

PROFESSIONAL SERVICES CONTRACT FOR 230197-JH URBAN FORESTRY MANAGEMENT PLAN

THIS CONTRACT is being entered into, effective as of _____, by and between the City of Las Vegas (hereinafter the "City"), a municipal corporation within the State of Nevada having its principal office at 495 South Main Street, Las Vegas, Nevada 89101, and Davey Resource Group, Inc., (hereinafter the "Company"), a corporation organized and existing under the laws of the State of OH, having its principal office at 295 South Water Street, Kent, Ohio 44240.

SECTION A – Contract Overview

A-1 Summary of Contract [CAO-12/30/2020]p

This Contract sets forth the terms and conditions for the performance of services described herein, and the execution hereof by the parties hereto forms a legally binding contract. This is a Non-Exclusive Contract.

(a) Contract Synopsis The legally binding Scope of Work is more fully defined in Section C	Provide services to inventory trees and develop an urban forestry management plan in alignment with goals and outcomes of the City's 2050 Master Plan	
Performance Dates The Performance Period is more fully defined in Section A-2	Award Date See first paragraph	Expiration Date Upon project completion, estimated to be no later than March 31, 2028
Contract Type As defined in Section B-1	The contract type is Firm Fixed Price	
Contract Amount This Amount is subject to Section C-2	\$405,377	

(b) Contract Exhibits / Attachments The following documents are hereby incorporated into this Contract
Exhibit A – Scope of Work Exhibit B – Company Proposal Excerpts Exhibit C – Company Fees Attachment 1 - Certificate of Disclosure

(c) City Project Manager Per Section D-4, (a)	Name Bradley Daseler	Phone (702) 229-1067	Email bdaseler@lasvegasnevada.gov
Company Representative Per Section D-4, (b)	Name Josh Behounek	Phone (573) 673-7350	Email josh.behounek@davey.com

(d)

City Legal Notice Representative per Section E-1			
Company Legal Notice Representative Per Section E-1	Name & Title Josh Behounek	Address (573) 673-7350	Email josh.behounek@davey.com

A-2 Performance Period [CAO-12/30/2020]

- (a) The performance period commences on the Award Date and continues through the Expiration Date.
- (b) The City may at its sole discretion, exercise the option to renew this Contract for the periods set forth above (if any). The City shall provide written notice to the Company of such renewal(s), and the Company may not assume an automatic renewal. Exercise of an option does not commit the City to exercise further options.
- (c) The City reserves the right to temporarily extend this Contract for up to one hundred eighty (180) calendar days from the Expiration Date, for any reason.

SECTION B – Basic Terms**B-1 Definitions [CAO-08/28/19]**

The following definitions apply to this Contract:

- (a) *“Award Date”* means the date that a Contract becomes effective. It is the date entered into the first paragraph of a Contract upon execution by an authorized representative of the City.
- (b) *“Contract”* means this document, consisting of Sections A through E, and the exhibits and attachments attached hereto, which is binding and effective only upon execution by the City.
- (c) *“Contract Amount”* means the maximum amount of compensation that may be paid to the Company for performance of the Contract, which includes, without limitation, compensation for all direct and indirect expenses.
- (d) *“Deliverable”* means any report, software, hardware, data, documentation or other tangible item that the Company is required to provide to the City under the terms of the Contract.
- (e) *“Fixed Fee Contract”* means a contract that provides for a firm price that is not subject to any adjustment on the basis of the Company’s cost experience in performing the Contract.

SECTION C – Scope of Work**C-1 Scope of Work**

- (a) Services shall be provided in accordance with Exhibit A “Scope of Work” and Exhibit B “Company Proposal Excerpts”. The City has elected for the Company to perform only the Essential services. The City has elected for the Company to perform the Smart Tree Inventory for up to 40,000 trees and to perform remote inspection services. The City will self perform field inspection services.
- (b) **Delivery Schedule.** The Company shall provide the Deliverables for each Contract Item and within the implementation timeframes as set forth Exhibit B.
- (c) **Fees.** The City will pay the Company fixed fee amounts upon completion and acceptance of incremental milestones as set forth in Exhibit C “Company Fees.” The sum of the milestone payments will equal the below Contract Item total fixed fees.

Item No.	Description	Amount 2024	Amount 2026
1	Background information, research and outreach	\$48,625	
2	Tree Inventory Update – Scan up to 40,000 Trees – Option B	\$139,123	\$139,123
3	Plan Development and Delivery	\$77,995	
4	Collaboration with University of Nevada Las Vegas	\$511	
5	Implementation	No Charge	
	Subtotal Fees	\$266,254	\$139,123
	Total Contract Fees for 2024 and 2026 Services		\$405,377

SECTION D – Special Conditions

D-1 Payment [CAO-4.2020]

Payment. Payment to the Company will be made upon completion of Deliverables as accepted by the City, and upon receipt of an invoice submitted in accordance with Section D-3, "Invoices".

D-2 Fee Revisions [CAO-08/28/19]

For the term of this Contract, fees shall remain firm.

D-3 Invoices [CAO-9/2020]

- (a) The Company will timely submit a detailed invoice to the City within sixty (60) days upon completion of Deliverables, in accordance with Section C-1, "Scope of Work". Each invoice shall contain the following information:
- (i) the date of the invoice and invoice number;
 - (ii) the Purchase Order number;
 - (iii) the Contract Item against which charges are made; and
 - (iv) the performance dates covered by the invoice.
- (b) Upon reconciliation of all errors, corrections, credits, and disputes, payment to the Company will be made in full within thirty (30) calendar days. **Invoices received without a valid Purchase Order number will be returned unpaid.** If the Company does not timely submit a detailed invoice to the City as required herein, the City shall not have any obligation or liability to effect any payment for said late invoice. The City shall also not be liable for any errors or omissions in an invoice once said invoice is paid by the City, all of which shall be expressly waived by Company. Notwithstanding the foregoing, this paragraph shall in no way waive the City's rights and remedies should the City find any errors or omissions in an invoice before or after said invoice is paid by the City.

The Company shall submit the original invoice to:

Department of Finance
ATTN: Accounts Payable
City of Las Vegas
495 South Main Street, 4th Floor
Las Vegas, NV 89101–2986

- (c) The Company shall forward a copy of the invoice to the City's Project Manager, identified in Section A-1(c), "Project Manager/Company Representative", with the following items:
- (i) copy of the applicable Deliverable associated with the invoice
- (d) The City may subtract or offset from any unpaid invoice from the Company any claims, which the City may have incurred for failure of the Company to comply with the terms, conditions or covenants of this Contract, or any damages, costs and expenses caused by, resulting from, or arising out of the negligent act or omission of the Company in the performance of the services under this Contract. Within ten (10) calendar days, the City shall provide a written statement to the Company of the off-set which has been subtracted from any payment to the Company along with appropriate documentation and receipts, if any, and a description of the failure, error or deficiency attributed to the Company. The Company may dispute the right or amount of the off-set made by the City by providing written notification to the City within ten (10) calendar days after receipt of the City's written notice. The City shall provide a written response to the Company within ten (10) calendar days of receipt of the Company's written dispute notice. If the Company disputes the City's determination, the Company may file a claim pursuant to Section E-2, "Disputes" of this Contract.

D-4 Project Manager/Company Representative [CAO-8/28/19]

- (a) The City's designated Project Manager for this Contract is named in Section A-1 (c). The City will provide written notice to the Company should there be a subsequent Project Manager change. The Project Manager will be the Company's principal point of contact at the City regarding any matters relating to this Contract, will provide all general direction to the Company regarding Contract performance, and will provide guidance regarding the City's goals and policies. *The Project Manager is not authorized to waive or modify any material scope of work changes or terms of the Contract.*
- (b) The Company's designated Company Representative for this Contract is named in Section A-1 (c). The Company will provide written notice to the City should there be a subsequent Company Representative change. The City has the right to assume that the Company Representative has full authority to act for the Company on all matters arising under or relating to this Contract.

D-5 Insurance [CAO-03/31/2022]

- (a) The Company shall procure and maintain, at its own expense, during the entire term of the Contract, the following coverage(s):
- (i) Industrial/Workers' Compensation Insurance protecting the Company and the City from potential Company employee claims based upon job-related sickness, injury, or accident, during performance of this Contract, and must submit proof of such insurance on a certificate of insurance issued by an insurer qualified to underwrite workers' compensation insurance in the State of Nevada, in accordance with NRS 616A-616D, inclusive. If Company is a sole proprietor, it will be required to submit an affidavit indicating that the Company has elected not to be included in the terms, conditions and provisions of NRS 616A-616D, inclusive, and is otherwise in compliance with those terms, conditions and provisions. The Company's Workers' Compensation policy shall have a waiver of subrogation endorsement in favor of the City of Las Vegas.
 - (ii) Commercial General Liability Insurance (bodily injury, property damage) with respect to the Company's agents assigned to the activities performed under this Contract in a policy limit of \$12,500,000 per occurrence and \$12,500,000 in the aggregate, for bodily injury, products, completed operations, personal injury and property damages. Such coverage shall be on an "occurrence" basis and not on a "claims made" basis, and be provided on either a Commercial General Liability or a Broad Form Comprehensive General Liability (including a Broad form CGL endorsement) insurance form. The form must be written on an ISO Form CG 00 01 12 19, or an equivalent form. The Company's General Liability policy shall have a waiver of subrogation endorsement in favor of the City of Las Vegas, and shall be endorsed to include the City, its officers, and employees as additional insured. Company may evidence the total limits required through a combination of primary and excess policies.
 - (iii) Commercial Automobile Liability Insurance of limits of \$1,000,000 combined single limit per occurrence for bodily injury and property damage to include, but not be limited to, coverage against all insurance claims for injuries to persons or damages to property which may arise from services rendered by Company and any auto used in the performance of services under this Contract. The policy must insure all vehicles **owned** by the Company and include coverage for **hired** and **non-owned** vehicles. If the services requested do not require the use of the vehicle to perform, the Commercial Automobile Liability Insurance requirements as described in this paragraph do not apply. The Company's Automobile Liability policy shall have a waiver of subrogation endorsement in favor of the City of Las Vegas, and shall be endorsed to include the City, its officers, and employees as additional insured.
- (b) The Company must provide compliant certificates of insurance and required endorsements to the City or its designated certificate tracking service immediately upon request. The Company shall maintain coverage for the duration of this Contract, and any renewal periods if applicable. The Company shall annually provide the City's designated certificate tracking service with a certificate of insurance and endorsements as evidence that all insurance requirements have been met.
- (c) All required aggregate limits must be disclosed and amounts entered on the certificate(s) of insurance. The certificates must identify the Contract number, the Contract description, and for internal City routing purposes only the name of the appropriate City division/department. The Company and/or insurance carrier shall provide the City with a 30-day advance notice of policy, cancellation sent by certified mail "return receipt requested".
- (d) The certificates and endorsements for each insurance policy are to be signed by a person authorized by that insurer and licensed by the State of Nevada. Each insurance carrier's rating as shown in the latest Best's Key Rating Guide shall be fully disclosed and entered on the required certificate of insurance. The City requires insurance carriers to

maintain a Best's Key minimum rating of A- VII, A- VIII, A- IX, A- X, or higher. The adequacy of the insurance supplied by the Company, including the rating and financial health of each insurance carrier providing coverage, is subject to the approval of the City.

(e) [Reserved]

(f) **Companies requesting increased deductibles or self-insured retentions must provide the City a written request stating the desired amounts along with recent audited financial statements for review. The City will review the request and determine if the requested deductibles or self-insured retentions are acceptable. .**

(g) If the Company fails to carry the required insurance, the City may (i) order the Company to stop further performance hereunder, declare the Company in breach, pursuant to Section E-5, "Event of Default", terminate the Contract if the breach is not remedied and, if permitted, assess liquidated damages, or (ii) purchase replacement insurance and withhold the costs or premium payments made from the payments due to the Company or charge the replacement insurance costs back to the Company.

(h) Any subcontractor or subconsultant approved by the City shall be required to procure, maintain, and submit proof of insurance to the City of the same insurance requirements as specified above, and as required in this paragraph.

(i) The Company is encouraged to purchase any additional insurance it deems necessary.

(j) The Company is required to remedy all injuries to persons and damage or loss to any property of the City caused in whole or in part by the Company, its subcontractors or anyone employed, directed, or supervised by the Company.

D-6 Warranty – Services [CAO-3/31/2022]

Company warrants that the services shall be performed in full conformity with this Contract, with the professional skill and care that would be exercised by those who perform similar services in the commercial marketplace, and in accordance with accepted industry practice. In the event of a breach of this warranty, or in the event of non-performance or failure of the Company to perform the services in accordance with this Contract, the Company shall, at no cost to the City, re-perform or perform the services so that the services conform to the warranty.

D-7 Holidays/Weekends [CAO-01/20/16] R

The Company is excused from performance on weekends and the following legal holidays (on the actual day the holiday is observed):

Martin Luther King's Birthday

President's Day

Memorial Day

Juneteenth

Independence Day

Labor Day

Nevada Admission Day

Veterans Day

Thanksgiving Day and Friday After

Christmas Day

New Year's Day

D-8 Liquidated Damages [CAO-01/20/2016]

Assessment of liquidated damages does not apply to this Contract.

SECTION E – General Conditions**E-1 Legal Notice [CAO-4/2020]**

- (a) Any notice required to be given hereunder shall be deemed to have been given when written notice is (i) received by the party to whom it is directed by personal service; (ii) three (3) days after deposit with the United States Post Office, by registered or certified mail, postage prepaid and addressed to the party to be notified at the address for such party; (iii) one (1) day after deposit with a nationally recognized air courier service such as FedEx; or (iv) by an email sent to the email address of the recipient stated in this Section. All notices shall be effective upon receipt by the party to which notice is given or if it is delivered by email, when the recipient acknowledges having received that email, with an automatic “read receipt” not constituting acknowledgment of an email for notice purposes. Either party hereto may change its address by giving ten (10) days advance notice to the other party as provided herein. Phone and fax numbers, if listed, are listed for information only:

FOR THE CITY: Manager, Purchasing and Contracts
City of Las Vegas
495 South Main Street, 4th Floor
Las Vegas, Nevada 89101-2986
Fax: (702) 384-9964
Email: purchasing@lasvegasnevada.gov

FOR THE COMPANY: As Noted in Section A-1 (d) of the Contract:

- (b) The parties shall provide written notification of any change in the information stated above.
- (c) For purposes of this Contract, legal notice shall be required for all matters involving potential termination actions, litigation, indemnification, and unresolved disputes. This does not preclude legal notice for any other actions having a material impact on the Contract.
- (d) Routine correspondence should be directed to the Project Manager or the Company Representative, as appropriate.

E-2 Disputes [CAO-4/2020]

- (a) For each claim or dispute arising between the parties under this Contract, the parties shall attempt to resolve the matter through escalating levels of management. In the event the matter cannot be successfully resolved in this manner, the City is granted the sole right, regardless of which party is asserting the claim or dispute, to determine between arbitration and litigation as the forum in which the party desiring to proceed further shall file to resolve the claim or dispute. For any and all claims or disputes asserted by the Company, the Company shall notify the City of its intent to proceed further with the claim or dispute and in response thereto, the City shall notify the Company as to its selected forum for resolution. For any and all claims or disputes asserted by the City, the City shall notify the Company in the notice of its intent to proceed with further resolution whether it has selected arbitration or litigation as the forum to resolve the claim or dispute. In the event arbitration is the designated forum, such arbitration shall be binding on the parties.
- (b) If arbitration is selected by the City as the forum for further resolution, the claim or dispute shall be filed with the American Arbitration Association under its then current Commercial Arbitration Rules, Expedited Procedures, regardless of the amount of the claim or dispute.
- (c) The laws of the State of Nevada shall govern the validity, construction, performance, and effect of this Contract, without giving effect to its conflict of law provisions. If arbitration is selected, each party hereto consents to, and waives any objection to, venue being the offices of the American Arbitration Association located in Las Vegas, Nevada, or other venue mutually agreed by the parties. If litigation is selected, each party hereto consents to, and waives any objection to, the State courts located in the County of Clark, State of Nevada as the proper and exclusive venue for any disputes arising out of or relating to this Contract or any alleged breach thereof. Each party hereby waives trial by jury in any action, proceeding or counterclaim brought by either of them against the other on any matters whatsoever arising out of or in any way connected with this Contract.

E-3 Notice of Delay [CAO-01/20/16]

- (a) If timely performance by the Company is jeopardized by the non-availability of City provided personnel, data, or equipment, the Company shall notify the City immediately in writing of the facts and circumstances causing such delay.

Upon receipt of this notification, the City will advise the Company in writing of the action which will be taken to remedy the situation.

- (b) The Company shall advise the City in writing of an impending failure to meet established milestones or delivery dates based on the Company's failure to perform. Notice shall be provided as soon as the Company is aware of the situation; however, such notice shall not relieve the Company from any existing obligations regarding performance or delivery.

E-4 Termination for Convenience [CAO-08/22/2019]

The City shall have the right at any time to terminate further performance of this Contract, in whole or in part, for any reason whatsoever (including no reason). Such termination shall be effected by written notice from the City to the Company specifying the extent and effective date of the termination. On the effective date of the termination, the Company shall terminate all work and take all reasonable actions to mitigate expenses. The Company shall submit a written request for incurred costs for services performed through the date of termination, and shall provide any substantiating documentation requested by the City. In the event of such termination, the City agrees to pay the Company within thirty (30) days after receipt of a correct, adequately documented written request. The City's sole liability under this Section is for payment of costs for goods and services requested by the City and actually performed by the Company.

E-5 Event of Default [CAO-12/30/2020]

- (a) If, during the term of this Contract, the Company (i) fails to deliver services that comply with the Scope of Work, (ii) fails to deliver the services within the time specified in the Purchase Order or Scope of Work or any extension thereof, (iii) fails to make progress so as to endanger the performance of this Contract, (iv) becomes insolvent, bankrupt or makes an assignment for the benefit of creditors, or if a receiver or trustee in bankruptcy is appointed for the Company, or if any proceeding in bankruptcy, receivership, or liquidation is instituted against the Company and is not dismissed within thirty (30) days following commencement thereof, or (v) fails to perform any of the other obligation or requirement of this Contract, then any of the aforementioned failures shall constitute an "Event of Default" under this Contract.
- (b) If there occurs an Event of Default, the Company shall be entitled to ten (10) calendar days from written notice thereof to remedy the Event of Default, provided, however, such is capable of being remedied within that period. If the Event of Default can be remedied, but the remedy cannot be completed within the ten (10) day period, the Company may be allowed such additional time as may be reasonably necessary to remedy the Event of Default, provided, however, the remedy is commenced within the ten (10) day period and is diligently pursued to completion but in no event later than thirty (30) days after such written notice. Said time period may be extended at City's sole discretion. If the Event of Default is incapable of remediation, or is not remedied as required herein, the City may, in addition to any other remedies available in law or equity, invoke any of the remedies provided for under Section E-6, "Termination for Default", below.

