STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS
HONOLULU HAWAII

SPECIAL PROVISIONS, SPECIFICATIONS, PROPOSAL AND CONTRACT

FOR

FURNISHING AND DELIVERING MOTOR VEHICLES AND EQUIPMENT

ISLANDS OF

OAHU, HAWAII, MAUI AND KAUAI

PROJECT NO. HWY-CM-23-01

2023

NOTICE TO BIDDERS

(Chapter 103D, HRS)

The receiving of SEALED BIDS for FURNISHING AND DELIVERING MOTOR VEHICLES AND EQUIPMENT FOR ISLANDS OF OAHU, HAWAII, MAUI AND KAUAI, PROJECT NO. HWY-CM-23-01, will begin as advertised on May 15, 2023, in HIePRO. Bidders are to register and submit bids through HIePRO only. See the following HIePRO link for important information on registering: https://hiepro.ehawaii.gov/welcome.html.

Deadline to submit bids is June 2, 2023, at 2:00 p.m., Hawaii Standard Time. Bids received after said due date and time shall not be considered.

The scope of work consists of furnishing and delivering motor vehicles and equipment to the islands of Oahu, Hawaii, Maui, and Kauai for the Department of Transportation, Highways.

ALL requests for information (RFI) shall be received in writing via HIePRO prior to the Question Due Date in General Information of the HIePRO solicitation. Questions received after the deadline will not be addressed. Verbal requests for information will not receive a response.

Any protest of this solicitation shall be submitted in writing to the Director of Transportation, in accordance with §103D-701, HRS and §3-126, HAR.

Campaign contributions by State and County Contractors. Contractors are hereby notified of the applicability of Section 11-355, HRS, which states that campaign contributions are prohibited from specified State or county government contractors during the term of the contract if the contractors are paid with funds appropriated by a legislative body. For more information, contact the Campaign Spending Commission at (808) 586-0285.

The U.S. Department of Transportation Regulation entitled "Nondiscrimination in Federally-Assisted Programs of the U.S. Department of Transportation," Title 49, Code of

Federal Regulations (CFR), Part 21 is applicable to this project. Bidders are hereby notified that the Department of Transportation will affirmatively ensure that the contract entered into pursuant to this advertisement will be awarded to the lowest responsible bidder without discrimination on the grounds of race, color, national origin or sex (as directed by 23 CFR Part 200).

For additional information, contact Manida Taylor, by phone at (808) 587-2180 or email at manida.taylor@hawaii.gov.

The State reserves the right to reject any or all proposals and to waive any defects in said proposals for the best interest of the public.

ROBIN K. SHISHIDO
Highways Deputy Director

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SPECIAL PROVISIONS

SPECIAL PROVISIONS

These specifications contained herein are amended as follows:

A. Section 1 - DEFINITION OF TERMS - is amended by the following:

1. The definition for "1.33 SUBCONTRACTOR" is amended by deleting it and replacing it with the following:

"1.33 SUBCONTRACTOR – An individual, partnership, firm, corporation, or joint venture, or other legal entity, as licensed or required to be licensed under Chapter 444, Hawaii Revised Statutes, as amended, which enters into an agreement with the Contractor to perform a portion of the work."

B. Section 2 - PROPOSAL REQUIREMENTS AND CONDITIONS is amended as follows:

1. 2.3 DELIVERY OF PROPOSALS is amended by replacing the entire subsection with:

"2.3 DELIVERY OF PROPOSALS - The bidder shall submit and upload a copy of the the proposal in HIePRO. Bids received after said due date and time shall not be considered. Original bid documents do not have to be submitted. Award will be made based on proposals submitted in HIePRO."

2. 2.4 WITHDRAWAL OF PROPOSALS is amended by replacing the entire subsection with:

"2.4 WITHDRAWAL OF PROPOSALS - A bidder may withdraw or revise a proposal after the bidder submits the proposal in HIePRO. Withdrawal or revision of proposal must be completed before the time set for the receiving of bids."

3. 2.5 PUBLIC OPENING OF PROPOSALS is not applicable.

4. The following subsections are added to this section:

"2.10 - BIDDER QUALIFICATION

Service Facility – At the time of bidding, bidder shall have an established place of commercial business with a reasonable inventory of replacement parts and commercial shop facility for the repair and servicing of vehicle/trailer/utility tractor/equipment offered. Such facility shall be located on the island where required item will be delivered, as indicated in the Delivery Schedule.

If the bidder does not have such a facility on the designated island, he shall arrange with a company on that island to make available to the State a commercial facility for the repair and service of vehicle/trailer/utility tractor/equipment offered. Bidders shall furnish the name and address of their warranty facility in the space provided in the proposal.

For the Island of Molokai and Lanai the designated service facility on the Island of Maui will be accepted. This service shall be provided at no additional transportation costs to the State within the warranty period.

The State reserves the right to inspect bidder's repair and service shop to determine acceptability under this requirement. Failure on the part of the bidder to meet the requirements of the Service Facility shall result in rejection of bid.

2.11 - BID PREPARATION

Legal Name. Bidder is required to submit bid-using bidder's exact legal name as registered at the Department of Commerce and Consumer Affairs. Failure to do so may delay proper execution of the contract.

State License. Chapter 437, H.R.S., as amended, provides for regulating and licensing of motor vehicle manufacturers and distributors and their branches and representatives, motor vehicle dealers, salesmen, auctions and auctioneers and any other persons engaged in the business of selling or purchasing motor vehicles in the State of Hawaii; therefore, all prospective bidders who are interested in selling motor vehicles to the State of Hawaii shall provide proof that they do meet and satisfy the licensing requirement set forth in said statute by listing the license number in the space provided for in the proposal.

A Motor Vehicle includes any vehicle, motor vehicle, or truck, as defined in Sections 249-1 and 249-2, H.R.S., as amended, except for tractors, trailers and amphibious vehicles.

Bid Quotation. Bid price(s) quoted herein shall be based on delivery to destination and shall include, when applicable, cost for installation, modification, and instructional training in use of equipment.

Make, Model, and Other Information. Bidder shall identify in the proposal the exact brand or manufacturer's name and vehicle/equipment/product model number, order number or other identifier(s) of each item offered. Failure to do so or the inclusion of remarks such as "as specified" shall be sufficient grounds for rejection of bid.

If any of the called-for elements of production information is missing from bidder's proposal, the State will not be able to determine from the information given, whether or not the product is acceptable. If additional space is needed to

provide complete product identification, bidder may attach a separate sheet to the bid for that purpose. Bidders will not be allowed to clarify product identification after bid opening. This is to assure that all bids are submitted under the same conditions with no opportunity for one bidder to have advantage over any other bidder after exposure of offers.

Certification Letter. Upon request through the Detailed Specifications/Proposal Schedule, bidder(s) shall submit with their bid a certified letter(s) from their manufacturer(s) to certify the prospective bidder as the factory authorized warranty dealer (letter required for both chassis and equipment). Failure to submit certified letter(s) shall be sufficient grounds for rejection of bid.

Brochures and Specifications Literature. Bidder shall upload to HIePRO with his/her bid, current brochures and specifications pertaining to bid proposal. Failure to do so shall be sufficient grounds for rejection of bid. All brochures and specifications shall be labeled with bidder's name and corresponding item number on both brochure and specification.

Trade-ins. Trade-in unit(s), if any, will be available for inspection by interested bidders at each respective location. Bidders shall contact agency indicated herein prior to attending an inspection visit.

It shall be the bidder's responsibility to meet with the agency to inspect the trade in units(s) for their general condition prior to bid opening. It shall also be the bidder's responsibility to ascertain which, if any, of the optional accessories and/or equipment, either installed or contained within the trade-in unit, are to be considered part of the trade in. Condition of trade-in unit(s) at the time of delivery may be commensurate with its condition at the time of inspection; however, bidder is advised that trade-in unit(s) will continue to be used until delivery and acceptance of new equipment is completed."

C. SECTION 3.1 - AWARD OF CONTRACT is amended by adding the following:

"The awarding of the contract(s) will be made by individual vehicle/equipment listed in the proposal schedule and be given to the lowest responsible bidder(s) for each vehicle/equipment whose proposal complies with all the requirements prescribed.

The State reserves the right to reject any and all proposals and to waive any defects as may be deemed to be in the best interest of the public.

Within ten (10) days of official commencement date of Notice to Proceed, the Contractor shall submit to the Construction and Maintenance Branch a copy of the order(s) placed with the factory for each item awarded. Within fifteen (15) working days after the factory order is submitted, the Contractor shall also provide a copy of the factory's acknowledgement and confirmation of receiving the order. Requests for extension time

will **NOT** be considered unless both documents are furnished within the time limits specified."

D. SECTION 8.2 - LIQUIDATED DAMAGES is amended by adding the following:

"Delivery extension shall be considered only with written notice prior to delivery deadline. Written notice requesting extension will not be considered without a copy of the factory order, factory confirmation of order and without documents substantiating that the cause(s) for delay is, in fact, beyond the control of the Contractor. The State shall be the sole judge of whether such delay is truly beyond the control of the Contractor and whether an extension will be granted."

E. SECTION 9.1 - PAYMENT is amended by adding the following:

"No payment, whether partial or final shall be construed to be an acceptance of defective work or latent defect."

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SPECIFICATIONS

SECTION 1 - DEFINITION AND TERMS

Whenever the following pronouns are used in these specifications, or in any documents or instruments where these specifications govern, the intent and meaning shall be interpreted as follows:

1.1 ADDENDA - A written document which may be issued by the Director during the bidding period involving changes to the specifications and plans, if any, which shall be considered and made a part of the contract.

1.2 AIRPORTS DIVISION - Airports Division, Department of Transportation, State of Hawaii.

1.3 AWARD - The written acceptance of a proposal by the State.

1.4 BIDDER - Any individual, partnership, corporation or other legal entity, or combination thereof, submitting a proposal for the work contemplated, acting either directly or through a duly authorized representative.

1.5 CALENDAR DAY - Every day shown on the calendar. If no designation of calendar or working day is made, "day" shall mean calendar day.

1.6 CHANGE ORDER - A written order issued by the Director to the Contractor requiring the contract work to be performed in accordance with a change or changes that may involve an adjustment in contract time and price or requiring performance of any unforeseen work essential to complete the contract.

1.7 CONTRACT - The written agreement between the State and the Contractor setting forth the obligations of the parties thereunder, including, but not limited to, the performance of the work, the furnishing of labor and materials, and the basis of payment.

The contract includes the (1) notice to bidders, (2) proposal, (3) contract form and contract bond, (4) specifications, (5) special provisions and plans, if any, (6) addenda, (7) notice to proceed, and (8) change orders and agreements that are required to complete the work, all of which constitute one instrument.

1.8 CONTRACT BOND - The approved form of security, executed by the Contractor and its Surety or Sureties, guaranteeing the completion of the work in accordance with the terms of the contract, and guaranteeing full payment of all claims for labor, materials, and supplies used or incorporated in the work.

1.9 CONTRACT TIME - The number of working days or calendar days allowed for completion of the contract, including authorized time extensions.

If a calendar date is specified as the date of completion in lieu of the number of working days or calendar days, the contract shall be completed by that date.

In case the contract is for a specified period of time, the contract time shall be for said specified period of time.

1.10 CONTRACTOR - The individual, partnership, corporation or other legal entity, or combination thereof, contracting with the State for performance of the prescribed work.

1.11 DEPARTMENT - The State Department of Transportation.

1.12 DIRECTOR - The Director of Transportation, acting either directly or through the Director's duly authorized representative.

1.13 EQUAL OR APPROVED EQUAL - Whenever this term is used in the specifications and plans, if any, it means a brand or article pre-qualified in accordance with Section 6.2 Trade Names and Alternates and which may be used in place of the one specified.

1.14 H.A.R. or HAR - Hawaii Administrative Rules.

1.15 H.R.S. or HRS - Hawaii Revised Statutes.

1.16 HARBORS DIVISION - Harbors Division, Department of Transportation, State of Hawaii.

1.17 HIGHWAYS DIVISION - Highways Division, Department of Transportation, State of Hawaii.

1.18 HOLIDAYS - The days which are set apart and established as State holidays pursuant to Section 8-1, H.R.S.

1.19 INSPECTOR - The Director's authorized representative assigned to make detailed inspections of contract performance and materials supplied.

1.20 NOTICE TO BIDDERS - The public announcement, as required by law, inviting proposals for the work to be performed or materials to be furnished.

1.21 NOTICE OF FINAL ACCEPTANCE - Written notice from the Director to the Contractor that the entire contract has been completed in all respects in accordance with the specifications and plans, if any, and any changes thereof previously approved by the Director.

1.22 NOTICE TO PROCEED - Written notice from the Director to the Contractor advising the Contractor of the date on which he is to begin the prosecution of the work.

1.23 PLANS - The contract drawings approved by the Director which show the location, character, dimensions and details of the work to be done and shall be a part of the contract.

1.24 PROCUREMENT OFFICER - The Director's duly authorized representative including project managers, project engineers and contract administrators assigned to prepare, evaluate and administer contracts for the purchasing of goods and services.

1.25 PROPOSAL (OR BID) - The offer of a bidder, on the prescribed form, to perform the work and to furnish the labor and materials at the prices quoted.

1.26 PROPOSAL FORM - The approved format prepared by the Department or a facsimile thereof on which bids for the work must be prepared and submitted. (Reasonable facsimile acceptable for bidding.)

1.27 PROPOSAL GUARANTY - The security furnished with a proposal to guarantee that the bidder will enter into the contract and furnish all other requirements if the bidder's proposal is accepted.

1.28 QUALIFICATION QUESTIONNAIRE - The specified forms on which the bidder shall furnish required information as to the bidder's ability to perform and finance the work.

1.29 S.L.H. or SLH - Session Laws of Hawaii.

1.30 SPECIAL PROVISIONS - Revisions to the specifications. The specific clauses setting forth conditions or requirements peculiar to the project under consideration which are not thoroughly or satisfactorily stipulated in these specifications.

1.31 SPECIFICATIONS - The directions, provisions, and requirements pertaining to the method and manner of performing the work and to the quantities and qualities of materials to be furnished under the contract.

1.32 STATE - The State of Hawaii.

1.33 SUBCONTRACTOR - An individual, partnership, corporation, other legal entity, or any combination thereof, that enters into an agreement with the Contractor to perform a portion of the work for the Contractor.

1.34 SUPERINTENDENT - The Contractor's representative who is responsible for and in charge of the work.

1.35 SURETY - The corporation, partnership or individual, other than the Contractor, executing a bond furnished by the Contractor and guaranteeing performance by the Contractor.

1.36 TITLES (OR HEADINGS) - The titles or headings of the Sections herein are intended for convenience of reference and shall not be considered as having any bearing on their interpretation. Unless otherwise indicated, whenever the word "Section" is used, reference is being made to a Section in these specifications.

1.37 WORK - The furnishing of all labor, materials, equipment, and other incidentals necessary or convenient for the successful completion of the project and the execution of all the duties and obligations imposed by the contract.

1.38 WORKING DAY - Any day, except Saturdays, Sundays and State holidays.

SECTION 2 - PROPOSAL REQUIREMENTS AND CONDITIONS

2.1 PROPOSAL FORMS - All proposals shall be made on forms furnished by the Department. All proposals shall give the prices proposed in the spaces provided and shall be signed by the bidder, who shall fill out all blanks in the proposal form as therein required.

2.2 REJECTION OF PROPOSALS CONTAINING ALTERATIONS, ERASURES, OR IRREGULARITIES - Proposals may be rejected if they show any alterations of form, additions not called for, conditional bids, incomplete bids, erasures, or irregularities of any kind.

When proposals are signed by any agent, other than the officer or officers of a corporation authorized to sign contract on its behalf or a member of copartnership, a Power of Attorney must be on file with the Department prior to opening bids or shall be submitted with the proposal; otherwise, the proposal may be rejected as irregular and unauthorized.

Members of a joint venture may be requested to supply the Department with a copy of their joint venture agreement or each member of the joint venture may be required to sign the proposal.

2.3 DELIVERY OF PROPOSALS - Each proposal shall be placed, together with the proposal guaranty, when required, in an envelope and sealed and so marked as to indicate the identity of the project, the name and address of the bidder, and other required information and then delivered as indicated in the Notice to Bidders. Proposals will be received up to the time fixed in the Notice to Bidders for the opening of bids.

2.4 WITHDRAWAL OF PROPOSALS - Any proposal may be withdrawn at any time prior to the time fixed in the Notice to Bidders for the opening of proposals upon the filing of a written request therefor with the Department, executed by the bidder or his duly authorized representative. The withdrawal of a proposal shall not preclude a bidder from submitting a new proposal.

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

2.6 DISQUALIFICATION OF BIDDERS - Any of the following reasons may be considered as being sufficient grounds for the disqualification of a bidder and the rejection of his proposal or proposals.

A. More than one proposal for the same work from an individual, firm, or corporation under the same or different name.

B. Evidence of collusion among bidders. Participants in such collusion will receive no recognition as bidders for any future work of the Department until such participant shall have been reinstated as a qualified bidder.

C. Evidence of assistance from a person who has been an employee of the agency within the preceding two years and who participated while in State office or employment in the matter with which the contract is directly concerned, pursuant to Section 84-15, HRS.

D. Lack of proposal guaranty.

E. Unsigned proposal or proposal not signed in ink by person or persons legally authorized to submit a proposal on behalf of the bidder.

2.7 MATERIAL GUARANTY - The bidder may be required to furnish a complete statement of the origin, composition and manufacture of any or all materials to be used in the prosecution of the work, together with samples. Such samples may be subjected to tests to determine their quality and fitness for the work.

2.8 OUT-OF-STATE BIDDERS - Pursuant to Section 103D-1008, Hawaii Revised Statutes, on out-of-state purchases where the bidder or vendor is an out-of-state vendor, not doing business in the State, the bid price of such out-of-state vendor, for the purpose of determining the lowest price bid, shall be increased by the applicable retail rate of general excise tax and the applicable use tax. The lowest responsible bidder, taking into consideration the above increases, shall be awarded the contract, but the contract amount of any contract awarded shall be the amount of the bid offered and shall not include the amount of said increases.

Such increases will not be applied in case an out-of-state vendor specifies in its bid that its bid price includes said general excise tax; the bidder will be required to pay said general excise tax and use tax in case the bidder is awarded the contract.

2.9 TAX REQUIREMENTS - Work to be done under this contract is a taxable transaction and the bidder receiving the award for this work will be required to pay the State of Hawaii General Excise Tax (GET) and the State of Hawaii use Tax.

Additional information regarding the tax rates may be obtained from the Department of Taxation (DOTAX) website at http://tax.hawaii.gov/geninfo/countysurcharge/

If awardee is an out-of-state bidder not holding a Hawaii GET License, the awardee will have to obtain a Hawaii GET License and pay all taxes due to obtain a tax clearance required before final contract payment is made by the State.

To obtain the tax clearance applications, see subsection 3.1.A. Tax Clearance of these Specifications.

Vendors may apply for either a regular or a one-time GET License. Information on applying for a GET License may be found at http://tax.hawaii.gov/geninfo/get/

SECTION 3 - AWARD AND EXECUTION OF CONTRACT

3.1 AWARD OF CONTRACT - The State reserves the right to reject any and all proposals and to waive any defects as may be deemed to be in the best interest of the public.

The award of contract, if it be awarded, will be made within sixty (60) calendar days after the opening of bids to the lowest responsive and responsible bidder whose proposal complies with all the prescribed requirements. The successful bidder will be notified, by letter mailed to the address shown on its proposal, that its proposal has been accepted and it has been awarded the contract.

Requirement for award. To be eligible for award, the apparent low Bidder will be contacted to submit copies of the documents listed below to demonstrate compliance with Section 103D-310(c), HRS. The documents should be submitted to the Department as soon as possible. If a valid certificate/clearance is not submitted on a timely basis for award of a contract, a Bidder otherwise responsive and responsible may not receive the award.

A. Tax Clearance.

Pursuant to §103D-310(c), 103-53 and 103D-328, HRS, the successful bidder shall be required to submit a certified copy of its tax clearance issued by the Hawaii State Department of Taxation (DOTAX) and the Internal Revenue Service (IRS) to demonstrate its compliance with Chapter 237, HRS. A tax clearance is valid for six (6) months from the most recent approval stamp date on the tax clearance and must be valid on the bid's first legal advertisement date or any date thereafter up to the bid opening date.

FORM A6, TAX CLEARANCE CERTIFICATE, is available at the following website:

http://www.hawaii.gov/tax/

To receive DOTAX Forms by fax or mail, phone (808)587-7572 or 1-800-222-7572.

The application for the Tax Clearance Certificate is the responsibility of the bidder, and must be submitted directly to the DOTAX or IRS. The approved certificate may then be submitted to the Department.

B. DLIR Certificate of Compliance.

Pursuant to §103D-310(c), HRS, the successful bidder shall be required to submit a copy (faxed copies are acceptable) of its approved Certificate of Compliance issued by the Hawaii State Department of Labor and Industrial Relations (DLIR) to demonstrate its compliance with unemployment insurance (Chapter 383, HRS), workers' compensation (Chapter 386, HRS), temporary disability insurance (Chapter 392, HRS), and prepaid health care (Chapter 393, HRS). The certificate is valid for six (6) months from the most recent approval stamp date on the certificate and must be valid on the bid's first legal advertisement date or any date thereafter up to the bid opening date. For certificates which receive a "pending" approval stamp, a DLIR approval stamp is required prior to the issuance of the Notice to Proceed.

FORM LIR#27, APPLICATION FOR CERTIFICATE OF COMPLIANCE WITH SECTION 3-122-112, HAR, is available at the following website:

www.hawaii.gov/labor

More information is available by calling the DLIR Unemployment Insurance Division at (808) 586-8926.

Inquiries regarding the status of a LIR#27 Form may be made by calling the DLIR Disability Compensation Division at (808)586-9200.

The application for the Certificate of Compliance is the responsibility of the bidder, and must be submitted directly to the DLIR. The approved certificate may then be submitted to the Department.

C. DCCA Certificate of Good Standing.

Pursuant to §103D-310(c), HRS, the successful bidder shall be required to submit a copy (faxed copies are acceptable) of its approved Certificate of Good Standing issued by the Hawaii State Department of Commerce and Consumer Affairs (DCCA), Business Registration Division (BREG) to demonstrate that it is either:

(1) incorporated or organized under the laws of the State; or
(2) registered to do business in the State as a separate branch or division that is

capable of fully performing under the contract.

A Certificate of Good Standing is valid for six (6) months from the approval date on the certificate and must be valid on the bid's first legal advertisement date or any date thereafter up to the bid opening date. A Hawaii business that is a sole proprietorship, is not required to register with the BREG, and therefore not required to submit a Certificate of Good Standing. Bidders are advised that there are costs associated with registering and obtaining a Certificate of Good Standing from the DCCA.

To purchase a CERTIFICATE OF GOOD STANDING, go to On-Line Services at the following website:

www.hawaii.gov/dcca/

The application for the Certificate of Good Standing is the responsibility of the bidder, and must be submitted directly to the DCCA. The approved certificate may then be submitted to the Department.

3.2 CANCELLATION OF AWARD - The State reserves the right to cancel the award of any contract any time before the execution of said contract by all parties without any liability to the successful bidder or any other bidder.

3.3 EXECUTION OF CONTRACT - The contract shall be executed by the successful bidder and returned, together with the contract bonds, when required, within ten (10) days after the award of the contract or within such further time as the Director may allow after the bidder has received the contract for execution.

Pursuant to Section 103D-309, H.R.S., the contract shall not bind the State in any way unless said contract has been fully and properly executed by all the parties thereto and the Comptroller has endorsed thereon a certificate that there is available an unexpended appropriation over and above all outstanding contracts, sufficient to cover the amount required by the contract.

3.4 FAILURE TO EXECUTE CONTRACT - Failure to execute the contract and file acceptable bonds, when required, within ten (10) days after the award of the contract, or within such further time as the Director may allow, shall be cause for the cancellation of the award and the forfeiture of the proposal guaranty. Award of the contract may then be made to the next lowest responsible bidder.

SECTION 4 - SCOPE OF WORK

4.1 WORK TO BE DONE - The work to be done is described in the Section(s) following Section 9 of these specifications.

4.2 PERFORMANCE OF WORK - The Contractor shall employ, so far as possible, such methods and means in carrying out his work so as not to cause any interruption, disturbance, or interference with the public.

In case the Contractor is performing work in a building, the Contractor shall conduct the work in such a manner so as not to cause any interruption, disturbance, or interference with the business activities of the tenants in the building.

4.3 EXTRA WORK - New and unforeseen items of work will be classed as extra work when they cannot be covered by any of the various items for which there is a bid price.

4.4 CHANGES AND CLAIMS FOR ADJUSTMENT

A. Change order. By a written order, at any time, and without notice to any surety, the procurement officer may, 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 to be furnished are to be specially manufactured for the State in accordance therewith;
2. Method of shipment or packing;
3. Place of delivery;
4. Changes in the work within the scope of the contract; or
5. Changes in the time of performance of the contract that do not alter the scope of work.

B. 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 contract price made pursuant to this clause shall be determined in accordance with the price adjustment clause 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 procurement officer promptly and duly make 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 an extension of time for completion.

C. Time period for claim. Within thirty (30) days after receipt of a written change order under subsection (a) unless the period is extended by the procurement officer in writing, the contractor shall file notice of intent to assert a claim for an adjustment. Later notification shall not bar the contractor's claim unless the State or county is prejudiced by the delay in notification.

D. Claim barred after final payment. No claim by the contractor for an adjustment hereunder shall be allowed if notice is not given prior to final payment under this contract.

E. Other 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 as under the contract or for breach of contract.

4.5 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 agreed 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 3-123 and 3-126 of the Hawaii Administrative Rules.

4.6 VARIATION IN QUANTITY

Upon agreement of the parties, the quantity of goods or services or both specified in this contract may be increased by a maximum of ten (10) percent provided (1) the unit prices will remain the same except for any price adjustments otherwise applicable and (2) the 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.

SECTION 5 - CONTROL OF WORK

5.1 AUTHORITY OF DIRECTOR - The Director shall decide all questions which may arise as to the quality or acceptability of materials furnished and work performed, the manner of performance and rate of progress of the work, and compensation for work performed, interpretation of the contract and fulfillment of the contract on the part of the Contractor. The Director shall have authority to enforce and make effective such decisions and orders which the Contractor fails to carry out properly and diligently. The decision of the Director shall be final.

5.2 COORDINATION OF PLANS, SPECIFICATIONS AND SPECIAL PROVISIONS - These specifications, plans, special provisions, and all supplementary documents are essential parts of the contract, and a requirement occurring in one is as binding as though occurring in all. They are intended to be complementary and to describe and provide for a complete work.

5.3 CLAIMS AND DISPUTES - The Contractor may give notice in writing to the procurement officer for claims that extra compensation, damages, or an extension of time for completion is due the Contractor for one or more of the following reasons:

A. Requirements not clearly covered in the contract, or not ordered by the procurement officer as an extra work;

B. Failure between the State and the Contractor to agree to an adjustment in price for a contract change order issued by the State; or

C. An action or omission on the part of the procurement officer requiring performance changes within the scope of the contract.

The Contractor shall continue with performance of the contract in compliance with the directions or orders of the procurement officer, 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:

A. The notice in writing be given:

1. Before the commencement of the work involved, if at that time the Contractor knows of such requirements or the occurrence of such actions or omissions; or

2. Within thirty (30) calendar days after the

Contractor knows of such requirements or the occurrence of such action or omission if the Contractor did not have such knowledge before the commencement of the work; or

3. Within thirty (30) calendar days after receipt of the written contract change order that was not agreed upon by both parties; or

4. Within such further time as may be allowed by the procurement officer in writing.

B. The notice shall clearly state the Contractor's intention to make claim and the reasons why the Contractor believes that additional compensation, changes or an extension of time may be remedies to which the Contractor is entitled; and afford the procurement officer every facility for keeping records of the actual cost of work. Failure on the part of the Contractor to give such notification or to afford the procurement officer proper facilities for keeping strict account of actual cost shall constitute waiver of the claim for such extra compensation. The filing of such notice by the Contractor and the keeping of costs by the procurement officer shall not in any way be construed to prove the validity of the claim.

The procurement officer will review the notice and render a decision. The procurement officer's decision shall be final and conclusive unless, within thirty (30) calendar days from the date of the decision, the Contractor mails or otherwise furnishes a written appeal to the Director. The decision of the Director shall be final. Later notification of such claims shall not bar the Contractor's claim unless the State is prejudiced by the delay in notification. No claim by the Contractor for an adjustment hereunder shall be allowed if notice is not given before final payment under this contract. Any adjustment in the contract price made pursuant to this clause shall be determined according to Section 4.5 - Price Adjustment.

The provisions of this Section shall not be construed as establishing any claims contrary to the terms of Section 4.4 - Changes and Claims for Adjustment.

Nothing herein contained, however, shall excuse the Contractor from compliance with any rules of law precluding any state officers and any Contractors from acting in collusion or bad faith in issuing or performing contract change orders which are clearly not within the scope of the contract.

SECTION 6 - CONTROL OF MATERIAL AND EQUIPMENT

6.1 DEFECTIVE MATERIALS - All materials not conforming to the requirements of these specifications or the special provisions shall be considered defective and all such materials, whether in place or not, shall be rejected. They shall be removed immediately from the site of the work, unless otherwise permitted by the Director. No rejected materials, the defects of which have been subsequently corrected, shall be used until approval in writing has been given by the Director. Upon failure on the part of the Contractor to comply promptly with any order to remove and replace defective materials, the Director may remove and replace defective material and to deduct the cost of removal and replacement from any monies due or to become due the Contractor.

6.2 TRADE NAMES AND ALTERNATES - For convenience in designation on the plans or in the specifications, certain equipment or articles or materials may be designated under a trade name or the name of a manufacturer and its information catalogue. The use of alternate equipment or an article or material which is of equal quality and of the required characteristics for the purposes intended will be permitted, subject to the written approval of the Director, in accordance with the following requirements:

A. QUALIFICATION BEFORE BID OPENING - When the specifications and/or plans specify one or more manufacturer's brand names of materials or equipment to indicate a quality, style, appearance, or performance, the bidder will be assumed to have based its bid on one of the specified named products, except where such proprietary product are specified, alternate brands may be qualified if found equal or better by the Director. Bidders requesting qualification of alternate proprietary products must submit a request to the Director for review and approval at the earliest date possible, but in any event, such request must be received at the Contracts office not later than ten (10) days before the bid opening date, not including the bid opening date.

It shall be the responsibility of the bidder to submit sufficient evidence based upon which a determination can be made by the Director that the alternate brand is qualified. The evidence shall be transmitted with a covering letter which shall list the evidence submitted and the items for which the substitution is requested.

If the evidence accompanying a request for substitution is insufficient to qualify a particular

model, the request shall be denied provided that further evidence may be submitted to qualify the item five (5) days prior to the bid opening date if the initial request was made prior to the deadline set above.

B. SUBSTITUTION AFTER BID OPENING - Substitution of material or equipment will not be allowed after the bid opening date except under the following unforeseen circumstances:

1. If a specified or pre qualified item is delayed by a lengthy strike in the factory or other unforeseeable contingency beyond the control of the Contractor which would cause an abnormal delay in the project completion.

2. If a specified or pre qualified item is found to be unusable due to change or other circumstances.

3. If the Contractor is willing to provide a more recently developed or manufactured item of material or equipment of the same manufacturer which the Director determines to be equal or better than the one specified or pre-qualified.

A substitution request, regardless of reason, shall be fully explained in writing by the Contractor and shall include its justification for said request, the quantities and unit prices involved, quotations and such other documents as are deemed necessary to support the request. Any savings in cost will accrue to the State and any additional cost for the substituted items will be paid by the Contractor.

The burden of proof as to the comparative quality and suitability of alternate equipment, articles, or materials shall be upon the bidder or Contractor and bidder or Contractor shall furnish, at its own expense, all information necessary or related thereto as required by the Director. The Director shall be the sole judge as to the comparative quality and suitability of alternate equipment, articles or materials and the Director's decisions shall be final.

The above shall not be construed to mean that substitution for brand name specified materials and equipment will be allowed; the Director reserves the right to deny any request he deems irregular or not in the best interest of the State.

6.3 ASSIGNMENT OF ANTITRUST CLAIMS FOR OVERCHARGES FOR GOODS AND MATERIALS PURCHASED

A. Vendor and purchaser recognize that in actual economic practice, overcharges resulting from antitrust violations are in fact usually borne by the purchaser. Therefore, vendor hereby assigns to purchaser any and all claims for such overcharges as to goods and materials purchased in connection with this order or contract, except as to overcharges which result from antitrust violations commencing after the price is established under this order or contract and which are not passed on to the purchaser under an escalation clause.

B. Contractor and owner recognize that in actual economic practice, overcharges resulting from antitrust violations are in fact usually borne by the owner. Therefore, contractor hereby assigns to owner any and all claims for such overcharges as to goods and materials purchased in connection with this order or contract, except as to overcharges which result from antitrust violations commencing after the price is established under this order or contract and any change order. In addition, contractor warrants and represents that each of its first tier suppliers and subcontractors shall assign any and all such claims to owner, subject to the aforementioned exception.

SECTION 7 - LEGAL RELATIONS AND RESPONSIBILITY

7.1 LAWS TO BE OBSERVED - The Contractor shall comply with all federal, state, city and county laws, 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. Any reference to such laws, ordinances, rules and regulations shall include any amendments thereto effective as of the date of the call for sealed proposals.

The Contractor shall hold harmless, indemnify, defend and where appropriate, insure the State, its officers, agents and employees against any claim or liability arising from or based on the violation of any such laws, ordinances, rules or regulations. If any discrepancy or inconsistency is discovered in the contract for the work in relation to any law, ordinance, rule, regulation, order or decree, the Contractor shall forthwith report the same to the Director in writing.

7.2 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.

