

SPECIFICATIONS FOR  
TREE TRIMMING AND REMOVAL AT  
HAWAII STATE VETERANS CEMETERY, KANEOHE  
STATE OF HAWAII, DEPARTMENT OF DEFENSE  
OFFICE OF VETERANS SERVICES  
JOB NO. CA-1704

ISSUED BY:  
STATE OF HAWAII  
DEPARTMENT OF DEFENSE  
3949 DIAMOND HEAD ROAD,  
HONOLULU, HAWAII 96816-4495  
TELEPHONE: 808-733-4250

MAY 2017

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STATE OF HAWAII  
DEPARTMENT OF DEFENSE  
OFFICE OF THE ADJUTANT GENERAL  
3949 DIAMOND HEAD ROAD  
HONOLULU, HAWAII 96816-4495

**NOTICE TO BIDDERS**

SEALED BIDS for furnishing labor, materials, tools and equipment for **"Tree Trimming and Removal at Hawaii State Veterans Cemetery, Kaneohe, State of Hawaii, Department of Defense, Office of Veterans Services, Job No. CA-1704"** will be received in the Engineering Office, State of Hawaii, Department of Defense, located in Building 306-A, Room 228, 3949 Diamond Head Road, Honolulu, Hawaii, up to **2:00 P.M. on June 1, 2017** and will then and there be publicly opened and read aloud. Proposals may also be mailed to State of Hawaii, Department of Defense, 3949 Diamond Head Road, Honolulu, HI, 96816-4495, **ATTN: HIENG Room 228**. Bids must be received in the Engineering Office, Room 228, prior to the time and date fixed for opening to be considered. All bids received in the Engineering Office after the time and date fixed for opening will not be considered.

Bidders are advised that the Department of Defense facility at 3949 Diamond Head Road is a secure facility. In order to access the property, Bidders and/or their authorized personnel shall present a current driver's license or other form of official identification (with photograph) to the security personnel at the entry gate, and shall inform the security personnel of the building and room number they require access to (State Contracting Section 733-4041). Lack of official identification or knowledge of the building and room to which access is needed are grounds for denial of access onto the property.

Bidders should be aware and allow for security screening and random vehicle inspections. The state will not be responsible for late bids due to the afore mentioned reasons.

Proposed work HI consists of, but not limited to the following: trimming and removal of various species of trees at the Hawaii State Veterans Cemetery, Kaneohe, Hawaii.

The estimated cost is between \$735,000 and \$810,000.

A Pre-Bid Conference/Site Visit will be held on May 17, 2017 at 9:00 AM. Contractors are to meet Mr. Reggie Yamada in front of the Hawaii State Veterans Cemetery Administration Building prior to 9:00 AM. Contractors are required to call Mr. Yamada at (808) 733-8440 before 4:30 PM on May 16, 2017, to register for the conference/site visit. If no answer please leave your company's name, all attendees names and contact numbers. You may assume that you have been registered for the conference/site visit. All interested bidders and subcontractors are welcome, but not required to attend.

Bona fide bidders may obtain copies of applicable specifications and bidding documents at the above-named office. Documents may also be downloaded from the State Procurement Office website at <http://spo.hawaii.gov/> and at the State Department of Defense website at <http://dod.hawaii.gov/hieng>. If prospective bidders obtain copies of the bid documents from sources other than the Contracting and Engineering Office address listed above, then bidders are responsible to register by sending their company name, address, telephone and email address via email to [estelita.a.pumares@hawaii.gov](mailto:estelita.a.pumares@hawaii.gov).

All requests for clarification of bidding documents and/or specifications must be received in the office listed above, via email, prior to May 18, 2016, 4:30 PM. Questions shall be emailed to [estelita.a.pumares@hawaii.gov](mailto:estelita.a.pumares@hawaii.gov).

Late submittals for this solicitation will not be reviewed by this agency.

**An Intent to Bid is NOT required to be submitted for this project.**

Bidders are required to register on the new Vendor Compliance web site for all tax clearances by going to <http://spo.hawaii.gov/> and registering there.

Bidders are responsible for checking for any addenda for this project. The addenda will be posted on the State Procurement Office web site under the project name at <http://spo.hawaii.gov/>.

The Hawaii Products preference pursuant to ACT 175, SLH 2009 may be applicable for numerous items throughout this solicitation. Persons wishing to certify and qualify a product not currently listed as a Hawaii Product shall submit a Certification for Hawaii Product Preference (form SPO-38) by e-mail to [cathy.a.siu@hawaii.gov](mailto:cathy.a.siu@hawaii.gov) prior to 4:30 PM, 15 days prior to the bid opening date for this project. View the current Hawaii Products List on the State Procurement office (SPO) website at <http://spo.hawaii.gov/>.

For each product, one form shall be completed and submitted (i.e. 3 products should have 3 separate forms completed). The form is available on the SPO webpage at <http://spo.hawaii.gov/>.

**CAMPAIGN CONTRIBUTIONS BY STATE AND COUNTY CONTRACTORS PROHIBITED.** If awarded a contract in response to this solicitation, offeror agrees to comply with HRS §11-355, which states that campaign contributions are prohibited from a State and County government contractor during the term of the contract if the contractor is paid with funds appropriated by the legislative body between the execution of the contract through the completion of the contract.

#### **REQUIREMENT FOR CONTRACTORS LICENSING CLASSIFICATIONS**

Due to the nature of the work contemplated bidder must possess a valid State of Hawaii Contractor's license in the appropriate classification – C27b

General Engineering Contractors holding an 'A' license and General Building Contractors holding a 'B' license are reminded that due to the Hawaii Supreme Court's January 28, 2002 decision in Okada Trucking Co., Ltd. v. Board of Water Supply, et al., 97 Haw. 450 (2002), they are prohibited from undertaking any work, solely or as part of a larger project, which would require the General Contractor to act as a specialty Contractor in any area in which the General Contractor has no license.

Bidders are solely responsible to review the project requirements, determine the appropriate licenses required, and ensure that they possess and that the Subcontractor(s) listed in their OFFER FORM possess the necessary specialty licenses to perform the work for this project.

Arthur J. Logan  
Major General  
Adjutant General

Posted on: May 10, 2017

**TREE TRIMMING AND REMOVAL AT HAWAII STATE VETERANS CEMETERY, KANEOHE,  
STATE OF HAWAII, DEPARTMENT OF DEFENSE, OFFICE OF VETERANS SERVICES,  
JOB NO. CA-1704**

Adjutant General  
State Department of Defense  
3949 Diamond Head Road  
Honolulu, Hawaii 96816-4495

Dear Sir:

The undersigned has carefully read and understands the terms and conditions specified in the Specifications, and all documents attached hereto, and hereby submits the following offer to perform the work specified herein, all in accordance with the true intent and meaning thereof. The undersigned further understands and agrees that by submitting this offer, 1) he/she is declaring his/her offer is not in violation of Chapter 84, Hawaii Revised Statutes, concerning prohibited State contracts, and 2) he/she is certifying that the price(s) submitted was (were) independently arrived at without collusion.

The undersigned represents: **(Check / one only)**

- A **Hawaii business** incorporated or organized under the laws of the State of Hawaii; **OR**  
 A **Compliant Non-Hawaii business** not incorporated or organized under the laws of the State of Hawaii. Business shall be registered prior to award at the State of Hawaii Department of Commerce and Consumer Affairs Business Registration Division to do business in the State of Hawaii.

State of incorporation: \_\_\_\_\_

Offeror is:

- Sole Proprietor     Partnership     Corporation     Joint Venture  
 Other \_\_\_\_\_

Federal I.D. No.: \_\_\_\_\_

Hawaii General Excise Tax License I.D. No.: \_\_\_\_\_

Payment address (if other than street address below): \_\_\_\_\_

City, State, Zip Code: \_\_\_\_\_

Business address (street address): \_\_\_\_\_

City, State, Zip Code: \_\_\_\_\_

Respectfully submitted:

Date: \_\_\_\_\_

(x) \_\_\_\_\_  
Authorized (Original) Signature (\*1)

Telephone No.: \_\_\_\_\_

Fax No.: \_\_\_\_\_

\_\_\_\_\_  
Name and Title (Please Type or Print)

E-mail Address: \_\_\_\_\_

\_\_\_\_\_  
Exact Legal Name of Company (Offeror) (\*2)

(\*1) Original signature in ink. If unsigned or the affixed signature is a facsimile or a photocopy, the offer shall be automatically rejected unless accompanied by other material, containing an original signature, indicating the Offeror's intent to be bound.

(\*2) If Offeror is a "dba" or a "division" of a Corporation, furnish the exact legal name of the corporation under which the awarded contract will be executed:

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The undersigned has carefully examined the attached plans and specifications and hereby proposes to furnish at his own expense all labor, materials, tools, and equipment necessary as shown and called for, in strict accordance with the specifications pertaining thereto, all for the LUMP SUM BID PRICE of (Including all applicable taxes, delivery, unloading, freight charges and other costs involved.):

BASE BID GROUP #1: Total 20 trees.

\_\_\_\_\_ DOLLARS (\$ \_\_\_\_\_ )

BASE BID GROUP #2: Total 30 trees.

\_\_\_\_\_ DOLLARS (\$ \_\_\_\_\_ )

BASE BID GROUP #3: Total 17 trees.

\_\_\_\_\_ DOLLARS (\$ \_\_\_\_\_ )

**TOTAL LUMP SUM BID PRICE:**

\_\_\_\_\_ DOLLARS (\$ \_\_\_\_\_ ).

*[BIDDER'S INSTRUCTIONS: Fill in the total lump sum bid price in numbers and write out the total lump sum bid price in words. Prices shall be written in ink or typed.]*

ADDITIVE ALTERNATE GROUP #1: Total 7 trees.

\_\_\_\_\_ DOLLARS (\$ \_\_\_\_\_ )

ADDITIVE ALTERNATE GROUP #2: Total 6 trees.

\_\_\_\_\_ DOLLARS (\$ \_\_\_\_\_ )

ADDITIVE ALTERNATE GROUP #3: Total 8 trees.

\_\_\_\_\_ DOLLARS (\$ \_\_\_\_\_ )

**Hawaii Products available for this project are as follows:**

Product Description	Class I, II or III	Manufacturer	Cost
			\$
			\$

**NOTE:**

1. Contract will be awarded based on the lowest aggregate amount, within the project's budget (after application of the preferences), for the total lump sum base bid plus the additives in their precedence order.
2. The prices listed in this Offer Form are firm and fixed for a minimum of 90 days from the date set for opening of the bids for this project unless otherwise noted above.
3. In order to execute the contract by the end of the State fiscal year (June 30, 2017), the contractor will need to provide all documents required in the Special Provisions, Responsibility of Offerors (Page SP-1-3) within seven (7) calendar days of notification of intent to award.
4. The Bidder shall provide copies of the Certified Arborist's current and five (5) years of previously expired ISA certificates with the bid documents.

List Name of Certified Arborist: \_\_\_\_\_

5. The State reserves the right to determine the extent of the contract by selecting and/or omitting bid items (not necessarily in numerical sequence or all of the bid items in the bid schedule) to the extent required to come within the funds available for the project. The award of the contract shall be made to the responsible bidder whose aggregate total on any combination or all of the bid items are the lowest.
6. Failure to submit complete item bids will cause the rejection of this proposal.
7. A Pre-Bid Conference/Site Visit will be held on May 17, 2017 at 9:00 AM. Contractors are to meet Mr. Reggie Yamada in front of the Hawaii State Veterans Cemetery Administration Building prior to 9:00 AM. Contractors are required to call Mr. Yamada at (808) 733-8440 before 4:30 PM on May 16, 2017, to register for the conference/site visit. If no answer please leave your company's name, all attendees names and contact numbers. You may assume that you have been registered for the conference/site visit. All interested bidders and subcontractors are welcome, but not required to attend.
8. All requests for clarification of bidding documents and/or specifications must be received in the office listed above, via email, prior to May 18, 2016, 4:30 PM. Questions shall be emailed to [estelita.a.pumares@hawaii.gov](mailto:estelita.a.pumares@hawaii.gov).
9. Term of contract shall be from July 2017 to December 31, 2017.

10. OPTION TO RENEW: Contract may be renewed by mutual agreement for no more than four one-year renewal periods.

11. **CAMPAIGN CONTRIBUTIONS BY STATE AND COUNTY CONTRACTORS**

**PROHIBITED.** If awarded a contract in response to this solicitation, offeror agrees to comply with HRS §11-355, which states that campaign contributions are prohibited from a State and County government contractor during the term of the contract if the contractor is paid with funds appropriated by the legislative body between the execution of the contract through the completion of the contract.

**TAX CLEARANCES FROM THE STATE DIRECTOR OF TAXATION AND INTERNAL REVENUE SERVICE**

Contractors are required to provide a state and federal tax clearance as a prerequisite to entering into a public contract of \$2,500 or more. To meet this requirement, all bidders shall submit valid tax clearances with their bid proposals when the bid is \$2,500 or more.

In accordance with Act 190 Amendment to HRS 103D-310(c), required as a prerequisite to entering into a contract, the contractor shall register on the Hawaii Compliance Express web site for all tax clearances by going to <http://spo.hawaii.gov> and registering there.

A Certificate of Vendor Compliance generated from this website should be included with their bid proposal. A Compliant status is required prior to awarding the contract.

**HAWAII PRODUCTS PREFERENCE**

In accordance with ACT 175, SLH 2009 the Hawaii Products preference is applicable to this solicitation. Hawaii products may be available for those items noted on the offer form. The Hawaii Products List is available on the State Procurement Office (SPO) website at <http://spo.hawaii.gov/> search for "Hawaii Product Preferences".

Offeror offering a Hawaii Product (HP) shall identify the HP on the solicitation offer pages. Any person desiring a Hawaii product preference shall have the product(s) certified and qualified if not currently on the Hawaii Products list, prior to the deadline for receipt of offer(s) specified in the procurement notice and solicitation. The responsibility for certification and qualification shall rest upon the person requesting the preference.

Persons desiring to qualify their product(s) not currently on the Hawaii Product list shall complete form SPO-38, *Certification for Hawaii Product Preference*, and submit to the Department of Defense, Contracting Officer, and provide all additional information required by the Contracting Officer no later than 4:30pm, fifteen (15) calendar days prior to the bid opening date. For each product, one form shall be completed and submitted (i.e. 3 products should have 3 separate forms completed). The form is available on the SPO webpage at <http://spo.hawaii.gov/> search for "Forms" and select form SPO-38.

Late submittals for this project will not be reviewed by the Department.



### Change in Availability of Hawaii Product

In the event of any change that materially alters the offeror's ability to supply Hawaii Products, the offeror shall immediately notify the Contracting Officer in writing and the parties shall enter into discussions for the purposes of revising the contract or terminating the contract for convenience.

Offerors shall indicate in the Hawaii Product Schedule below whether the pre-approved Hawaii Products are offered. Offerors offering a Hawaii Product shall fill-in the quantity, unit measure, unit price and total price for the Hawaii Product they desire to be considered for preference. Products not pre-approved shall not be considered. Hawaii Products not meeting the requirements of the specification shall not be considered.

Offerors selecting the Hawaii Product preference may be required to submit additional information on the cost basis of their selected Hawaii Product preference items when requested after the bid opening to verify cost of the Hawaii Products, including the computations for the estimated quantities, manufacturer's or supplier's quotations, and delivered material cost Free on Board (FOB) at the jobsite. The Hawaii Product Cost shall not include installation costs.

It is further understood and agreed that:

1. The Contractor shall call Mr. Reggie Yamada at 808-733-8440 and obtain permission before visiting the site.
2. The Adjutant General or his designated representative reserves the right to reject any and/or all bids and waive any defects when, in his opinion, such rejection or waiver will be in the best interest of the State.
3. The award of the contract shall be conditioned upon funds being made available for these projects and further upon the right of the Adjutant General or his designated representative to hold all bids received for a period of ninety (90) days from the date of the opening thereof, unless otherwise required by law, during which time no bid may be withdrawn.
4. The liquidated damages per working day for failure to complete the work on time shall be at \$270 per working day or as stipulated in the General Conditions, whichever is higher.
5. By submitting this proposal, the undersigned is declaring his firm has not been assisted or represented on this matter by an individual who has, in a State capacity, been involved in the subject matter of this contract in the past two years.
6. Upon the acceptance of the proposal by the Adjutant General or his designated representative, the undersigned must enter into and execute a contract for the same as required by law.
7. If the lowest bid received by the State exceeds the funds available for this project, the State reserves the right to negotiate with the lowest responsible bidder as permitted

under Section 103D-302, Hawaii Revised Statutes, as amended, to reduce the scope of work and award a contract therefore.

- 8. This contract may be awarded as an informal contract as determined by the Adjutant General or his designated representative in accordance with the applicable Hawaii Revised Statutes as amended, whereby a purchase order will be executed and used as the formal contract.
- 9. It is further agreed by the parties that any portion of the Contract price payable to the Contractor out of federal funds shall be paid to the Contractor only when such federal funds are received, and this contract shall not be construed as binding the State to pay said portion out of any fund other than those which are received from the Federal government.

Receipt of the following addenda issued by the Department is acknowledged by the day(s) of the receipt indicated below:

Addendum No. 1 \_\_\_\_\_ Addendum No. 2 \_\_\_\_\_  
Date  
Addendum No. 3 \_\_\_\_\_ Addendum No. 4 \_\_\_\_\_

It is understood that failure to receive any such addendum shall not relieve the Contractor from any obligation under this Proposal as submitted. (See Special Notice to Bidders for information regarding addenda.)

Respectfully submitted,

HAWAII GENERAL EXCISE TAX

\_\_\_\_\_  
Name of Company

I.D. NO. \_\_\_\_\_

By \_\_\_\_\_  
\*Signature

LICENSE CLASSIFICATION  
AND/OR SUBCLASSIFICATION  
NO. \_\_\_\_\_

\_\_\_\_\_  
Print Name

Title \_\_\_\_\_

Date \_\_\_\_\_

Address \_\_\_\_\_

Telephone \_\_\_\_\_

(CORPORATE SEAL)

\*Please attach to this page evidence of the authority of this officer to submit bids on behalf of the Company, and also the names and residence addresses of all officers of the Company.

NOTE: Fill in all blank spaces with the information asked for or bid may be invalidated.  
PROPOSAL PAGES MUST BE INTACT; MISSING PAGES MAY INVALIDATE YOUR BID.

(Name of Corporation)  
Corporate Resolution

I, \_\_\_\_\_, Secretary of \_\_\_\_\_  
Corporation,  
a \_\_\_\_\_ Corporation, do hereby certify that the following is a full, true  
and correct copy of a resolution duly adopted by the Board of Directors of said corporation, at its  
meeting duly called and held at the office of the Corporation \_\_\_\_\_  
Street, \_\_\_\_\_, on the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_, at  
which a quorum was present and acting throughout, and that said resolution has not been  
modified, amended or rescinded and continues in full force and effect:

“RESOLVED that any individual at the time holding the position of President, Vice  
President, Secretary or Treasurer be, and each of them hereby is, authorized to execute on behalf  
of the Corporation any bid, proposal or contract for the sale or rental of the products of the  
Corporation or for services to be performed by the Corporation, and to execute any bond  
required by any such bid, proposal or contract with the United States Government or the State of  
Hawaii or the City and County of Honolulu, or any County or Municipal Government of said  
State, or any department or subdivision of any of them.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the corporate seal of said  
\_\_\_\_\_ Corporation this \_\_\_\_\_ day of  
\_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
Secretary

(Names and Address of:)

President:

Vice President:

Secretary:

Treasurer:

## SPECIAL NOTICE TO BIDDERS – GOODS AND SERVICES

QUALIFICATIONS OF BIDDERS - Prospective bidders must be capable of performing the work for which bids are being called.

The Department of Defense no longer requires a submittal of “INTENTION TO BID” unless otherwise stated in the notice to bidders.

If a notice to bid is required, the written notice shall be received no later than TEN calendar days prior to the date designated for opening bids. If the 10th calendar day prior to the day designated for opening bids is a weekend or legal State holiday, then the written notice must be received no later than the last working day immediately prior to said weekend or State holiday. The written notice will be time stamped when received by said office. The time designated by the time stamping device in said office shall be official. If the written notice is hand carried, then the bearer is responsible to ensure that the notice is time stamped by said office.

It is the responsibility of the perspective bidder to ensure that the written notice of intention to bid is received in time and the State assumes no responsibility for failure of timely delivery caused by the prospective bidder or by any method of conveyance chosen by the prospective bidder.

If two (2) or more prospective bidders desire to bid jointly as a joint venture on a single project, they must file an affidavit of joint venture with their notice of intention to bid. Such affidavit of joint venture will be valid only for the specific project for which it is filed. No further license is required when all parties to the joint venture possess current and appropriate contractor’s licenses. Joint venture are required to be licensed in accordance with Chapter 444 of the Hawaii Revised Statutes, as amended, and the rules and regulations of the Contractor’s License Board when any party to the joint venture agreement does not hold a current or appropriate contractor’s license.

The Adjutant General or his designated representative may, in accordance with Section 103D-310, Hawaii Revised Statutes, require the prospective bidder to submit answers to questions in the “Standard Questionnaire and Financial Statement for Bidders,” on the form provided by the Department, properly executed and notarized, setting forth a complete statement of the experience of such prospective bidder and his organization in performing similar work and a statement of the equipment proposed to be used, together with adequate proof of the availability of such equipment, at least forty-eight (48) hours prior to the time advertised for the opening of bids. If the information in the questionnaire proves satisfactory, the bidder’s proposal will be received. All information contained in the answers to the questionnaire shall be kept confidential. The questionnaire will be returned to the bidder after it has served its purpose.

If upon review of the Questionnaire, or otherwise, the bidder appears not fully qualified or able to perform the intended work, the Adjutant General or his designated representative shall,

after affording the bidder an opportunity to be heard and if still of the opinion that the bidder is not fully qualified to perform the work, refuse to receive or to consider any bid offered by the prospective bidder.

Failure to complete the prequalification questionnaire, (IF SENT TO YOU), will be sufficient cause for the Department to disqualify a prospective bidder.

INTERPRETATION OF QUANTITIES IN BID SCHEDULE - When quantities for individual items of work are listed in the bid form for which respective unit prices are asked, said quantities are to be considered as approximate and are to be used by the Department only for the purpose of comparing on a uniform basis bids offered for the work. The Department does not, expressly or by implication, agree that the actual quantity of work will correspond therewith. The undersigned agrees that his is satisfied with and will at no time dispute said estimated quantities as a means of comparing the bids.

