ADMINISTRATIVE POLICY

CITY OF FORT SASKATCHEWAN

GEN-044-A

TREE INSTALLATION & MAINTENANCE

Date Issued: January 7, 2019

Current Revision: January 7, 2019

Next Review: January 30, 2021

Mandated by: Administration

Cross Reference:
- Tree Installation & Maintenance Procedure GEN-044-A

Responsibility: Director, Public Works

1. PURPOSE

The City maintains trees, growing on municipal land, within City limits. Trees are an integral part of the cityscape and infrastructure. The City strives to maintain this infrastructure by protecting and enhancing Tree inventory through new plantings, replacement plantings and performing proper maintenance, adhering to the latest industry standards, as per the ISA.

2. POLICY

The City shall, as financial resources allow, to provide the community with aesthetically pleasing parks, boulevards and open spaces. Conservation of Trees on City land and newly developed areas is a priority for environmental, economic and human health.

3. DEFINITIONS

3.1) *City* – The City of Fort Saskatchewan.

3.2) *Forest* – A dense growth of trees and underbrush covering a large tract of land.

3.3) *Hazard Tree* – A standing tree, either alive or dead, having defects in its roots, trunk or limbs which predisposes it to mechanical failure in whole or part and which is located that such failure has a probability of injury and damage to persons or property.

3.4) *ISA* – International Society of Arboriculture.

3.5) *Trees* – All trees growing on City owned property including City owned buildings, boulevards, parks, buffer zones and natural spaces.

4. EXCEPTIONS

4.1) Forest Trees, located near the river valley, are not on the City's maintenance schedule.

4.2) Trees that are considered hazardous in the forested areas that pose a threat to people or property will adhere to an Administrative Procedure for corrective action.

4.3) Trees that have been removed may or may not be replaced. Factors determining this may include location, utilities or services in the area.

5. GUIDING PRINCIPLES

5.1) An Administrative Procedure assigning labor, equipment and materials to the Tree Installation and Maintenance Program shall be created to support this Policy.

5.2) The Administrative Procedure shall be followed to ensure that all Tree stands are inspected on a regular basis and that any Hazard Tree that poses a health or safety risk to the public are assessed, prioritized and executed within an acceptable timeframe.

6. AUTHORITY / RESPONSIBILITY TO IMPLEMENT

The Director, Public Works is authorized to establish procedures for the implementation of this Policy which are consistent with the governing principles.

City Manager

ADMINISTRATIVE PROCEDURE

CITY OF FORT SASKATCHEWAN

GEN-044-A

TREE INSTALLATION & MAINTENANCE

Date Issued: February 15, 2019

Responsibility: Director, Public Works

Current Revision: February 15, 2019

Cross Reference:
- Tree Installation & Maintenance Policy GEN-044-A
- Parks Safe Work Practice & Procedure for Tree Installation & Maintenance

1. PURPOSE

To provide a strategic framework for the installation, inventory and maintenance for all City trees. Service levels are determined by location, size, health, safety and maintenance requirements of certain tree species.

2. DEFINITIONS

2.1) *City* – The City of Fort Saskatchewan.

2.2) *HisTree* – An inventory/task capturing GIS database for trees. All information is captured and delivered on an IOS platform. Individual trees are tagged (virtual or hard tagged) in the field and the system stores all information about each tree.

2.3) *Trees* – All trees growing on City owned property including City owned buildings, boulevards, parks, buffer zones and natural spaces.

2.4) *Forest* – A dense growth of trees and underbrush covering a large tract of land.

3. PROCEDURE

3.1) Installation:

a) The City will install new trees for the purposes of but not limited to, new development builds, routine life cycle management and damage resulting from vandalism. Installation shall be completed in accordance with the City's Engineering Standards, Tree Installation and Maintenance Policy GEN-044-A, as well as industry best practices.

b) Site considerations are to include location, exposure to elements (sun and wind exposure), slope and drainage, proximity to water bodies, soil type and condition.

c) Design considerations are to include zone hardiness, tree characteristics (heath and spread, color, bloom periods, soil preference, sun preferences, etc.) location and overall aesthetics.