7.3 PATENTS - The Contractor shall assume all costs arising from the use of patented materials, equipment, devices, or processes used on or incorporated in the work, and shall hold harmless, indemnify, defend and where appropriate, insure the State, its officers, agents and employees from all suits at law or actions of every nature, for or on account of the use of any patented materials, equipment, devices or processes.

7.4 RESPONSIBILITY FOR INJURY AND DAMAGE - The State, its officers, agents and employees shall not be held accountable in any manner for any loss or damage to the work or any part thereof, or for any of the materials and equipment used or employed in performing the work, or for any injury to any person or persons either workers or the public, or for any damage to property caused by the Contractor or its workers or any one employed by the Contractor. The Contractor shall be responsible for any liability imposed by law for any injury to any person or any damage to property resulting from defects or obstructions or from any cause whatsoever during the progress of the work or at any time before its completion and final acceptance. The acceptance of the completed work of the Contractor by the Director shall not relieve the Contractor from any liability which may have accrued or may accrue as a result of the performance of the work by the Contractor. The Contractor shall hold harmless, indemnify, defend and where appropriate, insure the State, its officers, agents and employees, from all suits or actions of every name, kind and description, brought for or on account of

any injuries or damages sustained by any persons or property caused by the Contractor, its servants or agents, or by or on account of any act or omission of the Contractor or its servants or agents, regardless of whether such actions or any claim is brought against them or any one of them before or after the final acceptance of the work. In addition to any remedy authorized by law, the State may withhold payment of any money due to Contractor as shall be reasonable until disposition has been made of any suits or claims for injuries or damages.

It is not the intention of the parties to this contract to make the public or any member thereof a third party beneficiary hereunder, or to authorize anyone not a party hereto to maintain a suit for personal injuries or property damage based on a contract theory of liability. In any event, the Contractor shall hold harmless, indemnify, defend and where appropriate, insure the State from suits and claims for personal injuries or property damage where such injuries or damage are caused by the negligent acts or omissions of the Contractor, its agents or employees.

7.5 COOPERATION BETWEEN CONTRACTORS - Where two or more Contractors are employed on related or adjacent work, each shall conduct its operations in such a manner as not to cause any unnecessary delay or hindrance to the other.

7.6 CONTRACTOR'S RESPONSIBILITY FOR WORK - Until the acceptance of the contract, the Contractor shall have the charge and care thereof and shall bear the risk of injury or damage to any part thereof by the action of the elements or from any other cause, whether arising from the execution or from the non-execution of the work. The Contractor shall rebuild, repair, restore, and make good all damages to any portion of the work occasioned by any of the above causes before its completion and acceptance and shall bear the expenses thereof.

7.7 NO PERSONAL LIABILITY - Neither the Director nor any other officer or authorized employee of the Department shall be personally responsible for any liability arising under the contract.

7.8 INSURANCE - Prior to commencing with the work, the Contractor shall, at its own expense, obtain and submit to the Department, Certificate of Insurance from an insurance company authorized by the laws of the State to issue such insurance in the State of Hawaii showing full policy coverage of the Contractor.

TYPES OF INSURANCE:

A. Workers' Compensation:

The Contractor shall obtain worker's compensation insurance for all persons whom they employ in carrying out the work under this contract. This insurance shall be in strict conformity with the requirements of the most current and applicable State of Hawaii Worker's Compensation Insurance laws in effect on the date of the execution of this contract and as modified during the duration of the contract. The minimum limit of liability for workers compensation is the HRS 386 statutory limit.

B. Comprehensive Automobile Liability:

The Contractor shall obtain Auto Liability Insurance covering all owned, non-owned and hired autos with a combined single Limit of not less than $1,000,000 per accident for bodily injury and property damage with the State of Hawaii named as additional insured. The required limit of insurance may be provided by a single policy or with a combination of primary and excess policies.

C. Commercial General Liability:

The Contractor shall obtain General Liability insurance with a limit of not less than $1,000,000 per occurrence and in the aggregates. The General liability insurance shall include the State of Hawaii as an additional insured. The required limit of insurance may be provided by a single policy or with a combination of primary and excess policies.

All policies must provide that 30 days prior written notice of cancellation or material change in coverage be given to certificate holders stated above.

Such insurance when accepted by the Director in writing shall become applicable and shall remain unmodified throughout the entire term of the contract and in no event shall be terminated or otherwise allowed to lapse prior to written certification of final acceptance of the work by the State. Such insurance aforementioned shall cover the State for all work performed under the contract, all work performed incidental thereto or directly or indirectly connected therewith, including other work performed outside of the work area, and all change orders.

Any delay in the submission and approval of insurance certificates shall not be justification of or grounds for a request by the Contractor postponing the issuance of a notice to proceed notwithstanding the fact that the Contractor shall not be allowed to proceed with the work until said certificates are submitted and approved.

Failure to obtain insurance in accordance with the Section, on the part of the Contractor, shall be considered a major breach of the contract; and should the State be forced to expend funds which would have been covered under the insurance, the Contractor agrees to assume the liability for such funds and to indemnify and hold the State harmless.

SECTION 8 - PROSECUTION AND PROGRESS

8.1 PROGRESS OF WORK - The Contractor shall diligently prosecute the work to completion within the time limit specified in the proposal. The Contractor shall give its personal attention to the fulfillment of the contract and shall keep the work under its control. Work shall commence on the date indicated in the "Notice to Proceed" letter from the State.

8.2 LIQUIDATED DAMAGES - Time is of the essence in this contract and in case the Contractor fails to complete the work within the time specified in the proposal, damages will be sustained by the State. Since the amount of damages is difficult and not possible of definite ascertainment and proof, the amount of such damages are fixed in advance at the sum shown in the proposal for each and every calendar (or working) day which the Contractor has delayed in the completion of this contract; and the Contractor shall pay such amount as liquidated damages, and not by way of penalty, and in case the same are not paid, the State may deduct such amount thereof from any monies due or that may become due the Contractor under this contract.

If the Contractor finds it impossible for reasons beyond its control to complete the work within the contract time as specified, the Contractor shall, within 10 days from the first day of notification from the manufacturer or supplier of any delay and prior to the expiration of the contract time, make a written request to the Director for an extension of time setting forth therein the reasons which the Contractor believes will justify the granting of its request. The Contractor's plea that insufficient time was specified is not a valid reason for extension of time. If the Director finds that the work was delayed because of conditions beyond the control and without the fault of the Contractor, the Director may extend the time for completion in such extension as the conditions justify. The extended time for completion shall then be in full force and effect the same as though it were the original time for completion.

8.3 TEMPORARY SUSPENSION OF WORK

A. Order to stop work. The Director, 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 work 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 work order issued pursuant to this section. Upon receipt of such an order, the contractor shall forthwith comply with its terms and take all reasonable steps to minimize the occurrence of costs allocable to

the work covered by the order during the period of work stoppage. Before the stop work order expires, or within any further period to which the parties shall have agreed, the Director shall either:

1. Cancel the stop work order; or

2. Terminate the work covered by such order as provided in the "termination for default clause" or the "termination for convenience clause" of this contract.

B. Cancellation or expiration of the order. If a stop work order issued under this section is canceled or if the period of the order or any extension thereof expires, the contractor shall have the right to resume work. 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 work 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 work stoppage; provided that, if the Director 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 work. If a stop work order is not canceled and the work covered by such order is terminated for default or convenience, the reasonable costs resulting from the stop work order shall be allowable by adjustment or otherwise.

D. Adjustment of price. Any adjustment in contract price made pursuant to this clause shall be determined in accordance with the price adjustment clause of this contract.

8.4 DEFAULT AND TERMINATION OF CONTRACT

A. Termination by 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 Director 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 Director, 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 Director may procure similar goods or services in the manner and upon terms deemed appropriate by the Director. 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.

1. Contractor's duties. Notwithstanding termination of the contract and subject to any directions from the Director, the contractor shall take timely, reasonable, and necessary action to protect and preserve property in the possession of the contractor in which the State or county has an interest.

2. Compensation. Payment for completed goods delivered and accepted by the State shall be at the contract price. Payment for the protection and preservation of property shall be in an amount agreed upon by the contractor and Director; if the parties fail to agree, the Director 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 Director deems to be necessary to protect the State against loss because of outstanding liens or claims of former lien holders and to reimburse the State for the excess costs incurred in procuring similar goods and services.

3. Excuse for nonperformance or delayed performance. Except with respect to defaults of subcontractors, 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 work hereunder which endangers such performance, if the contractor has notified the Director within fifteen (15) days after the cause of the delay and the failure arises out of causes such as: acts of God; acts of the 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 or services to be furnished by the subcontractor were unreasonably obtained from other sources in sufficient time to permit the contractor to meet the contract requirements. Upon request of the contractor, the Director 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 the clause entitled "Termination for Convenience". As used in this paragraph of this clause, the term "subcontractor" means subcontractor at any tier.

4. Erroneous termination for default. If, after notice of termination of the contractor's right to proceed under the provisions of this clause, it is determined for any reason that the contractor was not in default under the provisions of the clause, or that the delay was excusable under the provisions of paragraph (3), Excuse for nonperformance or delayed performance of this clause, the rights and obligations of the parties shall, if the contract contains a clause providing for termination for convenience of the State, be the same as if the notice of termination had been issued pursuant to such clause.

5. Additional rights and remedies. The rights and remedies provided in this clause are in addition to any other rights and remedies provided by law or under this contract.

B. Termination for convenience. The Director may, when the interests of the State so require, terminate this contract in whole or in part, for the convenience of the State. The Director shall give written notice of the termination to the contractor specifying the part of the contract terminated and when termination becomes effective.

1. Contractor's obligation. The contractor shall incur no further obligations in connection with the terminated work and on the dates set in the notice of termination the contractor will stop work to the extent specified. The contractor shall also terminate outstanding orders and subcontracts as they relate to the terminated work. The contractor shall settle the liabilities and claims arising out of the termination of subcontracts and orders connected with the terminated work. The Director

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 work not terminated by the notice of termination and may incur obligations as are necessary to do so.

2. Right to goods. The Director may require the contractor to transfer title and deliver to the State in the manner and to the extent directed by the procurement officer:

a. Any completed goods; and

b. 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 Director, protect and preserve property in the possession of the contractor in which the State has an interest. If the Director does not exercise this right, the contractor shall use the contractor's best efforts to sell such goods and manufacturing materials. Use of this section in no way implies that the State has breached the contract by exercise of the termination for convenience clause.

3. Compensation:

a. The contractor shall submit a termination claim specifying the amounts due because of the termination for convenience together with cost or pricing data to the extent required by subchapter 15, chapter 3-122, HAR, bearing on such claim. If the contractor fails to file a termination claim within one (1) year from the effective date of termination, the Director may pay the contractor, if at all, an amount set in accordance with subparagraph c. below.

b. The Director and the contractor may agree to settlement provided the contractor has filed a termination claim supported by cost or pricing data to the extent required by subchapter 15, chapter 3-122, HAR, 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 paragraph (2) of this clause, and the contract price of the work not terminated.

c. Absent complete agreement under subparagraph b above, the Director shall pay the contractor the following amounts, provided payments agreed to under subparagraph b. shall not duplicate payments under this subparagraph for the following:

(i) Contract prices for goods or services accepted under the contract;

(ii) Costs incurred in preparing to perform and performing the terminated portion of the work plus a fair and reasonable profit on such portion of the work, such profit shall not include anticipatory profit or consequential damages, less amounts paid or to be paid for accepted goods or services; provided 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;

(iii) Costs of settling and paying claims arising out of the termination of subcontracts or orders pursuant to paragraph (1) of this clause. These costs must not include costs paid in accordance with subparagraph (ii) above.

(iv) 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 cost of the contractor reduced by the amount of

payments otherwise made, the proceeds of any sales of supplies and manufacturing materials under subparagraph b. of this paragraph, and the contract price of work not terminated.

d. Cost claimed, agreed to, or established under subparagraphs b. and c. shall be in accordance with chapter 3-123, H.A.R. bearing on such claim.

8.5 TERMINATION OF CONTRACTOR'S RESPONSIBILITY - The contract will be considered complete when all work has been completed, the work accepted by the Director, and the final estimate paid. The Contractor will then be released from further obligation except as set forth in the contract and bond, when applicable.

SECTION 9 - PAYMENT

9.1 PAYMENT - The Contractor's bid price shall be inclusive of all costs, direct or indirect, including all taxes, required for the fulfillment of this contract.

Contract payments to the Contractor by the State shall be full payment, for furnishing all labor, and for furnishing and delivering all equipment, materials, supplies and other incidentals to the location(s) designated in these specifications.

9.2 PROGRESS PAYMENTS - If more than one shipment is required under these specifications, progress payments may be made to the Contractor after each shipment, provided the equipment materials, supplies, etc., furnished and delivered have satisfactorily met the requirements of these specifications. Five per cent (5%) of the amount of each progress payment shall be retained by the Department until the final acceptance of the work.

To expedite processing of all payments, for item(s) furnished and delivered to the Department, the Contractor shall forward an original and one copy of invoice with each shipment made to the recipient office.

Each invoice shall contain the following:

A. Vendor's name, address and phone number.

B. Contract or Purchase Order No.

C. Description of item, the quantity, unit or lump sum price, sub-total and total.

9.3 FINAL ACCEPTANCE AND FINAL PAYMENT - Final acceptance means the acceptance in writing by the Director of the satisfactory completion of the work as provided under Section 8.5 followed by final payment in accordance with the Director's final estimate. The Department shall make final acceptance and payment promptly after the contract has been satisfactorily completed and final inspection made.

No payment will be made for any work which was not authorized by the Director in writing.

Final payment shall be made only after the issuance of the notice of final acceptance and after the Contractor has filed with the Director the following:

A. Consent of the Contractor's surety, when applicable, of the final payment;

B. Satisfactory evidence by affidavit that all debts resulting from the contract have been fully paid or satisfactorily secured;

C. A current “Certificate of Vendor Compliance” issued by the Hawaii Compliance Express (HCE). The Certificate of Vendor Compliance is used to certify the Contractor’s compliance with (a) Section 103D-328, HRS (for all contracts $25,000 or more) which requires a current tax clearance certificate issued by the Hawaii State Department of Taxation and the Internal Revenue Service; (b) Chapters 383, 386, 392, and 393, HRS; and (c) Subsection 103D-310(c), HRS. The State reserves the right to verify that compliance is current prior to the issuance of final payment. Contractors are advised that non-compliance status will result in final payment being withheld until compliance is attained.

The filing of willfully false affidavits will disqualify the Contractor from bidding on future work of the Department.

SECTION 10 – GENERAL SPECIFICATIONS FOR FURNISHING AND DELIVERING MOTOR VEHICLES AND EQUIPMENT

GENERAL SPECIFICATIONS – In addition to Detailed Specifications listed herein, the following requirements shall form a part of these Specifications:

1. Quality of Vehicle, Trailer, Utility Tractor, and Equipment

   a. All vehicle, trailer, utility tractor, and equipment offered will comply with ANSI and OSHA safety requirements and any other Federal and State safety requirements. If applicable or when requested, equipment shall bear a label or written documentation indicating approval of safety requirements from a bona fide testing laboratory.

   b. Vehicles, trailers, utility tractors and equipment furnished under these Provisions and Specifications shall be new and of the best quality of its respective kind, and shall be completely assembled and free of defects which may render them unfit for use.

   c. All vehicles, trailers, utility tractors and equipment having modifications and/or being built through after manufacturer companies shall not use the process of torch scarfing of rivets and bolts. Areas affected by rivets and bolts being removed shall be corrosion treated, primed and completely painted before modifications or installations are completed. No exceptions shall be accepted.

   d. The State may at any time, by written order, stop delivery of vehicle, trailer, utility tractor, and equipment not conforming to these Specifications. Such stop order shall not relieve the contractor of its obligation to complete the project within contract time limits, nor shall it in any way terminate, cancel or abrogate the contract or any part thereof.

   e. All electrical modifications and/or additions built through after manufacturer company shall: use continuously numbered or same colored wiring as the manufacturer; use the same wire gauges (size) as the original manufacturer; encase all wiring in protective looms and be grommet protected when passing through metal or sharp surfaces. Contractor shall supply two (2) copies of the Electrical Schematic (CD/DVD/Flash Drive) for the modification at time of delivery. No exceptions shall be accepted.

2. Submittals

   Upon delivery, contractor shall provide the following:

   a. Two (2) copies Owner-Operator Manual and one (1) copy Service and Parts Manual for vehicles, trailers, utility tractors and equipment. Book format/CD/DVD/Flash Drive.

b. List of manufacturers trained and authorized personnel able to provide installation and service support. List of identifying items and systems, which require factory authorized personnel to install and maintain; and also stock all necessary parts for same.

3. Certificates and Procedures for Processing Vehicle/Trailer Registration

a. Prior to delivery, contractor shall submit the following to the "Fiscal Office, Highways, 869 Punchbowl Street, Room 201, Honolulu, Hawaii 96813."

i. Application for registration (C&C Form DFL-1 / DFl-2): Form shall be completely filled out; registered owner(s) shall be "Department of Transportation, Honolulu, Hawaii 96813," Lien Holder shall be "None".

ii. Safety Inspection Certificate.

iii. Certificate of Weight and Measures (required if factory furnished vehicle weight is unavailable; e.g. vehicle with post-factory modifications or alterations). Certificate shall include make, model number, year and vehicle identification number, verified weight in pounds shall be officially machine stamped; handwritten weight will not be acceptable.

iv. Certificate or origin for a vehicle.

v. Notarized Bill of Sale from seller.

vi. Contractor contact person(s) name, telephone number, email address.

b. The Fiscal Office shall process the paperwork (normally two (2) to three (3) working days) and shall call the contractor to pick up the paperwork.

c. The contractor shall obtain Certificate of Registration, Certificate of Title and State license plates from the "Division of Motor Vehicles and Licensing, City and County of Honolulu, Kapalama Satellite City Hall, 925 Dillingham Blvd. 2nd Floor, Honolulu, Hawaii, 96817." The State license plates shall be installed on vehicle/trailers for delivery. Three (3) copies of the Certificate of Registration and Certificate of Title shall be delivered to the respective accepting districts of the vehicle or equipment. The original Certificate of Registration and Certificate of Title shall be sent by Certified Mail or hand delivered to the "Fiscal Office, Highways, 869 Punchbowl Street, Room 201, Honolulu, Hawaii 96813."
The contractor shall be responsible for registration and licensing of vehicle or trailer in accordance with procedures in the above (parts 3a, 3b and 3c of Certificates and Procedures for Progressive Vehicle Registration).

4. Training - Unless stated differently in the individual Detailed Specifications

Upon request by receiving agency, contractor shall schedule operator and maintenance training to demonstrate proper and safe operation of vehicle/trailers/utility tractors/equipment (when specified trainer shall be from manufacturer). This service shall be provided at no additional cost to the State. This service shall be completed no later than fifteen (15) days after acceptance of delivery. All training shall be consistent with OSHA requirements.

Copy of attendance record showing class date, time, location, class type, instructor's name and attendees shall be submitted to:

State of Hawaii
Highways
Construction & Maintenance Branch
Attention: Equipment Superintendent/Safety Coordinator
869 Punchbowl Street, Room 404
Honolulu, Hawaii 96813

5. Delivery

a. Vehicles/trailer/utility tractors/equipment furnished under these Specifications shall be delivered to the following:

Section	Address	Attention
11, 12, 13, 14, 17, 18, 19, 20, 22, 23, 24, 26, 28, 30, 37, 41, 42	Department of Transportation Highways Oahu District 727 Kakoi Street Honolulu, Hawaii 96819	David Okaneku (808) 833-7768 Cell: (808) 258-1863
15, 16, 31, 32, 34	Department of Transportation Highways Hawaii District 50 Makaala Street Hilo, Hawaii 96720	Kepa Kekaualua (808) 933-8866
25, 38, 39	Department of Transportation Highways Maui District 650 Palapala Drive Kahului, Hawaii 96732	Alvin Takushi (808) 446-1428

21, 27, 29, 33, 35, 36, 40, 43, 44, 45, 46	Department of Transportation Highways Kauai District 1720 Haleukana Street Lihue, Kauai 96766	David Braun (808) 241-3041

Representatives of both the contractor and State shall be present at the delivery site for purpose of visual inspection and, if necessary, for instruction in use of vehicle/trailer/utility tractor/equipment.

b. Prior to delivery, contractor shall contact State representative at the location indicated in the Delivery Schedule to coordinate delivery.

6. Warranty

a. Motor vehicles, trailers, utility tractors and equipment, furnished shall be fully warranted by the contractor for a minimum period of one (1) year, or for the period warranted by the manufacturer, or for the period stated in the Detailed Specifications, whichever is longer, against defects, resulting from the use of defective or inferior materials or from negligent workmanship, or against all design and manufacturing defects.

b. Warranty period shall begin from the date the motor vehicle, trailer, utility tractor and equipment is accepted by State Highways, applicable training is completed.

c. A performance period of thirty (30) days shall be allowed, so the State can ascertain whether the motor vehicle, utility tractor or equipment meet the needs of the State. Should any problem occur, the contractor shall remedy the situation within five (5) working days of notification.

d. Warranty documents shall be delivered upon delivery and shall detail manufacturer's obligation and warranty procedures.

e. Contractor shall replace or repair defective materials and/or workmanship at no cost to the State for parts/labor during the warranty period, provided such defects are not due to abuse or negligence on the part of the State.

f. Contractor shall provide a loaner (of similar type), in the event warranty repairs exceed a period of five (5) days. This loaner shall be provided at no additional cost to the State.

g. Contractor shall provide a service facility as described in the Special Provisions Section 2, "2.10 BIDDER QUALIFICATION", throughout the motor vehicles, trailers, utility tractors and equipment warranty period. Contractor shall inform the State, in writing, immediately of any change in warranty service facility.

h. Failure to provide and complete warranty service/repair within two weeks (14 calendar days) of vehicle/equipment entering contractor's facility shall be sufficient grounds for the State to deny the contractor from bidding in future projects due to poor performance.

SECTION 11 - FULL SIZE VAN, ALTERNATIVE FUEL

11.1 SCOPE OF WORK - The work consists of furnishing and delivering one (1) only, Full Size Van, Alternative Fuel to the island of Oahu. The Contractor shall present the vehicle complete, ready to use, and fully operational.

11.2 FULL SIZE VAN, ALTERNATIVE FUEL - The Specifications contained herein establish minimum standards (unless stated differently). Vehicle offered shall include any other standard features not listed but detailed in manufacturer's brochures and deemed necessary for proper and safe operation of vehicle.

DETAILED SPECIFICATIONS FOR A FULL SIZE VAN, ALTERNATIVE FUEL

1. Model/Year: Ford E150, GMC 2500, or equal. 2023 or latest production year.

2. Type: 2-wheel drive.

3. GVW Rating: 3,900.96 kg (8,600 lbs.) minimum capacity.

4. Wheel Base: 3,429mm (135 inches) minimum.

5. Engine:

    a. Manufacturer's bi-fuel (e.g. gasoline/ compressed natural gas (CNG), gasoline/propane, etc.) or converted to operate on liquified petroleum gas (LPG) via vehicle manufacturer or authorized conversion dealer.

    b. Heavy duty cooling system.

6. Transmission:

    a. 4-speed automatic minimum.

    b. Transmission oil cooler.

    c. Auxiliary transmission oil cooler.

7. Axle: Rear locking or limited slip differential

8. Electrical System: Twelve (I 2) volt with alternator capable of charging battery at low engine speeds.

9. Steering: Power or power assisted.

10. Brakes:

    a. Power or power assisted.

b. Non-asbestos material.

c. Anti-lock brake system.

11. Body/Interior:

a. Seats - Two (2) bucket seats and two (2) three (3) passenger bench seats (removable), all with seat belts.

b. Upholstery of manufacturer's standard vinyl/cloth material.

c. Power windows on front doors.

d. Floor covering vinyl/rubber with insulation.

e. AM/FM radio.

f. Floor mats.

g. Factory installed air condition.

h. Rain guards or vent shades on front doors.

12. Body/Exterior:

a. Dual swing out mirrors with spot mirrors attached.

b. Rear bumper, step type.

c. Sliding/pull out right side loading door(s), with windows.

d. Dual rear loading, pull out doors with windows.

13. Tires/Wheels:

a. All terrain tires and wheels shall meet manufacturer's and Federal GAWR requirements for GVW submitted.

b. Full size spare mounted on carrier, on vehicle.

c. Jack and wheel wrench.

d. No chrome/aluminum wheels, unless manufacturer standard.

14. Suspension:

a. Shock absorbers shall be heavy duty.

b. Axles, springs, and shock absorbers shall meet manufacturer's and Federal

GAWR requirements for GVW submitted.

15. Color:

    a. White, Dupont 93-96923 High Gloss Enamel or equal.

    b. Chevron markings on rear loading doors, Omaha orange and white (comparable to existing State Highways Division Fleet).

16. Fuel System (Conversion):

    Vehicle shall be converted to operate exclusively on liquefied petroleum gas (LPG). Conversion components shall meet all EPA and Federal requirements and include but not limited to: LPG fuel tank; vacuum filter fuel lock; fuel converter; air valve/carburetor; and a solid-state electronic interface between the LPG fuel system and the electronic engine control module.

    If the vehicle manufacturer (represented by a prospective bidder) offers alternative fuel engine modification such as satellite or sodium filled exhaust valves; valve rotators; or other durability enhancing components, the prospective bidder must include those components in the proposal to the State.

    Durability enhancing components not withstanding, the propane fuel system components shall be installed in accordance with all applicable Federal State and local regulations by properly authorized and certified individuals.

    The installation shall include all warranties offered by the LPG fuel system manufacturer and shall not detract from the warranties offered by the vehicle manufacturer:

    Furthermore, each bidder shall provide written acknowledgement of warranty repair support from an authorized local service center supporting the bidder's proposed LPG fuel system, installation, and components. Failure to provide such certification may be cause for rejection.

    Fuel Tanks (Conversion):

    Total fuel tank(s) capacity shall be no less than 94.6 liters (25 gallons) combined, equivalent water capacity shall directly replace the vehicles original gasoline tank underbody and shall be constructed and installed for full compliance with National Fire Protection Association (NFPA) Pamphlet No. 58 (NFPA-58), Division IV. The tanks shall be installed under the body/in trunk, and shall also include a 44.5 mm (1 ¾ in.) Acme threaded, double check type, remote fill valve. The remote fill valve shall be installed within the vehicle manufacturer's standard fuel filler housing and shall replace the original fuel filler neck and cap.

    Additional remote fuel filler locations shall be subject to approval by an authorized officer of the vehicle user agency.

A rocker type selector switch shall be furnished and installed to interface with the vehicle manufacturer's fuel level gauge to provide the operator with the necessary fuel level information from all tanks through one (1) fuel level gauge. All fuel lines shall be of stainless steel wire braid hose in accordance with Section B.0 of NFPA-58. Aluminum, copper, or mild steel tube fuel lines shall be rejected. All fuel lines shall be properly routed to prevent damage and premature degradation by abrasion, heat, laceration, crushing, etc. All fuel tank fittings and valves shall be properly shielded and guarded against accidental damage. Fuel delivery lines from the auxiliary fuel tanks shall be adequately equipped with check valves to assure that fuel is not drawn simultaneously from all tanks at the same time. Tanks shall be equipped with automatic full fuel shut off for refueling purposes.

17. Other:

a. Operator's Manual two (2) copies, Shop Repair Manual one (I) copy, Parts Manual one (1) copy. Book format/CD/DVD.

b. Safety Inspection, License, Registration, and Certificates as required in General Specifications.

c. Complete after factory rustproof, minimum of seven (7) years unlimited mileage requirement warranty, in accordance with Federal Specifications 297A or its latest revision

d. Reverse alarm.

e. 2.2 kg (5 lbs.) ABC Fire extinguisher mounted in cab.

f. Complete factory towing/electrical. To include wire harness connectors (4-wire), under carriage tow receiver (Type IV), pintle hook and 2-inch ball combination hitch, and "D" rings.

g. The lightbar system shall be a Whelen model FX2HIDOT or equal. The bar shall be fifty-five (55) inches long minimum. The main structure of the lightbar must be an extruded aluminum I-Beam design. The lightbar shall house all electronic components. The lightbar must have Hi/Low power control of all inboard LED modules. The lightbar shall contain one (I) control module I/0 board, which must control all internal lightheads.

The I/O board shall produce a minimum flash rate of 75 Comet flashes per minute with alternating corners, not an "x' pattern. There shall be ten (10) Scan Lock flash patterns to choose from. Each pair of LED lamps must be capable of operating in a different flash pattern.

The lightbar shall have all linear LED modules and shall meet SAE-1845 Class I and SAE-J595 requirements. The lightbar shall have linear LED modules in the four corners.

Each linear 18 comer module shall consist of a minimum of eighteen (18) high output LED's permanently mounted within a single dual (over/under) “removeable" highly mirrored parabolic reflector for maximum light output. The eighteen (18) LED's shall be mounted in two straight lines of 9LED's each (over/under) for maximum light output. The linear reflector shall extend to the MR11 alley light with no appreciable open gap between the LED module on the alley light.

The LED work light must be the same size module as used for the warning lights, but must consist of two staggered rows of six Super LED's and be able to flash and steady burn. All LED panels shall be the same design as the Linear 18 described above and must contain 12 Super LED's (6 over 6). All inboard lightheads must be 400 Series (this will allow for placement of this lighthead in any inboard position). All LED inboard modules must produce a minimum 180 degree light pattern. The I/O module shall be 100% solid state with built-in reverse polarity protection and output short protection. The I/O board shall operate from 10 - 16 VDC with no degradation in flash rate. The lightbar shall be designed to have up to eight (8) lamps to the front, eight lamps to the rear, and one (1) on each end. Each lamp module position shall have colored lens sections, independent of the others, that match the color of the LED module. For split modules, clear lenses must be used. The LED panel must be mounted within the lightbar. The comer Linear LED's must have a two-intensity cruise light mode. This provides a lightbar that has illuminated corners (no flashing), which are used for marker lights.

The user shall have a choice often (10) Scan-Lock flash patterns to choose from the LED modules, and four (4) Scan-Lock flash patterns for the flashing work lights and flashing alleys. The pattern must be selected by an external connection, not requiring the user to open the lightbar to change flash patterns.

The light bar shall have: Front - Two (2) Corner Linear 18’s (amber), Six (6) inboard Linear12 LED's (4 amber/ 2 white); Rear - Two (2) Corner Linear 18’s (amber), Four (4) Inboard Linear 12 LED's (2 amber/ 2 amber-over-red), Two (2) Inboard staggered white TIRl2 Super-Led modules for use as work lights; Ends- Two (2) MR11I alley lights; Additional, two (2) spare MR11 halogen replacement bulbs.

The light bar shall be wired to function as follows: All Amber warning LED's; All white warning LED's and flashing LED work light; Left Alley; Right Alley; Flashing Alley; LED Work light, steady; Hi Low power. All switches shall be lighted type and mounted within a console attached to the dash or mounted as part of OEM console, with provisions to mount an external radio system. Lightbar power cable must be brought to the power source with a fuse (thermal circuit breakers shall be rejected). Power cable shall be labeled with a permanent label at the power source, marked "Lightbar".

All cable and wiring shall be conduit protected and shall use grommets through sheet metal panels.

Note: The rear bar red LED's must be wired to the OEM front tum/hazard circuit, for activation with tum signals, and 4-way flasher.

The four corner Linear18's must be identical and all other inboard lightheads must be 400 series. All internal lightheads must snap into sliding brackets that are mounted in the lightbar.

The lightbar must contain a maximum of eight (8) screws, four (4) for each end cap to access all internal lightheads. Lightheads that require the removal of more than eight screws to remove all internal lightheads are unacceptable. Lightbars with modules mounted outside of the main lightbar are not acceptable. The lightbar shall contain a permanent mounting kit to prevent theft of the lightbar.

h. Warranty shall be minimum 36 months/36,000 miles (to include all attachments).

i. First Service Kit shall include all required filters (oil, fuel, air, breather, transmission, etc.).

j. First Aid Kit (OSHA/ANSI recommended).

k. Road Safety Triangle Kit and ten (10) each Yellow-Green Safety Glow Light Sticks. 10 inch size with bi-pod stand by Omni Glow.

18. Training:

Upon request by receiving agency, Contractor shall provide proper fueling procedure/safe operation and maintenance of equipment. This training shall include a minimum of one (1) hour classroom and one (1) hour per operator hands on training. This service shall be provided at no additional cost to the State. Contractor shall provide classroom site. Training shall be consistent to OSHA requirements.

Copy of attendance record showing class date, time, location, class type, instructor's name and attendees shall be submitted to:

State of Hawaii Highways
Construction & Maintenance Branch
Attention: Equipment Superintendent/Safety Coordinator
869 Punchbowl Street, Room 404
Honolulu, Hawaii 96813

SECTION 12 - ONE TON PICK-UP TRUCK

12.1 SCOPE OF WORK - The work consists of furnishing and delivering one (1) only, One Ton Pick- Up Truck, to the island of Oahu. The Contractor shall present the vehicle complete, ready to use, and fully operational.

12.2 ONE TON PICK-UP TRUCK- The Specifications contained herein establish minimum standards (unless stated differently). Vehicle offered shall include any other standard features not listed but detailed in manufacturer's brochures and deemed necessary for proper and safe operation of vehicle.