After determining the low bidder by comparison of bids submitted in accordance with the proposal form, the Adjutant General or his designated representative reserves the right to increase or decrease the scope of the improvement.

On unit price bids, payment will be made only for the actual number of units incorporated into the finished project at the unit price bid.

It is understood and agreed that the contractor will make no claim for anticipated profit or loss of profit due to the Department's right to eliminate entirely portions of the work or to increase or decrease any or all of the quantities shown in the proposal form.

CONTENTS OF PROPOSAL FORMS - Prospective bidders will be furnished with proposal forms giving the location, description, and the contract time of the work contemplated for which a lump sum bid price is asked or containing a schedule of items, together with estimated quantities of work to be performed and materials to be furnished, for which unit bid prices and/or lump sum bid prices are asked.

Proposal forms will also include a listing of joint contractor and/or subcontractors asking the name of each person or firm to be engaged on the project as a joint contractor or subcontractor.

All papers bound with or attached to the proposal form shall be considered a part thereof and shall not be detached or altered when the proposal is submitted.

The plans, specifications and other documents designated in the proposal form, will also be considered a part thereof whether attached or not.

BIDDERS RESPONSIBILITY FOR EXAMINATION OF PLANS, SPECIFICATIONS, SITE OF WORK, ETC. - The bidder shall examine carefully the site work contemplated and the proposal, plans, specifications, supplemental specifications, special provisions and contract and bond forms therefore. The submission of a bid shall be considered as a warranty that the

bidder has made such examination and is satisfied with the conditions to be encountered in performing the work and with the requirements of the plans, specifications, supplemental specifications, special provisions, contract and bond.

No extra compensation will be given by reason of the Contractor's misunderstanding or lack of knowledge of the requirements of the work to be accomplished or the conditions to be encountered in performing the project.

ADDENDA AND INTERPRETATIONS - Discrepancies, omissions, or doubts as to the meaning of drawings and specifications should be communicated in writing to: Department of Defense, State of Hawaii, ATTN: HIENG, 3949 Diamond Head Road, Honolulu, HI, 96816, for the interpretation and must be received by the Engineering Office, Department of Defense, no later than fourteen (14) calendar days prior to the date fixed for bid opening. Any interpretation, if made, and any supplemental instructions will be in the form of written addenda to the specifications, which will be mailed to all prospective bidders at the respective addresses furnished for such purposes, eight (8) calendar days prior to the date fixed for the opening bids. Failure of any bidder to receive any such addendum or interpretations shall not relieve such bidder from any obligation under his bid as submitted. All addenda so issued shall become part of the contract documents.

PREPARATION OF PROPOSAL - The bidder's proposal must be submitted on the proposal form furnished by the Department. The proposal must be prepared in full accordance with the instructions therein. The bidder must state, both in words and numerals, the lump sum price at which the work contemplated is proposed to be done. These prices must be written in ink or typed. Prices written in pencil are not acceptable. In case of a discrepancy between the prices written in words and those written in figures, the words shall govern over the figures. The bidder shall sign the proposal in the spaces provided with ink.

If the proposal is made by an individual, his name and post office address must be shown in the space provided. If made by a partnership, the name and post office address of each member of the partnership must be shown and the proposal signed by all partners or evidence in the form of a partnership agreement must be submitted showing the authority of the partner to enter, on behalf of said partnership, into contract with the State. If made by a corporation, the proposal must show the name, title, and business address of the president, secretary and treasurer and also evidence in the form of a corporate resolution must be submitted showing the authority of the particular corporate representative to enter on behalf of said corporation into contract with the State. (See sample). If made by a joint venture the name and post office address of each member of the individual form, partnership or corporation comprising the joint venture must be shown with other pertinent information required of individuals, partnerships or corporations as the case may be. The proposal must be signed by all parties to the joint venture or evidence in the form of a Joint Venture Agreement must be submitted showing the authority of the Joint Venture's representative to enter on behalf of said Joint Venture into contract with the State.

Pursuant to the requirements of Section 103D-302, Hawaii Revised Statutes, each bidder shall include in his bid the name of each person or firm to be engaged by the bidder on the project

as joint contractor or subcontractor indicating also the nature and scope of work to be performed by such joint contractor and/or subcontractor.

DELIVERY OF PROPOSALS - The entire proposal shall be placed in a sealed envelope so marked as to indicate the identity of the project, the project number, the date of bid opening and the name and address of the bidder and then delivered as indicated in the Notice to Bidders. Bids which do not comply with this requirement may not be considered. Proposals will be received up to the time fixed in the public notice for opening of bids and must be in the hands of the officials by that time indicated. The words 'SEALED BID' must be clearly written or typed on the face of the sealed envelope containing the proposal package.

WITHDRAWAL OR REVISION OF PROPOSALS - Any bid may be withdrawn or revised at any time prior to, but not after, the time fixed in the public notice for the opening of bids, provided that a request in writing, executed by the bidder or his duly authorized representative, for the withdrawal or revision of such bid is filed with the Adjutant General before the time set for the opening of bids. The withdrawal of a bid shall not prejudice the right of a bidder to file a new bid. Whether or not bids are opened exactly at the time fixed in the public notice for opening bids, a bid will not be received after that time, nor may any bid be withdrawn after the time fixed in the public notice for the opening of bids.

PUBLIC OPENING OF PROPOSALS - Proposals will be opened and read publicly at the time and place indicated in the Notice to Bidders. Bidders, their authorized agents and other interested parties are invited to be present.

DISQUALIFICATION OF BIDDERS - Any one or more of the following cause will be considered as sufficient for the disqualification of a bidder and the rejection of his proposal or proposals:

- A. Evidence of collusion among bidders.
- B. Lack of responsibility and cooperation as shown by past work.
- C. Being in arrears on existing contracts with the State of Hawaii, or having defaulted on a previous contract.
- D. Lack of proper equipment and/or sufficient experience to perform the work contemplated.
- E. More than one proposal for the same work from an individual, firm, partnership, corporation or joint venture under the same or different name.
- F. Delivery of bids after the deadline specified in the advertisement calling for bids.
- G. Failure to pay, or satisfactorily settle, all bids overdue for labor and material on former contracts in force at the time of issuance of proposal forms.



CONSIDERATION OF PROPOSALS - After the proposals are opened and read, the figures will be extended and/or totaled in accordance with the bid prices of the acceptable proposals and the totals will be compared and the results of such comparison shall immediately be made public. In the comparison of bids, words written in the proposals will govern over figures and unit prices will govern over totals. Until the award of the contract, however, the right will be reserved to reject any and all proposals and to waive any defects or technicalities as may be deemed best for the interest of the State.

IRREGULAR PROPOSALS - Proposals will be considered irregular and may be rejected for the following reasons:

- A. If the proposal is unsigned.
- B. If proposal is on a form other than that furnished by the Department or if the form is altered or any part thereof detached.
- C. If the proposal shows any non-compliance with applicable law, alteration of form, additions not called, conditional bids, incomplete bids, uninitiated erasures, other defects, or if the prices are obviously unbalanced, or if sufficient funds are not available to prosecute the work.
- D. If the bidder adds any provisions reserving the right to accept or reject an award, or to enter into a contract pursuant to an award.

This does not exclude a proposal limiting the maximum gross amount of awards acceptable to any one bidder at any one bid letting, provided that any selection of awards will be made by the Department.

- E. When a proposal is signed by an officer or officers of a corporation and a currently certified corporate resolution authorizing such signer(s) to submit such proposal is not submitted with the proposal or when the proposal is signed by an agent other than the officer or officers of a corporation or a member of a partnership and a Power of Attorney is not submitted with the proposal.

AWARD OF CONTRACT - The award of contract, if it be awarded, will be made within ninety (90) consecutive calendar days after the opening of the proposals to the lowest responsible and responsive bidder (including the alternate or alternates which may be selected by the Adjutant General in the case of alternate bids) whose proposal complies with all the requirements prescribed, but in no case will an award be made until all necessary investigations are made. The successful bidder will be notified, by letter mailed to the address shown on the proposal that his bid has been accepted and that he has been awarded the contract.

No contract will be awarded to any person or firm suspended under the provisions of Chapter 104 and Chapter 444, Hawaii Revised Statutes, as amended.

CANCELLATION OF AWARD - The Adjutant General or his designated representative reserves the right to cancel the award of any contract at any time before the execution of said contract by all parties without any liability to the awardee and to any other bidder.

EXECUTION OF THE CONTRACT - The contract shall be signed by the successful bidder and returned, within ten (10) consecutive calendar days, after the bidder has received his contract for execution or within such further time as the Adjutant General or his designated representative may allow. No proposal or contract shall be considered binding upon the State until the contract has been fully and properly executed by all parties thereto and the Adjutant General or his designated representative has endorsed therein his certificate, as required by Section 103D-309, Hawaii Revised Statutes, that there is an available unexpended appropriation or balance of an appropriation over and above all outstanding contracts sufficient to cover the State's amount required by such contract.

On any individual award totaling less than \$50,000, the State reserves the right to execute the contract by the issuance of a State Purchase Order. Acceptance shall result in a binding contract between the parties without further action by the State. Executing the contract by Purchase Order shall not be deemed a waiver of these specification requirements.

PROTECTION OF PROPERTY – The Contractor shall confine all of his operations to the immediate vicinity of the work and take all necessary precautions during the progress of the work to protect the adjoining property from damage and injury. The Contractor shall repair and make good to the entire satisfaction of the Engineer any damages to existing utilities, streets, sidewalks and other properties.

The Contractor shall repair the damaged or disturbed utilities to existing condition at no cost to the State. Any damage claims due to the disruption of services caused by the utilities being damaged or disturbed shall be paid by the Contractor who shall save harmless the State from all suits, actions or claims of any character.

PERMITS AND LICENSES – The Contractor shall procure all permits and licenses, pay all charges and fees and give all notices necessary and incident to the due and lawful prosecution of the work.

LAWS TO BE OBSERVED – The Contractor at all times shall observe and comply with all Federal, State and local laws or ordinances, rules and regulations which in any manner affect those engaged or employed in the work, the materials used in the work, and the conduct of the work. The Contractor shall also comply with all such orders and decrees of bodies or tribunals having any jurisdiction or authority over the work. Any reference to such laws, ordinances, rules and regulations shall include any amendments thereto.

LIABILITY INSURANCE – The Contractor shall not commence any work until it obtains, at its own expense, all required liability insurance. Such insurance must have the approval of the State as to limit form and amount and must be maintained with a company acceptable to the State. Such insurance must be maintained for the full period of the contract and shall provide protection from claims arising out of or resulting from the Contractor's operations under the

Contract itself or by any Subcontractor or by anyone directly or indirectly employed by any of them or by anyone for whose acts any of them may be liable.

The Contractor shall take out and maintain during the life of this contract broad form public liability (Bodily Injury) and broad form property damage liability insurance in a combined single limit not less than \$1,000,000 and not less than \$2,000,000 in the aggregate to protect such contractor and all his subcontractors from claims for damages for personal injury, accidental death and property damage which may arise from operations under this contract, whether such operations be by himself or by any subcontractor or anyone directly or indirectly employed by either of them.

The insurance described herein will be maintained by the Contractor for the full period of the Contract and in no event will be terminated or otherwise allowed to lapse prior to final acceptance of the work by the State.

A certificate of insurance acceptable to the State shall be filed with the State prior to commencement of the work. Such certificate shall contain a provision that coverage afforded under the policy will not be canceled or changed until at least thirty days written notice has been given to the State by registered mail at the address denominated for the State in the Contract for official communications to it should any policy be canceled before final acceptance by the State, and the Contractor fails to immediately procure replacement insurance as specified, the State reserves the right to procure such insurance and to deduct the cost thereof from any sum due the Contractor.

**CHARACTER OF WORKERS OR EQUIPMENT** – The Contractor shall at all times provide adequate supervision and sufficient labor and equipment for prosecuting the several classes of work to full completion and within the time required by the contract.

- A. Character and Proficiency of Workers – All workers must have sufficient skill and experience to perform the work assigned to them and in the operation of the equipment.

Any worker employed on the project by the Contractor or subcontractor who, in the opinion of the Engineer or his authorized representative, is not careful and competent, does not perform his work in a proper and skillful manner or is disrespectful, intemperate, disorderly or neglects or refuses to comply with directions given, or is otherwise objectionable shall, at the written request of the Engineer, be removed forthwith by the Contractor or subcontractor employing such worker and shall not be employed again in any portion of the work without the written consent of the Engineer. Should the Contractor or subcontractor continue to employ, or again employ such person(s) on the project, the Engineer will withhold all estimates which are or may become due, or the Engineer will suspend the work until such orders are complied with.

- B. Insufficient Workers – In the event that the Engineer, in his judgment, finds the condition whereby insufficient workers are present to accomplish the work and no

corrective action is taken by the Contractor after being informed, the Engineer reserves the right to terminate the contract.

- C. Equipment Requirements – All equipment furnished by the Contractor and used shall be of such size and of such mechanical condition that the work can be prosecuted in an acceptable manner.

NOTICE TO PROCEED - After the contract is fully executed, the Contractor will be sent a formal "Notice to Proceed" advising the Contractor of the date on which he may proceed with the work. The Contractor shall be allowed ten (10) consecutive working days from said date to begin his work. In the event that the Contractor refuses or neglects to start the work, the Adjutant General or his designated representative may terminate the contract.

## **SPECIAL PROVISIONS FOR GOODS AND SERVICES CONTRACTS**

### **RESPONSIBILITY OF OFFERORS**

Offeror shall furnish proof of compliance in accordance with Act 190 Amendment to HRS 103D-310(c)

Required as a prerequisite to entering into a contract, the contractor shall register on the Hawaii Compliance Express web site for all tax clearances by going to <http://vendors.ehawaii.gov> and registering there.

A Certificate of Vendor Compliance generated from this website should be included with their bid proposal. A Compliant status is required prior to awarding the contract.

### **BID PREPARATION**

**Offer Form, Page Of-1.** Offeror is requested to submit its offer using Offeror's exact legal name as registered with the Department of Commerce and Consumer Affairs, if applicable; and to indicate exact legal name in the appropriate space on Offer Form, page OF-1. Failure to do so may delay proper execution of the contract.

The authorized signature on the first page of the Offer Form shall be an original signature in ink. If unsigned or the affixed signature is a facsimile or a photocopy, the offer shall be automatically rejected unless accompanied by other material, containing an original signature, indicating the Offeror's intent to be bound.

**Hawaii Business.** A business entity referred to as a "Hawaii business", is registered and incorporated or organized under the laws of the State of Hawaii.

**Compliant non-Hawaii business.** A business entity referred to as a "compliant non-Hawaii business," is not incorporated or organized under the laws of the State of Hawaii, but is registered to do business in the State.

**Tax Liability.** Work to be performed under this solicitation is a business activity taxable under Chapter 237, Hawaii Revised Statutes (HRS), and vendors are advised that they are liable for the Hawaii GET at the current rate.

**4.712% tax rate.** All businesses located on Oahu are required to pay the ½% County Surcharge tax on all Oahu transactions for which they pay the 4% GE tax. Neighbor island and out-of-state businesses that deliver goods or services to Oahu and have a 'physical presence' on Oahu, must pay the new ½% County Surcharge tax on their Oahu transactions.

4% tax rate. Neighbor island and out-of-state businesses that do not deliver any goods or services to Oahu are not subject to the new ½% County Surcharge tax.

If, however, an Offeror is a person exempt by the HRS from paying the GET and therefore not liable for the taxes on this solicitation, Offeror shall state its tax exempt status and cite the HRS chapter or section allowing the exemption.

**Taxpayer Preference.** For evaluation purposes, pursuant to §103D-1008, HRS, the Bidder's tax-exempt price offer submitted in response to an IFB shall be increased by the applicable retail rate of general excise tax and the applicable use tax. Under no circumstance shall the dollar amount of the award include the aforementioned adjustment.

## **AWARD OF CONTRACT**

**Method of Award.** Award, if made, shall be to the responsive, responsible offeror submitting the lowest Lump Sum Bid.

**Responsibility of Lowest Responsive Bidder.** Reference Responsibility of Offerors in §3-122-112, HAR. If compliance documents have not been submitted to the State Department of Defense prior to award, the lowest responsive offeror shall produce documents to the procurement officer to demonstrate compliance with this section.

### **HRS Chapter 237 tax clearance requirement for award and final payment.**

Instructions are as follows:

In accordance with Act 190 Amendment to HRS 103D-310(c)

Required as a prerequisite to entering into a contract, the contractor shall register on the Hawaii Compliance Express web site for all tax clearances by going to <http://vendors.ehawaii.gov> and registering there.

A current Certificate of Vendor Compliance must accompany the invoice for final payment on the contract.

### **HRS Chapters 383 (Unemployment Insurance), 386 (Workers' Compensation), 392 (Temporary Disability Insurance), and 393 (Prepaid Health Care) requirements for award.** Instructions are as follows:

Pursuant to §103D-310(c), HRS, The Certificate of Vendor Compliance must have a "Compliant" rating with the DLIR.

### **Compliance with Section 103D-310(c)(1) and (2), HRS.**

Contractors are required to provide a state and federal tax clearance as a prerequisite to entering into a public contract of \$2,500 or more. To meet this requirement, all bidders shall submit valid tax clearances with their bid proposals when the bid is \$2,500 or more.

In accordance with Act 190 Amendment to HRS 103D-310(c), required as a prerequisite to entering into a contract, the contractor shall register on the Hawaii Compliance Express web site for all tax clearances by going to <http://vendors.ehawaii.gov> and registering there.

Failure to submit the required tax clearance will be sufficient grounds for the State to refuse to receive or consider the prospective bidder's proposal.

**Timely Submission of all Certificates.** The above certificates should be applied for and submitted to the purchasing agency as soon as possible. If a valid certificate is not submitted on a timely basis for award of a contract, an offer otherwise responsive and responsible may not receive the award.

**Final Payment Requirements.** In addition to a Certificate of Vendor Compliance an original "Certification of Compliance for Final Payment" (SPO Form-22), attached, will be required for final payment. A copy of the Form is also available at [www.spo.hawaii.gov](http://www.spo.hawaii.gov). Select "Forms for Vendors/Contractors" from the Chapter 103D, HRS, pop-up menu.

# GENERAL CONDITIONS

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## GENERAL CONDITIONS

1. Coordination of Services by the STATE. The head of the purchasing agency ("HOPA") (which term includes the designee of the HOPA) shall coordinate the services to be provided by the CONTRACTOR in order to complete the performance required in the Contract. The CONTRACTOR shall maintain communications with HOPA at all stages of the CONTRACTOR'S work, and submit to HOPA for resolution any questions which may arise as to the performance of this Contract. "Purchasing agency" as used in these General Conditions means and includes any governmental body which is authorized under chapter 103D, HRS, or its implementing rules and procedures, or by way of delegation, to enter into contracts for the procurement of goods or services or both.
2. Relationship of Parties: Independent Contractor Status and Responsibilities, Including Tax Responsibilities.
  - a. In the performance of services required under this Contract, the CONTRACTOR is an "independent contractor," with the authority and responsibility to control and direct the performance and details of the work and services required under this Contract; however, the STATE shall have a general right to inspect work in progress to determine whether, in the STATE'S opinion, the services are being performed by the CONTRACTOR in compliance with this Contract. Unless otherwise provided by special condition, it is understood that the STATE does not agree to use the CONTRACTOR exclusively, and that the CONTRACTOR is free to contract to provide services to other individuals or entities while under contract with the STATE.
  - b. The CONTRACTOR and the CONTRACTOR'S employees and agents are not by reason of this Contract, agents or employees of the State for any purpose, and the CONTRACTOR and the CONTRACTOR'S employees and agents shall not be entitled to claim or receive from the State any vacation, sick leave, retirement, workers' compensation, unemployment insurance, or other benefits provided to state employees.
  - c. The CONTRACTOR shall be responsible for the accuracy, completeness, and adequacy of the CONTRACTOR'S performance under this Contract. Furthermore, the CONTRACTOR intentionally, voluntarily, and knowingly assumes the sole and entire liability to the CONTRACTOR'S employees and agents, and to any individual not a party to this Contract, for all loss, damage, or injury caused by the CONTRACTOR, or the CONTRACTOR'S employees or agents in the course of their employment.
  - d. The CONTRACTOR shall be responsible for payment of all applicable federal, state, and county taxes and fees which may become due and owing by the CONTRACTOR by reason of this Contract, including but not limited to (i) income taxes, (ii) employment related fees, assessments, and taxes, and (iii) general excise taxes. The CONTRACTOR also is responsible for obtaining all licenses, permits, and certificates that may be required in order to perform this Contract.
  - e. The CONTRACTOR shall obtain a general excise tax license from the Department of Taxation, State of Hawaii, in accordance with section 237-9, HRS, and shall comply with all requirements thereof. The CONTRACTOR shall obtain a tax clearance certificate from the Director of Taxation, State of Hawaii, and the Internal Revenue Service, U.S. Department of the Treasury, showing that all delinquent taxes, if any, levied or accrued under state law and the Internal Revenue Code of 1986, as amended, against the CONTRACTOR have been paid and submit the same to the STATE prior to commencing any performance under this Contract. The CONTRACTOR shall also be solely responsible for meeting all requirements necessary to obtain the tax clearance certificate required for final payment under sections 103-53 and 103D-328, HRS, and paragraph 17 of these General Conditions.
  - f. The CONTRACTOR is responsible for securing all employee-related insurance coverage for the CONTRACTOR and the CONTRACTOR'S employees and agents that is or may be required by law, and for payment of all premiums, costs, and other liabilities associated with securing the insurance coverage.

- g. The CONTRACTOR shall obtain a certificate of compliance issued by the Department of Labor and Industrial Relations, State of Hawaii, in accordance with section 103D-310, HRS, and section 3-122-112, HAR, that is current within six months of the date of issuance.
- h. The CONTRACTOR shall obtain a certificate of good standing issued by the Department of Commerce and Consumer Affairs, State of Hawaii, in accordance with section 103D-310, HRS, and section 3-122-112, HAR, that is current within six months of the date of issuance.
- i. In lieu of the above certificates from the Department of Taxation, Labor and Industrial Relations, and Commerce and Consumer Affairs, the CONTRACTOR may submit proof of compliance through the State Procurement Office's designated certification process.

3. Personnel Requirements.

- a. The CONTRACTOR shall secure, at the CONTRACTOR'S own expense, all personnel required to perform this Contract.
- b. The CONTRACTOR shall ensure that the CONTRACTOR'S employees or agents are experienced and fully qualified to engage in the activities and perform the services required under this Contract, and that all applicable licensing and operating requirements imposed or required under federal, state, or county law, and all applicable accreditation and other standards of quality generally accepted in the field of the activities of such employees and agents are complied with and satisfied.

