

TREE PRUNING

The purpose of tree pruning is to improve tree structure, enhance tree vigor, increase a tree's aesthetic appeal, and maintain safe conditions for all motorists and pedestrians as they move through the street corridor or visit Village properties.

The benefits from an established tree pruning program on a regular cycle include:

- * the enhancement of tree condition and shape, and preservation of value
- * an increase in light penetration and air passage to the interior parts of a tree, and a reduction in wind resistance
- * a reduction in the number and severity of storm related damages
- * a reduction in height clearance related issues
- * a reduction in the opportunity for insect and disease infestation
- * a reduction in service request calls
- * a reduction in the number of trees which undergo drastic changes in their appearance from before to after pruning
- * a reduction in pruning costs due to less work required on each tree and less wood waste generated

There are 3 different kinds of pruning activities in Downers Grove. Forestry staff administers the first two, area pruning and demand pruning. Area pruning consists of scheduling all parkway trees within an area of the Village for pruning, generally during the winter months. Area pruning comprises the bulk of the pruning program. Demand pruning activities occur all year long, subject to needs such as storm damage or clearance problems. The third kind of pruning activity, utility pruning, is administered and performed by the utilities for adequate clearance from overhead utility wires on a timetable established by the utility.

During their life span, parkway trees receive two general types of pruning: training and maintenance. Training young trees involves pruning to develop a branching habit that ensures structural strength and accentuates the tree's natural growth tendency so that maintenance is low once the tree is mature. With forms already established, maintenance pruning on older and mature trees removes hazards and improves vigor. As shown in Chapter 2, more than 60% of Downers Grove parkway trees have been planted between 1970 and the present, and 90% are less than 24" in diameter. This means that the majority of the tree inventory is less than 50 years old and that many of the parkway trees are still in the early stages of their life span. As a result, most of the pruning activities are still the training type for proper shape development and raising the crown for permanent clearance.

If training pruning is started early, tree structural problems can be corrected before any become

too prominent. Large limbs removed at a later stage in the tree's life not only dramatically change the appearances of the tree, but the resulting wounds are larger. Large pruning wounds are more likely to develop decay before the tree can completely grow over and close the wound areas. Also, the systematic removal of low limbs as the tree grows in size allows the tree to channel more resources into developing a more upward crown. With a legal vehicle height limit of 13.5 feet (see Illinois Motor Vehicle Code 625 ILCS 5/15-103), the Forestry Division has chosen 14 feet as the target clearance for over the street, with slightly lower height clearances for over sidewalks. Depending on the growth habit of the tree species, some trees may require the removal of lateral branches from the trunk at heights greater than 14 feet to maintain a crown with adequate clearance. For example, trees with pendulous branches, such as silver maple, will have branches pruned up higher along their trunk than trees with more upright growth such as sugar maple. Once the main branches of the crown form a pleasing shape and are at heights that give adequate clearance, pruning activities switch from training to more maintenance, and the tree canopy can continue to develop in height and spread.

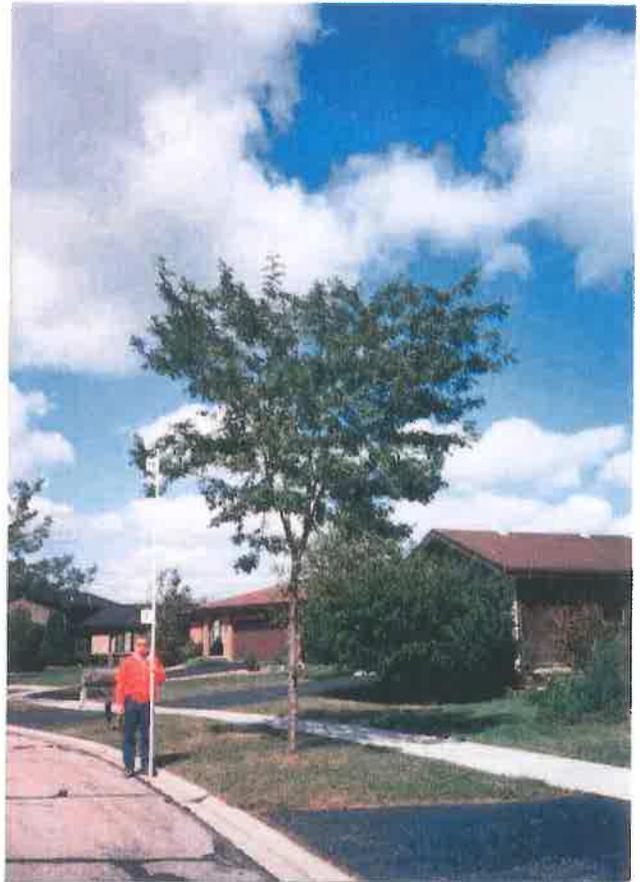
The following series of photographs better illustrate this progression. Using a 14.5-foot leveling rod with markers at 7 and 14 feet, a Public Works employee is photographed beside several different types and ages of trees. Pictures A and B show 2 different tree species of the same age. The honeylocust has a growth habit which is easier to train and raise for clearance than the pear tree. In future years, the pear tree will still need lower limbs removed for clearance. In picture C, the green ash has a well-developed form with larger branches above 14 feet. Future pruning will be more maintenance than training to remove descending branches, crowded inner growth and deadwood. Picture D shows a mature tree with adequate clearance, where maintenance pruning will focus on removing deadwood and suckers on the stems. Pictures E and F show instances where training pruning and removal of lower branches at an earlier stage in the tree's life would have improved the shape in addition to the clearance.

Pictures A, B, and C illustrate that the amount of pruning performed needs to be reasonable to achieve a balance between clearance and aesthetic appeal. Over-pruned trees are not only unhealthy and more susceptible to storm damage, they are unattractive. A tree's aesthetic appeal has been found to be very important. Downers Grove residents surveyed about parkway trees listed the most important benefits of parkway trees as visual – “pleasing to the eye” and “enhances the look of my yard and house” (see survey copies in Chapter 14).

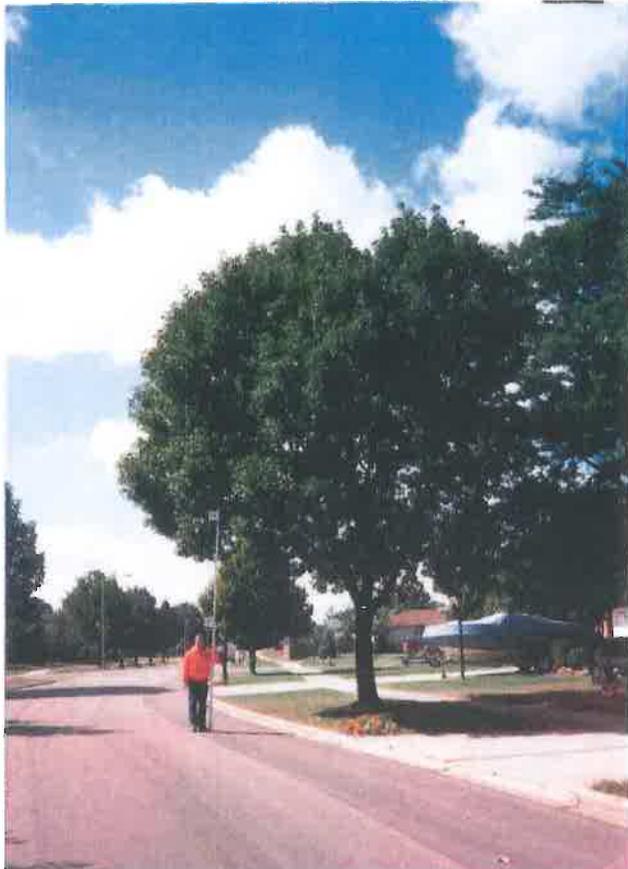
A - PEAR (15 years old)



B - HONEYLOCUST (15 years old)



C - GREEN ASH (30+ years old)



D - CATALPA (80+ years old)



E - On busy streets, low tree canopies are "carved" out by the frequent passage of taller vehicles.



F - This green ash was hit at a height of 11 feet. Subsequent removal of this branch left an irregular tree shape.



The more than 22,500 trees located in open parkways are the primary focus of area and demand pruning activities. Area and demand pruning activities improve tree health and shape, and raise branches to obtain adequate clearance over streets and sidewalks. Figure 5.1 shows the ideal street corridor where pruning improved individual tree shapes, the sum of which form a closed canopy over the street (forestry goal of a full street corridor shown in Figure 1.1 in Chapter 1).

Individual trees located in wooded parkways have growth that is not as dense as their counterparts in open parkways because of the close spacing between trees and shading of lower branches. When manual pruning activities are necessary, the wooded area is treated as a mass of vegetation where pruning focuses primarily on maintaining a closed canopy with adequate clearance. The target clearance height for wooded parkways is also 14 feet. Individual trees in wooded areas may not be pruned unless absolutely necessary.

Trees that are jointly owned or located in unimproved right-of ways and alleys are pruned as situations arise. Trees on Village properties are included in the property landscape maintenance plan, where specific pruning needs are addressed as needed.

Figure 5.1 A street corridor with a closed canopy.



Area Pruning

Area pruning is where all parkway trees located in sections or areas of the Village are pruned.

The recommended frequency of pruning or pruning cycle is 5 years where each parkway tree is pruned once every 5 years. Within the urban forestry profession, documented studies have shown that a 5-year pruning cycle maintains tree condition and value, and is the most cost effective pruning program for a community to maintain (see 1981 Journal of Arboriculture 7:109-111). Longer pruning cycles result in reduced tree value, with the decline in value accelerating over time. Decline in tree value was directly related to tree condition which was influenced by the size of pruning cuts, and the amount of corrective pruning needed. Comparing marginal costs (calculated as the loss in tree value for each one-year extension of the pruning cycle) to marginal returns (the savings in pruning costs for each one-year extension of the pruning cycle) indicate the optimum pruning cycle is 5 years, assuming the management goal is to provide the highest-value tree population for the dollars expended (see Urban Forestry 2015 by Robert W. Miller page 344).

Programmed maintenance pruning of all the trees in an area has many benefits. Robert W. Miller cites studies comparing area pruning (scheduling all trees in an area) to request pruning (pruning on demand) where it was found that area pruning had significantly greater crew productivity measured by the number of trees pruned (Urban Forestry page 343). This increase in productivity is due primarily to reduced transportation costs, reduced unproductive crew travel and setup time, and more efficient task scheduling. Other benefits include more frequent tree inspections, smaller pruning cuts, better public relations, a dramatic reduction in tree service request, fewer tree failures, and reduced task pruning for clearance.

A 2014 Municipal Tree Survey that asked city representatives a series of questions regarding the extent of their urban forest resource and their efforts to manage it is compiled in *Municipal Tree Care and Management in the United States* special publication from the University of Wisconsin – Stevens Point. Those that use a regular pruning cycle were asked to describe their current and desired pruning cycle. Page 59 of the report highlights a desired 4.8 year pruning cycle and an actual current 6.6 year pruning cycle, a difference of 1.8 years.

A study published in 2002 in the Journal of Arboriculture measured the effects of pruning on service requests and branch failures in the city of Rochester New York. This study was initiated near the end of the 5-year rotational pruning program to determine if the pruning was providing the desired impact on the city's street trees. When all types of forestry-related service requests were evaluated, areas of the city that were recently pruned had fewer requests than areas that were pruned several years earlier. On average, there were 7.8 fewer requests per 1000 trees in the pruned management areas. Pruning-related service requests decreased significantly in the recently pruned

areas compared to unpruned areas, with an average 6.6 fewer requests per 1000 trees. Branch-failure-related service requests were not significantly lower however, and depended on wind speed and leaf-on and leaf-off characteristics. Requests for branch-failure-related maintenance averaged 7.1 requests per 1000 trees in the pruned areas versus 7.5 requests per 1000 trees in the unpruned areas. Another important result of this study was that priority or safety-related maintenance was reduced in the years post-pruning in comparison to the years prior to pruning. Reviewing 8 years of records, Rochester determined that a 5-year pruning cycle was advantageous, and provided citizens with a certain degree of satisfaction with the forestry program as measured by the reduced number of calls for general and pruning-related maintenance.

In Downers Grove, an average of 18 years of records (from 2002 through 2019) for branch failures and pruning requests has shown a similar pattern to the Rochester study. For the past 18 years, staff has recorded all branch failure locations and all pruning activities not part of the programmed cyclic pruning. All such pruning activities were treated as requests, coming from either the Village Forester or from residents. Below in the table, the first column lists the years since cyclic pruning occurred and the second column lists the average count of trees with this number of years since the most recent pruning. The adjacent 2 columns list the average number of trees with branch failures and pruning requests per 1000 trees.

Years since cyclic pruning occurred	Average inventory count of trees with this number of years since the most recent cyclic pruning (average 18 years - 2002 through 2019)	Average number branch failures per 1000 trees	Average number pruning requests per 1000 trees
8+ years	1102	29.7	41.4
7 years	1123	43.8	26.0
6 years	1555	58.0	24.8
5 years	3680	28.6	20.8
4 years	4021	28.5	16.9
3 years	4073	23.6	12.2
2 years	4131	35.2	7.4
1 year	4187	35.7	4.4

In general, branch-failure-related service requests depend on wind speed and storm impacts on various sections of the Village in a given year. This was particularly true in 2011 where an EF1 tornado plowed through a diagonal portion of the Village. In most years, storms and the number of ash trees in various areas have been noted to influence branch failure reports. On the other hand, the trend for pruning requests demonstrates a strong link between the number of requests for pruning and the number of years since cyclic pruning last occurred.

Downers Grove had a 5-year pruning cycle for many years before the 2002-03 fiscal year. After being deferred for the 2002/03 and 2003/04 fiscal years because of budget, the area-pruning program was re-instated for the 2004/05 fiscal year. Lack of funding for 2 years caused the pruning cycle to increase to more than 7 years. Forestry staff informed Village management staff of the need to get back to a 5 year pruning cycle and the need to increase the forestry budget for pruning. Increased funding for pruning was approved for 2007 fiscal year, and then has been maintained annually since. By the 2012 fiscal year, the pruning cycle essentially returned to a 5-year rotation.

When area pruning does occur, both tree service contractors (see Parkway Tree Pruning Specifications) and Public Works staff prune trees. Of the more than 22,500 parkway trees, 19,000+ are of a size better handled by tree service contractors with the remaining 4,000+ smaller trees easily pruned by Public Works crews. Various criteria are used to select areas for the annual pruning program including forestry staff's evaluations of sites and their pruning needs, the number of service requests from a given area, and the amount of time that has elapsed since the last pruning cycle. Within a scheduled area, the amount of pruning performed on each tree depends on the tree species and growth characteristics, as well as the tree's size and health condition. The amount of pruning performed to obtain clearance is balanced with maintaining the tree aesthetically pleasing, keeping in mind surveys found visual benefits ("pleasing to the eye" and "enhances look of yard and home") rated high (see surveys in Chapter 14). All terminology and pruning practices follow the standards presented in the *International Society of Arboriculture Best Management Practices: Tree Pruning (2008)* and in the *ANSI A300 (Part 1) – 2017 Pruning*. Pruning of all tree sizes shall:

- maintain the crown shape and symmetry typical of the tree species;
- improve the appearance of the tree;
- encourage upward growth for adequate clearance over streets, sidewalks, and other structures;
- remove dead, dying, diseased, interfering, and weak branches;
- remove trunk suckers and water sprouts which do not add to the shape of the tree.