E-6 Termination for Default [CAO-4/2020]

- (a) If the Event of Default is not remedied as required pursuant to Section E-5, "Event of Default", the City may, by written notice to the Company pursuant to Section E-1, "Legal Notice", terminate this Contract in whole or in part.
- (b) If this Contract is terminated in whole or in part because the Company has failed to provide services in compliance with the specifications by the deadline of remediation period, the City may acquire, under reasonable terms and in a manner it considers appropriate, replacement services that are comparable to the services that the Company failed to deliver to the City, and the Company shall be liable to the City for any excess costs related thereto. If the City terminates this Contract only in part, the Company shall continue to perform the un-terminated obligations or portions of this Contract.
- (c) The Company shall not be liable for any excess costs if the failure to perform the Contract arises from circumstances beyond the control of, and without the fault or negligence on the part of, the Company. These circumstances are limited to such causes as (i) acts of God or of the public enemy, (ii) acts of governmental bodies, (iii) fires, (iv) floods, (v) epidemics/pandemics, (vi) quarantine restrictions, (vii) labor strikes, (viii) freight embargoes, or (ix) unusually severe weather. The time of performance of the Company's obligations under this Contract shall be extended by such period of enforced delay; provided, however, that such reasonably extended time period shall not exceed sixty (60) days. If the foregoing circumstances result in a delay greater than 60 days, the City may terminate the affected portion of the Contract pursuant to the terms of Section E-4, "Termination for Convenience".
- (d) The City retains the right to terminate for default immediately if the Company fails to maintain the required insurance, and/or bonding, fails to comply with applicable local, state, and federal statutes governing performance of these services, or fails to comply with statutes involving health or safety.

- (e) If the City fails to perform any of its obligations required under this Contract, and the City does not remedy the failure after notice thereof is provided to the City by the Company pursuant to the requirements of Section E-1, "Legal Notice" above, the Company shall have the right to treat the failure as a claim or dispute subject to the resolution provisions of E-2, "Disputes" of this Contract. During the period of such resolution, the Company shall continue with its performance under the Contract.

E-7 Limitation of Funding/Non-Appropriation [CAO-4/2020]

The Company acknowledges that City is a governmental entity and the Contract's validity is based upon the availability of public funding under its authority. The City reserves the right to reduce estimated or actual quantities, in whatever amount necessary, without prejudice or liability to the City, if funding is not available or if legal restrictions are placed upon the expenditure of monies for the services required under this Contract. In addition, and without prejudice or liability to the City, if funds are not appropriated or otherwise made available to support continuation in any fiscal year succeeding the first fiscal year, this Contract will be deemed to have been terminated automatically when appropriated funds expire and are not available. The City shall notify Company in writing of any such non-allocation of funds at the earliest possible date and shall pay Company any reasonable fees earned and costs incurred in performing this Contract for any period prior to such notice.

E-8 Changes - Fixed-Price Goods or Services [CAO-4/2020]

- (a) The City may at any time, by written order, and without notice to the sureties, if any, make changes within the general scope of this Contract in any one or more of the following:
- (i) Description of services to be performed or goods to be provided.
 - (ii) Time of performance (i.e., hours of the day, days of the week, etc.).
 - (iii) Place of performance of the services.
 - (iv) Time or place of delivery of goods
- (b) If any such change causes an increase or decrease in the cost of, or the time required for, performance of any part of the work under this Contract, the Company shall provide current, complete, and accurate documentation to the City in support of any request for equitable adjustment.
- (c) The Company must assert its right to an adjustment under this clause within thirty (30) days from the date of receipt of the written order, or shall otherwise be barred and shall have waived any right to an adjustment under this clause.
- (d) The parties shall negotiate a timely requested equitable adjustment by mutual written agreement and the change will be effected by purchase order revision. Failure to agree to any adjustment shall be a dispute under Section E-2, "Disputes"; however, nothing in this clause shall excuse the Company from proceeding with the Contract as changed.

E-9 Entire Contract, Section and Paragraph Headings [CAO-4/2020]

- (a) This Contract represents the entire and integrated agreement between the City and the Company. It supersedes all prior and contemporaneous understandings, negotiations, communications, representations, and agreements, whether oral or written, relating to the subject matter of this Contract.
- (b) The section and paragraph headings appearing in this Contract are inserted for the purpose of convenience and ready reference. They do not purport to define, limit, or extend the scope or intent of the language of the sections and paragraphs to which they pertain.

E-10 Order of Precedence [CAO-7/24/08]

In the event of a conflict between the specific language set forth in Sections A through E of this Contract and any Attachment or Exhibit, the specific language in Sections A through E shall prevail. Any exception to this order of precedence will be addressed through specific language elsewhere in Sections A through E.

E-11 Severability [CAO-7/24/08]

The invalidity, illegality, or unenforceability of any provision of this Contract or the occurrence of any event rendering any portion or provision of this Contract void shall in no way affect the validity or enforceability of any other portion or provision of this Contract. Any void provision shall be deemed severed from this Contract, and the balance of this Contract shall be

construed and enforced as if this Contract did not contain the particular portion or provision held to be void. The parties further agree to amend this Contract to replace any stricken provision with a valid provision that comes as close as possible to the intent of the stricken provision. The provisions of this clause shall not prevent this entire Contract from being void should a provision which is of the essence of this Contract be determined void.

E-12 Waiver [CAO-7/24/08]

Waiver of any of the terms of this Contract shall not be valid unless it is in writing signed by each party. The failure of the City to enforce any of the provisions of this Contract, or to require performance of any of the provisions herein, shall not in any way be construed as a waiver of such provisions or to affect the validity of any part of this Contract, or to affect the right of the City to thereafter enforce each and every provision of this Contract. Waiver of any breach of this Contract shall not be held to be a waiver of any other or subsequent breach of this Contract.

E-13 Modification/Amendment [CAO-7/24/08]

This Contract shall not be modified or amended except by the express written agreement of the parties, signed by a duly authorized representative for each party. Any other attempt to modify or amend this Contract shall be null and void, and may not be relied upon by either party.

E-14 Assignment [CAO-7/24/08]

Neither party may assign their rights nor delegate their duties under this Contract without the written consent of the other party. Such consent shall not be withheld unreasonably. Any assignment or delegation shall not relieve any party of its obligations under this Contract.

E-15 Indemnification [CAO-4/2020]

- (a) In addition to the insurance requirements set forth in Section D-5, "Insurance", and not in lieu thereof, the Company shall protect, defend, indemnify and hold harmless the City, its elected officials, officers, employees, agents, and consultants (collectively herein the "City") from and against any and all claims, liabilities, damages, losses, suits, actions, decrees, arbitration awards and judgments including reasonable attorney's fees, court costs or other expenses of any and every kind or character (collectively herein the "Liabilities") which may be recovered from or sought against the City, to the extent caused by (i) any negligent act or omission, on the part of the Company, its officers, employees, independent contractors, vendors, suppliers, consultants, or agents in the performance of the terms, conditions and covenants of the Contract; or (ii) a breach of any agreement between the Company and its employees, vendors, independent contractors, suppliers, consultants or agents; or (iii) any default in the performance of any obligation on Company's part to be performed under the terms of this Contract. Company agrees that it is assuming the sole risk of any Liabilities related to the contraction by Company's officers, employees, vendors, suppliers, agents, independent contractors, and consultants or any other person of any viral infection or other disease, including, without limitation, COVID 19, related to the performance of this Contract and that Company's indemnity obligations contained herein cover any such Liabilities. In no event shall the language in this Section constitute or be construed as a waiver or limitation of the City's rights or defenses with regard to sovereign immunity, governmental immunity, or other official immunities and protections as provided by the Federal and State Constitutions or by law.
- (b) If a third party claim against the City for negligent performance by the Company is within the limits of its liability insurance, and the insurance company has accepted the City's tender of defense, then the City will pay the Company what is due and owing to them within the payment method specified in this Contract. However, if the claim is greater than the coverage amount, the City, for its protection, may retain any money due and owing the Company under this Contract, until the claim has been resolved. In the event no money is due and owing, the surety, if required, of the Company, may be held until all of the Liabilities have been settled and suitable evidence to that effect furnished to the City.
- (c) It is expressly agreed that the Company shall defend the City at Company's expense, by legal counsel reasonably satisfactory to City, against the Liabilities and in the event that the Company fails to do so, the City shall have the right, but not the obligation, to defend the same and to charge all direct and incidental costs, including reasonable attorney's fees and court costs, to the Company. Company's indemnity obligations herein are not intended to nor shall they relieve any insurance carrier of its obligations under policies required to be carried by Company pursuant to the provisions of this Contract. Company's obligations under this Section shall survive any termination of this Contract for a period of two years.

- (d) Notwithstanding anything to the contrary in this Contract, Company's indemnity, defense, and hold harmless obligations will not extend to any claim or liability that is alleged to be caused by the negligence or willful misconduct of the indemnified party or other third party not controlled by Company; rather, such indemnification claims will be administered based upon a determination of the degree of comparative fault of each party. Company retains the right to select counsel reasonably acceptable to the indemnified party, the indemnified party will provide reasonable cooperation and not unreasonably withhold consent to settle any claims for which Company is providing defense or indemnification.
- (e) Notwithstanding anything to the contract, in no event will Company be liable for any consequential, indirect, incidental, special, exemplary, punitive, or enhanced damages, and in no event with Company's aggregate liability arising out of this Agreement, or the services performed exceed the amount of the applicable insurance limits set forth in the Agreement.

E-16 Patent Indemnity [CAO-12/30/2020]

The Company hereby indemnifies and shall defend and hold harmless the City and its representatives respectively from and against all claims, losses, costs, damages, and expenses, including reasonable attorney's fees, incurred by City and its representatives, respectively, to the extent caused by any claims or actions based upon infringement or alleged infringement of any patent or other intellectual property and arising out of the use of the equipment or materials furnished under the contract by the Company, or out of the processes or actions employed by, or on behalf of the Company in connection with the performance of the Contract. The Company shall, at its sole expense, by legal counsel reasonably satisfactory to City, promptly defend against any such claim or action unless directed otherwise by the City or its representative; provided that the City or its representatives shall have notified the Company upon becoming aware of such claims or actions, and provided further that the Company's aforementioned obligations shall not apply to equipment, materials, or processes furnished or specified by the City or its representatives.

E-17 Audit of Records [CAO-5/2/12]

- (a) The Company agrees to maintain the financial books and records (including supporting documentation) pertaining to the performance of this Contract according to standard accounting principles and procedures. The books and records shall be maintained for a period of three (3) years after completion of this Contract, except that books and records which are the subject of an audit finding shall be retained for three (3) years after such finding has been resolved. If the Company goes out of business, the Company shall forward the books and records to the City to be retained by the City for the period of time required herein.
- (b) The City or its designated representative(s) shall have the right to inspect and audit (including the right to copy and/or transcribe) the books and records of the Company pertaining to the performance of this Contract during normal business hours. The City will provide prior written notice to the Company of the audit and inspection. If the books and records are not located within Clark County, the Company agrees to deliver them to the City, or to an address designated by the City within Clark County. In lieu of such delivery, the Company may elect to reimburse the City for the cost of travel (including transportation, lodging, meals, and other related expenses) to inspect and audit the books and records at the Company's office. If the books and records provided to the City are incomplete, the Company agrees to remedy the deficiency after written notice thereof from the City, and to reimburse the City for any additional costs associated therewith including, without limitation, having to revisit the Company's office. The Company's failure to remedy the deficiency shall constitute a material breach of this Contract. The City shall be entitled to its costs and reasonable attorney fees in enforcing the provisions of this Section.
- (c) If at any time during the term of this Contract, or at any time after the expiration or termination of the Contract, the City or the City's designated representative(s) find the dollar liability is less than payments made by the City to the Company, the Company agrees that the difference shall be either: (i) repaid immediately by the Company to the City or (ii) at the City's option, credited against any future billings due the Company.

E-18 Confidentiality – City Information [CAO-4/2020]

- (a) All information, including but not limited to, oral statements, computer files, databases, and other material or data supplied to the Company is confidential and privileged. The Company shall not disclose this information, nor allow it to be disclosed to any person or entity without the express prior written consent of the City. The Company will use at least the same standard of care and exercise equivalent security measures to maintain the confidentiality of the City's information that it uses to maintain the confidentiality of its own confidential information; provided in no event shall such

standard be less than reasonable care. The Company shall have the right to use any such confidential information only for the purpose of providing the services under this Contract, unless the express prior, written consent of the City is obtained. City shall be and remain the sole owner of such confidential information. Nothing contained in this Contract shall be construed as granting or conferring any right or license in the City's information or in any patents, software, or other technology, either expressly or by implication to the Company. Upon request by the City, the Company shall promptly return to the City all confidential information supplied by the City, together with all copies and extracts. Company is required to employ the highest ethical standards and shall avoid those actions that are inconsistent with the City's best interest.

- (b) The confidentiality requirements shall not apply where (i) the information is, at the time of disclosure by the City, then in the public domain; (ii) the information is known to the Company prior to obtaining the same from the City; (iii) the information is obtained by the Company from a third party who did not receive the same directly or indirectly from the City; or (iv) the information is subpoenaed by court order or other legal process, but in such event, the Company shall notify the City. In such event the City, in its sole discretion, may seek to quash such demand.
- (c) The obligations of confidentiality shall survive the termination of this Contract.

E-19 Marketing Restrictions [CAO-4/2020]

The Company shall at all times be in compliance with Las Vegas Municipal Code 1.08.050, and shall not publish or sell any information from or about this Contract without the prior written consent of the City. This restriction does not apply to the use of the City's name in a general list of customers, so long as the list does not represent an express or implied endorsement of the Company or its services. The City logo shall not be used without the prior written consent of the City.

E-20 Intellectual Property Rights [CAO-4/2020]

All deliverables produced under this Contract, as well as all data, notes and documentation collected on behalf of the City, are exclusively the property of the City. The Company shall have no property interest in, and may assert no claim or lien on, or right to withhold from the City, or right to use said data other than in performance of its obligations pursuant to this Contract, any data it receives from, receives access to, or stores on behalf of the City. At any time during the term of this Contract, and within thirty (30) days of the expiration or termination of this Contract, the Company will upon request return the data to the City at no charge in the format held by Company. On City request, the Company will delete all City data and will provide appropriate certification to the City to document the disposal. The Company shall promptly notify the City if the Company becomes aware of any unauthorized access, acquisition, disclosure, use, modification, destruction or other misuse of the City's data or other confidential information, and shall fully cooperate with the City in any legal action taken by the City to enforce its rights therein. This Section shall survive termination or expiration of this Contract.

E-21 Taxes/Compliance with Laws [CAO-08/01/13]

- (a) The City is exempt from paying Sales and Use Taxes under the provisions of Nevada Revised Statutes 372.325(4), and Federal Excise Tax, under Registry Number 88-87-0003k. The Company shall pay all taxes, levies, duties and assessments of every nature and kind which may be applicable to any work under this Contract. The Company shall make any and all payroll deductions required by law. The Company agrees to indemnify and hold the City harmless from any liability on account of any and all such taxes, levies, duties, assessments, and deductions.
- (b) The Company, in the performance of the obligations of this Contract, shall comply with all applicable laws, rules and regulations of all governmental authorities having jurisdiction over the performance of this Contract including, but not limited to, the Federal Occupational Safety and Health Act.

E-22 Licenses/Registrations [CAO-01/20/16]

During the entire performance period of this Contract, the Company shall maintain all federal, state, and local licenses, certifications and registrations applicable to the work performed under this Contract, including maintaining an active City of Las Vegas business license if required by Las Vegas Municipal Code 6.02.060.

E-23 Non-Discrimination and Fair Employment Practices [CAO-07/31/13]

- (a) Discrimination: The City of Las Vegas is committed to promoting full and equal business opportunity for all persons doing business in Las Vegas. The Company acknowledges that the City has an obligation to ensure that public funds are not used to subsidize private discrimination. Company recognizes that if the Company or their subcontractors or

subconsultants are found guilty by an appropriate authority of refusing to hire or do business with an individual or company due to reasons of race, color, religion, sex, sexual orientation, gender identity or expression, age, disability, national origin, or any other legally protected status, City may declare the Company in breach of contract and terminate Contract.

- (b) Fair Employment Practices: In connection with the performance of work under this Contract, the Company agrees not to discriminate against any employee or applicant for employment because of race, color, religion, national origin, sex, sexual orientation, gender identity or expression, age, disability, national origin, or any other legally protected status. Such agreement shall include, but not be limited to, the following: employment; upgrading; demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.
- (c) The Company further agrees to insert this provision in all subcontracts hereunder. Any violation of such provision by a Company shall constitute a material breach of this Contract.

E-24 Employment of Unauthorized Aliens [CAO-01/20/16]

In accordance with the Immigration Reform and Control Act of 1986, the Company agrees that it will not employ unauthorized aliens in the performance of this Contract.

E-25 Conforming Services [CAO-4/2020]

The services performed under this Contract shall conform in all respects with the requirements set forth in this Contract. The Company shall furnish the City with sufficient data and information needed to determine if the services performed conform to all the requirements of this Contract.

E-26 Independent Contractor [CAO-4/2020]

In the performance of its obligations under this Contract, the Company and any other person employed by it shall be deemed to be an independent contractor and not an agent or employee of the City. The Company shall be liable for the actions of any person, organization, or corporation with which it subcontracts to fulfill this Contract. Accordingly, Company shall be responsible for payment of all taxes including federal, state and local taxes arising out of the Company's activities in accordance with this Contract, including by way of illustration but not limitation, federal and state income tax, Social Security tax, unemployment insurance taxes, and any other taxes or business license fees as required under existing or subsequently enacted laws, rules or regulations. Company shall not be entitled to any benefits afforded to City's employees, including without limitation worker's compensation, disability insurance, health insurance, vacation, or sick pay. Company shall be responsible for providing, at Company's expense, and in Company's name, unemployment, disability, worker's compensation, and other insurance, as well as licenses and permits usual or necessary for performance of its obligations pursuant to this Contract. Company shall hereby defend, indemnify, and hold the City harmless from any claims, losses, costs, fees, reasonable attorney's fees, liabilities, damages or injuries suffered by the City to the extent caused by Company's failure with respect to its obligations in this Section. Company, upon request, shall furnish evidence satisfactory to the City that any or all of the foregoing obligations have been fulfilled. During Company's contacts with third parties they shall identify themselves as an independent party and not as an employee for the City. Company understands and agrees that they do not have the power or authority to bind City in any capacity. The City shall hold the Company as the sole responsible party for the performance of this Contract. The Company shall maintain complete control over its employees and all of its subcontractors. Nothing contained in this Contract or any subcontract awarded by the Company shall create a partnership, joint venture, or agency with the City. Neither party shall have the right to obligate or bind the other party in any manner to any third party.

E-27 Official, Agent and Employees of the City Not Personally Liable [CAO-01/20/16]

It is agreed by and between the parties of this Contract, that in no event shall any official, officer, employee, or agent of the City in any way be personally liable or responsible for any covenant or agreement therein contained whether expressed or implied, nor for any statement, representation or warranty made herein or in any connection with this Contract.

E-28 Conflict of Interest (City Officials) [CAO-4/2020]

- (a) An official of the City, who is authorized on behalf of the City to negotiate, make, accept or approve, or take part in negotiating, making, accepting, or approving this Contract, payments under this Contract, or work under this Contract, shall not be directly or indirectly interested personally in this Contract or in any part hereof. No officer, employee,

architect, attorney, engineer or inspector of, or for the City, who is authorized on behalf of the City to exercise any legislative, executive, supervisory or other similar functions in connection with this Contract, shall become directly or indirectly interested personally in this Contract or in any part hereof, any material supply contract, subcontract, insurance contract, or any other contract pertaining to this Contract.