4. Nondiscrimination. No person performing work under this Contract, including any subcontractor, employee, or agent of the CONTRACTOR, shall engage in any discrimination that is prohibited by any applicable federal, state, or county law.

5. Conflicts of Interest. The CONTRACTOR represents that neither the CONTRACTOR, nor any employee or agent of the CONTRACTOR, presently has any interest, and promises that no such interest, direct or indirect, shall be acquired, that would or might conflict in any manner or degree with the CONTRACTOR'S performance under this Contract.

6. Subcontracts and Assignments. The CONTRACTOR shall not assign or subcontract any of the CONTRACTOR'S duties, obligations, or interests under this Contract and no such assignment or subcontract shall be effective unless (i) the CONTRACTOR obtains the prior written consent of the STATE, and (ii) the CONTRACTOR'S assignee or subcontractor submits to the STATE a tax clearance certificate from the Director of Taxation, State of Hawaii, and the Internal Revenue Service, U.S. Department of Treasury, showing that all delinquent taxes, if any, levied or accrued under state law and the Internal Revenue Code of 1986, as amended, against the CONTRACTOR'S assignee or subcontractor have been paid. Additionally, no assignment by the CONTRACTOR of the CONTRACTOR'S right to compensation under this Contract shall be effective unless and until the assignment is approved by the Comptroller of the State of Hawaii, as provided in section 40-58, HRS.

a. Recognition of a successor in interest. When in the best interest of the State, a successor in interest may be recognized in an assignment contract in which the STATE, the CONTRACTOR and the assignee or transferee (hereinafter referred to as the "Assignee") agree that:

- (1) The Assignee assumes all of the CONTRACTOR'S obligations;
- (2) The CONTRACTOR remains liable for all obligations under this Contract but waives all rights under this Contract as against the STATE; and
- (3) The CONTRACTOR shall continue to furnish, and the Assignee shall also furnish, all required bonds.

b. Change of name. When the CONTRACTOR asks to change the name in which it holds this Contract with the STATE, the procurement officer of the purchasing agency (hereinafter referred to as the "Agency procurement officer") shall, upon receipt of a document acceptable or satisfactory to the

Agency procurement officer indicating such change of name (for example, an amendment to the CONTRACTOR'S articles of incorporation), enter into an amendment to this Contract with the CONTRACTOR to effect such a change of name. The amendment to this Contract changing the CONTRACTOR'S name shall specifically indicate that no other terms and conditions of this Contract are thereby changed.

- c. Reports. All assignment contracts and amendments to this Contract effecting changes of the CONTRACTOR'S name or novations hereunder shall be reported to the chief procurement officer (CPO) as defined in section 103D-203(a), HRS, within thirty days of the date that the assignment contract or amendment becomes effective.
  - d. Actions affecting more than one purchasing agency. Notwithstanding the provisions of subparagraphs 6a through 6c herein, when the CONTRACTOR holds contracts with more than one purchasing agency of the State, the assignment contracts and the novation and change of name amendments herein authorized shall be processed only through the CPO's office.
7. Indemnification and Defense. The CONTRACTOR shall defend, indemnify, and hold harmless the State of Hawaii, the contracting agency, and their officers, employees, and agents from and against all liability, loss, damage, cost, and expense, including all attorneys' fees, and all claims, suits, and demands therefore, arising out of or resulting from the acts or omissions of the CONTRACTOR or the CONTRACTOR'S employees, officers, agents, or subcontractors under this Contract. The provisions of this paragraph shall remain in full force and effect notwithstanding the expiration or early termination of this Contract.
  8. Cost of Litigation. In case the STATE shall, without any fault on its part, be made a party to any litigation commenced by or against the CONTRACTOR in connection with this Contract, the CONTRACTOR shall pay all costs and expenses incurred by or imposed on the STATE, including attorneys' fees.
  9. Liquidated Damages. When the CONTRACTOR is given notice of delay or nonperformance as specified in paragraph 13 (Termination for Default) and fails to cure in the time specified, it is agreed the CONTRACTOR shall pay to the STATE the amount, if any, set forth in this Contract per calendar day from the date set for cure until either (i) the STATE reasonably obtains similar goods or services, or both, if the CONTRACTOR is terminated for default, or (ii) until the CONTRACTOR provides the goods or services, or both, if the CONTRACTOR is not terminated for default. To the extent that the CONTRACTOR'S delay or nonperformance is excused under paragraph 13d (Excuse for Nonperformance or Delay Performance), liquidated damages shall not be assessable against the CONTRACTOR. The CONTRACTOR remains liable for damages caused other than by delay.
  10. STATE'S Right of Offset. The STATE may offset against any monies or other obligations the STATE owes to the CONTRACTOR under this Contract, any amounts owed to the State of Hawaii by the CONTRACTOR under this Contract or any other contracts, or pursuant to any law or other obligation owed to the State of Hawaii by the CONTRACTOR, including, without limitation, the payment of any taxes or levies of any kind or nature. The STATE will notify the CONTRACTOR in writing of any offset and the nature of such offset. For purposes of this paragraph, amounts owed to the State of Hawaii shall not include debts or obligations which have been liquidated, agreed to by the CONTRACTOR, and are covered by an installment payment or other settlement plan approved by the State of Hawaii, provided, however, that the CONTRACTOR shall be entitled to such exclusion only to the extent that the CONTRACTOR is current with, and not delinquent on, any payments or obligations owed to the State of Hawaii under such payment or other settlement plan.
  11. Disputes. Disputes shall be resolved in accordance with section 103D-703, HRS, and chapter 3-126, Hawaii Administrative Rules ("HAR"), as the same may be amended from time to time.
  12. Suspension of Contract. The STATE reserves the right at any time and for any reason to suspend this Contract for any reasonable period, upon written notice to the CONTRACTOR in accordance with the provisions herein.
    - a. Order to stop performance. The Agency procurement officer may, by written order to the CONTRACTOR, at any time, and without notice to any surety, require the CONTRACTOR to stop all or any part of the performance called for by this Contract. This order shall be for a specified

period not exceeding sixty (60) days after the order is delivered to the CONTRACTOR, unless the parties agree to any further period. Any such order shall be identified specifically as a stop performance order issued pursuant to this section. Stop performance orders shall include, as appropriate: (1) A clear description of the work to be suspended; (2) Instructions as to the issuance of further orders by the CONTRACTOR for material or services; (3) Guidance as to action to be taken on subcontracts; and (4) Other instructions and suggestions to the CONTRACTOR for minimizing costs. Upon receipt of such an order, the CONTRACTOR shall forthwith comply with its terms and suspend all performance under this Contract at the time stated, provided, however, the CONTRACTOR shall take all reasonable steps to minimize the occurrence of costs allocable to the performance covered by the order during the period of performance stoppage. Before the stop performance order expires, or within any further period to which the parties shall have agreed, the Agency procurement officer shall either:

- (1) Cancel the stop performance order; or
  - (2) Terminate the performance covered by such order as provided in the termination for default provision or the termination for convenience provision of this Contract.
- b. Cancellation or expiration of the order. If a stop performance order issued under this section is cancelled at any time during the period specified in the order, or if the period of the order or any extension thereof expires, the CONTRACTOR shall have the right to resume performance. An appropriate adjustment shall be made in the delivery schedule or contract price, or both, and the Contract shall be modified in writing accordingly, if:
- (1) The stop performance order results in an increase in the time required for, or in the CONTRACTOR'S cost properly allocable to, the performance of any part of this Contract; and
  - (2) The CONTRACTOR asserts a claim for such an adjustment within thirty (30) days after the end of the period of performance stoppage; provided that, if the Agency procurement officer decides that the facts justify such action, any such claim asserted may be received and acted upon at any time prior to final payment under this Contract.
- c. Termination of stopped performance. If a stop performance order is not cancelled and the performance covered by such order is terminated for default or convenience, the reasonable costs resulting from the stop performance order shall be allowable by adjustment or otherwise.
- d. Adjustment of price. Any adjustment in contract price made pursuant to this paragraph shall be determined in accordance with the price adjustment provision of this Contract.

13. Termination for Default.

- a. Default. If the CONTRACTOR refuses or fails to perform any of the provisions of this Contract with such diligence as will ensure its completion within the time specified in this Contract, or any extension thereof, otherwise fails to timely satisfy the Contract provisions, or commits any other substantial breach of this Contract, the Agency procurement officer may notify the CONTRACTOR in writing of the delay or non-performance and if not cured in ten (10) days or any longer time specified in writing by the Agency procurement officer, such officer may terminate the CONTRACTOR'S right to proceed with the Contract or such part of the Contract as to which there has been delay or a failure to properly perform. In the event of termination in whole or in part, the Agency procurement officer may procure similar goods or services in a manner and upon the terms deemed appropriate by the Agency procurement officer. The CONTRACTOR shall continue performance of the Contract to the extent it is not terminated and shall be liable for excess costs incurred in procuring similar goods or services.
- b. CONTRACTOR'S duties. Notwithstanding termination of the Contract and subject to any directions from the Agency procurement officer, the CONTRACTOR shall take timely, reasonable, and

necessary action to protect and preserve property in the possession of the CONTRACTOR in which the STATE has an interest.

- c. Compensation. Payment for completed goods and services delivered and accepted by the STATE shall be at the price set forth in the Contract. Payment for the protection and preservation of property shall be in an amount agreed upon by the CONTRACTOR and the Agency procurement officer. If the parties fail to agree, the Agency procurement officer shall set an amount subject to the CONTRACTOR'S rights under chapter 3-126, HAR. The STATE may withhold from amounts due the CONTRACTOR such sums as the Agency procurement officer deems to be necessary to protect the STATE against loss because of outstanding liens or claims and to reimburse the STATE for the excess costs expected to be incurred by the STATE in procuring similar goods and services.
- d. Excuse for nonperformance or delayed performance. The CONTRACTOR shall not be in default by reason of any failure in performance of this Contract in accordance with its terms, including any failure by the CONTRACTOR to make progress in the prosecution of the performance hereunder which endangers such performance, if the CONTRACTOR has notified the Agency procurement officer within fifteen (15) days after the cause of the delay and the failure arises out of causes such as: acts of God; acts of a public enemy; acts of the State and any other governmental body in its sovereign or contractual capacity; fires; floods; epidemics; quarantine restrictions; strikes or other labor disputes; freight embargoes; or unusually severe weather. If the failure to perform is caused by the failure of a subcontractor to perform or to make progress, and if such failure arises out of causes similar to those set forth above, the CONTRACTOR shall not be deemed to be in default, unless the goods and services to be furnished by the subcontractor were reasonably obtainable from other sources in sufficient time to permit the CONTRACTOR to meet the requirements of the Contract. Upon request of the CONTRACTOR, the Agency procurement officer shall ascertain the facts and extent of such failure, and, if such officer determines that any failure to perform was occasioned by any one or more of the excusable causes, and that, but for the excusable cause, the CONTRACTOR'S progress and performance would have met the terms of the Contract, the delivery schedule shall be revised accordingly, subject to the rights of the STATE under this Contract. As used in this paragraph, the term "subcontractor" means subcontractor at any tier.
- e. Erroneous termination for default. If, after notice of termination of the CONTRACTOR'S right to proceed under this paragraph, it is determined for any reason that the CONTRACTOR was not in default under this paragraph, or that the delay was excusable under the provisions of subparagraph 13d, "Excuse for nonperformance or delayed performance," the rights and obligations of the parties shall be the same as if the notice of termination had been issued pursuant to paragraph 14.
- f. Additional rights and remedies. The rights and remedies provided in this paragraph are in addition to any other rights and remedies provided by law or under this Contract.

14. Termination for Convenience.

- a. Termination. The Agency procurement officer may, when the interests of the STATE so require, terminate this Contract in whole or in part, for the convenience of the STATE. The Agency procurement officer shall give written notice of the termination to the CONTRACTOR specifying the part of the Contract terminated and when termination becomes effective.
- b. CONTRACTOR'S obligations. The CONTRACTOR shall incur no further obligations in connection with the terminated performance and on the date(s) set in the notice of termination the CONTRACTOR will stop performance to the extent specified. The CONTRACTOR shall also terminate outstanding orders and subcontracts as they relate to the terminated performance. The CONTRACTOR shall settle the liabilities and claims arising out of the termination of subcontracts and orders connected with the terminated performance subject to the STATE'S approval. The Agency procurement officer may direct the CONTRACTOR to assign the CONTRACTOR'S right, title, and interest under terminated orders or subcontracts to the STATE. The CONTRACTOR must still complete the performance not terminated by the notice of termination and may incur obligations as necessary to do so.

- c. Right to goods and work product. The Agency procurement officer may require the CONTRACTOR to transfer title and deliver to the STATE in the manner and to the extent directed by the Agency procurement officer:

- (1) Any completed goods or work product; and
- (2) The partially completed goods and materials, parts, tools, dies, jigs, fixtures, plans, drawings, information, and contract rights (hereinafter called "manufacturing material") as the CONTRACTOR has specifically produced or specially acquired for the performance of the terminated part of this Contract.

The CONTRACTOR shall, upon direction of the Agency procurement officer, protect and preserve property in the possession of the CONTRACTOR in which the STATE has an interest. If the Agency procurement officer does not exercise this right, the CONTRACTOR shall use best efforts to sell such goods and manufacturing materials. Use of this paragraph in no way implies that the STATE has breached the Contract by exercise of the termination for convenience provision.

- d. Compensation.

- (1) The CONTRACTOR shall submit a termination claim specifying the amounts due because of the termination for convenience together with the cost or pricing data, submitted to the extent required by chapter 3-122, HAR, bearing on such claim. If the CONTRACTOR fails to file a termination claim within one year from the effective date of termination, the Agency procurement officer may pay the CONTRACTOR, if at all, an amount set in accordance with subparagraph 14d(3) below.
- (2) The Agency procurement officer and the CONTRACTOR may agree to a settlement provided the CONTRACTOR has filed a termination claim supported by cost or pricing data submitted as required and that the settlement does not exceed the total Contract price plus settlement costs reduced by payments previously made by the STATE, the proceeds of any sales of goods and manufacturing materials under subparagraph 14c, and the Contract price of the performance not terminated.
- (3) Absent complete agreement under subparagraph 14d(2) the Agency procurement officer shall pay the CONTRACTOR the following amounts, provided payments agreed to under subparagraph 14d(2) shall not duplicate payments under this subparagraph for the following:
  - (A) Contract prices for goods or services accepted under the Contract;
  - (B) Costs incurred in preparing to perform and performing the terminated portion of the performance plus a fair and reasonable profit on such portion of the performance, such profit shall not include anticipatory profit or consequential damages, less amounts paid or to be paid for accepted goods or services; provided, however, that if it appears that the CONTRACTOR would have sustained a loss if the entire Contract would have been completed, no profit shall be allowed or included and the amount of compensation shall be reduced to reflect the anticipated rate of loss;
  - (C) Costs of settling and paying claims arising out of the termination of subcontracts or orders pursuant to subparagraph 14b. These costs must not include costs paid in accordance with subparagraph 14d(3)(B);
  - (D) The reasonable settlement costs of the CONTRACTOR, including accounting, legal, clerical, and other expenses reasonably necessary for the preparation of settlement claims and supporting data with respect to the terminated portion of the Contract and for the termination of subcontracts thereunder, together with reasonable storage, transportation, and other costs incurred in connection with the protection or disposition of property allocable to the terminated portion of this Contract. The total sum to be paid the CONTRACTOR under this subparagraph shall not exceed the

total Contract price plus the reasonable settlement costs of the CONTRACTOR reduced by the amount of payments otherwise made, the proceeds of any sales of supplies and manufacturing materials under subparagraph 14d(2), and the contract price of performance not terminated.

- (4) Costs claimed, agreed to, or established under subparagraphs 14d(2) and 14d(3) shall be in accordance with Chapter 3-123 (Cost Principles) of the Procurement Rules.

15. Claims Based on the Agency Procurement Officer's Actions or Omissions.

- a. Changes in scope. If any action or omission on the part of the Agency procurement officer (which term includes the designee of such officer for purposes of this paragraph 15) requiring performance changes within the scope of the Contract constitutes the basis for a claim by the CONTRACTOR for additional compensation, damages, or an extension of time for completion, the CONTRACTOR shall continue with performance of the Contract in compliance with the directions or orders of such officials, but by so doing, the CONTRACTOR shall not be deemed to have prejudiced any claim for additional compensation, damages, or an extension of time for completion; provided:
- (1) Written notice required. The CONTRACTOR shall give written notice to the Agency procurement officer:
- (A) Prior to the commencement of the performance involved, if at that time the CONTRACTOR knows of the occurrence of such action or omission;
- (B) Within thirty (30) days after the CONTRACTOR knows of the occurrence of such action or omission, if the CONTRACTOR did not have such knowledge prior to the commencement of the performance; or
- (C) Within such further time as may be allowed by the Agency procurement officer in writing.
- (2) Notice content. This notice shall state that the CONTRACTOR regards the act or omission as a reason which may entitle the CONTRACTOR to additional compensation, damages, or an extension of time. The Agency procurement officer, upon receipt of such notice, may rescind such action, remedy such omission, or take such other steps as may be deemed advisable in the discretion of the Agency procurement officer;
- (3) Basis must be explained. The notice required by subparagraph 15a(1) describes as clearly as practicable at the time the reasons why the CONTRACTOR believes that additional compensation, damages, or an extension of time may be remedies to which the CONTRACTOR is entitled; and
- (4) Claim must be justified. The CONTRACTOR must maintain and, upon request, make available to the Agency procurement officer within a reasonable time, detailed records to the extent practicable, and other documentation and evidence satisfactory to the STATE, justifying the claimed additional costs or an extension of time in connection with such changes.
- b. CONTRACTOR not excused. Nothing herein contained, however, shall excuse the CONTRACTOR from compliance with any rules or laws precluding any state officers and CONTRACTOR from acting in collusion or bad faith in issuing or performing change orders which are clearly not within the scope of the Contract.
- c. Price adjustment. Any adjustment in the price made pursuant to this paragraph shall be determined in accordance with the price adjustment provision of this Contract.

16. Costs and Expenses. Any reimbursement due the CONTRACTOR for per diem and transportation expenses under this Contract shall be subject to chapter 3-123 (Cost Principles), HAR, and the following guidelines:

- a. Reimbursement for air transportation shall be for actual cost or coach class air fare, whichever is less.
- b. Reimbursement for ground transportation costs shall not exceed the actual cost of renting an intermediate-sized vehicle.
- c. Unless prior written approval of the HOPA is obtained, reimbursement for subsistence allowance (i.e., hotel and meals, etc.) shall not exceed the applicable daily authorized rates for inter-island or out-of-state travel that are set forth in the current Governor's Executive Order authorizing adjustments in salaries and benefits for state officers and employees in the executive branch who are excluded from collective bargaining coverage.

17. Payment Procedures; Final Payment; Tax Clearance.

- a. Original invoices required. All payments under this Contract shall be made only upon submission by the CONTRACTOR of original invoices specifying the amount due and certifying that services requested under the Contract have been performed by the CONTRACTOR according to the Contract.
- b. Subject to available funds. Such payments are subject to availability of funds and allotment by the Director of Finance in accordance with chapter 37, HRS. Further, all payments shall be made in accordance with and subject to chapter 40, HRS.
- c. Prompt payment.
  - (1) Any money, other than retainage, paid to the CONTRACTOR shall be disbursed to subcontractors within ten (10) days after receipt of the money in accordance with the terms of the subcontract; provided that the subcontractor has met all the terms and conditions of the subcontract and there are no bona fide disputes; and
  - (2) Upon final payment to the CONTRACTOR, full payment to the subcontractor, including retainage, shall be made within ten (10) days after receipt of the money; provided that there are no bona fide disputes over the subcontractor's performance under the subcontract.
- d. Final payment. Final payment under this Contract shall be subject to sections 103-53 and 103D-328, HRS, which require a tax clearance from the Director of Taxation, State of Hawaii, and the Internal Revenue Service, U.S. Department of Treasury, showing that all delinquent taxes, if any, levied or accrued under state law and the Internal Revenue Code of 1986, as amended, against the CONTRACTOR have been paid. Further, in accordance with section 3-122-112, HAR, CONTRACTOR shall provide a certificate affirming that the CONTRACTOR has remained in compliance with all applicable laws as required by this section.

18. Federal Funds. If this Contract is payable in whole or in part from federal funds, CONTRACTOR agrees that, as to the portion of the compensation under this Contract to be payable from federal funds, the CONTRACTOR shall be paid only from such funds received from the federal government, and shall not be paid from any other funds. Failure of the STATE to receive anticipated federal funds shall not be considered a breach by the STATE or an excuse for nonperformance by the CONTRACTOR.

19. Modifications of Contract.

- a. In writing. Any modification, alteration, amendment, change, or extension of any term, provision, or condition of this Contract permitted by this Contract shall be made by written amendment to this Contract, signed by the CONTRACTOR and the STATE, provided that change orders shall be made in accordance with paragraph 20 herein.
- b. No oral modification. No oral modification, alteration, amendment, change, or extension of any term, provision, or condition of this Contract shall be permitted.