Figures 5.2 and 5.3 illustrate examples of before and after pruning.

Before winter pruning starts, staff surveys the areas to verify tree inventory listings as accurate and re-measures tree diameters. Where there are no sidewalks or the right-of-way extends beyond the sidewalk, parkway trees are marked with yellow or blue paint dots on the street side of the stem (discussed in Chapter 3). Before actual pruning work begins, all residents located within the areas scheduled for pruning receive a mailing describing the pruning program (see *Parkway Tree Pruning* letter).

Both contractors and Public Works crews are provided with lists of trees to be pruned. As pruning

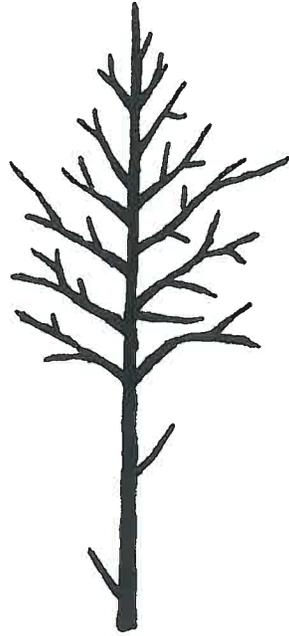
operations progress, inspections are made daily of both the tree service contractor and the Public Works crews to ensure consistent and proper techniques.

Various pruning activities have occurred for decades, with records on the tree inventory from 1995 to the present as the most accurate. Of the more established neighborhoods, parkway trees have been pruned at least 5 or more times. Tables 5.1 through 5.3 list annual pruning activities for the most recent 10 years. The following maps identify which areas of the Village were pruned during the past 5 years and where pruning activities are proposed in the future.

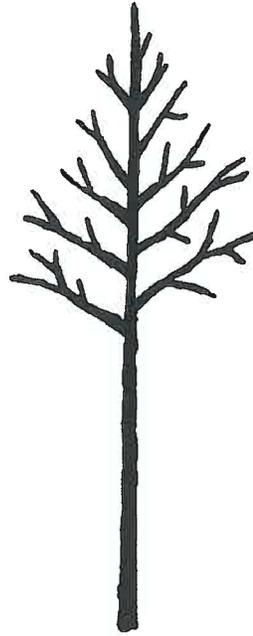
Due to COVID-19 and budget conservation measures, the 2020 tree pruning contract was put on hold as of mid-March 2020. Approximately half the number of scheduled trees were pruned between February and mid-March. With the next manual revision, updated numbers and maps will be included in this chapter.

Figure 5.2 Examples of smaller parkway trees before and after pruning.

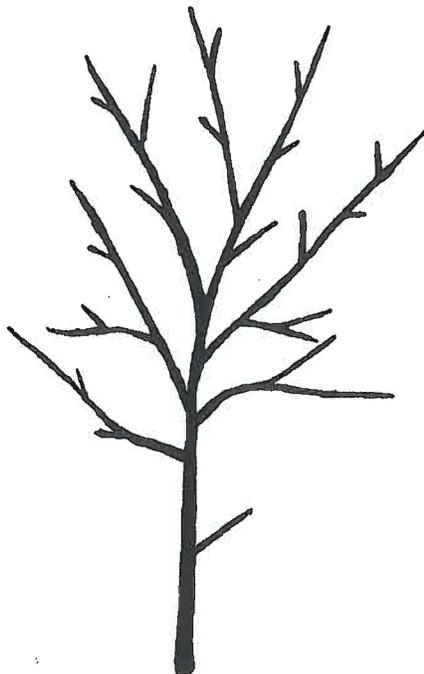
Before



After



Before



After

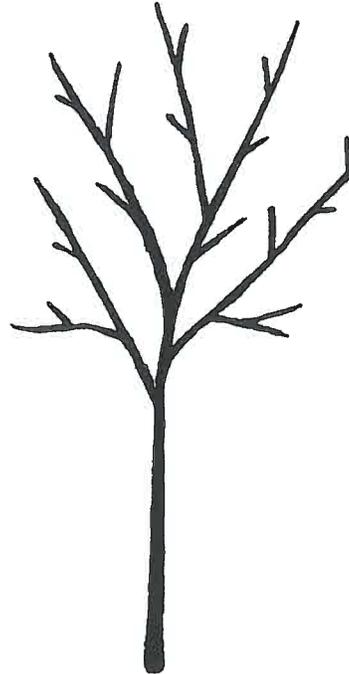
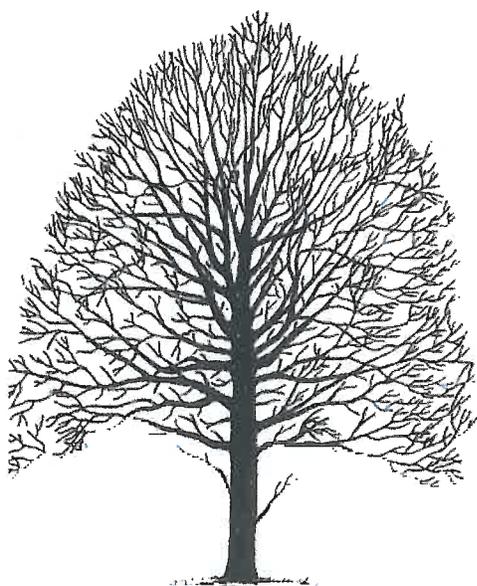
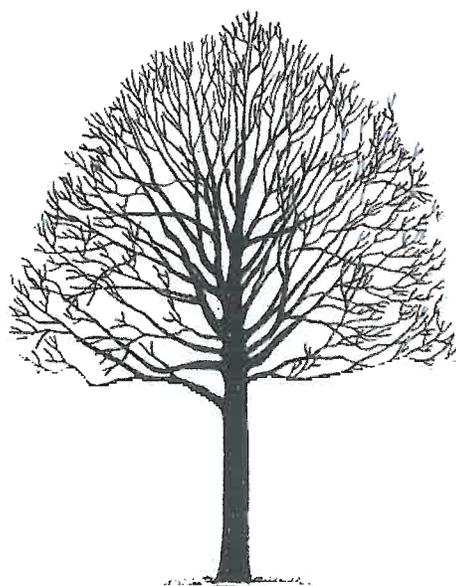


Figure 5.3 Example of a larger size parkway tree before and after pruning



Before



After



www.downers.us

PARKWAY TREE PRUNING NOTICE

February 20, 2020

Dear Property Owner,

Parkway trees in your area are scheduled for pruning in the coming weeks between January 20 and May 1. These trees are an important asset to the community. They clean the air, shade our streets, increase property values, and add to the community appearance. Here are answers to some of the most frequently asked questions about tree pruning.

COMMUNITY RESPONSE CENTER

630.434.CALL (2255)

CIVIC CENTER

801 Burlington Avenue
Downers Grove
Illinois 60515-4782
630.434.5500
TDD 630.434.5511
FAX 630.434.5571

FIRE DEPARTMENT ADMINISTRATION

5420 Main Street
Downers Grove
Illinois 60515-4834
630.434.5980
FAX 630.434.5998

POLICE DEPARTMENT

825 Burlington Avenue
Downers Grove
Illinois 60515-4783
630.434.5600
FAX 630.434.5690

PUBLIC WORKS DEPARTMENT

5101 Walnut Avenue
Downers Grove
Illinois 60515-4046
630.434.5460
FAX 630.434.5495

Which trees are the parkway trees?

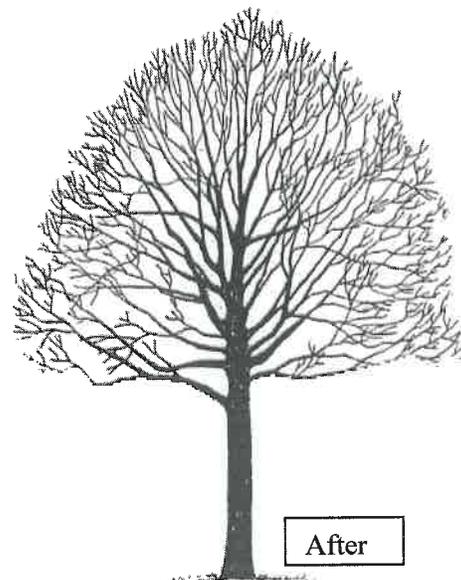
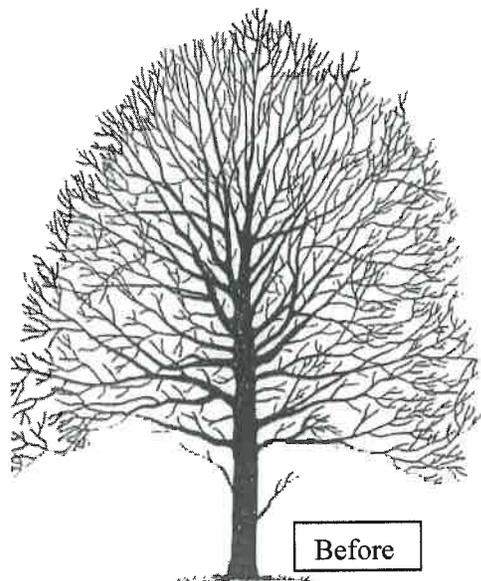
Parkway trees are those trees adjacent to public streets, generally identified as those located between the public sidewalk and the street. In areas without sidewalks or where the public right-of-way extends beyond the sidewalk, parkway trees are marked with a yellow paint dot.

What is the purpose of tree pruning?

Trees are pruned to improve tree structure, enhance tree vigor, increase aesthetic appeal, provide adequate clearance, and maintain safe conditions in the right-of-way. Dead and diseased branches are removed to prevent the spread of decay. Spacing and thinning of branches improves crown shape and branch structure, allows more light into the center of the tree, and permits wind to pass freely between limbs without causing damage. Regular pruning also removes potential problems before they have a chance to grow in size.

How much will each tree be pruned?

The amount of pruning each tree needs depends on the tree species and growth characteristics, as well as the tree's size and health condition. In general the very small trees will require little pruning. Trees with stem diameters ranging from six inches to twenty inches will require the most noticeable amount of pruning to obtain adequate clearance and improve crown form. Large mature trees should already have crowns with adequate clearance and may require only minor pruning or deadwood removal. The amount of pruning necessary will be adjusted to each individual tree in the parkway.



Why are branches pruned so high?

Because parkway trees are close to streets and sidewalks, their branches must be at a height which allows safe passage for pedestrians, bicyclists, snow plows, garbage trucks, and emergency vehicles. The removal of low branches before they become very large results in smaller wounds which will close quickly on the tree stem. This promotes the development of a full tree crown with a pleasing shape and adequate clearance.

Who prunes and how often?

Village crews prune the smaller trees while trees over six inches in diameter are pruned by contractors during the winter months. A five year pruning cycle has been implemented so that all trees are pruned once every five years. This pruning frequency promotes the development of a healthy crown typical of each tree species, decreases the amount pruned, reduces drastic tree form appearance changes, and eliminates the costly practice of pruning individual trees throughout the year.

How will ash trees with emerald ash borer beetle infestations be pruned?

Emerald ash borer (EAB) beetles continue to pose a significant threat to ash trees within the Village. In the parkways, ash trees now only comprise 7% of the total parkway tree population. Current activities include selectively treating a portion of the ash tree population, pruning to improve clearance and remove deadwood, and removing any ash that are dying or have significant EAB infestations. More information about EAB and ash trees can be found at the Village website www.downers.us.

Who are the contacts?

Forestry staff will be inspecting all pruning work and clean-up on a daily basis, and can be reached at 630-434-5460 to discuss pruning activities. All tree branches and tree debris shall be removed by the end of each workday. If snow cover is present during pruning activities, a follow-up cleanup will occur once snow has melted. Forestry staff will monitor all work and track progress to ensure timely completion.

Through our good stewardship and appropriate use of Village funds, we are proud to be a Tree City USA. If there are any questions regarding the pruning work, EAB and ash trees, or other forestry activities such as tree planting, please contact me directly at 630-434-5475 or at kvonderheide@downers.us.

Sincerely,
Kerstin G. von der Heide
Village Forester



Table 5.1 - Trees Pruned Contractually within Areas in last 10 Years

YEAR	QUANTITY	AVE UNIT PRICE	CONTRACTORS
Winter 2010 (FY10)	3487	\$25.38	D. Ryan
Winter 2011 (FY11)	3246	\$24.09	D. Ryan
Winter 2012 (FY12)	3277	\$24.94	D. Ryan
Winter 2013 (FY13)	4612	\$22.86	D. Ryan
Winter 2014 (FY14)	4100	\$24.63	D. Ryan
Winter 2015 (FY15)	4085	\$23.85	D. Ryan
Winter 2016 (FY16)	3311	\$25.08	N.J. Ryan
Winter 2017 (FY17)	3432	\$25.51	N.J. Ryan
Winter 2018 (FY18)	3037	\$25.89	N.J. Ryan
Winter 2019 (FY19)	3270	\$26.52	D. Ryan

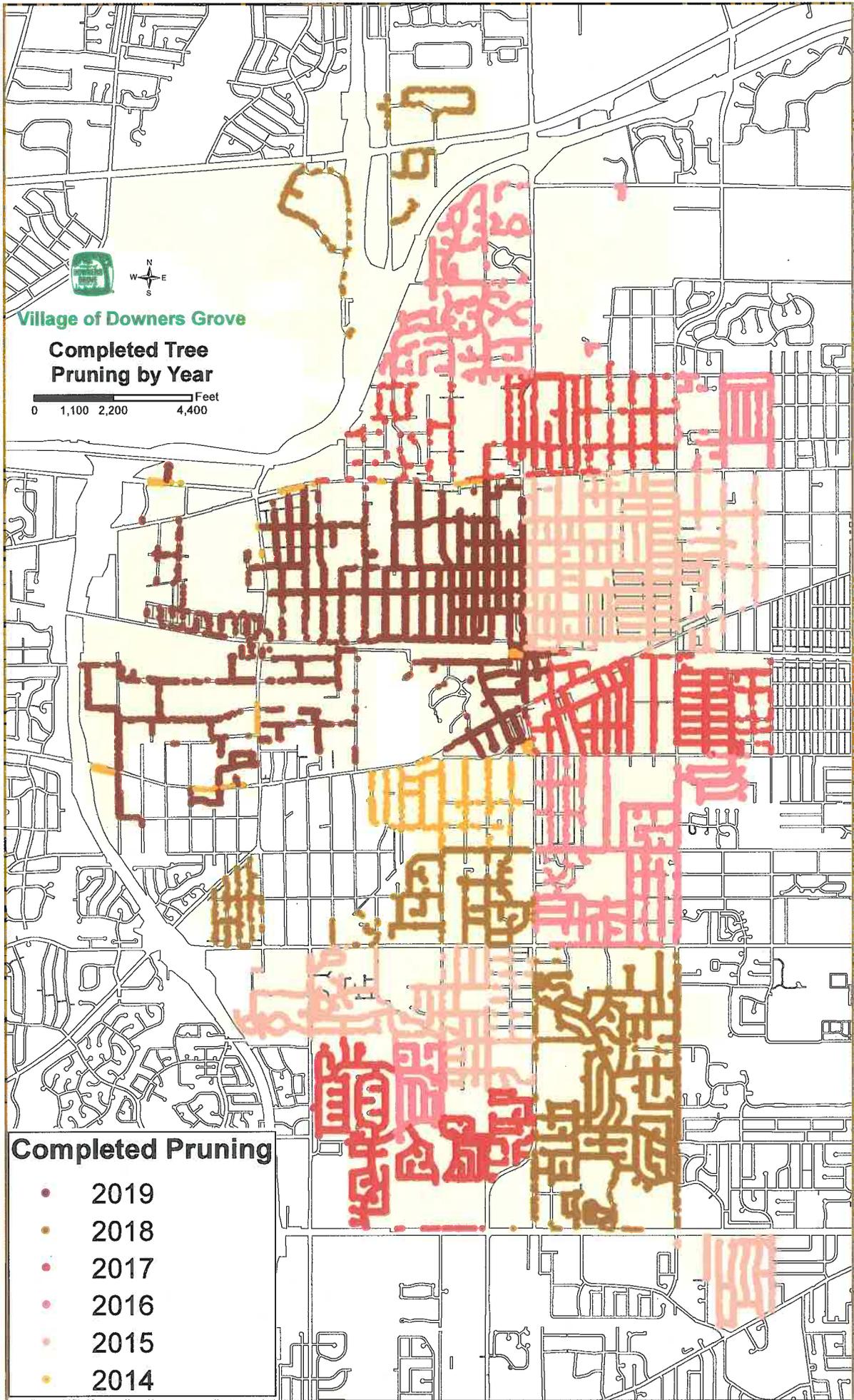
Table 5.2 - Trees Pruned by Public Works within Areas in Last 10 Years