- (b) Each party represents that it is unaware of any financial or economic interest of any public officer or employee of the City relating to this Contract. Notwithstanding any other provision of this Contract, if such interest becomes known, the City may immediately terminate this Contract for default or convenience, based on the culpability of the parties.
- (c) The Company represents and warrants that it has, in accordance with the current policy of the City, disclosed the ownership and principals of the Company on Attachment 1 (Certificate – Disclosure of Ownership and Principals), and that it has a continuing obligation to update this disclosure whenever there is a material change in the information contained therein. Throughout the Contract Term, Company shall notify City in writing of any material change in the above disclosure within ten (10) days of any such change.

E-29 Public Records [CAO-5/2/12]

The City is a public agency as defined by state law. As such, it is subject to the Nevada Public Records Law (Chapter 239 of the Nevada Revised Statutes). The City's Records are public records, which are subject to inspection and copying by any person (unless declared by law to be confidential). This Contract and all supporting documents are deemed to be public records.

E-30 Use By Other Government Entities [CAO-01/20/16]

A governing body or its authorized representative and the State of Nevada may join or use the contracts of local governments located within or outside this State with the authorization of the contracting vendor. In the event the Company allows another governmental entity to join the Contract, it is expressly understood that the City shall in no way be liable for the obligations of the joining governmental entity.

E-31 Certification – No Israel Boycott [CAO–4/2020]

(Applicable to contracts with an estimated annual amount over \$100,000)

By signing this Contract, the Company certifies that it is not engaged in, and agrees for the duration of the Contract not to engage in, a boycott of the State of Israel per NRS 332.065.

“Boycott of Israel” means refusing to deal or conduct business with, abstaining from dealing or conducting business with, terminating business or business activities with or performing any other action that is intended to limit commercial relations with Israel; or a person or entity doing business in Israel or in territories controlled by Israel, if such an action is taken in a manner that discriminates on the basis of nationality, national origin or religion. It does not include an action which is based on a bona fide business or economic reason; is taken pursuant to a boycott against a public entity of Israel if the boycott is applied in a nondiscriminatory manner; or is taken in compliance with or adherence to calls for a boycott of Israel if that action is authorized in 50 U.S.C. § 4607 or any other federal or state law.

“Company” means any domestic or foreign sole proprietorship, organization, association, corporation, partnership, joint venture, limited partnership, limited-liability partnership, limited-liability company, or other domestic or foreign entity or business association, including, without limitation, any wholly owned subsidiary, majority owned subsidiary, parent company or affiliate of such an entity or business association, that exists for the purpose of making a profit.

A violation of this Section by Company shall be considered an incurable Event of Default of this Contract, thereby allowing the City to immediately terminate this Contract upon giving Legal Notice to Company.

E-32 Counterpart Signatures [CAO-08/11/2022]

This Contract may be executed in counterparts. All such counterparts will constitute the same contract and the signature of any party to any counterpart will be deemed a signature to, and may be appended to, any other counterpart. Executed copies hereof may be delivered by facsimile or e-mail and upon receipt will be deemed originals and binding upon the parties hereto, regardless of whether originals are delivered thereafter.

The parties agree that this Contract may be signed electronically via the City's designated electronic signature platform, and that the electronic signatures appearing herein shall be considered the same as handwritten signatures for the purposes of validity, admissibility, and enforceability.

E-33 Miscellaneous [CAO – 4/2020]

- (a) In the event of a dispute under this Contract which results in litigation or other formal dispute resolution proceedings, the prevailing party shall be entitled to reimbursement of its or their actual reasonable attorney's fees and costs in connection with such proceeding.
- (b) Time is of the essence of the Contract and each of its provisions.

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IN WITNESS WHEREOF, the parties hereto have caused this Contract to be executed by their duly authorized representatives.

CITY OF LAS VEGAS

DAVEY RESOURCE GROUP, INC.

SignatureDate

Printed Name

Title

DocuSigned by:
Joshua J Behounek
AC3CADD404C14E7...

2/29/2024 | 12:04 PM PST

SignatureDate

Joshua J Behounek

Printed Name

Business Development Manager

Title

ATTEST:

LuAnn D. Holmes, MMCDate

City Clerk

APPROVED AS TO FORM:

DocuSigned by:
James B. Lewis
DD1EE26948C64F0...

2/26/2024 | 1:36 PM PST

Deputy City AttorneyDate

James B. Lewis

Printed Name

EXHIBIT A - SCOPE OF WORK

COVER PAGE

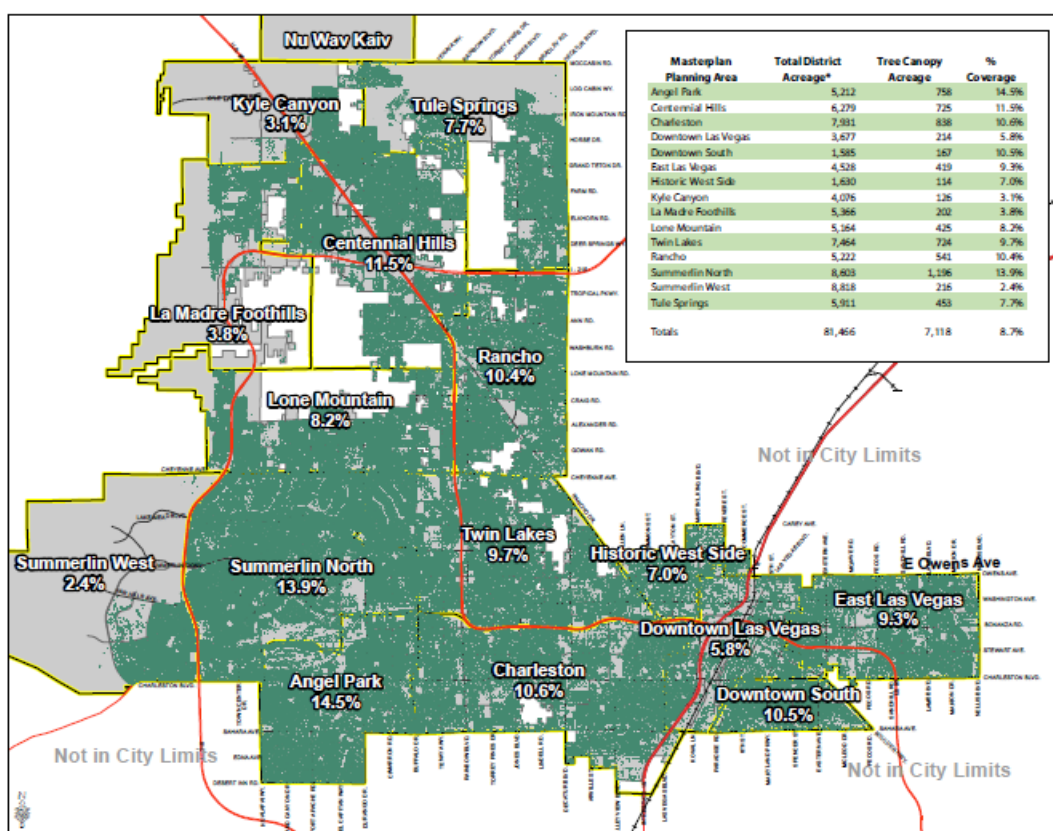
SCOPE OF WORK

Urban Forestry Management Plan

1. PURPOSE AND OBJECTIVE: The Company shall provide services to support the City of Las Vegas, Nevada (the “city” – a Tree City USA in the development of an urban forestry management plan. As specified in City Council resolution R-43-2022 adopted in September 2022, the Urban Forester, in consultation with the Departments of Parks, Recreation, and Cultural Affairs; Community Development; and Public Works, shall:

- a. Prepare and maintain an inventory of all trees on City property and in public rights of way and a plan to ensure that the species of trees are diverse for protection from catastrophic loss due to pests or disease; and
- b. Prepare an Urban Forestry Management Plan in alignment with relevant 2050 Master Plan outcomes, including any necessary policy recommendations and budgetary needs for City Council for urban forestry.

1.2 This inventory and plan will be consistent with the overarching goals and outcomes in the 2050 Master Plan and provide the necessary blueprint for tree planting over the next three decades.



2. Background: The City’s 2050 Master Plan was adopted by the Las Vegas City Council in 2021. Within the Plan’s Land Use and Environment Chapter, the Urban Forestry goal describes a number of opportunities and challenges related to the urban heat island effect and notes City efforts to mitigate it through urban forestry and landscaping. The City’s long-term outcomes are to plant and maintain 60,000 diverse and high quality native and adaptive trees on public and private property and to increase the tree canopy to 20% by 2035 and 25% by 2050. The 2022 Annual Report of the Master Plan notes that 1200 trees have been planted and canopy coverage is approximately 9% citywide. Many of these trees have been grown and maintained at the City’s tree nurseries.

2.1 In an effort to attain these outcomes, the City Council adopted a resolution creating the Urban Forestry Program; concurrently, Going Green for Good Health, a tree initiative from the Mayor’s Fund for Las Vegas Life, was created as a mechanism to donate and plant trees at locations within the City. This resolution establishes a number of guidelines for the program, many of which can be further defined through the

development of the Urban Forestry Management Plan by: Inventorying and determining where more trees can be planted, how they should be maintained, how they can be paid for, and what efforts will be required.

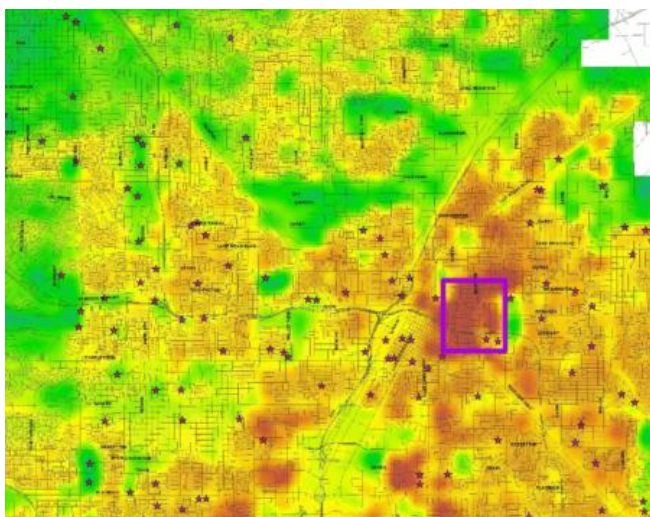
- a. Weighing and balancing at least two of the region's climate hazards described in the Master Plan (extreme heat and drought) as well as Environmental Justice.
- b. Supplementing the 2050 Master Plan, by providing direction for the Urban Forestry Program and incorporate useful policy recommendations for further consideration by the City.
- c. Considering and adhering to the Master Plan's guiding principles:
 - i. Resilience: Utilizing water efficient, drought tolerant adaptive tree and plant species help the City further mitigate and adapt against the hazard of extreme heat
 - ii. Innovation: Design structures and architectural features that provide shade as well as green space
 - iii. Livability: Parks, trees, and green infrastructure enhance the sense of place in the community and provide areas that are enjoyable to walk, bike, and recreate by all.
 - iv. Equity: Tree canopy coverage must be distributed throughout the City to ensure all residents, as well as members of vulnerable populations, have access to the benefits of trees
 - v. Health: Trees help reduce the urban heat island effect and overall temperatures, improve the quality of stormwater and air, and provide visual aesthetics that improve personal wellness.

3. Work Program, Project Costs, Schedule, and Deliverables: The Company shall have a strong background and understanding of the principles of urban forestry, to develop the Urban Forestry Management Plan consistent with the city's 2050 Master Plan and its guiding principles of equity, resilience, livability, health, and innovation as described in the objectives below.

3.1 Objective 1: Background information, research, and outreach

To assist the city in its development of the Urban Forestry Management Plan, the Company should be familiar with current, related plans, studies, and laws:

- a. Resolution R-43-2022 – Resolution Creating the City of Las Vegas Urban Forestry Program (attached)
- b. [City of Las Vegas 2050 Master Plan](#)
- c. [Vision 2045 Downtown Las Vegas Masterplan](#)
- d. [LVMC Title 13.48](#)
- e. [Unified Development Code of the City of Las Vegas \(LVMC Title 19\)](#)
- f. [Going Green for Good Health – Mayor's Fund for Las Vegas LIFE \(Tree Program\)](#)
- g. Plans and studies of other applicable state, local agencies (NDF, DRI, RTC, SNWA, etc.)
 - i. [RTC Studies and Reports](#) (Current/Recent: Extreme Heat, etc.)
 - ii. [Nevada Division of Forestry Community Reports](#)
 - iii. Urban Heat island effect and tree canopy coverage maps (2021-22)
 - iv. [SNWA Conservation Plan](#)



- h. At its discretion, the Company may conduct public outreach to gather information and support from residents, state, local, or regional governments (i.e., SNWA, industry groups, non-profits, academic institutions (DRI, UNR, etc), and other stakeholders. The Company may also choose to collaborate with the joint City of Las Vegas-UNLV team as described in Objective 4 to the extent practicable and necessary. If applicable, public participation processes should be inclusive to a wide range of groups; work with community based organizations is encouraged, but all public outreach shall be coordinated with the City's Office of Communications.

3.2 Objective 2: Tree Inventory Update

The City of Las Vegas currently utilizes TreeKeeper software to inventory approximately 40,000 City trees; using the same or similar software, the City requires an inventory update of those trees with all associated attributes, including, but not limited to: number of trees, location, species type, condition, size, how many empty tree spaces exist, how many trees can be pruned per year, how many have been removed (and the reason for removal).

3.3 Objective 3: Plan Development and Delivery

The Urban Forestry Management Plan will incorporate all of the work from the objectives and must be consistent with the City of Las Vegas 2050 Master Plan's guiding principles, goals, outcomes, key actions, and implementation strategies. Plan content should include, but is not limited to:

- a. Urban Forestry Status
 - i. Analyze and inventory the number of trees (Objective 2) and the percentage of tree coverage through its canopy on both private and public land in order to create a base line from which to evaluate the efficacy of the tree canopy goals stated in the 2050 Master Plan
 - ii. Evaluate existing tree canopy assessment and inventory – make recommendations for additional assessment or inventory. Determine time intervals for recurring assessments to gauge success. (ex. Canopy analysis every 8 years)
- b. Policies and Procedures
 - i. Ensure Urban Forestry Management Plan aligns with existing 2050 Master Plan, and other programs and policies
 - Provide recommendations to support canopy goals for future City Council consideration
 - ii. Evaluate existing policies, programs and regulations regarding trees, including but not limited to LVMC Title 19 landscaping waivers, easements, parking lot design, ordinances, codes, enforcement, and street tree design offering guidance in order to increase the tree canopy while allowing responsible development
 - iii. Define the role trees and the urban canopy play in a desert environment experiencing drought and extreme heat
 - iv. Assess current urban forestry outcomes documented in the 2050 Master Plan (starting on page 125).
 - v. Assembly Bill 356 (2021) requires commercial, multi-family, government, and other properties in Southern Nevada to stop watering and remove non-functional turf/grass starting in 2027. To ensure established trees within the turf remain viable after the non-functional turf is removed, offer guidance on how to maintain trees after the non-functional turf is removed.
 - vi. Provide Standard Operating Procedures for conserving water through soil care, mulch, species selection, soil volume requirements and irrigation details
 - vii. Provide pest management strategy
 - viii. Provide best practices for wildland fire management / wildland urban interface, as it may be applicable to city locations adjacent to public lands
- c. Urban Forestry Operations
 - i. Identify and map target areas (prioritizing the urban heat island and disadvantaged communities) for tree plantings with equitable distribution.
 - Discuss the potential impact heat and the urban heat island effect have on identified tree species
 - ii. Describe and assess the roles and responsibilities of city departments that engage with trees – public works, streets, planning, code, building, and community services
 - iii. Analyze the budget and staffing needs to provide appropriate tree care and labor to achieve tree canopy goals
 - iv. Create performance indicators to track the progress of Urban Forestry Master Plan (UFMP) goals
 - v. Create programs/strategies to incentivize invasive species removal – palms / salt cedar
 - Review the adopted, "[City of Las Vegas Approved Tree and Plant Species List](#)," and the "[Restricted Species List](#)."

- vi. Establish programs and strategies to incentivize for the removal of dead or hazardous trees on private property
- d. Community Engagement
 - i. Research similar jurisdictions that are also drought affected and compare Urban Forestry goals and programs including, but not limited to: municipality owned tree nurseries, municipality supported tree planting / tree giveaway program, urban forestry stewards and non-profit partnerships, and offer guidance for the City of Las Vegas
 - ii. Collaborate with the joint City of Las Vegas-UNLV team as described in Objective 4 to the extent practicable and necessary.
 - iii. Create citywide goals on how to promote and preserve greenspace, and encourage the planting of existing native landscapes and tree plantings (excluding turf grass)
 - iv. Establish programs and strategies to engage the public and plant trees on private property and develop a plan for long term care to ensure they reach maturity
 - v. Establish programs and strategies to incentivize for the preservation, care and planting of trees on private property
 - vi. Propose opportunities to build partnerships with local entities/corporations – SW Gas, NV Energy, SNWA, Casinos, Las Vegas Convention Center
 - vii. Provide engagement recommendations focusing on social and environmental justice issues, goals and paths for building understanding, commitments, and an action plan for a healthy tree canopy in underserved communities.
 - viii. Provide “best practices” educational materials to be distributed via hard copy or electronically (website and social media), including, but not limited to: tree species diversity, proper tree planting, and proper tree care
- e. Website
 - i. Create content for an Urban Forestry webpage on the City’s website to provide ongoing education, support, engagement, a tree selection tool, outreach, and updates. Content may include Best Management Practices for planting, irrigation, pruning, etc.
 - ii. Include TreeKeeper or similar software that is user friendly for the public to receive information about city tree planting efforts, including, but not limited to: How many trees are currently planted, where they are planted, species type, size, how many empty tree spaces exist, how many more trees must be planted to achieve 60k tree goal
 - iii. Create or provide digital or interactive maps depicting phased tree planting, suitable locations on public AND private property that allows the community tree planting requests in their neighborhood.
- f. Plantings
 - i. Create a budget, schedule, plan, and achievable benchmarks to achieve the 60,000 trees planted goal.
- g. Review
 - i. Develop a Methodology for future updates and provide a timeline for evaluation of the program and process for Urban Forestry Management Plan revisions and updates.
- h. The plan will be prepared for the City’s Planning Commission and City Council for possible adoption and should include both physical hard copies and digital copies to be displayed on the City’s interactive master plan website www.masterplan.vegas. The plan may include appropriate content including, but not limited to, a community needs assessment, visuals, maps, charts, renderings, implementation strategies, and/or photos to accessibly convey the plan.

3.4 Objective 4: Collaboration with University of Nevada, Las Vegas (UNLV)

To the extent practicable, the UNLV Team College of Urban Affairs and associated colleges of the university have resolved to collaborate with the City to both provide research on the urban forest and tree canopy and develop consistent current/future messaging and content, illustrating resilience, health, innovation and equity. The goal of the collaboration is to help show, versus tell, how the city’s activities benefit its residents, contextualizing and humanizing city efforts to develop a resilient community. The Company shall coordinate with this team as directed by the City.

3.5 Objective 5: Implementation

- a. Additional CIP funding has been reserved and is intended for one or more community-oriented implementation projects based on community recommendations and the outcomes of the plan, which may include, but is not limited to:
 - i. Community tree plantings
 - ii. A “Treebate” or other community incentive program
 - iii. A dedicated urban forestry website
 - iv. Purchase or acquisition of trees
 - v. Arbor Day / Tree City USA events
- b. Based on community feedback, the Company shall recommend one or more implementation activities and coordinate its execution with the City of Las Vegas, either during or after plan development (or adoption), or both.

