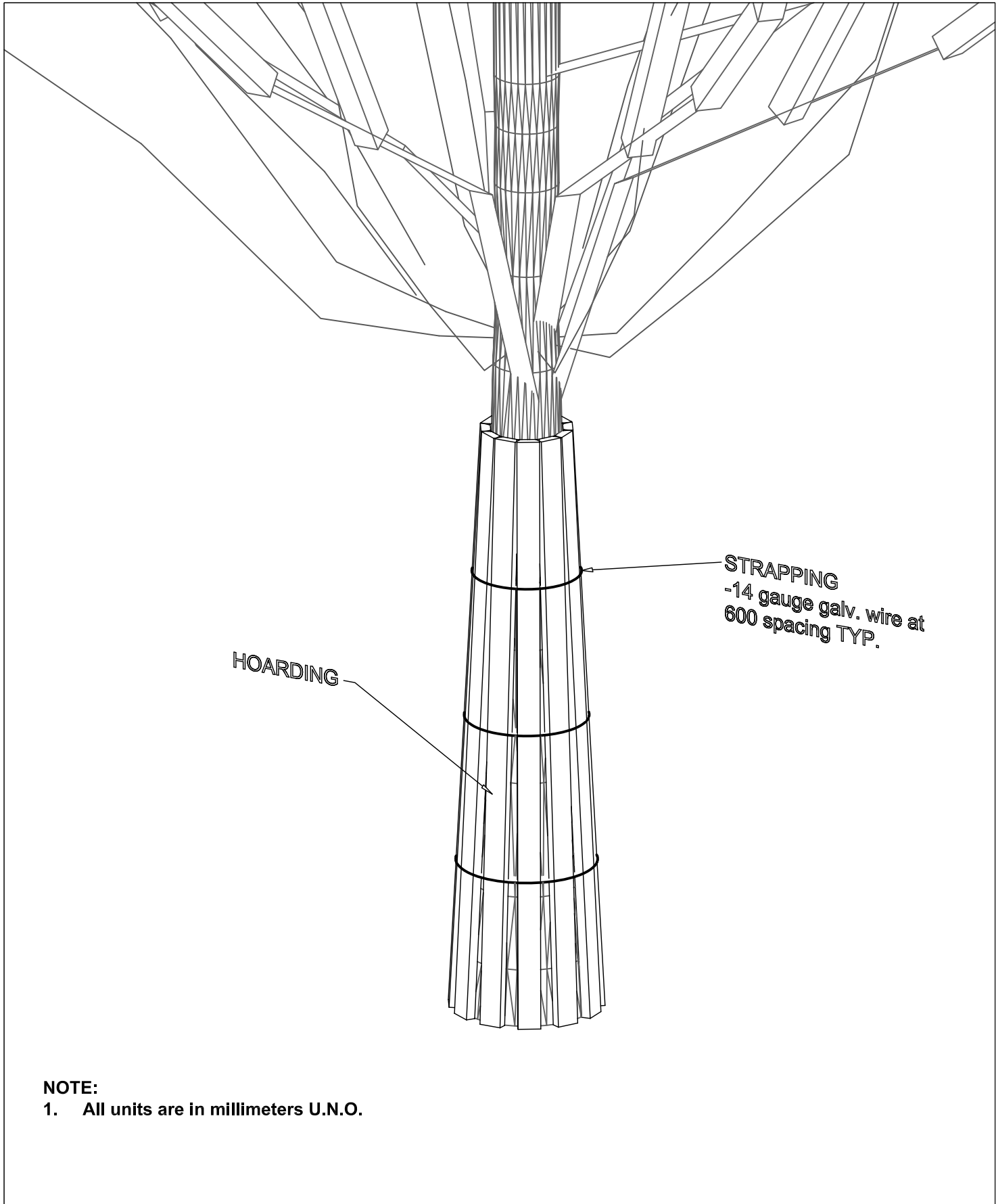
**END OF SECTION**



**NOTE:**

1. All units are in millimeters U.N.O.
2. For tree groups, use one continuous barrier, min. required distances per Specs still apply for each tree.
3. Min. fence height per specifications.

H:\Data\Design\PROJECTS\4209 Landscape\2-Master Specs\Drawings\2012 drawings\2012-02065-02 Existing Tree Protection Hoarding.dwg



**NOTE:**  
1. All units are in millimeters U.N.O.



**City of  
Saskatoon**  
Parks Branch

Drawing Title

Existing Tree  
Protection Hoarding

Drawn: HMK

Checked: AO

Date Y/M/D 09/11/24

Scale: 1:20

Drawing No.

02065-02

2012 Standard Detail