

AMENDATORY AGREEMENT

THIS AMENDATORY AGREEMENT is made between the **CITY AND COUNTY OF DENVER**, a municipal corporation of the State of Colorado (“City”), and **SAVATREE, LLC**, a Delaware limited liability company (the “Contractor”). City and Contractor shall be individually referred to herein as a “Party” and jointly as the “Parties.”

RECITALS:

A. The Parties entered into an Agreement executed on or about November 16, 2018, (the “Agreement”) for the performance of certain work set forth in that Agreement and **Exhibit A** thereto; and

B. Rather than enter into a new contract, the Parties desire to revise the terms and conditions of the Agreement as they previously existed and the Parties further desire to amend the Agreement to increase maximum capacity, extend the term and replace Exhibit A with Exhibit A-1.

NOW THEREFORE, in consideration of the premises and the Parties’ mutual covenants and obligations, the Parties agree as follows:

1. All references to “Exhibit A” (as related to the Agreement) shall be amended to read: “Exhibit A-1”. The scope of services in Exhibit A-1 are hereby incorporated herein by reference and shall supersede and replace the scope of services in Exhibit A.

2. Section 3 of the Agreement entitled “**TERM**” is amended to read as follows:

“**3. TERM.**

The term of the Agreement shall commence on May 1, 2019 and shall expire on December 31, 2020 (“Term”). This Agreement may be terminated earlier as provided in this Agreement. Any option to extend shall be exercised by a separate amendment executed in the same manner as this Agreement.”

3. Section 4 of the Agreement entitled “**COMPENSATION AND PAYMENT**” is amended to read as follows:

“**4. COMPENSATION AND PAYMENT.**

A. Maximum Contract Amount: The Maximum Contract Amount to be paid by the City to the Contractor shall in no event exceed the sum of **EIGHT HUNDRED EIGHTY THOUSAND DOLLARS AND ZERO CENTS**

(\$880,000.00), unless this Agreement is modified to increase said amount by a duly authorized and written amendment to this Agreement executed by the Parties in the same manner as this Agreement. The Maximum Contract Amount stated herein is not intended, and shall not be construed, as a promise or guarantee to the Contractor that the compensation for the Work authorized to be performed by the Contractor under this Agreement will total or approximate the Maximum Contract Amount. All Work is subject to inspection by the City prior to payment.”

4. Except as herein amended, the Agreement continues in effect, and is affirmed and ratified in each and every particular.

5. This Amendatory Agreement will not be effective or binding on the City until it has been fully executed by all required signatories of the City and County of Denver, and if required by Charter, approved by the City Council.

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[SIGNATURE PAGES TO FOLLOW]

Contract Control Number: PARKS-201845227-01 / 201952716
Contractor Name: SAVATREE, LLC.

IN WITNESS WHEREOF, the parties have set their hands and affixed their seals at Denver, Colorado as of:

SEAL

CITY AND COUNTY OF DENVER:

ATTEST:

By:

APPROVED AS TO FORM:

REGISTERED AND COUNTERSIGNED:

Attorney for the City and County of Denver

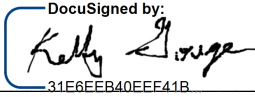
By:

By:

By:

Contract Control Number:
Contractor Name:

PARKS-201845227-01 / 201952716
SAVATREE, LLC.

By:  _____
31E6EEB40EEF41B

Name: Kelly Gouge
 (please print)

Title: District Manger
 (please print)

ATTEST: [if required]

By: _____

Name: _____
 (please print)

Title: _____
 (please print)

Exhibit A-1 **Scope of Work**

The contractor shall provide treatment of City-maintained ash trees located solely on City-owned property through trunk injection of any insecticide approved for treatment of EAB that contains 4% Emamectin Benzoate as the active ingredient for the purpose of providing effective, temporary protection against EAB. Although any 4% Emamectin Benzoate product may be used, the insecticide that's selected must be the sole insecticide used for the duration of the treatment period. Weather permitting, the application treatment season is expected to occur between May and October or for as long as trees are translocating.