DETAILED SPECIFICATIONS FOR A ONE TON PICK-UP TRUCK

1. Model/Year: Ford F350, Dodge 3500, GMC 3500, or equal. 2023 or latest production
2. Type: 2-Wheel Drive. Single rear wheel.
3. GVW Rating: 4,536kg (10,000 lbs.) minimum capacity.
4. Wheel Base: 3,302 mm (130 inches) minimum.
5. Engine:
    a. Diesel powered. Emissions compliant, Tier 4. Shall be B20 Bio-Diesel compatible.
    b. Heavy duty cooling system. Fuel water separator, DAVCO Fuel Pro 382, B20 Bio-Diesel compatible.
    c. Engine idle shutdown, set at five (5) minutes. Engine shall not shut down when light bar is in operation.
6. Transmission:
    a. 6-speed automatic minimum.
    b. Transmission oil cooler.
    c. External Transmission oil cooler.
7. Axle: Rear locking or limited slip differential
8. Electrical System:
    a. Twelve (12) volt with alternator capable of charging battery at low engine speeds.

b. Dual battery system

9. Steering: Power or power assisted.

10. Brakes:

a. Power or power assisted. Four-wheel disc brakes.

b. Anti-lock brake system.

c. Roll stability control.

11. Cab/Interior:

a. Conventional cab.

b. Bench seat, with seat belts for three (3) people.

c. Upholstery of manufacturer's standard vinyl/cloth material.

d. Interior rear-view mirror with glare control.

e. Power windows/locks.

f. Floor covering vinyl/rubber with insulation. With floor mats.

g. Dual outer mirrors with spot mirrors, on swing out or telescoping brackets.

h. AM/FM/Blue Tooth radio; Reverse Camera.

i. Factory installed air condition.

j. Twelve (12) volt accessory outlet.

k. Rain guards or vent shades on all doors. Step bars on both sides of vehicle.

12. Body: 2,438mm (8 ft.) bed; fleet side, style side, swept line or equal.

13. Bumpers:

a. Standard front.

b. Step type rear.

14. Tires/Wheels:

a. Tires and wheels shall meet manufacturer's and Federal GAWR requirements for GVW submitted; all terrain type.

b. Full size spare mounted on under frame carrier.

c. Jack and wheel wrench.

d. No chrome/aluminum wheels unless manufacturer standard.

15. Suspension: Heavy duty-Axles, springs, and shock absorbers shall meet manufacturer and Federal GAWR requirements for GVW submitted.

16. Color:

a. White, Dupont 93-96923 High Gloss Urethane or manufacturer's equal.

b. Reflective chevron markings (reflexite or equal) on lift gate bottom, Omaha orange and white (comparable to existing State Highways Division Fleet). Spray-on bed liner

17. Other:

a. Operator's Manual two (2) copies, Shop Repair Manual one (1) copy, Parts Manual one (1) copy. Book format/CD/DVD.

b. 2.2kg (5 lbs.) ABC fire extinguisher mounted in cab.

c. Complete after factory rustproof, minimum of seven (7) years unlimited mileage requirement warranty, in accordance with Federal Specifications 297A or its latest revision.

d. Cross mounted toolbox installed. Shall be low profile type with double/locking gull-wing type covers. Shall be aluminum type, heavy construction, with concealed hinges. Shall be painted to match vehicle color or be diamond plate aluminum (lockable).

e. Complete factory towing/electrical. To include wire harness connector (vehicle and trailer end), under carriage tow receiver, (Type IV), 907.2 kg (2,000 lbs.) 3-inch pintle hook and 2-inch ball combination receiver.

f. Reverse alarm. Gauge package.

g. Safety Inspection, License, Registration, and Certificates as required in General Specifications. To include PUC certification (if over 10,000 lbs.)

h. Complete after factory rust proofing, with minimum seven (7) years unlimited mileage requirement warranty, in accordance with Federal Specifications 297A or its latest rev1s10n.

i. The light bar system shall be a Whelen Model HIDOTF4W0 with photo cell or equal. The bar shall be sixty (60) inches long minimum. The light bar shall

house all electronic components. The light bar must have Hi/Low power control of all inboard LED modules. The I/O board shall produce a minimum flash rate of 75 comet flashes per minute with alternating comers, not an "X" pattern. There shall be ten (10) scan lock flash patterns to choose from. Each pair of LED lamps must be capable of operating in a different flash pattern. The light bar shall have all linear LED modules and shall meet SAE-J845 Class I and SAE-J595 requirements. All LED inboard modules must produce a minimum 180degree light pattern. The I/O module shall be 100% solid state with built in reverse polarity protection and output short protection. The I/O board shall operate from 10 - 16 VDC with no degradation in flash rate.

Shall have a switch controller Whelen PCC1OW or equal.

The light bar shall be programmed/wired for a rear lower duplex traffic advisor function. Switching sequence as follows: #1 -All amber warning+ red rear warning lights (flashing); #2 - White warning lights (flashing); #3 - Left arrow traffic advisor; #4 - Right arrow traffic advisor; #5 - Rear work lights steady bum; #6 - Left alley work light steady bum; #7 - Right alley work light steady bum; #8 - Cruise light comer steady bum; #9 - Aux; and #10 -Aux; Note - section #3 and #4 together will tum on a split traffic advisor function. Aux will allow for activation of optional items wired to the switch controller by installer.

All switches shall be lighted type and mounted within a console attached to the dash or mounted as part of OEM console, with provisions to mount an external radio system. Light bar power cable must be brought to the power source with a fuse (thermal circuit breakers shall be rejected).

Power cable shall be labeled with a permanent label at the power source, marked "light bar". All cable and wiring shall be grommet protected and shall use grommets through sheet metal panels.

The four corner linear 18' s must be identical and all other inboard light heads must be 400 series. All internal light heads must snap into sliding brackets that are mounted in the light bar. The light bar shall contain a permanent mounting kit to prevent theft of the light bar, and be laser etched "STATE DOT HIGHWAYS", lettering shall be 1.5 inches tall.

Etching shall be at top of light bar on both ends, lettering to face out.

j. First Service Kit shall include all filters as required by manufacturer (oil, air, breather, transmission, etc.).

k. Warranty shall be a minimum of 36 months/36,000miles (to include all attachments).

l. First Aid Kit (OSHA/ANSI recommended).

m. Road safety triangle kit; and self-charging four pack kit AERVOR Super LED Road Flares, shall have yellow housing with red LED lighting. All housing and case shall be etched "STATE DOT HIGHWAYS".

18. Training:

Upon request by receiving agency, Contractor shall provide proper operation and maintenance training. This training shall include a minimum of one (1) hour classroom and one (1) hour per operator hands on training. This service shall be provided at no additional cost to the State. Contractor shall provide classroom site. Training shall be consistent to OSHA requirements.

Copy of attendance record showing class date, time, location, class type, instructor's name and attendees shall be submitted to:

State of Hawaii Highways
Construction and Maintenance Branch
Attention: Equipment Superintendent/Safety Coordinator
869 Punchbowl Street, Room 404
Honolulu, Hawaii 96813

SECTION 13 - ONE TON PICK-UP TRUCK WITH LIFT GATE

13.1 SCOPE OF WORK -The work consists of furnishing and delivering one (1) only, One Ton Pick-Up Truck with Lift Gate, to the island of Oahu. The Contractor shall present the vehicle complete, ready to use, and fully operational.

13.2 ONE TON PICK-UP TRUCK WITH LIFT GATE - The Specifications contained herein establish minimum standards (unless stated differently). Vehicle offered shall include any other standard features not listed but detailed in manufacturer's brochures and deemed necessary for proper and safe operation of vehicle.

DETAILED SPECIFICATIONS FOR A ONE TON PICK-UP TRUCK WITH LIFT GATE

1. Model/Year: Ford F350, Dodge 3500, GMC 3500, or equal 2023 or latest production

2. Type: 4-Wheel Drive. Single rear wheel.

3. GVW Rating: 5,171.04kg (11,400 lbs.) minimum capacity.

4. Wheel Base: 3,479.8 mm (137 inches) minimum.

5. Engine:

    a. Diesel powered. 2016 Emissions compliant, Tier 4. Capability to operate on a B20 blend of Bio-Diesel with no adverse effects.

    b. Heavy duty cooling system.

    c. Engine exhaust brake.

6. Transmission:

    a. 6-speed automatic with tow/haul mode minimum.

    b. Transmission oil cooler.

    c. External Transmission oil cooler.

7. Axle: Rear locking or limited slip differential

8. Electrical System:

    a. Twelve (12) volt with alternator capable of charging battery at low engine speeds.

    b. Dual battery system.

9. Steering: Power or power assisted.

10. Brakes:

    a. Power or power assisted. Four wheel disc brakes.

    b. Anti-lock brake system.

    c. Roll stability control.

11. Cab/Interior:

    a. Conventional cab.

    b. Split bench seat (40/20/40), seat belts for three (3) persons.

    c. Upholstery of manufacturer's heavy duty vinyl/cloth material.

    d. Interior rear view mirror with glare control.

    e. Power windows.

    f. Floor covering vinyl/rubber with insulation. With floor liner mats.

    g. Dual outer mirrors with spot mirrors, on telescoping brackets.

    h. AM/FM radio.

    i. Factory installed air condition.

    j. Twelve (12) volt accessory outlet.

    k. Rain guards or vent shades on all doors. Step bars on both sides of vehicle.

    l. Trailer brake controller.

    m. Four (4) up-fitter switches.

12. Body: 2,438mm (8 ft.) bed; fleet side, style side, swept line or equal. Spray-on bed liner.

13. Bumpers:

    a. Standard front.

    b. Electric/hydraulic lift gate with power closing; diamond plate steel platform; 589.6 kg (1,300 lbs.) lift capacity, Tommy Gate G2 series, dual cylinders or equal

14. Tires/Wheels:

    a. Tires and wheels shall meet manufacturer's and Federal GAWR requirements for GVW submitted; all terrain type.

    b. Full size spare mounted on under frame carrier.

    c. Jack and wheel wrench.

    d. No chrome/aluminum wheels, unless manufacturer standard.

15. Suspension: Heavy duty - Axles, springs, and shock absorbers shall meet manufacturer and Federal GAWR requirements for GVW submitted.

16. Color:

    a. White, Dupont 93-96923 High Gloss Urethane or manufacturer's equal.

    b. Chevron markings on lift gate bottom, Omaha orange and white (comparable to existing State Highways Division Fleet).

17. Other:

    a. Operator's Manual two (2) copies, Shop Repair Manual one (1) copy, Parts Manual one (1) copy. Book format/CD/DVD.

    b. 2.2kg (5 lbs.) ABC fire extinguisher mounted in cab.

    c. Complete after factory rustproof, minimum of seven (7) years unlimited mileage requirement warranty, in accordance with Federal Specifications 297A or its latest revision.

    d. Cross mount tool box installed. Shall be low profile type with double/locking gull-wing type covers. Shall be aluminum type, heavy' construction, with concealed hinges. Shall be painted to match vehicle color or be diamond plate aluminum (lockable). Auxiliary fuel tank (RDS #71083 or equal) forty five (45) gallons minimum; Tuthill twelve (12) volt DC pump or equal, capable of 15gpm; with fifteen (15) foot fill hose; dispenser nozzle; shall be mounted between cab and cross mount tool box.

    e. Complete factory towing/electrical. To include wire harness connector vehicle and trailer end (cole hersee male 6-prong, pat no. 1236), under carriage tow receiver, (Type IV), 907.2 kg (2,000 lbs.) 3 inch pintle hook and 2 inch ball combination receiver.

    f. Reverse alarm.

    g. Gauge package.

h. Safety Inspection, License, Registration, and Certificates as required in General Specifications. To include PUC certification (if over 10,000 lbs.).

i. The lightbar system shall be a Whelen model FC0HIDOT, part no. 01-0684294-72 or equal. The bar shall be sixty (60) inches long minimum. The main structure of the lightbar must be an extruded aluminum I-Beam design. The lightbar shall house all electronic components. The lightbar must have Hi/Low power control of all inboard LED modules. The lightbar shall contain one (1) control module I/O board which must control all internal lightheads. The I/O board shall produce a minimum flash rate of 75 Comet flashes per minute with alternating comers, not an "x' pattern. There shall be ten (10) Scan Lock flash patterns to choose from. Each pair of LED lamps must be capable of operating in a different flash pattern.

The lightbar shall have all linear LED modules and shall meet SAE-1845 Class I and SAE-J595 requirements. The lightbar shall have linear LED modules in the four corners. Each linear 18 corner module shall consist of a minimum of eighteen (18) high output LED's permanently mounted within a single dual (over/under) "removable" highly mirrored parabolic reflector for maximum light output. The eighteen (18) LED's shall be mounted in two straight lines of 9 LED's each (over/under) for maximum light output. The linear reflector shall extend to the MR11 alley light with no appreciable open gap between the LED module on the alley light. The LED work light must be the same size module as used for the warning lights, but must consist of two staggered rows of six Super LED's and be able to flash and steady burn. All LED panels shall be the same design as the Linear 18 described above and must contain 12 Super LED's (6 over 6). All inboard lightheads must be 400 Series (this will allow for placement of this lighthead in any inboard position). All LED inboard modules must produce a minimum 180 degree light pattern. The I/O module shall be 100% solid state with built-in reverse polarity protection and output short protection. The I/O board shall operate from 10 - 16 VDC with no degradation in flash rate. The lightbar shall be designed to have up to eight (8) lamps to the front, eight lamps to the rear, and one (1) on each end. Each lamp module position shall have colored lens sections, independent of the others, that match the color of the LED module. For split modules, clear lenses must be used. The LED panel must be mounted within the lightbar. The corner Linear LED's must have a two intensity cruise light mode. This provides a lightbar that has illuminated comers (no flashing), which are used for marker lights.

The user shall have a choice often (10) Scan-Lock flash patterns to choose from the LED modules, and four (4) Scan-Lock flash patterns for the flashing work lights and flashing alleys. The pattern must be selected by an external connection, not requiring the user to open the lightbar to change flash patterns.

The light bar shall have: Front-Two (2) Corner Linear 18's (amber), Eight (8)

inboard Linear12 LED's (6 amber/ 2 white); Rear-Two (2) Corner Linear 18's (amber), Six (6) Inboard Linear12 LED's (4 amber/ 2 red), Two (2) Inboard staggered white TIR12 Super- Led modules for use as work lights; Ends - Two (2) MR11 alley lights.

The light bar shall be wired to function as follows: All Amber warning LED's; All white warning LED's and flashing LED work light; Left Alley; Right Alley; Flashing Alley; LED Work light, steady; Hi/Low power. All switches shall be lighted type and mounted within a console attached to the dash or mounted as part of OEM console, with provisions to mount an external radio system. Lightbar power cable must be brought to the power source with a fuse (thermal circuit breakers shall be rejected). Power cable shall be labeled with a permanent label at the power source, marked "Lightbar". All cable and wiring shall be conduit protected and shall use grommets through sheet metal panels.

Note: The rear bar red LED's must be separately wired for activation.

The four corner Linear18's must be identical and all other inboard lightheads must be 400 series. All internal lightheads must snap into sliding brackets that are mounted in the lightbar.

The lightbar must contain a maximum of eight (8) screws, four (4) for each end cap to access all internal lightheads. Lightheads that require the removal of more than eight screws to remove all internal lightheads are unacceptable. Lightbars with modules mounted outside of the main lightbar are not acceptable. The lightbar shall contain a permanent mounting kit to prevent theft of the lightbar, and be laser etched "STATE DOT HIGHWAYS", lettering shall be 1.5 inches tall. Etching shall be at top of lightbar on both ends, lettering to face out.

j. First Service Kit shall include all filters as required by manufacturer (oil, air, breather, transmission, etc.).

k. Warranty shall be a minimum of 36 months/36,000miles (to include all attachments).

l. First Aid Kit (OSHA/ANSI recommended).

m. Road safety triangle kit; and self charging four pack kit AERVOR Super LED Road Flares, shall have yellow housing with red LED lighting. All housing and case shall be etched "STATE DOT HIGHWAYS".

n. Heavy duty jumper cables; 6.09m (20 ft.) premium two (2) gauge 100% copper cables; Quick connect and disconnect installed; protective cover/lockout.

18. Training:

Upon request by receiving agency, Contractor shall provide proper operation and maintenance training. This training shall include a minimum of one (1) hour classroom and one (1) hour per operator hands on training. This service shall be provided at no additional cost to the State. Contractor shall provide classroom site. Training shall be consistent to OSHA requirements.

Copy of attendance record showing class date, time, location, class type, instructor's name and attendees shall be submitted to:

State of Hawaii Highways
Construction and Maintenance Branch
Attention: Equipment Superintendent/Safety Coordinator
869 Punchbowl Street, Room 404
Honolulu, Hawaii 96813

SECTION 14 - ONE TON CREW CAB, PICK-UP TRUCK WITH LIFT GATE AND ARROW BOARD

14.1 SCOPE OF WORK - The work consists of furnishing and delivering five (5), One Ton Crew Cab, Pick-Up Trucks with Lift Gate and Arrow Board, to the island of Oahu. The Contractor shall present the vehicle complete, ready to use, and fully operational.

14.2 ONE TON CREW CAB, PICK-UP TRUCK WITH LIFT GATE AND ARROW BOARD – The Specifications contained herein establish minimum standards (unless stated differently). Vehicle offered shall include any other standard features not listed but detailed in manufacturer's brochures and deemed necessary for proper and safe operation of vehicle.

DETAILED SPECIFICATIONS FOR A ONE TON CREW CAB, PICK-UP TRUCKWITH LIFT GATE AND ARROW BOARD

1. Model/Year: Ford F350, Dodge 3500, GMC 3500, or equal. 2023 or latest production

2. Type: 2-Wheel Drive. Single rear wheel.

3. GVW Rating: 4,536kg (10,000 lbs.) minimum capacity.

4. Wheel Base: 4368.8 mm (172 inches) minimum.

5. Engine:

    a. Diesel powered. 2016 Emissions compliant, Tier 4. Capability to operate on a B20 blend of Bio-diesel with no adverse effects.

    b. Heavy duty cooling system.

6. Transmission:

    a. 6-speed automatic minimum.

    b. Transmission oil cooler.

    c. External Transmission oil cooler.

7. Axle: Rear locking or limited slip differential

8. Electrical System:

    a. Twelve (12) volt with alternator capable of charging battery at low engine speeds.

    b. Dual battery system.

9. Steering: Power or power assisted.

10. Brakes:

    a. Power or power assisted. Four wheel disc brakes.

    b. Anti-lock brake system.

    c. Roll stability control.

11. Cab/Interior:

    a. Crew cab.

    b. Bench seats (front and rear), seat belts for three (3) people (front and rear).

    c. Upholstery of manufacturer's standard vinyl/cloth material.

    d. Interior rear view mirror with glare control.

    e. Power windows.

    f. Floor covering vinyl/rubber with insulation. With floor mats.

    g. Dual outer mirrors with spot mirrors, on swing out or telescoping brackets.

    h. AM/FM radio.

    i. Factory installed air condition.

    j. Cigarette lighter.

    k. Rain guards or vent shades on all doors. Step bars on both sides of vehicle.

12. Body: 2,438mm (8 ft.) bed; fleet side, style side, swept line or equal.

13. Bumpers:

    a. Standard front.

    b. Electric/hydraulic lift gate with power closing; diamond plate steel platform; 589.6 kg (1,300 lbs.) lift capacity, Tommy Gate G2 series, dual cylinders or equal

14. Tires/Wheels:

    a. Tires and wheels shall meet manufacturer's and Federal GAWR requirements for GVW submitted; all terrain type.

b. Full size spare mounted on under frame carrier.

c. Jack and wheel wrench.

d. No chrome/aluminum wheels, unless manufacturer standard.

15. Suspension: Heavy duty-Axles, springs, and shock absorbers shall meet manufacturer and Federal GAWR requirements for GVW submitted.

16. Color:

a. White, Dupont 93-96923 High Gloss Urethane or manufacturer's equal.

b. Chevron markings on lift gate bottom, Omaha orange and white (comparable to existing State Highways Division Fleet). Spray-on bed liner

17. Other:

a. Operator's Manual two (2) copies, Shop Repair Manual one (1) copy, Parts Manual one (1) copy. Book format/CD/DVD.

b. 2.2kg (5 lbs.) ABC fire extinguisher mounted in cab.

c. Complete after factory rustproof, minimum of seven (7) years unlimited mileage requirement warranty, in accordance with Federal Specifications 297A or its latest revision.

d. Cross mount tool box installed. Shall be low profile type with double/locking gull-wing type covers. Shall be aluminum type, heavy construction, with concealed hinges. Shall be painted to match vehicle color or be diamond plate aluminum (lockable).

e. Complete factory towing/electrical. To include wire harness connector (vehicle and trailer end), under carriage tow receiver, (Type IV), 907.2 kg (2,000 lbs.) 3 inch pintle hook and 2 inch ball combination receiver.

f. Reverse alarm. Gauge package.

g. Water cooler, three (3) gallon minimum with holder to be mounted at rear.

h. Safety Inspection, License, Registration, 'and Certificates as required in General Specifications. To include PUC certification (if over 10,000 lbs.).

i. Complete after factory rust proofing, with minimum seven (7) years unlimited mileage requirement warranty, in accordance with Federal Specifications 297A or its latest revision.

j. The lightbar system shall be a Whelen model FC0HIDOT, part no. 01-0684294-72 or equal. The bar shall be sixty (60) inches long minimum. The main structure of the lightbar must be an extruded aluminum I-Beam design. The lightbar shall house all electronic components. The lightbar must have Hi/Low power control of all inboard LED modules. The lightbar shall contain one (1) control module I/O boardwhich must control all internal lightheads. The I/O board shall produce a minimum flash rate of 75 Comet flashes per minute with alternating comers, not an "x' pattern. There shall be ten (10) Scan Lock flash patterns to choose from. Each pair of LED lamps must be capable of operating in a different flash pattern.

The lightbar shall have all linear LED modules and shall meet SAE-J845 Class I and SAE- J595 requirements. The lightbar shall have linear LED modules in the four comers. Each linear 18 comer module shall consist of a minimum of eighteen (18) high output LED's permanently mounted within a single dual (over/under) "removable" highly mirrored parabolic reflector for maximum light output. The eighteen (18) LED's shall be mounted in two straight lines of9 LED's each (over/under) for maximum light output. The linear reflector,shall extend to the MR11 alley light with no appreciable open gap between the LED module on the alley light. The LED work light must be the same size module as used for the warning lights, but must consist of two staggered rows of six Super LED's and be able to flash and steady bum. All LED panels shall be the same design as the Linear 18 described above, and rri.ust contain 12 Super LED's (6 over 6). All inboard lightheads must be 400 Series (this will allow for placement of this lighthead in any inboard position). All LED inboard modules must produce a minimum 180 degree light pattern. The 1/0 module shall be 100% solid state with built-in reverse polarity protection and output short protection. The 1/0 board shall operate from 10 - 16 VDC with no degradation in flash rate. The lightbar shall be designed to have up to eight (8) lamps to the front, eight lamps to the rear, and one (1) on each end. Each lamp module position shall have colored lens sections, independent of the others, that match the color of the LED module. For split modules, clear lenses must be used. The LED panel must be mounted within the lightbar. The corner Linear LED's must have a two intensity cruise light mode. This provides a lightbar that has illuminated corners (no flashing), which are used for marker lights.

The user shall have a choice often (10) Scan-Lock flash patterns to choose from the LED modules, and four (4) Scan-Lock flash patterns for the flashing work lights and flashing alleys. The pattern must be selected by an external connection, not requiring the user to open the lightbar to change flash patterns.

The light bar shall have: Front-Two (2) Corner Linear 18's (amber), Eight (8) inboard Linear12 LED's (6 amber/ 2 white); Rear-Two (2) Corner Linear 18's (amber), Six (6) Inboard Linear12 LED's (4 amber/ 2 red), Two (2) Inboard staggered white TIR12 Super- Led modules for use as work lights; Ends - Two

(2) MRl1 alley lights; Additional, two (2) spare MR11 halogen replacement bulbs.

The light bar shall be wired to function as follows: All Amber warning LED's; All white warning LED's and flashing LED work light; Left Alley; Right Alley; Flashing Alley; LED Work light, steady; Hi/Low power. All switches shall be lighted type and mounted within a console attached to the dash or mounted as part of OEM console, with provisions to mount an external radio system. Lightbar power cable must be brought to the power source with a fuse (thermal circuit breakers shall be rejected). Power cable shall be labeled with a permanent label at the power source, marked "Lightbar". All cable and wiring shall be conduit protected and shall use grommets through sheet metal panels.

Note: The rear bar red LED's must be separately wired for activation.

The four corner Linear18's must be identical and all other inboard lightheads must be 400 series. All internal lightheads must snap into sliding brackets that are mounted in the lightbar.

The lightbar must contain a maximum of eight (8) screws, four (4) for each end cap to access all internal lightheads. Lightheads that require the removal of more than eight screws to remove all internal lightheads are unacceptable. Lightbars with modules mounted outside of the main lightbar are not acceptable. The lightbar shall contain a permanent mounting kit to prevent theft of the lightbar, and be laser etched "STATE DOT HIGHWAYS", lettering shall be 1.5 inches tall. Etching shall be at top of lightbar on both ends, lettering to face out.

k. First Service Kit shall include all filters as required by manufacturer (oil, air, breather, transmission, etc.).

l. Warranty shall be a minimum of 36 months/36,000miles (to include all attachments).

m. First Aid Kit (OSHA/ANSI recommended).

n. Road safety triangle kit; and self charging four pack kit AERVOR Super LED Road Flares, shall have yellow housing with red LED lighting. All housing and case shall be etched "STATE DOT HIGHWAYS".

o. Fold down Arrow Board (MUTCD approved) to be mounted at the rear of the cab (front of pick-up box) to extend above cab roof height to include all wiring and controls mounted in cab within drivers reach. In folded down position, Arrow Board shall not block view of light bar and third brake light. A travel height placard shall be mounted on the dash. Automated electrical/hydraulic.

18. Training:

Upon request by receiving agency, Contractor shall provide proper operation and maintenance training. This training shall include a minimum of one (1) hour classroom and one (1) hour per operator hands on training. This service shall be provided at no additional cost to the State. Contractor shall provide classroom site. Training shall be consistent to OSHA requirements.

Copy of attendance record showing class date, time, location, class type, instructor's name and attendees shall be submitted to:

State of Hawaii Highways
Construction and Maintenance Branch
Attention: Equipment Superintendent/Safety Coordinator
869 Punchbowl Street, Room 404
Honolulu, Hawaii 96813

SECTION 15 - SIX (6) MAN CREW CAB FOUR (4) WHEEL DRIVE ONE (1) TON DUMP WITH LIFT GATE

15.1 SCOPE OF WORK - The work consists of furnishing and delivering two (2) each Six (6) Man Crew Cab - Four (4) Wheel Drive One (1) Ton Dump with Lift Gate, to the island of Hawaii. The Contractor shall present the equipment complete, ready to use, and fully operational.

15.2 SIX (6) MAN CREW CAB FOUR (4) WHEEL DRIVE ONE (1) TON DUMP WITH LIFT GATE - The Specifications contained herein establish minimum standards (unless stated differently). Equipment offered shall include any other standard features not listed but detailed in manufacturer's brochures and deemed necessary for proper and safe operation of equipment.

DETAILED SPECIFICATION FOR A SIX (6) MAN CREW CAB FOUR (4) WHEEL DRIVE ONE (1) TON DUMP WITH LIFT GATE

1. Model/Year: Dodge 5500, Ford F-550, Chevrolet 5500, 2023 or latest production; or equal.
2. Type: 4X4 electronic-shift-on-the-fly
3. GVW Rating: 19,500 lbs. minimum capacity.
4. Wheel Base: 137 inches minimum.
5. Engine:
    a. 6.7 liter power stroke diesel or equal with engine idle shutdown.
    b. Fuel (diesel) tank (40 gallons) minimum.
    c. Heavy duty cooling system.
6. Transmission:
    a. 6-speed Automatic Transmission with tow/haul mode, minimum.
    b. Transmission oil cooler.
    c. Auxiliary transmission oil cooler.
7. Axle: 3.55 front and rear (minimum) with electronic rear locking axle differential.
8. Electrical System: Twenty-four (24) volt with heavy duty alternator (157 amp minimum)
9. Steering: Power or power assisted.
10. Brakes:

a. Power or power assisted 4-wheel disc brake.

b. Anti-lock brake system.

c. Exhaust/engine brake

11. Cab/Interior:

a. Crew Cab, Four (4) Doors

b. Front - Bench seat (40/20/40 split bench seat) heavy duty vinyl material.

c. Rear - Bench seat, heavy duty vinyl material.

d. Driver and passenger air bag

e. Interior rear-view mirror with glare control.

f. Power windows and power door locks.

g. Floor covering vinyl/rubber with insulation.

h. AM/FM radio with bluetooth.

i. Husky Liner floor mats (front & rear) or equal.

j. Factory installed air conditioning.

k. Rain guards or vent shades on all doors.

l. Twelve (12) volt power accessory outlet.

m. Trailer brake controller

n. Upfitter switches (4)

o. 2500 Watt Power Inverter mounted under rear seat

12. Body/Exterior:

a. Power mirrors

b. Cargo Box:

2 cubic yard drop side dump body minimum, 3 cubic yard maximum, Knapheide KDBDS912, or equal. Ends & sides of minimum 12-gauge, floor of minimum 10-gauge 50,000 PSI yield high strength alloy steel. 8 ft. long x 78 inches inside width with 14-inch-high sides, 20 inch high tailgate, 35 inch bulkhead. Bulkhead to be furnished with minimum ¼, maximum ½-cab protector shield and rear-view mirror,

cut out with screen. 7-inch interlocking longsills. Side board pocket extensions with rumber removable 6 inch “cheater” boards. Mud flaps fore and aft of rear wheels. Safety body prop and all lights and reflectors as required to meet Federal and State requirements.

c. Hoist: Underbody subframe scissor hoist, 6.8-ton light capacity, single acting, NTEA performance class 10. Electric pump with push button control, mounted in cab near diver side

d. Roof clearance lights

e. Exterior back up alarm

f. Skid plate transfer case and fuel tank

g. Spray-in bed liner

h. Power trailer tow mirrors

i. Electric/Hydraulic lift gate with power closing; diamond plate steel platform; 1,500 lbs. lift capacity; Tommy Gate G2 series dual cylinders or equal

j. Reverse sensors

k. 16,000 lbs. (minimum) Winch with remote mounted on front of vehicle.

l. Front bumper: Road Armor (61740B or equal) housing a Warn Winch (16.5ti or equal) and four (4) Rigid Dually/D2, Quake LED (QSE550) lights or equal

13. Tires/Wheels:

a. All terrain tires E rating that meets Federal GAWR requirements for GVW submitted.

b. Full size spare mounted on carrier, on vehicle.

c. Jack and wheel wrench.

d. 18 inch 6-Spoke Cast-Aluminum Wheels if manufacturer standard

14. Suspension:

a. Leveling kit (front)

b. Heavy duty – springs and shock absorbers shall meet manufacturer and Federal GAWR requirements for GVW submitted.

15. Color:

a. White, Dupont 93-96923 High Gloss Enamel or manufacturer's equal.

b. Chevron markings on lift gate bottom, Omaha orange and white (comparable to existing State Highways Division Fleet).

16. Other:

a. Operator's Manual two (2) copies, Shop Repair Manual one (1) copy, Parts Manual one (1) copy. Book format/CD/DVD.

b. Safety Inspection, License, Registration, and Certificates as required in General Specifications.

c. Complete after factory rustproof, minimum of seven (7) years unlimited mileage warranty, in accordance with Federal Specifications 297A or its latest revision.

d. One (1) each 2.2 kg (5 lbs.) ABC Fire extinguisher mounted in cab.

e. Complete factory towing/electrical. To include wire harness connectors (Cole Hersee male 6-prong) and 7pin & 4pin plug, under carriage tow receiver (Type IV), 3-inch pintle hook and 2 inch ball combination receiver.

f. The lightbar system shall be a Whelen Towman's Freedom IV Series has 4 Bi-level Linear-LED corners, 2 Super-LED® work lights, and 2 LED brake/tail/turn lights or equal. The bar shall be fifty-five (55) inches long minimum. The lightbar shall house all electronic components. The lightbar must have Hi/Low power control of all inboard LED modules. The lightbar shall contain one (1) control module I/O board, which must control all internal lightheads.

All switches shall be lighted type and mounted within a console attached to the dash or mounted as part of OEM console, with provisions to mount an external radio system. Lightbar power cable must be brought to the power source with a fuse (thermal circuit breakers shall be rejected). Power cable shall be labeled with a permanent label at the power source, marked "Lightbar".

All cable and wiring shall be conduit protected and shall use grommets through sheet metal panels.

Lightbar shall be mounted on the center of the cargo box cab protector.

Whelen 900 Series Super-LED (split red/amber) or equal mounted to the rear (left and right side) of Cargo Box. Wired to the light bar.

g. Warranty shall be minimum 36 months/36,000 miles (to include all attachments).

h. First Service Kit shall include all required filters (oil, fuel, air, breather, transmission, etc.).

i. First Aid Kit (OSHA/ANSI recommended).

j. Triangle road safety kit

k. Heavy duty jumper cables

17. Training:

Upon request by receiving agency, Contractor shall provide proper fueling procedure/safe operation and maintenance of equipment. This training shall include a minimum of one (1) hour classroom and one (1) hour per operator hands on training. This service shall be provided at no additional cost to the State. Contractor shall provide classroom site. Training shall be consistent to OSHA requirements.

Copy of attendance record showing class date, time, location, class type, instructor's name, and attendees shall be submitted to:

State of Hawaii, Highways
Construction and Maintenance Branch
Attention: Equipment Superintendent/Safety Coordinator
869 Punchbowl Street, Room 404
Honolulu, Hawaii 96813

SECTION 16 - SIX (6) MAN CREW CAB FOUR (4) WHEEL DRIVE ONE (1) TON WITH UTILITY BOX AND LIFT GATE

16.1 SCOPE OF WORK - The work consists of furnishing and delivering six (6) each Six (6) Man Crew Cab - Four (4) Wheel Drive One (1) Ton with Utility Box and Lift Gate, to the island of Hawaii. The Contractor shall present the equipment complete, ready to use, and fully operational.