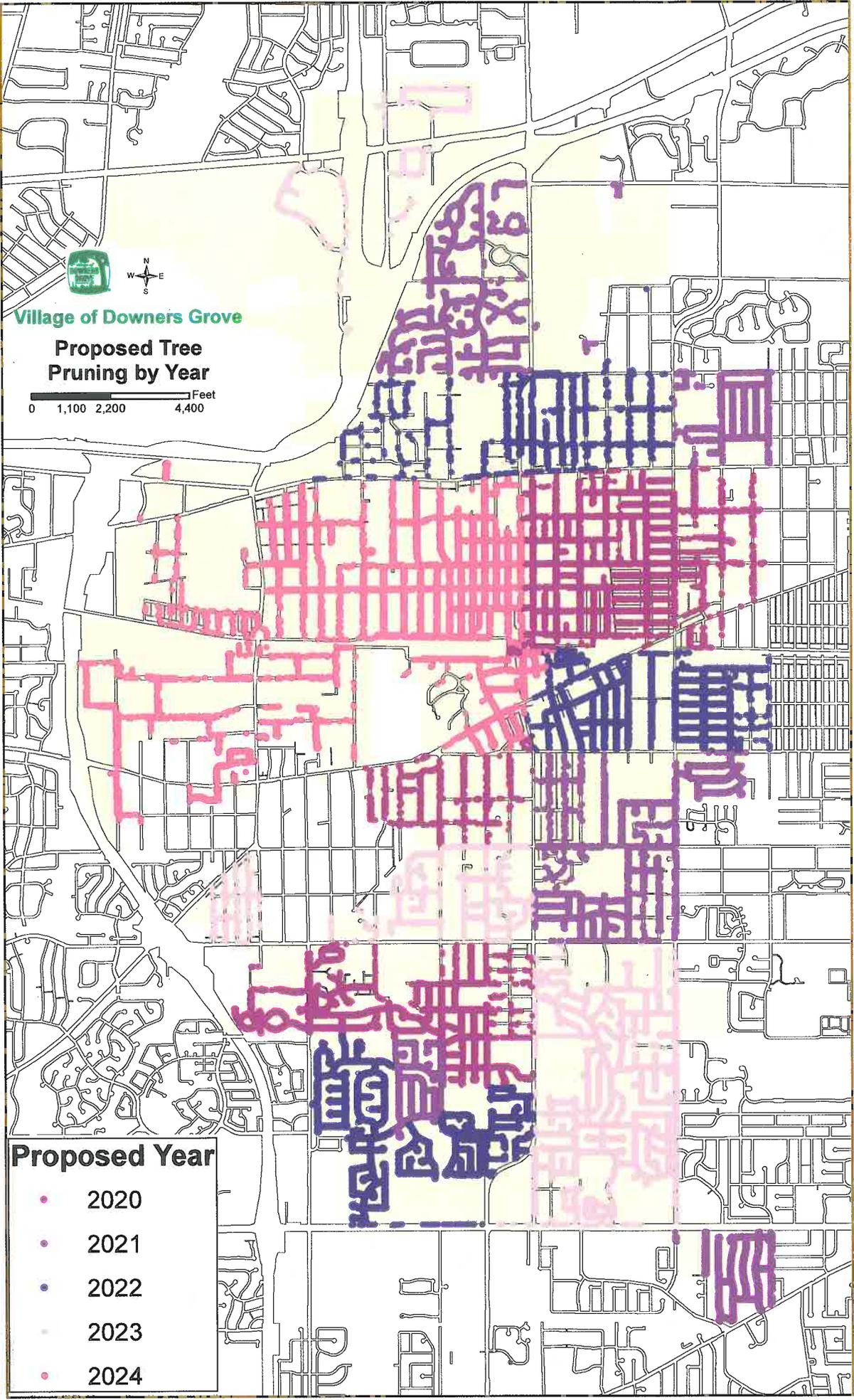
YEAR	QUANTITY
Winter 2010 (FY10)	843
Winter 2011 (FY11)	798
Winter 2012 (FY12)	872
Winter 2013 (FY13)	825
Winter 2014 (FY14)	1462
Winter 2015 (FY15)	1217
Winter 2016 (FY16)	993
Winter 2017 (FY17)	1194
Winter 2018 (FY18)	1026
Winter 2019 (FY19)	1039

Table 5.3 - Parkway Tree Pruning Letters Mailed in Last 10 Years

YEAR	QUANTITY
Winter 2010 (FY10)	2749
Winter 2011 (FY11)	2330
Winter 2012 (FY12)	2788
Winter 2013 (FY13)	3056
Winter 2014 (FY14)	3718
Winter 2015 (FY15)	3445
Winter 2016 (FY16)	2550
Winter 2017 (FY17)	3016
Winter 2018 (FY18)	2165
Winter 2019 (FY19)	2814







Demand Pruning

Individual trees located outside of the areas scheduled for pruning in the current fiscal year may require pruning such as request pruning, crisis pruning, or task pruning. Request pruning is scheduled based on reasonable citizen requests. Crisis pruning is the removal of hazards or emergencies such as hanging limbs. Task pruning is for a particular reason, such as removing branches infested with a pest, or providing adequate height clearance along a street.

A qualified tree service is contracted to handle any pruning that cannot be safely handled by Public Works employees with a Demand Pruning Contract (see Demand Pruning Specifications). This includes pruning larger trees for clearance, deadwood removal, hanging limb removal, and removal of hazardous tree situations. Table 5.4 lists the contract costs for the past several years.

Forestry Division staff along with other Public Works employees, if needed, handle small pruning requests and other pruning needs throughout the year.

Annually, Public Works staff has to prune select trees along snow routes because of branches hitting the snow plow trucks. This task pruning has become particularly more prevalent in the last decade because the new Public Works 5-ton and 10-ton trucks have a clearance height of 11 feet (the older trucks were 9 feet).

Table 5.4 lists the contractual work for the most recent 10 years.

Table 5.4 - Annual Demand Pruning Contract in Last 10 Years

YEAR	CONTRACTOR	TOTAL COST	TREES PRUNED NON-EMERGENCY	TREE EMERGENCIES
FY 2010	Homer	\$7,125.00	92	3
FY 2011	Homer	\$7,050.00	83	10
FY 2012	Homer	\$8,360.00	104	1
FY 2013	D. Ryan	\$8,480.00	109	3
FY 2014	D. Ryan	\$5,935.00	66	6
FY 2015	D. Ryan	\$5,435.00	67	5
FY 2016	Homer	\$8,550.00	108	1
FY 2017	Homer	\$4,661.00	62	4
FY 2018	Homer	\$5,189.00	68	4
FY 2019	Homer	\$4,670.00	57	5

Utility Pruning

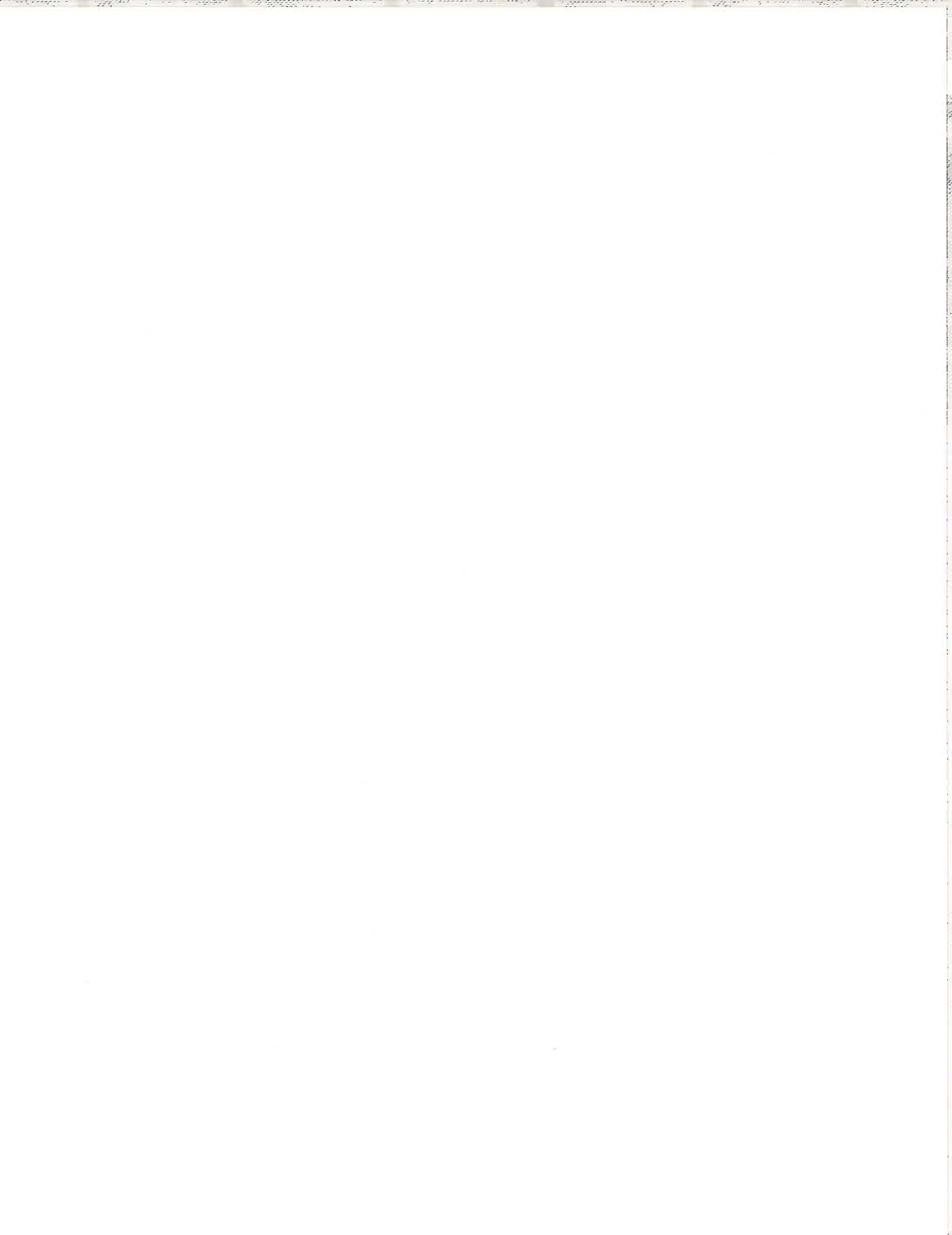
Trees throughout the community that are located near aboveground utility lines may receive additional pruning for line clearance. Utilities include electric power, telephone, and cable television companies. In terms of service interruptions, electric utility companies have the greatest concern for continuity of service and public safety.

Only qualified utility workers are allowed to engage in tree pruning near electrical hazards incidental to their normal occupation. All other tree workers must maintain a minimum clearance of 10 feet from energized conductors as listed in ANSI Z133.1-2017 (a standard widely adopted within the field of arboriculture). When tree services contracted by the Village or Public Works crews identify pruning or limb removal needs near or on utility wires, the appropriate utility is contacted.

In Downers Grove, the most active utility in tree pruning has been Commonwealth Edison (ComEd). Ordinance Number 3504 details the Franchise Agreement with ComEd. With recent revisions to the Public Utilities Act, Resolution 2002-84 was passed in September 2002 and includes the pertinent items from the Act (see Resolution 2002-84). Because plant tissues contain over 50 percent water with actively growing tissues containing as much as 80 percent water, limbs that come in contact with an energized line can conduct a current, catch on fire from the heat build-up or cause interruptions in service. To limit these occurrences, ComEd's general guideline has been to prune branches to clear the wires by 10 to 14 feet, and re-prune an area every 4 years. ComEd must notify the Village no less than 21 days before such pruning can begin, notify affected customers, and publish notice in a newspaper.

When ComEd's tree contractor is performing routine line-clearance pruning, all branches pruned are removed from the work site. During emergency service repairs, interfering branches are cut and left at the work site to facilitate service repairs. The disposal of these branches is the responsibility of the property owner who owns the tree from which these branches came from.

The Forestry Division has maintained good communication with ComEd's area representative for line-clearance pruning and required removals of public trees. Chapter 2 details the number of parkway trees impacted by overhead utilities. Chapter 6 details ComEd's Cooperative Municipal Tree Replacement Program.



RESOLUTION NO. 2002-84

**A RESOLUTION AUTHORIZING EXECUTION OF AN AGREEMENT
BETWEEN THE VILLAGE OF DOWNERS GROVE AND COM ED**

BE IT RESOLVED by the Village Council of the Village of Downers Grove, DuPage County, Illinois, as follows:

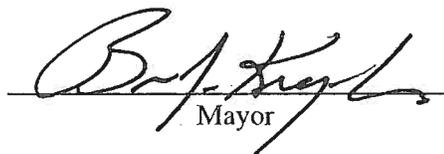
1. That the form and substance of a certain Agreement between the Village of Downers Grove (the "Village") and ComEd (the "Company"), for uniformed tree trimming activities within the community, as set forth in the form of the Agreement submitted to this meeting with the recommendation of the Village Manager, is hereby approved.

2. That the Village Manager and Village Clerk are hereby respectively authorized and directed for and on behalf of the Village to execute, attest, seal and deliver the Agreement, substantially in the form approved in the foregoing paragraph of this Resolution, together with such changes as the Manager shall deem necessary.

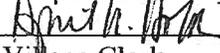
3. That the proper officials, agents and employees of the Village are hereby authorized and directed to take such further action as they may deem necessary or appropriate to perform all obligations and commitments of the Village in accordance with the provisions of the Agreement.