General Specifications

1. Pesticide applicators shall follow all federal, state, and local applicable laws and/or regulations pertaining to pesticide use, application, and handling. Wherever there is a conflict between regulations, the most stringent shall apply.
2. Prior to initiating treatments, the Office of City Forester must approve the insecticide and treatment method. Once approved, the contractor must submit a copy of the approved insecticide's label and a copy of its SDS (Safety Data Sheet) to the Office of the City Forester.
3. Pesticides shall be secured at all times, and when not in use shall be stored in locked compartments.
4. Pesticides shall be stored in their original container or a clearly marked service container.
5. Devices used for mixing and measuring pesticides shall be specifically designated and marked for pesticide use and shall be used for no other purpose.
6. To reduce pesticide usage and possible toxicity levels, the contractor must agree to use the required chemical product listed in this Scope of Work.
7. The contractor shall not accept requests from private property owners to treat City-maintained park and parkway trees at the request of a property owner, as the City will treat or remove those trees separately. Property owners can opt to treat a City-maintained tree only if they have prior authorization from the Office of the City Forester.
8. At any time, a property owner or legal representative of the owner requests that a City-maintained tree(s) on City-owned property not be treated, the contractor agrees not to treat said tree(s) at that time. The following contact information shall be recorded in the site(s) ID work record:
 - a. Name
 - b. Phone number
 - c. Email address if applicable
 - d. Reason for opt-out
9. The contractor is responsible for checking the Colorado Pesticide Sensitivity Registry and abiding by applicable rules and regulations for pesticide application when in proximity to known registrants.

10. The contractor shall provide proof that its company has been in the business of pesticide application for a minimum of five years and shall provide proof that the company has a minimum of one year of successful trunk injection pesticide application experience.
11. The contractor shall possess and maintain a valid Commercial Pesticide Applicator's license from the State of Colorado. While not required on-site, a Colorado Department of Agriculture Qualified Supervisor (QS) shall be readily available to the pesticide application crews to answer any questions/handle any concerns that should arise. The contractor must follow all Colorado Department of Agriculture rules and regulations.
12. Trees to receive trunk injection must meet the following conditions:
 - a. Only trees of 12-inch diameter or greater shall be treated, unless otherwise authorized by the City Forester.
 - i. The DBH (Diameter Breast Height) of each tree shall be measured at 4.5 feet above ground, around the outside of the bark:
 1. Upright, fairly straight trees shall be measured at 4.5 feet above ground.
 2. Trees on a slope shall be measured at 4.5 feet above ground on the uphill side of the trunk.
 3. For trees that fork below 4.5 feet from the ground, each stem shall be measured at 4.5 feet and combined for total DBH.
 - b. Only trees with 30% or less canopy decline from health or infestation of EAB shall be treated.
 - c. Do not apply pesticide to heat- or drought-stressed trees.
13. Treatment and treatment window:
 - a. Treatment is to be made in accordance with manufacturer's specifications and requirements.
 - b. Timing of treatment per manufacturer's label:
 - i. Uptake of the insecticide is dependent upon the tree's transpiration. Transpiration is dependent on a number of abiotic and biotic factors, such as soil moisture, soil and ambient temperature, and time of day. For uptake, apply when soil is moist, soil temperatures are above 45°F, ambient temperatures are between 40° to 90°F, and during the 24-hour period when transpiration is greatest, typically before 2:00 PM MT. Applications to drought-stressed or heat-stressed trees may result in injury to tree tissue, poor treatment, and subsequent control. Avoid treating trees that are moisture-stressed or suffering from herbicide damage.
 - c. Complete treatment daily work by 2:00 PM MT, unless environmental conditions allow rapid uptake of the pesticide.
14. The contractor is responsible for posting (tacking) City-supplied "Be A Smart Ash" treatment notification tags as directed by the Office of the City Forester. Treated trees will be posted on the street-side of the tree at a minimum, but the City Forester may direct the contractor to post tags on both the street and sidewalk sides of all treated trees.
15. The Office of the City Forester reserves the right to request meeting times with the contractor, as well as to observe the contractor's applicator(s) to ensure good injection technique, chemical uptake, and proper safety measures and techniques.

16. Workload and reporting:
 - a. Biweekly (every two weeks) work records for each applicator(s) or crew(s), shall be submitted to the Office of the City Forester and/or gathered from the Tree Inventory Work Records.
 - b. Treated trees shall be field-verified by Office of the City Forester staff.
17. All work shall be conducted in a manner as to cause the least possible interference with or annoyance to others. The applicator/operator(s) shall not allow application equipment, materials, or other related items to create a tripping hazard for coworkers or the public.
18. Cleanup resulting from any treatment operation shall be promptly and completely accomplished by the end of the work day on all trees, unless otherwise authorized. All debris shall be disposed of in an appropriate manner. The work area shall be kept safe at all times until the cleanup operation is completed. Under no condition shall the accumulation of debris be allowed upon a public street right-of-way that may result in a public hazard.