- c. Agency procurement officer. By written order, at any time, and without notice to any surety, the Agency procurement officer may unilaterally order of the CONTRACTOR:
    - (A) Changes in the work within the scope of the Contract; and
    - (B) Changes in the time of performance of the Contract that do not alter the scope of the Contract work.
  - d. Adjustments of price or time for performance. If any modification increases or decreases the CONTRACTOR'S cost of, or the time required for, performance of any part of the work under this Contract, an adjustment shall be made and this Contract modified in writing accordingly. Any adjustment in contract price made pursuant to this clause shall be determined, where applicable, in accordance with the price adjustment clause of this Contract or as negotiated.
  - e. Claim barred after final payment. No claim by the CONTRACTOR for an adjustment hereunder shall be allowed if written modification of the Contract is not made prior to final payment under this Contract.
  - f. Claims not barred. In the absence of a written contract modification, nothing in this clause shall be deemed to restrict the CONTRACTOR'S right to pursue a claim under this Contract or for a breach of contract.
  - g. Head of the purchasing agency approval. If this is a professional services contract awarded pursuant to section 103D-303 or 103D-304, HRS, any modification, alteration, amendment, change, or extension of any term, provision, or condition of this Contract which increases the amount payable to the CONTRACTOR by at least \$25,000.00 and ten per cent (10%) or more of the initial contract price, must receive the prior approval of the head of the purchasing agency.
  - h. Tax clearance. The STATE may, at its discretion, require the CONTRACTOR to submit to the STATE, prior to the STATE'S approval of any modification, alteration, amendment, change, or extension of any term, provision, or condition of this Contract, a tax clearance from the Director of Taxation, State of Hawaii, and the Internal Revenue Service, U.S. Department of Treasury, showing that all delinquent taxes, if any, levied or accrued under state law and the Internal Revenue Code of 1986, as amended, against the CONTRACTOR have been paid.
  - i. Sole source contracts. Amendments to sole source contracts that would change the original scope of the Contract may only be made with the approval of the CPO. Annual renewal of a sole source contract for services should not be submitted as an amendment.
20. Change Order. The Agency procurement officer may, by a written order signed only by the STATE, at any time, and without notice to any surety, and subject to all appropriate adjustments, make changes within the general scope of this Contract in any one or more of the following:
- (1) Drawings, designs, or specifications, if the goods or services to be furnished are to be specially provided to the STATE in accordance therewith;
  - (2) Method of delivery; or
  - (3) Place of delivery.
- a. Adjustments of price or time for performance. If any change order increases or decreases the CONTRACTOR'S cost of, or the time required for, performance of any part of the work under this Contract, whether or not changed by the order, an adjustment shall be made and the Contract modified in writing accordingly. Any adjustment in the Contract price made pursuant to this provision shall be determined in accordance with the price adjustment provision of this Contract. Failure of the parties to agree to an adjustment shall not excuse the CONTRACTOR from proceeding with the Contract as changed, provided that the Agency procurement officer promptly and duly makes the provisional adjustments in payment or time for performance as may be reasonable. By

proceeding with the work, the CONTRACTOR shall not be deemed to have prejudiced any claim for additional compensation, or any extension of time for completion.

- b. Time period for claim. Within ten (10) days after receipt of a written change order under subparagraph 20a, unless the period is extended by the Agency procurement officer in writing, the CONTRACTOR shall respond with a claim for an adjustment. The requirement for a timely written response by CONTRACTOR cannot be waived and shall be a condition precedent to the assertion of a claim.
- c. Claim barred after final payment. No claim by the CONTRACTOR for an adjustment hereunder shall be allowed if a written response is not given prior to final payment under this Contract.
- d. Other claims not barred. In the absence of a change order, nothing in this paragraph 20 shall be deemed to restrict the CONTRACTOR'S right to pursue a claim under the Contract or for breach of contract.

21. Price Adjustment.

- a. Price adjustment. Any adjustment in the contract price pursuant to a provision in this Contract shall be made in one or more of the following ways:
  - (1) By agreement on a fixed price adjustment before commencement of the pertinent performance or as soon thereafter as practicable;
  - (2) By unit prices specified in the Contract or subsequently agreed upon;
  - (3) By the costs attributable to the event or situation covered by the provision, plus appropriate profit or fee, all as specified in the Contract or subsequently agreed upon;
  - (4) In such other manner as the parties may mutually agree; or
  - (5) In the absence of agreement between the parties, by a unilateral determination by the Agency procurement officer of the costs attributable to the event or situation covered by the provision, plus appropriate profit or fee, all as computed by the Agency procurement officer in accordance with generally accepted accounting principles and applicable sections of chapters 3-123 and 3-126, HAR.
- b. Submission of cost or pricing data. The CONTRACTOR shall provide cost or pricing data for any price adjustments subject to the provisions of chapter 3-122, HAR.

22. Variation in Quantity for Definite Quantity Contracts. Upon the agreement of the STATE and the CONTRACTOR, the quantity of goods or services, or both, if a definite quantity is specified in this Contract, may be increased by a maximum of ten per cent (10%); provided the unit prices will remain the same except for any price adjustments otherwise applicable; and the Agency procurement officer makes a written determination that such an increase will either be more economical than awarding another contract or that it would not be practical to award another contract.

23. Changes in Cost-Reimbursement Contract. If this Contract is a cost-reimbursement contract, the following provisions shall apply:

- a. The Agency procurement officer may at any time by written order, and without notice to the sureties, if any, make changes within the general scope of the Contract in any one or more of the following:
  - (1) Description of performance (Attachment 1);
  - (2) Time of performance (i.e., hours of the day, days of the week, etc.);
  - (3) Place of performance of services;

- (4) Drawings, designs, or specifications when the supplies to be furnished are to be specially manufactured for the STATE in accordance with the drawings, designs, or specifications;
  - (5) Method of shipment or packing of supplies; or
  - (6) Place of delivery.
- b. If any change causes an increase or decrease in the estimated cost of, or the time required for performance of, any part of the performance under this Contract, whether or not changed by the order, or otherwise affects any other terms and conditions of this Contract, the Agency procurement officer shall make an equitable adjustment in the (1) estimated cost, delivery or completion schedule, or both; (2) amount of any fixed fee; and (3) other affected terms and shall modify the Contract accordingly.
  - c. The CONTRACTOR must assert the CONTRACTOR'S rights to an adjustment under this provision within thirty (30) days from the day of receipt of the written order. However, if the Agency procurement officer decides that the facts justify it, the Agency procurement officer may receive and act upon a proposal submitted before final payment under the Contract.
  - d. Failure to agree to any adjustment shall be a dispute under paragraph 11 of this Contract. However, nothing in this provision shall excuse the CONTRACTOR from proceeding with the Contract as changed.
  - e. Notwithstanding the terms and conditions of subparagraphs 23a and 23b, the estimated cost of this Contract and, if this Contract is incrementally funded, the funds allotted for the performance of this Contract, shall not be increased or considered to be increased except by specific written modification of the Contract indicating the new contract estimated cost and, if this contract is incrementally funded, the new amount allotted to the contract.
24. Confidentiality of Material.
- a. All material given to or made available to the CONTRACTOR by virtue of this Contract, which is identified as proprietary or confidential information, will be safeguarded by the CONTRACTOR and shall not be disclosed to any individual or organization without the prior written approval of the STATE.
  - b. All information, data, or other material provided by the CONTRACTOR to the STATE shall be subject to the Uniform Information Practices Act, chapter 92F, HRS.
25. Publicity. The CONTRACTOR shall not refer to the STATE, or any office, agency, or officer thereof, or any state employee, including the HOPA, the CPO, the Agency procurement officer, or to the services or goods, or both, provided under this Contract, in any of the CONTRACTOR'S brochures, advertisements, or other publicity of the CONTRACTOR. All media contacts with the CONTRACTOR about the subject matter of this Contract shall be referred to the Agency procurement officer.
26. Ownership Rights and Copyright. The STATE shall have complete ownership of all material, both finished and unfinished, which is developed, prepared, assembled, or conceived by the CONTRACTOR pursuant to this Contract, and all such material shall be considered "works made for hire." All such material shall be delivered to the STATE upon expiration or termination of this Contract. The STATE, in its sole discretion, shall have the exclusive right to copyright any product, concept, or material developed, prepared, assembled, or conceived by the CONTRACTOR pursuant to this Contract.
27. Liens and Warranties. Goods provided under this Contract shall be provided free of all liens and provided together with all applicable warranties, or with the warranties described in the Contract documents, whichever are greater.

28. Audit of Books and Records of the CONTRACTOR. The STATE may, at reasonable times and places, audit the books and records of the CONTRACTOR, prospective contractor, subcontractor, or prospective subcontractor which are related to:

- a. The cost or pricing data, and
- b. A state contract, including subcontracts, other than a firm fixed-price contract.

29. Cost or Pricing Data. Cost or pricing data must be submitted to the Agency procurement officer and timely certified as accurate for contracts over \$100,000 unless the contract is for a multiple-term or as otherwise specified by the Agency procurement officer. Unless otherwise required by the Agency procurement officer, cost or pricing data submission is not required for contracts awarded pursuant to competitive sealed bid procedures.

If certified cost or pricing data are subsequently found to have been inaccurate, incomplete, or noncurrent as of the date stated in the certificate, the STATE is entitled to an adjustment of the contract price, including profit or fee, to exclude any significant sum by which the price, including profit or fee, was increased because of the defective data. It is presumed that overstated cost or pricing data increased the contract price in the amount of the defect plus related overhead and profit or fee. Therefore, unless there is a clear indication that the defective data was not used or relied upon, the price will be reduced in such amount.

30. Audit of Cost or Pricing Data. When cost or pricing principles are applicable, the STATE may require an audit of cost or pricing data.

31. Records Retention.

- (1) Upon any termination of this Contract or as otherwise required by applicable law, CONTRACTOR shall, pursuant to chapter 487R, HRS, destroy all copies (paper or electronic form) of personal information received from the STATE.
- (2) The CONTRACTOR and any subcontractors shall maintain the files, books, and records that relate to the Contract, including any personal information created or received by the CONTRACTOR on behalf of the STATE, and any cost or pricing data, for at least three (3) years after the date of final payment under the Contract. The personal information shall continue to be confidential and shall only be disclosed as permitted or required by law. After the three (3) year, or longer retention period as required by law has ended, the files, books, and records that contain personal information shall be destroyed pursuant to chapter 487R, HRS or returned to the STATE at the request of the STATE.

32. Antitrust Claims. The STATE and the CONTRACTOR recognize that in actual economic practice, overcharges resulting from antitrust violations are in fact usually borne by the purchaser. Therefore, the CONTRACTOR hereby assigns to STATE any and all claims for overcharges as to goods and materials purchased in connection with this Contract, except as to overcharges which result from violations commencing after the price is established under this Contract and which are not passed on to the STATE under an escalation clause.

33. Patented Articles. The CONTRACTOR shall defend, indemnify, and hold harmless the STATE, and its officers, employees, and agents from and against all liability, loss, damage, cost, and expense, including all attorneys fees, and all claims, suits, and demands arising out of or resulting from any claims, demands, or actions by the patent holder for infringement or other improper or unauthorized use of any patented article, patented process, or patented appliance in connection with this Contract. The CONTRACTOR shall be solely responsible for correcting or curing to the satisfaction of the STATE any such infringement or improper or unauthorized use, including, without limitation: (a) furnishing at no cost to the STATE a substitute article, process, or appliance acceptable to the STATE, (b) paying royalties or other required payments to the patent holder, (c) obtaining proper authorizations or releases from the patent holder, and (d) furnishing such security to or making such arrangements with the patent holder as may be necessary to correct or cure any such infringement or improper or unauthorized use.

34. Governing Law. The validity of this Contract and any of its terms or provisions, as well as the rights and duties of the parties to this Contract, shall be governed by the laws of the State of Hawaii. Any action at law or in equity to enforce or interpret the provisions of this Contract shall be brought in a state court of competent jurisdiction in Honolulu, Hawaii.
35. Compliance with Laws. The CONTRACTOR shall comply with all federal, state, and county laws, ordinances, codes, rules, and regulations, as the same may be amended from time to time, that in any way affect the CONTRACTOR'S performance of this Contract.
36. Conflict Between General Conditions and Procurement Rules. In the event of a conflict between the General Conditions and the procurement rules, the procurement rules in effect on the date this Contract became effective shall control and are hereby incorporated by reference.
37. Entire Contract. This Contract sets forth all of the agreements, conditions, understandings, promises, warranties, and representations between the STATE and the CONTRACTOR relative to this Contract. This Contract supersedes all prior agreements, conditions, understandings, promises, warranties, and representations, which shall have no further force or effect. There are no agreements, conditions, understandings, promises, warranties, or representations, oral or written, express or implied, between the STATE and the CONTRACTOR other than as set forth or as referred to herein.
38. Severability. In the event that any provision of this Contract is declared invalid or unenforceable by a court, such invalidity or unenforceability shall not affect the validity or enforceability of the remaining terms of this Contract.
39. Waiver. The failure of the STATE to insist upon the strict compliance with any term, provision, or condition of this Contract shall not constitute or be deemed to constitute a waiver or relinquishment of the STATE'S right to enforce the same in accordance with this Contract. The fact that the STATE specifically refers to one provision of the procurement rules or one section of the Hawaii Revised Statutes, and does not include other provisions or statutory sections in this Contract shall not constitute a waiver or relinquishment of the STATE'S rights or the CONTRACTOR'S obligations under the procurement rules or statutes.
40. Pollution Control. If during the performance of this Contract, the CONTRACTOR encounters a "release" or a "threatened release" of a reportable quantity of a "hazardous substance," "pollutant," or "contaminant" as those terms are defined in section 128D-1, HRS, the CONTRACTOR shall immediately notify the STATE and all other appropriate state, county, or federal agencies as required by law. The Contractor shall take all necessary actions, including stopping work, to avoid causing, contributing to, or making worse a release of a hazardous substance, pollutant, or contaminant, and shall promptly obey any orders the Environmental Protection Agency or the state Department of Health issues in response to the release. In the event there is an ensuing cease-work period, and the STATE determines that this Contract requires an adjustment of the time for performance, the Contract shall be modified in writing accordingly.
41. Campaign Contributions. The CONTRACTOR is hereby notified of the applicability of 11-355, HRS, which states that campaign contributions are prohibited from specified state or county government contractors during the terms of their contracts if the contractors are paid with funds appropriated by a legislative body.
42. Confidentiality of Personal Information.
- a. Definitions.
- "Personal information" means an individual's first name or first initial and last name in combination with any one or more of the following data elements, when either name or data elements are not encrypted:
- (1) Social security number;
  - (2) Driver's license number or Hawaii identification card number; or

- (3) Account number, credit or debit card number, access code, or password that would permit access to an individual's financial information.

Personal information does not include publicly available information that is lawfully made available to the general public from federal, state, or local government records.

"Technological safeguards" means the technology and the policy and procedures for use of the technology to protect and control access to personal information.

b. Confidentiality of Material.

- (1) All material given to or made available to the CONTRACTOR by the STATE by virtue of this Contract which is identified as personal information, shall be safeguarded by the CONTRACTOR and shall not be disclosed without the prior written approval of the STATE.
- (2) CONTRACTOR agrees not to retain, use, or disclose personal information for any purpose other than as permitted or required by this Contract.
- (3) CONTRACTOR agrees to implement appropriate "technological safeguards" that are acceptable to the STATE to reduce the risk of unauthorized access to personal information.
- (4) CONTRACTOR shall report to the STATE in a prompt and complete manner any security breaches involving personal information.
- (5) CONTRACTOR agrees to mitigate, to the extent practicable, any harmful effect that is known to CONTRACTOR because of a use or disclosure of personal information by CONTRACTOR in violation of the requirements of this paragraph.
- (6) CONTRACTOR shall complete and retain a log of all disclosures made of personal information received from the STATE, or personal information created or received by CONTRACTOR on behalf of the STATE.

c. Security Awareness Training and Confidentiality Agreements.

- (1) CONTRACTOR certifies that all of its employees who will have access to the personal information have completed training on security awareness topics relating to protecting personal information.
- (2) CONTRACTOR certifies that confidentiality agreements have been signed by all of its employees who will have access to the personal information acknowledging that:
  - (A) The personal information collected, used, or maintained by the CONTRACTOR will be treated as confidential;
  - (B) Access to the personal information will be allowed only as necessary to perform the Contract; and
  - (C) Use of the personal information will be restricted to uses consistent with the services subject to this Contract.

d. Termination for Cause. In addition to any other remedies provided for by this Contract, if the STATE learns of a material breach by CONTRACTOR of this paragraph by CONTRACTOR, the STATE may at its sole discretion:

- (1) Provide an opportunity for the CONTRACTOR to cure the breach or end the violation; or
- (2) Immediately terminate this Contract.

In either instance, the CONTRACTOR and the STATE shall follow chapter 487N, HRS, with respect to notification of a security breach of personal information.

e. Records Retention.

- (1) Upon any termination of this Contract or as otherwise required by applicable law, CONTRACTOR shall, pursuant to chapter 487R, HRS, destroy all copies (paper or electronic form) of personal information received from the STATE.
- (2) The CONTRACTOR and any subcontractors shall maintain the files, books, and records that relate to the Contract, including any personal information created or received by the CONTRACTOR on behalf of the STATE, and any cost or pricing data, for at least three (3) years after the date of final payment under the Contract. The personal information shall continue to be confidential and shall only be disclosed as permitted or required by law. After the three (3) year, or longer retention period as required by law has ended, the files, books, and records that contain personal information shall be destroyed pursuant to chapter 487R, HRS or returned to the STATE at the request of the STATE.

ADDITIONAL GENERAL CONDITIONS FOR  
GOODS AND SERVICES CONTRACTS

INTENT OF CONTRACT:

The intent of the contract is to provide for the service, complete in every detail, of the work described. The Contractor shall furnish all labor, materials, equipment, tools, transportation and supplies required to complete the work in accordance with the specifications and terms of the contract.

INTERPRETATION OF SPECIFICATIONS:

Should it appear that the work to be done or any of the matters relative thereto are not sufficiently detailed or explained in the specifications, the Contractor shall apply to the Contracting Officer for such further explanations as may be necessary and shall conform to same as part of the contract, so far as may be consistent with the original specifications; and in the event of any doubt or questions arising respecting the true meaning of the specifications, reference shall be made to the Contracting Officer whose decision thereon shall be final.

LIABILITY INSURANCE:

The Contractor shall not commence any work until it obtains, at its own expense, all required liability insurance. Such insurance must have the approval of the State as to limit form and amount and must be maintained with a company acceptable to the State. Such insurance must be maintained for the full period of the contract and shall provide protection from claims arising out of or resulting from the Contractor's operations under the Contract itself Subcontractor or by anyone directly or indirectly employed by any of them or by anyone for whose acts any of them may be liable.

The contractor shall take out and maintain during the life of this contract broad form public liability (Bodily Injury) and broad form property damage liability insurance in a combined single limit not less than \$1,000,000 and not less than \$2,000,000 in the aggregate to protect such contractor and all his subcontractors from claims for damages for personal injury, accidental death and property damage which may arise from operations under this contract, whether such operations be by himself or anyone directly or indirectly employed by either of them.

The insurance described herein will be maintained by the Contractor for the full period of the Contract and in no event will be terminated or otherwise allowed to lapse prior to final acceptance of the work by the State.

A certificate of insurance acceptable to the State shall be filed with the State prior to commencement of the work. Such certificate shall contain a provision that coverage afforded under the policy will not be canceled or changes until at least thirty days written notice has been given to the State by registered mail at the address denominated for the State in the Contract for



official communications to it should any policy be canceled before final acceptance by the State, and the Contractor fails to immediately procure replacement insurance as specified, the State reserves the right to procure such insurance and to deduct the cost thereof from any sum due the Contractor.

#### LAWS TO BE OBSERVED:

The Contractor at all times shall observe and comply with all Federal, State and local laws or ordinances, rules and regulations which in any manner affect those engaged or employed in the work, the materials used in the work, and the conduct of the work. The Contractor shall also comply with all such orders and decrees of bodies or tribunals having any jurisdiction or authority over the work. Any reference to such laws, ordinances, rules and regulations shall include any amendments thereto.

The Contractor shall protect and indemnify the State and its Departments and Agencies and all their officers, representatives, employees or agents against any claim or liability arising from or based on the violation of any such laws, ordinances, rules and regulations, orders and decrees, whether such violation is committed by the Contractor or his subcontractor or the employee of either or both. If any discrepancy or inconsistency is discovered in the contract for the work in relation to any such laws, ordinances, rules and regulations, orders or decrees, the Contractor shall forthwith report the same to the State of Hawaii, Department of Defense, Engineer in writing.

Attention is directed to the Hawaii Employment Relations Act, Chapter 377, HRS; Hawaii Employment Security Law, Chapter 383, HRS; Wage and Hour Law, Chapter 387, HRS; Payment of Wages, Chapter 388, HRS; and Worker's Compensation Law, Chapter 386, HRS.

Workers' Compensation - The Contractor shall, in accordance with Sections 386-121 to 386-129 Hawaii Revised Statutes, inclusive, take out adequate worker's compensation insurance for all of his employees who will be engaged in work at the site of the project.

#### PERMITS AND LICENSES:

The Contractor shall procure all permits and licenses, pay all charges and fees and give all notices necessary and incident to the due and lawful prosecution of the work.

#### CHARACTER OF WORKERS OR EQUIPMENT:

A. Character and Proficiency of Workers - All workers must have sufficient skill and experience to perform the work assigned to them and in the operation of the equipment.

Any worker employed on the project by the Contractor who, in the opinion of the Engineer or his authorized representative, is not careful and competent, does not perform his work in a proper and skillful manner or is disrespectful, intemperate, disorderly or neglects or refuses to comply with directions given, or is otherwise objectionable shall, at the written request of the

Engineer, be removed forthwith by the Contractor employing such worker and shall not be employed again in any portion of the work without the written consent of the Engineer. Should the Contractor continue to employ, or again employ such person(s) on the project, the Engineer will withhold all estimates which are or may become due, or the Engineer will suspend the work until such orders are complied with.

B. Insufficient Workers - In the event that the Engineer, in his judgment, finds the condition whereby insufficient workers are present to accomplish the work and no corrective action is taken by the Contractor after being informed, the Engineer reserves the right to terminate the contract.

C. Equipment Requirements - All equipment furnished by the Contractor and used shall be of such size and of such mechanical condition that the work can be prosecuted in an acceptable manner.

### RIGHT TO AUDIT RECORDS

Pursuant to Section 103D-317 HRS the State, at reasonable times and places, may audit the books and records relating to the contractor's cost or pricing data. The books and records shall be maintained for a period of three years from the date of final payment under the contract, unless another period is otherwise authorized in writing.

Additionally, Sections 231-7, 235-108, 237-39 and other HRS chapters through reference, authorizes the Department of Taxation to audit all taxpayers conducting business within the State. Contractors must make available to the Department of Taxation all books and records necessary to verify compliance with the tax laws.

The following sections of the Hawaii Administrative Rules, Chapter 3-125 are amended as shown below.

### CHANGE ORDERS TO GOODS AND SERVICES CONTRACTS – HAR 3-125-2

1. Change clause. By written order, at any time, and without notice to any surety, the procurement officer may, unilaterally, order of the contractor:
  - a. Changes in the work within the scope of the contract; and
  - b. Changes in the time of performance of the contract that do not alter the scope of the contract work.
  
2. Adjustments of price or time for performance. If any change order increases or decreases the contractor's cost of, or the time required for, performance of any part of the work under this contract, an adjustment shall be made and the contract modified in writing accordingly. Any adjustment in contract price made pursuant to this clause shall be determined, where applicable, in accordance with the price adjustment clause of this contract or as negotiated. Failure of the parties to agree to an adjustment shall not excuse the contractor from

proceeding with the contract as changed, provided that the procurement officer promptly and duly makes the provisional adjustments in payment or time for the direct costs of the work as the State deems reasonable. The right of the contractor to dispute the contract price or time required for performance or both shall not be waived by its performing the work, provided however, that it follows the written notice requirements for disputes and claims established by the contract or these rules.