16.2 SIX (6) MAN CREW CAB FOUR (4) WHEEL DRIVE ONE (1) TON WITH UTILITY BOX AND LIFT GATE - The Specifications contained herein establish minimum standards (unless stated differently). Equipment offered shall include any other standard features not listed but detailed in manufacturer's brochures and deemed necessary for proper and safe operation of equipment.

DETAILED SPECIFICATION FOR A SIX (6) MAN CREW CAB FOUR (4) WHEEL DRIVE ONE (1) TON WITH UTILITY BOX AND LIFT GATE

1. Model/Year: Dodge 5500, Ford F-550, Chevrolet 5500, 2023 or latest production; or Equal.
2. Type: 4X4 electronic-shift-on-the-fly
3. GVW Rating: 19,500 lbs. minimum capacity.
4. Wheel Base: 137 inches minimum.
5. Engine:
   a. 6.7 liter power stroke diesel or equal with engine idle shutdown.
   b. Fuel (diesel) tank (40 gallons) minimum.
   c. Heavy duty cooling system.
6. Transmission:
   a. 6-speed Automatic Transmission with tow/haul mode, minimum.
   b. Transmission oil cooler.
   c. Auxiliary transmission oil cooler.
7. Axle: 3.55 front and rear (minimum) with electronic rear locking axle differential.
8. Electrical System: Twenty four (24) volt with heavy duty alternator (157 amp minimum)
9. Steering: Power or power assisted.

10. Brakes:

    a. Power or power assisted 4-wheel disc brake.

    b. Anti-lock brake system.

    c. Exhaust/engine brake

11. Cab/Interior:

    a. Crew Cab, Four (4) Doors

    b. Front - Bench seat (40/20/40 split bench seat) heavy duty vinyl material.

    c. Rear - Bench seat, heavy duty vinyl material.

    d. Driver and passenger air bag

    e. Interior rear-view mirror with glare control.

    f. Power windows and power door locks.

    g. Floor covering vinyl/rubber with insulation.

    h. AM/FM radio with bluetooth.

    i. Husky Liner floor mats or equal.

    j. Factory installed air condition.

    k. Rain guards or vent shades on all doors.

    l. Twelve (12) volt power accessory outlet.

    m. Trailer brake controller

    n. Upfitter switches (4)

    o. 2500 Watt Power Inverter mounted under rear seat

12. Body/Exterior:

    a. Power mirrors

    b. Utility Truck Bed: Royal Truck Body, 9-foot standard DRW, Model 40-VDO-108, or equal. Length: 108 inches, Height: 40 inches, Body Width 79 inches, Compartment Depth: 22 inches, Floor Width: 49 inches, Weight: 1570 pounds, Storage Capacity 81.5 cubic feet. Safety body prop and all lights and reflectors as required to meet Federal and State requirements.

c. Roof clearance lights

d. Exterior back up alarm

e. Skid plate transfer case and fuel tank

f. Spray-in bed liner

g. Power trailer tow mirrors

h. Electric/Hydraulic lift gate with power closing; diamond plate steel platform; 1,500 lbs lift capacity; Tommy Gate G2 series dual cylinders or equal

i. Reverse sensors

j. 16,000 lbs (minimum) Winch with remote mounted on front of vehicle.

k. Front bumper: Road Armor (61740B or equal) housing a Warn Winch (16.5ti or equal) and four (4) Rigid Dually/D2, Quake LED (QSE550) lights or equal

13. Tires/Wheels:

a. All terrain tires E rating that meets Federal GAWR requirements for GVW submitted.

b. Full size spare mounted on carrier, on vehicle.

c. Jack and wheel wrench.

d. 18 inch 6-Spoke Cast-Aluminum Wheels if manufacturer standard

14. Suspension:

a. Leveling kit (front)

b. Heavy duty – springs and shock absorbers shall meet manufacturer and Federal GAWR requirements for GVW submitted.

15. Color:

a. White, Dupont 93-96923 High Gloss Enamel or manufacturer's equal.

b. Chevron markings on lift gate bottom, Omaha orange and white (comparable to existing State Highways Division Fleet).

16. Other:

a. Operator's Manual two (2) copies, Shop Repair Manual one (1) copy, Parts Manual one (1) copy. Book format/CD/DVD.

b. Safety Inspection, License, Registration, and Certificates as required in General Specifications.

c. Complete after factory rustproof, minimum of seven (7) years unlimited mileage warranty, in accordance with Federal Specifications 297A or its latest revision.

d. One (1) each 2.2 kg (5 lbs.) ABC Fire extinguisher mounted in cab.

e. Complete factory towing/electrical. To include wire harness connectors (Cole Hersee male 6-prong, part no. 1236) and 7pin & 4pin plug, under carriage tow receiver (Type IV), 3-inch pintle hook and 2 inch ball combination receiver.

f. The lightbar system shall be a Whelen Towman's Freedom IV Series has 4 Bi-level Linear-LED corners, 2 Super-LED® work lights, and 2 LED brake/tail/turn lights or equal. The bar shall be fifty-five (55) inches long minimum. The lightbar shall house all electronic components. The lightbar must have Hi/Low power control of all inboard LED modules. The lightbar shall contain one (1) control module I/O board, which must control all internal lightheads.

All switches shall be lighted type and mounted within a console attached to the dash or mounted as part of OEM console, with provisions to mount an external radio system. Lightbar power cable must be brought to the power source with a fuse (thermal circuit breakers shall be rejected). Power cable shall be labeled with a permanent label at the power source, marked "Lightbar".

All cable and wiring shall be conduit protected and shall use grommets through sheet metal panels.

g. Warranty shall be minimum 36 months/36,000 miles (to include all attachments).

h. First Service Kit shall include all required filters (oil, fuel, air, breather, transmission, etc.).

i. First Aid Kit (OSHA/ANSI recommended).

j. Triangle road safety kit

k. Heavy-duty jumper cables

17. Training:

Upon request by receiving agency, Contractor shall provide proper fueling procedure/safe operation and maintenance of equipment. This training shall include a minimum of one (1) hour classroom and one (1) hour per operator hands on training. This service shall be provided at no additional cost to the State. Contractor shall provide classroom site. Training shall be consistent to OSHA requirements.

Copy of attendance record showing class date, time, location, class type, instructor's name, and attendees shall be submitted to:

State of Hawaii, Highways
Construction and Maintenance Branch
Attention: Equipment Superintendent/Safety Coordinator
869 Punchbowl Street, Room 404
Honolulu, Hawaii 96813

SECTION 17 - CAB/CHASSIS WITH UTILITY BODY

17.1 SCOPE OF WORK- The work consists of furnishing and delivering one (1) only, Cab/Chassis with Utility Body to the island of Oahu. The Contractor shall present the vehicle complete, ready to use, and fully operational.

17.2 CAB/CHASSIS WITH UTILITY BODY - The Specifications contained herein establish minimum standards (unless stated differently). Vehicle offered shall include any other standard features not listed but detailed in manufacturer's brochures and deemed necessary for proper and safe operation of vehicle.

DETAILED SPECIFICATION FOR A CAB/CHASSIS WITH UTILITY BODY

1. Model/Year: Ford, Freightliner, International, Mack, Peterbilt, or equal, 2023 or latest production.

2. GVW Rating: 11,793.6kg (26,000 lbs.) capacity maximum.

3. Wheel Base: 3,860.8mm (152 in.) minimum.

4. Cab to Axle: 2,133.6mm (84 in.) maximum.

5. Engine:

    a. Diesel powered, wet sleeved engine, 2016 emissions Tier 4 compliant. Shall have capability of operating on a B20 blend of bio-diesel with no adverse effects.

    b. Six (6) cylinder- net horsepower 223.7 kw (300 hp) minimum at rated RPM.

    c. Liquid cooled with deaeration system with tank and sight glass; full radiator guard.

    d. Fuel water separator Racor or manufacturer's equal; fuel tank 151.4L (40 gal.) minimum.

    e. Exhaust, single horizontal muffler with after treatment device, frame mounted; vertical exhaust pipe with protective shield and rain cap. Shall have two position exhaust switch to inhibit diesel particulate filter regeneration, as switch is "on" position.

    f. Hour meter and tachometer.

    g. Engine exhaust brake.

6. Transmission:

    a. Allison 3000 series automatic 6 speed or equal.

b. Transmission oil cooler.

c. Automatic transmission oil temperature gauge.

7. Differential: Locking/limited slip differential.

8. Frame:

a. Steel channel type.

b. 80,000 PSI minimum.

9. Electrical System:

a. Twelve (12) volt with 160 amp alternator capable of charging battery at low engine speed.

b. Dual battery system. AGM type batteries. Minimum of 750 cold cranking amp capacity each.

c. Color coded wiring or continuously numbered.

d. Circuit breakers at main panel to replace all fuses except instrument cluster feed.

10. Steering: Powered or power assisted.

11. Brakes:

a. Power or power assisted.

b. Non-asbestos material.

c. Anti-lock brake system. Full vehicle wheel control.

d. Four wheel disc brake system.

12. Wheels/Tires:

a. Seven (7) each; single front, dual rear, spare.

b. Tires - 10 R 22.5 load rating G.

c. Wheels -22.5 x 6.0, disc painted steel 10-stud with steel hubs.

13. Axle:

a. Front - 3,628.8 kg (8,000 lbs.) minimum.

b. Rear- 8,164.8 kg (18,000 lbs.) minimum.

14. Springs:

a. Front - 3,628.8 kg (8,000 lbs.) minimum with shock absorbers.

b. Rear-8,164.8 kg (18,000 lbs.) minimum.

c. Manufacturer's standard auxiliary springs.

d. Heavy duty shock absorber (front and rear).

15. Cab/Interior:

a. Aluminum cab with tilt hood or steel conventional cab with tilt hood and seven (7) years unlimited warranty.

b. Bench seat or split bench, seat belts for three (3) people.

c. Upholstery of manufacturer's standard vinyl material.

d. Interior rear-view mirror with glare control.

e. Power windows on all doors. Rain guards on all doors.

f. Floor covering vinyl/rubber with insulation. With floor mats.

g. Dual exterior mirrors (backs, brackets shall be aluminum/stainless steel, or non-corrosive composite type) 152.4mm x 406.4mm (6 in. x 16 in.) minimum. West Coast type or equal with convex bottom section. Powered type. Passenger door down view mirror.

h. AM/FM radio.

i. Factory installed air condition.

j. Steps and grab handles located on both sides of cab.

k. Sun visor driver and passenger.

l. Twelve (12) volt accessory power outlet.

m. Rear window guard.

n. Air bag protection.

o. Clear safety glass on rear window.

16. Body:

a. Welder's Utility Body (KNAPHEIDE 6132DLHR-60J or equal) body length shall be a maximum of 3,352.8 (132 in.). Body width 2,387.6mm (94 in.) maximum.

b. Shall have one (1) compartment for storage of oxygen/acetylene tanks minimum of 863.6mm length x 538.8mm width x 1,524mm height (34 in. x 22 in. x 60 in.), located at right front (next to cab) of utility bed setup. Other compartments shall be vertical series with a maximum height of 1,320.8mm (52 in.). Right rear compartment shall be reinforced to support hoist and hoist operating weight.

c. Hoist - Lift capacity of 1,451.52 kg (3,200 lbs.), electric hydraulic operated, 360° rotatable, boom length 1,828.8mm to 4,572mm (84 in. to 180 in.), with various lifting positions. Shall be equipped with jack legs/outriggers for support. Auto Crane Model 3202EH or equal.

d. All lighting shall be LED type for compartments, tail, stop, tum, hazard, marker, etc.

17. Bumpers:

a. Standard painted front bumper.

b. Heavy duty step type rear platform bumper 533.4 mm length x 2,387.6mm width (21 in. x 94 in.).

18. Color:

a. White, Dupont 93-96923 High Gloss Urethane or equal.

b. Chevron markings on tailgate - Omaha orange and white (comparable to existing State Highways Fleet).

19. Other:

a. Reverse alarm.

b. First Service Kit shall include all required filters (oil, fuel, air, breather, transmission, etc.).

c. Gauge package.

d. Road safety triangle kit and self-charging four pack kit AERVOR Super LED road flares, shall have yellow housing with red LED lighting. All housing and case shall be etched "STATE DOT HIGHWAYS".

e. Two 2.2 kg (5 lbs.) ABC fire extinguisher mounted as instructed by receiving agency.

f. The light bar system shall be a Whelen model FCOHIDOT, Part No. 01-0684294- 72 or equal. The bar shall be sixty (60) inches long minimum. The main structure of the light bar must be an extruded aluminum I-Beam design. The light bar shall house all electronic components. The light bar must have Hi/Low power control of all inboard LED modules. The light bar shall contain one (1) control module I/O board which must control all internal light heads.

The I/O board shall produce a minimum flash rate of 75 Comet flashes per minute with alternating comers, not an "x' pattern. There shall be ten (10) Scan Lock flash patterns to choose from. Each pair of LED lamps must be capable of operating in a different flash pattern. The light bar shall have all linear LED modules and shall meet SAE-J845 Class I and SAE-J595 requirements. The light bar shall have linear LED modules in the four comers.

Each linear 18 corner module shall consist of a minimum of eighteen (18) high output LED's permanently mounted within a single dual (over/under) "removable" highly mirrored parabolic reflector for maximum light output. The eighteen (18) LED's shall be mounted in two straight lines of 9 LED's each (over/under) for maximum light output. The linear reflector shall extend to the MR11 alley light with no appreciable open gap between the LED module on the alley light. The LED work light must be the same size module as used for the warning lights, but must consist of two staggered rows of six Super LED's and be able to flash and steady bum. All LED panels shall be the same design as the Linear 18 described above, and must contain 12 Super LED's (6 over 6). All inboard light heads must be 400 Series (this will allow for placement of this light head in any inboard position). All LED inboard modules must produce a minimum 180 degree light pattern. The I/O module shall be 100% solid state with built-in reverse polarity protection and output short protection. The I/O board shall operate from 10 - 16 VDC with no degradation in flash rate. The light bar shall be designed to have up to eight (8) lamps to the front, eight (8) lamps to the rear, and one (1) on each end. Each lamp module position shall have colored lens sections, independent of the others, that match the color of the LED module. For split modules, clear lenses must be used. The LED panel must be mounted within the light bar. The corner Linear LED's must have a two-intensity cruise light mode. This provides a light bar that has illuminated corners (no flashing), which are used for marker lights. The user shall have a choice of ten (10) Scan-Lock flash patterns to choose from the LED modules, and four (4) Scan-Lock flash patterns for the flashing work lights and flashing alleys. The pattern must be selected by an external connection, not requiring the user to open the light bar to change flash patterns.

The light bar shall have: Front-Two (2) Corner Linear 18's (amber), Eight (8) inboard Linear12 LED's (6 amber/ 2 white); Rear-Two (2) Comer Linear 18's (amber), Six (6) Inboard Linear12 LED's (4 amber/ 2 red), Two (2) Inboard staggered white TIR12 Super-LED modules for use as work lights; Ends-Two (2) MR11 alley lights.

The light bar shall be wired to function as follows: All Amber warning LED's; All white warning LED's and flashing LED work light; Left Alley; Right Alley; Flashing Alley; LED Work light, steady; Hi/Low power. All switches shall be lighted type and mounted within a console attached to the dash or mounted as part of OEM console, with provisions to mount an external radio system. Light bar power cable must be brought to the power source with a fuse (thermal circuit breakers shall be rejected). Power cable shall be labeled with a permanent label at the power source, marked "Light bar". All cable and wiring

shall be conduit protected and shall use grommets through sheet metal panels. Note: The rear bar red LED's must be wired to the OEM front turn/hazard circuit, for activation with turn signals, and 4-way flasher.

The four corner Linear18's must be identical and all other inboard light heads must be 400 series. All internal light heads must snap into sliding brackets that are mounted in the light bar.

The light bar must contain a maximum of eight (8) screws, four (4) for each end cap to access all internal light heads. Light heads that require the removal of more than eight screws to remove all internal light heads are unacceptable. Light bars with modules mounted outside of the main light bar are not acceptable. The light bar shall contain a permanent mounting kit to prevent theft of the light bar, and be laser etched "STATE DOT HIGHWAYS", lettering shall be 1.5 inches tall. Etching shall be at top of light bar on both ends, lettering to face out.

g. Operator's Manual, two (2) copies.

h. Service/Repair Manual, Parts Manual, one (1) copy each.

i. PUC Certification, Safety Inspection, License Registration, and Certificates as required in General Specifications.

j. Complete after factory rustproof with minimum of seven (7) year unlimited mileage warranty. In accordance with Federal Specifications, 297A or its latest revision.

k. Warranty shall be a minimum of 36 months/36,000 miles (to include all attachments).

l. Fold down arrow board (MUTCD approved) to be mounted rear of cab (between cab and utility body) to extend above cab roof height. To include all wiring and controls mounted in cab within drivers reach. In folded down position arrow board shall not block view of light bar. A travel height placard shall be mounted on the dash. Automated electrical/hydraulic.

m. Two (2) work lights mounted at rear of utility body.

n. First Aid Kit (OSHA approved).

o. Upon "Notice to Proceed", Contractor shall submit "Application" (To State Motor Vehicle Safety Office) to meet the requirements of Section 286-202 (12), Hawaii Revised Statutes, for approval of a major modification. Construction, or reconstruction of a vehicle with a gross vehicle weight rating (GVWR) of 10,001 pounds and above. Application is available at:

State of Hawaii
Department of Transportation Highways
Motor Vehicle Safety Office
98-339 Ponohana Place
Aiea, Hawaii 96701

Copy of approved application shall be submitted at time of delivery.

20. Training:

Contractor shall provide proper and safe operation, maintenance of equipment. This training shall include a minimum of one (1) hour classroom and one (1) hour per operator hands on training. This service shall be provided at no additional cost to the State. Contractor shall provide classroom site. Training shall be consistent to OSHA requirements.

Copy of attendance record showing class date, time, location, class type, instructor's name and attendees shall be submitted to:

State of Hawaii Highways
Construction and Maintenance Branch
Attn: Equipment Superintendent/Safety Coordinator
869 Punchbowl Street, Room 404
Honolulu, Hawaii 96813

21. Note:

Bidder(s) shall submit with their bid a certified letter(s), from the manufacturer(s) to certify the prospective bidder as the Factory Authorized Warranty Dealer (letter require for both chassis and equipment). Failure to submit certified letter(s) shall be sufficient grounds for rejection of bid.

SECTION 18 - CAB/CHASSIS WITH AERIAL AND UTILITY BODY

18.1 SCOPE OF WORK - The work consists of furnishing and delivering one (1) only, Cab/Chassis with Aerial and Utility Body to the island of Oahu. The Contractor shall present the vehicle complete, ready to use, and fully operational.

18.2 CAB/CHASSIS WITH AERIAL AND UTILITY BODY - The Specifications contained herein establish minimum standards (unless stated differently). Vehicle offered shall include any other standard features not listed but detailed in manufacturer's brochures and deemed necessary for proper and safe operation of vehicle.

DETAILED SPECIFICATION FOR A CAB/CHASSIS WITH AERIAL AND UTILITY BODY

1. Model/Year: International, GMC, Ford, or equal, 2023 or latest production.
2. GVW Rating: 8,164.8 kg (18,000 lbs.) capacity minimum.
3. Wheel Base: 3,860.8mm (152 in.) minimum.
4. Cab to Axle: 2,133.6mm (84 in.) maximum.
5. Engine:
    a. Diesel powered, wet sleeved engine or dry sleeved engine with seven (7) year unlimited mileage warranty.
    b. Liquid cooled with deaeration system with tank and sight glass, full radiator guard.
    c. Six (6) cylinder minimum.
    d. Net horsepower 156.59 kW (210 HP) minimum, at rated RPM.
    e. Fuel water separator (Racor Model 21000) or manufacturers equal. Fuel tank 151.4L (40 gal.) minimum.
    f. Exhaust, single horizontal muffler with short tail pipe or manufacturer standard.
    g. Hour meter and tachometer.
6. Differential: Locking/limited slip.
7. Frame:
    a. Steel channel type.
    b. 36,000 psi, minimum.

8. Transmission:

    a. Allison AT545, 4-speed or equal.

    b. PTO/Clutch Pump for aerial unit operation.

    c. Automatic transmission oil temperature gauge.

9. Electrical:

    a. Twelve volt system with dual batteries.

    b. 150 AMP minimum alternator, capable of charging at low engine speeds.

    c. Color coded wiring or continuously numbered.

    d. Circuit breakers at main panel to replace all fuses except instrument cluster feed.

10. Steering: Powered.

11. Brakes:

    a. Hydraulic system.

    b. Antilock Brake System - full vehicle wheel control.

    c. Parking Brake System.

    d. Four wheel disc brake system.

12. Wheels/Tires:

    a. Seven (7) each; single front, dual rear, spare.

    b. Tires - 225/70 R 19.5 load rating F.

    c. Wheels – 19.5 x 6.0, disc painted steel 10-stud with steel hubs.

13. Axle:

    a. Front-· 3,175.2 kg (7,000 lbs.) minimum.

    b. Rear - 6,123.6 kg (13,500 lbs.) minimum.

14. Springs:

    a. Front - 3,175.2 kg (7,000 lbs.) minimum with shock absorbers.

    b. Rear· 6,132.6 kg (13,500 lbs.) minimum.

c. Manufacturer's standard auxiliary springs.

d. Heavy duty shock absorber (front and rear).

15. Cab

a. Aluminum/steel conventional cab. With seven (7) year unlimited warranty.

b. Complete head lining.

c. Clear safety glass on rear window (full width).

d. Full width bench seat or split bench, seat belt for three (3) people.

e. Steps and grab handles located on both sides of cab.

f. Floor mats.

g. Sun visor, driver and passenger.

h. Factory installed air condition.

i. Vinyl upholstery.

j. AM/FM radio, factory installed.

k. Dual exterior powered rear view mirrors (backs/brackets shall be aluminum/stainless steel, or non-corrosive composite type, 152.4mm x 406.4mm (6 in. x 16 in.) minimum. West Coast type or equal with convex bottom section. Interior mirror (day/night type).

l. Rain guards on both doors.

m. The lightbar system shall be a Whelen model FX0HIDOT or equal. The bar shall be sixty (60) inches long minimum. The main structure of the lightbar must be an extruded aluminum I-Beam design. The lightbar shall house all electronic components. The lightbar must have Hi/Low power control of all inboard LED modules. The lightbar shall contain one (1) control module I/O boardwhich must control all internal lightheads. The I/O board shall produce a minimum flash rate of 75 Comet flashes per minute with alternating comers, not an "x' pattern. There shall be ten (10) Scan Lock flash patterns to choose from. Each pair of LED lamps must be capable of operating in a different flash pattern. The lightbar shall have all linear LED modules and shall meet SAE-J845 Class I and SAE-J595 requirements. The lightbar shall have linear LED modules in the four corners.

Each linear 18 corner module shall consist of a minimum of eighteen (18) high output LED's permanently mounted within a single dual (over/under) "removeable" highly mirrored parabolic reflector for maximum light output.

The eighteen (18) LED's shall be mounted in two straight lines of 9 LED's each (over/under) for maximum light output. The linear reflector shall extend to the MR11 alley light with no appreciable open gap between the LED module on the alley light. The LED work light must be the same size module as used for the warning lights, but must consist of two staggered rows of six Super LED's and be able to flash and steady burn. All LED panels shall be the same design as the Linear 18 described above, and must contain 12 Super LED's (6 over 6). All inboard lightheads must be 400 Series (this will allow for placement of this lighthead in any inboard position). All LED inboard modules must produce a minimum 180 degree light pattern. The I/O module shall be I100% solid state with built-in reverse polarity protection and output short protection. The I/O board shall operate from 10 – 16 VDC with no degradation in flash rate. The lightbar shall be designed to have up to eight (8) lamps to the front, eight lamps to the rear, and one (1) on each end. Each lamp module position shall have colored lens sections, independent of the others, that match the color of the LED module. For split modules, clear lenses must be used. The LED panel must be mounted within the lightbar. The corner Linear LED's must have a two-intensity cruise light mode. This provides a lightbar that has illuminated corners (no flashing), which are used for marker lights. The user shall have a choice of ten (10) Scan- Lock flash patterns to choose from the LED modules, and four (4) Scan-Lock flash patterns for the flashing work lights and flashing alleys. The pattern must be selected by an external connection, not requiring the user to open the lightbar to change flash patterns.

The light bar shall have: Front - Two (2) Corner Linear18's (amber), Eight (8) inboard Linear12 LED's (6 amber/ 2 white); Rear - Two (2) Comer Linear 18's (amber), Six (6) Inboard Linear12 LED's (4 amber/ 2 red), Two (2) Inboard staggered white TIR12 Super-Led modules for use as work lights; Ends - Two (2) MR11 alley lights; Additional, two (2) spare MR11 halogen replacement bulbs.

The light bar shall be wired to function as follows: All Amber warning LED's; All white warning LED's and flashing LED work light; Left Alley; Right Alley; Flashing Alley; LED Work light, steady; Hi/Low power. All switches shall be lighted type and mounted within a console attached to the dash or mounted as part of OEM console, with provisions to mount an external radio system. Lightbar power cable must be brought to the power source with a fuse (thermal circuit breakers shall be rejected). Power cable shall be labeled with a permanent label at the power source, marked "Lightbar". All cable and wiring shall be conduit protected and shall use grommets through sheet metal panels.

Note: The rear bar red LED's must be wired to the OEM front tum/hazard circuit, for activation with turn signals, and 4-way flasher.

The four corner Linear 18's must be identical and all other inboard lightheads

must be 400 series. All internal lightheads must snap into sliding brackets that are mounted in the lightbar.

The lightbar must contain a maximum of eight (8) screws, four (4) for each end cap to access all internal lightheads. Lightheads that require the removal of more than eight screws to remove all internal lightheads are unacceptable. Lightbars with modules mounted outside of the main lightbar are not acceptable. The lightbar shall contain a permanent mounting kit to prevent theft of the lightbar.

n. Twelve (12) volt power accessory outlet.

o. Rear window guard.

p. Travel height placard, mounted on dash.

q. Air bag for driver side.

16. Body:

a. Aerial Service Line/Step Body, suitable for installing on any chassis with a minimum CA dimension of2,133.6mm (84 in.), built in accordance with standard specifications with dimensions and compartments as specified.

b. Body fabricated from hot-dipped galvanized steel with 100% iron zinc alloy coating:

i. Sixteen (16) gauge outside panels.

ii. Fourteen (14) gauge end panels.

iii. Eighteen (18) gauge shelving.

iv. Twenty (20) gauge double panel doors.

v. Twelve (12) gauge tread plate steel door.

vi. Structural channel sub base with 76.2mm (3 in.) cross members.

vii. Fourteen (14) gauge tread plate installed on top of body compartments.

c. Body dimensions: Minimum

i. 3,352.8mm (132 in.) overall length.

ii. 2,362.2mm (93 in.) outside width.

iii. l,092.2mm (43 in.) body height.

iv. 457.2mm (18 in.) compartment depth.

v. l,447.8mm (57 in.) floor width (cargo area).

d. Compartments - left side (driver's side)

i. First vertical - 762mm (30 in.) w. Two (2) adjustable shelves with removable dividers on 101.6mm (4 in.) centers.

ii. Second vertical - 711.2mm (28 in.) w. Two (2) adjustable shelves with removable dividers on 101.6mm (4 in.) centers.

iii. Horizontal - l,168.4mm (46 in.) w. One (I) removable shelf with removable dividers on 203.2mm (8 in.) centers.

iv. Rear vertical - 711.2mm (28 in.) w. Six (6) fixed material hooks.

e. Compartments- right side (passenger side)

i. First vertical - 762mm (30 in.) w. Six (6) fixed material hooks.

ii. Second vertical - 711.2mm (28 in.) w. Six (6) fixed material hooks.

iii. Horizontal- 1,168.4mm (46 in.) w. One (1) removable shelf with removable dividers on 203.2oun (8 in.) centers.

iv. Rear vertical - 711.2mm (28 in.) w. Two (2) adjustable shelves with removable dividers on 101.6mm (4 in.) centers.

v. Through shelf, full length and rear door.

f. Standard Body features:

i. Wheel chock holders, installed one (1) each side in fender panels behind rear wheels, with rubber wheel chocks with metal handles.

ii. All doors full, double paneled, self-sealed wit built in drainage for maximum weather tightness. Steel hinge rod extends entire length of door.

iii. All doors shall have cadium plated flush type, single point locks with recessed handles, included keyed alike locks and two-stage strikers.

iv. All edges either folded or rolled for strength and safety.

v. Door header drip rail at top for maximum weather protection.

vi. Neoprene fenders.

vii. Completely painted; all interior bases and walking surfaces shall be coated with non-skid.

viii. Lights in all compartments, pressure switches on each door, compartment lights wiring through master switch in cab.

g. Custom Features:

i. Galvanized rear extension/bumper tail-shelf 736.6mm (29 in.).

ii. One (1) each cable step. Installed curbside of rear platform extension.

iii. Grab handles curbside of tail-shelf (shall be designed for 3-point contact).

iv. Two (2) each large splash aprons, installed behind rear wheels.

v. Two (2) each large mud flaps/brackets mounted behind rear wheel.

vi. Triangle road safety kit and ten (10) each yellow-green safety glow light sticks. Ten (10) inch size with bipod stands by Omni Glow.

vii. One (1) 2.2 kg (5 lbs.) ABC Dry Chemical Fire extinguisher mounted in first left side compartment.

viii. Lights and reflectors in accordance with FMVSS#l08 modular lighting package, all wiring connections crimped with solderless connectors and enclosed in shrink tube with waterproof sealant. All wire ends are tinned before insertion into plugs. All plug connections are completely sealed and weather proof. Entire assembly is enclosed in a continuous plastic loom to form a one-piece harness. Lighting package is complete with sealed polycarbonate lenses and housings, affording superior impact and heat protection, flush mounted in rubber grommets as follows: two (2) clear back up lights; four (4) red stop/tum/tail lights; seven (7) 63.5 mm (2.5 in.) diameter red clearance lights; license plate light.

17. Aerial Unit:

a. ALTEC AT-35G or approved equal (shall be approved in writing before bid opening), insulated articulating arm and continuous rotation. Installed behind chassis cab.

b. Front torsion bar- front axle, under frame.

c. Rear torsion bar- rear under frame.

d. Ground to bottom of platform height 10,911.84mm (35.8 ft.).

e. Working height 12,435.84mm (40.8 ft.).

f. Maximum reach to edge of platform 8,625.84mm (28.3 ft.) at 3,870.96mm (12.7 ft.) platform height (edge of platform).

g. Post type pedestal design with large service openings.

h. Continuous rotation provided by worm gear drive, equipped with extended shaft for manual rotation driving a shear ball bearing rotation gear. Provisions for adjusting backlash.

i. Turntable shall have a steel bottom plate, minimum thickness of 25.4mm (1 in.). Bottom of plate shall be machined to ensure flat mounting surface for rotation bearing.

j. The articulating arm shall be designed so that the stress proof articulating arm and lower boom are compensating. Articulating arm shall remain within 457.2mm (18 in.) of side of truck.

k. Lift cylinders shall be one-piece design cast steel on the blind end, which utilizes cartridge type bi-directional counter balance holding valves.

l. Lower boom- fabricated, reinforced steel box structure. Pivot pin of high strength chrome plated steel with self-lubricating replaceable, non-pivot pin metallic bearings.

m. Upper Boom - rectangular filament wound fiberglass, providing a minimum of 203mm (8 in.) of isolation when retracted and 889mm (35 in.) when extended.

n. Upper Boom extension shall be extended and retracted by a double acting hydraulic extension cylinder installed within the booms.

o. Platform is leveled by hydraulic leveling means, contained within _the upper boom and designed to maintain the dielectric integrity of the aerial device. Controls for leveling and tilting the platform shall be located at the platform and at lower control. Leveling system shall include a system to lock the platform in the event of hydraulic line failure. System shall maintain a level platform throughout the full range of boom articulation.

p. Dielectric rating, ANSI, Category C, 46 kV.

q. ISO 9001 certification, this aerial device shall be manufactured in a facility that is certified to meet ISO 9001 requirements.

r. The control system shall be a full pressure type, operating at 152 BAR (2,200 PSI) maximum. The upper control located at the platform shall consist of a single handle control. This control shall allow the operator to make

simultaneous multiple boom movements. An additional separate control shall activate the articulating arm, this control shall be mechanically locked to prevent accidental actuation and should not require the actuation of the trigger on the single hand control.

Conventional multiple lever ground controls located at the turntable shall include an upper control override.

s. A valve located at the boom tip and easily accessible by the operator without having to remove any covers, allows the lower boom to be lowered in the case of engine/hydraulic system failure.

t. Hydraulic tool circuit control easily accessible to the operator activated the tool circuit to provide 18.9 LPM (5GPM) at 138 BAR (2,000 PSI), One set of HTMA quick disconnect couplings located within a protected location inside the control cover at the platform.

u. Diagnostic pressure test, quick disconnect couplings located at turntable.

v. Two (2) strobe lights (Whelen Model No. 1200 DHAP or equal) mounted one on each side of aerial pivot base arm.

w. "Boom out of Stow" warning light in cab.

x. Engine start/stop control at the platform, and toggle switch at the turntable.

y. Emergency Operating System: Electrical powered, includes pump and motor operated from truck battery, captive air activated, automatic.

z. Basket 159kg (350 lbs.) capacity with 180° platform rotator.

aa. Vertical outrigger installed rear of chassis cab. Maximum of 2,171.7 mm (85.5 in.) spread at maximum penetration. Controls located at right and left sides of tail-shelf. Shall have motion alarm switches.