Personnel

1. All personnel shall wear company-identifying uniform or clothing with a company logo clearly visible on the upper left chest area, at a minimum.
2. All staff assigned by the contractor for servicing the contract shall be adequately and properly trained to perform their work properly and safely.
3. Pesticide applicators shall obtain and remain current with all licensing/certification requirements as required by the appropriate state regulatory authority prior to using pesticides (All Colorado Department of Agriculture regulations, statutes, policies, etc.)
4. The EPA signal word of the selected insecticide may require that a Qualified Supervisor or Certified Operator be present at the site when the work is being performed. At least one (1) member of the on-site team must be able to communicate and answer questions or concerns from the City Forester representative and/or property owners.
5. Applicators must attend and pass a training seminar conducted by the product and equipment manufacturer. No treatments will be allowed until all applicators demonstrate proficiency with the equipment and techniques allowable by the contract. The contractor must provide the City with proof of training from the manufacturer for applicators assigned to this contract.

Safety

1. The contractor shall provide education and training for its employees and applicators as necessary to comply with federal, state, and local regulations appropriate to employee job assignments.
2. The contractor shall be responsible for being fully familiar with and conforming to the requirements and guidelines set forth by the Occupational Safety and Health Act ("OSHA") and any regulations or directives adopted thereunder.
3. Employee training shall be provided in the recognition of hazardous substances, proper handling, and emergency procedures in the event of a spill or accidental poisoning, as

required by OSHA 1910.1200 Hazard Communication regulations. The contractor shall be responsible for being fully familiar with and conforming to the requirements and guidelines set forth by the Colorado Department of Agriculture and any regulations or directives adopted thereunder.

4. An emergency action plan, including spill response materials and procedures, shall be available where pesticides are stored, transported, and/or handled. The operator(s) shall be aware of emergency procedures, and the location and use of emergency equipment in relation to chemical spills, exposure, and public endangerment.
5. Any spills that occur during treatments for a City contract shall be reported immediately to the Office of the City Forester. This notification is in addition to the Colorado State Department of Agriculture spill notification requirements.
6. Safety Data Sheets ("SDS") for all products in inventory shall be freely available to all employees, safety officials, and City representatives.
7. Personal protective equipment shall be properly fitted, cleaned, maintained, and stored. All applicators shall use personal protective equipment as specified on the product label.
8. The contractor shall provide a clean water source at the worksite of a minimum of five (5) gallons, which may be used for emergency personal decontamination. Precautions shall be taken to prevent contamination of the clean water source. Drinking water and decontamination water shall be kept in separate containers.
9. The contractor shall be present during the entire pesticide application process. No injection equipment or chemical shall be unattended at any time. Under no condition shall it be considered proper to leave the site while treatment is on-going.
10. Any injury to person or damage to any improvement, vehicle, tree, or structure caused by or related to the work performed under this contract shall be promptly reported to the City Forester and arrangement made by the contractor to make restitution or repairs. If the contractor fails to act promptly, the City may seek recovery of losses, damages and costs from the contractor's insurance company or surety. As provided in the contract, the City reserves the right to withhold a portion or the entire payment until the contractor can provide proof that restitution or repairs have been made.
11. All pesticide applications shall comply with the appropriate pre- and post-notification requirements as mandated by the Colorado Department of Agriculture.