3. Time Period for Claim. Within 10 days after receipt of a written change order, unless the period is extended by the procurement officer in writing, the contractor shall respond with a claim for an adjustment. The requirement for a timely written response cannot be waived and shall be a condition precedent to the assertion of a claim.
4. Claim barred after final payment. No claim by the contractor for an adjustment hereunder shall be allowed if written response is not given prior to final payment under this contract.
5. Claims not barred. In the absence of a change order, nothing in this clause shall be deemed to restrict the contractor's right to pursue a claim under the contract or for breach of contract.

#### MODIFICATIONS TO GOODS AND SERVICES CONTRACTS – HAR 3-125-3

1. Contract Modification. By a written order, at any time, and without notice to any surety, the procurement officer, subject to mutual agreement of the parties to the contract and all appropriate adjustments, may make modifications within the general scope of this contract to include any one or more of the following:
  - a. Drawings, designs, or specifications, for the goods to be furnished;
  - b. Method of shipment or packing;
  - c. Place of delivery;
  - d. Description of services to be performed;
  - e. Time of performance (i.e., hours of the day, days of the week, etc.);
  - f. Place of performance of the services; or
  - g. Other provisions of the contract accomplished by mutual action of the parties to the contract.
2. Adjustments of price or time for performance. If any modification increases or decreases the contractor's cost of, or the time required for, performance of any part of the work under this contract, an adjustment shall be made and the contract modified in writing accordingly. Any adjustment in contract price made pursuant to this clause shall be determined, where applicable, in accordance with the price adjustment clause of this contract or as negotiated.
3. Claim barred after final payment. No claim by the contractor for an adjustment hereunder shall be allowed if written agreement of modification is not made prior to final payment under this contract.

4. Claims not barred. In the absence of a contract modification, nothing in this clause shall be deemed to restrict the contractor's right to pursue a claim under the contract or for a breach of contract.

#### PRICE ADJUSTMENT FOR GOODS AND SERVICES CONTRACTS – HAR 3-125-12

1. Price adjustment. Any adjustment in contract price pursuant to a clause in this contract shall be made in one or more of the following ways;
  - a. By agreement on a fixed price adjustment before commencement of the pertinent performance or as soon thereafter as practicable;
  - b. By unit prices specified in the contract or subsequently agree upon;
  - c. By the costs attributable to the event or situation covered by the clause, plus appropriate profit or fee, all as specified in the contract or subsequently agreed upon;
  - d. In such other manner as the parties may mutually agree; or
  - e. In the absence of agreement between the parties, by a unilateral determination by the procurement officer of the costs attributable to the event or situation covered by the clause, plus appropriate profit or fee, all as computed by the procurement officer in accordance with generally accepted accounting principles and applicable sections of chapters 3-122 and 3-126, Hawaii Administrative Rules.
2. Submission of cost or pricing data. The contractor shall provide cost or pricing data for any price adjustments subject to the provision of subchapter 15, chapter 3, 122, Hawaii Administrative Rules.

#### PROMPT PAYMENT BY CONTRACTORS TO SUBCONTRACTORS – HAR 3-125-23

1. Prompt payment clause. Any money, other than retainage, paid to a contractor shall be dispersed to subcontractors within ten days after receipt of the money in accordance with the terms of the subcontract; provided that the subcontractor has met all the terms and conditions of the subcontract and there are no bona fide disputes; and, upon final payment to the contractor, full payment to the subcontractor, including retainage, shall be made within ten days after receipt of the money; provided that there are no bona fide disputes over the subcontractor's performance under the subcontract.

## STATEMENT OF WORK

TREE TRIMMING AND REMOVAL AT  
HAWAII STATE VETERANS CEMETERY, KANEOHE  
STATE OF HAWAII, DEPARTMENT OF DEFENSE  
OFFICE OF VETERAN SERVICES  
Job No.: CA-1704

The project involves the trimming (pruning) and removal (felling) of various species of trees at the Hawaii State Veterans Cemetery (HSVC), Kaneohe, HI.

The Contractor shall furnish all labor, equipment, tools, materials, and transportation to perform all operations in connection with furnishing the tree pruning (trimming) and removal (felling) of designated trees at the HSVC as set forth in this Contract, including the Scope of Work, General Conditions and Special Provisions. Tree cuttings and debris shall be removed and disposed of daily and recycled.

Trees to be pruned shall be under the direct supervision of a Certified Arborist. The Certified Arborist shall confirm the locations of all trees to be pruned and/or removed with the Project Manager (PM) prior to doing the tree pruning and/or removal work. Trees to be removed shall be marked (i.e., using tags, tape, paint) by the Certified Arborist.

The project location is identified in Attachment 1 - Location Map. The listing of trees to be pruned and/or removed and their general locations, tree identification numbers, species, sizes and mitigation measures are provided in Attachments 2 and 3 – Tree Inventory and Site Map. Attachment 4 – Tree Risk Assessment and Risk Reduction Recommendations Report, November 1, 2016, provides information on trees that present a hazard to people and property within the Cemetery property and identifies the species, size, and mitigation measures for the trees to be pruned and/or removed.

The project scope includes a Base Bid (BB) having three (3) groups (BB Group 1, BB Group 2 and BB Group 3) and three (3) Additive Alternates (AA) identified by groups (AA Group 1, AA Group 2, AA Group 3). The Base Bid and Additive Alternate Groups are identified in Attachment #3.

For purpose of evaluating the bid: (1) The lump sum base bid shall include BB Group 1, BB Group 2 and BB Group 3; and (2) the additive alternates are listed below in the order of precedence, from highest first to lowest:

- AA Group 1
- AA Group 2
- AA Group 3

Work shall be performed in the following sequence and time period:

BB Group 1	9 weeks
BB Group 2	9 weeks
BB Group 3	6 weeks
AA Group 1	2 weeks
AA Group 2	2 weeks
AA Group 3	2 weeks

The pruning and/or removal of all trees within a Group shall be completed before work can commence on the next Group. The Certified Arborist shall determine the order of the trees to be pruned and/or removed within a Group with the approval of the PM.

1. Base Bid Group 1: (Total 20 trees)

- a. Tree Pruning: (See Attachments 2 and 3 for the locations, identification numbers, species and heights of the trees to be pruned).
  - (1) Prune (crown reduction) three (3) Eucalyptus trees.
  - (2) Prune (crown cleaning) three (3) Monkey Pod trees.
  - (3) Tree branches shall be cut and lowered in a manner that will prevent the branches from falling onto adjacent existing graves and buildings.
  - (4) Tree cuttings and debris shall be removed and disposed of daily and recycled.
  - (5) Stockpiling of tree cuttings on site shall not be permitted.
  - (6) Transport cuttings and debris in a manner that will prevent spillage on to roadways.
  - (7) Provide documentation of recycling (e.g., receipt and acceptance of recyclable waste by the recycling and processing facility licensed to accept them). Include manifests, weight tickets, receipts and invoices.
  
- b. Tree Removal: (See Attachments 2 and 3 for the locations, identification numbers, species and heights of the trees to be removed).
  - (1) Remove (fell) 14 Albizia trees.
  - (2) Cut the trees at the bottom of the trunk leaving a one (1) foot stump.
  - (3) Apply a herbicide to the tree stumps.
    - (a) Herbicide shall be a product approved by the State of Hawaii, Department of Health.
    - (b) The Contractor shall submit the product data and Material Safety Data Sheet (MSDS) for the proposed herbicide to the Project Manager for review and approval.
    - (c) The Contractor shall be certified to use and apply the herbicide by the State of Hawaii Department of Health.
    - (d) The herbicide shall be used and applied in accordance with the manufacturer's application instructions and Material Safety Data Sheet (MSDS), and in accordance with federal, State and local laws and regulations. There shall be a level of control of at least 90% of the trees treated.

- (e) The Contractor is responsible for maintaining a copy of the MSDS at the jobsite and in notifying personnel about the existence of hazardous chemicals in the project area.
- (4) Tree branches and trunks shall be cut and lowered in a manner that will prevent the branches and trunks from falling onto adjacent existing gravesites and buildings.
- (5) Tree cuttings and debris shall be removed and disposed of daily and recycled.
- (6) Stockpiling of tree cuttings on site will not be permitted.
- (7) Transport cuttings and debris in a manner that will prevent spillage on to roadways.
- (8) Provide documentation of recycling (e.g. receipt and acceptance of recyclable waste by the recycling and processing facility licensed to accept them). Include manifests, weight tickets, receipts, and invoices.

2. Base Bid Group 2: (Total 30 trees)

- a. Tree Removal: (See Attachments 2 and 3 for the locations, identification numbers, species and heights of the trees to be removed).
  - (1) Remove (fell) 30 Albizia trees.
  - (2) Cut the trees at the bottom of the trunk leaving a one (1) foot stump.
  - (3) Apply a herbicide to the tree stumps.
    - (a) Herbicide shall be a product approved by the State of Hawaii, Department of Health.
    - (b) The Contractor shall submit the product data and Material Safety Data Sheet (MSDS) for the proposed herbicide to the Project Manager for review and approval.
    - (c) The Contractor shall be certified to use and apply the herbicide by the State of Hawaii Department of Health.
    - (d) The herbicide shall be used and applied in accordance with the manufacturer's application instructions and Material Safety Data Sheet (MSDS), and in accordance with federal, State and local laws and regulations. There shall be a level of control of at least 90% of the trees treated.
    - (e) The Contractor is responsible for maintaining a copy of the MSDS at the jobsite and in notifying personnel about the existence of hazardous chemicals in the project area.
  - (4) Tree branches and trunks shall be cut and lowered in a manner that will prevent the branches and trunks from falling onto adjacent existing gravesites and buildings.
  - (5) Tree cuttings and debris shall be removed and disposed of daily and recycled.
  - (6) Stockpiling of tree cuttings on site will not be permitted.
  - (7) Transport cuttings and debris in a manner that will prevent spillage on to roadways.

- (8) Provide documentation of recycling (e.g. receipt and acceptance of recyclable waste by the recycling and processing facility licensed to accept them). Include manifests, weight tickets, receipts, and invoices.

3. Base Bid Group 3: (Total 17 trees)

- a. Tree Pruning: (See Attachments 2 and 3 for the locations, identification numbers, species and heights of the trees to be pruned).
  - (1) Prune (crown reduction) three (3) African Tulip, four (4) Monkey Pod, two (2) Eucalyptus, and one (1) Java Plum trees.
  - (2) Tree branches shall be cut and lowered in a manner that will prevent the branches from falling onto adjacent existing graves and buildings.
  - (3) Tree cuttings and debris shall be removed and disposed of daily and recycled.
  - (4) Stockpiling of tree cuttings on site shall not be permitted.
  - (5) Transport cuttings and debris in a manner that will prevent spillage on to roadways.
  - (6) Provide documentation of recycling (e.g., receipt and acceptance of recyclable waste by the recycling and processing facility licensed to accept them). Include manifests, weight tickets, receipts and invoices.
  
- b. Tree Removal: (See Attachments 2 and 3 for the locations, identification numbers, species and heights of the trees to be removed).
  - (1) Remove (fell) two (2) Albizia, three (3) Eucalyptus, one (1) African Tulip, and (1) Octopus trees.
  - (2) Cut the trees at the bottom of the trunk leaving a one (1) foot stump.
  - (3) Apply a herbicide to the tree stumps.
    - (a) Herbicide shall be a product approved by the State of Hawaii, Department of Health.
    - (b) The Contractor shall submit the product data and Material Safety Data Sheet (MSDS) for the proposed herbicide to the Project Manager for review and approval.
    - (c) The Contractor shall be certified to use and apply the herbicide by the State of Hawaii Department of Health.
    - (d) The herbicide shall be used and applied in accordance with the manufacturer's application instructions and Material Safety Data Sheet (MSDS), and in accordance with federal, State and local laws and regulations. There shall be a level of control of at least 90% of the trees treated.
    - (e) The Contractor is responsible for maintaining a copy of the MSDS at the jobsite and in notifying personnel about the existence of hazardous chemicals in the project area.
  - (4) Tree branches and trunks shall be cut and lowered in a manner that will prevent the branches and trunks from falling onto adjacent existing gravesites and buildings.



- (5) Tree cuttings and debris shall be removed and disposed of daily and recycled.
- (6) Stockpiling of tree cuttings on site will not be permitted.
- (7) Transport cuttings and debris in a manner that will prevent spillage on to roadways.
- (8) Provide documentation of recycling (e.g. receipt and acceptance of recyclable waste by the recycling and processing facility licensed to accept them). Include manifests, weight tickets, receipts, and invoices.

4. Additive Alternate Group 1: (Total 7 trees)

- a. Tree Removal: (See Attachments 2 and 3 for the locations, identification numbers, species and heights of the trees to be removed).
  - (1) Remove (fell) seven (7) Albizia trees.
  - (2) Cut the trees at the bottom of the trunk leaving a one (1) foot stump.
  - (3) Apply a herbicide to the tree stumps.
    - (a) Herbicide shall be a product approved by the State of Hawaii, Department of Health.
    - (b) The Contractor shall submit the product data and Material Safety Data Sheet (MSDS) for the proposed herbicide to the Project Manager for review and approval.
    - (c) The Contractor shall be certified to use and apply the herbicide by the State of Hawaii Department of Health.
    - (d) The herbicide shall be used and applied in accordance with the manufacturer's application instructions and Material Safety Data Sheet (MSDS), and in accordance with federal, State and local laws and regulations. There shall be a level of control of at least 90% of the trees treated.
    - (e) The Contractor is responsible for maintaining a copy of the MSDS at the jobsite and in notifying personnel about the existence of hazardous chemicals in the project area.
  - (4) Tree branches and trunks shall be cut and lowered in a manner that will prevent the branches and trunks from falling onto adjacent existing gravesites and buildings.
  - (5) Tree cuttings and debris shall be removed and disposed of daily and recycled.
  - (6) Stockpiling of tree cuttings on site will not be permitted.
  - (7) Transport cuttings and debris in a manner that will prevent spillage on to roadways.
  - (8) Provide documentation of recycling (e.g. receipt and acceptance of recyclable waste by the recycling and processing facility licensed to accept them). Include manifests, weight tickets, receipts, and invoices.

5. Additive Alternate Group 2: (Total 6 trees)

- a. Tree Pruning: Tree Pruning: (See Attachments 2 and 3 for the locations, identification numbers, species and heights of the trees to be pruned).
- (1) Prune (crown reduction) five (5) Eucalyptus trees.
  - (2) Tree branches shall be cut and lowered in a manner that will prevent the branches from falling onto adjacent existing graves and buildings.
  - (3) Tree cuttings and debris shall be removed and disposed of daily and recycled.
  - (4) Stockpiling of tree cuttings on site shall not be permitted.
  - (5) Transport cuttings and debris in a manner that will prevent spillage on to roadways.
  - (6) Provide documentation of recycling (e.g., receipt and acceptance of recyclable waste by the recycling and processing facility licensed to accept them). Include manifests, weight tickets, receipts and invoices.
- b. Tree Removal: (See Attachments 2 and 3 for the locations, identification numbers, species and heights of the trees to be removed).
- (1) Remove (fell) one (1) Albizia tree.
  - (2) Cut the trees at the bottom of the trunk leaving a one (1) foot stump.
  - (3) Apply a herbicide to the tree stumps.
    - (a) Herbicide shall be a product approved by the State of Hawaii, Department of Health.
    - (b) The Contractor shall submit the product data and Material Safety Data Sheet (MSDS) for the proposed herbicide to the Project Manager for review and approval.
    - (c) The Contractor shall be certified to use and apply the herbicide by the State of Hawaii Department of Health.
    - (d) The herbicide shall be used and applied in accordance with the manufacturer's application instructions and Material Safety Data Sheet (MSDS), and in accordance with federal, State and local laws and regulations. There shall be a level of control of at least 90% of the trees treated.
    - (e) The Contractor is responsible for maintaining a copy of the MSDS at the jobsite and in notifying personnel about the existence of hazardous chemicals in the project area.
  - (4) Tree branches and trunks shall be cut and lowered in a manner that will prevent the branches and trunks from falling onto adjacent existing gravesites and buildings.
  - (5) Tree cuttings and debris shall be removed and disposed of daily and recycled.
  - (6) Stockpiling of tree cuttings on site will not be permitted.
  - (7) Transport cuttings and debris in a manner that will prevent spillage on to roadways.

- (8) Provide documentation of recycling (e.g. receipt and acceptance of recyclable waste by the recycling and processing facility licensed to accept them). Include manifests, weight tickets, receipts, and invoices.

6. Additive Alternate Group 3: (Total 8 trees)

- a. Tree Pruning: Tree Pruning: (See Attachments 2 and 3 for the locations, identification numbers, species and heights of the trees to be pruned).
  - (1) Prune (crown reduction) one (1) African Tulip tree.
  - (2) Tree branches shall be cut and lowered in a manner that will prevent the branches from falling onto adjacent existing graves and buildings.
  - (3) Tree cuttings and debris shall be removed and disposed of daily and recycled.
  - (4) Stockpiling of tree cuttings on site shall not be permitted.
  - (5) Transport cuttings and debris in a manner that will prevent spillage on to roadways.
  - (6) Provide documentation of recycling (e.g., receipt and acceptance of recyclable waste by the recycling and processing facility licensed to accept them). Include manifests, weight tickets, receipts and invoices.
  
- b. Tree Removal: (See Attachments 2 and 3 for the locations, identification numbers, species and heights of the trees to be removed).
  - (1) Remove (fell) one (1) Albizia and six (6) African Tulip trees.
  - (2) Cut the trees at the bottom of the trunk leaving a one (1) foot stump.
  - (3) Apply a herbicide to the tree stumps.
    - (a) Herbicide shall be a product approved by the State of Hawaii, Department of Health.
    - (b) The Contractor shall submit the product data and Material Safety Data Sheet (MSDS) for the proposed herbicide to the Project Manager for review and approval.
    - (c) The Contractor shall be certified to use and apply the herbicide by the State of Hawaii Department of Health.
    - (d) The herbicide shall be used and applied in accordance with the manufacturer's application instructions and Material Safety Data Sheet (MSDS), and in accordance with federal, State and local laws and regulations. There shall be a level of control of at least 90% of the trees treated.
    - (e) The Contractor is responsible for maintaining a copy of the MSDS at the jobsite and in notifying personnel about the existence of hazardous chemicals in the project area.
  - (4) Tree branches and trunks shall be cut and lowered in a manner that will prevent the branches and trunks from falling onto adjacent existing gravesites and buildings.
  - (5) Tree cuttings and debris shall be removed and disposed of daily and recycled.
  - (6) Stockpiling of tree cuttings on site will not be permitted.

- (7) Transport cuttings and debris in a manner that will prevent spillage on to roadways.
- (8) Provide documentation of recycling (e.g. receipt and acceptance of recyclable waste by the recycling and processing facility licensed to accept them). Include manifests, weight tickets, receipts, and invoices.

### **CERTIFIED ARBORIST - GENERAL REQUIREMENTS & RESPONSIBILITIES**

1. The Certified Arborist shall possess five (5) years of work experience as an ISA Certified Arborist, which includes:
  - a. A sound knowledge and understanding of local tree species and their growth rates.
  - b. Knowledge and experience in the pruning practices and maintenance of all tree species included in this contract.
  - c. Possession of a thorough working knowledge of ANSI A300 and ANSI Z133.
  - d. Demonstrated ability and experience to supervise the Contractor's crew to ensure the satisfactory completion of operations including, but not be limited to, insuring proper clearances, proper pruning techniques, productivity, cleanup, safety, and compliance with this Contract.
  - e. Experience in the recognition, diagnosis, and examination of trees for indication of hazardous condition such as the presence of disease, decayed trunk or cracks, presence of termites, dead or dying trees, poor structure, or other structural stability and safety prior to climbers entering trees.
  - f. Ability to recognize and report hazardous conditions that cannot be addressed by corrective pruning described in this contract.
2. The Contractor shall provide the name of the Certified Arborist. As proof of the Certified Arborist's minimum five (5) year history of Certification as an Arborist, the Contractor shall provide copies of the Certified Arborist's current and previously expired ISA certificates. These ISA certificates shall include the certification number and expiration date, and will be subject to review and approval by the Project Manager. Failure to provide the required documentation may result in rejection of bid.
3. The Certified Arborist shall maintain certification by the International Society of Arboriculture (ISA) throughout the contract period.
4. The Certified Arborist shall represent the Contractor at the worksite and be competent to serve in the capacity or act on behalf of the Contractor and to understand and carry-out instructions which may be given by the Project Manager.

5. For the duration of the contract, there shall be one (1) Certified Arborist on site at all times when tree pruning work is being performed. The Certified Arborist shall be in compliance at all times with the contract requirements. In the event that the Contractor fails to provide Certified Arborist at the worksite during any phase of ongoing tree operation; the Project Manager has the right to temporarily suspend work operation and may terminate the contract during any phase of the contract due to Contractor's non-compliance. Work operation may resume upon approval by the Project Manager when the Contractor's non-compliant performance has been satisfactorily corrected for all non-performance issues. Any losses resulting from work delays due to the Contractor's non-compliant performances shall be the sole responsibility of the Contractor.
6. The Certified Arborist shall remain at all times within visual and voice communication of the crew performing the tree trimming operations. The Certified Arborist shall have a cellular telephone by which the Project Manager can be in contact with the Certified Arborist during tree trimming operations.

#### **TREE MANAGEMENT TERMINOLOGY**

1. Crown Cleaning (CC): Removal of dead, dying, diseased, broken, hanging, damaged and defective branches in the tree's crown, including removal of invasive plants and vines.
2. Crown Reduction (CR): Removal of the outer portions of the branches and/or the top of the subject tree to shorten tree height and branch length and end weight. Pruning cuts must be made back to the parent stem or a lateral branch that is at least 1/3 the diameter of the parent branch.
3. Fell (F): Removal of the tree by cutting the tree down to a stump. The freshly cut stump shall be treated with an herbicide solution to control and minimize resprouting.

#### **GENERAL NOTES**

1. Contractor shall provide all labor, materials, tools and equipment necessary to accomplish the tree pruning and removal identified in this Scope of Work.
2. All work shall be done in accordance with applicable federal, State and local regulations, and the latest local and industry standards and codes.
3. Contractor shall provide, install and maintain safety devices and barricades around the work areas, including but not limited to 4-foot high plastic orange safety mesh fencing, plastic orange bollards/delineators with caution tape and warning signs, for the protection, safety, and convenience of the public for the duration of the construction work at the project sites.