EXHIBIT B – COMPANY PROPOSAL EXCERPTS

COVER PAGE



SECTION 3. WORK PLAN

The development of an Urban Forestry Management Plan (UFMP) is a comprehensive exercise in collaboration, education, research, and community participation. DRG has completed plans across the United States and Canada. Through the collaboration among the City of Las Vegas, community internal and external stakeholders, and the DRG team, a unique road map will emerge incorporating the combined experiences and knowledge of all parties. The framework and the vision of this plan will be generated through goal setting and research. Research will be both historical and current and conducted by document examination, canopy research, personnel, and community input. It will be guided by what the City of Las Vegas team asks DRG to look for, as well as our experience in **knowing what to look for**. It will result in identifying key components that will lead to stronger connections and engagement of the urban forest stakeholders within the City.

Specifically the plan will address the following outcomes:

- » Ensure that species are diverse for protection from catastrophic loss due to pests or disease.
- » Align the UFMP with relevant 2050 Master Plan outcomes, including policy recommendations and budget needs.
- » Consistency with overarching goals of the 2050 Master Plan and the guiding principles of equity, resilience, health, and innovation.
- » Provide a blueprint for tree planting over the next three decades.
- » Include objectives and guidance to plant and maintain 60,000 native/adaptive trees on public and private property to increase canopy to 20% by 2035 and 25% by 2050.
- » Mitigation of heat islands through trees and landscaping.
- » Equitable access to tree canopy and urban forestry services.

During the planning process, we utilize adaptive management techniques. This is a well used, proven methodology for planning at a variety of levels. The steps are simple and circular:

- » We look at **what the city has in their urban forestry program**. We do this by research and examination of documents, conversations with stakeholders, and engagement with the community.
- » At the same time we are listening to stakeholders about the current urban forestry situation, we listen for **what are the desired outcomes for the program**. This is the fulfillment of what the city wants and needs for their urban forestry program both internally and externally.
- » **Developing the plan** is the next step in the process. We look for gaps, opportunities, issues, and desires to create goals, action plans and the steps needed to achieve the desired outcomes. We also look to comparative cities for examples.
- » And most importantly, we develop ways to create responsibility and accountability for the plan through audits and evaluations. That audit and evaluation process incorporates the original first look at the program.

Our approach to developing your UFMP is based on working with communities and entities that we have served across North America. For the City of Las Vegas, we have developed an approach to systematically address all of the specifications listed in the RFP. We also offer some “optional add-ons” that are not critical to the plan but may help you deliver the story of your urban forest in a more comprehensive manner to internal and external stakeholders.

We will begin the project by introducing our staff and confirming your goals, objectives and timeline. The next step is to document your resources. We offer two approaches for collecting tree inventory data. Our planning team will then analyze the tree inventory data to determine the composition, structure, and function of the tree population. We will distill the data analysis, along with industry standards, risk management goals, and best management practices, to report on the status of the urban forest. DRG will research city operational documents and ordinances, as well as interview internal and external stakeholders. By first determining and benchmarking what the City has in the way of an urban forestry program, we can move into what the City and its stakeholders want to see or envision in its UFMP.

While the City's role in this process is critical, DRG will provide facilitation and organization to minimize impacts on staff's time and resources. We will provide monthly reports to update our progress, so you are prepared for what is needed to support a successful project together. City staff will always know where DRG is in the process. There will be no surprises.

For the City of Las Vegas we present the following project approach to develop an Urban Forestry Management Plan (UFMP) for the City of Las Vegas that aligns with the city's 2050 Master Plan and its guiding principles of equity, resilience, livability, health, and innovation. The plan will include policy and budgetary recommendations to support the City of Las Vegas in achieving its urban forestry goals. The UFMP will be developed with contribution from the community. Flexibility is key to a successful project and we offer the ability to adjust our plan so that it fits your needs, budget and timeline.

Point of Contact

Tina McKeand, Principal Consultant

Tina McKeand provides leadership to a team of urban forest planning professionals who are committed to your project and its success. As such Tina will be responsible for communicating all billing, invoicing and progress reports. Progress reports and invoicing are delivered monthly, or on a timeline that meets your needs. Our staff is always available and responsive to the success of this project.

Project Management

DRG will lead and coordinate all project activities, including the development of a timeline and shared file system. We will also create a public outreach plan to promote public support for the project. The planning portion of the project will begin with a pre-project meeting between DRG and City staff, to introduce our planning staff, confirm the project scope, timeline, and gather necessary information.

Throughout the planning portion of the project, DRG will provide progress reports detailing the remaining budget, completed tasks, and pending tasks. Bi-weekly calls will also be scheduled to provide updates on the project's progress.

Kickoff Meeting

DRG will begin this project with a kickoff meeting that includes our project manager and significant contributors to the project. DRG hopes that critical project team members, including the designated project manager and any key personnel who will interact with DRG throughout the project, will also attend the meeting. The kickoff meeting is important to establish communication and set the tone for the project. During the meeting, DRG will clarify project goals and deliverables, discuss the timeline, community engagement, and key milestones, and gather background information. This includes reviewing City documents relevant to the plan and discussing stakeholder information gathering to begin that process as soon as possible.

Objective 1: Background Information, Research, and Outreach

Important components of an urban forest management plan process include conducting an assessment of current urban forest conditions, researching urban forest management practices, engaging in public outreach and education, collaborating with local government agencies, and promoting community involvement and awareness.

DRG has decades of experience supporting the advancement of urban forestry initiatives, strategic leadership and guiding operative management. To assist Las Vegas in developing an effective UFMP, the DRG team will become familiar with current plans, municipal regulations, the status of the existing urban forest and the communities vision and commitment to grow a thriving, diverse and equitable urban forest canopy.

Working with community-based organizations can help to ensure that diverse voices are heard and that the plan reflects the needs and values of the entire community. DRG will work with the city's urban forestry staff and the Office of Communications as well as the UNLV Team College of Urban Affairs to develop a public outreach plan. The plan will provide opportunities for the engagement of a wide range of stakeholders, including UNLV, community members, local businesses, environmental groups, and other relevant organizations. Coordinating all public outreach efforts with the City's Office of Communications will help to ensure that messaging is consistent and that all stakeholders are reached effectively. This coordination can help to ensure that the plan represents and is supported by the community.

COMMUNITY ENGAGEMENT

Stakeholder Interviews (Onsite)—up to 15 Individuals/Groups

DRG will conduct interviews with internal and external stakeholders to review management practices, staffing, and relationships between departments related to the urban forest. In addition to reviewing existing documents and policies, DRG will gather lists and contact information for city staff, supporters, elected officials, and other stakeholders to identify challenges, opportunities, and solutions related to the urban forest. The discussions will be guided by the city. DRG has a cultivated methodology for conducting such interviews, which includes a standard set of questions that will be asked during each interview to ensure consistency in the research. However, additional discussions may take place if deemed necessary. DRG will conduct 15-stakeholder interviews.

Working Group Meetings (8)

DRG will organize and facilitate eight virtual working group meetings during the development of the UFMP. These meetings will serve as formal checkpoints to assess the plan's progress and determine next steps. The meetings will provide an opportunity for the City and its stakeholders to review, discuss, and provide feedback on DRG's recommendations for the UFMP. DRG will coordinate the logistics of the meetings and ensure that all stakeholders are informed about the schedule and any relevant materials. By conducting these meetings, DRG can ensure that the plan is developed collaboratively and transparently, with input from a diverse range of stakeholders. This can lead to a more effective, practical, and widely supported plan for the community.

Develop a Public Outreach Plan

A community outreach plan is a crucial component of urban forestry planning, as it can help to ensure that the plan is practical, effective, and widely supported by the community. DRG will develop a Public Outreach Plan in collaboration with the City. Based on the City's goals, DRG can provide workshops, pop up tabling, surveys, presentations, and content (copy and graphics) to support community engagement in the UFMP. Outreach materials will highlight the goals and objectives of this project and will include narrative and images for community distribution. DRG is able to provide translation services for materials and/or events as needed.

Developing an effective urban forestry community outreach plan requires careful planning, targeted messaging, and ongoing engagement with the community. By engaging the community in the planning process, urban forestry plans can be more effective, practical, and widely supported by the community.

DRG Public Outreach Plans involve several key steps, which may include the following:

- » **Identify target audience:** identify and determine the best way to reach key stakeholders in the community, considering factors such as age, gender, location, and interests when inviting residents, businesses, community organizations, and non-profits to participate.
- » **Define your message:** DRG will recommend key messages to explain the importance of urban forestry and its benefits for the community.
- » **Develop outreach strategy:** DRG will work with the City to identify the best way to reach our target audience. This may include hosting community meetings, distributing flyers, sending email newsletters, using social media, or partnering with local media outlets.
- » **Create educational materials:** DRG will develop easy to understand and visually appealing educational materials that communicate the key messages about urban forestry.
- » **Engage the community:** DRG will work with the City to develop and coordinate accessible and inclusive events or workshops to engage the community and provide opportunities for planning feedback.
- » **Evaluate your outreach plan:** DRG will evaluate the effectiveness of the Public Outreach Plan by tracking participation rates and collecting feedback from the community. Feedback will be used to make improvements and refine your outreach strategy.

Optional

Outreach Toolkit

If desired, DRG will develop an outreach toolkit to support the development of the city of Las Vegas UFMP. The purpose of an outreach toolkit is to provide a structured and organized approach to outreach, and to ensure that outreach efforts are consistent and effective. Our plans typically include templates, guides, and other materials that help to standardize messaging and facilitate communication with stakeholders. For each of the following outreach approaches, DRG will develop “best practices” educational materials to be distributed via hard copy or electronically (website and social media), including, but not limited to: tree species diversity, proper tree planting, and proper treecare. DRG can provide language translation for all materials.

Open House/Workshop (Each)

DRG can facilitate, or support the facilitation of in-person Open House/Workshop sessions at a city facility or other venue. During the event, attendees will be invited to participate in discussions and survey questions that contribute to the development of the UFMP and urban forest vision. The goal is to engage the community in an interactive and collaborative process to help shape the direction of the street tree program. DRG will work closely with City staff to ensure that the event runs smoothly and that all necessary logistical arrangements are in place. The format of the event will be designed to encourage participation and input from attendees, with the ultimate goal of developing a robust and effective UFMP that reflects the needs and desires of the community.

Pop Ups (Each)—In Conjunction with Open House

DRG proposes to use a “roaming popup” strategy to facilitate informal community outreach. This strategy involves identifying popular areas or events where residents gather, such as the Farmer’s Market or a popular outdoor eatery or park, and engaging residents in conversations about the urban forest. During the pop-ups, DRG will engage residents in conversation about the urban forest and conduct surveys if appropriate. DRG will present a summary of outreach findings to the City.

Online Survey (Develop, Monitor, Analysis)

DRG can create a customized online survey to assess public perception of the community’s urban forest and its management. The survey will be available on the project website and can be promoted through social media and public service announcements (PSAs). The survey questions will be based on research findings, inventory results, and key considerations for the UFMP. DRG will develop the survey questions to provide useful information and engage meaningful public commentary. At the end of the survey, DRG will develop a report that highlights community interests, common findings, and feedback. All comments will be collected and presented to City staff along with a summary.

PSAs, Website Content, Handouts, Posters, Maps, Etc.

DRG can provide content (copy and graphics), including virtual media, to support communication and community engagement in the plan. Outreach materials can highlight the goals and objectives of the project, provide updates, and communicate opportunities to participate in the development of the STMP. Materials will include narrative and images suitable for printing or virtual distribution.

Multi-Lingual Translation—Per Day/Event/Document

DRG is able to provide multilingual translation services when representing the City at outreach events and meetings. DRG can work with the City to identify the languages that are most commonly spoken in the community and provide translation services for those languages. This can help to ensure that all community members are able to fully participate and provide feedback, regardless of their language proficiency. DRG can provide translation services in a variety of formats, including written materials, verbal interpretation, and digital translation tools. The specific format used will depend on the needs of the community and the type of outreach event or meeting being held.

By providing multilingual translation services, DRG can help to ensure that the outreach efforts are inclusive and accessible to all members of the community, regardless of their language background or proficiency. This can help to build trust and engagement with the community and ensure that the UFMP reflects the diverse perspectives and needs of the community.

Community Presentation (Virtual)—Live and Recorded

DRG will prepare the UFMP and deliver presentations to the City's Planning Commission and City Council either in-person or virtually. For each presentation, DRG will collaborate with the City Project Manager to determine appropriate messaging and goals, and if requested, will prepare the presentation and review it with city staff before presenting. The objective is to ensure that the presentations are aligned with the goals of the urban forestry plan, and that they effectively communicate the key findings, recommendations, and benefits of the plan to the relevant stakeholders. By presenting the plan to the City Council or other advisory bodies, DRG can help to generate support for the plan and secure the necessary resources and funding for its implementation.

Objective 2: Tree Inventory Update

As the leader in urban forestry DRG has developed and refined reliable systems for conducting tree inventories and the developing adaptive and nationally recognized Urban forest Plans. For this project we offer two options to conduct and deliver a 40,000 tree inventory.

TRADITIONAL ANALOG COLLECTION

An analog tree inventory involves obtaining necessary GIS data and imagery and working with the City's GIS or planning department to set up field computers for data collection. The agreed-upon data fields, imagery, maps, and data files are used to program data collection software and field computers.

Once the field computers are calibrated, we will set up a meeting specific to inventory collection. During the inventory launch meeting, city staff and the DRG project team will discuss approach, inventory safety, communication procedures and confirm project expectations and milestones. If possible during this time DRG's staff will assess a few trees with city staff to ensure consistent assessment results.

DRG will schedule a timeframe when daytime temperatures are less than 96 degrees to deploy experienced and qualified inventory arborists to locate trees, planting sites, and stumps along city properties, evaluate those trees, and record the data in TreeKeeper. We expected to document 1080 tree sites per day and complete this portion of the project within two months.

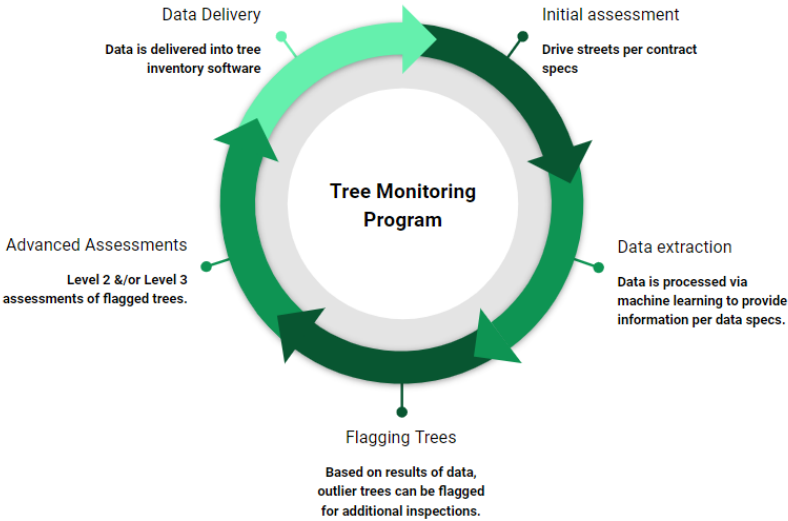
During the inventory collection portion of this project, DRG will submit a weekly data collection progress report in map form, along with an accuracy verification analysis. DRG guarantees that the tree inventory data accuracy shall be no less than 90% accurate for the location (within 1 meter), no less than 90% accurate for the tree species, number of stems, and DBH. The data will be post-processed to establish accuracy of points within a meter.

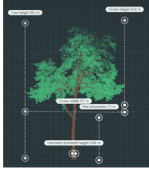
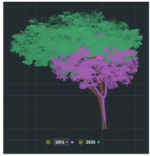
Within an analog approach, DRG will document the following attributes currently listed in the Las Vegas TreeKeeper® systems.

Species	Botanical, common
Status	Tree, Palm, Stump, Vacant Site, Other/Unknown
Diameter Std. Height	In feet: 0–3, 4–6, 7–12, 13–18, 19–24, 25–30, 31–36, >36
Tree Width	In feet: 0, 1–15, 16–30, 31–45, 46–60, >60
Tree Height	In feet: 0, 1–15, 16–30, 31–45, 46–60, >60
Staking	N/A, Inspect, Install, Adjust, Remove
Expand Root	N/A, Structural soil, Soil cell, Root channel
Condition	Excellent, Good, Fair, Poor, Dead, Unknown, N/A
Observations	Cavity or Decay, Hardware Installed in Tree, Improperly Installed, Improperly Mulched, Improperly Pruned, Mechanical Damage, Memorial Tree, None, Nutrient Deficiency, Pest Problem, Poor Root System, Poor Structure, Previous Branch Failure, Remove Hardware, Serious Decline, Tree Conflict with Gate/Guard
Primary Maintenance	Inspect - Recommended Removal, N/A, Plant, Prune, Remove, Retain and Monitor, Training Prune
Secondary Maintenance	Inspect - Recommended Removal, N/A, Plant, Prune, Remove, Retain and Monitor, Training Prune
Removal Reason	N/A, Storm Damage, Insect/Disease, Unacceptable Structure, Location/Construction
Collection Source	List staff or contractors
Ward	1,2,3,4,5,6
Land Use	Single Family Residential, Small Commercial, Large Commercial, Park, N/A

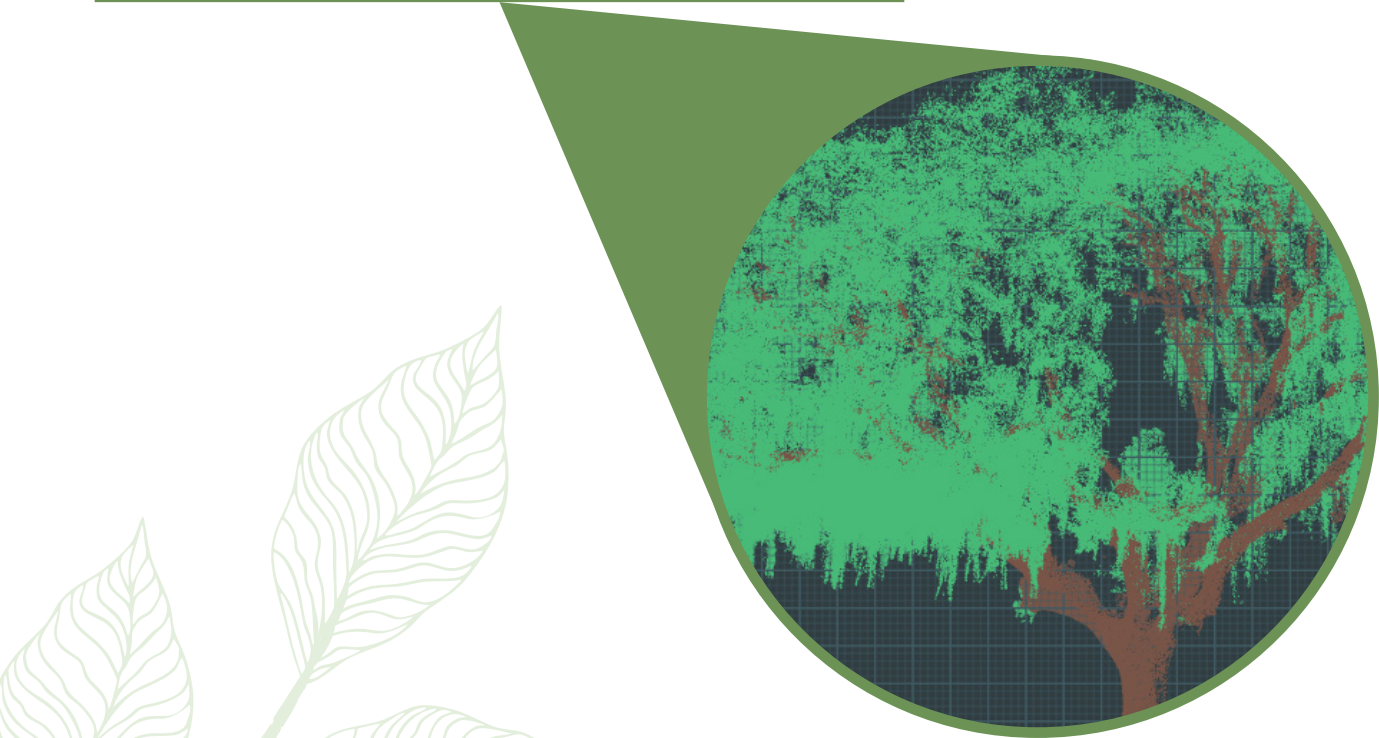
DIGITAL COLLECTION

As an alternative to a traditional analog tree inventory DRG can provide a digital scan of all city trees. If this option is selected, DRG will partner with greehill incorporated, the world’s leading platform for digital urban forest management, to deliver to Las Vegas a fully digitized model of its public tree resource. With this approach, data is captured in LiDAR and ground-based technology, then delivered in a shareable 3-D format within the City TreeKeeper® system. The information provides a visual assessment of each trees’ condition and growing situation. Assessments are efficient and repeated in two-year intervals. With each assessment Las Vegas will monitor and learn about the effectiveness of specific tree management strategies on individual trees and tree species.