Equipment

1. All of the contractor's motor vehicles used in the injection work shall be clearly identified with the name of the business and phone number in a minimum of two-inch-high lettering against a contrasting background, and clearly visible and legible from a distance of at least 60 feet. Failure to post aforementioned signage on vehicles and equipment can be grounds for contract suspension or termination.
2. Identification of maintenance issues are the responsibility of the contractor. Maintenance and repairs are the responsibility of the contractor.
3. All injection equipment and accessories shall be in a clean and operable condition and free from defects prior to use each day.
4. The contractor shall clean/sterilize equipment as directed by manufacturer or at a minimum of once per work week. Any equipment used on a tree that is suspected of any communicable disease shall be sterilized immediately upon treatment completion of said tree and prior to any further use.
5. The contractor may only utilize injection equipment that the manufacturer specifies for use with pesticide and formulation to be applied. Other devices may be used as approved by the City Forester prior to use. Approved equipment shall be used in accordance with the manufacturer's directions/specifications.
6. If drills are required for injection treatment device:
 - a. All drills shall be cordless and the contractor shall supply the quantity needed to meet daily production needs.
 - b. All drill bits must be brad point, sharp, clean, and of the appropriate size. Bits shall be used for no more than a maximum of 100 drill sites until bit must be replaced.
 - c. Used drill bits shall be turned in to the Office of the City Forester at the end of each work week and bits will be returned to the contractor after all treatments are completed.
7. Staple tack hammers and staples: City-supplied "Be A Smart Ash" treatment notification tags to be placed on each treated tree shall be supplied by the Office of the City Forester. The contractor has the option of supplying their own, but must obtain prior authorization from the Office of the City Forester. The Office of the City Forester will supply staple gun(s) and staples if needed.
8. Mobile devices: The contractor shall supply mobile device of choice, cell phone, iPad, laptop, etc. to use for assignments of qualified trees. Work will be assigned using the City's TreeKeeper inventory system and the contractor shall be assigned a login to access and update work records. The mobile device must have Windows Operating System 7 or higher. The contractor must have an alternate system available to continue treatments in case of loss of or poor connectivity issues. Contractor must be adept in creating work records using TreeKeeper.

Completion Schedule

When the street tree qualification evaluation is not up to date, only an approximation of total PRW ash trees to be treated can be given. Based on inventory records, the approximate number of publicly-owned ash trees to be treated for this contract ranges from 2,000 to a maximum of 3,700. A majority of the trees to be treated are located in central Denver, but all neighborhoods have trees and the contractor should plan/route accordingly. Using 3,000 trees and a three-month treatment schedule as an example, it would be necessary to treat 1,000 trees per month, which equates to treating 50 trees per business day. Treating 20 trees per day per crew would necessitate three crews to meet that goal. This calculation is based on optimal conditions for applicator(s), equipment, environmental conditions, and tree uptake, which is a rarity in Colorado. The calculation is also based on a typical eight-hour, five-day work week. The contractor should plan to have additional labor, equipment, and materials ready to meet the annual treatment goal of total treatable trees within the specified timeframe.

1. Addresses, maps and other necessary information will be provided to the contractor noting the location and size of ash trees. Information will be provided via an electronic format through the City's TreeKeeper inventory system. Ash trees may be added, subtracted, or the priorities changed by the Office of the City Forester. Maps of all ash trees to be treated in the City are available upon request by calling the Office of City Forester at 720-913-0651.
2. The Office of the City Forester, may, at its discretion, reduce or increase the total number of trees to be treated.
3. Timing is critical for specific applications. City Forestry staff will monitor weather conditions, insect populations, and coordinate with the contractor for application timing.
4. The contractor should call the Office of the City Forester at 720-913-0651 **at least 4 days prior** to chemical treatments to determine if there are any schedule changes.
5. The contractor shall supply the appropriate number of application crews to treat the quantity of trees specified within the specified timeframe. Each application crew shall treat a minimum of 100 trees per week (an average of 20 trees per day) and supply sufficient workers to meet the contract requirement. It is recognized that moisture conditions can dramatically impact treatment uptake and may impact daily and weekly treatment rates. The contractor will communicate daily with Forestry Supervisors to review how environmental conditions are impacting rate of uptake of chemical into the tree. The contractor should plan to start applications on May 1 each year that the contract is in effect; however, initiation of trunk injection applications should not begin until adequate leaf cover permits reasonable uptake of treatment chemistry.
6. The contractor is obligated to exercise due diligence in making good progress on the work and within the specified time period. If the contractor is unable to perform the work within the timeframe allotted, the contractor is obligated to promptly notify the City Forester and the work may be re-assigned to another contractor.

Licenses and Permits

1. The contractor must possess a current Commercial Applicators License issued by the State of Colorado, Colorado Department of Agriculture.
2. The contractor must possess a current business license with the Director of Excise and Licenses. Licenses must be retained throughout the life of the contract; failure to do so may result in the termination of the contract.
3. The contractor is responsible for obtaining all required permits and paying any costs associated with these permits before commencing work. Street occupancy, lane/street closure permits, and rules associated with street/traffic permits can be obtained through the Denver Department of Public Works-Traffic Division. A breakdown of current required permits and fees are listed as follows (all fees are subject to change over time):
 - a. Forestry Tree Work Permits:
 - i. Free (required for all licensed contractors)
 - b. Public Works Annual Equipment Fee:
 - i. \$50/piece of equipment (required for all licensed contractors)
 - c. Public Works Street Occupancy Fees:
 - i. One-time annual fee of \$50 (required for all licensed contractors)
 - ii. Additional job-related street occupancy permit fees are waived for Forestry-issued work orders
 - d. Traffic Control Plans and Barricades:
 - i. The contractor must follow requirements of Public Works for obtaining permits and providing traffic plans to receive street occupancy permits. The contractor will be allowed to use the City's current contractor for traffic control plans and barricades for Forestry-issued Task Notices and amended Task Notices, and the contractor will not be responsible for the cost of these services.