4. That all resolutions or parts of resolutions in conflict with the provisions of this Resolution are hereby repealed.

5. That this Resolution shall be in full force and effect from and after its passage as provided by law.


Mayor

Passed: September 17, 2002

Attest: 
Village Clerk

Agreement

This agreement, dated as of September 17 2002, is between Commonwealth Edison Company ("ComEd"), an Illinois electric public utility, and the Village of Downers Grove (the "Municipality"), an Illinois municipal corporation.

Whereas, ComEd provides electric delivery services to electric customers in the Municipality; and

Whereas, ComEd and the Municipality agree to the common goal of providing adequate, efficient, reliable, and safe electricity at the least cost; and

Whereas, ComEd and the Municipality agree that vegetation should be maintained so as to minimize the risk of electrocution from distribution circuit wires; and

Whereas, ComEd and the Municipality agree that proper management of vegetation, including the trimming of trees and the proper selection of appropriate species near electric distribution wires is critical to the maintenance of adequate, efficient, reliable, and safe electric delivery service;

Whereas, ComEd and the Municipality agree that ComEd's vegetation management should be performed so as to minimize the effect on trees, to the extent reasonably possible given the goal of maintaining adequate, efficient, reliable, and safe electric delivery service;

NOW, THEREFORE, ComEd and the Municipality agree as follows:

1. Specific Vegetation Management Practices. ComEd will periodically trim trees in the Municipality, consistent with the standards set forth below.

A. *Vegetation Management Cycle.* ComEd will inspect the trees and other vegetation along its distribution lines within the Municipality on a regular cycle, not to exceed

four years, trimming as necessary to meet required clearances. ComEd may also perform emergent trimming of particular trees when a need for it is identified by ComEd, by the Municipality, or by customer request.

B. *General Clearances.* ComEd will trim trees in accordance with the following table, using the trimming techniques specified by the American National Standards Institutes' ANSI A300 standard:

Table of Recommended Line Clearances (in feet)

Clearance From Trees	Rate of Re-growth	Service Wire (120-480v)	Isolated Open Wire Secondary (120-480v)	Open Wire Secondary (120-480v)	Secondary Cable (120-480v)	Primary Voltage (2-13.2kV)	Primary Aerial Cable	34 kV
Side	Slow	(a)	4 (e) (f)	4 (e)	(a)	6 (e)	4 (e)	8 (g)
	Fast	(a)	4 (e) (f)	4 (e)	(a)	8 (e)	4 (e)	12 (g)
Over	Slow	(a)	4 (e) (f)	4 (e)	(a)	6 (b) (e)	4 (e)	12 (b) (c)
	Fast	(a)	4 (e) (f)	4 (e)	(a)	8 (b) (e)	4 (e)	12 (b) (c)
Under	Slow	(a)	6 (f)	6	(a)	8	4 (e)	12 (d)
	Fast	(a)	8 (f)	8	(a)	12	4 (e)	12 (d)

- (a) ComEd will remove broken limbs that may damage equipment.
- (b) ComEd will remove all hazardous overhang.
- (c) ComEd will trim to keep overhang to a minimum.
- (d) ComEd will remove all fast-growing trees at the discretion of ComEd's trained arborists and, if necessary, when permission has been obtained.
- (e) Large tree trunks or major limbs of established trees may be allowed to remain as close as 2 feet from the conductors if (1) movement of either the conductor or the tree will not result in contact between the tree and the conductor, (2) the tree is not easily or readily climbed without the use of ladders or specialized climbing equipment, and (3) there is no evidence of re-growth or sprouting from the tree trunk towards the line.
- (f) ComEd may perform isolated secondary clearance when trimming is required.
- (g) Dangerous trees located off of ComEd's right-of-way should be removed if practical and if the owner's permission has been obtained.

C. *Exceptions to General Clearances.* The following are exceptions to the general clearance standards shown above:

- i. ComEd may trim to special clearances because of field conditions, or when ANSI A300 standards cannot be achieved. Except as noted below, deviation from the general clearances and deviation from the ANSI A300 standards shall be approved in each case by a trained arborist employed by or acting as a consultant to ComEd.
- ii. ComEd may make additional allowances for multi-phase construction, wires that will sag due to hot weather, or wires that will swing sideways due to strong winds. When trimming, ComEd will take into consideration that the greatest wire sag or blowout occurs at mid-span.
- iii. In the case of coniferous (evergreen) trees, ComEd will achieve proper clearance by using any one of the following methods: (a) removal of the tree, (b) topping to a point 6 feet from primary voltage conductors, or (c) trimming to achieve the provisions of subsection B above, and removal of all lower limbs within 10 feet of the ground or within 10 feet of an adjacent climbable object.
- iv. ComEd will not trim trees along single-building service drops on private property.

D. *Debris Removal.* ComEd shall remove the brush and debris associated with cyclic tree trimming.

2. Notice of Cyclic Trimming. ComEd will give notice at least 21 days and not more than 90 days before commencing cyclic trimming in the Municipality, as follows:

A. ComEd will notify the Municipality at the address shown in section 10 below where cyclic trimming in the Municipality is upcoming. ComEd will provide the Municipality with a description of the areas, by common street address, in which the trimming will occur.

B. ComEd will notify affected customers directly, by mail or by hanging a card on the customer's door. The notice shall contain, at a minimum, the following information: the nature of the planned vegetation management activities, the address of a website and a toll-free telephone number at which a written disclosure of all dispute resolution opportunities and processes, rights, and remedies provided by the ComEd may be obtained, a statement that the customer and the property owner may dispute the planned vegetation management activities through ComEd and the Illinois Commerce Commission, a toll-free telephone number through which communication may be had with a representatives of ComEd regarding the vegetation management activities, and the telephone number of the Consumer Affairs Officer of the Illinois Commerce Commission. The notice shall also include a statement that the location of the area of planned vegetation management activities is on file with the Municipality.

C. ComEd will publish notice in a newspaper in general circulation and widely distributed in the area in which the cyclic trimming will occur.

3. Non-Cyclic Vegetation Management. The provisions of Sections 1 and 2 above apply to routine, cyclic vegetation management. ComEd may conduct vegetation management, including trimming or removing particular trees, without prior notice, when and where such activities are urgently needed pursuant to state regulations to restore electrical service or to prevent an imminent interruption of service. Although ComEd, as the electric utility responsible

for reliability of service shall make the determination as to when non-cyclic vegetation management is appropriate, ComEd will send notice to the Municipality within 10 business days, at the address shown below for notices, informing the Municipality of the location and nature of the non-cyclic activities.

4. Removal and Replacement of Privately Owned Trees. Prior to cyclic trimming, ComEd will examine the distribution circuits to identify privately owned trees that, because of their type and close proximity to overhead lines, would need extensive pruning or removal. Upon identifying such trees for removal:

A. ComEd will contact the tree's owner, recommend removal of the tree, and obtain a signed permission from the owner to remove the tree.

B. For each tree over 4 inches in diameter (breast high) that is to be removed, ComEd may, at ComEd's discretion, offer to the owner a replacement voucher. Each voucher will be redeemable at a participating vendor for one replacement tree on ComEd's approved replacement list, or for an equal dollar amount of other approved landscape materials.

C. ComEd will mail the voucher, along with a planting guide and other appropriate publications, to the owner after the removal of the existing tree.

D. If the owner agrees to the removal of the tree, ComEd will cut down the tree, remove and chip associated brush, cut all wood into firewood length, and leave the wood on site.

E. The owner of the tree will be responsible for any stump removal and disposal of logs left on site. This responsibility will be specified in the signed agreement of the owner before removal of the tree commences.

5. Cooperation on New Private and Public Tree Plantings. ComEd and the Municipality will work together to promote the planting of appropriate species of trees on private

and public property throughout the Municipality, including education of the public as to appropriate types of trees and vegetation for locations near electric power lines, and encouraging developers of new projects within the Municipality to plant only appropriate types of trees and vegetation near electric power line rights-of-way. ComEd will supply the Municipality with a copy of a publication identifying tree species that are compatible and incompatible with electric power lines. Programs developed pursuant to this section that require expenditures by ComEd or the Municipality shall be subject to the prior mutual consent of the parties.

6. Applicability of Public Utilities Act and Village Ordinances. It is the intent of the parties that this agreement constitutes a written agreement mandating specific vegetation management practices within the meaning of Section 8-505.1(c) of the Illinois Public Utilities Act, and will supersede the provisions of Section 8-505.1(a) & (d) of that Act (220 ILCS 5/8-505.1(a) & (d)). ComEd's vegetation management activities will conform with, and this Agreement shall not preempt, the ordinances of the Municipality, including the requirement, if any, to obtain a permit for the removal of a tree within the Municipality.

7. Term of Agreement. The initial term of this agreement is four years from its effective date. The agreement shall automatically be renewed for successive four year terms, unless one of the parties notifies the other of its intention not to renew the agreement by so notifying the other party at least sixty days before the end of any four year term.

8. Benefit and Assignment. This Agreement shall be binding upon and inure to the benefit of the Parties, and their respective successors and assigns.

9. Entire Agreement and Amendment. This Agreement contains the entire agreement between the Parties with respect to the matters described herein and it is a complete and exclusive

statement of the terms thereof and supersedes all previous agreements. This Agreement may not be altered or modified except by a writing signed by the Parties hereto.

10. Notices to ComEd and Municipality. All notices, demands, and requests required or permitted to be given under the provisions of this Agreement shall be in writing and shall be deemed given: (a) when personally delivered to the Party to be given such notice or other communication; (b) on the business day that such notice or other communication is sent by facsimile; (c) on the third business day following the date of deposit in the United States Mail as such notice or other communication is sent by certified or registered mail with return receipt requested and postage thereon fully prepaid; or (d) on the business day following the day such notice or other communication is sent by reputable overnight courier, to the following:

If to ComEd:

[...]

If to the Municipality:

[...]

or to such other address as the Parties may designate in writing.

11. Representations and Warranties. The Municipality hereby represents and warrants to ComEd as follows as of the date hereof:

(a) This Agreement has been properly authorized by a duly adopted ordinance or resolution of the Municipality and any and all other necessary corporate action of the Municipality has been taken and this Agreement has been duly executed and delivered by the Municipality and constitutes a valid and legally binding agreement, enforceable against the Municipality in accordance with its terms; and

(b) Neither the execution and delivery of this Agreement, nor the performance of the provisions of the agreements therein contained on the part of the Municipality, will contravene, violate, or cause a default under any applicable law, statute, ordinance, regulation, encumbrance, or agreement binding upon the Municipality, or result in a violation of any judgment, order, writ, injunction, decree, or rule of any court, administrative agency or other governmental authority binding upon the Municipality.

12. No Third Party Beneficiaries. The sole Parties to this Agreement are ComEd and the Municipality; and nothing contained herein creates any right, title, or interest in any other person or entity, whether under a third party beneficiary theory or otherwise.

13. Miscellaneous. If any provision of this Agreement or its application to any person or circumstance shall to any extent be invalid or unenforceable, the remainder of this Agreement shall not be affected thereby; and each provision of this Agreement shall be valid and enforceable to the fullest extent permitted by law. This Agreement does not waive or modify, and shall not be construed as waiving or modifying, ComEd's rates, tariffs, or terms and conditions of service. The language in all parts of this Agreement shall in all cases be construed as a whole according to its fair meaning and not strictly for or against ComEd or the Municipality, regardless of the involvement of either Party in drafting this instrument. The headings in this Agreement are for convenience only and shall not be utilized in the construction of the language of this instrument. This Agreement shall be governed and construed under the laws of the State of Illinois.

IN WITNESS WHEREOF, the Parties have entered into this Agreement as of the date first above written.

COMED:

COMMONWEALTH EDISON COMPANY, an
Illinois corporation

By: _____
Its: _____

Municipality:

[*Municipality*], an Illinois municipal corporation

By: Richard J. King
Its: Village Manager

Attest: Smith. H. M.
Its: Village Clerk

CONTRACTUAL SPECIFICATIONS

Parkway Tree Pruning 2019-21
Demand Pruning 2019-21



III. DETAIL SPECIFICATIONS

A. Competitive Sealed Bidding

The Village of Downers Grove, an Illinois municipal corporation (hereinafter referred to as the "Village"), will receive sealed bids from Contractors for parkway tree pruning services identified in the solicitation. Bids must be received by the date and time specified.

B. Attendance Required at Pre-bid Conference

For the purpose of familiarizing bidders with the project, answering questions, and issuing addenda as needed for clarification of the bidding documents, a mandatory pre-bid conference shall be held at the Downers Grove Public Works Facility, 5101 Walnut Avenue, Downers Grove, Illinois 60515, (630) 434-5460. Bids shall only be opened from Contractors present at the mandatory pre-bid conference. Date and time of the meeting are listed on the cover sheet.

C. Objective

This contract is for the pruning of parkway trees on the public right-of-way within the Village of Downers Grove. The specifications contained herein detail how pruning activities shall develop desired structure and appearance, improve and maintain health, reduce risk, and raise the clearance height of these trees. This contract is not being performed in conjunction with or as part of a public works construction or demolition project.

D. Qualifications of Contractors

The Contractor shall be required before the award of any contract to show to the complete satisfaction of the Village Forester that it has the necessary facilities, ability, and resources to provide the services specified herein in a satisfactory manner. The Contractor shall be required to give past history and references in order to satisfy the Village Forester in regard to the Contractor's qualifications. The Village Forester shall make reasonable investigations deemed necessary and proper to determine the ability of the Contractor to perform the work. The Village Forester reserves the right to reject any bid if the evidence submitted by, or investigation of, the Contractor fails to satisfy the Village Forester that the Contractor is properly qualified to carry out the obligations of the contract and to complete the work described herein. In addition to those requirements set forth in Section 10.1 above, evaluation of the Contractor's qualifications shall include:

1. The ability, capacity, skill, and resources to perform the work or provide the service required.
2. The ability of the Contractor to perform the work or provide the service promptly or within the time specified, without delay or interference.
3. The character, integrity, reputation, judgment, experience, and efficiency of the Contractor.
4. The quality of performance of previous pruning contracts or services with the Village and other municipalities. Bidders must submit a list of not less than four (4) references who can verify the Contractor's successful completion of parkway tree pruning contracts in the last five (5) years. At least four (4) of the municipal references must be for individual

pruning contracts in excess of 3,000 parkway trees annually. For any Contractor who has not performed pruning work for the Village in the last five years, the Village Forester shall require maps and addresses of trees pruned in other municipalities for field inspections.

5. The status of Tree Care Industry Association (TCIA) Accreditation. TCIA Accreditation shall be used as a tiebreaker for instances when submitted bid prices and all other factors are equal.

E. Bidder Investigations

Before submitting a bid, each Contractor shall make all investigations and examinations necessary to ascertain all site conditions and requirements affecting the full performance of the contract and to verify any representations made by the Village Forester upon which the Contractor will rely. If the Contractor receives an award as a result of their bid submission, failure to have made such investigations and examinations will in no way relieve the Contractor from their obligations to comply in every detail with all provisions and requirements of the contract documents. Nor will the Village accept a plea of ignorance of such conditions and requirements as a basis for any claim whatsoever by the Contractor for additional compensation.