4. The primary objective of tree pruning services is to address and/or reduce potentially hazardous tree conditions. The Certified Arborist shall determine the tree pruning work to be performed based on the requirements listed in the Scope of Work and the Certified Arborist's arboricultural knowledge and experience. The Certified Arborist shall provide complete supervision of all pruning work performed.
5. During all phases of the Contract, the Contractor shall practice best arboricultural practices.
6. The tree pruning work shall also be in compliance with the current version of:
  - a. ANSI A300 (Part 1): Pruning Standard.
  - b. ANSI Z133: Pruning, Trimming, Repairing, Maintaining, and Removing Trees, and Cutting Brush-Safety Requirements.
7. Pruning practices shall be based upon the tree's predictable responses to pruning cuts and should correct problems rather than create new ones.
8. Contractor shall clear all underbrush that obstructs the access to the trees to be pruned/removed. Contractor shall remove and dispose of all trimmings, wood chips and other debris resulting from the work on a daily basis. Ground areas disturbed during the pruning/removal work shall be restored to a natural condition.
9. All provisions of the Occupational Safety and Health Act (OSHA) shall be strictly adhered to.
10. Any damage to gravesites, buildings, structures, vehicles, plants and other items in the area and adjoining properties shall be repaired and/or replaced to their existing condition by the Contractor at no additional cost to the State and to the satisfaction of the Project Manager.
11. The Project Manager may routinely inspect the Contractor's work during any phase of the operations. These inspections shall be made to assess progress of work and for general conformance with the contract documents.
12. Adverse conditions which may require major field changes not stated in the contract must be reported to the Project Manager prior to commencement or continuation of work.
13. Use of the HSVC waste receptacles is not permitted.
14. Parking and Site Access:
  - a. Parking areas for the Contractor and his staff shall be coordinated with and identified by the PM.

- b. Unauthorized vehicles parked in areas outside of that permitted will be subject to towing at the Contractor's expense.

15. Site Access:

- a. The Contractor shall coordinate access to the site with the PM.
- b. The Contractor shall provide, erect and maintain lights, barriers, signs, and other safety devices around areas of work and equipment to protect pedestrians, visitors to the cemetery and maintenance personnel.
- c. The Contractor shall keep access roads to the project site free of dirt and debris. Obey facility traffic and safety regulations. The Contractor shall clean the project site and roadways of dirt and debris resulting from the Contractor's operations at no additional cost to the State.
- d. The Contractor shall take precautions as necessary (e.g. laying of plywood sheathing to distribute weight) to prevent rutting of existing cemetery turf by its vehicles. Damage to turf areas shall be repaired to its original condition and to the satisfaction of the PM at no additional cost to the State.

16. Noise, dust and other disrupting activities resulting from the tree removal operations are detrimental to the conduct of activities at the HSVC and adjacent locations. Therefore, the Contractor shall monitor its activities and exercise precautions when using equipment and machinery to keep noise and dust levels to a minimum.

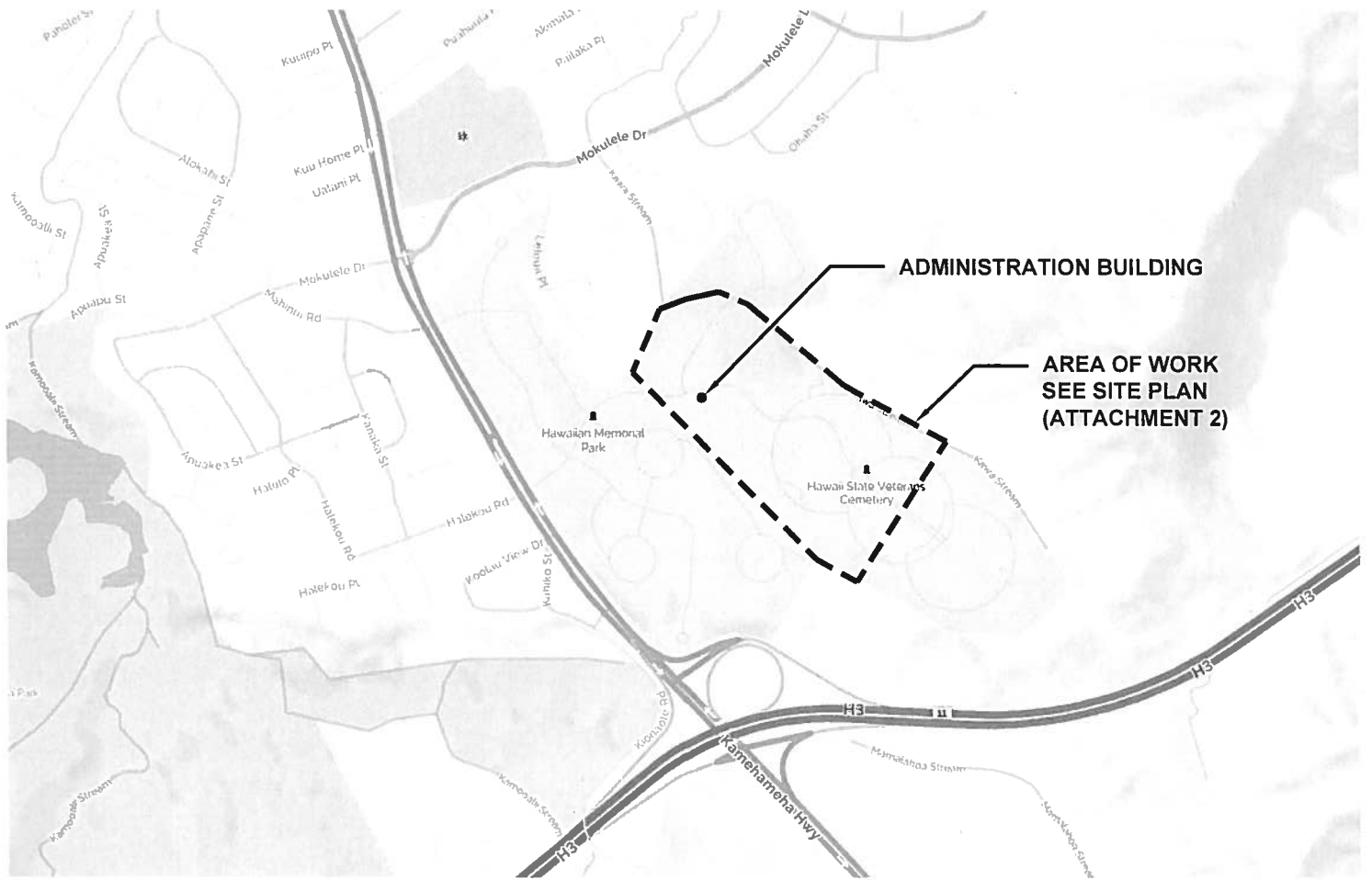
- a. To reduce loud disruptive noise levels, ensure mufflers and other devices are provided on equipment, internal combustion engines, and compressors.
- b. The Contractor shall temporarily suspend work during burial/memorial services and related activities, as directed by the PM or Cemetery Manager (CM). Burials occur on the average of three (3) per day, with each burial having an approximate duration of 20-30 minutes. The PM or CM will notify the Contractor of interment ceremonies one to two days in advance of the ceremony. The Contractor shall include the cost of such stoppages of work in the bid amount. No additional compensation will be provided for the Contractor's lack of accommodating such stoppages in his bid amount.

17. The Contractor shall operate machinery and equipment with discretion and with minimum interference to driveways and walkways. Obey facility traffic and safety regulation. Do not leave machinery and equipment unattended. Provide, erect and maintain lights, barriers, signs, etc. as necessary to protect visitors to the cemetery.

18. The Contractor shall comply with all federal, State and local environmental laws and regulations when handling hazardous materials.

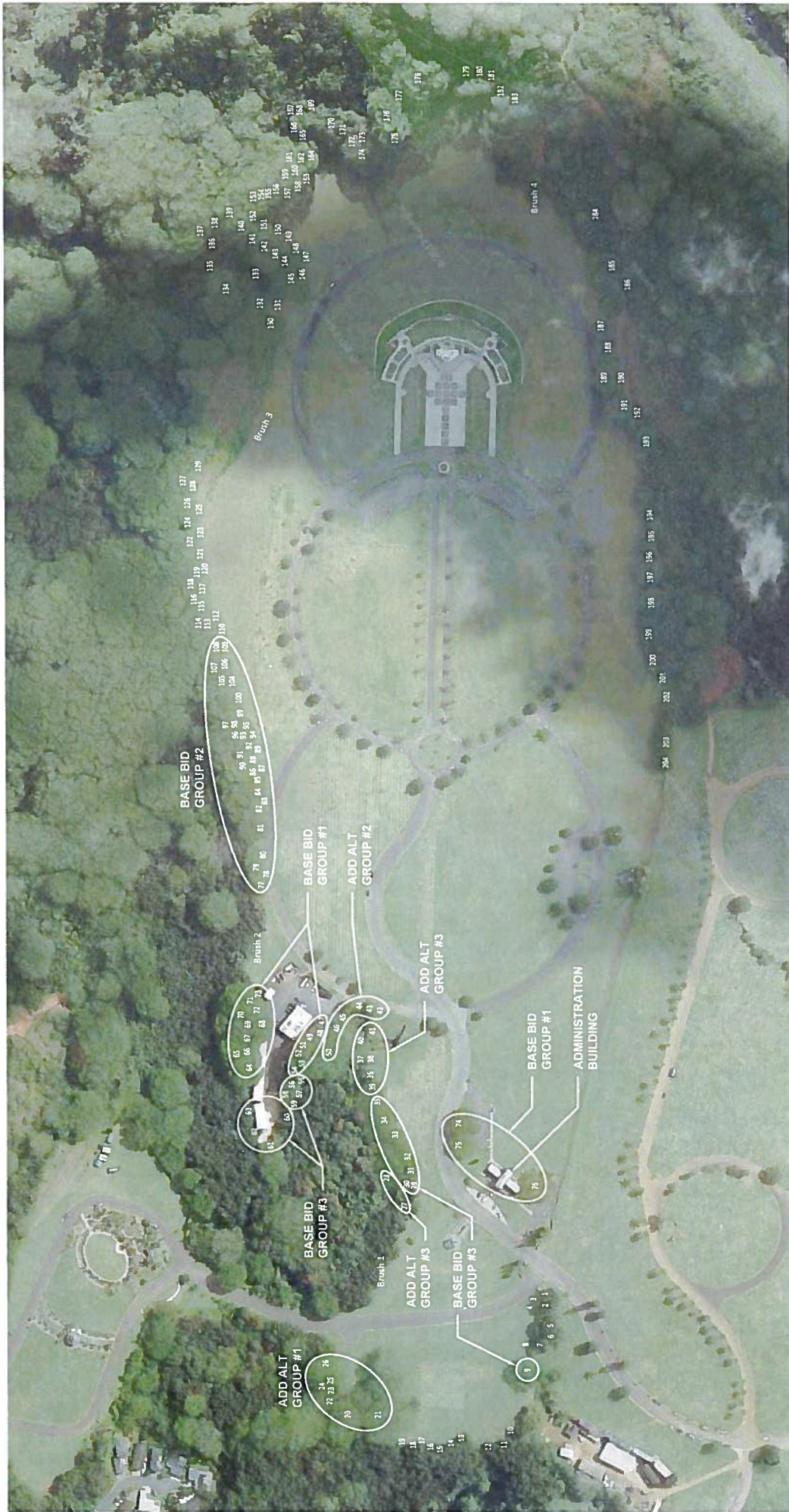
19. The Contractor shall immediately contain and clean-up the release or spill of hazardous materials and shall report the incident to the PM.
20. Contractor shall implement storm water pollution prevention measures, e.g., best management practices, to minimize construction debris, sediment-laden runoff, and other pollutants from leaving the construction areas and/or entering the streams and storm drainage system.
21. Contractor shall submit a work schedule to the CM and PM at least one week prior to start of construction.
22. The cemetery is open to visitors daily from 7:45 am to 6:00 pm, including holidays. The cemetery office hours are from 7:45 am to 4:30 pm Monday through Friday (closed on weekends and State holidays). The Contractor's normal working hours shall be from 7:45 am to 4:30 pm (Monday thru Friday), excluding State holidays. Work on the weekends and State holidays shall not be permitted.
23. The cemetery restroom facilities will be available for use during construction. The facilities shall be kept clean and maintained in a condition acceptable with the PM. Abuse of this privilege will result in the revocation of the use of the facilities, and the Contractor will be required to provide temporary facilities at no additional cost to the State.
24. The use of radios or stereos by the Contractor's employees is strictly prohibited.
25. Contractor Attire and Conduct:
  - a. Proper attire (in good taste) and safety equipment shall be worn at all times.
  - b. The Contractor and its employees shall wear shirts identifying the Contractor's company and shall also maintain photo identification on their person at all times.
26. Drug Free System: Comply with the ban on smoking and other use of tobacco products, alcoholic beverages and other illegal substances at all times.





**LOCATION MAP**  
NOT TO SCALE

**TREE TRIMMING AND REMOVAL  
HAWAII STATE VETERANS CEMETERY  
KANEOHE, HAWAII  
JOB NO.: CA-1704  
ATTACHMENT 1**



TREE TRIMMING AND REMOVAL  
 HAWAII STATE VETERANS CEMETERY  
 KANOEHE, HAWAII  
 JOB NO.: CA-1704  
 ATTACHMENT 2

**SITE PLAN**  
 NOT TO SCALE

**TREE TRIMMING AND REMOVAL, HSVC, KANEHOE, HI**

**JOB NO.: CA-1704**

**TREE INVENTORY**

Group	Tree #	Species	Height (ft) (*)	Targets	Mitigation Measures	Comments (*)
<b>BASE BID - GROUP #1:</b>						
BB-1	64	Albizia	120	vehicles, people, building	F	
BB-1	65	Albizia	120	vehicles, people, building	F	
BB-1	66	Albizia	50	vehicles, people, building	F	
BB-1	67	Albizia	130	vehicles, people, building	F	
BB-1	68	Albizia	130	vehicles, people, building	F	
BB-1	69	Albizia	60	vehicles, people, building	F	
BB-1	70	Albizia	130	vehicles, people, building	F	
BB-1	71	Albizia	130	vehicles, people, building	F	
BB-1	72	Albizia	70	vehicles, people, building	F	
BB-1	73	Albizia	50	vehicles, people, building	F	
BB-1	74	Monkey Pod	40	vehicles, people	CC	4" Diameter Deadwood
BB-1	75	Monkey Pod	40	vehicles, people	CC	4" Diameter Deadwood
BB-1	76	Monkey Pod	40	vehicles, people	CC	4" Diameter Deadwood
BB-1	47	Albizia	95	people, storage area	F	
BB-1	48	Albizia	130	vehicles, people	F	
BB-1	49	Albizia	130	vehicles, people, building	F	
BB-1	51	Albizia	130	vehicles, people, building	F	
BB-1	52	Eucalyptus	100	vehicles, people, building	CR	
BB-1	53	Eucalyptus	125	vehicles, people, building	CR	
BB-1	54	Eucalyptus	125	vehicles, people, building	CR	
<b>BASE BID - GROUP #2:</b>						
BB-2	77	Albizia	100	vehicles, people, grave sites	F	
BB-2	78	Albizia	85	vehicles, people, grave sites	F	Leans toward lawn
BB-2	79	Albizia	100	vehicles, people, grave sites	F	
BB-2	80	Albizia	70	vehicles, people, grave sites	F	Leans toward lawn
BB-2	81	Albizia	100	people on lawn, vehicles	F	
BB-2	82	Albizia	100	people on lawn, vehicles	F	
BB-2	83	Albizia	70	people on lawn, vehicles	F	
BB-2	84	Albizia	60	people on lawn, vehicles	F	
BB-2	85	Albizia	50	people on lawn, vehicles	F	
BB-2	86	Albizia	105	people on lawn, vehicles	F	
BB-2	87	Albizia	105	people on lawn, vehicles	F	
BB-2	88	Albizia	105	people on lawn, vehicles	F	
BB-2	89	Albizia	105	people on lawn, vehicles	F	
BB-2	90	Albizia	120	people on lawn, vehicles	F	
BB-2	91	Albizia	120	people on lawn, vehicles	F	
BB-2	92	Albizia	100	people on lawn	F	
BB-2	93	Albizia	100	people on lawn	F	Leans toward lawn
BB-2	94	Albizia	100	people on lawn	F	
BB-2	95	Albizia	50	people on lawn	F	small tree, lean
BB-2	96	Albizia	115	people on lawn, grave sites	F	
BB-2	97	Albizia	50	people on lawn, grave sites	F	small tree, lean
BB-2	98	Albizia	50	people on lawn	F	small tree, lean
BB-2	99	Albizia	115	people on lawn, grave sites	F	
BB-2	100	Albizia	115	people on lawn, grave sites	F	
BB-2	104	Albizia	75	people on lawn, grave sites	F	
BB-2	105	Albizia	90	people on lawn, grave sites	F	
BB-2	106	Albizia	120	people on lawn, grave sites	F	leans away from graves, behind front trees
BB-2	107	Albizia	120	people on lawn, grave sites	F	90' from graves
BB-2	108	Albizia	120	people on lawn, grave sites	F	leans away from graves, behind front trees
BB-2	109	Albizia	120	people on lawn, grave sites	F	
<b>BASE BID - GROUP #3:</b>						
BB-3	9	Albizia	75	people on lawn	F	
BB-3	29	African Tulip	65	people on lawn	CR	covered in vines, on slope
BB-3	30	African Tulip	65	people on lawn	CR	covered in vines, on slope
BB-3	31	African Tulip	70	grave sites	CR	covered in vines, on slope
BB-3	32	Monkey Pod	60	grave sites	CR	Prune long branches extending over grass/graves
BB-3	33	Monkey Pod	60	grave sites	CR	Prune long branches extending over grass/graves
BB-3	34	Monkey Pod	60	grave sites	CR	Prune long branches extending over grass/graves
BB-3	35	Monkey Pod	60	grave sites	CR	Prune long branches extending over grass/graves
BB-3	55	Eucalyptus	125	vehicles, people, building	F	
BB-3	56	Eucalyptus	125	vehicles, people, building	F	
BB-3	57	Eucalyptus	125	vehicles, people, building	CR	
BB-3	58	Eucalyptus	125	vehicles, people, building	F	

**TREE TRIMMING AND REMOVAL, HSVC, KANEHOE, HI**

**JOB NO.: CA-1704**

**TREE INVENTORY**

<u>Group</u>	<u>Tree #</u>	<u>Species</u>	<u>Height (ft)</u> <u>(*)</u>	<u>Targets</u>	<u>Mitigation</u> <u>Measures</u>	<u>Comments (*)</u>
BB-3	59	Eucalyptus	125	vehicles, people, building	CR	
BB-3	60	African Tulip	65	vehicles, people, building	F	
BB-3	61	Albizia	100	vehicles, people, building	F	
BB-3	62	Java Plum	35	vehicles, people, building	CR	
BB-3	63	Octopus	45	vehicles, people, building	F	
<b>ADDITIVE ALTERNATE GROUP #1:</b>						
AA-1	20	Albizia	75	people on lawn	F	
AA-1	21	Albizia	75	people on lawn	F	
AA-1	22	Albizia	70	people on lawn	F	
AA-1	23	Albizia	70	people on lawn	F	
AA-1	24	Albizia	70	people on lawn	F	
AA-1	25	Albizia	70	people on lawn	F	
AA-1	26	Albizia	85	people on lawn	F	
<b>ADDITIVE ALTERNATE GROUP #2:</b>						
AA-2	42	Eucalyptus	70	vehicles, people	CR	
AA-2	43	Eucalyptus	70	vehicles, people	CR	
AA-2	44	Eucalyptus	70	vehicles, people	CR	
AA-2	45	Eucalyptus	95	vehicles, people	CR	
AA-2	46	Eucalyptus	120	people, storage area	CR	
AA-2	50	Albizia	130	vehicles, people, building	F	
<b>ADDITIVE ALTERNATE GROUP #3:</b>						
AA-3	27	African Tulip	50	people on lawn	F	
AA-3	28	African Tulip	45	people on lawn	F	
AA-3	36	African Tulip	55	drainage	F	
AA-3	37	African Tulip	55	people on lawn	F	
AA-3	38	African Tulip	55	people on lawn	F	
AA-3	39	African Tulip	55	people on lawn	F	
AA-3	40	Albizia	130	drainage	F	
AA-3	41	African Tulip	55	drainage	CR	
<b>Legend:</b>						
CR-Crown Reduction						
CC-Crown Cleaning						
F- Fell						
(*) Dimensions noted are approximate						





November 1, 2016

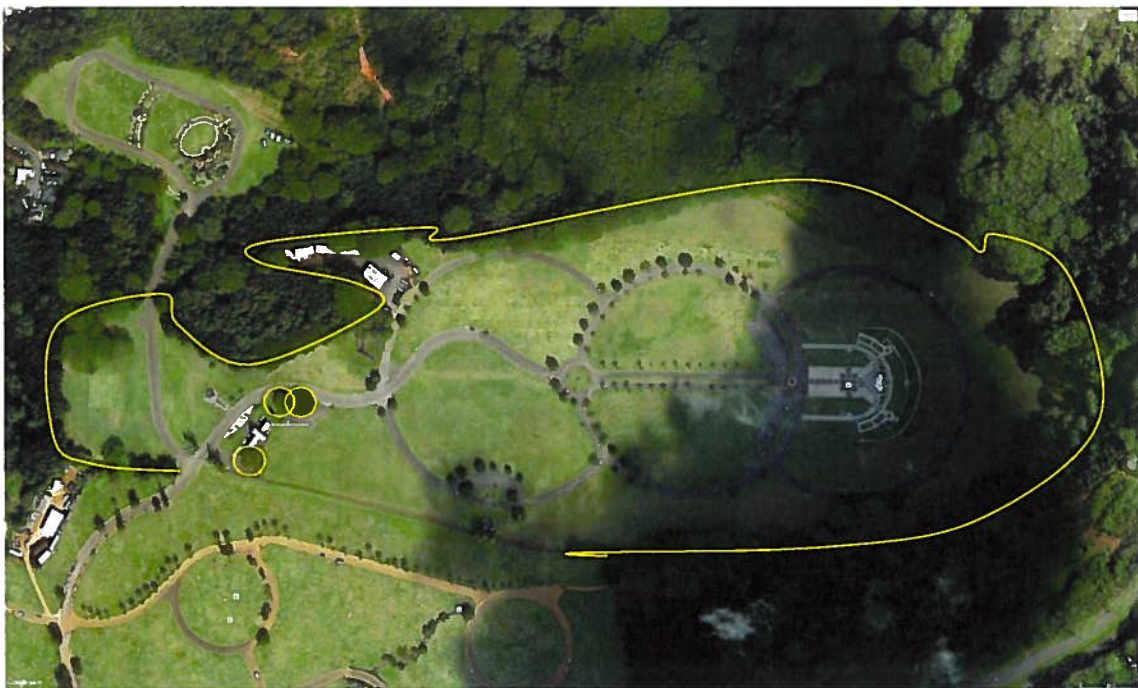
Report of: Kevin K. Eckert  
ISA Board Certified Master Arborist WE-1785BU

Project: Tree Risk Assessment and Risk Reduction Recommendations  
Job No. CA-1601

Project Site: Hawaii State Veterans Cemetery  
45-349 Kamehameha Highway Kaneohe

### 1.0 Introduction

Arbor Global (AG), a Hawaii-based arboricultural consulting company, has been retained by the State of Hawaii, Department of Defense, Office of Veterans Services (OVS), to provide tree inventory and risk assessment services for designated areas around the perimeter of the Cemetery property, the Administration building, and the water tank site in the southeast corner of the property, where large trees may threaten public safety and/or property. AG also provided an assessment and recommendations to manage encroaching woody vegetation around the perimeter of the Cemetery property. This inventory and risk assessment is limited to trees that are most likely to present a hazard to people within the maintained landscape, grave sites, vehicles on roadways and structures within the Cemetery property.