Barricades and Traffic Control Plans

1. The contractor will be allowed to use the City's current contractor for traffic control plans and barricades if needed. The contractor will need to contact the City to notify the City of the need, and the City will provide information for the contractor to pursue permit(s) and barricades to complete the job. The contractor will not be responsible for the cost of these services.
2. Adequate barricades, warning devices, and signage shall be furnished by the contractor and placed as necessary for the safety of persons and vehicles. Rules from the Denver Department of Public Works Traffic Division must be followed, as well as the Colorado State Highway Department regulations.
3. Street and sidewalk warning devices shall be in position as required when needed.

Technical Specifications

1. The contractor is required to treat ash trees in the City and County of Denver for EAB using an approved trunk injection method and will use only products labeled for Emerald Ash Borer containing the active ingredient Emamectin Benzoate at 4% solution. The contractor will follow the approved application rates and all label requirements.

2. The contractor will only treat trees during the following treatment window: after the leaves have fully emerged in the spring, through the summer, and while leaves remain on the tree in the fall, while translocation still occurs.
3. Formulation Specifications – TREE-äge® and Arbormectin® Insecticides are commonly used in the treatment of EAB. Their labels with applicable rates are provided below as examples.
 - a. The detail below sets forth specifications for the treatment of the EAB pest for publicly-owned, City and County of Denver-managed ash trees. The product used shall be a micro-encapsulated concentrated liquid formulation of 4% Emamectin Benzoate. It must be specifically labeled for use on trees against EAB and be registered in Colorado.
 - b. The following rates of TREE-äge® (Table 1) shall be applied, dependent on the injection system used:

Tree Diameter (DBH) (Inches)	Low ml product/tree	Medium ml product/tree	High ml product/tree
4 to 6	15	25	50
7 to 9	20	40	80
10 to 12	30	55	110
13 to 15	35	70	140
16 to 18	42	85	170
19 to 21	50	100	200
22 to 24	–	115	230
25 to 27	–	130	260
28 to 30	–	145	290
31 to 33	–	160	320
34 to 36	–	175	350
37 to 39	–	190	380
40 to 42	–	205	410
43 to 45	–	220	440
46 to 48	–	235	470
49 to 51	–	250	500
52 to 54	–	265	530
55 to 57	–	280	560
58 to 60	–	295	590
61 to 63	–	310	620
64 to 66	–	325	650
67 to 69	–	340	680
70 to 72	–	355	710

The use of low, medium, and high rates are based on the professional judgment of the applicator as to what constitutes a low, medium or high infestation.

Higher rates tend to provide longer residual and control of more difficult to control insects. See **Target Pest** for additional information in choosing the amount of product to apply.

- c. The following rates of ArboMectin® (Table 2) shall be applied, dependent on the injection system used:

Tree Diameter (DBH) (Inches)	Low (mL product/ tree)	Medium (mL product/ tree)	Medium - High (mL product/ tree)	High (mL product/ tree)
4 to 6	15	25	50	-
7 to 9	20	40	80	-
10 to 12	30	55	110	165
13 to 15	35	70	140	210
16 to 18	42	85	170	225
19 to 21	50	100	200	300
22 to 24	-	115	230	345
25 to 27	-	130	260	390
28 to 30	-	145	290	435
31 to 33	-	160	320	480
34 to 36	-	175	350	525
37 to 39	-	190	380	570
40 to 42	-	205	410	615
43 to 45	-	220	440	660
46 to 48	-	235	470	705
49 to 51	-	250	500	750
52 to 54	-	265	530	795
55 to 57	-	280	560	840
58 to 60	-	295	590	885
61 to 63	-	310	620	930
64 to 66	-	325	650	975
67 to 69	-	340	680	1020
70 to 72	-	355	710	1065

The use of low, medium, medium-high and high rates are based on the professional judgment of the applicator as to what constitutes a low, medium or high infestation. Higher rates tend to provide longer residual and control of more difficult to control insects. See **Target Pest** table for additional information in choosing the amount of product to apply.