Tree Monitoring Program				
Year 1	Year 2	Year 3	Year 4	Year 5
Initiate tree monitoring program at base price. Perform advanced assessments. Install TreeKeeper 9	Maintain subscription to TreeKeeper 9 at base price. 	Perform tree monitoring data collection at base price. Perform advanced assessments of flagged trees. Perform change analysis. Update TreeKeeper 9	Maintain subscription to TreeKeeper 9 at base price. 	Perform tree monitoring data collection at base price Perform advanced assessments of flagged trees. Perform change analysis. Update TreeKeeper 9

The technology delivers precise information and assessment to document the improvement of tree structure, safety, and growing a healthy and robust urban canopy, giving staff precise information to prescribe actions to improve the situation. By scanning the City’s trees on a cyclical basis, it is possible to automate how the City monitors the health and growth of each tree and expedite informed decisions about its care and management.



Closeup of digitized model of a tree.

DIGITAL TREE ATTRIBUTES

Tree ID	N/A
Street Number	Free Text Field, transferred from City's parcel data layer
Street Name	Free Text Field transferred from City's parcel data layer
Status	Alive
	Dead
	Removed
Species	*Species Listing*
DBH	Free Text Field
Number of Stems	Free Text Field
Observations	Crown dieback
	Nutrient Deficiency
	Pests/Disease
	Codominant stems
Primary Maintenance Needs	Removal for dead trees
	Monitoring
Pruning Type	Sprouts
Additional Maintenance	Inspect/Monitor
	Remove Stakes
	Stake Tree
Notes	Free Text Field
Software	Web-based tree inventory software that includes 3D digital viewing, work order management, and mobile solution.
Leaning Angle	Leaning angle is the angle between the vertical axis of the tree and the angle of the tree trunk relative to the ground. By monitoring the leaning angle over time, arborists and tree managers can detect changes in the tree's stability and take appropriate measures to mitigate risk to people or property.
First Bifurcation	The first bifurcation of a tree refers to the point at which the main trunk of a tree splits into two main branches. This point is also known as the tree's crown base or branching height. The angle of the first bifurcation can affect the stability of the tree. Trees with a narrow angle between the two main branches are more prone to splitting or breaking, while trees with a wider angle tend to be more stable.
Tree Height	Monitoring tree height can provide valuable information about the tree's growth rate, health, and structure.
Crown Width	Measuring tree crown width has multiple benefits in tree care and management. It provides an estimate of the tree's canopy cover and ecological benefits, such as reducing urban heat island effects and improving air quality. It can help identify changes in the tree's growth and structure over time, indicating issues that may affect the tree's health, and estimate its age, growth rate, and potential lifespan, which can inform appropriate management strategies.
i-Tree Values	Environmental Benefits will be identified for each tree.
Photos	A minimum of 3 high resolution photos will provide a visual record of the tree's size, shape, and condition at the time of the survey. This documentation can be used to track changes in the tree over time or to compare different trees. Additionally, photos can be used to remotely assess tree condition and identify potential issues such as insect infestations or disease symptoms.

Additional Optional Data Fields

We are able to provide additional data beyond the proposed Standard Data Fields above on an additional per tree cost basis. These fields can be added either completely digitally, through digital virtual inspections, or in-field inspections. The nature of our proposed data collection allows for these additional data fields to be added at any time.

Data Field	Definition	Process
Leaf Area Index	Measure the precise amount of live vegetation within each tree.	Digital
NDVI	Measure the actual NDVI for each tree.	Digital
Condition	By using Leaf Area Index and NDVI we can assign a vitality rating to each tree based on the average peer group.	Digital
Overhead Utilities	Identify which trees are under overhead utilities and measure distance to overhead wires.	Digital
Clarence Road	Identify trees with crown that are within a certain distance from the edge of the roadway.	Digital
Leaning Angle	Measure the precise angle of each tree.	Digital
Safety Factor	Determine the safety factor score for each tree with variable wind loading.	Digital
Primary Maintenance Need	Assign a primary maintenance to all trees > 6" DBH.	Digital Review & In-field verification
Maintenance Priority	Assign a priority rating to all trees >6" DBH.	Digital Review & In-field verification
Pruning Type	Assign a primary pruning type to all trees >6" DBH.	Digital Review & In-field verification
Additional Maintenance	Assign additional maintenance to all trees.	In-field
Risk Assessment	Assign a risk rating to all trees >6" DBH.	In-field

Deliverable: Deliver an analog inventory update of city trees or a fully digitized model of the public tree resource within the City's TreeKeeper software. A digital delivery will require an additional subscription to integrate 3-D technology within the City's TreeKeeper management software.

Objective 3: Plan Development and Delivery

A. URBAN FORESTRY STATUS

The US Forest Service estimates only 20% of the urban forest is made up of public trees. Most of the urban forest consists of trees on private land and national and state forest lands. A tree canopy and land cover assessment considers all trees, both public and private. Assessment of the overall structure and function of the urban forest combines two analytical processes to achieve the best understanding of the urban forest qualities, quantities, and characteristics.

Nevada Division of Forestry Urban and Community Forestry Program is contracting with DRG to conduct a Land Cover Assessment (LCA) and analysis of Nevada communities, including the City of Las Vegas. The results of the LCA will provide valuable information on the land resources in the City of Las Vegas and contribute to the development of the UFMP. DRG will be conducting the GIS project over the summer and will incorporate the data, maps, and analysis into the UFMP at no additional cost to the city. The following information will enhance the understanding of the city's tree population and contribute to the sustainable management of city trees.

Urban Tree Canopy and Land Cover Data & Analysis

Area and percentages of canopy cover will be calculated for each land cover type and designation (e.g., City-wide, parks and open space, land use, zoning, improvement and redevelopment areas, neighborhood, subdivisions, watersheds, flood zones, etc.). DRG will explore the relationship and distribution of canopy with consideration for canopy equity and socioeconomic factors as well as access to urban forest resources. This comparison of canopy cover with geography and land use will become a primary resource for recommendations and actionable goals.

Canopy Type (Deciduous/Coniferous)

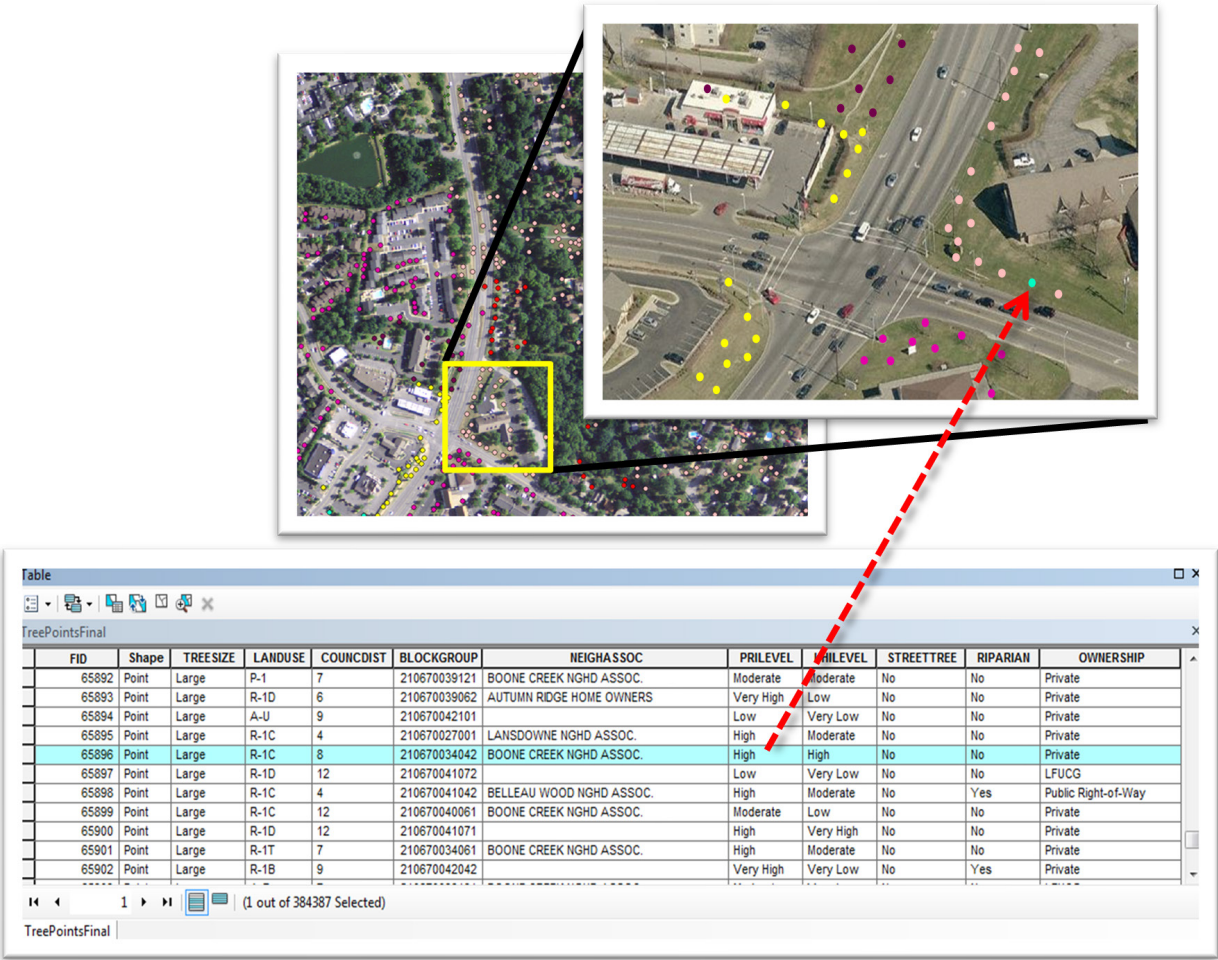
DRG will provide Conifer Species Mapping by separating deciduous and evergreen tree species. This will be useful for recommending best practices for wildland fire management/wildland urban interface.

Canopy Change Assessment

Land cover to change due to development and natural activities, and the potential threats these changes pose to the environment. DRG will conduct a change assessment for tree canopy, identifying points of growth and loss. The analysis will include spatial, acreage, percent, and absolute change for specified geographies.

Ecosystem Benefits

Using the tree canopy area identified by the land cover analysis, ecosystem benefits for air quality, carbon, and stormwater will be assessed using i-Tree Software (i-Tree Canopy and i-Tree Hydro, specifically). The assessment can quantify the ecological and economic benefits of urban forests to help identify areas where the urban forest is lacking, such as areas with a low tree canopy cover or areas where the tree species diversity is limited. The assessment can help to prioritize management actions by identifying areas where trees provide the greatest benefits, such as reducing stormwater runoff or improving air quality.

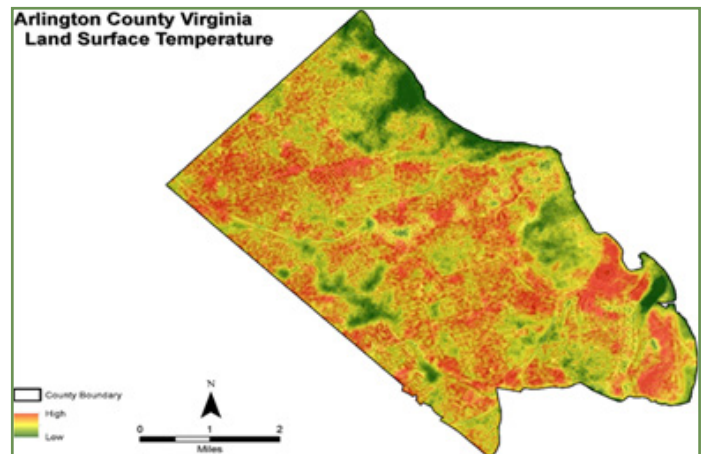


Priority Planting

DRG will determine areas that are biophysically feasible to support trees, estimate budget implications for tree planting to increase canopy, and account for the number of trees plantable by crown size. The Priority Planting index provides a basis for creating planting plans and prioritizing target areas to address key considerations, including canopy equity, environmental justice, greenhouse gas emissions, heat islands, canopy connectivity, erosion, and stormwater runoff. Additional considerations for determining planting sites may include council districts, human health data, a crime reduction strategy, or other GIS-based data that is available.

Heat Island

Capturing land surface temperature is essential to monitoring heat islands, air quality, and overall well-being for residents. To establish an understanding of how urban tree canopy affects heat island, land surface temperature analysis is conducted during the late afternoon during summer conditions to determine the highest surface temperatures observed. Multiple years can be assessed to determine how heat islands have changed over time.



Social Equity

Equity analysis will explore five to seven (5-7) social, economic, and environmental factors determined by Nevada Division of Forestry in consultation with DRG. Factors may include:

- » Summer temperature (urban heat island).
- » Stormwater/Flooding.
- » Air Quality.
- » Minority Population.
- » Household Income.
- » Homeownership.
- » Health Factors (e.g., asthma, heart disease, mental health, etc.).

Foliar Health

Healthy vegetation contains more chlorophyll and therefore absorbs more light. DRG will use the Normalized Difference Vegetation Index (NDVI) to determine the overall health of all trees.

Tree Canopy and Land cover Assessment Summary Report

In addition to the above mentioned data, the Nevada Division of Forestry Urban and Community Forestry Program is funding a Tree Canopy and Land cover Assessment Summary Report for the cities of Reno, Henderson and Las Vegas. This information will contribute to understanding the extent of tree canopy cover in the area and serve as a foundation for identifying priority planting locations within the city to address inequities in natural shading and heat mitigation.

Tree Inventory Report

Understanding the values that the urban forest brings to a community is an important step in developing an urban forest management plan. Upon completion of the tree inventory, DRG will utilize i-Tree Eco to create an expansive snapshot of the City's Tree resource. It is our intent to assist the City of Las Vegas in utilizing the results of its inventory to establish a deeper understanding of the current condition of the urban and community forest within the City. i-Tree is a software program we are very proud of. The i-Tree program was developed by the United States Forest Service with the support of The Davey Tree Expert Company, the International Society of Arboriculture (ISA), Society of Municipal Arborists, Casey Tree, and the Arbor Day Foundation. Utilized worldwide, i-Tree is the standard for scientific urban forest analysis for countless communities. The Davey Tree Expert Company remains an active contributor to its use, functionality, interpretation, and advancement.

One of the advantages of selecting DRG as the preferred project contractor is our depth of knowledge with i-Tree software. As a significant contributor to i-Tree software development, we have extensive and substantial experience processing input data, confirming results, and interpreting data. Other contractors may only be able to provide the i-Tree raw data outputs with minimal comment. DRG will exercise the robust nature of i-Tree and the in-depth capacity of its interpretation. We will provide a customized i-Tree report that interprets The City's tree inventory data in a clear, meaningful, and useful way. In doing so, Las Vegas will receive clarity and a precise scientific understanding of the value of its urban forest with specific recommendations to advance its urban forest growth and sustainability.

The i-Tree Eco analysis will provide meaningful analysis on the following topics:

- » Urban forest composition, including species composition and diversity, condition, and age distribution.
- » Annual amount of pollution removed by the urban and community forest and associated percent air quality improvement throughout a single year. Pollution removal is calculated for ozone (O₃), sulfur dioxide (SO₂), nitrogen dioxide (NO₂), carbon monoxide (CO), and particulate matter <10 microns (PM₁₀).
- » Annual urban and community forest volatile organic compound emissions and the relative impact of tree species on net ozone and carbon monoxide formation throughout the year.
- » Total carbon stored and net carbon annually sequestered by the urban and community forest(s).
- » Compensatory value of the forest, as well as the value of air pollution removal and carbon storage and sequestration.
- » Potential impact of pests and diseases.

DRG i-Tree reports are clearly written and are presented in a way that may be used by resource managers in the pursuit of alternative funding sources and collaborative relationships with utility purveyors, non-governmental organizations, air quality districts, federal and state agencies, legislative initiatives, or local assessment fees.

Deliverable: DRG will deliver a Tree canopy and land cover data analysis, including canopy equity and socioeconomic factors. Based on the tree canopy assessment and inventory, DRG will make recommendations for future tree plantings. This involves reviewing the current state of the urban forest, identifying priority planting areas, researching tree species that are resilient to heat and pests, and developing a tree placement model and long term planting plan. Additionally, the deliverable includes recommending time intervals for recurring assessments to ensure the effectiveness of the planting plan over time.

B. POLICIES AND PROCEDURES

Planning and developing resources for the plan is generally weighted towards the governing entity of the urban forest. DRG will review all relevant material to the City of Las Vegas Urban Forestry Program, including City policies and documents, to identify where the City is successfully meeting program goals, and where there are gaps and areas for recommended improvements. From our experience, we expect to utilize the following documents to inform the plan. However, we are not limited to these and may explore additional documents as we conduct our research.

- » Resolution (R-43-2022). Creating the City of Las Vegas Urban Forestry Program.
- » City of Las Vegas 2050 Master Plan.
- » Updated 2023 tree inventory.
- » Nevada Department of Forestry 2030 canopy study and report (pending late summer/fall 2023).
- » City Approved Tree and Plant Species List and Restricted Species List.
- » Vision 2045 Downtown Las Vegas Master Plan.
- » LVMC Title 13.48.
- » Unified Development Code of the City of Las Vegas (LVMC Title 19).
- » Going Green for Good Health—Mayor's Fund for Las Vegas LIFE (Tree Program).
- » Urban Forests Ecosystem Institute (UFEI)-SelecTree.
- » Guiding documents from the National Urban and Community Forestry Advisory Committee.
- » Plans and studies of other applicable state, local agencies (NDF, DRI, RTC, SNWA, etc.).
 - RTC Studies and Reports (Current/Recent: Extreme Heat, etc.).
 - Nevada Division of Forestry Community Reports.
 - Urban Heat island effect and tree canopy coverage maps (2021–22).
- » SNWA Conservation Plan.
- » Guiding documents from the Sustainable Urban Forestry Coalition.
- » Other documents that may impact the plan.