3.2) Inventory:

a) The City will inventory new trees upon installation or granting of Final Approval Certificate (FAC). For new development builds, a copy of the landscape drawings shall be obtained and kept on file. Every new tree shall be entered into the Parks Asset Management System (via HisTree), and assigned a unique identification number. The location shall be recorded (physical address and GPS coordinates), and plant characteristics such as tree species and cultivar, size (DBH – "Diameter at Breast Height), type of new plant (potted or caliper), and installation date (if known).

3.3) Inspection:

a) City trees are inspected regularly during regularly scheduled maintenance such block pruning and tree watering.

3.4) Service and Maintenance for Newly Installed Trees:

a) The City will provide maintenance to newly planted trees for 2 years. This may be extended up to 3 years if drought conditions are present, depending on the size, species, location and condition of the tree.

b) Immediately after installation, the tree shall be staked should it meet staking requirements (a bare root planting; a potted tree planting; tree planting in a high or strong wind location; and tree planting along highway and arterial snow clearing routes).

c) Immediately after installation, a 2-4" circular layer of mulch will be placed around the base of the tree, creating a bowl effect (also known as a "mulch bowl"). A mulch-free area of 1-2" wide at the base of the tree, or trunk flare, must be present so as not to cause decay of the living bark. Employees will ensure that the mulch level does not exceed 4", as this may cause a problem with oxygen and moisture levels.

d) Immediately after installation and mulching, the tree will be watered.

e) Following the initial watering, the newly planted tree shall be watered on a weekly basis for the first year.

f) In times of drought or extreme heat conditions, watering shall be increased to two times per week. Watering shall be decreased to bi-weekly in the second year to allow feeder roots to establish.

g) Newly planted trees shall be given fertilizer stakes (number of stakes is dependent on tree girth) in both the spring and fall. Fertilizer blends shall include evergreen tree blends, fruit tree blends and deciduous tree blends.

h) Newly planted trees shall receive regular maintenance such as line trimming, removal of leaves and litter, weeding, minor pruning, stake removal, topping up of mulch, etc.

i) Newly planted trees shall receive a Final Inspection after 2 years of care has been given. If the tree passes the Final Inspection, it is added in to the regular pruning cycle of the area. If a tree does not pass Final Inspection, corrective action(s) must be taken. This may include adding the tree to a “slow-monitor” list and providing it with another year of care; further pruning and possible removal if die back meets or exceeds sixty percent (60%).

j) Seasonal watering may take place anytime from April 1 to November 30, depending on the current year’s weather conditions.

3.5) Care for Established Trees:

a) Cleaning (pruning to remove dead, disease and broken branches).

b) Thinning (selective pruning to reduce density of live branches).

c) Structural (pruning that influences the orientation, spacing, growth rate, strength of attachment, and ultimate size of branches and stems).

d) Raise (selective pruning to provide vertical clearance).

e) Reduce (pruning to decrease height or spread).

f) Restore (process of improving the structure of a tree that was previously topped, damaged, vandalized, lion tailed or over thinned).

g) Slow-monitor (observing the tree over a 2 year period and analyzing how it responds to additional watering, fertilizing and/or other treatments).

h) Watering, fertilizing, staking, mulching, soil tests and/or amendments.

i) Soil tests and amendments.