Tree Inventory and Assessment Area  
(Yellow line defines perimeter assessed)

Field inspections were conducted on May 18 and June 26, 2016 by Kevin K. Eckert, International Society of Arboriculture (ISA) Board Certified Master Arborist WE-1785BU, and Walter Warriner, ISA Certified Arborist WE-407AM.

This report provides AG's general findings, conclusions and recommendations for risk reduction and brush management according to conditions at the time of inspection.

## 2.1 Definitions

- **Crown Cleaning:** Removal of dead, dying, diseased, broken, hanging, damaged and defective branches in the tree's crown. Also includes removal of invasive plants or vines.
- **Crown Raising:** Removal of lowest branches, side branches or parts of branches to lift or shorten the ends of the lower portion of the tree crown and avoid or clear obstacles.
- **Crown Reduction:** Removal of the outer portions of the branches and/or the top of the subject tree to shorten tree height and branch length and end weight. Pruning cuts must be made back to the parent stem or a lateral branch that is at least 1/3 the diameter of the parent branch.
- **Deadwood:** Branch or part of a tree that is dead.
- **Dieback:** Condition in which a tree begins to die from the tip of its branches backward due to disease, pests, damage or other conditions.
- **Directional Pruning:** Removal of branches and tree tops in a manner that will retain growing points that will result in tree growth in a desired direction. Pruning cuts must be made back to the parent stem or a lateral branch that is at least 1/3 the diameter of the parent branch.
- **Phloem:** Innermost layer of the bark portion of a tree where transport of soluble organic material made during photosynthesis is conducted.
- **Root Collar:** Area where roots join the main stem or trunk. This area is where the trunk flares out and enters the soil then transitions into the major roots. The root collar is part of the tree's trunk.
- **Stand:** Aggregation of trees or other growth occupying a specific area and sufficiently uniform in species composition, size, age, arrangement, and condition as to be distinguished from the forest or other growth on adjoining areas.
- **Windthrow:** Refers to trees uprooted or broken by wind. Also called "blowdown".
- **Xylem:** Woody part of the tree trunk.

## 3.1 Assessment Procedure

### 3.2 Tree Inventory and Mapping

AG conducted a visual inventory and mapping of the location of large trees that are most likely to fall onto the maintained, turfgrass covered grounds along the Cemetery perimeter or Maintenance Area. AG also inspected three large monkeypod trees located near to the Administration Building. Each tree was

assigned a unique numerical identifier that was manually placed on a Google Earth map as close as could be reasonably accomplished to each tree's field location by using visual references. This numerical identifier serves as a reference to data recorded for each tree on the attached Appendix 1 - Tree Location and Management Recommendations Map – June 2016.

Inventory data was recorded within an Excel spreadsheet and included tree species, tree height, targets (people, gravesites, vehicles on roadways, and/or structures), recommendations for management, management time frame and descriptive comments as AG determined appropriate.

### **3.3 Tree Risk Assessment**

Tree risk assessment was conducted in conformance with the standards and practices described within the “American National Standard Institute (ANSI) A300 (Part 9) Tree Risk Assessment; a. Tree Structure Assessment - Standard Practices”, Level 1, ground-based Limited Visual Assessment (LVA). A LVA includes a ground-based, visual inspection from one side of the subject tree as the assessor walked by the tree on the accessible portions of the property. During the inspection and assessment, obvious signs of defects and conditions that could be observed and assessed from the side of the tree inspected included:

- Tree species;
- Tree height visually estimated and periodically verified on selected trees with a TruPulse hypsometer. Crown spread was visually observed where it overhung targets to help define likely fall zone of tree parts;
- Tree health and vigor as observed through visible indicators of foliage and growth condition;
- Root, root collar, trunk and crown defects that were readily visible on the date of the inspection and that were determined to provide clear signs or symptoms of conditions that would significantly increase likelihood of tree or tree part failure. These defects included, but may not be limited to structural defect assumptions based on experience with that species' failure characteristics (e.g. albizia), large, external cavities, included bark, large cracks or splits and significantly over-extended branches; and
- Obvious visual signs of recent site disturbance that may have damaged roots and compromised the tree's structural stability.

Photographs were recorded of selected groups of subject trees assessed.

### **3.4 Risk Reduction Recommendations**

As applicable, for trees that possessed signs or symptoms of defects that may pose an unreasonable risk of failure and high likelihood of striking a target during the defined time frame of 12 months, AG has recommended practical, cost-effective risk reduction measures. AG has provided recommendations for work that should be conducted within the next 24 months. Risk reduction measures that were considered included:

- Relocation of movable targets to outside the fall zone;

- Restriction of access to the fall zone of the tree;
- Crown cleaning and/or crown reduction pruning;
- Installation of tree or branch support systems; or
- Tree removal.

AG prioritized risk reduction work according to the magnitude of the defect and an estimate of the earliest time frame of its most likely risk of failure and impact to an identified target during normal weather conditions.

Estimated costs for proposed mitigation measures were calculated through AG's experience and interviews with tree management contractors familiar with this site, and removal and pruning of these types of trees.

Recommendations for measures that can prevent regrowth of the subject trees and young seedlings that may attempt to repopulate the open site have been developed based on AG's extensive experience with vegetation management of undesirable vegetation throughout Hawaii, Mainland US, a number of Pacific Rim Islands and Asia.

### **3.5 Woody Vegetation Assessment and Management**

AG conducted a ground-based, visual inspection and assessment of the perimeter of the landscaped Cemetery grounds to identify the primary woody plant species community and condition (density, general heights, and site). Based on the information collected and according to AG's extensive experience with vegetation management of undesirable vegetation, AG developed a recommended management plan to remove and most cost-effectively manage woody vegetation that is currently encroaching upon the landscaped turf within the designated inspection areas.

### **3.6 Assessment Limitations and Further Information**

This report, its findings and recommendations are submitted with the following understanding:

- Arborists are specialists in tree management and care who use their education, knowledge, training and experience to inspect and assess tree health and condition, and identify measures that reduce risk of personal injury or property damage from trees exhibiting defects.
- This assessment is based upon the information provided by the Client, and AG's education, knowledge, training, experience and diligent field investigation. Arborists cannot detect every condition that could possibly lead to the structural failure or decline in the health of a tree. Trees are living organisms that fail in ways we do not fully understand and cannot always predict. Conditions are often hidden within trees and below ground. Arborists cannot guarantee that a tree will be healthy or safe under all circumstances, or for a specified period of time. Likewise, remedial treatments, like any medicine, cannot be guaranteed.
- This assessment is based on predictions of tree behavior during normal weather conditions and the condition of the tree at the time of the field



inspection. Normal weather conditions are defined as wind less than 47mph in speed and rainfall that does not saturate the soil and destabilize the tree root system. Changes to tree or site conditions after completion of the field inspection that are caused by severe weather, construction, tree clearing or removal, insects, disease or other agents may change the structural integrity of a tree or tree part and increase risk. These types of future changes in condition and their impact on the tree cannot be reasonably predicted during a risk assessment.

- This assessment is restricted to the designated trees and did not assess any other nearby trees that may present potential hazards to people or property.
- Recommendations for risk reduction treatments may involve considerations beyond the scope of the arborist's services such as cost, public sensitivity, property management considerations, and other issues. This assessment did not consider these factors, but focused on the structural integrity of this tree and its relative risk to the public at the time of this inspection and during normal weather conditions.
- Trees can be managed, but they cannot be controlled. To live, work and play near trees is to accept some degree of risk. The only way to eliminate risk from trees is to remove trees, but this is not recommended unless required by a Qualified Arborist and based on recognized tree defects and defined thresholds of risk because it also eliminates the multitude of benefits provided by trees.
- Clients may choose to accept or disregard the recommendation of the arborist, or to seek additional advice.

#### **4.1 Findings and Conclusions**

AG's significant findings and risk ratings for each tree inspected are included within Appendix 1, attached. A discussion of general findings and conclusions is provided below.

AG identified and assessed 201 trees or related clusters of trees that appeared to be most likely to directly strike an identified target (people, grave sites, vehicles on roadways and/or structures) should the whole subject tree or a tree part fall onto the Cemetery property (Appendix 1, Tree Location and Management Recommendations Map – June 2016).

#### **4.2 Tree Species**

AG has identified the majority of the large trees around the perimeter of the lawn area to be albizia (*Falcataria moluccana*) with a smaller number of Java plum (*Syzygium cumini*), rainbow eucalyptus (*Eucalyptus deglupta*), monkeypod (*Albizia saman*) and African tulip (*Spathodea campanulata*). Small numbers of kukui (*Aleurites moluccana*), macaranga (*Macaranga tanarius*), octopus (*Schefflera actinophylla*), false kamani (*Terminalia catappa*), Formosa koa (*Acacia confusa*) and fiddlewood (*Citharexylum caudatum*) trees were also identified within these sites.

Albizia is a fast growing, very large tree with trunk diameters exceeding 4 feet and heights that can exceed 200 feet. It is native to the Molucca Islands of Indonesia and has been cultivated in Hawaii since 1917. They possess an upright, wide spreading, open crown with foliage generally concentrated at the top and ends of long branches. Because of its rapid growth habit and tendency to develop over-extended and end-heavy branches, this species possesses a tendency to break apart or uproot during windy periods. Even on calm days, when conditions increase end loads, long branches can break and fall. Because of its invasive nature and failure habits, this tree species has been identified as one of the most problematic invasive trees affecting communities throughout Hawaii.

Java plum can grow over 80 feet tall with trunk diameters over 24 inches. It is a common, non-native and widespread, invasive tree throughout wet low-lands of Hawaii. It is native to southern Asia and has been cultivated in Hawaii since 1871. It possesses a brittle branch structure that readily breaks in strong winds.

Rainbow eucalyptus can grow up to 150 feet in height with trunk diameters up to 8 feet. It is native to the Philippines and was introduced in 1929 at the Wahiawa Botanical Gardens. It is a common species planted in landscapes and in some forest plantations. This species of tree is known to possess a weak structure and susceptible to breaking of tree parts in strong winds. This species also possesses a weak internal barrier defense system which often results in extensive internal decay where large wounds occur. These structurally weak structural characteristics generally increase the likelihood of tree part failure, especially for trees with high wind exposure.

African tulip can grow over 75 feet in height with trunk diameters over 4 feet. It is native to Western and Central Africa. It was introduced as an ornamental tree on Oahu in 1915. It is a common and invasive species throughout the State found naturalized in forests, along roadsides and residential areas. It has also been planted in parks, home landscapes and along road sides. This species of tree is known to possess a weak structure that breaks in storms with a poor defense system that results in decay at wound sites.

Monkeypod trees generally grow up to 75 feet in height with trunk diameters over 4 feet. It is native to Central and South America and was introduced in 1847 in Honolulu and Kauai. It is a common species planted in parks, home landscapes and road sides. This species of tree is known to possess a strong structure with an exceptionally strong defense system that resists decay.

#### **4.3 Tree Size**

Heights of the trees assessed ranged from approximately 35 feet to 150 feet. Major tree species heights were observed as follows:

- Albizia trees primarily ranged from approximately 70 to 150 feet with the average being around 100 feet tall.
- Java plum trees ranged from approximately 35 to 70 feet tall with the average being around 55 feet tall.

- Rainbow eucalyptus trees ranged from approximately 70 to 125 feet tall with the average being around 105 feet tall.
- African tulip trees ranged from approximately 45 to 70 feet tall with the average being around 55 feet tall.
- Monkeypod trees ranged from approximately 40 to 65 feet tall with the average being around 55 feet tall.

#### 4.4 Tree Form and Crown Class

This site is dominated by very large, upright albizia trees. Upright African tulip trees were scattered throughout the site, and a stand of large, single-trunk, rainbow eucalyptus were growing near the Maintenance Shop. All of these large trees, with the exception of the monkeypod trees near to the Administration Building, are located within unmanaged, naturalized areas.

Most of the albizia and rainbow eucalyptus trees were in large stands lining the perimeter of the grounds and growing close together in a codominant or intermediate crown position. These groups of codominant and intermediate trees provide some level of wind screening for each other, reducing their likelihood of windthrow. Some trees were dominant extending above the crown of nearby trees. These dominant trees are more exposed to winds and are more susceptible to failure of the whole tree or tree parts. Some of the trees in the understory possessed significant lean towards the Cemetery lawn as they attempted to grow out into the sun.

Representative photos of the typical condition of the primary subject tree species are as follows:



Albizia



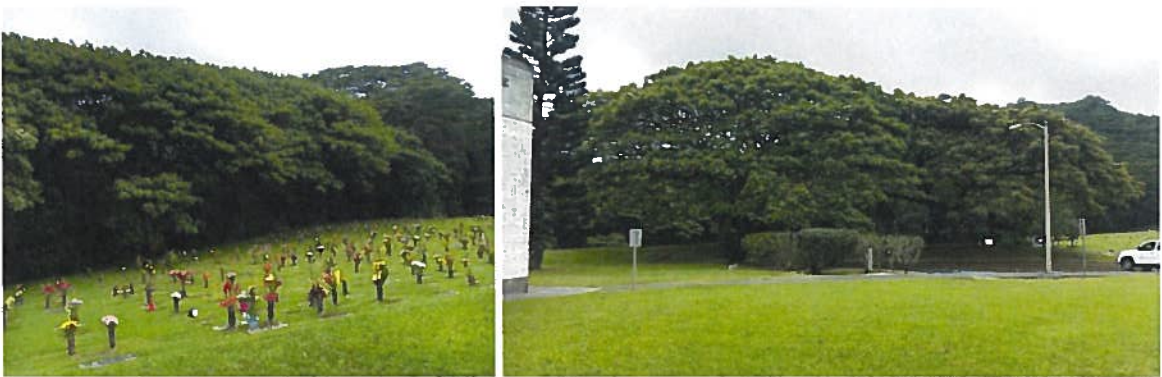
Rainbow Eucalyptus



Java Plum



African Tulip



Monkeypod Trees

#### 4.5 Tree Health

The majority of the trees assessed were observed to be in reasonably good health.

Some of the African tulip trees (28, 29, 30 and 31) were covered in vines and in declining health due to competition from the vines. A few albizia trees in the southeast corner of the property showed signs of significant decline and deadwood. Tree 178 were observed to be dead.

#### 4.6 Defective Root Conditions

Most of these trees did not show symptoms of root defects. Root systems were generally not visible due to restrictive, heavy growth of competitive understory vegetation. Dieback or crown restriction attributed to root defects or disease was not generally observed except as mentioned in the Tree Health section. The root systems of the trees that are growing closely together are expected to be significantly restricted in distribution and size resulting in low structural support for single trees.

Trees grown in dense stands are protected from wind loads by neighboring trees. Wind loads cause trees to produce stronger structural root systems whereas lack of wind loads generally does not find extended and strong structural root systems. Reduction of wind stress restricts the trees' need to produce these strong root systems. When trees fall or are removed, nearby trees that remain are then exposed to increased wind are at increased risk for whole tree or tree part failure.



#### **4.7 Trunk Defects**

No significant trunk defects that would be expected to significantly increase likelihood of failure were observed in most trees at the time of this inspection.

#### **4.8 Scaffold branch/tree crown defects**

No significant dead branches or scaffold branch or tree crown defects were observed on most of the trees at the time of the inspection that would be expected to significantly increase likelihood of failure and striking a target within the designated time frame.

Monkeypod trees 74, 75 and 76 possessed moderate amounts of large deadwood. Formation of deadwood in monkeypod trees is a natural progression and should be managed on a cycle based on the formation of this deadwood, usually approximately every 24 months.

Albizia trees are recognized to possess a natural, structural defect whereby they may shed large branches at unexpected intervals or fall over in whole during strong winds. This structural defect is caused by their exceptionally tall growth habit with long branches and foliage typically loaded at the end of these branches. This conditions produces an exceptional lever arm load that can exceed the carrying capacity of this relatively weak structured wood and sometimes inadequate structural root systems.

Rainbow eucalyptus trees are recognized to possess generally weaker structural integrity and branches may fail in strong winds. The rainbow eucalyptus near to the Maintenance Shop generally are protected from strong winds by nearby large trees and therefore their likelihood of failure is reduced.

#### **4.9 Adverse site conditions**

The sites in which most of these trees are growing are naturalized, unmaintained areas that have been left to regenerate vegetation. The result has been the establishment of the current, undesirable, invasive tree and brush species population. No native tree species were observed at the time of this general inspection. The only generally desirable, landscape tree species that were observed within the subject sites are kukui and monkeypod.

The majority of the subject trees encircle the perimeter of the Cemetery and Maintenance Shop and are generally protected from strong winds by adjacent trees. However, the close spacing of many of these trees generally restricts development of a structural root system that would support the subject tree if it were more exposed to strong winds. This potentially inadequate root system increases risk of failure of the whole tree or newly exposed tree parts and must be considered and mitigated when trees are removed or fall on their own.

The 3 monkeypod trees near to the Administration Building are located in a generally open area within the landscaped site. Two of these trees are near to a parking lot and

the access road while the third tree is sited near a garden and infrastructure equipment. The turfgrass competes for space, nutrients and water and increases health stress on these trees. Further, the soil within this landscaped and maintained area is compacted, which restricts root growth and further stresses these trees. Occupancy of people and vehicles within the fall zone of these trees is expected to be generally low with occupancy of equipment high within the fall zone of the third monkeypod at the rear of the Administration Building.

#### **4.10 Targets**

Primary, valuable targets that were identified and assessed included people at gravesites, the currently developed gravesites themselves, vehicles and people on roadways and parking areas, Maintenance Shop structures, the fence and stone wall at the main entrance of the Cemetery, and the water tank in the wooded area in the southeast corner of the property.

#### **4.11 Risk Rating**

AG calculates the general risk rating for each tree based on observations and measurements of structural defects within the tree and site, the value and frequency of exposure of targets within the fall zone of that tree, and the tree's exposure to environmental factors that could cause failure. The risk rating is not a definitive value, but rather a guide to better understand relative risk based on known factors. It is important to understand that arborists cannot detect every condition that could possibly lead to the structural failure or decline in the health of a tree. Trees are living organisms that fail in ways we sometimes do not fully understand and cannot always predict. Defects are often hidden within trees and below ground. Environmental factors and load stresses cannot be reasonably measured or predicted for each tree. Arborists cannot guarantee that a tree will be safe under all circumstances, or for a specified period of time. The risk rating helps arborists to understand the general risk and develop recommendations for mitigation, and decision-makers to make informed decisions on how best to manage these risks.

#### **4.11 Woody Vegetation Conditions**

Small trees, vines, woody shrubs and tall-growing grass have established along the perimeter of the Cemetery. These invasive plants are encroaching upon the landscaped turfgrass and facilities around almost the entire perimeter that was assessed. Tree species, if unmanaged, will grow large and likely dominate the area, further encroaching upon the landscaped areas and likely requiring management in the future. Removal and management of tree species before they get large is considered to be much more cost-effective than deferring action until required.

Five (5) distinct woody vegetation (brush) areas were identified around the perimeter of the Cemetery property that was assessed as follows:

- Brush 1: Located behind the Flag Plaza, this area includes trees up to approximately 55 feet in height. Most common tree species within this area are Java plum, fiddlewood and Formosa koa. Guinea grass (*Megathyrsus*

*maximus*) was also observed within this site. Trees and vegetation on this site are growing on a slope that declines steeply from the lawn area. This restricts safe access to this area.

- **Brush 2:** Located next to the Maintenance Shop on the north side of the Duty Circle Road, this area includes octopus, fiddlewood and Java plum trees up to approximately 30 feet in height. These trees and vegetation are growing behind the fence at the Maintenance Shop and along the edge of the lawn area.
- **Brush 3:** Located on the northeast side of the property near to the Honor Circle and Country Circle areas, this area primarily includes small albizia trees and Guinea grass. These trees and vegetation are growing within what appears to be a previously cleared and generally level site along the edge of the lawn area.
- **Brush 4:** Located on the southeast side of the property off the end of the Country Circle area, this area primarily includes small albizia, fiddlewood, Java plum and Formosa koa trees that generally range from approximately 10 to 30 feet tall. These trees and vegetation are growing within a generally level site along the edge of the lawn area.
- **Brush General:** The remainder of the perimeter area not specifically identified above and in the understory of the large trees assessed is generally covered with small to medium trees and woody vegetation. Species include albizia, octopus, Java plum, fiddlewood, African tulip and haole-koa. Topography of these areas varies from steep slopes to generally level.

#### **4.12 Water Tank Trees**

A water tank is located in the southeast corner of the property accessed by a paved road near to the Country Circle area.

Twenty-eight (28) albizia trees were identified surrounding the tank and as presenting potential risks to the access road in this area. The dense growth of this area prevents meaningful mapping of individual trees.

These trees ranged in height from 90 to 130 feet tall. The water tank is in a depressed topographical area surrounded by higher terrain with the subject trees growing on the slopes. Most of these trees leaned downhill toward the water tank or possessed asymmetrical crowns that caused them to favor a fall toward the water tank.