DRG will review and develop recommendations consistent with city goals and policies that provide for growth in internal efficiencies, cost reductions, and limiting liability. Recommendations will also support and promote better communication and coordination among city departments that work within and adjacent to the urban forest (trees), decision-makers, and the community. All recommendations will include applicable costs and responsibilities within the city. Operational recommendations will be supported by Best Management Practices of the ISA, Tree Care Industry Association (TCIA), (of which Davey is a member) as well as ANSI.

Deliverables: DRG will review all city policies, standards, and procedures relevant to the urban forest and ensure that the UFMP is in alignment with existing requirements, regulations, industry standards, and best management practices, including those communicated in the 2050 Master Plan. The development of the UFMP will address all of the RFP requirements noted in section 3.3 Objective, Policies and Procedures i through viii, including defining the role of trees and canopy in the desert environment, defining a pest management strategy, and providing best management practices for the wildland urban interface.

C. URBAN FORESTRY OPERATIONS (STAFFING, STRUCTURE, SERVICES, FUNDING, ETC.)

DRG will assess the street tree department structure, function, programs and budget. Specifically we will review:

- » Current staffing and program resources
- » Program and operational structure/staffing/roles and responsibilities (e.g., in-house, contract, volunteers).
- » Scope of department responsibilities (planting, special projects, interdepartmental coordination emergency response, etc).
- » Budget allocated per program area and current level of service for each, including contractors.

To accomplish this, we will also obtain lists and contact information for city staff, key advocates, elected officials, and other stakeholders that share an interest and/or responsibility for the urban forest.

DRG will map and prioritize target areas for tree planting to address urban heat islands, disadvantaged communities and canopy equity. We will provide recommendations and action items to address budget and staffing needs as well as organization structure as applicable. The UFMP will provide and assess performance indicators to establish baselines and track the progress of UFMP goals and objectives.

Deliverables: The urban forestry operations review and the UFMP development process will include consideration of and address 3.3 Objective, Urban Forestry Operations i through vi, including review and recommendations for updating the City of Las Vegas Approved Tree and Plant Species List, and Restricted Species List, as well as strategies to incentivize invasive species removal.

D. COMMUNITY ENGAGEMENT

DRG will include goals and action plans in the UFMP for ongoing community engagement and education, including addressing 3.3 Objective, Community Engagement i through viii, including programs and strategies that incentivize tree preservation and planting on private property and prioritizing engagement that addresses social and environmental justice issues in underserved communities. We look forward to collaborating with the joint City of Las Vegas-UNLV team to ensure that education and engagement addresses the specific challenges and opportunities that are unique to the community. We will explore opportunities for additional partnerships and collaborations that might provide benefit to urban forestry management and operations. DRG brings a wealth of knowledge and strategies from decades of urban forest planning in communities across North America. This includes experience with how many other cities are addressing specific challenges and opportunities. DRG is prepared to perform case studies on an as needed basis where the city desires additional or more specific language. To facilitate cost savings, we have priced case studies as an optional (as needed) task.

Optional

Case Studies

For each case study, DRG will coordinate with the city to identify the goal of the research and develop survey and interview questions to address the challenges specific to Las Vegas. The purpose of this research is to identify best practices and successful strategies that can be implemented in the City of Las Vegas to enhance its urban forestry goals and programs (e.g., municipal owned tree nurseries, tree planting/giveaway programs, stewardship programs, etc.) By studying how other jurisdictions have approached similar challenges, the City can learn from their experiences and identify opportunities to improve its own programs.

Based on the research, DRG will offer guidance for the City of Las Vegas on how to improve its urban forestry goals and programs, with a focus on addressing the challenges posed by drought conditions. Recommendation will be based on Best Management Practices and successful strategies identified through the research.

Deliverables: DRG will include goals, objectives and action plans in the UFMP to promote ongoing and long term community engagement and education. DRG will perform case studies as requested by the city.

E. WEBSITE

DRG will create and manage a website page for the City's website specifically dedicated to the urban forestry project. The purpose of the Website is to increase awareness of the project, provide a platform for community engagement, and facilitate communication between stakeholders. Content will be developed with input from stakeholders and the City. It will serve as the central hub of information and resources related to the project, and will be accessible to the public. The page will:

- » Provide ongoing education, support, engagement, a tree selection tool, outreach, and updates.
- » Content may include Best Management Practices for planting, irrigation, pruning, etc.
- » Link to TreeKeeper® in order for the public to receive information about city tree planting efforts, and the status of its 60k tree goal.
- » Provide digital or interactive maps depicting phased tree planting, suitable locations on public
- » AND private property that allows the community tree planting requests in their neighborhood.

Deliverable: Webpage content that meets all initiatives stated above.

F. PLANTINGS

Using research, findings, and maps developed in preceding tasks and objectives, DRG will create a budget, schedule, plan and achievable benchmarks to realize the goal to plant 60,000 trees and increase canopy cover, including:

- » Develop a planting plan that identifies the locations, species, and timing of tree planting.
- » Estimate the costs associated with planting 60,000 trees, including trees, labor, equipment, and materials.
- » Create a realistic budget that includes all necessary expenses and potential sources of funding.
- » Develop a planting schedule that outlines when each tree will be planted.
- » Set achievable benchmarks based on the planting plan and schedule.
- » Regularly monitor progress towards the goal of planting 60,000 trees and make adjustments as necessary.
- » Evaluate progress at the end of each planting season and make any necessary adjustments for the following season.

StoryMap

The State GIS data will enable DRG to create a visual presentation of the City's Urban Forestry Management Plan (UFMP) using StoryMap technology. StoryMap combines text, data, and images to effectively detail project findings. With StoryMap technology, the City of Las Vegas will be able to showcase its efforts to the public in a simplified manner that is easy to understand and learn from.

StoryMap examples:



Yuba City, CA



Sammamish, WA

G. REVIEW

The UFMP will include a methodology for future updates and will identify milestones to evaluation, plan updates, and reporting progress.

H. UFMP DEVELOPMENT/DELIVERABLES

The development of an UFMP is a comprehensive exercise in collaboration, education, research, and community participation. We understand that by creating a plan that is collaborative between the City of Las Vegas, its residents, stakeholders and DRG, a unique road map will emerge incorporating the combined experiences, knowledge, and vision of all stakeholders.

The framework of the plan will be generated through a proven methodology of industry adopted goal-setting and research. Research will be both historical and current, and conducted by document examination, interviews, working meetings, and community input. It will be guided by what the City of Las Vegas team asks DRG to look for, as well as our experience in knowing what to look for. It will result in key components that will lead to stronger connections and engagement of Las Vegas's urban forest stakeholders.

The following description of our approach to this project is based on working with communities and entities we have served across North America. For the City of Las Vegas, DRG will create a clear, understandable and useful UFMP that reflects the vision, needs, culture and environment of the City.

Analyzing the Research to Develop the Plan

Through research, data analysis, stakeholder interviews, and public engagement activities, urban forest issues, opportunities and challenges are uncovered. These help to frame and serve as the foundation of the UFMP's vision, goals, and recommendations. This analysis helps answer the questions "What do we want," and "How do we get there?"

Review, Feedback, and Final Deliverables

We are committed to delivering a plan that is dynamic and usable, incorporates tree management policy, and supports the vision and goals for the City of Las Vegas. It will be formatted for a variety of uses including:

- » A tool for planning for the future of the urban forest as it integrates into Las Vegas's vision for a sustainable future.
- » Assisting personnel in budgeting, staffing, and other operational aspects.
- » A tool for City staff to use to coordinate on projects both internally and externally, including capital projects.
- » Support planning policies both internally and externally and speak to both stakeholder groups.
- » A tool that will support City Urban Forestry personnel's efforts to maintain a healthy and sustainable municipal forest.
- » For use by community partners and stakeholders to identify ways to participate in improving the health and sustainability of the City's trees.
- » Deliverables that meet RFP 230197-JH for an Urban Forestry Management Plan

The UFMP will be a narrative text authored by a team of urban forest planning specialists. It will incorporate sections on Program, Policy, Management, Maintenance, and Community Participation. All of those components will lead to goals, objectives, and action plans that will be easily understood and achievable. We will incorporate all findings from meetings, interviews, outreach, University of Nevada, Las Vegas (UNLV) collaboration and online surveys into the plan.

Components of the UFMP

DRG will use the information provided by the City staff and make sure that the UFMP document addresses all the issues that were initially identified in the Scope of Work. DRG will develop the organization, narrative text and graphic layout for the final UFMP.

Within the UFMP process DRG will provide the following deliverables:

Tree Inventory Update

- » DRG will deliver an updated tree inventory within the City Treekeeper® system. DRG will present the status of city trees and share key findings from the land cover and tree inventory analyses, such as determining percentage of canopy coverage on both private and public land, equity distribution, and environmental benefits of city trees.
- » Identify a baseline from which to evaluate the efficacy of the tree canopy goals stated in the 2050 Master Plan
- » Determine time intervals for recurring tree inventory and canopy assessments to gauge success.

Canopy Assessment

Policies and Procedures Components

- » DRG will ensure the 2023 UFMP aligns with the 2050 Master Plan, Resolution (R-43-2022) and other program policies.
- » Provide recommendations to support canopy goals for City Council consideration in the future.
- » Evaluate existing policies, programs and regulations regarding trees and provide guidance to increase the tree canopy while allowing responsible development.
- » DRG will develop principles and goals for the updated Plan and the Urban Forest Program. DRG's approach will address social equity in the prioritization of tree planting across neighborhoods and in the outreach process. The UFMP will identify challenges in implementing this work as well as offer solutions.
- » DRG will define the role trees and the urban canopy play in a desert environment.
- » Assess and provide comment of current urban forestry outcomes documented in the 2050 Master Plan.
- » Provide guidance on how to maintain trees after the non-functional turf is removed.
- » Provide guidelines for conserving water in the urban landscape.
- » Provide pest management strategy.
- » Provide best practices for wildland fire management/wildland urban interface, as it may be applicable to city locations adjacent to public lands.

Tree Placement Model and Long-Term Planting Plan

For this task, DRG will include priority planting analysis with tree placement modeling and long term planting plan. Future planting projects can be planned with this information generated from the tree inventory. The tree placement model and long term planting plan can prioritize available planting areas based on available GIS datasets and boundaries, which may include:

- » Socio-demographics and population density.
- » Proximity to surface waters and impaired waterways.
- » Topography, floodplains, and soil types.
- » Public/private ownership.
- » Linkages to greenways.
- » Stormwater problem areas.
- » Mitigating urban heat island effect.

DRG uses a combination of parameters obtained from discussion with the City and stakeholders to determine planting objectives. Ultimately, each suitable planting area is divided into priority categories ranging from Very Low to Very High, based on the City of Las Vegas parameters.

Urban Forestry Operations

- » Identify and map target areas (prioritizing the urban heat island and disadvantaged communities) for tree plantings with a priority for equitable canopy distribution upon maturity.
- » Discuss the potential impact heat and the urban heat island effect have on City tree species.
- » Describe and assess the roles and responsibilities of city departments that engage with trees. Provide recommendations for greater communication and efficiencies.
- » Identify budget and staffing needs to achieve tree canopy goals.
- » DRG will recommend measurable key performance indicators for tracking progress on UFMP goals, such as tree planting numbers, net tree gain and tree canopy coverage, increased native biodiversity, number of environmental justice priority community events, number of volunteer hours and others in alignment with citywide goals. DRG will propose policies and strategies that support achievement of these goals.
- » Create programs/strategies to incentivize invasive species removal.
- » Present programs and strategies to incentivize for the removal of dead or hazardous trees on private property.

DRG will develop principles and goals for the UFMP. DRG's approach will address social equity in the prioritization of tree planting across neighborhoods and in the outreach process. The UFMP will identify challenges in implementing this work as well as offer solutions.

As part of the planning process, DRG will deliver to the City of Las Vegas a methodology for future updates and provide a timeline for evaluation of the program and process for Urban Forestry Management Plan revisions and updates.

Project Review

Project review is a highly collaborative process where the City of Las Vegas, and DRG will develop an UFMP with relevant data, narrative text, graphic layout, and a complementary web-based document. The final project review begins with the submission of the first draft to the City. It is generally between 85% - 90% complete. Once Las Vegas staff provides feedback on the first draft and we reach consensus on the final elements to be included in the plan, we transition into the graphic design phase of the document.

Format

Our urban and community forest management plans are custom to meet your cities needs. They are designed utilizing a modern appearance and visually pleasing palette that includes a well balanced combination of a narrative document, tables, images, and maps to share and convey the critical information necessary to achieve your objectives. The following QR codes provide examples of recent UFMP formats for the cities of Davis, CA, South San Francisco, CA and Yuba City, California. South San Francisco and Yuba City selected an 11 x17 hard copy format, and the City of Davis elected a web platform. During the kickoff meeting we will discuss format delivery options and provide examples for your consideration.

- » **Option:** The Final UFMP will be delivered electronically as a fully formatted PDF in formats that are printer ready or suitable for online viewing (and downloading). DRG will provide printed and bound copies of the UFMP as requested by the city. We have provided an initial cost for each printed copy, but the per copy price may be lowered significantly depending upon how many copies are required. Additionally, DRG can provide pricing for a fully online web-based UFMP if this is something the city would like to explore.

Objective 4: Collaboration with University of Nevada-Las Vegas (UNLV)

Public understanding and participation is essential in urban forestry planning. The DRG team is looking forward to working with University of Nevada, Las Vegas (UNLV) to explore findings and applications based on the urban forest inventory and tree canopy, facilitate community engagement, and participate in developing consistent current/future messaging and content, illustrating resilience, health, innovation, and equity.

Objective 5: Implementation

The following chart shows a proposed schedule of work. DRG is eager to collaborate with you further to refine our assumptions during the kickoff meeting.

Additionally, DRG acknowledges that more funding has been set aside for community-oriented projects. These projects will be based on recommendations from the community within the UFMP process. DRG is looking forward to receiving input from the community and providing guidance to the city in order to choose the most effective and impactful projects to use the funding for. Our commitment to the City of Las Vegas is to recommend the funding is used in a way that will benefit the community the most.

Estimated Timeline for Essential Items																		
Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Kickoff meeting																		
Update tree inventory																		
Develop a Public Outreach Plan																		
Status/check in meetings—ongoing																		
Website support																		
Design & Style Guidelines																		
Background and operations review																		
Working group meetings (TBD as needed)																		
Stakeholder interviews																		
Community engagement—as applicable																		
Inventory resource analysis with iTree Eco																		
Tree canopy and land cover analysis																		
Tree placement model and long term planting plan																		
Best Practices—educational materials																		
Draft 1 UFMP																		
City review period—Draft 1																		
Draft 2 UFMP																		
City review period—Draft 2																		
Public review period—TBD																		
Final UFMP																		

TreeKeeper® Canopy Software

TreeKeeper® Canopy is a popular tool to empower communities to prioritize new planting locations for the greatest benefits. DRG’s TreeKeeper® provides an interactive and dynamic platform for exploring the benefits and costs of planting scenarios at multiple levels, from the overall community to census tracts or census block groups. The software supports the identification of priority planting areas to address one or multiple priority concerns (e.g., heat islands, stormwater, canopy equity, etc.) and project future tree canopy benefits and estimate budgets for tree planting costs.

The program uses data from the inventory, census tracts, public health, and environmental factors identified in the land cover analysis, and allows you to focus your planting projects based on parameters you set. The tool is simple to use and allows the user to explore a multitude of priority planting options to determine the estimated number of trees biophysically feasible to plant within the available planting space, calculate the number of small, medium, and large-stature trees for optimal coverage, and estimate planting and maintenance costs. This web solution has proven to be an insightful and engaging planning and public education tool for municipalities. For this item we have budgeted the TreeKeeper® Canopy software build and one year of subscription/support. Additional year subscriptions are addressed in the section budget sheet. This tool allows for a three-step system of “observe, prioritize, and plant” to optimize future tree planting.

Observe

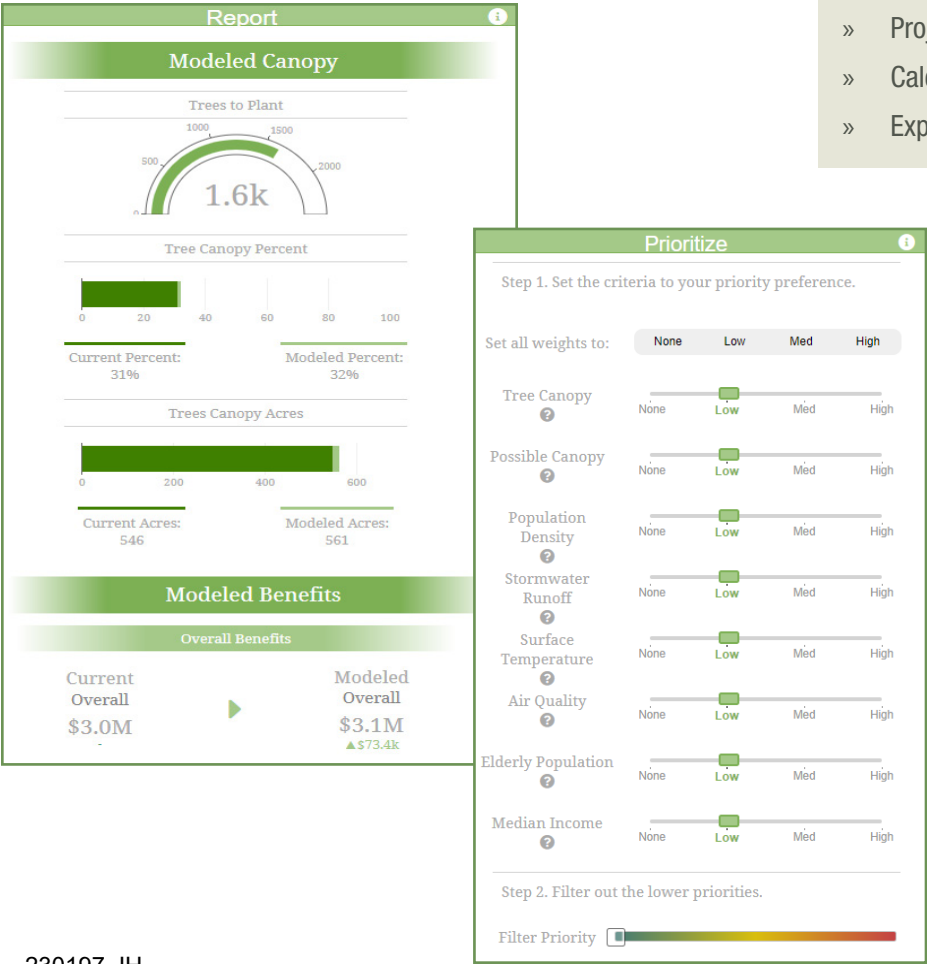
- » Review tree canopy data.
- » Explore tree canopy changes.
- » Select between multiple layers.
- » Customizable attributes.
- » Determine planting opportunities.