3.6) Care for Established Trees - Tree Maintenance Program:

a) Cleaning (pruning to remove dead, disease and broken branches).

b) Thinning (selective pruning to reduce density of live branches).

c) Structural (pruning that influences the orientation, spacing, growth rate, strength of attachment, and ultimate size of branches and stems).

d) Raise (selective pruning to provide vertical clearance).

e) Reduce (pruning to decrease height or spread).

f) Restore (process of improving the structure of a tree that was previously topped, damaged, vandalized, lion-tailed or over thinned).

g) Slow-monitor (observing the tree over a 2 year period and analyzing how it responds to additional watering, fertilizing and/or other treatments).

h) Watering, fertilizing, staking, mulching, soil tests and/or amendments.

i) Soil tests and amendments.

3.7) Care for Established Trees – Tree Pruning Program:

a) Class I fine pruning of trees ½" in size shall consist of the removal of dead, dying, diseased, decayed, interfering, objectionable, obstructing, and weak branches, as well as selective thinning to lessen wind resistance. The removal of such described branches is to include those on the main trunks, as well as those inside the leaf area. An occasional undesirable branch up to ½" inch in diameter, as described above, may remain within the main leaf area to its full length when it is not practical to remove it.

b) Class II standard pruning of trees 1" in size is recommended where aesthetic considerations are secondary to structural integrity and tree health concerns. The removal of such described branches is to include those on the main trunks, as well as those inside the leaf area. An occasional undesirable branch up to 1" in diameter may remain within the main leaf area where it is not practical to remove it.

c) Class III hazard pruning of trees 2" in size is recommended where safety considerations are paramount. Hazard pruning shall consist of the removal of dead, diseased, decayed, and obviously weak branches, 2" in diameter or greater.

Hazard Pruning of Trees

Type	***Description***	***Pruning Class***	***Completion Timeframe***
Boulevard Trees – Block Pruning	Shall be completed to give 14 feet street clearance and 10 feet sidewalk clearance.	Class 2	7 years
Park Trees -	Shall be completed to give 10 feet mower clearance (Spruce trees will be raised just enough to have the ability to line trim underneath without causing damage)	Class 2	7 years
Highway Buffer Trees	Inspected annually by the Horticulture crew. Unless an internal service request as follow up from the inspection is submitted, area will be left naturalized and left to decay.	Class 3	Inspected annually – corrective action taken as required
River Valley Trees	Inspected bi-annually as part of a Trail Inspection. Unless hazardous, area will be left naturalized and left to decay.	Class 3	Inspected bi-annually as part of a Trail Inspection –

			corrective action taken as required

Electrical Pruning	Minimum 7 meter clearance from all electrical lines will be maintained, any tree work within this area will be undertaken by qualified Utility Arborists. Fortis will be notified of all tree situations where a hazardous situation is present.	Class 2	Notification given to Fortis Alberta or a qualified contractor.
Tree Removals	If a City Arborist deems any City tree to be a hazard to life or property, infected by disease or insects, impedes the growth of other trees in better condition, impedes on electrical right-of-ways, has 60-70% dieback or is completely (100%) dead, the tree shall be removed.	N/A	As required

3.8) Tree Pruning Cease Operations:

a) All tree work shall cease during the following conditions: presence of lightening, an active tornado warning is in effect, wind speeds above 48km/h or cold conditions below -25C (including wind chill factor).

3.9) Pruning Bans:

a) The City will comply with provincial pruning bans for Elm trees. This is to prevent the spread of Dutch Elm Disease. The pruning ban is in effect from April 1 to September 30, annually. Hazardous situations such as storm damage, including broken branches shall take precedence over the pruning ban.

3.10) Dutch Elm Disease (DED):

a) The City works in collaboration with the City of Edmonton, the Society to Prevent Dutch Elm Disease (STOPDED) and the Government of Alberta (Alberta Agriculture and Rural Development to detect and prevent the spread of (DED). The City installs traps annually from May through to September and sends them to the City of Edmonton's Environmental Services Laboratory for further testing. Results are recorded and maintained through various partners. The City will strive, as financial resources allow, to have staff attend the STOPDED meetings to keep informed on current and up to date information regarding DED.

b) The City will install 6 new traps beginning in May. The City will take down and replace the traps after 1 month. The City will continue this process until the end of September.