A large number of broken branches were observed on the ground around the water tank that had fallen from these trees. No significant damage to the water tank was observed.

The density of the trees around the water tank reduces wind loads on individual trees and reduces the likelihood of whole tree or tree part failure. However, the

observations of previous branch failure indicate that branches are falling. It is probable that branches will fall in the next 12 to 24 months and possible that a whole tree may fail in this time frame.

The likelihood of failure of large branches or whole trees, and impact and significant damage to the water tank is considered to be low during the next 12 months.

## **5.1 Recommendations**

Mitigation measures recommended to reasonably reduce the risk of tree or tree part failure and/or striking a recognized target within a 24 month time frame is provided for each assessed tree within Appendix 2, Tree Inventory and Mitigation Recommendations, July 2016.

Mitigation recommendations assume that conditions will not change within the next 24 months from the date of the field inspection. A new inspection and assessment should be conducted if tree or site conditions change within the next 24 months as described within section 2.5 Assessment Limitations and Further Information.

## **5.2 Albizia Trees**

Albizia trees are recommended to be felled (F) whenever practical or crown reduced/pruned (CR) if felling is not practical. This invasive species should be removed or managed whenever practical when it is in a location where it is capable of striking and significantly injuring persons or damaging property because of its common failure characteristics, exceptionally large size, exceptionally fast growth rate, and location on sites with relatively challenging access for management. However, felling and disposal of the great amount of debris generated from large trees can be prohibitively expensive in some instances. In these instances, other, less expensive alternatives may be applied. These alternatives may only reduce risk in the short-term, but they may permit better cost distribution within limited budgets.

Stumps and roots may be left in the ground, but freshly cut stumps should be treated with an herbicide solution to control and minimize resprouting. Herbicide treatment should be applied as a solution of 20% triclopyr herbicide in 80% mineral oil. Stumps should be treated immediately after cutting is conducted. Only the outer area of the stump, where the phloem is located, requires treatment. Applications should be made around the entire outer circumference of the stump to saturate the outer sapwood permitting the herbicide solution to saturate the upper portion of the bark of the remaining stump. Treatment of the xylem, which is the woody inner portion of the stump, is not effective and wastes herbicide. Resprouting of stumps or new seedlings should be controlled on a regular cycle, at least once per year, using selective herbicide applications applied to the foliage and young woody growth of the undesirable species. This will effectively control new and resprout growth of the target plants and permit establishment of a dense community of desirable vegetation that will inhibit the establishment of undesirable plants and significantly reduce maintenance time and costs.



Felling of the subject albizia trees will significantly modify the appearance of the area surrounding the Cemetery. These trees currently provide a sheltered, forested setting for Cemetery visitors. Although the perimeter will still be composed of vegetation, the vegetation will be much shorter in stature.

It is further recommended that desirable tree species, favoring native trees, be considered for planting around the perimeter to replace the undesirable trees that are removed and provide an environment that is comparable, but of higher natural value.

Crown reduction pruning that correctly removes approximately 20% to 25% of the top and/or ends of target branches will reduce the structural load on the whole tree or target branch and reduce the likelihood of tree or tree part failure. Where practical, shortening tree tops or long branches may also result in a reduced tree height and/or branch length such that a tree part is less likely to strike the subject target. However, additional pruning must be conducted in the future to manage continuing tree growth.

**5.2.1 Alternate Albizia Mitigation Recommendations:** Alternative mitigation can effectively reduce risk to targets at a reduced, short-term cost. However, these alternatives include disadvantages that must be considered when determining how best to mitigate potential risks. Alternate mitigation recommendations for the subject albizia trees are as follows:

**5.2.1.1 Fall Modification Pruning:** Certain tall trees that should be removed that possess broad crowns and/or overextended branches may sometimes be initially pruned to redirect the tree or branch fall away from targets. This technique serves to adequately reduce risk and costs in the short-term, delaying the ultimate removal of the subject tree. The primary disadvantage to this technique is that the subject tree continues to grow and may require further pruning or removal in the future.

**5.2.1.2 Fall Modification Pruning/Herbicide Treatments:** In conjunction with fall modification pruning as described above, after subject trees are pruned, they are then treated with herbicide to kill the subject tree. Over time, after it dies, the subject tree will naturally fall apart into areas below the tree that are at low risk to strike a recognized target. This method may be the most cost-effective to remove large trees as the tree will not resprout and disposal challenges and costs are usually significantly reduced if debris can be left where it falls. The primary disadvantage to this technique is that the dead subject tree continues to stand for an extended time and is very visible to those who visit the Cemetery. People may object to the aesthetics of dead trees near to the site. Further, as the tree deteriorates and fall apart, it may reach a condition where its fall direction may change and it could fall into an area where targets may be located. Additional work may be required to reduce that risk.

### **5.3 Crown Reduction Pruning**

Crown reduction pruning, where recommended, requires that subject trees be pruned to reduce the ends of branches and the tops of the trees approximately 20% to 25% unless otherwise specified. Pruning cuts must be made in conformation to the most recent version of the ANSI A300 Pruning Standard. This reduction in the height of trees and/or ends of long branches should clear obstacles and obstructions, and has been demonstrated to significantly reduce the risk of whole tree or tree part failure. The primary advantage is that desirable subject trees that may be too tall, wide or otherwise in conflict with infrastructure or site safety are retained and can provide amenity values to the site. The primary disadvantage of this technique is that the subject tree continues to grow and will likely require further pruning in the future.

### **5.4 Monkeypod Trees Near Administration Building**

The 3 monkeypod trees, (Trees 74, 75 and 76), near to the Administration Building should be crown cleaned and crown raised. Crown raising should be conducted to lift lower branches such that they do not interfere with vehicles or pedestrians for an approximate 5 year pruning cycle. Pruning cuts must be made in conformation to the most recent version of the ANSI A300 Pruning Standard.

### **5.5 Woody Vegetation Management**

It is recommended that all small woody vegetation (brush) around the perimeter of the Cemetery be cut and controlled by the application of an herbicide solution.

Tree species that are greater than 4 inches in diameter are likely best removed by cutting with a chainsaw. Smaller woody plants can be cut with a chainsaw, brush saw or woody brush mowing machine. Given the terrain and conditions observed on the site, an articulating boom, side mounted mower is likely the most cost-effective tool for this project.

The freshly cut stumps of all woody vegetation that is cut should be treated with a solution of 20% triclopyr herbicide in a solution of 80% mineral oil. Stumps should be treated immediately after cutting is conducted. Resprouting of stumps or new seedlings should be controlled on a regular cycle, at least once per year, using selective herbicide applications applied to the foliage and young woody growth of the undesirable species. This will effectively control new and resprout growth of the target plants and permit establishment of a dense community of desirable vegetation that will inhibit the establishment of undesirable plants and significantly reduce maintenance time and costs.

## 5.6 Water Tank Trees

No mitigation work is recommended for the trees surrounding the water tank within the next 12 months. It is recommended that this area be re-inspected and assessed in 12 months.

When management of this area is conducted, it is recommended that all trees capable of striking the water tank be removed at one time. Removal of only a limited number of trees that can strike the water tank will expose remaining trees to winds and significantly increase the likelihood of failure of those remaining trees.

Please contact Kevin K. Eckert at [keckert@arborglobal.com](mailto:keckert@arborglobal.com) with any questions regarding this inspection, assessment or report.

Tree Inventory and Mitigation Recommendations, July 2016

Tree #	Species	HT	Targets	Mit. Rec.	Mit. Time (mon.)	Comments
1	Java Plum	55	wall/fence, vehicles, people on lawn	CR	24	off property, consider remove and replace in long term
2	Java Plum	55	wall/fence, people on lawn	CR	24	off property
3	Java Plum	55	people on lawn	CR	24	consider remove and replace in long term
4	Java Plum	55	people on lawn	CR/F	24+	consider remove and replace in long term
5	Java Plum	65	people on lawn	CR/F	24+	off property, consider remove and replace in long term
6	Java Plum	65	people on lawn	CR/F	24+	off property, consider remove and replace in long term
7	Java Plum	65	people on lawn	CR/F	24+	off property, consider remove and replace in long term
8	Af.Tulip	60	people on lawn	CR/F	24+	consider remove and replace in long term
9	Albizia	75	people on lawn	F/CR	12	consider remove and replace in long term
10	Java Plum	55	people on lawn	F	24+	
11	Java Plum	70	people on lawn	F	24+	
12	Java Plum	65	people on lawn	F	24+	
13	Mango	50	people on lawn	CR	24+	
14	Java Plum	45	people on lawn	F	24+	
15	Java Plum	45	people on lawn	F	24+	off property
16	Java Plum	55	people on lawn	F	24+	off property
17	Java Plum	50	people on lawn	F	24+	off property
18	Java Plum	65	people on lawn	F	24+	off property
19	Java Plum	60	people on lawn	F	24+	off property
20	Albizia	75	people on lawn	F	24	Felling may be deferred if development within fall zone deferred
21	Albizia	75	people on lawn	F	24	Felling may be deferred if development within fall zone deferred
22	Albizia	70	people on lawn	F	24	Felling may be deferred if development within fall zone deferred
23	Albizia	70	people on lawn	F	24	Felling may be deferred if development within fall zone deferred
24	Albizia	70	people on lawn	F	24	Felling may be deferred if development within fall zone deferred
25	Albizia	70	people on lawn	F	24	Felling may be deferred if development within fall zone deferred
26	Albizia	85	people on lawn	F	24	Felling may be deferred if development within fall zone deferred
27	Af.Tulip	50	people on lawn	F	24+	covered in vines, on slope
28	Af.Tulip	45	people on lawn	F	24+	covered in vines, on slope
29	Af.Tulip	65	people on lawn	CR	12	covered in vines, on slope
30	Af.Tulip	65	people on lawn	CR	12	covered in vines, on slope
31	Af.Tulip	70	grave sites	CR	12	covered in vines, on slope
32	M.Pod	60	grave sites	CR	12	Prune long branches extending over grass and graves
33	M.Pod	60	grave sites	CR	12	Prune long branches extending over grass and graves
34	M.Pod	60	grave sites	CR	12	Prune long branches extending over grass and graves
35	M.Pod	60	grave sites	CR	12	Prune long branches extending over grass and graves

Tree Inventory and Mitigation Recommendations, July 2016

Tree #	Species	HT	Targets	Mit. Rec.	Mit. Time	Comments
36	Af.Tulip	55	drainage	F/CR	24+	
37	Af.Tulip	55	people on lawn	F/CR	24+	
38	Af.Tulip	55	people on lawn	F/CR	24+	
39	Af.Tulip	55	people on lawn	F/CR	24+	
40	Albizia	130	drainage	F	24+	
41	Af.Tulip	55	drainage	CR/F	24+	
42	Eucalyptus	70	vehicles, people	CR	24	
43	Eucalyptus	70	vehicles, people	CR	24	
44	Eucalyptus	70	vehicles, people	CR	24	
45	Eucalyptus	95	vehicles, people	CR	24	
46	Eucalyptus	120	people, storage area	CR	24	
47	Albizia	95	people, storage area	F/CR	12	
48	Albizia	130	vehicles, people	F/CR	6	
49	Albizia	130	vehicles, people, building	F/CR	6	
50	Albizia	130	vehicles, people, building	F/CR	24	
51	Albizia	130	vehicles, people, building	F/CR	6	
52	Eucalyptus	100	vehicles, people, building	CR/F	12	
53	Eucalyptus	125	vehicles, people, building	CR/F	12	
54	Eucalyptus	125	vehicles, people, building	CR	12	
55	Eucalyptus	125	vehicles, people, building	F	24	
56	Eucalyptus	125	vehicles, people, building	F	24	
57	Eucalyptus	125	vehicles, people, building	CR	12	
58	Eucalyptus	125	vehicles, people, building	F	24	
59	Eucalyptus	125	vehicles, people, building	CR	12	
60	Af.Tulip	65	vehicles, people, building	F	24	
61	Albizia	100	vehicles, people, building	F/CR	24	
62	Java Plum	35	vehicles, people, building	CR/F	24	
63	Octopus	45	vehicles, people, building	F/CR	24	
64	Albizia	120	vehicles, people, building	F/CR	3	
65	Albizia	120	vehicles, people, building	TBD	3	review after work on 64 and 66 complete
66	Albizia	50	vehicles, people, building	F/CR	3	
67	Albizia	130	vehicles, people, building	F/CR	3	
68	Albizia	130	vehicles, people, building	F/CR	3	
69	Albizia	60	vehicles, people, building	F/CR	3	
70	Albizia	130	vehicles, people, building	TBD	3	review after work on 68 and 69 complete

Tree Inventory and Mitigation Recommendations, July 2016

Tree #	Species	HT	Targets	Mit. Rec.	Mit. Time	Comments
71	Albizia	130	vehicles, people, building	F/CR	3	
72	Albizia	70	vehicles, people, building	TBD	3	review after work on 68 and 71 complete
73	Albizia	50	vehicles, people, building	TBD	3	review after work on 68 and 71 complete
74	M.Pod	40	vehicles, people	CC	3	4" Diameter Deadwood
75	M.Pod	40	vehicles, people	CC	3	4" Diameter Deadwood
76	M.Pod	40	vehicles, people	CC	3	4" Diameter Deadwood
77	Albia	100	vehicles, people, grave sites	F/CR	12	
78	Albia	85	vehicles, people, grave sites	F	12	Leans toward lawn
79	Albia	100	vehicles, people, grave sites	F/CR	12	
80	Albia	70	vehicles, people, grave sites	F	12	Leans toward lawn
81	Albia	100	people on lawn, vehicles	F/CR	12	
82	Albia	100	people on lawn, vehicles	F/CR	12	
83	Albia	70	people on lawn, vehicles	F/CR	12	
84	Albia	60	people on lawn, vehicles	F/CR	12	
85	Albia	50	people on lawn, vehicles	F/CR	12	
86	Albia	105	people on lawn, vehicles	F/CR	12	
87	Albia	105	people on lawn, vehicles	F/CR	12	
88	Albia	105	people on lawn, vehicles	F/CR	12	
89	Albia	105	people on lawn, vehicles	F/CR	12	
90	Albia	120	people on lawn, vehicles	F/CR	12	
91	Albia	120	people on lawn, vehicles	F/CR	12	
92	Albia	100	people on lawn	F/CR	24	
93	Albia	100	people on lawn	F/CR	24	Leans toward lawn
94	Albia	100	people on lawn	F/CR	24	
95	Albia	50	people on lawn	F/CR	24	small tree, lean
96	Albia	115	people on lawn, grave sites	F/CR	12	
97	Albia	50	people on lawn, grave sites	F/CR	12	small tree, lean
98	Albia	50	people on lawn	F/CR	12	small tree, lean
99	Albia	115	people on lawn, grave sites	F/CR	12	
100	Albia	115	people on lawn, grave sites	F/CR	12	
104	Albia	75	people on lawn, grave sites	F/CR	12	
105	Albia	90	people on lawn, grave sites	F/CR	12	
106	Albia	120	people on lawn, grave sites	TBD	12	leans away from graves, behind front trees, review after work on
107	Albia	120	people on lawn, grave sites	F/CR	12	90' from graves
108	Albia	120	people on lawn, grave sites	TBD	12	leans away from graves, behind front trees, review after work on

Tree Inventory and Mitigation Recommendations, July 2016

Tree #	Species	HT	Targets	Mit. Rec.	Mit. Time	Comments
109	Albzia	120	people on lawn, grave sites	F/CR	12	
110	Albzia	80	people on lawn	F/CR	24+	
111	Albzia	100	people on lawn	F/CR	24+	
112	Albzia	100	people on lawn, grave sites	F/CR	24+	
113	Albzia	100	people on lawn	F/CR	24+	lean
114	Albzia	50	people on lawn	F/CR	24+	small tree
115	Albzia	140	people on lawn	F/CR	24+	
116	Albzia	50	people on lawn	F/CR	24+	small tree
117	Albzia	150	people on lawn	F/CR	24+	
118	Albzia	150	people on lawn	F/CR	24+	
119	Albzia	150	people on lawn	F/CR	24+	
120	Albzia	150	people on lawn	F/CR	24+	
121	Albzia	150	people on lawn	F/CR	24+	
122	Albzia	140	people on lawn	F/CR	24+	
123	Albzia	140	people on lawn	F/CR	24+	
124	Albzia	140	people on lawn	F/CR	24+	
125	Albzia	100	people on lawn	F/CR	24+	understory tree
126	Albzia	100	people on lawn	F/CR	24+	understory tree
127	Albzia	100	people on lawn	F/CR	24+	understory tree
128	Albzia	100	people on lawn	F/CR	24+	understory tree
129	Albzia	100	people on lawn	F/CR	24+	
130	Albzia	100	people on lawn	F/CR	24+	
131	Albzia	55	people on lawn	F/CR	24+	
132	Albzia	100	people on lawn	F/CR	24+	
133	Albzia	140	people on lawn	F/CR	24+	
134	Albzia	130	people on lawn	F/CR	24+	
135	Albzia	130	people on lawn	F/CR	24+	
136	Albzia	85	people on lawn	F/CR	24+	leans toward lawn
137	Albzia	160	people on lawn	F/CR	24+	
138	Albzia	160	people on lawn	F/CR	24+	
139	Albzia	120	people on lawn	F/CR	24+	
140	Albzia	120	people on lawn	TBD	24+	leans away from lawn
141	Albzia	100	people on lawn	F/CR	24+	understory tree
142	Albzia	160	people on lawn	F/CR	24+	
143	Albzia	100	people on lawn	F/CR	24+	

Tree Inventory and Mitigation Recommendations, July 2016

Tree #	Species	HT	Targets	Mit. Rec.	Mit. Time	Comments
144	Albizia	130	people on lawn	F/CR	24+	
145	Albizia	140	people on lawn	F/CR	24+	
146	Albizia	150	people on lawn	F/CR	24+	Monstera vine covering most of stem
147	Albizia	150	people on lawn	F/CR	24+	Monstera vine covering most of stem
148	Albizia	150	people on lawn	F/CR	24+	
149	Albizia	150	people on lawn	F/CR	24+	
150	Albizia	120	people on lawn	F/CR	24+	
151	Albizia	100	people on lawn	F/CR	24+	
152	Albizia	110	people on lawn	F/CR	24+	leans toward lawn
153	Albizia	110	people on lawn	F/CR	24+	
154	Albizia	125	people on lawn	F/CR	24+	
155	Albizia	110	people on lawn	F/CR	24+	
156	Albizia	125	people on lawn	F/CR	24+	
157	Albizia	125	people on lawn	F/CR	24+	
158	Albizia	90	people on lawn	F/CR	24+	understory tree
159	Albizia	125	people on lawn	F/CR	24+	
160	Albizia	125	people on lawn	F/CR	24+	
161	Albizia	60	people on lawn	F/CR	24+	understory tree
162	Albizia	120	people on lawn	F/CR	24+	
163	Albizia	120	people on lawn	F/CR	24+	
164	Albizia	145	people on lawn	F/CR	24+	
165	Albizia	65	people on lawn	F/CR	24+	
166	Albizia	110	people on lawn	F/CR	24+	leans toward lawn
167	Albizia	80	people, vehicles on service road	F/CR	24+	leans toward lawn
168	Albizia	80	people, vehicles on service road	F/CR	24+	understory tree at entrance of road to the water tank
169	Albizia	80	people, vehicles on service road	F/CR	24+	understory tree at entrance of road to the water tank
170	Af. Tulip	45	people, vehicles on service road	F/CR	24+	understory tree at entrance of road to the water tank
171	Macaranga	60	people, vehicles on service road	F/CR	24+	understory tree at entrance of road to the water tank
172	Albizia	90	people, vehicles on service road	F/CR	24+	entrance of road to the water tank
173	Af. Tulip	50	people, vehicles on service road	F/CR	24+	understory tree at entrance of road to the water tank
174	M. Pod	65	people, vehicles on service road	CC	24	deadwood
175	Albizia	125	people on lawn	F/CR	24+	
176	Albizia	125	people on lawn	F/CR	24+	
177	Albizia	135	people on lawn	F/CR	24+	3 trees: 2~20" DSH, 1~18" DSH
178	Albizia	120	people on lawn	F/CR	24+	2 dead trees



Tree Inventory and Mitigation Recommendations, July 2016

Tree #	Species	HT	Targets	Mit. Rec.	Mit. Time	Comments
179	Albizia	70	people on lawn	F/CR	24+	5 small trees <8" DSH
180	Albizia	100	people on lawn	F/CR	24+	
181	Albizia	75	people on lawn	F/CR	24+	
182	Albizia	60	people on lawn	F/CR	24+	
183	Albizia	60	people on lawn	F/CR	24+	4 small trees: 8"-10" Dia
184	Albizia	50-75	people on lawn	F/CR	24+	6 small trees: 8"-12" DSH
185	Albizia	40-75	people on lawn	F/CR	24+	6 small trees: 6"-12" DSH
186	Albizia	60-75	people on lawn	F/CR	24+	13 small trees: 4"-10" Dia
187	Albizia	75	people on lawn, vehicles	F/CR	24	
188	Albizia	60	people on lawn, vehicles	F/CR	24	small A/S rear
189	Albizia	75	people on lawn, vehicles	F/CR	24	
190	Albizia	75	people on lawn, vehicles	F/CR	24	3 trees
191	Albizia	75	people on lawn, vehicles	F/CR	24	
192	Albizia	90	people on lawn, vehicles	F/CR	24	
193	Albizia	70	people on lawn	F/CR	24+	lean into brush
194	Albizia	50	people on lawn	F/CR	24+	
195	Albizia	75	people on lawn	F/CR	24+	
196	Albizia	65	people on lawn	F/CR	24+	
197	Albizia	85	people on lawn	F/CR	24+	
198	Albizia	85	people on lawn	F/CR	24+	
199	F.Kamani	50	people on lawn	CR	24+	
200	F.Kamani	50	people on lawn	CR	24+	
201	F.Kamani	50	people on lawn	CR	24+	
202	Kukui	40	people on lawn	F/CR	24+	
203	F.Kamani	40	people on lawn	F/CR	24+	
204	Fiddlewood	20	people on lawn	F/CR	24+	

Legend:

CR-Crown Reduction

CC-Crown Clean

F- Fell

F/CR-Tree needs to be Felled, but if not practical at this time, correct Crown Reduction should adequately reduce risk.

CR/F-Crown Reduction is most practical at this time but, tree should be Felled in future.

TBD-To Be Determined after work on nearby trees is completed.