Prioritize

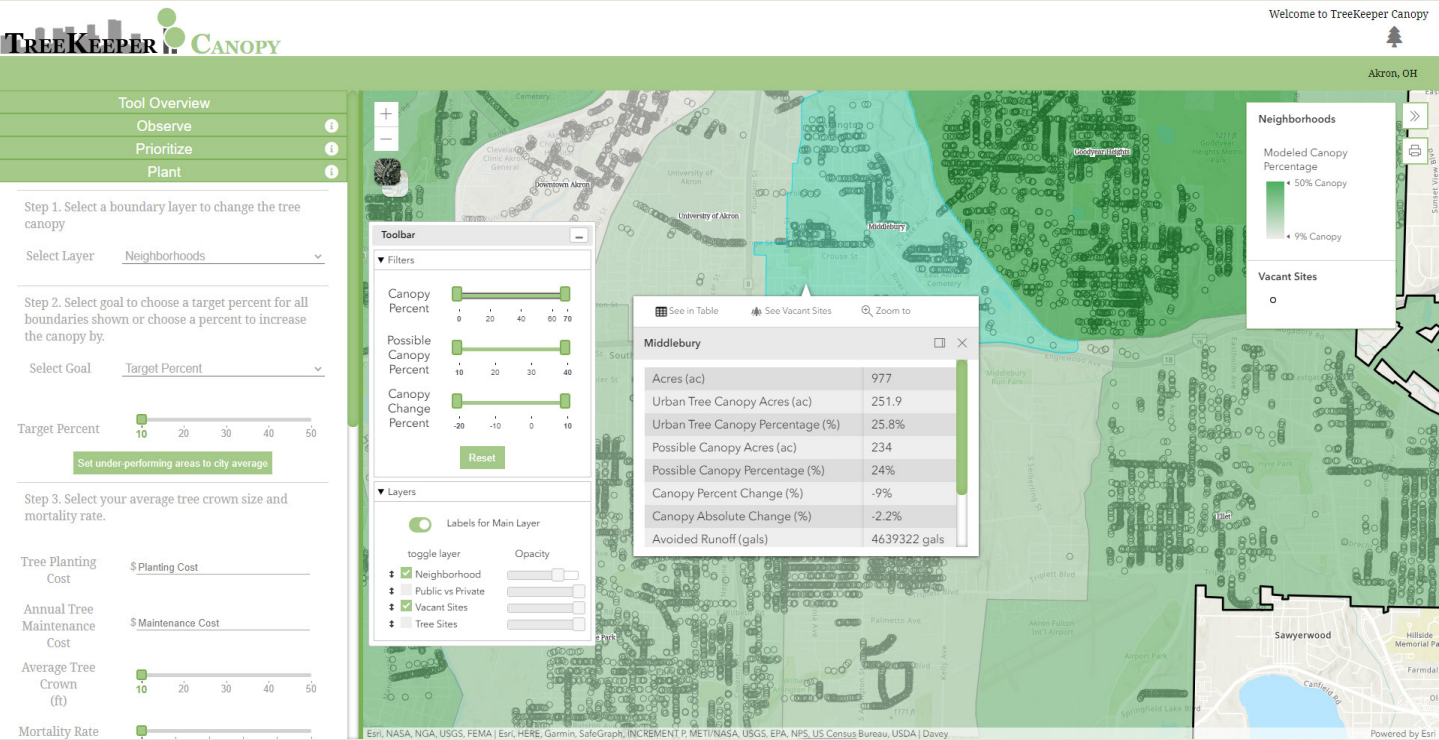
- » Integrate inventory data from TreeKeeper®.
- » Create strategies that work for you.
- » Customize needs of the community.
- » Collaborate with other stakeholders.
- » Determine critical factors.

Plant

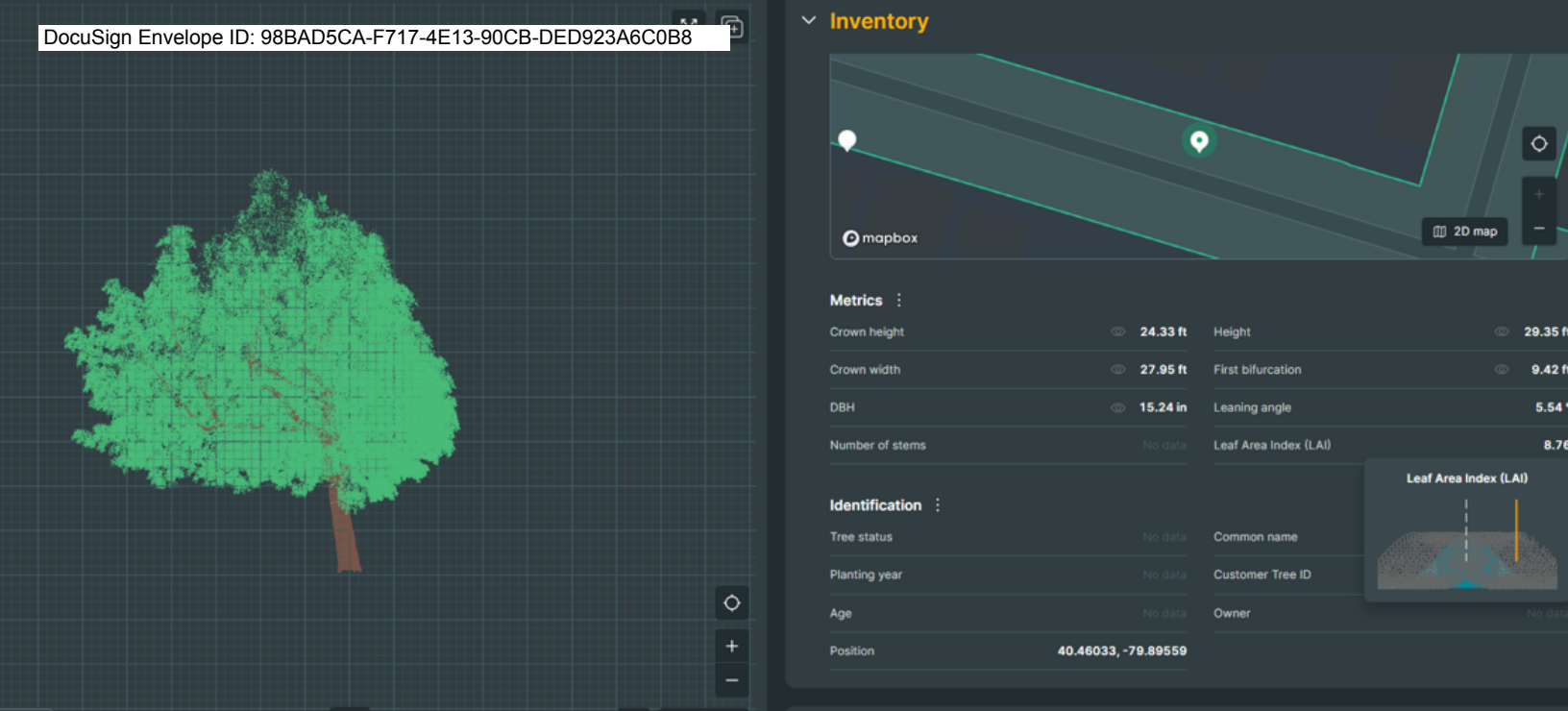
- » Set tree canopy goals.
- » Design and compare scenarios.
- » Project future tree canopy and benefits.
- » Calculate tree planting costs.
- » Export data for reporting.



TreeKeeper® Canopy is an engaging tool to consider priority actions and canopy projections.



Screenshot of TreeKeeper® Canopy landing page.



Smart Tree Inventory

Prepared For:

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Urban Forester
City of Las Vegas, Nevada

Prepared By:

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December, 2023



Introduction

As the largest city in Nevada, the City of Las Vegas is a leader in urban and community forestry. With an estimated 33,000 city trees, growing along streets, and in parks, Las Vegas understands the importance of green infrastructure for its citizens and visitors alike. Las Vegas manages its urban forest with a team of professionals that helps to grow and protect its canopy for the future. Las Vegas's city trees contribute to the health and well-being of the community and those who live, work, and play in Las Vegas.

Davey Resource Group clients have consistently relied on us for providing the latest in tree management tools over the many years of conducting tree inventories. Using our experience and our understanding of trees and technology, we are excited to partner with Greehill, as the provider of the data to manage Las Vegas trees. DRG and Greehill have an exclusive partnership that supports clients in the advanced management of their urban forests. Greehill's ground-based LiDAR technology will capture and extract precise tree data, and DRG's arborists will analyze the outcomes of the data capture. After analysis, the data will be uploaded into Davey's signature software, TreeKeeper for the Las Vegas tree management program. This seamless methodology is the latest in tree management technology and we are excited to share this proposal with you to create a Smart Tree Inventory for the City of Las Vegas.

Project Approach

Kick Off Meeting and Communication

DRG project management staff will contact the city after contract execution to schedule a kick-off meeting. During the kick-off meeting, Las Vegas staff and the DRG project team discuss inventory protocols and communication procedures and confirm project expectations and milestones. We finalize the project timeline based on the methodology being utilized for the project. From project beginning to end, DRG staff keep open lines of communication with the city of Las Vegas via telephone, e-mail, and, as needed, in-person meetings. DRG answers any questions Las Vegas has as well as keeps the city apprised of the project's progress.

Digital Monitoring of Community Trees

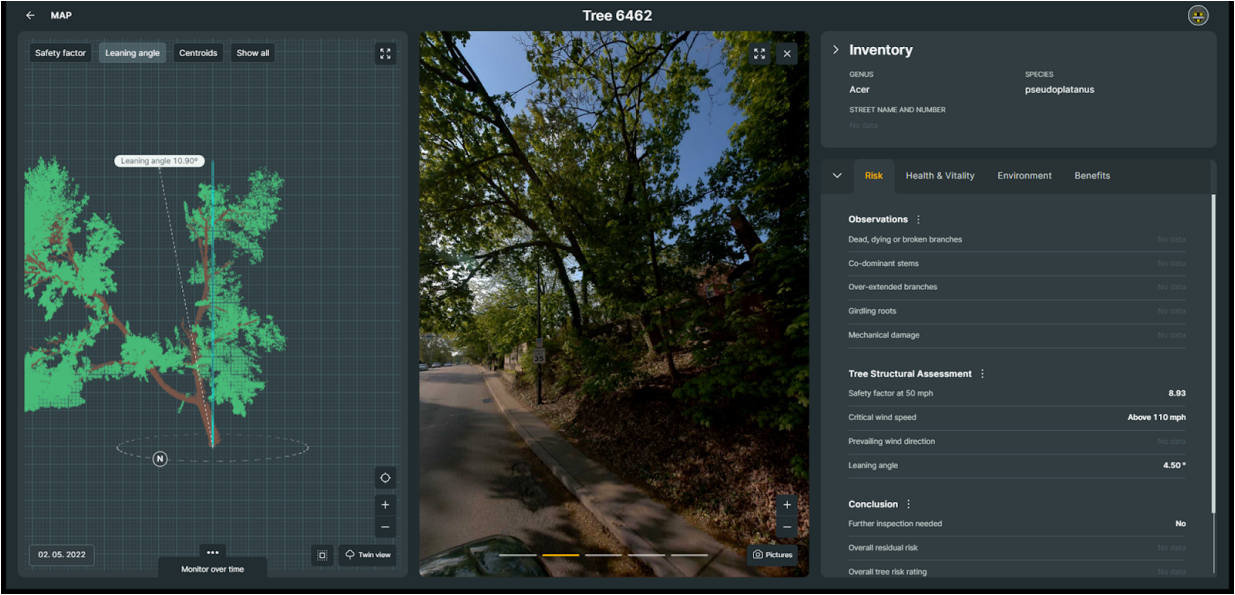
Our urban forests are changing rapidly. From pests and diseases to devastating weather events, it is fast becoming critical that tree data be relevant and up-to-date. Making decisions about the urban forest should be based on data that is current and accurate. This is the outcome of a Smart Tree Inventory.

DRG believes that the singular advantage for Las Vegas with this methodology is time, accuracy, and the ability to keep the inventory up-to-date. With this technology, combined with DRG foresters, and TreeKeeper® software, Las Vegas will be building an effective and state of the art tree care and management program. Additionally, the cost for this methodology is roughly equivalent to utilizing DRG arborists to conduct the inventory. The recommended approach includes two LiDAR captures of the urban forest spaced two years apart. This bi-annual data capture creates the opportunity for comparisons of trees looking for "outliers"

The solution for digital tree monitoring will be a pioneering and progressive approach to managing Las Vegas’s urban forests. Around the world, digital twin technology has shown positive results in terms of its effectiveness and ability to revolutionize urban forest monitoring. The strengths of the digital inventory are that it is objective, efficient, precise, and repeatable. The ultimate goal is to ensure healthy and sustainable management of Las Vegas's urban forest for the City's future.

Step 1. Data Capture

Our exclusive partner, greehill Incorporated, has developed the world’s first multi-dimensional Urban Forest Management System which encompasses a 3D foundation from start to finish. Technicians gather street ROW tree data in a standard vehicle equipped with a mounted mobile laser scanner and a 360-degree camera. A smaller, four-wheel drive vehicle is used in park and Special District settings. The standard vehicle travels with the flow of traffic while the terrestrial park scanner moves throughout the city park system. Each vehicle assesses 4 million data points per second and RGB (red, green, blue) color capture. A detailed point cloud is created for the entire urban environment and high-resolution panoramic images are captured.



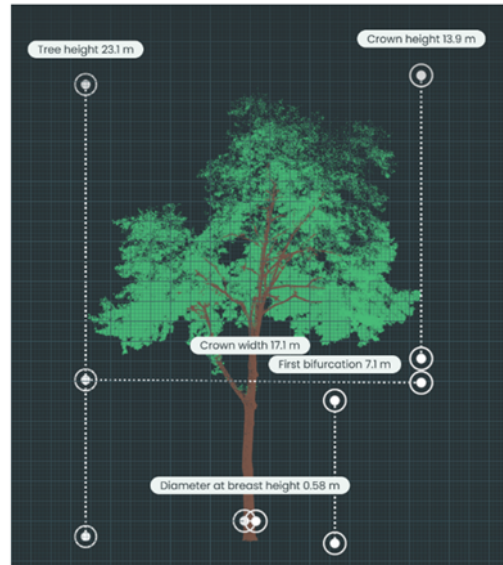
Digital twin, one of five high-resolution photos, and select scanned attribute data.

Step 2: Digital “Twin” Tree Creation

The data is first reviewed using a machine learning (ML) application that automatically locates and identifies each tree. It also determines essential tree attributes using an Artificial Intelligence (AI) platform. This platform separates each tree from its surroundings and classifies woody parts from foliage. The output produces an exact digital twin of every tree scanned. This digital twin provides the finest resolution possible for canopy foliage volume, trunk diameter, health metrics, and safety information. Additionally, it delivers 3D models and five (5) high-resolution images of each tree. The level of precision and detail enables Las Vegas to understand the growth dynamics of its urban forest in detail, for the first time ever.

Direct data updated or collected by this approach includes:

1. Address (street address or park name, and X and Y coordinates)
2. Species
3. Tree Diameter
4. Tree Height
5. Crown Width
6. Multi-Stem Tree
7. Safety Factor
8. 3–5 Pictures of Each Tree
9. Digital Twin of Each Tree
10. Date of Assessment



Data Quality and Accuracy:

- Preliminary tree inspections from the office optimize staff time and resources. Tree managers have the information they need to identify liabilities and implement risk mitigation strategies.
- Delivers 3D models, 360° images, and automated analyses of every public tree. Las Vegas will have access to panoramic photos, an intuitive digital twin platform, and high-resolution images of each tree. This rich database of information will allow the city to more effectively manage its urban forest by providing resources that help see tree challenges early.
- Tree location data (X/Y) is not estimated or extrapolated, it is captured using highly accurate GPS and LiDAR technology. Each tree location is guaranteed to be within 1 foot of actual.
- Stem diameters will be calculated to within half an inch. This type of highly precise data allows arborists to precisely plan tasks and allocate resources for the job before going into the field.
- Tree crown size and tree height will be provided (height and dripline radius).

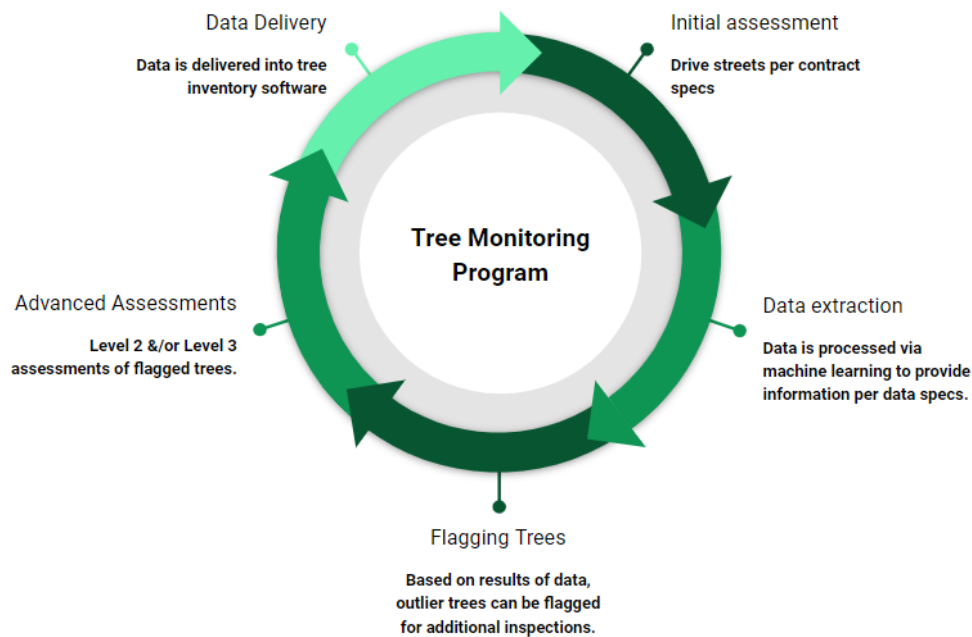
Step 3: Field Monitoring of “Outliers”

This field mapping approach from Step 2, above, will form the baseline of a monitoring program that the City deploys on-going inspections into the future. For this project, DRG will be providing the initial assessment, data extraction, and initial assessment of flagging trees (field inspection) per the illustration below. Data gathered will be provided to Las Vegas as a traditional shapefile to meet your current urban forestry program needs, but will also offer a pathway to an optimized urban forestry program that more efficiently targets your day-to-day tree management efforts.

The LiDAR data collection strategy combined with machine learning and artificial intelligence technologies ensures an unparalleled level of data accuracy. Understanding that the city of Las Vegas has legacy approaches to planning and management of its public trees, we are proposing a hybrid strategy that culminates with DRG providing an ISA certified arborist to inspect up to 20% of the trees collected to target possible **advanced**

assessments. Simply put, Steps One and Two are the initial inspection conducted remotely, and Step Three brings the expert arborist's input and review to the process.