c) The City will inventory all trap locations on a Municipal Address Plan Map.

d) The City will record information pertaining to each trap, including, but is not limited to, the location of the trap, date trap was installed and the period of monitoring completed.

e) The City will send the traps to the City of Edmonton Environmental Services Laboratory for analysis.

f) The City of Edmonton Environmental Services Laboratory will receive, process and analyze the traps sent from the City.

g) The City of Edmonton will maintain records and share pertinent information with the STOPDED and the Government of Alberta (Alberta Agriculture and Rural Development).

h) If samples from the City show any areas for concern, further tree samples will be taken and sent to the University of Alberta for culturing and testing of DED.

i) If samples from the University of Alberta test positive for DED, the tree shall be destroyed in accordance with STOPDED removal procedures and best practices; and all Government of Alberta Regulations under the Pest and Nuisance Control Regulation.

3.11) Stump Removal:

a) Once a tree is removed, the remaining stump shall be treated with a specialized herbicide to prevent the growth of suckers, and to destroy the remaining root structure. Depending on the size, species and time of year, stumps may also be ground down.

b) All stump removal tasks shall be tracked using the Parks Asset Management System, through the HisTree app.

3.12) Heritage Trees:

a) A heritage tree is typically a large, individual tree with unique value, which is considered irreplaceable. The major criteria for heritage tree designation are age, rarity, and size, as well as aesthetic, botanical, ecological, and historical value.

b) The City will identify trees for heritage status consideration.

c) The City will approve heritage trees based on an outlined criteria.

d) The City will create an inventory of all heritage trees that shall include the address/location, the species and cultivar of tree, the size of the tree (DBH), estimated age and reason for Heritage status.

e) The City will erect signage in front of the tree stating the reason for heritage status, the species of the tree, and the date Heritage status was given.

f) Heritage status signage shall meet all requirements in accordance with the City's Engineering Standards.

g) The City will develop a Practical Management Program for heritage trees that will allow for protection from commercial or residential development.

3.13) Tree Protection During Construction:

a) The City is committed to protecting trees during commercial or residential construction. All responsible parties must be informed of tree management activities prior to field work to ensure conservation goals are being met and that trees which are of significance to City due to landmark value, cultural historical, ecological or social impact.

b) Where damage to or loss of City trees occurs equitable compensation for that loss will be recovered from the civic or private entity causing the damage or loss and applied to future tree replacements.

c) An estimated value of tree replacement will be done using the trunk formula method and current industry standards.

3.14) Responding to Fort Report Service Tracker Requests:

a) Action shall be taken on all internal and external service requests generated by the City's Fort Report Service Tracker software within 2 business days when possible. If action cannot be completed within this time frame, the person responsible to complete the action will contact the internal or external customer to advise them of the estimated time frame to take action.

b) Actions may include a visual inspection of the tree, visual inspection of the disease/fungus/insect, etc., immediate corrective action(s) such as pruning and chipping and taking measurements (DBH).

c) Acknowledgement of response action(s) will be given to all internal and external customers who request follow-up contact. This may be done in person, over the phone or through e-mail.

d) Response actions shall be documented in the Fort Report Service Tracker software, along with the name(s) of the person/people completing the service request. Completed service requests shall have their status updated to 'closed' in the Fort Report Service Tracker software as soon as the work is completed and the customer has been notified (if requested).

Service Request Response – Tree Pruning and Maintenance

Level	***Description***	***Completion Timeframe***
1	Hazardous trees, including but not limited to, broken branches (attached and hanging or otherwise suspended), broken branches blocking roadways or pathways, storm damage (broken braches, partial or complete upheavals	24 hours

2	Non-hazardous trees, including but not limited to, presence of insects, disease or fungus, broken branches (detached)	30 days
3	All other requests, including but not limited to, block pruning, ground pruning, and tree planting requests.	As time allows or following the regular service level interval

3.15) Lifecyle Management:

a) The health and/or condition of a tree may change suddenly or over time. As life cycles of trees cannot be determined by tree age, trees are assessed during regularly scheduled inspections and recommendations for removal will be given to the Parks Services Foreman for approval. Consideration for removal will be based on a hazard/risk assessment (TRAQ Assessment) that considers age, structure, potential failure, etc.