F. Quantities

Whenever a bid is sought for services, the quantities shall be construed as estimates for the purpose of obtaining unit prices to uniformly evaluate bids unless otherwise stated. The Village reserves the right to increase or decrease the stated quantities, adjust pruning map boundaries, and switch pruning priorities.

G. Award of Contract

The Village Forester shall review the submitted bids and shall rank the submitted bids by contract activity forecast (the sum total of unit price multiplied by the quantity of trees). If the submitted unit price and the calculated extension price on the bid form are at variance, the unit price shall prevail. Additional information including work history, references, and TCIA accreditation shall be reviewed as listed in Section D - Qualifications of Contractors.

The award shall be made to the lowest responsive and responsible bidder (one Contractor) for all map areas. The Village shall select the bid which is the most advantageous to the Village. Depending upon budget, the Village Forester may reduce the number of trees in all or part of a map area in order to meet forestry goals.

H. Term of Contract

In accordance with terms mentioned in Section 40.1 above, the contract term shall be three (3) complete calendar years starting January 1 of 2019 and ending December 31 of 2021.

I. Insurance for Illinois State and DuPage County Right-of-Ways

In that the Village has planted and maintained trees on both Illinois State and DuPage County right-of-ways, the Village Forester must obtain permits annually for any tree related work on those right-of-ways. These permits require certificates of insurance in addition to those required by the Village. The Village Forester shall coordinate the permit process. At a minimum, Illinois State and DuPage County are to be listed as additional insured. Requirements for DuPage County are listed in the Highway Permit Application Packet at http://www.dupageco.org/DOT/Highway_Permitting/31108/.

J. Parkway Tree Composition in Downers Grove

There are over 23,000 parkway trees in Downers Grove. The following are the 5 most common tree species: Honeylocust 12.5%, Silver Maple 8.1%, Norway Maple 7.9%, American Linden 5.4% and Hackberry 4.7%. Parkway trees are of following diameter sizes: 25.0 % are 0-6.0", 65.7% are 6.1-24.0", 8.5% are 24.1-36.0", and 0.8% are greater than 36.1".

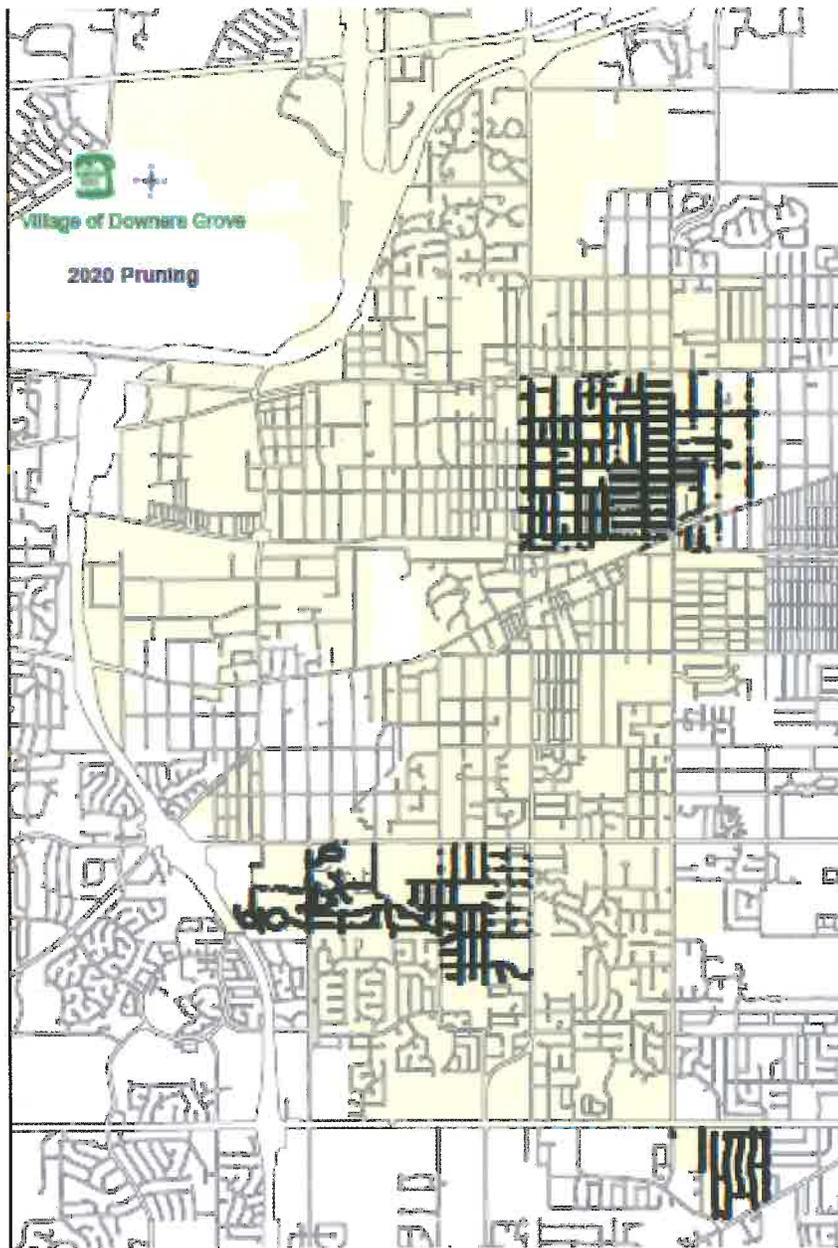
K. Parkway Trees for Pruning

Parkway trees to be pruned by the Contractor are all deciduous and evergreen trees in the parkway with a diameter at breast height (DBH at 4.5') greater than six inches (6") located within the areas marked on the map. Parkway trees are those located between the street edge and public sidewalk, and those with a yellow paint mark on the stem in areas without sidewalks or where the right-of-way extends past the sidewalk. The Village Forester shall provide a listing of all trees to be pruned to the awarded Contractor.

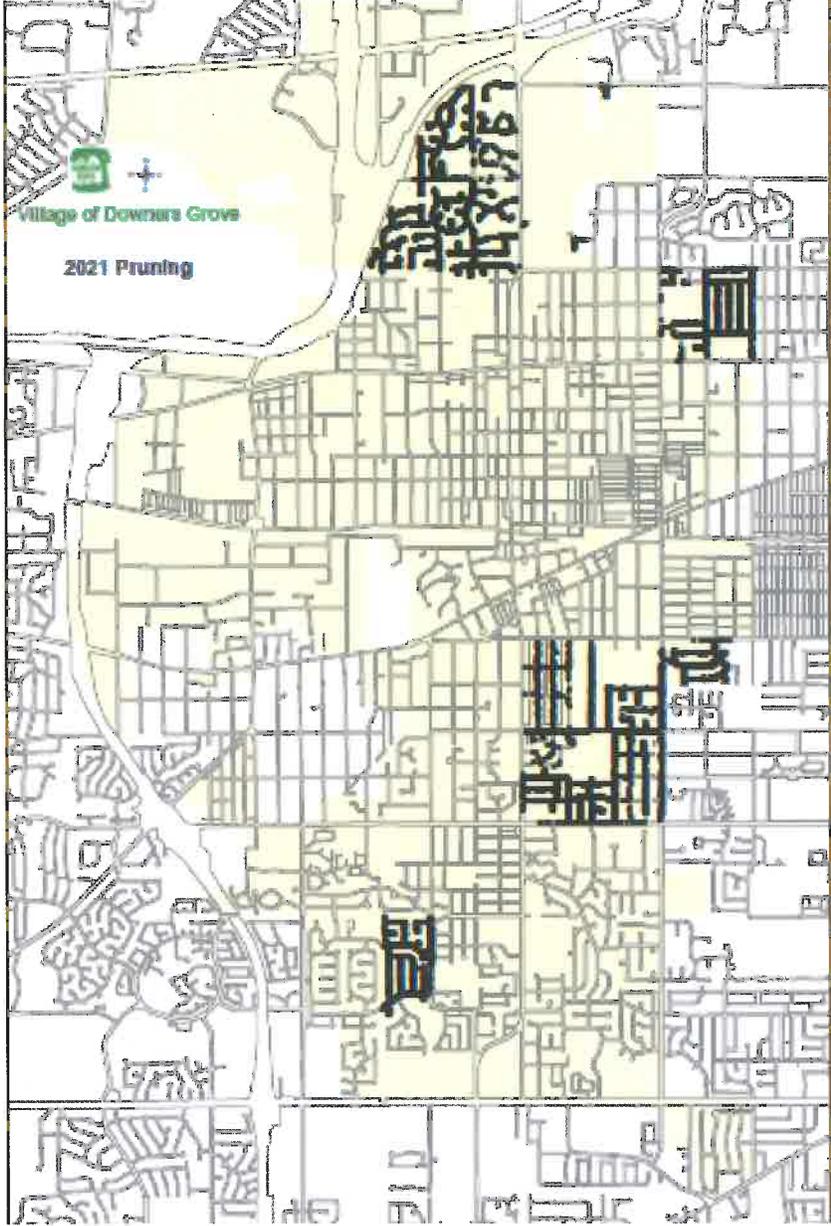
L. Pruning Maps
Winter 2019



Winter 2020



Winter 2021



M. Pruning Specifications

1. Purpose and Pruning Procedures

- a. All pruning shall follow the *ANSI A300 (Part 1) - 2017 Pruning* Standard and the ISA's *Best Management Practices: Tree Pruning (2008)*. The Natural Pruning System shall be used to develop desired structure and appearance, improve and maintain health, reduce risk, and raise the clearance height of these trees. Several pruning methods or types are to be used including crown cleaning, crown thinning, crown raising, and structure development.
- b. All pruning shall optimize tree architecture and branch spacing, and maintain the crown shape and symmetry typical of the each individual tree species at its given size and age.
- c. Crown cleaning shall remove all non-beneficial parts including dead, diseased, detached, cracked, and broken branches. This shall apply to all branches and stubs greater than ½" (half inch) in diameter.
- d. Crown thinning shall selectively remove live branches to reduce crown density. Branches to be thinned shall be ½" (half inch) diameter and greater. Thinning cuts shall remove crowded and low vigor branches. Thinning shall increase light penetration and air movement through the crown. Thinning shall also remove suckers from the base of the tree and some watersprouts on the interior. After crown thinning, tree branches shall have foliage and mechanical stress evenly distributed along a branch and throughout the crown. Not more than one-fourth of the crown shall be removed from mature trees.
- e. Crown raising shall remove lower branches where practical (dependent on tree size) to obtain an eventual full foliage vertical height clearance of fourteen (14) feet on the street side of the tree. All work shall always maintain the crown shape and symmetry typical of the species being pruned, and shall balance the tree evenly. This raising should also allow an eventual clearance over the pedestrian walk of eight (8) feet. Pruning may include reduction cuts to shorten lower limbs or thinning cuts to lighten lower branch loads to achieve clearance if complete branch removal from the tree trunk is not practical.
- f. Structural pruning shall influence the orientation, spacing, growth rate, strength of attachment, and ultimate size of branches and stems. Structural pruning shall select and establish scaffold limbs above the lowest permanent limb and provide the base on which to build the permanent crown. Particular attention is to be given to young trees (those less than 40 years old with diameters 6"-24") if a scaffold branch is large in diameter and competes with the leader, then this scaffold branch is to be reduced back to a lateral and/or thinned to obtain a balanced crown shape overall. Scaffold branches should be free of defects and have appropriate vertical spacing (18 inches for large-maturing trees and 12 inches for smaller trees).
- g. Structural pruning shall also choose and develop a dominant leader. Competing stems and branches are to be subordinated (reduced in length) or removed, particularly if structurally weak "V" crotches occur along the main trunk or are developing within young tree crowns. Special attention shall be given to the effect reducing or removal of such branches will have on the ultimate form of the tree.

- h. Pruning for clearance such that branches do not interfere with infrastructure, houses, building rooftops, streetlights, lines-of-sight, and all traffic control devices by a minimum of fifteen (15) feet. Branches shall be pruned such that all traffic control devices (including but not limited to traffic light signals, opticom cameras, STOP and Yield signs, speed limit signs, parking control signs) are visible to moving traffic.
- i. All pruning shall not remove more living material than is necessary.

2. Pruning Cuts and Tools

- a. All branch removal and reduction cuts shall be the smallest diameter possible, and the number and size of cuts that expose heartwood kept to a minimum.
- b. All limbs to be removed shall be cut in such a manner so as to prevent any ripping or tearing of the wood or bark on the parent or remaining stem. Large limbs shall be cut using the three-cut pruning method
- c. All branch removal cuts shall be made sufficiently close to the trunk or parent limb, without cutting into the branch bark ridge or branch collar, or without leaving a protruding stub. If there is no collar, the top of the cut shall be located where the top of the branch makes an abrupt upward turn into the union. The face of the branch removal cut should generally be perpendicular to the top of the branch and be circular in form. "Flush" cuts to the main stem behind the branch collar that leave oval exposed wounds shall not be made. Cuts shall be made such that all wound sides are even edged and do not leave "dog ear" ridges on one side or another. Clean smooth cuts shall be made at all times without leaving any jagged edges or stubs.
- d. All reduction cuts shall be made to a live lateral branch or codominant stem at a slight angle, without damaging the branch bark ridge and without leaving a stub.
- e. All limbs shall be brought to the ground in such a manner as to prevent any damage to real or personal property, publicly or privately owned.
- f. Proper tools shall be used for each pruning cut. All equipment and tools shall be maintained according to manufacturer's recommendations. Blades of each tool, including hand pruners, pole saws, hand saws, and chain saws, shall be placed on each branch in a manner that does not cut, rip, or harm adjacent bark areas.
- g. No person working in trees shall use shoes with spikes, or any other footwear, which will, in the opinion of the Village Forester, injure the tree being pruned. At no time shall any person working in trees for pruning purposes, wear spurs or climbing irons.

3. Pruning of Elm

All American elms (*Ulmus americana*) or other elms susceptible to Dutch Elm Disease shall be pruned by April 1st of each year.

4. Pruning of Trees Near Power Wires

Trees which have been disfigured due to ComEd pruning for power line clearance shall only be pruned for height clearance from the ground, clearance from buildings, and removal of structurally weak branches or deadwood under this contract.

N. Inspections for Insects, Diseases and Decay

In that a wide variety of tree species are included in the contract, pruned limbs, branches and ash trunks are to be inspected for the presence of insects, diseases and decay. Limbs and branches are to be made available for Village staff to inspect from time to time before being chipped. The Contractor shall notify the Village Forester if significant insects, diseases or decay areas are found.

O. Site Appearance and Clean-Up

Pruned limbs and branches temporarily placed in the parkway area shall be placed in such a manner as to eliminate any obstruction to motor vehicles and pedestrians including streets, driveways and sidewalks. At all times, pruning crews shall not advance more than 1 block ahead of chipping/clean-up crews.

The Contractor shall clean up the site and remove and dispose of all debris. Site cleanup shall include removal of sawdust, small twigs, chips, leaves, trunks and limbs from the street, curb, parkway, sidewalk, private lawns and driveways with the appropriate tools for the job. The site shall be returned to the same state it existed in prior to the pruning work. Under no circumstances shall any materials be allowed to lie on the parkway overnight.