18. Other:

a. Two (2) each safety harness large and lanyards 1,828.8mm (6-ft.) decelerating· type (fall protection). To include proper fall protection training consistent to OSHA requirements.

b. Electrical switch panel - coin box style to include truck/equipment switch; hour meter; boom out of stow; strobe flashers.

c. Electrical inverter DC to AC static, 1800 w with duplex (GFI protected outlets mounted at right rear. Two (2) deep cycle batteries group 27,700 CCA, wired in isolation.

d. Work lights, two (2) each 100,000candle power, located at rear of cab and at

platform. Battery powered.

e. Hydraulic oil reservoir 56.7 L (15 gal.) minimum capacity, internally mounted suction filter and gate valve.

f. Boom rest.

g. Front bumper, manufacturer standard with single or dual tow hooks.

h. First service kit shall include all required filters (oil, fuel, air, breather, transmission, etc.).

i. Safety Inspection/PUC Certification, License, Registration and Certificate as required in General Provisions.

j. Complete after factory rustproof with seven (7) year unlimited warranty (complete unit). Applied in accordance with Federal Specifications 297A at its latest revision.

k. Electronic reverse alarm.

l. Road safety triangle kit, and ten (10) each yellow-green safety glow sticks, ten inch size with bipod stand, by Omni Glow.

m. Technical resources - one (1) copy of repair manual, one (I) copy of parts catalog, two (2) copies of operations manual.

n. Color, white high gloss enamel, complete unit. Apply non-skid to all walking surfaces. Shall be outlined with conspicuity material (reflexite or equal) red and white.

o. Complete unit shall be designed to carry a minimum of 907.2 kg (2,000 lbs.) materials/supplies not including driver, passengers, and fluids.

p. First Aid Kit (OSHA approved).

q. Upon "Notice to Proceed", Contractor shall submit "Application" (To State Motor Vehicle Safety Office) to meet the requirements of Section 286-202 (12), Hawaii revised statutes, for approval of a major modification. Construction, or reconstruction of a vehicle with a gross vehicle weight rating (GVWR) of 10,001 pounds and above. Application is available at:

State of Hawaii
Department of Transportation
Highways
Motor Vehicle Safety Office
98-339 Ponohana Place
Aiea, Hawaii 96701

Copy of approved application shall be submitted at time of delivery.

19. Training:

Contractor shall provide proper and safe operation, maintenance of equipment. This training shall include a minimum of one (1) hour classroom and one (1) hour per operator hands on training. This service shall be provided at no additional cost to the State. Contractor shall provide classroom site. Training shall be consistent to OSHA requirements.

Copy of attendance record showing class date, time, location, class type, instructor's name and attendees shall be submitted to:

State of Hawaii Highways
Construction and Maintenance Branch
Attn: Equipment Superintendent/Safety Coordinator
869 Punchbowl Street, Room 404
Honolulu, Hawaii 96813

20. Note:

Bidder(s) shall submit with their bid a certified letter(s), from the manufacturer(s) to certify the prospective bidder as the Factory Authorized Warranty Dealer (letter required for both chassis and equipment). Failure to submit certified letter(s) shall be sufficient grounds for rejection of bid.

SECTION 19- CAB/CHASSIS WITH SCISSORS LIFT

19.1 SCOPE OF WORK - The work consists of furnishing and delivering one (1) only, Cab/Chassis with Scissors Lift to the island of Oahu. The Contractor shall present the vehicle complete, ready to use, and fully operational.

19.2 CAB/CHASSIS WITH SCISSORS LIFT - The Specifications contained herein establish minimum standards (unless stated differently). Vehicle offered shall include any other standard features not listed but detailed in manufacturer brochures and deemed necessary for proper and safe operation of vehicle.

DETAILED SPECIFICATION FOR A CAB/CHASSIS WITH SCISSORS LIFT

1. Model/Year: Ford, GMC or equal, 2023 or latest production.
2. Type: 2-Wheel drive. Dual rear wheel.
3. GVW Rating: 6,804 kg (15,000 lbs.) minimum.
4. Wheel Base: 2,768.6mm (109in) minimum.
5. Engine:
    a. Diesel powered.
    b. 205 horsepower at rated RPM, minimum.
    c. Heavy duty cooling system.
    d. Fuel water separator Roosamaster or manufacturer equal.
6. Transmission:
    a. Six-speed automatic minimum.
    b. Transmission oil cooler.
    c. Additional external transmission oil cooler.
7. Exhaust: Manufacturer standard; Exhaust Brake
8. Axle:
    a. Front 3,098kg (6,830lbs.) minimum.
    b. Rear 6,600kg (14,550lbs.) minimum
9. Differential:

a. Rear wheel drive.

b. Ratio - Manufacturer recommended.

10. Electrical system:

a. Twelve (12) volt with alternator capable of charging battery at low engine speeds.

b. Dual battery system.

11. Steering: Power or power assisted.

12. Brakes:

a. Power or power assisted.

b. Anti-lock brake system; Electronic brake distribution.

13. Cab/Interior:

a. Aluminum/steel cab over with seven (7) year warranty.

b. Individual drivers and passenger seats with safety belts.

c. Upholstery of manufacturer standard vinyl material.

d. Power windows on all doors; rain guards.

e. Floor covering vinyl/rubber with insulation. With floor mats.

f. Dual West Coast mirrors with spot mirrors, stainless/aluminum/composite backs and brackets.

g. AM/FM radio, twelve (12) volt accessory outlet.

h. Factory installed air condition.

14. Body:

a. 2,438mm x 3,657.6mm (8' x 12'), heavy duty aluminum flatbed (diamond plate flooring) with 1,016mm (40 inch) removable stakes.

b. All welded aluminum construction.

c. 76.2mm (3 inch) I-beam cross member on 304.8mm (12 inch) centers.

d. Welded and reinforced all rear comers.

e. Recessed DOT required markers and lights with encased continuous wiring and protected terminals (weather proofed). All wiring passing

through any metal shall be through a grommet.

f. Wheel wells with mud flaps.

g. Scissors Lift-Tesco AL28T, SLT29 or equal. Shall have the following minimum requirements: 8,534mm (29 feet) platform working height; 453.6kg (1,000 lbs.) minimum load capacity; 340.2kg (750 pounds) lift capacity fully extended right/left; Platform 60" x 96" inside dimension with 42" high railing able to support 300 lbs. minimum, with 6" kick plate at bottom of platform, and 30" door; One set of vertical stabilizers; Emergency stop switch at platform control station and platform with engine remote start/stop on upper control; Emergency platform lowering at control station and platform; Lock valves on lift and stabilizer cylinders; Independently operated stabilizers two each at rear of cab and two each at rear of flatbed or manufacturer recommendation; Double acting rod type lift cylinders to provide constant speed of ascent and descent; Lift cylinders shall be equipped with holding valves that contain the pressurized hydraulic within the cylinders; All steel platform with fall protection attachment anchors/lanyards (2 each); Traversing platform, sixty inches in both directions; additional power supply in case of main system failure; Cab mounted engine hour meter; Platform lowering alarm; inverter with 110 AC outlet with GFI at platform; P.T.O-Pump drive with P.T.O. access opening.

15. Bumpers:

a. Standard front, with tow hooks mounted to frame.

b. Pintle hook and ball combination, 907.2kg (2,000lbs) capacity, mounted on rear "A" bracket frame. Center of hitch to be mounted approximately 711.2mm (28inches) from ground level.

16. Tires/Wheels:

a. Seven (7) LT225/70R19.5F tubeless highway tread, load range F, mounted on 10 stud wheels with steel hubs.

b. Full size spare.

c. No chrome/aluminum wheels unless factory standard.

17. Suspension:

a. Heavy duty front/rear shock absorbers.

b. Axles, springs, and shock absorbers shall meet manufacturer and Federal GAWR requirements for GVW submitted. Shall be heavy duty.

c. Note: Front and rear springs shall not bottom out at maximum vehicle load

capacity set by manufacturer.

18. Color:

    a. White, Dupont 93-96923, High Gloss Enamel or equal.

    b. Shall be outlined with red/white conspicuity material (reflexite).

19. Other:

    a. Reverse alarm.

    b. Gauge package.

    c. 2.2kg (5 lbs.) ABC Fire extinguisher mounted in cab.

    d. Complete after factory rustproof, with minimum seven (7) year, unlimited mileage warranty. In accordance with Federal Specification 297A or its latest revision.

    e. Road Safety Triangle Kit and ten (10) each Yellow Green Safety Glow Light Sticks, 10- inch size with bi-pod stand by Omni Glow.

    f. Operator Manual (2 copies). CD/DVD/Book Format.

    g. Service and Repair Manual, Parts Manual one (1) copy each. CD/DVD/Book Format.

    h. Safety Inspection, License, Registration and Certificates as required in General Specifications. To include PUC Certification.

    i. First service kit shall include all filters as required by manufacturer (oil, fuel, air, breather, transmission, etc.)

    j. The lightbar system shall be a Whelen model FX0HIDOT or equal. The bar shall be sixty (60) inches long minimum. The main structure of the lightbar must be an extruded aluminum I-Beam design. The lightbar shall house all electronic components.

       The lightbar must have Hi/Low power control of all inboard LED modules. The lightbar shall contain one (1) control module I/O boardwhich must control all internal lightheads. The I/O board shall produce a minimum flash rate of 75 Comet flashes per minute with alternating corners, not an "x' pattern. There shall be ten (10) Scan Lock flash patterns to choose from. Each pair of LED lamps must be capable of operating in a different flash pattern. The lightbar shall have all linear LED modules and shall meet SAE-J845 Class I and SAE-J595 requirements. The lightbar shall have linear LED modules in the four corners.

Each linear 18 corner module shall consist of a minimum of eighteen (18) high output LED's permanently mounted within a single dual (over/under) "removeable" highly mirrored parabolic reflector for maximum light output. The eighteen (18) LED's shall be mounted in two straight lines of 9 LED's each (over/under) for maximum light output. The linear reflector shall extend to the MR11 alley light with no appreciable open gap between the LED module on the alley light. The LED work light must be the same size module as used for the warning lights,but must consist of two staggered rows of six Super LED's and be able to flash and steady burn. All LED panels shall be the same design as the Linear 18 described above, and must contain 12 Super LED's (6 over 6). All inboard lightheads must be 400 Series (this will allow for placement of this lighthead in any inboard position). All LED inboard modules must produce a minimum 180 degree light pattern. The I/O module shall be 100% solid state with built-in reverse polarity protection and output short protection. The I/O board shall operate from 10 - 16 VDC with no degradation in flash rate. The lightbar shall be designed to have up to eight (8) lamps to the front, eight lamps to the rear, and one (1) on each end. Each lamp module position shall have colored lens sections, independent of the others, that match the color of the LED module. For split modules, clear lenses must be used. The LED panel must be mounted within the lightbar. The corner Linear LED's must have a two-intensity cruise light mode. This provides a lightbar that has illuminated corners (no flashing), which are used for marker lights.

The user shall have a choice of ten (10) Scan-Lock flash patterns to choose from the LED modules, and four (4) Scan-Lock flash patterns for the flashing work lights and flashing alleys. The pattern must be selected by an external connection, not requiring the user to open the lightbar to change flash patterns.

The light bar shall have: Front - Two (2) Corner Linear 18's (amber), Eight (8) inboard Linear12 LED's (6 amber/ 2 white); Rear - Two (2) Corner Linear 18's (amber), Six (6) Inboard Linear12 LED's (4 amber/ 2 red), Two (2) Inboard staggered white TIR12 Super-Led modules for use as work lights; Ends -Two (2) MR11 alley lights; Additional, two (2) spare MR11 halogen replacement bulbs. The light bar shall be wired to function as follows: All Amber warning LED's; All white warning LED's and flashing LED work light; Left Alley; Right Alley; Flashing Alley; LED Work light, steady; Hi/Low power. All switches shall be lighted type and mounted within a console attached to the dash or mounted as part of OEM console, with provisions to mount an external radio system. Lightbar power cable must be brought to the power source with a fuse (thermal circuit breakers shall be rejected).

Power cable shall be labeled with a permanent label at the power source, marked "Lightbar". All cable and wiring shall be conduit protected and shall use grommets through sheet metal panels.

Note: The rear bar red LED's must be wired to the OEM front turn/hazard circuit, for activation with tum signals, and 4-way flasher.

The four corner Linear18' s must be identical and all other inboard lightheads must be 400 series. All internal lightheads must snap into sliding brackets that are mounted in the lightbar.

The lightbar must contain a maximum of eight (8) screws, four (4) for each end cap to access all internal lightheads. Lightheads that require the removal of more than eight screws to remove all internal lightheads are unacceptable. Lightbars with modules mounted outside of the main lightbar are not acceptable. The lightbar shall contain a permanent mounting kit to prevent theft of the lightbar.

k. Warranty shall be a minimum of 36 months/36,000 miles. (To include all attachments.)

l. First Aid Kit (OSHA/ANSI recommended).

m. Upon "Notice to Proceed", contractor shall submit "Application" (To State Motor Vehicle Safety Office) to meet the requirements of Section 286-202 (12), Hawaii Revised Statutes, for approval of a major modification, construction, of reconstruction of a vehicle with a gross vehicle weight rating (GVWR) of 10,001 pounds and above.

Application is available at:

State of Hawaii
Department of Transportation
Highways
Motor Vehicle Safety Office
98-339 Ponohana Place
Aiea, Hawaii 96701

Copy of approved application shall be submitted at time of delivery.

20. Training:

Contractor shall provide proper and safe operation and maintenance of vehicle/equipment. This training shall include a minimum of one (1) hour classroom and one (1) hour per operator hand-on training. Training shall be consistent to OSHA requirements. This service shall be provided at no additional cost to the State. Contractor shall provide classroom site.

Copy of attendance record showing class date, location, class type, instructors name and attendees shall be submitted to:

State of Hawaii Highways
Construction & Maintenance Branch
Attn: Equipment Superintendent/Safety Coordinator
869 Punchbowl Street, Room 404
Honolulu, Hawaii 96813

21. Note:

Bidder(s) shall submit with their bid a certified letter(s) from the manufacturer(s) to certify the prospective bidder as the Factory Authorized Warranty Dealer (letter required for both chassis and equipment). Failure to submit certified letter(s) shall be sufficient grounds for rejection of bid.

SECTION 20 - CREW CAB/CHASSIS STAKE TRUCK WITH LIFT GATE

20.1 SCOPE OF WORK - The work consists of furnishing and delivering one (1) only, Crew Cab/Chassis Stake Truck with Lift Gate to the island of Oahu. The contractor shall present the vehicle complete, ready to use and fully operational.

20.2 CREW CAB/CHASSIS STAKE TRUCK WITH LIFT GATE - The specifications contained herein establish minimum standards (unless stated differently). Vehicle offered shall include any other standard features not listed but detailed in manufacturer's brochures and deemed necessary for proper and safe operation of vehicle.

DETAILED SPECIFICATIONS FOR A CREW CAB/CHASSIS STAKE TRUCK WITH LIFT GATE

1. Model/Year: GMC, International, Peterbilt, Ford or equal. 2023 or latest production.

2. GVW Rating: 11,566.8 kg (25,500lbs.) minimum, 11,793 kg (26,000 lbs.) maximum.

3. Wheel Base: 5,232.4 mm (206 in.) minimum. Dual rear wheels.

4. Cab to Axle: 2,565.4 mm (101 inch) minimum.

5. Engine:

    a. Diesel powered, wet sleeved engine or dry sleeved engine with ten (10) year unlimited mileage warranty. Emissions certified tier 4. Shall have capability of operating on a B20 blend of bio-diesel with no adverse effects.

    b. Six (6) cylinders minimum

    c. Net horsepower 300 HP minimum, at rated RPM, 1,150 ft. lb. torque. Engine compression brake.

    d. Liquid cooled with deaeration system with tank and sight glass, full radiator guard. Silicone cooling hoses.

    e. Fuel water separator DAVCO Fuel Pro 382, B20 bio-diesel compatible.

    f. Fifty (50) gallon fuel tank including nine (9) gallon diesel exhaust fluid (DEF) tank, minimum.

6. Exhaust: Single horizontal muffler with after treatment device frame mounted and short tail pipe or manufacturer standard. Two position exhaust switch to inhibit diesel particulate filter regeneration, as long as the switch is "on" position.

7. Transmission:

a. Automatic, close ratio 6-speed with power take off (PTO) gear (Allison MD-3060P or equal).

b. Transmission shift control - push button with lockout or lever type.

c. Automatic transmission oil temperature gauge.

8. Axle:

a. Front - 3,628.8 kg (8,000 lbs.) capacity, minimum.

b. Rear- 7,938 kg (17,500 lbs.) capacity, minimum.

i. 180/190 wheel ends.

ii. Gear ratio - manufacturer recommended to meet criteria of both highways (including up/down hill terrain) and off-road hauling and dumping of various materials (density and weight).

9. Suspension:

a. Front- 4,082.4 kg (9,000 lbs.) capacity minimum.

b. Rear- 10,432.8 kg (23,000 lbs.) capacity, minimum; Air suspension with dash mounted dump switch and light.

c. Heavy Duty front shock absorbers.

10. Tires/Wheels:

a. Seven (7) each, truck, tubeless type, same size single front, dual rear, and spare. 265/70R 19.5, load range G, minimum.

b. Dual rear wheels shall be able to accept any brand of tire; tires shall not touch when inflated and loaded.

c. Seven (7) each wheels, disc type, hub piloted; same size single front, dual rear, and spare. 19.5 x 7.50, 10-stud DC rims with steel hubs.

d. No chrome/aluminum wheels unless factory standard.

11. Brakes:

a. Dual air system 13.2 cubic feet compressor, with air dryer and pressure gauge with low air warning buzzer.

b. Front and rear disc brake system.

c. Safety spring loaded on rear axle, cab controlled emergency air tank release.

d. Parking piggyback, spring actuated, double diaphragm; anchor lock MGM or equal.

e. Anti-lock brake system. Full vehicle wheel control, including automatic traction control.

12. Steering: Powered.

13. Electrical:

a. Dual twelve (12) volt battery. AGM type batteries shall have the rating of 1250 CCA, Minimum. Aluminum Battery storage case.

b. Alternator: 115 amp minimum, capable of charging at low engine speeds.

14. Cab:

a. Aluminum crew cab with tilt assist hood or steel conventional crew cab with forward tilt assist hood and ten (10) year warranty. Cab air suspension shall be included.

b. Complete head lining.

c. Seating for six (6), vinyl upholstery, seat belts for six (6) people.

d. Steps and grab handles located on both sides of cab, allowing for 3-point contact upon entering/disembarking, at all cab doors.

e. Floor mats.

f. Sun visor for driver and passenger.

g. Factory installed air condition.

h. AM/FM/Bluetooth radio. Reverse camera.

i. Twelve (12) volt accessory outlet

j. Rain guards or vent shades on doors.

k. Dual exterior rear view mirrors (backs and brackets shall be aluminum, or stainless steel, or non-corrosive composite type), approximate 152.4 mm x 406.4 mm (6 in. x 16 in.) Minimum. West coast type or equal, with convex bottom section. Power type. Passenger down view mirror.

15. Body:

a. Flatbed with stake sides, 4,267.2 mm (14 ft.) long by 2,438.4 mm (8 ft.) wide.

b. Stakes - reinforced steel stakes 1,066.8 mm (42 in.) high.

c. Stake Rack- straight grained hardwood constructed; six (6) removable sections, three (3) sections, on each side of flatbed; each section shall consist of two (2) vertical steel stakes connecting four (4) horizontal wooden slats.

d. Mechanical, rotating stake interlocks located at the top of each stake section to serve as connection devices.

e. Stake pockets - steel lined, flush with floor.

f. Flooring- 3.2 mm (1.8 in.) diamond plate steel floor minimum.

g. Four (4) foot high steel headboard, 3/16 inch thick and steel frame. Shall have rear window cutout with guard (cutout shall be size of rear window). Shall not block view of light bar.

h. Two (2) tool boxes, one (1) on each side of the vehicle under the stake body rear of cab. Heavy duty, weather proof, aluminum construction 72 inch x 18 inch x 18 inch minimum. Tamper proof, keyed alike.

16. Bumper:

a. Heavy duty front bumper.

b. One (1) or two (2) tow hooks mounted on front bumper or chassis front frame.

c. Electrical/hydraulic lift gate with power closing; Diamond plate steel platform; 1,360.8 kg (3,000 lbs.) capacity; tuck away type; tapered wedge ramp, safety device for control levers when not in use (anti-tamper).

17. Preparation: All bare metal shall be treated with OSPHO and primed prior to application of finish coat.

18. Color:

a. White, Dupont 93-96923 High Gloss Urethane or equal.

b. Reflective chevron markings (reflexite or equal) on bottom of lift gate- Omaha orange and white (comparable to existing State Highways Fleet).

c. Stake bed and components shall be corrosion treated, primed and painted black.

19. Other

a. Reverse alarm.

b. Gauge package.

c. 2.2 kg (5 lbs.) fire extinguisher mounted in cab.

d. Clearance lights, reflectors, identification lights, and directional lights shall conform with PUC regulations.

e. Road safety triangle kit; and self-charging four pack kit, Aervoe Super LED Road Flares, shall have yellow housing with red LED lighting. All housing and case shall be etched "STATE DOT HIGHWAYS".

f. Complete after factory rust proofing, with minimum seven (7) year, unlimited mileage warranty. In accordance with Federal Specifications 297A at its latest revision.

g. PUC Certification, License, Registration and Certificates as required in General Specifications.

h. The light bar system shall be a Whelen Model HIDOTF4WO with photo cell or equal. The light bar shall be sixty (60) inches long minimum. The light bar shall house all electronic components. The light bar must have Hi/Low power control of all inboard LED modules. The I/O board shall produce a minimum flash rate of 75 comet flashes per minute with alternating comers, not and "X" pattern. There shall be ten (10) scan lock flash patterns to choose from. Each pair of LED lamps must be capable of operating in a different flash pattern. The light bar shall have all linear LED modules and shall meet SAE-J845 Class I and SAE-J595 requirements. All LED inboard modules must produce a minimum 180 degree light pattern. The I/O module shall be 100% solid state with built in reverse polarity protection and output short protection. The I/O board shall operate from 10 - 16 VDC with no degradation in flash rate.

Shall have switch controller Whelen PCCl0W or equal.

The light bar shall be programmed/wired for a rear lower duplex traffic advisor function. Switching sequence as follows: #1 -Amber warning; #2- White warning lights (flashing); #3 - Red rear warning lights (flashing); #4 - Left alley; #5 - Right alley; #6 - Rear work lights steady burn; #7 - Cruise light comer steady bum; #8 - Traffic advisor left; #9 - Traffic advisor right; #IO-Front work lights steady bum; -Note, #8 and #9 together will activate split traffic advisor by turning on both left and right traffic advisor buttons at eh same time.

All switches shall be lighted type and mounted within a console attached to the dash or mounted as part of OEM console, with provisions to mount an external radio system. Light bar cable must be brought to the power source with a fuse (thermal circuit breakers shall be rejected).

Power cable shall be labeled with a permanent label at the power source, marked "light bar". All cable and wiring shall be grommet protected and shall use grommets through sheet metal panels.

The four-corner linear 18's must be identical and all other inboard light heads must snap into sliding brackets that are mounted in the light bar. The light bar shall contain a permanent mounting kit to prevent theft of the light bar, and be laser etched "STATE DOT HIGHWAYS", lettering shall be 1.5 inches tall. Etching shall be at the top of the light bar on both ends, lettering to face out.

i. Vehicle shall conform to Code of Federal Regulations, Title 40, Part 85, Control of Air Pollution from New Motor Vehicles, Engines, Environmental Protection Agency; Federal Motor Vehicle Safety Standards.

j. Vehicles shall conform to all applicable State, Federal and OSHA requirements necessary for licensing, registration and certification process.

k. Technical resources: One (1) copy of Repair Manual, one (1) copy of Parts Catalog, two (2) copies of Operator's Manual. Book format/CD/DVD.

l. First Service Kit shall include all required filters (oil, fuel, air, breather, transmission, etc.).

m. Vehicle shall be outlined with conspicuity material tape, along the perimeters. conspicuity material shall be red and white (reflexite or equal).

n. Dual rear mud flaps.

20. Upon "Notice to Proceed", contractor shall submit "Application" (To State Motor Vehicle Safety Office) to meet the requirements of Section 286-202 (12), Hawaii Revised Statutes, for approval of a major modification, construction, or reconstruction of a vehicle with a gross vehicle weight rating (GVWR) of 10,001 pounds and above.

Application is available at:

State of Hawaii
Department of Transportation
Highways
Motor Vehicle Safety Office
98-339 Ponohana Place
Aiea, Hawaii 96701

Copy of approved application shall be submitted at time of delivery.

21. Training: Contractor shall provide proper and safe operation, maintenance of equipment. This training shall include a minimum of one (1) hour classroom and one (1) hour per operator hands-on training. Training shall be consistent to OSHA requirements. This service shall be provided at no additional cost to the State. Contractor shall provide classroom site.

Copy of attendance record showing class date, location, class type, instructors name

and attendees shall be submitted to:

State of Hawaii Highways
Construction and Maintenance Branch
Attn: Equipment Superintendent/Safety Coordinator
869 Punchbowl Street, Room 404
Honolulu, Hawaii 96813

22. Bidder(s) shall submit with their bid a certified letter(s) from the manufacturer(s) to certify the prospective bidder as the Factory Authorized Warranty Dealer (letter required for both chassis and equipment).

SECTION 21 - CAB/CHASSIS WITH FLAT BED DUMP BODY

21.1 SCOPE OF WORK- The work consists of furnishing and delivering one (1) only, Cab/Chassis with Flat Bed Dump Body to the island of Kauai. The contractor shall present the vehicle complete, ready to use and fully operational.

21.2 CAB/CHASSIS WITH FLAT BED DUMP BODY- The specifications contained herein establish minimum standards (unless stated differently). Vehicle offered shall include any other standard features not listed but detailed in manufacturer's brochures and deemed necessary for proper and safe operation of vehicle.

DETAILED SPECIFICATIONS FOR A CAB/CHASSIS WITH FLAT BED DUMP BODY

1. Model/Year: GMC, International, Peterbilt, Ford or equal. 2023 or latest production.
2. GVW Rating: 8,164.8 kg (18,000 lbs.) minimum, 11,793.6kg (26,000lbs) maximum.
3. Wheelbase: 3,680.8 mm (152 in.) minimum.
4. Cab to Axle: 2,133.6 mm (84 in.) minimum.
5. Axle to Frame: 1,600.2 mm (63 in.) minimum.
6. Engine:
    a. Diesel powered, wet sleeved engine or dry sleeved engine with seven-year (7) year unlimited mileage warranty.
    b. Liquid cooled with deaeration system with tank and sight glass, full radiator guard.
    c. Six (6) cylinders, minimum.
    d. Net horsepower 300 HP minimum, at rated RPM. Exhaust Brake.
    e. Fuel water separator Roosamaster or manufacturer equal.
    f. Forty (40) gallon fuel tank minimum.
7. Exhaust: Single horizontal muffler.
8. Transmission:
    a. Automatic, close ratio, 6-speed, with PTO gear (Allison 2200RDS series or equal).

b. Transmission shift control - push button with lockout or lever type.

c. PTO power shift.

d. Automatic transmission oil temperature gauge.

e. Transmission oil cooler.

f. Four-wheel drive (4x4).

9. Axle:

a. Front - 3,175 kg (7,000 lbs.) capacity, minimum.

b. Rear - 6,123 kg (13,500 lbs.) capacity minimum.

a. 180/190 wheel ends.

b. Gear ratio - manufacturer recommended to meet criteria of both highways (including up/down hill terrain) and off road hauling and dumping of various materials (density and weight).

10. Suspension:

a. Front- 3,175 kg (7,000 lbs.) capacity, minimum.

b. Rear - 6,804 kg (15,000 lbs.) capacity, minimum; varirate.

c. Auxiliary Rear - 2,041.2 kg (4,500 lbs.) capacity, minimum.

d. Note - Front and Rear springs shall not bottom out at maximum vehicle load capacity set by the manufacturer (the State carries various materials at various weights).

e. Front and rear stabilizer bars.

11. Shock Absorbers: Heavy Duty front and rear.

12. Wheels:

a. Seven (7) each, disc type, hub piloted; Same size single front, dual rear, and spare.

b. 19.5 x 6.75, 8-stud DC rims with steel hubs.

13. Tires:

a. Seven (7) each, truck, tubeless type, same size single front, dual rear, and

spare. 225/70R 19.5, load range F, minimum.

b. Dual rear wheels shall be able to accept any brand of tire; tires shall not touch when inflated and loaded.

14. Brakes:

a. 4-Wheel Disc Brakes.

b. 4-Channel Anti-lock brake system.

15. Steering: Powered.

16. Electrical:

a. Dual twelve (12) volt battery. Maintenance free battery shall have the rating of 1250 CCA, minimum.

b. Alternator: 115 amp minimum, capable of charging at low engine speed.

17. Cab:

a. Aluminum cab with tilt hood or steel conventional cab with tilt hood and seven (7) year warranty.

b. Complete head lining.

c. Clear safety glass on rear window.

d. Seating for three (3), vinyl upholstery, seat belts for three (3) people.

e. Steps and grab handles located on both sides of cab, allowing for 3-point contact upon entering/disembarking.

f. Floor mats.

g. Sun visor for driver and passenger.

h. Factory installed air condition.

i. AM/FM radio.

j. Twelve (12) volt accessory outlet.

k. Rain guards both doors.

18. Chassis Frame: High strength low alloy steel 80,000 psi yield; reinforced.

19. Flat Bed Dump Body:

a. 3,048 mm (10 ft.) length, 2,133.6 mm (7 ft.) width, 304.8 mm (12 in.) high minimum measurement.

b. Fold down low sides. Four position tailgate.

c. Retractable load cover with steel protector system, mounted at front of dump box, and operable by one (1) person.

d. Head board and sides: Ten gauge steel minimum.

e. Floor and tailgate: Eight (8) gauge steel minimum.

f. Dump box shall be furnished with four (4) lashing hooks of each side of box and three (3) lashing hooks on tailgate.

g. Headboard with quarter-cab shield, fully welded between dump body and headboard. Head board to have rear window cut out with protective mesh.

h. Strobe Light System - Shall consist of a three (3) light system. Whelen Model SSNF102D, DOT3, Strobe Plus System. Shall include one (1) amber DOT6H light head with limb guard installed on cab; two (2) Strobe Plus+, LED brake/tum/tail and incandescent back up lights, installed at rear of dump body bed at lower A-frame bracket; power supply with diagnostic indicator panel, Model ISP4HS mounted in cab behind rear of seat; standard lighted switch panel mounted in or under dash within easy reach of operator; TPR cables, Deutsch connectors must be water, oil, and corrosion resistant; system must be AMECA certified to SAE Standards; to include one (1) spare flash tube for front light head, two (2) spare strobe reflector modules for rear light heads, and two (2) spare bulbs for backup lights; system shall be installed by a factory authorized representative.

i. Shall be lined inside with spray on liner minimum of 6.35 mm (1/4 in.) thickness (liner shall be compatible with asphalt).

20. Hoist:

a. 4,536 kg (10 ton) minimum lift capacity.

b. Under-body mounted with safety locks.

c. Control levers with safety lock mounted on floorboard of cab (right side of driver's seat).

d. Safety drop leg.

e. There shall be a stopper block designed to lock dump body and hoist in place, in the event of a weld failure at dump box frame and hoist connection while dump is being operated.

21. Bumper:

    a. Heavy duty front bumper.

    b. One (1) or two (2) tow hooks mounted on front bumper or chassis front frame.

    c. Pintle hook with two (2) "D" rings, 8,164.6 kg (9 ton) minimum tow capacity, a Holland Hitch #380 or equal, mounted on rear "A" bracket frame. Center of hitch to be mounted approximately 711.2 mm (28 in.) from ground. Trailer wire connector.

22. Preparation: All bare metal shall be treated with OSPHO and primed prior to application of finish coat on dump body.

23. Other:

    a. Fuel tank, 151.4 L (40 gal.) capacity, minimum.

    b. Full radiator gravel guard.

    c. Heater, defroster, vent system.

    d. Instrument Panel:

        i. Gauges: Coolant temperature, fuel, tachometer, ammeter/volt meter, oil pressure, and hour meter.

        ii. Parking brake control dash mounted. Warning light: Water in fuel

        iii. Warning light and buzzer: Low oil pressure, low coolant level, and high coolant temperature.

    e. Mirrors: Dual exterior rear view mirrors (backs and brackets shall be aluminum or stainless steel or non-corrosive composite type), approximate 152.4 mm x 406.4 mm (6 in. x 16 in.) minimum, West Coast type or equal, with convex bottom section. Power Type.

    f. Clearance lights, reflectors, identification lights, and directional lights shall conform with PUC regulations.

    g. Electronic reverse alarm.

    h. One (1) 2.2 kg (5 lbs.) ABC dry fire extinguisher mounted in cab.

    i. Road safety triangle kit and ten (10) each yellow-green safety glow sticks, ten inch size with bipod stand, by Omni Glow.

    j. Color- State buff, Dupont 93-35686 high gloss enamel or equal; Chevron markings on tailgate - Omaha orange and white (comparable to existing State Highways

Fleet.

k. Complete after factory rust proofing, with minimum seven (7) year, unlimited mileage warranty. In accordance with Federal Specifications 297A at its latest revision.

l. PUC Certification, License, Registration and Certificates as required in General Specifications.

m. Vehicle shall conform to Code of Federal Regulations, Title 40, Part 85, Control of Air Pollution from New Motor Vehicles, Engines, Environmental Protection Agency, Federal Motor Vehicle Safety Standards.

n. Vehicles shall conform to all applicable State, Federal and OSHA requirements necessary for licensing, registration, and certification process.

o. Technical resources: One (1) copy of Repair Manual, one (1) copy of Parts Catalog, two (2) copies of Operator's Manual. Book format/CD/DVD.

p. First Service Kit shall include all required filters (oil, fuel, air, breather, transmission, etc.).

q. Vehicle shall be outlined with conspicuity material tape, along the perimeters. conspicuity material shall be red and white (reflexite or equal).

r. Frame mounted lockable toolbox approximate measurement 457.2 mm (18 in.) x 457.2 mm (18 in.) x 914.4 mm (36 in.); weather resistant.

s. Upon "Notice to Proceed", contractor shall submit "Application" (To State Motor Vehicle Safety Office) to meet the requirements of Section 286-202 (12), Hawaii Revised Statutes, for approval of a major modification, construction, or reconstruction of a vehicle with a gross vehicle weight rating (GVWR) of 10,001 pounds and above.