3.16) Records Management and Program Review:

a) The City will record all maintenance performed to its trees and review the effectiveness of the Program annually.

b) All maintenance shall be recorded in Parks Asset Management System (via HisTree app).

c) The Lead Hand (Arboriculture) and the Foreman (Parks) shall review the effectiveness of the Tree Installation & Maintenance Program annually using various methods including, but not limited to, staff surveys, completion reports, number of Fort Report Service Tracker requests and review of the annual expenditures.

d) A presentation of the Program effectiveness (Program Summary) shall be submitted to the Parks Manager for review.

4. SUCCESS INDICATORS

4.1) All City owned and maintained trees are being inspected, maintained and otherwise cared for in accordance with the City's service level intervals to avoid injuries and/or damages to the public, to avoid public nuisance causing complaints and to maintain a healthy tree inventory.

5. LEGISLATION

5.1) The City of Fort Saskatchewan will adhere to all pertinent legislation while providing maintenance to City trees.

5.2) Legislative context to include:

a) Alberta Occupational Health & Safety Legislation

b) Alberta Traffic Safety Act

c) Alberta Environmental Protection and Enhancement Act

d) Alberta Weed Control Act

e) Pest Control Products Act (Federal)

f) Alberta Agricultural Pests Act

g) Alberta Wildlife Act

h) City of Fort Saskatchewan Bylaws

6. SUPPORTING DOCUMENTS

6.1) The City will adhere to all pertinent legislation while providing maintenance to City trees.

6.2) Supporting documents to include:

a) City of Fort Saskatchewan Health and Safety Policy

b) Job Hazard Assessments (JHAs)

c) Safe Work Practices and Procedures (SWP&Ps)

d) City of Fort Saskatchewan Engineering Standards

e) Canadian Standards for Nursery Stock

f) Development Agreement

g) Final Acceptance Certificate

h) HisTree app; HisTree Maps

i) Subdivision Landscape Design Drawings

j) Photos

7. REFERENCES/LINKS

- Alberta Occupational Health and Safety Act, Regulation and Code - http://work.alberta.ca/occupational-health-safety/ohs-act-regulation-and-code.html
- Alberta Traffic Safety Act - http://www.qp.alberta.ca/documents/Acts/t06.pdf
- Alberta Environmental Protection and Enhancement Act - http://www.qp.alberta.ca/documents/acts/e12.pdf
- Alberta Weed Control Act - http://www.qp.alberta.ca/documents/Acts/W05P1.pdf
- Pest Control Products Act - http://laws-lois.justice.gc.ca/PDF/P-9.pdf

- Alberta Agricultural Pests Act - http://www.qp.alberta.ca/documents/Acts/A08.pdf
- Alberta Wildlife Act - http://www.qp.alberta.ca/documents/Acts/W10.pdf
- City of Fort Saskatchewan Health and Safety Policy - http://www.fortsask.ca/Home/ShowDocument?id=3673
- Canadian Standards for Nursery Stock - http://www.canadanursery.com/Storage/47/5649_CSNS_-_8th_Edition_-_web.pdf
- City of Fort Saskatchewan Parkland Bylaw 1952 – http://www.fortsask.ca/city-government/bylaws/parkland
- City of Fort Saskatchewan Community Standards Bylaw C16-12 - http://www.fortsask.ca/home/showdocument?id=3417
- City of Fort Saskatchewan Traffic Bylaw C4-09 - http://www.fortsask.ca/home/showdocument?id=3427