As pruning may occur during or after snow events, some debris may filter down through the snow and may not be immediately accessible for clean up. In these instances, it is the responsibility of the Contractor to re-clean and rake up debris in these areas within 2 to 3 days after the snow melts. No extra payment shall be made for this clean up work.

P. Wood and Chip/Grinding Debris Disposal

Disposal of wood chips and grinding debris generated by work described within this contract shall be the responsibility of the Contractor. The Contractor may deliver chips to the homes of Village residents as requested by the residents without charge, at a time convenient to the Contractor. Chips shall be left only on private property and not on the parkway or in the street. Any logs requested by the residents shall be given free of charge and shall not be from diseased trees. Logs left at the homeowner's request must be on the resident's property and not the parkway. Any logs from elm trees must have the bark removed.

Q. Damage to Public or Private Property

Should any damage to private or public property occur as a result of the service performed or work done by the Contractor, the Contractor shall immediately notify the Village Forester or other Village representative of such damage. Any correction of damage shall be resolved within ten (10) days after damage occurs. Should the damage not be rectified within the time frame agreed upon or to the satisfaction of the Village Forester, the Village reserves the right to repair or replace that which was damaged and assess the Contractor such costs as may be reasonable and related to damage caused by the Contractor, and deduct these costs from any payment due the Contractor.

R. Protection of Overhead Utilities

Tree pruning operations may be conducted in areas where overhead electric, telephone, and cable television facilities exist. The Contractor shall protect all utilities from damage, shall immediately contact the appropriate utility if damage should occur, and shall be responsible for all claims for damage due to their operation. The Contractor shall make arrangements with the utility for removal of all necessary limbs and branches that may conflict with or create a hazard in conducting the operations of this contract. If the Contractor has properly contacted the utility in sufficient time to arrange for the required work by the utility, delays encountered by the Contractor in waiting for the utility to complete its work shall not be the responsibility of the Contractor.

S. Contractor Personnel and Equipment

The Contractor shall supply all material, equipment and personnel necessary to complete the work specified. The Contractor shall rent equipment as needed to cover any equipment breakdowns that would cause this contract to not be completed in the allotted time period. All vehicles and attached equipment shall have the Contractor's name in a visible location. Personal vehicles shall have the name in the window. All vehicles and equipment shall abide by the standards listed in the Traffic Control section. All vehicles and equipment shall have all the appropriate items to avoid damage to public and private property (example – boards or pads for outriggers to avoid depressions, etc...).

The Contractor shall employ only competent and efficient employees. All employees and supervisors shall wear uniforms or apparel clearly displaying the company name for ease of identification. All individuals shall be familiar with the pruning specifications identified in this document and shall be experienced in pruning operations. Competent individuals and not those in “training” shall perform actual pruning. The Village Forester or other Village representative shall have, throughout the life of the contract, the right of reasonable rejection and approval of staff assigned to the work by the Contractor. If the Village Forester or other Village representative rejects staff, the Contractor must provide replacement staff satisfactory to the Village Forester or other Village representative in a timely manner and at no additional cost to the Village. The day-to-day supervision and control of the Contractor’s employees is the responsibility solely of the Contractor.

On a daily basis, the minimum number of individuals on the pruning crew shall be four (4). Work crews may be split to work on different streets but a minimum of one English speaking supervisor shall be at each location at all times.

The Contractor shall at all times endeavor to maintain good relations with the public and respectfully answer questions. If work and equipment must block a driveway, the Contractor shall make contact with the property resident to inform them of the work, shall keep the time of blockage to a minimum and shall move equipment promptly if requested.

T. Storage of Equipment and Materials

If the Contractor desires to store its equipment and materials used to perform work on behalf of the Village within Downers Grove, and has no place of its own, or under lease agreement,

the Village may provide said space on a Village property (ex. 5101 Walnut Avenue), with the provision that the Contractor must hold the Village harmless for any loss or damages that may be associated with the privilege of storing said equipment and materials on Village property. Under these circumstances, the Village will not be responsible for assuring security of the designated site, and the Contractor will be responsible for abiding by rules set forth by the Village. This privilege may be immediately rescinded by the Village if, in the sole determination of the Village, the Village finds that the Contractor has failed to abide by the Village's regulations.

U. Work Crew Supervision

The Contractor shall provide qualified supervision of each crew at all times while working under this contract. Each supervisor shall be fluent in English and be authorized by the Contractor to accept and act upon all directives issued by the Village Forester or other Village representative.

V. Certified Arborist

At least one individual shall be on the job site at all times who has passed the International Society of Arboriculture (ISA) arborist certification exam and received a Certified Arborist certificate prior to the bid opening date listed on the cover sheet. Their name(s) and certification number(s) must be included in the bid document to be considered for this project, and listed on the ISA website at <http://www.isa-arbor.com>. Any change in the status of the Certified Arborist individual(s) during the life of this contract must be reported to the Village Forester at the time of occurrence. Failure to have a Certified Arborist on site at all times shall result in termination of the contract.

W. Starting and Completion Requirements

Work may begin on the first Monday in January of a given year, or at a time mutually agreed upon by the Contractor and the Village Forester. Work must commence no later than January 15 of a given year. All work shall be completed prior to April 30 of a given year. Fifty percent (50%) of the dollar value of the contract shall be completed by February 28 of a given year, as an indication that the Contractor is satisfactorily progressing toward completion of the contract. Once work has begun, the Contractor shall work successive workdays as is practical until the contract has been completed.

X. Workdays and Working Hours

The Contractor shall schedule work between the hours of 7:00 a.m. and 5:00 p.m., Monday through Friday, unless authorized by the Village Forester or other Village representative thereof. Any work within a two-block radius of a school shall be performed between the hours of 9:00 a.m. and 2:00 p.m. It is preferred that work is scheduled on days when school is not in session. Any work along a street with significant traffic during rush-hours shall be performed between the hours of 9:00 a.m. and 4:00 p.m. The Village Forester shall determine appropriate work areas and timeframes before pruning work begins.

Y. Safety Standards

All equipment to be used and all work to be performed shall be in full compliance with the most current revision of the *ANSI Z133.1-2017 Safety Requirements for Arboricultural Operations*, or as amended.

Contractor personnel exposed to public vehicular traffic shall wear warning vests or other suitable garments marked with or made of reflectorized material. At a minimum, this includes ANSI Class 2 garments.

Z. Traffic Control

The Contractor shall conduct its operations in a manner that will not interrupt pedestrian or vehicle traffic except as approved by the Village. The work area shall be confined to the smallest area possible to allow maximum use of the street or sidewalk and to minimize any hazard to traffic or pedestrians. The Contractor shall provide adequate traffic control for work area protection in compliance with the Federal Highway Administration *Manual on Uniform Traffic Control Devices for Streets and Highways* (MUTCD) current edition, the State of Illinois *Illinois Vehicle Code*, the Illinois Department of Transportation *Highway Standards*, and the Illinois Department of Transportation *Handbook of Traffic Engineering Practice for Small Cities*. All personnel, signs, barricades, and any other items or devices necessary shall be provided by the Contractor. The Village shall make no separate payment for this work. Traffic control shall include but not be limited to the following:

1. All work vehicles shall be positioned on the same side of the street as the work site.
2. Whenever possible the work site on a two lane street or highway shall be confined to one traffic lane leaving the opposite lane open to traffic.
3. Work area protection shall take into account the duration of the project, the size of the project, the lanes of traffic, the volume of traffic, the speed limit, and the distance to the work area from the pavement.
4. Work vehicles shall have the flasher light lit but not as a substitute for any traffic control devices for work area protection that may be necessary.
5. Under certain field conditions such as hills and curves, the spacing of the traffic control devices shall be adjusted as necessary.
6. Warning signs such as "Men Working" shall be diamond shaped having a black symbol or message on an orange reflective background. Such signs shall be 48 inches by 48 inches in size and shall be posted at a minimum height of 12 inches above the pavement.
7. Cones used as daytime channeling devices shall be at least 18 inches tall, conical or tubular in shape with a broadened base, and orange in color. Cones shall be spaced equal in feet to the posted speed limit or closer along the taper length.
8. Channeling devices such as cones shall be positioned to provide adequate taper length before the work area to guide traffic through the work area. Tapers approaching the work zone shall be:
 - 150' minimum for posted speed limits 35 mph or higher
 - 50' minimum for posted speed limits 30 mph or less

9. Should individuals progress ahead of vehicles, such as tree climbers, cones shall be placed in the roadway to alert motorists of activity in those trees.
10. For lane closures on busy streets, appropriate signal boards and warning signs such as "Right Lane Closed" and channeling devices at the appropriate intervals shall be used depending on the speed limit.
11. Should complete street closure be required in order to complete contract work, the Contractor shall notify the Forestry Division 24 hours in advance to coordinate and to plan appropriate actions. At the time the road is closed, the Contractor shall notify the Police Department, and the appropriate barricades (at least 3 Type II barricades at each intersection), and "Road Closed" and "Detour" arrow signs used.
12. Flaggers shall be appropriately dressed (high visibility safety apparel, etc.) to alert motorists, shall stand in a conspicuous position facing approaching traffic, and shall use the proper traffic control sign and IDOT flagging procedures when directing traffic.

AA. Outdoor Advance Notice Signs

The Contractor shall post suitable outdoor advance notice signs (at least 24 hours but not more than 7 days prior to performing work in that location) on streets scheduled to be pruned. Signs are to be posted in parkways, at intersection corners, and suitable intervals, facing all directions of travel. The Contractor, immediately upon completion of work on each street, shall remove all such signs. The sign used must be approved by the Village Forester and indicate the type of work that is planned for the area (i.e. pruning), the date range it is planned for, and any other language approved/required by the Municipality.

The Contractor is responsible for all outdoor advance notice signs and this item is incidental to the cost of the overall contract work.

AB. Report Form Submission

The Village will provide the "Pruning Checklist" report form for the Contractor to fax or e-mail to the Village Forester at the end of each work week. The Contractor shall be responsible to submit this weekly "Pruning Checklist" report form at the end of each week indicating what work has been completed that week. The submitted report form will be inspected for compliance with the specifications for pruning. Incomplete or unsatisfactory pruning or missed trees will be noted. Report forms will then be used to verify and approve payment for services.

The Contractor shall report any structural weakness, decayed trunk or branches, split crotches, or when removal is the best option instead of pruning on the provided report forms.

AC. Inspection of Work

All work shall be completed to the satisfaction of the Village Forester, or other Village representative, and same shall resolve any questions as to proper procedures or quality of workmanship.

AD. Unsatisfactory or Unsafe Work

If, at any time during the contract, the service performed or work done by the Contractor is considered by the Village to create a condition that threatens the health, safety, or welfare of the community, the Contractor shall, on being notified either by written or oral notice, immediately correct such deficient service or work. In the event the Contractor fails, after notice, to correct the deficient service or work immediately, the Village shall have the right to order correction of the deficiency by separate contract or with its own resources at the expense of the Contractor. The Village reserves the right to terminate the whole or any part of this contract in the event the awarded Contractor fails to perform any of the provisions of this contract.

AE. Costs and Basis of Payment

The Contractor affirms and states that the prices submitted herein constitute the total cost to the Village for all work involved in the respective items. This cost also includes all insurance, bonds, royalties, transportation charges, use of all tools and equipment, superintendence, overhead expense, inspection costs, all profits and all other work, services and conditions necessarily involved in the work to be done in accordance with the requirements of the Contract Documents considered severally and collectively.

The Contractor shall be paid for the work described herein on a per tree basis depending on the tree's diameter and the unit price for a given tree diameter. The tree diameter shall be measured with a standard measuring tape at a point four and one-half (4.5) feet above the highest ground level at the tree. In cases of low-branching trees with a crotch that is four and one-half (4.5) feet or lower from the ground, measurement shall be taken below the lowest branch. If a tree becomes multi-stemmed below one (1) foot, each stem shall be measured independently and shall be paid as a single tree if stems number 3 or less, and as 2 trees if stems number more than 3.

Partial payment shall be made to the Contractor as work progresses but, in no case, shall payment be made on trees not completed to the satisfaction of the Village Forester and in accordance with these specifications and accepted arboricultural practices.

The contract unit prices shall remain firm for the contract term, or until all pruning work is complete. No adjustments in contract unit prices or additional compensation will be made for increases or decreases in the quantities.

The Awarded Contractor shall send all invoices to the Village Forester. The Village shall pay the Contractor after receipt of a correct invoice for reasonable work allocable to the contract or after the date of acceptance of work that meets the contract requirements, whichever occurs later.

AF. Liquidated Damages

The Village and Contractor recognize that time and work quality is of the essence to this contract. They also recognize the delays, expense and difficulties involved in a legal or

arbitration proceeding. Instead, the Contractor shall be liable and shall pay the Village as liquidated damages the amount shown in the following schedule. The liquidated damage amount specified will accrue and be assessed until final completion of the total physical work of the contract. The Village shall deduct these liquidated damages from any monies due or to become due to the Contractor for breach of this contract.

- 1) \$100.00 per day for failure to complete the work in the time frames required by this contract;
- 2) \$100.00 per day for failure to clean-up and restore each site as required by this contract;
- 3) \$100.00 for each tree improperly pruned or with incorrect pruning cuts such as flush cuts and tears.

AG. Tree Care Industry Association Accreditation

TCIA Accreditation shall be used as a tiebreaker for instances when submitted bid prices and all other factors are equal. If applicable, a copy of the accreditation certificate is to be submitted with the bid.

AH. Failure to Enforce

Failure by the Village at any time to enforce the provisions of the contract shall not be construed as a waiver of any such provisions. Such failure to enforce shall not affect the validity of the contract or any part thereof or the right of the Village to enforce any provision at any time in accordance with its terms.

AI. Questions during the Bid Process

All questions shall be directed to:

Kerstin G. von der Heide, Village Forester,
Phone (630) 434-5475 and FAX (630) 434-5495
Email: kvonderheide@downers.us

AJ. Bid Form Submission

Each bidder shall submit one (1) complete original bid document and one (1) duplicate copy on CD or Flash Drive in a sealed envelope no later than the time and date specified on the cover sheet. Bids received after the specified time shall be rejected and returned to the bidder unopened. Each bid shall contain:

1. Unit prices and extensions.
2. A statement of the approximate number of personnel to be at the work site on a given work day, a list of equipment to be used on the project, and names of Certified Arborists.
3. Bidders must submit a list of not less than four (4) references who can verify the Contractor's successful completion of parkway tree pruning contracts in the last five (5) years. At least four (4) of the municipal references must be for individual pruning contracts in excess of 3,000 parkway trees annually. At least two (2) of the four (4) municipal references are to have employees titled as "Forester", "Forestry Superintendent" or equivalent. Ideally, these employees are Certified Arborists or

Municipal Specialists. Include names, addresses, daytime phone numbers, year of contract and number of trees pruned.

4. For Contractors who have not performed pruning work for the Village in the last five (5) years, attach maps and addresses from other municipalities for field inspections.
5. Attach a copy of TCIA Accreditation if applicable.
6. Applicable insurance information supplied and financial forms completed.
7. Completed Suspension or Debarment Certificate, and Campaign Disclosure Certificate.
8. Cover page and Signature block completed.