DRG's urban foresters and ISA certified arborists play a significant role in the Smart Tree Inventory. While the system can highlight trees that *may* have tree health and structure concerns, it cannot say what is wrong with the tree, nor prescribe maintenance - the arborist is needed. After the collection of point cloud data by the vehicle or park's tracker, tree extraction by AI machine learning to create a database, and initial AI database analysis, DRG's arborists perform the following activities:



1. *In-depth remote review of outliers:* DRG's arborists carry out an examination of the outlier data. During the remote review, the DRG arborist will sort and group data based on attribute-defined criteria. The main purpose of the remote review is to sort and assess the outliers, assigning work remotely, when possible, without field inspection. This will reduce the number of trees that need a field inspection. While remote inspection is a time saver compared to field inspection, it still requires time to review records and look at photographs of trees.
2. *Follow-up field inspections:* Trees that show signs of decline or stress, which typically account for a smaller percentage of the collected trees are selected for follow-up field inspections. Field inspections are conducted to gather additional data and assess the health and condition of outlier trees. These inspections involve traditional ground-based tree inventory assessments, including Level 1 and Level 2 inventories. However, field inspections differ from a traditional tree inventory because the assessed trees may not be located in the same area and may require a more detailed inspection. Consequently, field inspections require more time to complete, both for the assessment and for locating the trees. Results from the field inspections are provided in the software.
3. *TreeKeeper® and software support:* TreeKeeper® software aids in managing and maintaining the tree inventory data.

Step Four: Data Delivery

All output data will be incorporated into an online data viewing platform, TreeKeeper®. Portions of the core tree measurements can be output as ESRI® shapefiles; however, items such as the digital twin and deep analysis of some tree metrics are not standard GIS data files. Data (e.g., status of tree, diameter, etc.) will be updated for trees already in the city's inventory, and new data populated for trees not yet in the city's database. Via TreeKeeper®, the city will have access to view the digital twin of each tree captured during this process.

Step Five: Repeat

The benefit of this approach is the regular monitoring and repeatability of tree scans. Each time the LiDAR scans are repeated, a rich dataset emerges that provides robust analytics on tree growth rates and the light signature of tree foliage that provides incredible detail on tree vigor and vitality. These data can be used to intervene in tree maintenance at the early stages of tree stress, rather than when the tree begins to change in observable 'condition'. Additionally, the data can be used to observe and compare trends with cohorts of similar trees thus allowing the urban forester to make quicker and more informed decisions about trees.

Client Responsibilities

1. Provide DRG with imagery, maps, and data files. Our request may include the following: digital orthophotographs, available GIS data layers, other electronic or paper copies of maps for roads, pavement widths, right-of-way widths, boundaries, and utilities, and an electronic file or printed list of street names and endpoints.
2. Provide daily contact information and directions during the inventory project.
3. Provide a copy of any existing tree inventory databases.
4. Coordinate and host a kick-off meeting before the start of fieldwork.
5. By accepting this proposal, the City of Las Vegas accepts DRG's Terms and Conditions and Limited Warranty (listed after the Authorization to Proceed page below) and agrees that, upon award, this proposal and its attachments will be made a part of the Agreement.

Project Schedule, Tasks, and Deliverables

For the Smart Tree Inventory project, DRG will continue to provide full LiDAR scans of Las Vegas's urban forest every other year. It is important that original contracts for this project reflect the opportunity for Las Vegas to obtain more than one scan of the city's inventory. This will allow our team the opportunity to continue to work with the City of Las Vegas to review the data, understand trends in tree health and vigor, and support decisions that best improve the health and longevity of Las Vegas's trees.

Estimated Project Schedule (weeks) - Smart Tree Inventory (Leaf - On Start Date Required)									
	Task	1	2	3	4	5	6	7	Result/Deliverables
Year 1	Award								Insurance, contract
	Project Logistics								Data structure, scheduling
	Kick-off Meeting (Scan)								Meeting summary as needed
	Year 1 Point Cloud Scan								Scan
	AI Extraction								Machine learning and Ai
	Remote Data Assessment								Analysis and report - six weeks
	Data Review Meeting								
	Kick-off Meeting (Inspections)								DRG arborist and the city
	Field Inspections (s)								Expect two to four weeks depending on the number of trees.
	Software								Inventory data in TreeKeeper®
Year 2	Data Management								
	Smart Tree Inventory Consulting Services/Field Inspections (s)								
	Software Subscription								
Year 3	Re-scan, See Year 1 for schedule								

TERMS AND CONDITIONS

- All pricing is valid for 30 days from the date of this proposal, after which time we reserve the right to amend fees as needed.
- Time and materials (T&M) estimates will be billed using the labor rates in DRG's current commercial price list. Fixed Fee Contract Prices will be billed in monthly increments for the percentage of work completed in the billing period. Firm-Fixed Unit Prices will be billed in monthly increments for the number of completed units in the billing period.
- Payment terms are net 30 days.
- If prevailing wage requirements are discovered after the date of this proposal, we reserve the right to negotiate our fees.
- The client is responsible for any permit fees, taxes, and other related expenses unless noted as being included in our proposal.
- The client shall provide 48 hours notice of any meetings where the consultant's attendance is required.
- Unless otherwise stated, one round of revisions to deliverables is included in our base fee. Additional edits or revisions will be billed on a time and material (T&M) basis.
- All reports are provided only to the client unless otherwise directed.

LIMITED WARRANTY

Davey Resource Group, Inc. ("DRG") provides this limited warranty ("Limited Warranty") in connection with the provision of services by DRG (collectively the "Services") under the agreement between the parties, including any bids, orders, contracts, or understandings between the parties (collectively the "Agreement").

Notwithstanding anything to the contrary in the Agreement, this Limited Warranty will apply to all Services rendered by DRG and supersedes all other warranties in the Agreement and all other terms and conditions in the Agreement that conflict with the provisions of this Limited Warranty. Any terms or conditions contained in any other agreement, instrument, or document between the parties, or any document or communication from you, that in any way modifies the provisions in this Limited Warranty, will not modify this Limited Warranty nor be binding on the parties unless such terms and conditions are approved in a writing signed by both parties that specifically references this Limited Warranty.

Subject to the terms and conditions set forth in this Limited Warranty, for a period of ninety (90) days from the date Services are performed (the "Warranty Period"), DRG warrants to Customer that the Services will be performed in a timely, professional and workmanlike manner by qualified personnel.

To the extent the Services involve the evaluation or documentation (“Observational Data”) of trees, tree inventories, natural areas, wetlands and other water features, animal or plant species, or other subjects (collectively, “Subjects”), the Observational Data will pertain only to the specific point in time it is collected (the “Time of Collection”). DRG will not be responsible nor in any way liable for (a) any conditions not discoverable using the agreed upon means and methods used to perform the Services, (b) updating any Observational Data, (c) any changes in the Subjects after the Time of Collection (including, but not limited to, decay or damage by the elements, persons or implements; insect infestation; deterioration; or acts of God or nature [collectively, “Changes”]), (d) performing services that are in addition to or different from the originally agreed upon Services in response to Changes, or (e) any actions or inactions of you or any third party in connection with or in response to the Observational Data. If a visual inspection is utilized, visual inspection does not include aerial or subterranean inspection, testing, or analysis unless stated in the scope of work. When performing tree inventories or assessments, DRG will not be liable for the discovery or identification of non-visually observable, latent, dormant, or hidden conditions or hazards, and does not guarantee that Subjects will be healthy or safe under all circumstances or for a specified period of time, or that remedial treatments will remedy a defect or condition.

To the extent you request DRG’s guidance on your permitting and license requirements, DRG’s guidance represents its recommendations based on its understanding of and experience in the industry and does not guarantee your compliance with any particular federal, state or local law, code or regulation.

DRG may review information provided by or on behalf of you, including, without limitation, paper and digital GIS databases, maps, and other information publicly available or other third-party records or conducted interviews (collectively, “Source Information”). DRG assumes the genuineness of all Source Information. DRG disclaims any liability for errors, omissions, or inaccuracies resulting from or contained in any Source Information.

If it is determined that DRG has breached this Limited Warranty, DRG will, in its reasonable discretion, either: (i) re-perform the defective part of the Services or (ii) credit or refund the fees paid for the defective part of the Services. **This remedy will be your sole and exclusive remedy and DRG’s entire liability for any breach of this Limited Warranty.** You will be deemed to have accepted all of the Services if written notice of an alleged breach of this Limited Warranty is not delivered to DRG prior to the expiration of the Warranty Period.

To the greatest extent permitted by law, except for this Limited Warranty, DRG makes no warranty whatsoever, including, without limitation, any warranty of merchantability or fitness for a particular purpose, whether express or implied, by law, course of dealing, course of performance, usage of trade or otherwise.

EXHIBIT C – COMPANY FEES

COVER PAGE

SECTION 5. PRICING PROPOSAL

	Objectives	Est. Hrs	Essential	Optional	Total
1	Background information, research, and outreach	512	\$48,625	\$26,259	\$74,884
	Recommended "Essential" Items				
	Kickoff meeting—onsite (includes prep/follow up)	24	\$4,193		
	Background review (history, guiding docs, regulations, policies, etc.)—including 3.1 a-g	48	\$5,692		
	Operations review (staffing, structure, services, funding, tree species list(s) etc.) (3.3 c)	60	\$7,208		
	Working Group meetings (up to 8), including prep/follow up	32	\$4,084		
	h. Develop a Public Outreach Plan	10	\$1,222		
	Stakeholder interviews—onsite, up to 15 individuals/ groups	68	\$10,783		
	Status/Check in meetings (virtual)	28	\$3,682		
	Project Administration	80	\$11,760		
	Options				
	Open house/Community workshop—EACH, including prep/materials	44		\$6,965	
	Pop Ups - EACH, *in conjunction w/open house/workshop	16		\$2,180	
	Online Survey (develop, monitor, analysis)	34		\$3,859	
	Community presentation (virtual)—live and recorded	28		\$3,372	
	Project landing page—DRG hosted/managed	-		\$5,882	
	PSAs, website content, handouts, posters, maps, ect.	40		\$4,000	
	Translation Services (as needed/requested)	-		TBD	
2	Tree Inventory Update		\$316,673	\$0	\$316,673
	Recommended "Essential" Items				
	Collect analog tree inventory	280	\$316,673		
	Optinal—Collect Digital twin tree data, additional subscription required.				
3	Plan Development and Delivery		\$77,995	\$14,223	\$92,218
	Recommended "Essential" Items				
	a. Urban Forestry Status				
	Inventory resource analysis with iTree Eco	62	\$6,894		
	Tree canopy and land cover data analysis, including canopy equity and socioeconomic factors	64	\$7,188		
	Report maps	-	\$2,941		
	Tree placement model and long term planting plan	-	\$5,882		
	Best Practices—educational materials (for print or electronic distribution)—5–7 topics	68	\$8,136		

	Objectives	Est. Hrs	Essential	Optional	Total
3	Plan Development and Delivery (contunued)		\$77,995	\$14,223	\$92,218
	Draft 1 UFMP >85% unformatted (including a-d; f-h)	164	\$19,768		
	Draft 2 UFMP >95% formatted	76	\$9,312		
	Final UFMP—print ready and optimized for web viewing	44	\$5,352		
	Design & Style Guidelines	-	\$824		
	Layout	40	\$3,529		
	Editor	40	\$2,353		
	Website support (e)	48	\$5,816		
	Options				
	Storymap (e.i. through e.iii)	-		\$9,752	
	Case studies (3.3d) (e.g., municipal owned tree nurseries, tree planting/giveaway programs, stewardship programs, etc.)—EACH	36		\$4,300	
	UFMP hard copy—printed/bound - Each	-		\$171	
4	Collaboration with University of Nevada, Las Vegas (UNLV)		\$511	\$511	\$1,021
	Recommended "Essential" Items				
	working group meeting (1) (virtual)	4	\$511		
	Options				
	Additional working group meetings (as needed)—EACH	4		\$511	
5	Implementation		\$0	\$17,401	\$17,401
	Options				
	TK Canopy—build + 1st year	-		\$8,529	
	TK Canopy Annual maintenance subscription	-		\$1,500	
	Printable Tree Guide	68		\$7,372	
	Total "Essential"		\$443,804		
	Total Optional (not including TreeKeeper®)			\$58,394	
	Total All (Essential and Optional)				\$502,197



Corporate Headquarters
295 South Water Street, Suite 300
Kent, OH 44240
800.828.8312

Local Contact
Anne Fenkner
916-214-5908
anne.fenkner@davey.com

January 18, 2024

Brad Daseler, Urban Forester
Denise Marcella, Quality Assurance Administrator
City of Las Vegas, Nevada
Sent via Email

RE: Budget for Smart Tree Inventory

Greetings Brad and Denise,

Thank you both for your time yesterday and the opportunity to review the budget.

Davey Resource Group (DRG) respectfully offers the following pricing considerations using a LiDAR extraction and verification process to deliver a smart tree inventory within the City of Las Vegas TreeKeeper management system. The following budget addresses a quantity of 33,000 trees or 40,000 city trees.

DRG will provide a LiDAR scan of Las Vegas's urban forest beginning in 2024 and 2026. The scan will collect data on either 33,000 or 40,000 trees. Following each scan, DRG will virtually inspect 20% of the inventoried trees as "outliers". Outliers are defined with you based on various priorities and findings from the initial inventory. DRG will then conduct field inspections for approximately 25% of the outlier trees. None of the inspections will include a condition, rate risk, or prescribe maintenance recommendations. All data will be uploaded to the city's TreeKeeper software.

The following pricing does not include Las Vegas' TreeKeeper software subscription. It is understood that this subscription will remain active under a separate agreement. The city of Las Vegas always owns the tree inventory data and can export it at any time. DRG T/M Field Consultant is \$175/hour.

33,000 Trees	Option A: Biennial Subscription (4-Year contract)	
Brief Description	Year 2024	Year 2026
Scan of up to 33,000 city trees	\$89,946	\$89,946
Remote inspection of up to 6,600 outlier trees (each scan year) after each scan by a Certified Arborist	\$25,280	\$25,280
Field Inspection of up to 1,650 outlier trees (each scan year) by a Senior Certified Arborist	\$20,358	\$20,358
Total	\$135,584	\$135,584

40,000 Trees (Recommended)	Option B: Biennial Subscription (4-Year contract)	
Brief Description	Year 2024	Year 2026
Scan of up to 40,000 city trees	\$107,376	\$107,376
Remote inspection of up to 8,000 outlier trees (each scan year) after each scan by a Certified Arborist	\$31,747	\$31,747
Field Inspection of up to 2,000 outlier trees (each scan year) by a Senior Certified Arborist	\$25,428	\$25,428
Total	\$164,551	\$164,551

We appreciate the opportunity to clarify the budget and review the contracting details and respectfully request the opportunity for our legal counsels to engage in discussions to address any remaining items.

Thank you, Brad and Denise, for facilitating this ongoing conversation. We are eager to bring these discussions to a successful conclusion and finalize agreements with the City of Las Vegas in the coming weeks.

Sincerely,



Anne Fenkner, Project Developer
Davey Resource Group, Inc.

cc: Josh Behounek, Business Development Manager, DRG
Amber Krebbers, Regional Operations Manager, DRG

CERTIFICATE - DISCLOSURE OF OWNERSHIP AND PRINCIPALS**1. Definitions**

"City" means the City of Las Vegas.

"City Council" means the governing body of the City of Las Vegas.

"Contracting Entity," means the individual, partnership, or corporation seeking to enter into a contract with the City of Las Vegas.

"Principal" means, for each type of business organization, the following: (a) sole proprietorship – the owner of the business; (b) corporation – the directors and officers of the corporation; but not any branch managers of offices which are a part of the corporation; (c) partnership – the general partner and limited partners; (d) limited liability company – the managing member as well as all the other members; (e) trust – the trustee and beneficiaries.

2. Policy

In accordance with Resolutions 79-99, 105-99 and RA-4-99, adopted by the City Council, Contracting Entities seeking to enter into certain contracts with the City of Las Vegas must disclose information regarding ownership interests and principals. Such disclosure generally is required in conjunction with a Request for Proposals (RFP). In other cases, such disclosure must be made prior to the execution of a contract.

3. Instructions

The disclosure required by the Resolutions referenced above shall be made through the completion of this Certificate. The Contracting Entity shall complete Block 1, Block 2, and Block 3. The Contracting Entity shall complete either Block 4 or its alternate in Block 5. Specific information, which must be provided, is highlighted.

4. Incorporation

An updated and notarized Certificate shall be incorporated into the resulting contract, if any, between the City and the Contracting entity. Upon execution of such contract, the Contracting Entity is under a continuing obligation to notify the City in writing of any material changes to the information in this Certificate. This notification shall be made within fifteen (15) days of the change. Failure to notify the City of any material change may result, at the option of the City, in a default termination (in whole or in part) of the contract, and/or a withholding of payments due the Contracting Entity.

Block 1: Contracting Entity	
Name: Davey Resource Group	
Address: 295 S Water Street	City / ST / Zip: Kent, Ohio 44240
Telephone:	EIN or DUNS : 82-1948528
Block 2: Description / Subject Matter of Contract	
Services for: Urban Forest Pan	Project Number: RFP 230197-JH&

Block 3:	<u>Type of Business</u>
<input type="checkbox"/> Individual <input type="checkbox"/> Partnership <input type="checkbox"/> Limited Liability Company <input checked="" type="checkbox"/> Corporation <input type="checkbox"/> Trust <input type="checkbox"/> Other:	

CERTIFICATE – DISCLOSURE OF OWNERSHIP AND PRINCIPALS (CONTINUED)**Block 4: Disclosure of Ownership and Principals**

In the space below, the Contracting Entity must disclose all principals (including partners) of the Contracting Entity, as well as persons or entities holding more than one-percent (1%) ownership interest in the Contracting Entity.

	FULL NAME/TITLE	BUSINESS ADDRESS	BUSINESS PHONE
1	John J. McCabe, VP & General Manager	295 S Water Street, Suite 300, Kent ,OH 44240	800-828-8312
2	Scott R. Carlin, VP & General Manager	295 S Water Street, Suite 300, Kent ,OH 44240	800-828-8312
3	Karen M. Wise, VP Environmental Consulting	295 S Water Street, Suite 300, Kent ,OH 44240	800-828-8312
4	Brian M. Chromey, P.E., VP	295 S Water Street, Suite 300, Kent ,OH 44240	800-828-8312
5	T.J. Mascia, Director of Mitigation	295 S Water Street, Suite 300, Kent ,OH 44240	800-828-8312
6	Christopher J. Bast, VP and Treasurer	1500 N. Mantua Street, Kent, OH 44240	800-445-8733
7	Thea R. Sears, VP and Controller	1500 N. Mantua Street, Kent, OH 44240	800-445-8733
8	Erika J. Schoenberger, General Counsel	1500 N. Mantua Street, Kent, OH 44240	800-445-8733
9	& Secretary		
10			

The Contracting Entity shall continue the above list on a sheet of paper entitled "Disclosure of Ownership and Principals – Continuation" until full and complete disclosure is made. If continuation sheets are attached, please indicate the number of sheets: _____

Block 5: Disclosure of Ownership and Principals – Alternate

If the Contracting Entity, or its principals or partners, are required to provide disclosure (of persons or entities holding an ownership interest) under federal law (such as disclosure required by the Securities and Exchange Commission or the Employee Retirement Income Act), a copy of such disclosure may be attached to this Certificate in lieu of providing the information set forth in Block 4 above. A description of such disclosure documents must be included below.

Name of Attached Document: _____

Date of Attached Document: _____ Number of Pages: _____

Contracting Party Certification (Notarized signature required in event of contract award per section 4, "Incorporation")

I certify under penalty of perjury, that all the information provided in this Certificate is current, complete and accurate. I further certify that I am an individual authorized to contractually bind the above named Contracting Entity.

Signature

4/27/2023

Date

Subscribed and sworn to before me this 8th day of February, 20 24

Notary Signature



KAYLEE YUTZY
Notary Public
State of Ohio
My Comm. Expires
August 22, 2028