Application is available at:

State of Hawaii
Department of Transportation Highways
Motor Vehicle Safety Office
98-339 Ponohana Place
Aiea, Hawaii 96701

Copy of approved application shall be submitted at time of delivery.

24. Training:

Contractor shall provide proper and safe operation, maintenance of equipment. This training shall include a minimum of one (1) hour classroom and one (1) hour per operator

hands-on training. Training shall be consistent to OSHA requirements. This service shall be provided at no additional cost to the State. Contractor shall provide classroom site.

Copy of attendance record showing class date, location, class type, instructors name and attendees shall be submitted to:

State of Hawaii Highways
Construction and Maintenance Branch
Attn: Equipment Superintendent/Safety Coordinator
869 Punchbowl Street, Room 404
Honolulu, Hawaii 96813

25. The new unit shall be capable of carrying the factory rated capacity without adverse effects. The unit shall be designed for both highway and off-road hauling and dumping of various materials (density and weight).

26. Bidder(s) shall submit with their bid a certified letter(s) from the manufacturer(s) to certify the prospective bidder as the Factory Authorized Warranty Dealer (letter required for both chassis and equipment). Failure to submit certified letter(s) shall be sufficient grounds for rejection of bid.

SECTION 22 - CAB/CHASSIS WITH SOLID SIDE PANEL DUMP

22.1 SCOPE OF WORK - The work consists of furnishing and delivering one (1) each, Cab/Chassis with Solid Side Panel Dump to the Island of Oahu. The Contractor shall present the vehicle/equipment complete, ready to use, and fully operational.

22.2 CAB/CHASSIS WITH SOLID SIDE PANEL DUMP - The Specifications contained here in establish minimum standards (unless stated differently). Vehicle/equipment offered shall include any other standard features not listed but detailed in manufacturer's brochures and deemed necessary for proper and safe operation of vehicle/equipment.

DETAILED SPECIFICATION FOR A CAB/CHASSIS WITH SOLID SIDE PANEL DUMP

1. Model/Year: GMC, International, Peterbilt or equal 2023 or latest production. Low profile.

2. GVW Rating: 10,886 kg (24,000 lbs.) capacity minimum; 11,793.6 kg (26,000 lbs.) maximum.

3. Wheel Base: 3,987.8mm (157 in.) minimum.

4. Cab to Axle: 2,133.6mm (84 in.) minimum.

5. Engine:

    a. Diesel powered, wet sleeved engine or dry sleeved engine with seven (7) year unlimited mileage warranty.

    b. Liquid cooled with deaeration system with tank and sight glass.

    c. Six (6) cylinder minimum.

    d. Net horsepower 156.6 kW (210 HP) minimum, at rated RPM.

    e. Fuel water separator Roosamaster or manufacturer equal.

    f. Engine exhaust brake.

6. Exhaust: Single horizontal muffler and exhaust pipe.

7. Transmission:

    a. Automatic, 4-speed, with PTO gear (Allison AT545 or equal)

    b. Transmission shift control - push button.

    c. PTO power shift.

d. Automatic transmission oil temperature gauge.

8. Axle:

a. Front - 3,638 kg (8,000 lbs.) capacity, minimum.

b. Rear - 7,257.6 kg (16,000 lbs.) capacity minimum.

c. 180/170 wheel ends.

9. Springs:

a. Front - 3,628.8 kg (8,000 lbs.) capacity, minimum.

b. Rear - 7,257.6 kg (16,000 lbs.) capacity, minimum; vari-rate.

c. Manufacturer's standard auxiliary springs.

d. Note - front and rear springs shall not bottom out at maximum vehicle load capacity set by the manufacturer (the State carries various materials at various weights).

10. Shock Absorbers: Heavy Duty front and rear.

11. Wheels:

a. Seven (7) each, disc type, hub piloted; same size single front dual rear and spare.

b. 22.5 x 7.5, IO-stud DC rims with steel hubs.

12. Tires:

a. Seven (7) each, disc type; same size single front, dual rear, and spare. 235/80R, load range G minimum.

b. Dual rear wheels shall be able to accept any brand of tire; tires shall not touch when inflated and loaded.

13. Brakes:

a. Four wheel disc

b. Hydraulic type.

c. Parking brake.

d. Non-asbestos material.

e. Anti-lock brake system.

14. Steering: Powered.

15. Electrical:

a. Dual twelve (12) volt battery. Maintenance free, battery shall have the rating of 1250 CCA, minimum.

b. Alternator: 110 amp minimum, capable of charging at low engine speed.

16. Cab:

a. Aluminum/steel conventional cab with tilt hood and seven (7) year warranty.

b. Complete head lining.

c. Clear safety glass on rear window.

d. Full width bench seat, vinyl upholstery, and seat belts for three (3) people.

e. Steps and grab handles located on both sides of cab.

f. Floor mats.

g. Sun visor for driver and passenger.

h. Factory installed air condition.

i. AM/FM radio.

17. Chassis Frame: High strength low alloy steel (50,000 psi yield); 916,000 in./lbs. per rail.

18. Dump Body:

a. Flat bed with solid panel sides, 4,267.2mm (14 ft.) Length 2,438.2mm (8 ft.) width.

b. Front bulkhead 12-gauge steel.

c. Rear double doors, full opening.

d. Solid removable reinforced side panels 1,016mm (40 in.) high. Constructed of 14-gauge steel.

e. Floor and tailgate: Ten (10) gauge steel minimum.

f. Dump box shall be furnished with four (4) lashing hooks on each side of box and two (2) lashing hooks on tailgate.

g. Three strobe light system 12-volt, amber dome, Whelen Model 6H mounted on top of cab shield d with limb guard, and two rear mounted directional strobes Whelen Model DOT3102H or equal, AAMVA Certified.

h. Shall be lined inside with spray on liner minimum of 6.35mm (1/4 in.) thickness. Liner shall be compatible with asphalt (hot/cold).

i. A third brake light shall be mounted at rear of bed lower, to be operational with vehicle brake light system.

19. Hoist:

a. NTEA performance class D hoist. Crysteel Manufacturer, Inc. Lo-Boy model 545 or equal.

b. Under-body mounted with safety locks.

c. Control levers with safety lock mounted on floorboard of cab (right side of drivers seat).

d. Safety drop leg.

e. There shall be a stopper block designed to lock dump body and hoist in place, in the event of a weld failure at dump box frame and hoist connection while dump is being operated.

20. Bumper:

a. Heavy duty front bumper.

b. Two (2) tow hooks mounted on front bumper or chassis front frame.

c. Pintle hook (combination type with 51.11mm (2 5/16in.) ball) with "D" rings, 8,164.6 kg (8 ton) minimum tow capacity, mounted on rear "A" bracket frame. Center of hitch to be mounted approximately 685.8mm (27 in.) from ground level.

21. Preparation: All bare metal shall be treated with OSPHO and primed prior to application of finish coat on solid side panel dump body.

22. Other:

a. Step-type fuel tank, 189.3L (50 gal.) capacity, minimum.

b. Full radiator gravel guard.

c. Dual horn.

d. Heater, defroster, vent system.

e. Instrument panel:

i. Gauges.

ii. Coolant temperature, fuel, tachometer, amp meter/voltmeter, oil pressure, and hour meter.

iii. Parking brake warning light/buzzer.

iv. Warning light and buzzer: Low oil pressure low coolant level, and high coolant temperature.

f. Mirrors: Dual exterior rear view mirrors (aluminum or stainless steel or non-corrosive composite), 252.4mm x 406.4mm (6 in. x 16 in.) minimum, West Coast type or equal, with convex bottom selection.

g. Clearance lights, reflectors, identification lights, and directional lights shall conform with PUC regulations.

h. Electronic reverse alarm.

i. One 2.2 kg (5 lbs.) ABC dry chemical fire extinguisher mounted in cab.

j. Triangle road safety kit, and ten (10) each yellow-green safety glow light sticks. Ten (10) inch size with bi-pod stands by Omni Glow.

k. Electrical four-wire connector mounted at rear. Truck connector (NAPA No. 755042) to include trailer connector (NAPA No. 755040), or equal.

l. Color - State buff, Dupont 93-35686 high gloss enamel or equal; Chevron markings on tailgate panels - Omaha orange and white (comparable to existing State Highways fleet).

m. Complete after factory rustproof, with minimum seven (7) year, unlimited mileage requirement warranty.

n. PUC Certification, License, Registration and Certificates as required in General Specifications.

o. Vehicle shall conform to Code of Federal Regulations, Title 40, Part 85, Control of Air Pollution from New Motor Vehicles, Engines, Environmental Protection Agency; Federal Motor Vehicle Safety Standards.

p. Vehicles shall conform to all applicable State, Federal and OSHA requirements necessary for licensing, registration and certification process.

q. Technical Resources: one (1) copy of Repair Manual, one (l) copy of Parts Catalog, two (2) copies of Operator's Manual. Book format/CD/DVD.

r. First Service Kit shall include all required filters (oil, fuel, air, breather, transmission, etc.).

s. Vehicle shall be outlined with conspicuity material (tape) along the perimeters. Conspicuity material shall be red and white (reflexite or equal).

t. Frame mounted lockable toolbox approximate measurement 457.2mm (18 in.) x 457.2mm (18 in.) x 914.4mm (36 in.).

u. Rear anti-sail mud flaps.

v. First Aid Kit OSHA/ANSI recommended.

w. Upon "Notice to Proceed", Contractor shall submit "Application" (To State Motor Vehicle Safety Office) to meet the requirements of Section 286-202 (12), Hawaii revised statutes, for approval of a major modification. Construction, or reconstruction of a vehicle with a gross vehicle weight rating (GVWR) of 10,001 pounds and above.

Application is available at:

State of Hawaii
Department of Transportation
Highways
Motor Vehicle Safety Office
98-339 Ponohana Place
Aiea, Hawaii 96701

Copy of approved application shall be submitted at time of delivery.

23. Training:

Contractor shall provide proper and safe operation, maintenance of equipment. This training shall include a minimum of one (1) hour classroom and one (1) hour per operator hands-on training. Training shall be consistent to OSHA requirements. This service shall be provided at no additional cost to the State. Contractor shall provide classroom site.

Copy of attendance record showing class date, time, location, class type, instructor's name and attendees shall be submitted to:

State of Hawaii Highways
Construction & Maintenance Branch
Attn: Equipment Superintendent/Safety Coordinator
869 Punchbowl Street, Room 404
Honolulu, Hawaii 96813

24. Bidder(s) shall submit with their bid a certified letter(s) from the manufacturer(s) to certify the prospective bidder as the Factory Authorized Warranty Dealer (letter required for both chassis and equipment). Failure to submit certified letter(s) shall be sufficient grounds for rejection of bid.

SECTION 23 - CAB/CHASSIS WITH 2 ½ CUBIC YARD DUMP BODY

23.1 SCOPE OF WORK - The work consists of furnishing and delivering one (1) only, Cab/Chassis with 2 ½ Cubic Yard Dump Body to the island of Oahu. The contractor shall present the vehicle complete, ready to use and fully operational.

23.2 CAB/CHASSIS WITH 2½ CUBIC YARD DUMP BODY - The specifications contained herein establish minimum standards (unless stated differently). Vehicle offered shall include any other standard features not listed but detailed in manufacturer's brochures and deemed necessary for proper and safe operation of vehicle.

DETAILED SPECIFICATIONS FOR A CAB/CHASSIS WITH 2 ½ CUBIC YARD DUMP BODY

1. Model/Year: Ford, International, Peterbilt or equal, 2023 or latest production.

2. GVW Rating: 11,753.6 kg (26,000 lbs.) capacity maximum.

3. Wheel Base: 3,680.8 mm (152 in.) minimum.

4. Cab to Axle: 2,108.2 mm (83 in.) minimum.

5. Axle to Frame: 1,600.2 mm (63 in.) minimum

6. Engine:

   a. Diesel powered, wet sleeved engine or dry sleeved engine with ten (10) year unlimited mileage warranty. Emissions compliant, Tier 4. Shall have capability of operating on a B20 blend of bio-diesel, with no adverse effects.

   b. Liquid cooled with deaeration system with tank and sight glass, full radiator guard. Silicone cooling hoses.

   c. Six (6) cylinders minimum

   d. Net horsepower 223.7 kW (300 HP) minimum, at rated RPM.

   e. Fuel water separator DAVCO Fuel Pro 382, B20 Bio-diesel compatible.

   f. Engine compression brake, exhaust brake shall be rejected.

7. Exhaust: Single horizontal muffler with after treatment device, frame mounted and vertical exhaust pipe with protective shield with rain cap. Shall have two (2) position exhaust switch to inhibit diesel particulate filter regeneration as switch is in "on" position.

8. Transmission:

   a. Automatic, close ratio, 6-speed, with PTO gear (Allison MD-3060P or equal).

   b. Transmission shift control - push button with lockout or lever type.

   c. PTO: Hot shift PTO with piggy back pump.

   d. Automatic transmission oil temperature gauge.

   e. Transmission oil cooler.

9. Axle:

   a. Front- 3,628.8 kg (8,000 lbs.) capacity, minimum.

   b. Rear- 7,938 kg (17,500 lbs.) capacity minimum.

      i. 180/190 wheel ends.

      ii. Gear ratio - manufacturer recommended to meet criteria of both highways (including up/down hill terrain) and off road hauling and dumping of various materials (density and weight).

10. Springs:

   a. Front - 4,082.4 kg (9,000 lbs.) capacity, minimum.

   b. Rear-8,618.4 kg (19,000 lbs.) capacity, minimum.

   c. Auxiliary Rear-2,041.2 kg (4,500 lbs.) capacity, minimum.

   d. Note- Front and Rear springs shall not bottom out at maximum vehicle load capacity set by the manufacturer (the State carries various materials at various weights).

11. Shock Absorbers: Heavy Duty front and rear.

12. Wheels:

   a. Seven (7) each, disc type, hub piloted; Same size single front, dual rear, and spare.

   b. 22.5 x 7.5, 10-stud DC rims with steel hubs

13. Tires

   a. Seven (7) each, truck, tubeless type, same size single front, dual rear, and spare. IOR 22.5, 14-ply load range G, minimum.

b. Dual rear wheels shall be able to accept any brand of tire; tires shall not touch when inflated and loaded.

14. Brakes:

a. Dual air system 22.4m^3/h (13.2 cubic feet) compressor, with air dryer, and pressure gauge with low air warning buzzer.

b. Safety spring loaded on rear axle, cab controller emergency air tank for release.

c. Parking piggyback, spring actuated, double diaphragm: Anchor lock MGM or equal.

d. Front and rear disc brake system. System shall comply with new stopping distance NHTSA regulations.

e. Anti-lock brake system. Traction control.

15. Steering: Powered.

16. Electrical:

a. Dual twelve (12) volt battery. AGM type batteries shall have the rating of 1250 CCA, minimum.

b. Alternator: 115 amp minimum, capable of charging at low engine speed.

17. Cab:

a. Aluminum cab with tilt hood or steel conventional cab with tilt hood and ten (10) year warranty.

b. Complete head lining.

c. Seating for two (2), vinyl upholstery, seat belts for two (2) people; high back air ride seats.

d. Steps and grab handles located on both sides of cab, allowing for 3-point contact upon entering/disembarking.

e. Floor mats.

f. Sun visor for driver and passenger.

g. Factory installed air condition, heater, defroster, and vent system.

h. AM/FM/Blue Tooth radio; Reverse Camera.

i. Power windows and locks; Rain guards both doors.

j. Color – Standard O.E.M. white, high glass urethane or equal.

18. Chassis Frame: High strength low alloy steel (120,000 psi yield); 2,136,000in./lbs. per rail.

19. Dump Body:

a. Dimensions - 3,048 mm (10 ft.) length, 2,133.6 mm (7 ft.) width, 304.8 mm (12 in.) high, minimum measurements. With wood side boards, 3,048 mm (10 ft.) long, 50.8 mm (2 in.) thick, 304.8 mm (12 in.) high to be installed on left and right sides, at top of dump box.

b. Automated retractable load cover with steel protector system, mounted at front of dump box.

c. Head board and sides: Ten (10) gauge steel minimum.

d. Floor and tailgate: Eight (8) gauge steel minimum. Tailgate shall be double paneled.

e. Dump box shall be furnished with four (4) lashing hooks of each side of box and three (3) lashing hooks on tailgate.

f. Headboard with half-cab shield, fully welded between dump body and headboard.

g. Shall be lined inside with spray on liner minimum of 6.35 mm (1/4 in.) thickness (liner shall be compatible with asphalt).

h. Air actuated tailgate release, with controls in cab. Four-way tailgate.

i. Color – Standard O.E.M. Black, high gloss urethane or equal; Chevron marking on tailgate - Omaha orange and white (comparable to existing State Highways fleet). Shall be outlined with conspicuity material tape along the perimeters. Conspicuity material shall be red and white (reflexite or equal).

20. Hoist:

a. 9,071.8 kg (10 ton) minimum lift capacity.

b. Under-body mounted with safety locks.

c. Control levers with safety lock mounted on floorboard of cab (right side of driver seat).

d. Safety drop leg.

e. There shall be a stopper block designed to lock dump body and hoist in place,

in the event of a weld failure at dump box frame and hoist connection while dump is being operated.

21. Bumper:

    a. Heavy duty front bumper.

    b. One (1) or two (2) tow hooks mounted on front bumper or chassis front frame.

    c. Pintle hook with two (2) "D" rings, 8,164.6 kg (9 ton) minimum tow capacity, a Holland Hitch PH30 or equal, mounted at rear "ICC" bracket frame. Center of hitch to be mounted approximately 711.2 mm (28 in.) from ground.

22. Preparation: All bare metal shall be treated with OSPHO and primed prior to application of finish coat on dump body.

23. Other:

    a. Step-type fuel tank, 189.3 L (50 gal.) capacity, including nine (9) gallon DEF tank minimum.

    b. Full radiator gravel guard.

    c. Air horn.

    d. Anti-sail mud flaps, front/rear tire.

    e. Instrument Panel:

        i. Gauges: Coolant temperature, fuel, tachometer, ammeter/volt meter, oil pressure, and hour meter.

        ii. Parking brake control dash mounted.

        iii. Warning light: Water in fuel.

        iv. Warning light and buzzer: Low oil pressure, low coolant level, and high coolant temperature.

    f. Mirrors: Powered dual exterior rear view mirrors (backs and brackets shall be aluminum or stainless steel or non-corrosive composite type), approximate 152.4 mm x 406.4 mm (6 in. x 16 in.) minimum, West Coast type or equal, with convex bottom section. Passenger door down view mirror.

    g. Clearance lights, reflectors, identification lights, and directional lights shall conform with PUC regulations.

    h. Electronic reverse alarm.

i. One (1) 2.2 kg (5 lbs.) ABC dry fire extinguisher mounted in cab.

j. Road safety triangle kit; and self-charging four pack kit Aervoe Super LED Road Flares, shall have yellow housing with red LED lighting. All housing and case shall be etched "State DOT Highways".

k. LED light system, Whelen Model DOT 3710D to include two (2) Stainless Steel Micro 400S, installed on dump headboard, two (2) Rectangular 7-guage welded steel housings installed on rear of dump body, one on each side, containing two (2) 700 series amber linear strobe light heads, one on each side, two (2) 700 series red LED brake/tail/tum light heads with side light head, one (1) on each side, two (2) 700 series clear back-up lights, one on each side, one (1) standard PCC4W lighted switch panel with Diagnostic indicator installed in or under dash within easy reach of driver. Waterproof, oil, and corrosion resistant TPR cables with waterproof connectors shall be installed with the above system. AMECA certified to SAE and FMVSS108 standards and/or minimum specifications.

l. Glad hands with complete air plumbing/connections with electrical six-wire (Cole Hersee) connector mounted at rear. With tractor protection valve and hand control lever. Electric brake controller wired to seven-way receptacle; Control switch shall be mounted within operator reach.

m. Complete after factory rust proofing, with minimum seven (7) year, unlimited mileage requirement warranty. In accordance with Federal Specifications 297A at its latest revision.

n. PUC Certification, License, Registration and Certificates as required in General Specifications.

o. Vehicle shall conform to Code of Federal Regulations, Title 40, Part 85, Control of Air Pollution from New Motor Vehicles, Engines, Environmental Protection Agency; Federal Motor Vehicle Safety Standards.

p. Vehicles shall conform to all applicable State, Federal and OSHA requirements necessary for licensing, registration and certification process.

q. Technical resources: One (1) copy of Repair Manual, one (1) copy of Parts Catalog, two (2) copies of Operator's Manual. Book format/CD/DVD.

r. First Service Kit shall include all required filters (oil, fuel, air, breather, transmission, etc.).

s. Aluminum weatherproof frame mounted lockable toolbox approximate measurement 457.2 mm (18 in.) x 457.2 mm (18 in.) x 914.4 mm (36 in.).

t. Upon "Notice to Proceed", contractor shall submit "Application" (To State

Motor Vehicle Safety Office) to meet the requirements of Section 286-102 (12), Hawaii Revised Statutes, for approval of a major modification, construction, or reconstruction of a vehicle with a gross vehicle weight rating (GVWR) of 10,001 pounds and above.

Application is available at:

State of Hawaii
Department of Transportation
Highways
Motor Vehicle Safety Office
98-339 Ponohana Place
Aiea, Hawaii 96701

Copy of approved application shall be submitted at time of delivery.

24. Training:

Contractor shall provide initial training at time of delivery for proper and safe operation, maintenance of equipment and refresher training one (1) year after initial delivery. This training shall include a minimum of one (1) hour classroom and one (1) hour per operator hands-on training. Training shall be consistent to OSHA requirements. This service shall be provided at no additional cost to the State. Contractor shall provide classroom site.

Copy of attendance record showing class date, location, class type, instructors name and attendee's Shall be submitted to:

State of Hawaii Highways
Construction and Maintenance Branch
Attn: Equipment Superintendent/Safety Coordinator
869 Punchbowl Street, Room 404
Honolulu, Hawaii 96813

25. Bidder(s) shall submit with their bid a certified letter(s) from the manufacturer(s) to certify the prospective bidder as the Factory Authorized Warranty Dealer (letter required for both chassis and equipment).

26. The new unit shall be capable of carrying the factory rated capacity without adverse effects. The unit shall be designed for both highway and off-road hauling and dumping of various materials (density and weight).

SECTION 24 - CAB/CHASSIS WITH 7 CUBIC YARD DUMP BODY

24.1 SCOPE OF WORK - The work consists of furnishing and delivering, one (1) only, Cab/Chassis with 7 Cubic Yard Dump Body to the island of Oahu. The Contractor shall present the vehicles complete, ready to use, and fully operational.

24.2 CAB/CHASSIS WITH 7 CUBIC YARD DUMP BODY - The Specifications contained herein establish minimum standards (unless stated differently). Vehicle/equipment offered shall include any other standard features not listed but detailed in manufacturer's brochures and deemed necessary for proper and safe operation to vehicle/equipment.

DETAILED SPECIFICATIONS FOR CAB/CHASSIS WITH 7 CUBIC YARD DUMP BODY

1. Model/Year: International, Ford, Peterbilt or equal, 2023 or latest production.

2. GVW Rating: 15,876 kg (35,000 lbs.) minimum capacity.

3. Wheel Base: 3,860.8mm (152 inches) minimum.

4. Cab to Axle: 2,108.2 mm (83 inches) minimum.

5. Axle to Frame: 1,600.2mm (63 inches) minimum.

6. Engine:

    a. Diesel powered, wet sleeved engine or dry sleeved engine with ten (10) year unlimited warranty. Emissions compliant, Tier 4. Shall have the capability of operating on a blend of B20 Bio-Diesel with no adverse effects.

    b. Liquid cooled with deaeration system with tank and sight glass; Silicone radiator and heater hoses.

    c. Six (6) cylinder minimum.

    d. Net Horsepower: 223.7kw (300 HP) minimum at rated RPM.

    e. Fuel water separator DAVCO Fuel Pro 382, B20 Bio-Diesel compatible.

    f. Heavy duty dry type air cleaner with pop-up restriction indicator.

7. Exhaust:

    Single horizontal muffler with after treatment device frame mounted and vertical exhaust pipe with protective shield and rain cap. Shall have two position exhaust switch to inhibit diesel particulate filter regeneration as long as switch is "on" position.

8. Transmission:

   a. Automatic Allison MD 3500RDS-P, rugged duty service. 935 lb. ft. torque, or equal.

   b. PTO: Hot Shift PTO with piggy back pump

   c. Automatic transmission oil temperature gauge.

   d. Transmission shift control - push button/lever.

   e. Transmission oil cooler.

9. Axle:

   a. Front: 6,350.4 kg (14,000 lbs.) capacity, minimum.

   b. Rear: 10,433 kg (23,000 lbs.) capacity, minimum single reduction with 200-wheel end (Spicer W-230S or equal).

10. Springs:

   a. Front: 6,350.4 kg (14,000 lbs.) heavy-duty capacity, minimum.

   b. Rear: 10,433 kg (23,000 lbs.) capacity, minimum.

   c. Auxiliary Rear: 2,041.2 kg (4,500 lbs.) capacity, minimum.

   d. Note: Front and rear springs shall not bottom out at maximum vehicle load capacity set by the manufacturer (the State carries various materials at various weights).

11. Shock Absorbers: Heavy duty front and rear.

12. Wheels:

   a. Seven (7) each disc type, hub piloted; same size single front, dual rear, and spare.

   b. 22.5 x 8.25, 10-stud DC rims; with steel hubs.

13. Tires:

   a. Seven (7) each, truck tubeless type, same size single front, dual rear, and spare. 11R 22.5, 16-ply, load range H.

   b. Dual rear wheels shall be able to accept any brand of tire; tires shall not touch when inflated and loaded.

14. Brakes:

    a. Dual air system with 18.7 CFM compressor, anti-lock with air dryer, and pressure gauge with low air warning buzzer.

    b. Front/rear disc brakes. System shall comply with new stopping distance NHTSA regulations.

    c. Parking - Piggyback, spring actuated, double diaphragm: Anchor lock, MGM or equal, S-cam.

    d. Safety spring loaded on rear axle, cab controlled emergency air tank for release.

    e. Trailer hand control brake lever mounted on steering column and tractor protection valve.

    f. Non-asbestos material.

    g. Anti-lock brake system. Traction Control.

    h. Retarder-Telma or Klam Retarder, driveline mount with handle lever positioner and foot brake application, rated for 60,000 lbs. gross combination.

15. Steering: Powered.

16. Electrical:

    a. Dual, twelve (12) volt batteries. AGM type batteries shall have the rating of 2700 CCA, minimum. Aluminum battery storage box.

    b. Alternator: 200 amp minimum, capable of charging at low engine speed.

    c. Electric brake controller wired to seven-way receptacle at rear pintle hitch. Control switch within view and reach of driver.

17. Cab:

    a. Aluminum conventional cab with tilt hood or steel conventional cab with tilt hood and ten (10) year unlimited warranty.

    b. Complete head lining.

    c. Individual seats for driver and passenger with safety belts, driver's seat shall be air suspension type (Bostrom Freedom XC or equal), with adjustable mechanical lumbar support, front cushion adjustment, vinyl material. Passenger seat shall be two-man passenger, vinyl.

    d. Steps and grab handles located both sides of cab. Allow for 3-point contact.

e. Floor mats.

f. Sun visor, driver and passenger.

g. Factory installed air condition, heater, defroster and vent system.

h. Power windows/locks.

i. Color – Standard O.E.M. white, high glass urethane or equal.

18. Chassis Frame: Heat treated alloy steel 120,000 psi yield, minimum.

19. Dump Body:

a. Contractor's Type - 5.4m^3 (7 cubic yards).

b. 3.m length x 2,209.8mm width x 863.6mm height (10 ft. x 87 in. x 34 in.) with steel side board 3.m x 50.4mm x 203.2mm (10 ft. x 2 in. x 8 in.), to be installed on left and right sides atop dump box. 1,066.8 mm (42 inch) high lift tailgate.

c. Headboard and sides - minimum 8 gauge l00XF steel/AR450. Shall be 100,000 yield PSI; 110,000 tensile PSI minimum.

d. Floor and Tailgate - minimum 4.76mm (3/16 in.) minimum eight (8) gauge AR450 steel. Shall be 145,000 yield PSI; 180,000 tensile PSI minimum. Tailgate shall be full boxed framed.

e. Head board with half cab shield fully welded between dump body and headboard.

f. Grab bar on driver side front top of box; grab bar outside of box on both sides above rear tires.

g. Horizontal bracing. Body safety prop.

h. Dump box shall be equipped with the following: 304.8mm (12 inches) spreader apron; four (4) lashing hooks on each side of box and two (2) lashing hooks on tailgate; flat (not angled) running board or catwalk to extend out along each bottom side of box with safety threads or a painted on non-slip coating (no metal grating).

i. Safety step ladder slide out left and right side, with grab handles for 3-point contact.

j. Air tailgate release and power tailgate with controls in cab. Tailgate shall be multi- function (traditional dump through, sliding and high-lift).

k. Pull tarp automatic load cover (one-man operation), retractable, with steel

protector shield.

l. Shall be lined inside with spray on liner minimum of 6.35mm (1/4 inch) thickness (liner shall be compatible with hot/cold asphalt mix).

m. Color – Standard O.E.M. Black, high gloss urethane or equal. Reflective chevron marking (reflexite or equal) on tailgate - Omaha orange and white (comparable to existing State Highways fleet). Vehicle shall be outlined with conspicuity material (tape along the perimeters). Conspicuity material shall be red and white (reflexite or equal).

20. Hoist:

a. 15,422 kg (17 ton) minimum capacity, class 60.

b. Under-body mounted with safety locks.

c. Control lever with safety lock mounted on floorboard of cab (right side of driver's seat).

d. There shall be a stopper block designed to lock dump body and hoist in place in the event of a weld failure at dump box frame and hoist connection while dump is being operated.

21. Bumper:

a. Heavy duty front bumper.

b. One (1) or two (2) tow hooks mounted on front bumper or chassis front frame.

c. 60,000 lb. air compensated pintle hitch with two "D" rings, 18,144 kg (20 ton) minimum tow capacity, a Holland Hitch or equal. Mounted on rear "ICC" bracket frame. Center of hitch to be mounted approximately 711.12mm (28 inches) from ground level.

22. Preparation: All bare metal shall be treated with OSPHO and primed prior to application of finish coat on dump body.

23. Other:

a. Dual step-type fuel tanks, 189.3 L (50 gal.) minimum capacity each, with additional swing step for both sides. Aluminum construction with locking tank caps. Including nine (9) gallon DEF tanks.

b. Full radiator gravel guard.

c. Air horn.

d. Glad hands and plumbing with electrical wire connection (Warner 13-281-001

or equal) mounted at rear. Additional Cole Hersee #12063 seven (7) prong socket trail hook-up shall also be mounted at rear. All electrical connectors to include both male and female connectors.

e. Instrumental panel:

i. Gauges; coolant temperature, fuel, tachometer, amp meter, oil pressure, air pressure, and hour meter.

ii. Parking brake control dash mounted.

iii. Water in fuel warning light and buzzer; low oil pressure, low coolant level, and high coolant temperature.

iv. AM/FM/Blue Tooth radio; Reverse Camera.

v. Twelve (12) volt power accessory outlet.

f. Mirrors: Powered dual exterior view mirrors (aluminum or stainless steel backs/bracket or non-corrosive composite type), 152.4mm x 406.4mm (6in. x 16in.) minimum, west coast type or equal, with convex bottom section. Passenger door down view mirror.

g. Clearance lights, reflectors, identification lights, and directional lights shall conform with PUC regulations.

h. Anti-sail mud flaps, front and rear tire.

i. Electronic reverse alarm.

j. One (1) 2.2 kg (5 lbs.) ABC dry chemical fire extinguisher mounted in cab.

k. Road safety triangle kit; and self-charging four pack kit Aervoe Super LED Road Flares, shall have yellow housing with red LED lighting. All housing and case shall be etched "STATE DOT HIGHWAYS".

l. LED light system, Whelen Model DOT 3710D to include two (2) stainless steel Micro 400, installed on dump headboard, two (2) Rectangular 7-gauge welded steel housings installed on rear of dump body, one on each side, containing two (2) 700 series amber linear light heads, one on each side, two (2) 700 series red LED brake/tail/tum light heads with side light head, one (1) on each side, two (2) 700 series clear back-up lights, one on each side, one (1) standard PCC4W lighted switch panel with Diagnostic indicator installed in or under dash within easy reach of driver. Waterproof, oil, and corrosion resistant TPR cables with waterproof connectors shall be installed with the above system. AMECA certified to SAE and FMVSS108 standards and/or minimum specifications.

m. Complete after factory rust proofing, with minimum seven (7) years unlimited mileage requirement warranty in accordance with Federal Specifications, 297A or its latest revision

n. PUC Certification, License, Registration, and Certificates as required in General Specifications.

o. Vehicle shall conform to Code of Federal Regulations, Title 40, Part 85; Control of Air Pollution from New Motor Vehicles, Engines, Environmental Protection Agency; Federal Motor Vehicle Safety Standards.

p. Vehicle shall conform to all applicable State, Federal, and OSHA requirements necessary for licensing, registration, and certification purposes.

q. Technical Resources: One (1) copy of Repair Manual, one (1) copy of Parts Catalog, two (2) copies of Operator's Manual. Book format/CD/DVD.

r. First Service Kit shall include all required filters (oil, fuel, air, breather, transmission, etc.).

s. 457.2mm (18 inches) x 457.2mm (18 inches) x 1,066mm (42 inches) aluminum weather proof frame mounted lockable toolbox.

t. First Aid Kit, OSHA/ANSI recommended.

u. Upon "Notice to Proceed", Contractor shall submit "Application" (to State Motor Vehicle Safety Office) to meet the requirements of Section 286-202 (12), Hawaii Revised Statutes, for approval of a major modification. Construction or reconstruction of a vehicle with a gross vehicle weight rating (GVWR) of 10,001 pounds and above.