IV. BID/CONTRACT FORM

The undersigned Contractor offers to provide to the Village of Downers Grove, an Illinois Municipal Corporation, **Parkway Tree Pruning** services conforming to the specifications, terms and conditions set forth herein.

A. Unit Prices and Extensions

January 1, 2019 to December 31, 2019

Map 2019	Tree #	Unit Price	Extension (Tree# X Unit Price)
6-24" trees	3,100		
24-36" trees	400		
>36" trees	40		
TOTAL			

January 1, 2020 to December 31, 2020

Map 2020	Tree #	Unit Price	Extension (Tree# X Unit Price)
6-24" trees	3,100		
24-36" trees	400		
>36" trees	40		
TOTAL			

January 1, 2021 to December 31, 2021

Map 2021	Tree #	Unit Price	Extension (Tree# X Unit Price)
6-24" trees	3,100		
24-36" trees	400		
>36" trees	40		
TOTAL			

COMBINED Total all 3 years = _____

B. Personnel and Equipment

The approximate number of personnel who will be at the work site daily is _____

List of equipment _____

Certified Arborist who shall be present every workday:
Name and number _____

Additional Certified Arborists: Name and number _____

Name and number _____

Name and number _____

MUNICIPAL REFERENCE LIST

Municipality: _____
Address: _____
Telephone # _____
Forestry Contact Name _____
Year of the pruning contract and number of trees pruned _____

Municipality _____
Address: _____
Telephone # _____
Forestry Contact Name _____
Year of the pruning contract and number of trees pruned _____

Municipality: _____
Address: _____
Telephone # _____
Forestry Contact Name _____
Year of the pruning contract and number of trees pruned _____

Municipality _____
Address: _____
Telephone # _____
Forestry Contact Name _____
Year of the pruning contract and number of trees pruned _____

Municipality: _____
Address: _____
Telephone # _____
Forestry Contact Name _____
Year of the pruning contract and number of trees pruned _____

Municipality _____
Address: _____
Telephone # _____
Forestry Contact Name _____
Year of the pruning contract and number of trees pruned _____

Municipality: _____
Address: _____
Telephone # _____
Forestry Contact Name _____
Year of the pruning contract and number of trees pruned _____



III. DETAIL SPECIFICATIONS

A. Competitive Sealed Bidding

The Village of Downers Grove, an Illinois municipal corporation (hereinafter referred to as the "Village"), will receive sealed bids from Contractors for demand tree pruning services identified in the solicitation. Bids must be received by the date and time specified.

B. Attendance Required at Pre-bid Conference

For the purpose of familiarizing bidders with the project, answering questions, and issuing addenda as needed for clarification of the bidding documents, a mandatory pre-bid conference shall be held at the Downers Grove Public Works Facility, 5101 Walnut Avenue, Downers Grove, Illinois 60515, (630) 434-5460. Bids shall only be opened from Contractors present at the mandatory pre-bid conference. Date and time of the meeting are listed on the cover sheet.

C. Objective

This contract is for pruning services of various trees from time to time for clearance, vision obstruction removal, deadwood removal, hanging limb removal, storm damage repair, diseased limb removal, or hazardous branch removal upon the right-of-way of any street or alley and upon any property owned or maintained by the Village. The specifications contained herein detail how pruning activities shall occur. Under normal conditions, most of the work under this contract is expected to be non-emergency tree pruning. This contract is not being performed in conjunction with or as part of a public works construction or demolition project.

D. Qualifications of Contractors

The Contractor shall be required before the award of any contract to show to the complete satisfaction of the Village Forester that it has the necessary facilities, ability, and resources to provide the services specified herein in a satisfactory manner. The Contractor shall be required to give past history and references in order to satisfy the Village Forester in regard to the Contractor's qualifications. The Village Forester shall make reasonable investigations deemed necessary and proper to determine the ability of the Contractor to perform the work. The Village Forester reserves the right to reject any bid if the evidence submitted by, or investigation of, the Contractor fails to satisfy the Village Forester that the Contractor is properly qualified to carry out the obligations of the contract and to complete the work described herein. In addition to those requirements set forth in Section 10.1 above, evaluation of the Contractor's qualifications shall include:

1. The ability, capacity, skill, and resources to perform the work or provide the service required.
2. The ability of the Contractor to perform the work or provide the service promptly or within the time specified, without delay or interference.
3. The character, integrity, reputation, judgment, experience, and efficiency of the Contractor.

4. The quality of performance of previous pruning contracts or services with the Village and other municipalities. Bidders must submit a list of not less than four (4) references who can verify the Contractor's successful completion of parkway tree pruning contracts in the last five (5) years. At least four (4) of the municipal references must be for individual pruning contracts in excess of 3,000 parkway trees annually. For any Contractor who has not performed pruning work for the Village in the last five years, the Village Forester shall require maps and addresses of trees pruned in other municipalities for field inspections.
5. The status of Tree Care Industry Association (TCIA) Accreditation. TCIA Accreditation shall be used as a tiebreaker for instances when submitted bid prices and all other factors are equal.

E. Bidder Investigations

Before submitting a bid, each Contractor shall make all investigations and examinations necessary to ascertain all site conditions and requirements affecting the full performance of the contract and to verify any representations made by the Village Forester upon which the Contractor will rely. If the Contractor receives an award as a result of their bid submission, failure to have made such investigations and examinations will in no way relieve the Contractor from their obligations to comply in every detail with all provisions and requirements of the contract documents. Nor will the Village accept a plea of ignorance of such conditions and requirements as a basis for any claim whatsoever by the Contractor for additional compensation.

F. Quantities

Whenever a bid is sought for services, the quantities shall be construed as estimates for the purpose of obtaining unit prices to uniformly evaluate bids unless otherwise stated. The Village reserves the right to increase or decrease the stated quantities.

G. Award of Contract

The Village Forester shall review the submitted bids and shall rank the submitted bids by contract activity forecast (the sum total of unit price multiplied by the quantity of trees). If the submitted unit price and the calculated extension price on the bid form are at variance, the unit price shall prevail. Additional information including work history, references, and TCIA accreditation shall be reviewed as listed in Section D - Qualifications of Contractors.

The award shall be made to the lowest responsive and responsible bidder (one Contractor) for all demand pruning activities. The Village shall select the bid which is the most advantageous to the Village.

H. Term of Contract

In accordance with terms mentioned in Section 40.1 above, the contract term shall be three (3) complete calendar years starting January 1 of 2019 and ending December 31 of 2021.

I. Insurance for Illinois State and DuPage County Right-of-Ways

In that the Village has planted and maintained trees on both Illinois State and DuPage County right-of-ways, the Village Forester must obtain permits annually for any tree related work on those right-of-ways. These permits require certificates of insurance in addition to those required by the Village. The Village Forester shall coordinate the permit process. At a minimum, Illinois State and DuPage County are to be listed as additional insured. Requirements for DuPage County are listed in the Highway Permit Application Packet at http://www.dupageco.org/DOT/Highway_Permitting/31108/.

J. Parkway Tree Composition in Downers Grove

There are over 23,000 parkway trees in Downers Grove. The following are the 5 most common tree species: Honeylocust 12.5%, Silver Maple 8.1%, Norway Maple 7.9%, American Linden 5.4% and Hackberry 4.7%. Parkway trees are of following diameter sizes: 25.0 % are 0-6.0", 65.7% are 6.1-24.0", 8.5% are 24.1-36.0", and 0.8% are greater than 36.1".

K. Pruning Work Lists

Lists containing the address, tree species, tree diameter and pruning work needed shall be submitted (phone, fax, e-mail, in person, etc.) to the Contractor from time to time.

L. Response Time

Upon notification crews shall respond to "Emergency" immediate need tree situations within 4 hours. When a list of non-emergency pruning requests is given to the Contractor, these shall be completed within a two-week time period.

M. Pruning Specifications

1. Purpose and Pruning Procedures

- a. All pruning shall follow the *ANSI A300 (Part 1) - 2017 Pruning Standard* and the *ISA's Best Management Practices: Tree Pruning (2008)*. The Natural Pruning System shall be used to develop desired structure and appearance, improve and maintain health, reduce risk, and raise the clearance height of these trees. Several pruning methods or types are to be used including crown cleaning, crown thinning, crown raising, and structure development.
- b. All pruning shall optimize tree architecture and branch spacing, and maintain the crown shape and symmetry typical of the each individual tree species at its given size and age.
- c. Crown cleaning shall remove all non-beneficial parts including dead, diseased, detached, cracked, and broken branches. This shall apply to all branches and stubs greater than 1/2" (half inch) in diameter.
- d. Crown thinning shall selectively remove live branches to reduce crown density. Branches to be thinned shall be 1/2" (half inch) diameter and greater. Thinning cuts shall remove crowded and low vigor branches. Thinning shall increase light penetration and air movement through the crown. Thinning shall also remove suckers from the base of the tree and some watersprouts on the interior. After crown thinning, tree branches shall have foliage and mechanical stress evenly distributed

along a branch and throughout the crown. Not more than one-fourth of the crown shall be removed from mature trees.

- e. Crown raising shall remove lower branches where practical (dependent on tree size) to obtain an eventual full foliage vertical height clearance of fourteen (14) feet on the street side of the tree. All work shall always maintain the crown shape and symmetry typical of the species being pruned, and shall balance the tree evenly. This raising should also allow an eventual clearance over the pedestrian walk of eight (8) feet. Pruning may include reduction cuts to shorten lower limbs or thinning cuts to lighten lower branch loads to achieve clearance if complete branch removal from the tree trunk is not practical.
- f. Structural pruning shall influence the orientation, spacing, growth rate, strength of attachment, and ultimate size of branches and stems. Structural pruning shall select and establish scaffold limbs above the lowest permanent limb and provide the base on which to build the permanent crown. Particular attention is to be given to young trees (those less than 40 years old with diameters 6"-24") if a scaffold branch is large in diameter and competes with the leader, then this scaffold branch is to be reduced back to a lateral and/or thinned to obtain a balanced crown shape overall. Scaffold branches should be free of defects and have appropriate vertical spacing (18 inches for large-maturing trees and 12 inches for smaller trees).
- g. Structural pruning shall also choose and develop a dominant leader. Competing stems and branches are to be subordinated (reduced in length) or removed, particularly if structurally weak "V" crotches occur along the main trunk or are developing within young tree crowns. Special attention shall be given to the effect reducing or removal of such branches will have on the ultimate form of the tree.
- h. Pruning for clearance such that branches do not interfere with infrastructure, houses, building rooftops, streetlights, lines-of-sight, and all traffic control devices by a minimum of fifteen (15) feet. Branches shall be pruned such that all traffic control devices (including but not limited to traffic light signals, opticom cameras, STOP and Yield signs, speed limit signs, parking control signs) are visible to moving traffic.
- i. All pruning shall not remove more living material than is necessary.

2. Pruning Cuts and Tools

- a. All branch removal and reduction cuts shall be the smallest diameter possible, and the number and size of cuts that expose heartwood kept to a minimum.
- b. All limbs to be removed shall be cut in such a manner so as to prevent any ripping or tearing of the wood or bark on the parent or remaining stem. Large limbs shall be cut using the three-cut pruning method
- c. All branch removal cuts shall be made sufficiently close to the trunk or parent limb, without cutting into the branch bark ridge or branch collar, or without leaving a protruding stub. If there is no collar, the top of the cut shall be located where the top of the branch makes an abrupt upward turn into the union. The face of the branch removal cut should generally be perpendicular to the top of the branch and be circular in form. "Flush" cuts to the main stem behind the branch collar that leave oval exposed wounds shall not be made. Cuts shall be made such that all wound sides are

even edged and do not leave "dog ear" ridges on one side or another. Clean smooth cuts shall be made at all times without leaving any jagged edges or stubs.

- d. All reduction cuts shall be made to a live lateral branch or codominant stem at a slight angle, without damaging the branch bark ridge and without leaving a stub.
- e. All limbs shall be brought to the ground in such a manner as to prevent any damage to real or personal property, publicly or privately owned.
- f. Proper tools shall be used for each pruning cut. All equipment and tools shall be maintained according to manufacturer's recommendations. Blades of each tool, including hand pruners, pole saws, hand saws, and chain saws, shall be placed on each branch in a manner that does not cut, rip, or harm adjacent bark areas.
- g. No person working in trees shall use shoes with spikes, or any other footwear, which will, in the opinion of the Village Forester, injure the tree being pruned. At no time shall any person working in trees for pruning purposes, wear spurs or climbing irons.

N. Inspections for Insects, Diseases and Decay

In that a wide variety of tree species are included in the contract, pruned limbs, branches and ash trunks are to be inspected for the presence of insects, diseases and decay. Limbs and branches are to be made available for Village staff to inspect from time to time before being chipped. The Contractor shall notify the Village Forester if significant insects, diseases or decay areas are found.

O. Site Appearance and Clean-Up

The Contractor shall clean up the site and remove and dispose of all debris. Site cleanup shall include removal of sawdust, small twigs, chips, leaves, trunks and limbs from the street, curb, parkway, sidewalk, private lawns and driveways with the appropriate tools for the job.

P. Wood and Chip/Grinding Debris Disposal

Disposal of wood chips and grinding debris generated by work described within this contract shall be the responsibility of the Contractor. The Contractor may deliver chips to the homes of Village residents as requested by the residents without charge, at a time convenient to the Contractor. Chips shall be left only on private property and not on the parkway or in the street. Any logs requested by the residents shall be given free of charge and shall not be from diseased trees. Logs left at the homeowner's request must be on the resident's property and not the parkway. Any logs from elm trees must have the bark removed.

Q. Damage to Public or Private Property

Should any damage to private or public property occur as a result of the service performed or work done by the Contractor, the Contractor shall immediately notify the Village Forester or other Village representative of such damage. Any correction of damage shall be resolved within ten (10) days after damage occurs. Should the damage not be rectified within the time frame agreed upon or to the satisfaction of the Village Forester, the Village reserves the right to repair or replace that which was damaged and assess the Contractor such costs as may be

reasonable and related to damage caused by the Contractor, and deduct these costs from any payment due the Contractor.

R. Protection of Overhead Utilities

Tree pruning operations may be conducted in areas where overhead electric, telephone, and cable television facilities exist. The Contractor shall protect all utilities from damage, shall immediately contact the appropriate utility if damage should occur, and shall be responsible for all claims for damage due to their operation. The Contractor shall make arrangements with the utility for removal of all necessary limbs and branches that may conflict with or create a hazard in conducting the operations of this contract. If the Contractor has properly contacted the utility in sufficient time to arrange for the required work by the utility, delays encountered by the Contractor in waiting for the utility to complete its work shall not be the responsibility of the Contractor.

S. Contractor Personnel and Equipment

The Contractor shall supply all material, equipment and personnel necessary to complete the work specified. The Contractor shall rent equipment as needed to cover any equipment breakdowns that would cause this contract to not be completed in the allotted time period. All vehicles and attached equipment shall have the Contractor's name in a visible location. Personal vehicles shall have the name in the window. All vehicles and equipment shall abide by the standards listed in the Traffic Control section. All vehicles and equipment shall have all the appropriate items to avoid damage to public and private property (example – boards or pads for outriggers to avoid depressions, etc...).