Application is available at:

State of Hawaii
Department of Transportation
Highways
Motor Vehicle Safety Office
98-339 Ponohana Place
Aiea, Hawaii 96701

Copy of approved application shall be submitted at time of delivery.

24. Training:

Contractor shall provide initial training at time of delivery for proper and safe operation and maintenance of equipment, and refresher training one (1) year after initial delivery. This training shall include a minimum of one (1) hour classrooms and one (1) hour per operator hands-on training. This service shall be provided at no

additional cost to the State. Contractor shall provide classroom site. Training shall be consistent to OSHA requirements.

Copy of attendance record showing class date, time, location, class type, instructor's name and attendees shall be submitted to:

State of Hawaii Highways
Construction and Maintenance Branch
Attn: Equipment Superintendent/Safety Coordinator
869 Punchbowl Street
Honolulu, Hawaii 96813

25. Bidder(s) shall submit with their bid a certified letter(s) from the manufacturer(s) to certify the prospective bidder as the Factory Authorized Warranty Dealer (letter required for both chassis and equipment).

26. The new unit shall be capable of carrying the factory rated capacity without adverse effects.

SECTION 25 – CAB/CHASSIS WITH 10.8 CUBIC YARD DUMP

25.1 SCOPE OF WORK – The work consists of furnishing and delivering one (1) only, Cab/Chassis with 10.8 Cubic Yard Rock Dump Body to the island of Maui. The Contractor shall present the vehicle complete, ready to use and fully operational.

25.2 CAB/CHASSIS WITH 10.8 CUBIC YARD DUMP BODY- The specifications contained herein establish minimum standards (unless stated differently). Vehicle/equipment offered shall include any other standard feathers not listed but detailed in manufacturer's brochures and deemed necessary for proper and safe operation to vehicle/equipment

DETAILED SPECIFICATIONS FOR CAB/CHASSIS WITH 10.8 CUBIC YARD DUMP BODY

1. Model/Year: Ford, Peterbilt, Kenworth or equal, 2023 or latest production.
2. GVW/GCW Rating: 40,600 LBS. GVWR/65,000 LBS. GCWR
3. Wheelbase: 170-180 Inches
4. Cab to Axle: 102-108 Inches
5. Axle to frame: As required per manufacturer
6. Engine:
    a. Diesel powered, wet sleeved engine or dry sleeved engine with ten (10) year unlimited warranty. Emissions compliant, Tier 4. Shall have the capability of operating on a blend of B20 Bio-Diesel with no adverse effects to any emission products.
    b. Liquid cooled, deration system with tank and sight glass. Silicone radiator and heater hoses with coolant filter from factory only.
    c. Six (6) cylinder minimum.
    d. Net horsepower of 375 HP/1250 ft. LBS torque at rated RPM.
    e. Fuel/water separator DAVCO Fuel Pro 245, B20 Bio-Diesel compatible.
    f. Heavy duty dry type air cleaner with pop-up restriction indicator.
7. Exhaust: Single horizontal muffler with after treatment device frame mounted and vertical exhaust pipe with protective shield and rain cap. Shall have two (2) position exhaust switch to inhibit diesel particulate filter regeneration as long as switch is "on" position.

8. Transmission:

   a. Eaton RTO 14908LL ten (10) speed manual transmission 1450 lbs. ft. torque or equal.

   b. Water/oil heat cooler- factory installed, no exceptions. Coolant Filter II Factory".

   c. PTO: Hot shift PTO with piggy back pump.

   d. Aluminum bell housing

   e. Includes rear transmission support, direct shift pattern and synthetic lubricant.

   f. Remote lubricant for linkage release bearing and cross shafts mounted to LH frame rail.

9. Axle:

   a. Front: Meritor 14,600 lbs. capacity, “Wide Track”

   b. Dual Rear: 23,000 lbs. capacity, minimum single reduction with200 wheel end (Spicer W-230S or equal). Including driver controlled locking differential and ATC traction control on both axles.

   c. Gear Ratio is set per manufacture specs of 65 mph max.

10. Springs:

   a. Front: 6,350.4 kg (14,000 lbs.) heavy duty capacity, minimum.

   b. Rear: Reyco 79KB 20,000 lbs. capacity each, no exceptions. Capacity set by the manufacturer (the State carries various materials at various weights).

   c. Auxiliary Rear: 4,500 lbs. capacity, minimum. Wet front hubs only Synthetic oil. Note: Front and rear springs shall not bottom out at maximum vehicle load capacity set by the manufacturer (the State carries various materials at various weights).

11. Shock Absorbers: Heavy duty fronts.

12. Wheels: Seven (7) each disc type, hub piloted; same size front, dual rear and spare: 22.5 x 8.25, 10 stud DC rims with steel hubs.

13. Tires:

a. Seven (7) each, truck tubeless type, single front (highway steer), dual rear (traction) and front spare. Front: 11R 22.5H 16 ply, XZA2, Rear: 11R22.5L, 16 ply. No exceptions.

b. Dual rear wheels shall be able to accept any brand of tire. Tires shall not touch when inflated and loaded.

14. Brakes:

a. Dual air system with 18.7 CFM compressor, anti-lock with air dryer and pressure gauge with low air warning buzzer.

b. Front severe service disc brakes and rear disc brake type w/heavy duty rotors. No exceptions. System shall comply with new stopping distance NHTSA regulations.

c. Parking-Piggyback rear spring actuated, double diaphragm: Anchor lock, MGM or equal, S-cam.

d. Safety spring loaded on rear axle, cab controlled emergency air tank for release.

e. Self-returning trailer hand control brake lever and tractor protection valve

f. Non-asbestos material. Air tanks to be Auto Drain and controlled in cab to drain all tanks.

g. Anti-lock brake system. Full vehicle wheel control including traction and ATS.

h. Engine compression brake “No Electrical or Driveline or Transmission Brakes".

15. Steering: Powered.

16. Electrical:

a. Twelve (12) volt batteries. Four (4) AGM batteries shall have the rating of 3000 CCA, minimum. Aluminum battery storage box with lockable cover for thief protection.

b. Alternator: 200 amp minimum, capable of charging at low engine speed.

c. Electrical brake controller wired to seven-way receptacle at rear pintle hitch. Control switch within view and reach of driver. Air line shall be right and left location of pintle hitch.

17. Cab:

a. Aluminum conventional cab with tilt hood or steel conventional cab with tilt hood and ten (10) year unlimited warranty.

b. Complete head lining.

c. Individual seats for driver and passenger with safety belts. Drivers seat shall be air suspension type (Bostrom Freedom XC or Equal), with adjustable mechanical lumbar support, front cushion adjustment, vinyl material. Passenger seat shall be two-man passenger, vinyl. With built in toolbox below passenger seat.

d. Steps and grab handles located both sides of cab. Allow for 3- point contact.

e. Floor mats.

f. Sun visor, driver and passenger.

g. Factory installed air condition, heater, defroster and vent system

h. AM/FM/Bluetooth radio; Reverse Camera.

i. Power windows/locks on all doors.

j. Color – Standard O.E.M. white high gloss urethane or equal.

18. Chassis Frame: Heat Treated alloy steel 120,00 psi yield; 10.75" x 3.50" x .375 w/10' BOC liner

19. Dump Body:

a. Rock dump 10.8 cubic yards, minimum

b. Beveled floor corners

c. Headboard, sides, floor and tailgate 6.35mm (¼") AR400 minimum

d. Horizontal and vertical bracing.

e. Dump box shall be equipped with the following: four (4) lashing hooks on each of the box and four(4) lashing hooks on the tailgate; flat (not angled) running board or catwalk extend out along each bottom side of box with safety threads non-slip.

f. Stainless Steel Safety step ladder slide out left and right side with SS grab handles for 3-point contact.

g. Air tailgate release with controls in cab. Tailgate shall be multi- function (traditional dump through, sliding and high lift).

h. Electric tarp automatic load cover with Heavy Duty Tarp Material (one-man operation), retractable, with aluminum arms and steel protector shield only.

i. Shall be lined inside with spray on liner minimum of 6.35mm (1/4") thickness (liner shall be compatible with hot/cold asphalt mix).

j. Color – Standard O.E.M. Black, high gloss utherane or equal. Chevron marking on tailgate Omaha orange and white (comparable to existing State Highways fleet). Shall be outline with conspicuity material tape along perimeters. Conspicuity material shall be red and white (reflexite or equal).

20. Hoist:

a. Turbo T5398 Hoist, or equal. Dual action cylinders with holding valves.

b. PTO & body controls mounted on floorboard of cab (right side of drivers seat), PTO indicator light and body up light shall be mounted in dash visible to driver. Must also have alarm to indicate dump body is up and be controlled by switch on dash if needed.

c. Box lift alarm to ring when box lifted up and to turn off when lowered and wired to ignition switch to turn off system when not in use.

d. There shall be a stopper block designed to lock dump body and hoist in place in the event of a weld failure at dump box frame and hoist connection while dump is being operated.

21. Bumper:

a. Heavy duty front aluminum bumper only with two (2) amber fog lights in lower portion of bumper for driving in rain. Driver switch controlled.

b. Two (2) tow hooks mounted on front bumper or chassis front frame. (Non-removable) Bolted to truck frame with safety clips.

c. Pintle hook with two (2) "D" rings, 18,144 kg (20 ton) minimum tow capacity, a Holland Hitch or equal. Mounted on rear "ICC" bracket frame. Center of hitch to be mounted approximately 711.12 mm (28") from ground level.

22. Preparation: All bare metal shall be treated with OSPHO and primed prior to application of finish coat on dump body.

23. Other:

a. Single step-type fuel tank (60 gal.) minimum capacity. Aluminum construction with locking tank cap including nine (9) gallon DEF tank minimum size.

b. Mounted on rear "ICC" bracket frame. Center of hitch to be mounted approximately 711.12 mm (28") from ground level. Vendor shall contact receiving agency for trailer details hitch shall stick out pass the dump body rock shield.

c. Full radiator gravel guard. Fan shall be air controlled in cab and by ECM for temperature and ale operations.

d. Dual air horns with pull cord near driver head left side and factory dual electric horn high and low with horn button.

e. Glad hands and plumbing shall be right and left of pintle hitch area with all electrical wire connection (Warner 13-281-001 or equal) mounted at rear. Additional Cole Hersee #12063 seven (7) prong socket trail hook-up shall also be mounted at rear. All types included 4 flat and 4 round and electrical connectors to include both male and female connectors shall be mounted. Including hand electric brake controller in cab. Vendor shall contact receiving agency for trailer details.

f. Instrument panel: All gauges include coolant temperature, fuel, tachometer, volt meter, oil pressure, air pressure, hour meter, transmission oil, hydraulic oil shall be mounted facing driver. Parking brake control dash mounted. Water in fuel warning light and buzzer, low oil pressure, low coolant level and high coolant and transmission temperature. AM/FM/Bluetooth radio; reverse camera (color) w/cab mounted 7" color monitor. Twelve (12) volt power accessory outlet.

g. Mirrors: Powered dual exterior view mirrors (aluminum or stainless steel backs/bracket or non-corrosive composite type), 6" x 16" minimum, west coast type or equal with convex bottom section. Passenger door down mirror.

h. Clearance lights, reflectors, identification lights and directional lights shall conform with PUC regulations.

i. Anti-sail mud flaps, front and rear tire.

j. Electronic reverse alarm.

k. One (1) 5 lbs. ABC dry chemical fire extinguisher mounted in cab.

l. Road safety triangle kit and self-charging four (4) pack kit. AERVOR Super LED Road Flares, shall have yellow housing with red LED lighting. All housing and case shall be etched "STATE DOT HIGHWAYS".

m. LED system, Whelen Model DOT 3710D to include two (2) stainless steel Micro 400, installed on dump headboard, two (2) Rectangular 7-gauge welded steel housings installed on rear of dump body, one on each side, containing two (2) series amber linear light heads, one on each side, two (2) 700 series red LED brake/tail/turn light heads with side light head, one on each side, two (2) 700 series clear back-up lights, one on each side, one (1) standard PCC4W lighted switch panel with diagnostic indicator installed in or under dash within easy reach of driver. Waterproof, oil and corrosion resistant TPR cables with waterproof connectors shall be installed with the above system. AMECA certified to SAE and FMVSS108 standards and/or minimum specifications.

n. PUC Certification, license, registration and certificates as required in general specifications and decals.

o. Vehicle shall conform to Code of Federal Regulations, Title 40, Part 85; Control of Air Pollution from New Motor Vehicles, Engines, Environmental Protection Agency; Federal Motor Vehicle Safety Standards.

p. Vehicle shall conform to all applicable State, Federal and OSHA requirements necessary for licensing, registration and certification purposes.

q. Technical Resources: One (1) copy of Repair Manual, one (1) copy of parts catalog, two (2) copies of operator's manual. Book format/CD/DVD.

r. First service kit shall include all required filters (oil, fuel, air, breather, transmission, etc.)

s. 18 in. x 18 in x 42 in aluminum weatherproof frame mounted lockable toolbox.

t. First Aid Kit, OSHA/ANSI recommended

u. Upon "Notice To Proceed" contractor shall submit "Application" (to State Motor Vehicle Safety Office) to meet the requirements of Section 286-202 (12), Hawaii Revised Statutes, for approval of a major modification. Construction or reconstruction of a vehicle with a gross vehicle weight rating (GVWR) of 10,001 pounds and above.

Application is available at:

State of Hawaii
Department of Transportation
Highways
Motor Vehicle Safety Office
98-339 Ponohana Place
Aiea, Hawaii 96701

Copy of approved application shall be submitted at time of delivery.

24. Training:

Contractor shall provide proper and safe operation and maintenance of equipment. This training shall include a minimum of one (1) hour classrooms and one (1) hour per operator hands-on training. This service shall be consistent to OSHA requirements. Training shall include manufacturer training for DAVCO Filtration equipment for mechanics for Maui.

Copy of attendance record showing class date, time location, class type, instructor's name and attendees shall be submitted to:

State of Hawaii Highways
Construction and Maintenance Branch
Attn: Equipment Superintendent/Safety Coordinator
869 Punchbowl Street, Room 404
Honolulu, Hawaii 96813

25. Bidder(s) shall submit with their bid a certified letter(s) from the manufacturer(s) to certify the prospective bidder as the Factory Authorized Warranty Dealer (letter required for both chassis and equipment).

26. Note: The new unit shall be capable of carrying the factory rated capacity without adverse effects.

SECTION 26 – TRAILER TANDEM, WITH 5,000 GALLON TANK

26.1 SCOPE OF WORK - The work consists of furnishing and delivering one (1) only, trailer tandem, with 5,000 gallon tank, to the island of Oahu. The contractor shall present the equipment complete, ready to use, and fully operational.

26.2 TRAILER TANDEM WITH 5,000 GALLON TANK – The specifications contained herein establish minimum standards (unless stated differently). Equipment offered shall include any other standard features not listed but detailed in manufacturer's brochures and deemed necessary for proper and safe operation of equipment.

DETAILED SPECIFICATIONS FOR A TRAILER TANDEM, WITH 5,000 GALLON TANK

1. Model/Year: OMCO, or equal, 2023 or latest production

2. Type: Water/Flusher; semi-trailer.

3. Water Tank:

   a. 18,925 liters (5,000 gallons).

   b. Elliptical in shape.

   c. Equipped with dished and flanged heads (5 inch dish and 2 inch flange), five (5) each dished (5 inch) baffles.

   d. Two (2) each twenty (20) inch over enter latching manhole hatches.

   e. Top spill rail channels for full length of tank

   f. Front mounted access ladder; catwalk with guard rails mounted both sides of tank (catwalk material shall be galvanized grip strut) with access from operators compartment ladders.

   g. Fabricate "I" beam design under frame will be installed between the 5th wheel plate and rear suspension, storage compartments will be suspended from this frame section.

   h. King Pin placement shall be twenty (20) inches front of trailer and on center.

   i. Interior of tank shall prepped and painted with two (2) coats of Dupont Corlar two part epoxy primer.

4. Tank Material:

   a. A-36 3/16-inch mild steel will be used on bottom 1/3 of tank vessel, and tank heads; ten (10) gauge mild steel will be used on upper 2/3 of tank vessel and baffles.

   b. All tank shell sections, heads, and baffles will be Electrically double welded.

5. Dimensions:

   a. Overall length approximate 10.97 m (36 ft.).

   b. Tank approximate 8.53 m (28 ft), plus heads.

6. Brakes:

   a. Full air, S-CAM type, with MAXI brakes on both axles.

   b. Sixteen and a half (16 ½) x seven (7).

   c. Anti-lock brake system.

   d. Brakes shall be installed so S-CAM rotation is in the same direction as wheel direction, to eliminate brake vibration/chatter.

7. Suspension:

   Suspension shall be 20,865.6 kg (46,000 lbs.) capacity. Hutchins four-spring suspension or equal.

8. Axles:

   a. Two (2) standard forge A-225-5 inch tubular, 22,000 pounds rating each axle, or equal.

   b. Wheel seals shall be oil lubricant type with visible hub caps and ventilated fill plugs.

   c. Shall have hub meter.

9. Ground Clearance:

   A minimum of 457.2 mm (18 inches) ground clearance will be provided under center area of tank trailer, and in no case will ground clearance be less than 381 mm (15 inches). The trailer shall be mounted in such a manner as to maintain a level plateau when attached to towing tractor.

10. Lighting:

    a. Lighting shall be ICC/DOT approved with color coded wiring and 7-way receptacle.

    b. Wiring system shall be vapor proof throughout all major junctions and shall be through terminal connections in Betts cast aluminum #B-47 waterproof or equivalent junction boxes. Wiring shall be enclosed in plastic conduit and routed within main frame members for absolute protection.

    c. Stop, tum, tail, side clearance, mid-ship turn, rear identification, lights shall be of the sealed beam LED type and mounted in rubber housings. Reflectors shall be screwed or bolted on type (stick on/riveted are not acceptable).

11. Tires/Wheels:

    a. Nine (9) 11R 22.5 14 ply.

    b. Wheels shall be hub-piloted budd type disc. Rims shall be 8.25" x 22.5".

    c. Outboard mount hubs shall be furnished

12. Rear Operators Compartment:

    A rear operator's compartment shall be constructed across tank rear, ahead of the engine compartment for operating spray bars. Compartment will have floor plate grid with drainage, be equipped with entryway, and framed with square tubing. The compartment shall comply with OSHA regulations. The entryway will be accessed via ladder located on both sides of the rear of tank trailer and have rails for a three point contact. The compartment shall be equipped with two seats with seat belts, and be in easy reach of all controls.

13. Rear Engine Compartment:

    a. A fully enclosed engine compartment shall be installed at the rear of the trailer behind of the operator's compartment The compartment shall be compatible with the shape of the tank. Adequate ventilation shall be provided for proper air circulation for engine. A rear door hinged vertically shall be installed complete with gas struts and "D" ring locking latch. Compartment shall be fully insulated to reduce engine noise.

    b. Engine - Diesel engine capable of delivering 80HP @ 2300 RPM minimum.

    c. Priming System - There shall be a Hale oil-less electric Primer installed in the rear engine compartment complete with all necessary valves to allow for self-loading. There will be two (2) sections of rubber suction hose 101.6 mm x 4,572 mm (4 in x 15 ft), complete with suction strainer basket, cam lock connections, and storage hooks on tank sides.

14. Water Delivery System:

    a. Flusher System - The trailer shall be equipped with two (2) road sprinkler nozzle bars, one on each side located mid height on trailer under catwalk. Twenty one (21) nozzles spaced 165.1 mm (6.5 in) apart will be installed in each bar. Each bar will be controlled from the operator's station with remote vertical adjustment from 45 degrees above horizon to 45 degrees below horizon. Two (2) 63.5 mm (2.5 in) fire discharge ports will be installed on the discharge bar (one on each side) to include two (2) lengths of 100 feet each of fire hose and adjustable nozzles with storage for hoses on trailer. There shall be a 101.6 mm (4 in) clean out plug located at the bottom of the tank.

    b. Plumbing - All plumbing will be schedule 40 black piping with welded fittings, rather than threaded pipe or fittings. Threaded fittings will be used only where necessary due to valve or pump entries being threaded. All plumbing entries to be constructed from schedule 40 weld fittings and fitted weld collars. Plumbing to be assembled using rubber gasket couplers at various locations to prevent stress

on plumbing and to insure easy removal of plumbing sections from chassis.

c. Water Pump-The water pump shall be a Berkeley model B21/21QBMS centrifugal 4 inch x 2 ½ inch single stage cast iron water pump (or equal) with 4 inch suction piping from tank to 4 inch pump draft orifice. Pump performance capability shall be a minimum 500 gpm at 125 psi.

d. Hose Reel- a 1 ½ inch live hose reel with 1 ½ inch x 70 Feet of 200 psi hard rubber hose and NST 1 ½ inch brass end adaptor installed in rear of trailer compartment for operations to either side of equipment. A 1 ½ inch full port three piece bal valve will be used for on/off control. The reel will have a ring gear and pinion style rewind with ½ horse power 12 volt electric rewind motor complete with stainless steel roller chain, correct controls, automatic reset circuit breaker, and crank backup with crank holder.

e. Tool Compartment -Two (2) tool compartments shall be installed (one on each side). Compartments will be approximately 24 in x 24 in x 72 in, with locking "D" ring latch. Door will hinge vertically up and is supported by gas struts.

f. Hydrant Fill System - Two (2) each 2 ½ inch external piping system located at the rear of the trailer at frame height to tank top. The fill pipe shall be equipped with a guarded six (6) inch air gap visible from all angles. The unit will be equipped with 2 ½ inch NST female swivel and 2 ½ inch three piece ball b=valve at receiving end. To include 20 feet of hydrant fill hose.

15. Operators Console:

a. A control console shall be constructed and mounted between the seats in the operator's compartment, and to be painted with three coats of Hammerite Protective Coating.

b. Console to have a 0-200 psi liquid filled water pressure gauge and all necessary air/electric controls. All switches shall be identified.

c. Engine throttle assembly will be pos1Jioned on con ole for easy control by operator. A pump in gear light shall be furnished.

d. A low water level warning light shall be on console

e. The spray bar controls and necessary control switches shall be installed in the control console.

16. Water Level Indicator/Floats:

Two (2) each adjustable stainless steel float assemblies will be positioned inside tank at mid center line. The lower float will indicate “tank empty” and will have an identified indicator light on cab console. The upper float will indicate “tank full” and have an identified indicator light at the hydrant fill station.

17. Color:

a. Paint preparation shall be carbide shot blast to the bare metal removing all mill

scale and rust. Primacoat shall be minimum of 1 mil. of rust inhibitive primer.

b. Dupont Chroma One Acrylic Urethane with catalyst, Federal Safety School Bus Yellow.

c. Rear Signage to include “FREQUENT STOPS” “CAUTION SLOW MOVING VEHICLE” “KEEP DISTANCE”.

d. Shall be outlined with conspicuity tape (reflexite or equal) to meet federal requirements Red/White.

18. Other:

a. Operators Manual (2 copies), Shop Manual (1 copy).

b. PUC Certification, License, Registration and certificates as required in General Specifications

c. Complete after factory rustproof with five (5) year unlimited mileage warranty. In accordance with Federal Specifications, 297A at is latest revision.

d. Reverse alarm.

e. Full formed fiberglass fenders mounted with rubber isolator bushings to include mud flaps.

f. Landing Gear - Double pedestal, two speed minimum.

g. Two (2) 360 degree strobes (Whelen model DOT6H, Strobe Plus) mounted at front top of tank and at rear top of engine compartment, both with aluminum limb guards, to include spare bulbs.

h. Vehicle shall conform to code of Federal Regulations, Title 40, Part 85, Control of Air Pollution from New Motor Vehicles, Engines, Environmental Protection Agency, Federal Motor vehicle Safety Standard.

i. One (1) 4.5 kg (10 lbs) ABC dry chemical fire extinguisher mounted in operators compartment.

19. TRAINING:

Contractor shall provide proper and safe operation, maintenance of equipment. This training shall include classroom and operator hands on training. Training shall be consistent to OSHA requirements. This service shall be provided at no extra cost to the State.

Copy of attendance record showing class date, time, location, class type, instructor's name and attendees shall be submitted to:

State of Hawaii Highways
Construction & Maintenance Branch
Attn: Equipment Superintendent/Safety Coordinator
869 Punchbowl Street, Room 404
Honolulu, Hawaii 96813

20. Bidder(s) shall submit with their bid a certified letter(s)from the manufacturer(s) to certify the prospective bidder as the Factory Authorized Warranty Dealer (letter required for both chassis and equipment). Failure to submit certified letter(s) shall be sufficient grounds for rejection of bid.

SECTION 27 - TRANSPORT TRAILER

27.1 SCOPE OF WORK - The work consists of furnishing, delivering, one (1), Transport Trailer, to the Island of Kauai. The Contractor shall present the equipment complete, ready to use, and fully operational.

27.2 TRANSPORT TRAILER - The Specifications contained herein establish minimum standards (unless stated differently). Equipment offered shall include any other standard features not listed but detailed in manufacturer's brochures and deemed necessary for proper and safe operation of equipment.

DETAILED SPECIFICATIONS FOR TRANSPORT TRAILER

1. Model/Year: Zieman 1150 or approved equal, 2023 or latest production.

2. Type: Tilt bed

3. Deck Length: 14.0 ft; Overall Length: 20.5 ft.

4. Deck Width: 70 in; Overall Width: 100 in.

5. GVWR at 55 mph: 9,999 lbs.

6. Payload at 55 mph: 7,830 lbs.

7. Training:

   Contractor shall provide operator and maintenance training to demonstrate proper and safe operation of equipment. This training shall consist of a minimum of one (1) hour class and one (1) hour hands on training, per operator. Contractor shall provide classroom site. This service shall be provided at no additional cost to the State. Training shall be consistent to OSHA requirements.

   Copy of attendance record showing class date, time, location, class type, instructor's name and attendees shall be submitted to:

   State of Hawaii
   Highways
   Construction and Maintenance Branch
   Attention: Equipment Superintendent/Safety Coordinator
   869 Punchbowl Street, Room 404
   Honolulu, Hawaii 96813

SECTION 28 - EQUIPMENT TRAILER, DECK-OVER TILT

28.1 SCOPE OF WORK – The work consists of furnishing, delivering, three (3) Equipment Trailer, to the island of Oahu. The Contractor shall present the equipment complete, ready to use, and fully operational.

28.2 EQUIPMENT TRAILER, DECK-OVER TILT - The Specifications contained herein establish minimum standards (unless stated differently). Equipment offered shall include any other standard features not listed but detailed in manufacturer's brochures and deemed necessary for proper and safe operation of equipment.

1. Model/Year: Towmaster T-20T or approved equal, 2023 or latest production.

2. Type: Deck-Over Tilt

3. Deck Length: 24+4 ft; Overall Length: 34.7 ft.

4. Deck Width: 102 in.

5. GVWR at 55 mph: 25,990 lbs.

6. Payload at 55 mph: 17,300 lbs.

7. Training:

   The contractor shall provide operator and maintenance training to demonstrate the proper and safe operation of equipment. This training shall consist of a minimum of one (1) hour class and one (1) hour hands-on training, per operator. The contractor shall provide a classroom site. This service shall be provided at no additional cost to the State. Training shall be consistent with OSHA requirements.

   Copy of attendance record showing class date, time, location, class type, instructor's name and attendees shall be submitted to:

   State of Hawaii Highways
   Construction and Maintenance Branch
   Attention: Equipment Superintendent/Safety Coordinator
   869 Punchbowl Street, Room 404
   Honolulu, Hawaii 96813

SECTION 29 - EQUIPMENT TRAILER, RAMP

29.1 SCOPE OF WORK – The work consists of furnishing, delivering, one (1) Equipment Trailer, to the island of Kauai. The Contractor shall present the equipment complete, ready to use, and fully operational.

29.2 EQUIPMENT TRAILER, RAMP - The Specifications contained herein establish minimum standards (unless stated differently). Equipment offered shall include any other standard features not listed but detailed in manufacturer's brochures and deemed necessary for proper and safe operation of equipment.

DETAILED SPECIFICATIONS FOR EQUIPMENT TRAILER, RAMP

1. Model/Year: Zieman 2735 or approved equal, 2023 or latest production.

2. Type: Ramp type with high traction cleated ramps & beavertail with open bucket slot.

3. Deck Length: 21+4 ft; Overall Length: 34.0 ft.

4. Deck Width: 102 in.

5. GVWR at 55 mph: 62,000 lbs.

6. Payload at 55 mph: 50,000 lbs.

7. Radial tires on disc wheels, spare tire/wheel assembly.

8. Lockable storage box.

9. Adjustable heavy duty Lunette eye.

10. Heavy duty quick-drop jack stand.

11. Training:

    The contractor shall provide operator and maintenance training to demonstrate the proper and safe operation of equipment. This training shall consist of a minimum of one (1) hour class and one (1) hour hands-on training, per operator. The contractor shall provide a classroom site. This service shall be provided at no additional cost to the State. Training shall be consistent with OSHA requirements.

    Copy of attendance record showing class date, time, location, class type, instructor’s name and attendees shall be submitted to:

State of Hawaii
Highways
Construction and Maintenance Branch
Attention: Equipment Superintendent/Safety Coordinator
869 Punchbowl Street, Room 404
Honolulu, Hawaii 96813

SECTION 30 – DROP-DECK AND DUMP TRAILER

30.1 SCOPE OF WORK – The work consists of furnishing, delivering, one (1) Drop-Deck and Dump Trailer, to the island of Oahu. The Contractor shall present the equipment complete, ready to use, and fully operational.

30.2 DROP-DECK AND DUMP TRAILER - The Specifications contained herein establish minimum standards (unless stated differently). Equipment offered shall include any other standard features not listed but detailed in manufacturer's brochures and deemed necessary for proper and safe operation of equipment.

1. Model/Year: Air-Tow 3D-12 or approved equal, 2023 or latest production.
2. Type: Drop-Deck and Dump
3. GVWR: 14,770 lbs.
4. Capacity:
   i. Load Capacity – 10,000 lbs.
   ii. Dumping Capacity – 8,000 lbs.
5. Dimensions
   a. Deck Width: 74 inches
   b. Overall Width: 102 inches
   c. Deck Length: 12 ft
6. Training:

   The contractor shall provide operator and maintenance training to demonstrate the proper and safe operation of equipment. This training shall consist of a minimum of one (1) hour class and one (1) hour hands-on training, per operator. The contractor shall provide a classroom site. This service shall be provided at no additional cost to the State. Training shall be consistent with OSHA requirements.

   Copy of attendance record showing class date, time, location, class type, instructor's name and attendees shall be submitted to:

   State of Hawaii Highways
   Construction and Maintenance Branch
   Attention: Equipment Superintendent/Safety Coordinator

869 Punchbowl Street, Room 404
Honolulu, Hawaii 96813

SECTION 31 – UTILITY TRACTOR WITH REAR MOUNTED DITCH BANK FLAIL MOWER

31.1 SCOPE OF WORK – The work consists of furnishing and delivering one (1) only Utility Tractor with Rear Mounted Flail Mower to the Island of Hawaii. The Contractor shall present the equipment complete, ready to use, and fully operational.

31.2 UTILITY TRACTOR WITH REAR MOUNTED DITCH BANK FLAIL MOWER – The Specifications contained herein establish minimum standards (unless stated differently). Equipment offered shall include any other standard features not listed but detailed in manufacturer's brochures and deemed necessary for proper and safe operation of equipment.

DETAILED SPECIFICATIONS FOR A UTILITY TRACTOR WITH REAR MOUNTED DITCH BANK FLAIL MOWER

1. Model/Year: Case Farmall 75C, Kioti RX-7320, Kubota 7040SU, 2023 or latest production; or equal.

2. Type: 4-Wheel drive.

3. Engine:

   a. Diesel powered, liquid cooled. EPA Tier 4 and EU Stage III A compliant. Shall have capability of operating on a B20 blend of bio-diesel with no adverse effects.

   b. PTO 44.7 kW (75 HP) minimum.

   c. Fuel water separator, CONMETCO or equal.

   d. Combination pre-screener/pre-cleaner or turbo cleaner indicator.

4. Transmission:

   a. Manufacturer's standard full synchromesh 12x12 hydraulic with shuttle and creeper minimum, or equal.

   b. Lock type differential.

5. Electrical:

   a. Twelve (12) volt system.

   b. Alternator capable of charging at low engine speeds.

6. PTO:

a. Rear PTO at 540 RPM.

b. Independent PTO.

7. Steering: Powered.

8. Brakes: Manufacturer's standard service and parking brake system.

9. Tires:

a. All tires mounted on compatible rims.

b. Front - 7.50 x 16, F-2 (Highway Tread).

c. Rear - 16.9 x 30, R-4 (Industrial Surge Grip Tread) or manufacturers equal R-1.

d. Spares - Front and rear, one (1) each.

10. Axles: Heavy duty adjustable, front/rear.

11. Hydraulic:

a. Open or closed center.

b. Suction line shall have a 100 mesh filter.

c. Main in tank filter to be 10 micron, full flow with restriction gauge.