The Contractor shall employ only competent and efficient employees. All employees and supervisors shall wear uniforms or apparel clearly displaying the company name for ease of identification. All individuals shall be familiar with the pruning specifications identified in this document and shall be experienced in pruning operations. Competent individuals and not those in “training” shall perform actual pruning. The Village Forester or other Village representative shall have, throughout the life of the contract, the right of reasonable rejection and approval of staff assigned to the work by the Contractor. If the Village Forester or other Village representative rejects staff, the Contractor must provide replacement staff satisfactory to the Village Forester or other Village representative in a timely manner and at no additional cost to the Village. The day-to-day supervision and control of the Contractor's employees is the responsibility solely of the Contractor.

The Contractor shall at all times endeavor to maintain good relations with the public and respectfully answer questions. If work and equipment must block a driveway, the Contractor shall make contact with the property resident to inform them of the work, shall keep the time of blockage to a minimum and shall move equipment promptly if requested.

T. Storage of Equipment and Materials

If the Contractor desires to store its equipment and materials used to perform work on behalf of the Village within Downers Grove, and has no place of its own, or under lease agreement, the Village may provide said space on a Village property (ex. 5101 Walnut Avenue), with the

provision that the Contractor must hold the Village harmless for any loss or damages that may be associated with the privilege of storing said equipment and materials on Village property. Under these circumstances, the Village will not be responsible for assuring security of the designated site, and the Contractor will be responsible for abiding by rules set forth by the Village. This privilege may be immediately rescinded by the Village if, in the sole determination of the Village, the Village finds that the Contractor has failed to abide by the Village's regulations.

U. **Work Crew Supervision**

The Contractor shall provide qualified supervision of each crew at all times while working under this contract. Each supervisor shall be fluent in English and be authorized by the Contractor to accept and act upon all directives issued by the Village Forester or other Village representative.

V. **Certified Arborist**

At least one individual shall be on the job site at all times who has passed the International Society of Arboriculture (ISA) arborist certification exam and received a Certified Arborist certificate prior to the bid opening date listed on the cover sheet. Their name(s) and certification number(s) must be included in the bid document to be considered for this project, and listed on the ISA website at <http://www.isa-arbor.com>. Any change in the status of the Certified Arborist individual(s) during the life of this contract must be reported to the Village Forester at the time of occurrence. Failure to have a Certified Arborist on site at all times shall result in termination of the contract.

W. **Workdays, Working Hours, and After Hours Contact**

The Contractor shall schedule work between the hours of 7:00 a.m. and 5:00 p.m., Monday through Friday, unless authorized by the Village Forester or other Village representative thereof. Any work within a two-block radius of a school shall be performed between the hours of 9:00 a.m. and 2:00 p.m. It is preferred that work is scheduled on days when school is not in session. Any work along a street with significant traffic during rush-hours shall be performed between the hours of 9:00 a.m. and 4:00 p.m. The Village Forester shall determine appropriate work areas and timeframes before pruning work begins.

The Contractor and the Village Forester shall determine hours for emergency work. The Contractor shall supply a contact phone number which shall be more than just an answering machine in case an emergency tree situation arises which needs to be discussed.

X. **Safety Standards**

All equipment to be used and all work to be performed shall be in full compliance with the most current revision of the *ANSI Z133.1-2017 Safety Requirements for Arboricultural Operations*, or as amended.

Contractor personnel exposed to public vehicular traffic shall wear warning vests or other suitable garments marked with or made of reflectorized material. At a minimum, this includes ANSI Class 2 garments.

Y. Traffic Control

The Contractor shall conduct its operations in a manner that will not interrupt pedestrian or vehicle traffic except as approved by the Village. The work area shall be confined to the smallest area possible to allow maximum use of the street or sidewalk and to minimize any hazard to traffic or pedestrians. The Contractor shall provide adequate traffic control for work area protection in compliance with the Federal Highway Administration *Manual on Uniform Traffic Control Devices for Streets and Highways* (MUTCD) current edition, the State of Illinois *Illinois Vehicle Code*, the Illinois Department of Transportation *Highway Standards*, and the Illinois Department of Transportation *Handbook of Traffic Engineering Practice for Small Cities*. All personnel, signs, barricades, and any other items or devices necessary shall be provided by the Contractor. The Village shall make no separate payment for this work. Traffic control shall include but not be limited to the following:

1. All work vehicles shall be positioned on the same side of the street as the work site.
2. Whenever possible the work site on a two lane street or highway shall be confined to one traffic lane leaving the opposite lane open to traffic.
3. Work area protection shall take into account the duration of the project, the size of the project, the lanes of traffic, the volume of traffic, the speed limit, and the distance to the work area from the pavement.
4. Work vehicles shall have the flasher light lit but not as a substitute for any traffic control devices for work area protection that may be necessary.
5. Under certain field conditions such as hills and curves, the spacing of the traffic control devices shall be adjusted as necessary.
6. Warning signs such as "Men Working" shall be diamond shaped having a black symbol or message on an orange reflective background. Such signs shall be 48 inches by 48 inches in size and shall be posted at a minimum height of 12 inches above the pavement.
7. Cones used as daytime channeling devices shall be at least 18 inches tall, conical or tubular in shape with a broadened base, and orange in color. Cones shall be spaced equal in feet to the posted speed limit or closer along the taper length.
8. Channeling devices such as cones shall be positioned to provide adequate taper length before the work area to guide traffic through the work area. Tapers approaching the work zone shall be:
 - 150' minimum for posted speed limits 35 mph or higher
 - 50' minimum for posted speed limits 30 mph or less
9. Should individuals progress ahead of vehicles, such as tree climbers, cones shall be placed in the roadway to alert motorists of activity in those trees.
10. For lane closures on busy streets, appropriate signal boards and warning signs such as "Right Lane Closed" and channeling devices at the appropriate intervals shall be used depending on the speed limit.

Contractor personnel exposed to public vehicular traffic shall wear warning vests or other suitable garments marked with or made of reflectorized material. At a minimum, this includes ANSI Class 2 garments.

Y. **Traffic Control**

The Contractor shall conduct its operations in a manner that will not interrupt pedestrian or vehicle traffic except as approved by the Village. The work area shall be confined to the smallest area possible to allow maximum use of the street or sidewalk and to minimize any hazard to traffic or pedestrians. The Contractor shall provide adequate traffic control for work area protection in compliance with the Federal Highway Administration *Manual on Uniform Traffic Control Devices for Streets and Highways* (MUTCD) current edition, the State of Illinois *Illinois Vehicle Code*, the Illinois Department of Transportation *Highway Standards*, and the Illinois Department of Transportation *Handbook of Traffic Engineering Practice for Small Cities*. All personnel, signs, barricades, and any other items or devices necessary shall be provided by the Contractor. The Village shall make no separate payment for this work. Traffic control shall include but not be limited to the following:

1. All work vehicles shall be positioned on the same side of the street as the work site.
2. Whenever possible the work site on a two lane street or highway shall be confined to one traffic lane leaving the opposite lane open to traffic.
3. Work area protection shall take into account the duration of the project, the size of the project, the lanes of traffic, the volume of traffic, the speed limit, and the distance to the work area from the pavement.
4. Work vehicles shall have the flasher light lit but not as a substitute for any traffic control devices for work area protection that may be necessary.
5. Under certain field conditions such as hills and curves, the spacing of the traffic control devices shall be adjusted as necessary.
6. Warning signs such as "Men Working" shall be diamond shaped having a black symbol or message on an orange reflective background. Such signs shall be 48 inches by 48 inches in size and shall be posted at a minimum height of 12 inches above the pavement.
7. Cones used as daytime channeling devices shall be at least 18 inches tall, conical or tubular in shape with a broadened base, and orange in color. Cones shall be spaced equal in feet to the posted speed limit or closer along the taper length.
8. Channeling devices such as cones shall be positioned to provide adequate taper length before the work area to guide traffic through the work area. Tapers approaching the work zone shall be:
 - 150' minimum for posted speed limits 35 mph or higher
 - 50' minimum for posted speed limits 30 mph or less
9. Should individuals progress ahead of vehicles, such as tree climbers, cones shall be placed in the roadway to alert motorists of activity in those trees.
10. For lane closures on busy streets, appropriate signal boards and warning signs such as "Right Lane Closed" and channeling devices at the appropriate intervals shall be used depending on the speed limit.

11. Should complete street closure be required in order to complete contract work, the Contractor shall notify the Forestry Division 24 hours in advance to coordinate and to plan appropriate actions. At the time the road is closed, the Contractor shall notify the Police Department, and the appropriate barricades (at least 3 Type II barricades at each intersection), and "Road Closed" and "Detour" arrow signs used.
12. Flaggers shall be appropriately dressed (high visibility safety apparel, etc.) to alert motorists, shall stand in a conspicuous position facing approaching traffic, and shall use the proper traffic control sign and IDOT flagging procedures when directing traffic.

Z. Inspection of Work

All work shall be completed to the satisfaction of the Village Forester, or other Village representative, and same shall resolve any questions as to proper procedures or quality of workmanship.

AA. Unsatisfactory or Unsafe Work

If, at any time during the contract, the service performed or work done by the Contractor is considered by the Village to create a condition that threatens the health, safety, or welfare of the community, the Contractor shall, on being notified either by written or oral notice, immediately correct such deficient service or work. In the event the Contractor fails, after notice, to correct the deficient service or work immediately, the Village shall have the right to order correction of the deficiency by separate contract or with its own resources at the expense of the Contractor. The Village reserves the right to terminate the whole or any part of this contract in the event the awarded Contractor fails to perform any of the provisions of this contract.

AB. Costs and Basis of Payment

The Contractor affirms and states that the prices submitted herein constitute the total cost to the Village for all work involved in the respective items. This cost also includes all insurance, bonds, royalties, transportation charges, use of all tools and equipment, superintendence, overhead expense, inspection costs, all profits and all other work, services and conditions necessarily involved in the work to be done in accordance with the requirements of the Contract Documents considered severally and collectively.

The Contractor shall be paid for the work described herein on a per tree basis depending on the tree's diameter and the unit price for a given tree diameter. The tree diameter shall be measured with a standard measuring tape at a point four and one-half (4.5) feet above the highest ground level at the tree. In cases of low-branching trees with a crotch that is four and one-half (4.5) feet or lower from the ground, measurement shall be taken below the lowest branch. If a tree becomes multi-stemmed below one (1) foot, each stem shall be measured independently and shall be paid as a single tree if stems number 3 or less, and as 2 trees if stems number more than 3.

Partial payment shall be made to the Contractor as work progresses but, in no case, shall payment be made on trees not completed to the satisfaction of the Village Forester and in accordance with these specifications and accepted arboricultural practices.

The contract unit prices shall remain firm for the contract term, or until all pruning work is complete. No adjustments in contract unit prices or additional compensation will be made for increases or decreases in the quantities.

The Awarded Contractor shall send all invoices to the Village Forester. The Village shall pay the Contractor after receipt of a correct invoice for reasonable work allocable to the contract or after the date of acceptance of work that meets the contract requirements, whichever occurs later.

AC. Liquidated Damages

The Village and Contractor recognize that time and work quality is of the essence to this contract. They also recognize the delays, expense and difficulties involved in a legal or arbitration proceeding. Instead, the Contractor shall be liable and shall pay the Village as liquidated damages the amount shown in the following schedule. The liquidated damage amount specified will accrue and be assessed until final completion of the total physical work of the contract. The Village shall deduct these liquidated damages from any monies due or to become due to the Contractor for breach of this contract.

- 1) \$100.00 per day for failure to complete the work in the time frames required by this contract;
- 2) \$100.00 per day for failure to clean-up and restore each site as required by this contract;
- 3) \$100.00 for each tree improperly pruned or with incorrect pruning cuts such as flush cuts and tears.

AD. Tree Care Industry Association Accreditation

TCIA Accreditation shall be used as a tiebreaker for instances when submitted bid prices and all other factors are equal. If applicable, a copy of the accreditation certificate is to be submitted with the bid.

AE. Failure to Enforce

Failure by the Village at any time to enforce the provisions of the contract shall not be construed as a waiver of any such provisions. Such failure to enforce shall not affect the validity of the contract or any part thereof or the right of the Village to enforce any provision at any time in accordance with its terms.

AF. Questions during the Bid Process

All questions shall be directed to:

Kerstin G. von der Heide, Village Forester,
Phone (630) 434-5475 and FAX (630) 434-5495

Email: kvonderheide@downers.us

AG . Bid Form Submission

Each bidder shall submit one (1) complete original bid document and one (1) duplicate copy on CD or Flash Drive in a sealed envelope no later than the time and date specified on the cover sheet. Bids received after the specified time shall be rejected and returned to the bidder unopened. Each bid shall contain:

1. Unit prices and extensions.
2. A statement of the approximate number of personnel to be at the work site on a given work day, a list of equipment to be used on the project, and names of Certified Arborists.
3. Bidders must submit a list of not less than four (4) references who can verify the Contractor's successful completion of parkway tree pruning contracts in the last five (5) years. At least four (4) of the municipal references must be for individual pruning contracts in excess of 3,000 parkway trees annually. At least two (2) of the four (4) municipal references are to have employees titled as "Forester", "Forestry Superintendent" or equivalent. Ideally, these employees are Certified Arborists or Municipal Specialists. Include names, addresses, daytime phone numbers, year of contract and number of trees pruned.
4. For Contractors who have not performed pruning work for the Village in the last five (5) years, attach maps and addresses from other municipalities for field inspections.
5. Attach a copy of TCIA Accreditation if applicable.
6. Applicable insurance information supplied and financial forms completed.
7. Completed Suspension or Debarment Certificate, and Campaign Disclosure Certificate.
8. Cover page and Signature block completed including an after-hours phone number other than an answering machine.

IV. BID/CONTRACT FORM

The undersigned Contractor offers to provide to the Village of Downers Grove, an Illinois Municipal Corporation, **Demand Tree Pruning** services conforming to the specifications, terms and conditions set forth herein.

A. Unit Prices and Extensions

January 1 – December 31, 2019

Diameter	Tree #	Unit Price	Extension
6-24"	70		
24-36"	40		
>36"	10		
TOTAL			

January 1 – December 31, 2020

Diameter	Tree #	Unit Price	Extension
6-24"	70		
24-36"	40		
>36"	10		
TOTAL			

January 1 – December 31, 2021

Diameter	Tree #	Unit Price	Extension
6-24"	70		
24-36"	40		
>36"	10		
TOTAL			

COMBINED Total all 3 years = _____

B. Personnel and Equipment

The approximate number of personnel who will be at the work site daily is _____

List of equipment _____

Certified Arborist who shall be present every workday:
Name and number _____

Additional Certified Arborists: Name and number _____

Name and number _____

Name and number _____

MUNICIPAL REFERENCE LIST

Municipality: _____
Address: _____
Telephone # _____
Forestry Contact Name _____
Year of the pruning contract and number of trees pruned _____

Municipality _____
Address: _____
Telephone # _____
Forestry Contact Name _____
Year of the pruning contract and number of trees pruned _____

Municipality: _____
Address: _____
Telephone # _____
Forestry Contact Name _____
Year of the pruning contract and number of trees pruned _____

Municipality _____
Address: _____
Telephone # _____
Forestry Contact Name _____
Year of the pruning contract and number of trees pruned _____

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Telephone # _____
Forestry Contact Name _____
Year of the pruning contract and number of trees pruned _____