12. Accessories:

a. ROPS and enclosed cab shall meet OSHA requirements; with factory installed air condition.

b. Front safety approved windshield glass with electric wiper motor.

c. Rear cab glass to have a protective shield (guard) from mower at rear, shield shall be removable to facilitate the cleaning of rear outer glass, or rear glass to be lexan type.

d. Reverse warning alarm.

e. Four (4) D rings, one (1) each installed at each corner

f. Horn.

g. Interior rear view mirror; two (2) exterior mirror mounted right/left side of cab.

h. Working and traveling lights - headlights; hazardous flashing lights front/rear; directional signals front/rear; combination tail/brake lights; six (6) work lights – front - two (2) each on cab roof and two (2) each mounted at lower windshield area. Rear - two (2) each mounted to rear top of cab, to include limb guards.

i. LED Light System: Custer High Intensity LED Mini Bar Model LBE-20001 or equal, one (1) only, mounted on center of cab, two (2) Rectangular 7-gauge welded steel housings installed on side of cab, one on each side, containing two (2) 700 series amber linear strobe lightheads, one on each side, two (2) 700 series red LED brake/tail/turn lightheads with side lighthead, one (1) on each side, two (2) 700 series clear back-up lights, one on each side, one (1) Whelen Model ISP94, 90-watt output strobe power supply installed in cab behind seat, allowing for service access, one (1) standard lighted switch panel with Diagnostic indicator installed in dash within easy reach of driver.

j. Manufacturer front and rear fenders (if available).

13. Rear Mounted Flail Ditch Bank Mower:

a. Super heavy duty Rear Ditch Bank Flail Mower (FH-AGF18, 145FLAILDB or equal) chopper blade reverse rotation package or approved equal.

b. Offset mount with return to center.

c. Heavy duty gear box of 63.3 kw (85 HP) rating. Low profile design.

d. Cutting width 1524 mm (60 in.) minimum.

e. Cutting height adjustable 25.4 mm to 127 mm (1 in. to 5 in.).

f. Shall be able to shred brush/pruning up to 88.9 mm (3 in.), constant use of 63.5 mm (2.5 in.).

g. Heavy duty roller full width, 152.4 mm (6 in.) diameter with external bearings.

h. Minimum weight of unit 553.3 kg (1,220 lbs.).

i. Shall be able to shred brush as well as cut grass.

j. Rear trash deflector shall be provided at rear of unit.

k. Shall have front mounted chains to provide safety from flying material.

l. Rotor bearings shall be self-aligning.

m. Anti-wrap steel knives welded to inner housing to protect seals on motor shaft roller ends protected by 12.7 mm (0.5 in.) end plate case housing.

n. One (1) spare set reversible knife, and attachment accessories.

14. Other:

a. Unit shall have cushioned, adjustable operators' seat with backrest and seat belt.

b. List of factory trained and authorized personnel who will provide service. Tractor shall have a five (5) year warranty on drive train, axles and cutter gear box.

c. List of scheduled item/systems which require maintenance by factory authorized.

d. Counterweight - manufacturer's recommended.

e. SMV (Slow Moving Vehicle) emblem.

f. Tool Box 254mm x 254mm x 508mm (10 in. x 10 in. x 20 in.) approximately, lockable.

g. Operators Manual, two (2) copies. Service and Repair Manual, one (1) copy; Parts Catalog; one (1) copy each (for tractor and rear flail). Book format/CD/DVD.

h. Color, Federal Safety School Bus Yellow, High Gloss urethane or manufacturer equal.

i. First Service Kit to include all necessary filters, as required. (Oil, fuel, air, breather, etc.).

j. Hour meter.

k. Slope degree indicator, model 7489, R&B, Inc. Manufacturing or equal.

l. Complete vandalism protection package at all service/cab/dash/fuel points and to be keyed alike.

m. 2.2 kg (5lb.) ABC fire extinguisher mounted in cab.

n. First Aid Kit OSHA/ANSI recommended.

15. Training:

Contractor shall provide operator and maintenance training to demonstrate proper and safe operation of equipment. This training shall include a minimum of one (1) hour classroom, and one (1) hour per operator hands on training. Contractor shall provide classroom site. This training shall be at no additional cost to the State. Training shall be consistent to OSHA regulations.

Copy of attendance record showing class date, time, location, class type, instructor's name and attendees shall be submitted to:

State of Hawaii
Highways
Construction and Maintenance Branch
Attention: Equipment Superintendent/Safety Coordinator
869 Punchbowl Street, Room 404
Honolulu, Hawaii 96813

SECTION 32 - UTILITY TRACTOR WITH EXTENDED SIDE AND REAR MOUNTED DITCH BANK FLAIL MOWER

32.1 SCOPE OF WORK – The work consists of furnishing and delivering one (1) Utility Tractor with Extended Side and Rear Mounted Ditch Bank Flail Mower to the island of Hawaii. The Contractor shall present the equipment complete, ready to use, and fully operational.

32.2 UTILITY TRACTOR WITH EXTENDED SIDE AND REAR MOUNTED DITCH BANK FLAIL – The Specifications contained herein establish minimum standards for the Utility Tractor with Extended Side and Rear Mounted Flail Mower and shall include any other standard features not listed but detailed in manufacturer's brochures and deemed necessary for proper and safe operation of the equipment.

DETAILED SPECIFICATIONS FOR A UTILITY TRACTOR WITH EXTENDED SIDE AND REAR MOUNTED DITCH BANK FLAIL MOWER

1. Model/Year: Case 145 Maxxium Series, John Deere 5M Series, Kubota M5 Series, 2023 or latest production; or equal.
2. Type: 4-Wheel Drive.
3. Engine:
   a. Diesel powered, liquid cooled.
   b. PTO 52.1 kW (75 HP) minimum.
   c. Fuel water separator, CONMETCO or equal.
   d. Combination pre-screener/pre-cleaner or turbo cleaner indicator.
4. Transmission:
   a. Manufacturer's standard full synchromesh 12 x 12 synchro shift with shuttle minimum, or equal.
   b. Lock type differential.
5. Electrical:
   a. Twelve (12) volt system.
   b. Alternator capable of charging at low engine speeds.
6. PTO: Rear PTO at 540 RPM with engine auxiliary pump; Slip clutch.
7. Steering: Powered.

8. Brakes: Manufacturer's standard service and parking brake system.

9. Tires:

   a. All tires mounted on compatible rims.

   b. Front – 7.50 x 16, F-2 (Highway Tread).

   c. Rear – 16.9 x 28, R-4 (Industrial surge grip thread) or manufacturers equal R-1.

   d. Spares – Same size front and rear, one (1) each.

10. Axles: Heavy duty front; adjustable treads, front/rear.

11. Hydraulic:

   a. Open or closed center.

   b. Hydraulic reservoir 47.1 L (60 gals.) minimum, with shut off valve on main hydraulic line.

   c. Suction line shall have a 100 mesh filter/manufacturer recommended.

   d. Main in tank filter to be 10 micron, 283.9 L/min (75 gpm) full flow with restriction gauge.

12. Accessories:

   a. ROPS and enclosed cab shall meet OSHA requirements; with factory installed air condition.

   b. Front safety approved windshield glass with electric wiper motor and washer.

   c. Lexan glass to be supplied as protective shield from mowers (at rear and right side).

   d. Reverse warning alarm.

   e. Horn.

   f. Four (4) D rings, one (1) each installed at each corner

   g. Interior rear view mirror; two (2) exterior mirror mounted right/left side of cab.

   h. Working and traveling lights – headlights; hazardous flashing lights front and rear; 177.8 mm (7 in.) diameter directional signals front and rear; 177.8 mm (7 in.) diameter combination tail and brake lights. (Note: Mounting of lights and toolbox will be coordinated with receiving agency prior to delivery of equipment).

i. Strobe light, twelve (12) volt, amber dome (Whelen strobe with both sides model HELS or equal), including limb guard and mounted on top of cab.

j. Manufacturer front and rear fenders if available.

k. A boom rest shall be installed on the rear axle or tractor frame to cradle side extension boom when in transport position. Boom rest must take pressure off of cylinder or boom shall store in a position recommended by manufacturer within legal transport requirements.

13. Side Mounted Flail Ditch Bank Mower:

a. Super heavy duty Rear Ditch Bank Flail Mower (FH-AGF18, 145FLAILDB or equal) chopper blade reverse rotation package or approved equal.

b. Offset mount with return to center.

c. Heavy duty gear box of 63.3 kw (85 HP) rating. Low profile design.

d. Cutting width 1524 mm (60 in.) minimum.

e. Cutting height adjustable 25.4 mm to 127 mm (1in. to 5 in.).

f. Shall be able to shred brush/pruning up to 88.9 mm (3 in.), constant use of 63.5 mm (2.5 in.).

g. Heavy duty roller full width, 152.4 mm (6 in.) diameter with external bearings.

h. Minimum weight of unit 553.3 kg (1,220 lbs.).

i. Shall be able to shred brush as well as cut grass.

j. Rear trash deflector shall be provided at rear of unit.

k. Shall have front mounted chains to provide safety from flying material.

l. Rotor bearings shall be self-aligning.

m. Anti-wrap steel knives welded to inner housing to protect seals on motor shaft roller ends protected by 12.7 mm (0.5 in.) end plate case housing.

n. Mounting: Entire extension mechanism shall be side mounted on sub frame to the rear axle and the front axle mounting frame. Main Boom of the cutter unit shall be mounted between the front and rear wheels and to the right side of the power unit. Cutter head shall be mounted on a sliding/bolt-on bracket in order for cutter head to be positioned at various angles or boom shall be articulated with rotational cutter head. No brackets shall interfere with service access areas.

o. Cutter Head; Terrain King Brush-Flail Axe, Tiger Boom Flail, or equal:

i. 1.2 m (4 ft.) minimum width of cut.

ii. 5.2 m (17 ft.) Reach maximum (2 piece).

iii. Height of cut roller adjustable from 12.7 mm to 152.4 mm (1/2 in. to 6 in.)

iv. Bearings, self-aligning, special double-row, roller bearings 50.8 mm (2 in.) I.D. greaseable.

v. Knife lungs, welded with replaceable bushing.

vi. Cutter shaft speed, 1,650 RPM at 1,800-RPM engine speed.

p. Knives:

i. Forged steel, double edged 360-degree swing.

ii. Minimum of 16 knives.

iii. Knife weight – 680.4 g (24 oz.), special high strength allow steel. Knife FPK – 02956707 Flail Axe Head.

iv. One (1) set spare blades and attachment accessories.

14. Design:

a. Roller, full span, sealed ball bearing equipped, steel constructed; mounted rear of knives to prevent scalping.

b. Cutter shaft – solid steel, ball bearing mounted and balanced of smooth operation.

c. Cutter Head – equipped with steel and rubber front and rear deflector (construction shall be heavy duty, thick wall square channel).

d. Hood – 10 gauge, formed/100,000 PSI steel,

e. Side Plates – 9.5 mm (3/8 in.).

f. Full length, replaceable skid shoes.

g. Added gussets on welded area as needed to prevent bucket and weld from cracking.

h. Safety: Safety lock to prevent mower unit from lowering while traveling and a hydraulic auto-return safety breakaway.

i. Side extension flail shall be installed by tractor manufacturer or side extension flail manufacturer no local installation of side extension flail shall be accepted. Certified letter of installation required on delivery.

15. Rear Mounted Flail Ditch Bank Mower:

a. Super heavy duty Rear Ditch Bank Flail Mower (FH-AGF18, 145FLAILDB or equal) chopper blade reverse rotation package or approved equal.

b. Offset mount with return to center.

c. Heavy duty gear box of 63.3 kw (85 HP) rating. Low profile design.

d. Cutting width 1524 mm (60 in.) minimum.

e. Cutting height adjustable 25.4 mm to 127 mm (1in. to 5 in.).

f. Shall be able to shred brush/pruning up to 88.9 mm (3 in.), constant use of 63.5 mm (2.5 in.).

g. Heavy duty roller full width, 152.4 mm (6 in.) diameter with external bearings.

h. Minimum weight of unit 553.3 kg (1,220 lbs.).

i. Shall be able to shred brush as well as cut grass.

j. Rear trash deflector shall be provided at rear of unit.

k. Shall have front mounted chains to provide safety from flying material.

l. Rotor bearings shall be self-aligning.

m. Anti-wrap steel knives welded to inner housing to protect seals on motor shaft roller ends protected by 12.7 mm (0.5 in.) end plate case housing.

16. Other:

a. Unit shall have cushioned, adjustable operators seat with backrest and seat belt.

b. List of factory trained and authorized personnel who will provide service.

c. Tractor shall have a five (5) year warranty on drive train and axles.

d. List of scheduled item/systems which require maintenance by factory authorized.

e. Counterweight: Manufacturer recommended; shall be provided to balance equipment at a five (5) degree slope on right side with boom extended to maximum length.

f. SMV (Slow Moving Vehicle) emblem.

g. Tool Box: 254 mm x 254 mm x 508 mm (10 in. x 10 in. x 20 in.) approximately, lockable.

h. Operators Manual: Two (2) copies. Service and Repair Manual, one (1) copy. Parts Catalog, one (1) copy (for tractor, side extension flail and rear mounted flail). Book format/CD/DVD.

i. Color: Safety School Bus Yellow, High Gloss Enamel or equal.

j. First Service Kit to include all necessary filters, as required. (Oil, fuel, air, breather, transmission, etc.).

k. Hour meter.

l. Slope degree indicator, model 7489, R&B Inc. Manufacturing or equal.

m. 2.2 kg (5 lb.) ABC fire extinguisher mounted in cab.

n. First Aid Kit OSHA/ANSI recommended.

17. Training:

Contractor shall provide operator and maintenance training to demonstrate proper and safe operation of equipment. This training shall include a minimum of one (1) hour classroom, and one (1) hour per operator hands on training. Contractor shall provide classroom site. This training shall be at no additional cost to the State. Training shall be consistent to OSHA requirements.

Copy of attendance record showing class date, time, location, class type, instructor's name and attendees shall be submitted to:

State of Hawaii
Highways
Construction and Maintenance Branch
Attn: Equipment Superintendent/Safety Coordinator
869 Punchbowl Street, Room 404
Honolulu, Hawaii 96813

SECTION 33 - ZERO TURN MOWER

33.1 SCOPE OF WORK - The work consists of furnishing and delivering one (1) Zero Turn Mower to the island of Kauai. The Contractor shall present the Zero Turn Mower, complete and ready to use.

33.2 ZERO TURN MOWER - The specifications contained herein establish minimum standards (unless stated differently). Zero Turn Mower shall include any other standard feature not listed but detailed in manufacturer's brochures and deemed necessary for proper and safe use.

DETAILED SPECIFICATIONS FOR ZERO TURN MOWER

1. Model/Year: Grasshopper 325D, Hustler Z Diesel; 2023 or latest production year.

2. Type: Zero Turn Grass Mower. Commercial Grade.

3. Engine:

    a. Diesel powered, 24.8 HP minimum. 2021 emissions compliant, tier 4, shall be B20 Bio-Diesel compatible.

    b. Liquid/Air cooled.

    c. Dual element dry type air filter with service indicator with dust spinner bowl pre air cleaner.

    d. In-line fuel filter with clear bowls and replaceable filters and indicators with lockable fuel tank filler cover.

    e. Fuel tank capacity minimum of thirteen (13) gallons.

4. Transmission:

    a. Hydrostatic.

    b. Spin on/off transmission oil filter.

    c. Unit must have Aluminum skid in rear area of transmission to prevent hitting under carriage area of transmission must be unbolt-able and removable.

5. Steering:

    a. Adjustable dual lever control.

    b. Sensitive to control of speed and motion.

    c. Independent right hand and left-hand steering levers.

d. Zero degree turning radius with counter-rotating, independently powered drive wheels.

6. Electrical:

a. Twelve (12) volt solenoid shift starter motor.

b. Fourteen (14) amp changing capacity.

c. Maintenance Free Battery Gel type battery, minimum 450 cold-cranking amp capacity.

7. Tires:

a. Drive tires shall be Michelin X Tweel Turf or approved equal.

b. Front tires shall be standard OEM. Provide (1) spare tire.

8. Brakes: Dynamic braking through hydrostatic transmission or internal expanding shoe. Automatic parking brake on steering levers.

9. Cutting Deck:

a. Mid-mount cutting unit, rotary cutting blades, mulching under pan discharge.

b. Minimum width of cut shall not be less than sixty (60) inches.

c. Variable cutting height 1.0 to 5 inches. Electric operated deck lift.

d. 11-gauge double welded deck with reinforced steel skirts.

e. 3 blades with extra sets of blades.

10. Other:

a. Ergonomic designed seat with suspension; adjustable; with armrests; high back; padded; water resistant and breathable; wide width; safety switch; seat belt; isolator platform.

b. Certified roll over protection (ROPS) with Stainless Steel or Aluminum roof canopy only (no sheet metal or soft tops).

c. Indicators/Gauges - hour meter; fuel gauge; amp/volt meter. Must have all factory safety switches (Seat weight stop switch) (No start in gear safety switches).

d. Counterweights if required by manufacturer.

e. Mulching option: 3 Blades with a set of spare blades kit.

f. Whelen Super LED Beacon L10LAP with lighted switch or equal with front and back paired yellow warning strobe at eye level mounted and controlled with switches. Must be waterproof and dustproof mounted switch panel. Also, tractor should have front driving lights and rear backup lights installed LED only.

g. 5 lbs. ABC fire extinguisher mounted on mower.

h. Slow moving vehicle sign mounted at rear of mower; light kit; Driving and reverse light kit.

i. Warranty shall be a minimum thirty-six (36) months.

j. First service kit to include all filters as required (oil, fuel, air, breather, transmission, etc.). Any spare parts like blades and belts must be included in package.

k. Custom mower cover must also have a hard-top above operator head area and must be made out stainless steel or aluminum. It must have a stainless steel or aluminum frame to prevent top from rattling and support in case of accident and must hold the weight of the mower. (No fabric or soft top allowed). Light Beacon must be mounted in center of roof and must be able to see 360 degrees. Top shall have no adversity to ROP System in any way.

l. Unit must be colored to seen on the side of highway by oncoming traffic. Bright orange or bright red in color is preferred for safety and visibility.

11. Training:

Contractor shall provide proper operation and maintenance training on the island of Kauai; training shall be consistent to OSHA requirements; this training shall be at no additional cost to the State. Training shall include a minimum one (1) hour hands on training, to be arranged with the receiving district.

Copy of attendance record showing class date, time, location, class type, instructor's name and attendees shall be submitted to:

State of Hawaii
Highways
Construction and Maintenance Branch
Attn: Equipment Superintendent/Safety Coordinator
869 Punchbowl Street, Room 404
Honolulu, Hawaii 96813

SECTION 34 – VIBRATORY ROLLER, 8 TO 10 TON

34.1 SCOPE OF WORK – The work consists of furnishing and delivering one (1) only Vibratory Roller, 8 to 10 Ton to the island of Hawaii. The Contractor shall present the Vibratory Roller, complete, fully operational, and ready to use.

34.2 VIBRATORY ROLLER, 8 TO 10 TON – The specifications contained herein establish minimum standards (unless stated differently). Equipment offered shall include any other standard features not listed but detailed in manufacturer's brochures and deemed necessary for proper and safe operation of equipment.

DETAILED SPECIFICATIONS FOR VIBRATORY ROLLER, 8 TO 10 TON

1. Model/Year: Dynapac CC7200, CAT CB10 or equal, 2023 or latest production year.

2. Type:

   a. Eight (8) to Ten (10) ton.

   b. Vibratory.

   c. Hydrostatic drive.

3. Engine:

   a. Diesel powered, 2023 emissions compliant, Tier 4. Shall be B20 Bio-diesel compatible. Liquid/air cooled.

   b. 120 horsepower minimum.

4. Transmission:

   a. Hydrostatic drive with single level control.

   b. Front and rear drum drive.

   c. Variable speed, 0-5 mph minimum.

5. Electrical:

   a. Twelve (12) volt system.

   b. Alternator capable of charging at low engine speeds.

6. Vibratory system: Direct hydraulic vibration on both drums.

7. Scrapers:

    a. Double acting.

    b. Full width adjustable.

    c. Spring loaded on both drums.

8. Brakes:

    a. Hydrostatic braking system.

    b. Mechanical parking brake system

9. Steering:

    a. Hydraulic system.

    b. Oscillating.

    c. Articulating.

10. Water spray system:

    a. Pressurized.

    b. 43 gal. minimum capacity.

    c. Tank shall be non-corrosive type material.

    d. Water filter to prevent spray nozzle lugging.

    e. Audible or visible low-water alarm to alert operator.

11. Dimensions/weight:

    a. Operating weight 25,000 lbs. minimum.

    b. Centrifugal force per drum 5,000 lbs. minimum.

    c. Frequency 3,000 vpm.

    d. Front drum diameter 44 in. minimum.

    e. Rear drum diameter 44 in. minimum.

f. Front drum width 70 in. minimum.

g. Rear drum width 70 in. minimum.

h. Overall width 90 in. minimum.

i. Overall height 10 ft. minimum.

j. Overall length 15 ft. minimum.

k. Wheelbase 10 ft. minimum.

12. Operator's Station:

a. Single seat with backrest; adjustable; heavily padded; vinyl; Three (3) inch seatbelt.

b. Rollover protection meeting all safety standards.

c. Canopy.

13. Instrumentation and controls:

Engine tachometer, hour meter, ammeter, oil pressure and electrical system charge lights;parking brake light and warning buzzer, hydraulic oil level gauge, manual vibration control switch, rear drum vibration cut-out lever, sprinkler system flow control valve, horn, and reverse alarm.

14. Lights:

a. Front headlights, combination taillight/brake light directional turn signals, rear and side clearance lights.

b. Work lights front and rear.

c. Super LED Beacon with limb guard. SAE Class, Whelen L41 series or equal.

15. Color: Safety School Bus Yellow

16. Other:

a. Complete vandalism protection.

b. All working parts shall be enclosed and protected from weather and dust.

c. Operator's Manual two (2) copies, Repair and Parts Manual one (1) copy each

d. First Service Kit shall include all filters as required, (oil, fuel, air, breather, transmission, etc.)

e. 5 lbs. ABC fire extinguisher mounted.

f. Minimum one (1) year warranty to include all attachments.

g. Cocoa mats on each drum (both directions) if available as standard/option.

h. All lubrication points shall be painted red.

17. Training:

Contractor shall provide proper and safe operation, maintenance of equipment. This training shall include a minimum of one (1) hour classroom and one (1) hour per operator hands on training on the Island of Hawaii. This training shall be consistent to OSHA requirements. Training shall be provided at no additional cost to the State.

Copy of attendance record showing class date, time, location, class type, instructors name and attendees shall be submitted to:

State of Hawaii
Highways
Construction and Maintenance Branch
Attn: Equipment Superintendent/Safety Coordinator
869 Punchbowl Street, Room 404
Honolulu, Hawaii 96813

SECTION 35 – HYDRAULIC EXCAVATOR WITH ATTACHMENTS

35.1 SCOPE OF WORK – The work consists of furnishing and delivering one (1) only, Hydraulic Excavator with Attachments to the island of Kauai. The Contractor shall present the Excavator with necessary equipment complete, ready to use, and fully operational as specified.

35.2 HYDRAULIC EXCAVATOR WITH ATTACHMENTS – The Specifications contained herein establishes minimum standards for the Compact Excavator with Attachments. Equipment offered shall include other features not listed but detailed in manufacturer's brochures and deemed necessary for proper and safe operation of equipment.

DETAILED SPECIFICATIONS FOR HYDRAULIC EXCAVATOR WITH ATTACHMENTS

1. Model/Year: Komatsu PC138USLC-11 John Deere 130P, Takeuchi TB2150 or latest production or equal.

2. Weight: Operating weight shall be 13,847 kg (30,500 lbs.) minimum.

3. Tail Swing Radius: Maximum radius 1,570 mm (61.2 in.). For working in restricted lane space.

4. Buckets and Thumb: Operating bucket shall be 762 mm (30 in.) width with; rated capacity of .67 cu. yd. with thumb; Spare bucket shall be 610 mm (24 in.) capacity of.50 cu. yd. with thumb. Buckets shall be furnished with cutting edge and replaceable teeth (detachable). Hydraulically operated thumb.

5. Engine:

    a. Net power of 72.3 KW (97hp) minimum, at the flywheel when engine equipped with fan, air cleaner, muffler and alternator.

    b. Shall be 4 cylinder, 4-cycle diesel powered, water-cooled, direct injection, turbocharged and air cooled, minimum.

    c. Shall meet EPA Tier 4 (Interim)Emissions Standards.

    d. Provide Electronic Control Module system with sensors, to monitor and adjust the engine rpm, fuel consumption, air, coolant, and exhaust systems. Electronic Control Display shall be located in operator's cab.

    e. Electrical system twenty-four (24) volt, with heavy-duty 110 amp alternator, minimum. Two (2) AGM type batteries, 150 Ah minimum.

    f. Air filter, dry type cleaner with replaceable filter, minimum.

    g. Radiator, heavy duty, reduce-dust type, 25L (6.6 gal.) minimum.

h. Engine operating system shall be equipped with alarms for high temperature; low lube oil pressure; hydraulic pump pressure. Operating system with alarm shall be located in operator's cab

i. Daily service for oil dipstick, fuel, hydraulic oil, oil filter, air filter, fuel filter, fuel/water separator and greasing points shall be accessible from ground level.

6. Hydraulic System:

a. System Design: Manufacturer's design to meet the required (full time) total main pump flow and the required pressure for the proper and safe operation of the excavator; operating with bucket and thumb, or a hydraulic hammer, or tree mulcher.

b. Hydraulic Pump(s): **Manufacturer's required pressure for the proper and safe operation of the boom, arm, swing, travel circuits, and for during the operation of each attachment.** One or two hydraulic motors shall be required to meet the hydraulic flow (gpm) and pressure (psi) for the proper and safe operation of the excavator with attachment. **Certification shall be provided with bid proposal showing actual hydraulic operating maximum flow (gpm) and maximum pressure (psi) for each attachment in operation**. Failure to submit certification will be sufficient grounds for non-acceptance of bid proposal.

c. All buckets with thumb and a tree mulcher attachment shall have the proper operating hydraulic pressure to meet the manufacturers specification s for proper and safe operation; All attachments shall have a quick connect/disconnect hydraulic coupling.

d. All hydraulic pump(s), control valves, anti-drift valves, and cylinders shall be from the same manufacturer of the excavator with a minimum three (3) years unlimited warranty.

e. Hydraulic oil filtration: One (1) 10-micron full-flow return filter; inline pressure filters with bypass, minimum.

7. Swing System:

a. Speed shall be not less than 11.0 RPM.

b. Torque shall be not less than 48,124 lb./ft.

c. Swing brake. Manufacturer standard.

8. Undercarriage:

a. Each track; width 500 mm (20 in.) with rubber shoes/pads, Minimum.

b. Sealed and lubricated track rollers, carrier rollers, and idlers required.

c. One (1) carrier roller minimum, for each track.

d. Eight (7) track rollers minimum, for each track.

e. Track length- 3,750 mm (147 in.) maximum. With hydraulic track adjuster.

f. Travel speeds-High 5.0 km/h (3.1 mph), Low 3.1 km/h (1.9 mph) minimum.

g. Ground Pressure: 5.37 psi minimum for operating weight.

h. Ground Clearance: 406.4 mm (16 in.) minimum.

i. Hydraulic dozer blade- 2,590 mm (8 ft. 6 in.) installed.

9. Boom/Arm Combination with operating bucket and power boost:

a. Arm length - 2,500 mm (98 in.) minimum.

b. Cutting height 8670 mm (28 ft 6 in.) minimum.

c. Dumping height: 6,840 mm (22 ft. 5 in.) maximum.

d. Digging depth: 5480 mm (18 ft..) maximum.

e. Vertical wall digging depth: 4600 mm (15.1 ft.) minimum.

f. Arm force (ISO Rating): 65 kN (14,611 lbs.) minimum.

g. Bucket digging force (ISO Rating): 85 kN (19,015 lbs.) minimum.

h. Lifting capacity at ground level at 15 ft. reach, 5,820 kg (9,000 lbs.) minimum.

i. Two (2) LED type working lights; mounted each side of boom.

j. Quick Coupler mounted for rapid change over of (work tools) attachments.

k. Hydraulic piping - Attachment Management System - Programmable for up to eighteen (18) memories; Quick coupling piping and hydraulic couplers.

10. Cab:

a. Closed cab with integrated ROPS meeting OSHA requirements.

b. Cab mounted on viscous damping mounts to reduce vibration and noise (low noise design).

c. Sliding entry door and roof skylight to easily communicate with people at work site.

d. Front, rear and side windows shall be tinted polycarbonate/lexan safety type. Shall have cab falling object protective guard and structure safety net for front window.

e. Factory air condition climate control with air intake system. Heater and defroster provided for front window.

f. Inner rear-view mirror. Two (2) outer rear-view mirrors.

g. Operator's seat: deluxe suspension, lumbar support, adjustable, backrest, armrests and 3-inch-wide seat belt. Sun visors /sun screens; floor mat, twelve (12) volt power supply outlet.

h. Shall be equipped with a horn; travel alarm; reverse warning alarm; Two (2) back up lights mounted at top rear of excavator; Two (2) travel lights mounted at front comers of excavator; Two (2) halogen work lights mounted at top of cab; intermittent windshield wiper/washer.

i. Shall be equipped with multi-position controls to allow the operator to work in comfort for maximum productivity. All switches and controls shall be within reach of operator in seat.

j. Electronic control for various work modes to match engine speed, pump speed and system pressure. Operator controls to adjust/match specific speed and pressure for all attachments productivity.

11. Tree Mulcher Unit: Fecon Bullhog BH62EXC, 2023 or latest production or equal.

a. Tree mulcher shall be mounted in line with stick and boom of excavator which provides for a 90 degree attachment to the stick. Mount shall be by quick coupler and coupling. All operating controls shall be in easy reach of the operator.

b. Tree mulcher shall be able to mulch a tree with a 203.2 mm (8 in.) diameter trunk, minimum.

c. Working width shall be a minimum of 1,422.4 mm (50 in.).

d. FGT cutter drum 1,700 RPM, minimum.

e. Minimum of twenty-four (24) fixed teeth double thick carbide type. To include a spare set of teeth and connecting accessories. Rotating teeth are acceptable providing the equipment meets the manufacturers (for both excavator and mulcher) specifications for proper and safe operation.

f. Variable displacement hydraulic motor to include motor and hydraulic protection valves. Shall be mounted within limits of excavator. No add-on unit shall extend beyond the swing radius of the excavator.

g. Operating weight shall be within manufacturers (both excavator and mulcher) specifications for proper and safe operation.

h. Tree mulcher shall include all materials and attachments necessary to meet manufacturers (both excavator and mulcher) specifications for proper and safe operation.

12. Concrete Barrier Lift:

a. Kenco Model KL 12000 or equal. 12,000lb. capacity, 6 to 12 inch barrier thickness.

b. 6 in. x 36 in. elastomer grip pads, rotating pad angles to conform to wall slope.

13. Other:

a. Complete vandalism protection package for all doors and service points and to be keyed alike.

b. SMV emblem.

c. Tool box 12 in. x 12 in. x 30 in., with accessory tray mounted and lockable (coordinate mounting with user). Tool kit for pre-inspection, to include 10 ton hydraulic jack and refillable grease gun.

d. Two (2) L360 Super LED Beacons (Whelen Model L32LAF4 or equal) including limb guard, mounted on top of cab. Wire to model LSK lighted switch kit or equal.

e. One (1) 4.4 kg (10 lbs.) ABC dry chemical fire extinguisher (metal nozzle type), mounted on bracket in cab.

f. Dome light in cab.

g. Electric starter (heavy duty).

h. Fixed drawbar and pin.

i. First Service Kit to include all manufacturer required filters (oil, fuel, air, etc.).

j. Two (2) copies each of owner/operator manual, service/repair manual, and parts manual (to include all attachments). List of factory trained and authorized personnel who will provide service for excavator and attachments.

k. Heavy duty Hydraulic oil cooler.

l. Hydraulic with quick connect/disconnect for use of other tool attachments.

m. Manufacturer recommended counterweights for proper balance for use with all attachments.

n. Manufacturer's training video for safe operation of equipment and attachments.

o. First Aid Kit OSHA/ANSI recommended.

14. Color/Paint:

a. The Excavator and all attachments shall be painted with Federal Safety School Bus Yellow.

b. Excavator boom sides and the outer edge of upper structure to be lined with conspicuity materials (red/white reflexite or equal).

15. Warranty, Service and Maintenance of Excavator with Attachments:

a. Vendor receiving equipment award must furnish statement, listing number of factory trained and authorized personnel to install and provide service and maintenance support.

b. Vendor must also provide statement identifying items and systems, which require factory authorized personnel to maintain.

c. Local warranty, service and maintenance for all components shall be provided on the island of Hawaii. Warranty period for Excavator and Attachments shall be minimum of three (3) years. Service and maintenance shall be minimum of three (3) years for the Excavator and each Attachment. Warranty, service and maintenance work, including labor and parts, shall be provided at no additional cost to the State for a period of three (3) years after the acceptance of this equipment.

16. Diagnostic Scan Tool with current diagnostic software installed including software licenses and operation training.

17. Training: Bidder shall provide manufacturer training syllabus as requested by the State.

Contractor shall provide manufacturer's training for proper and safe operation, maintenance of equipment and all attachments. This training shall include a minimum of three (3) days classroom and operator hands on training on the island of Hawaii. Training shall be provided at no additional cost to the State. Contractor shall provide classroom site. This training shall be consistent with OSHA requirements.

Copy of attendance record showing class date, time, location, class type, instructors name and attendees shall be submitted to:

State of Hawaii Highways
Construction & Maintenance Branch
Attn: Equipment Superintendent/Safety Coordinator
869 Punchbowl Street, Room 404
Honolulu, Hawaii 96813

SECTION 36 - HYDRAULIC HAMMER

36.1 SCOPE OF WORK - The work consists of furnishing and delivering one (1) only, Hydraulic Hammer, to the island of Kauai. The Contractor shall present the equipment complete, ready to use, and fully operational.

36.2 HYDRAULIC HAMMER - The Specifications contained herein establish minimum standards (unless stated differently). Equipment offered shall include any other standard features not listed but detailed in manufacturer's brochures and deemed necessary/required for proper and safe operation of the equipment.

DETAILED SPECIFICATIONS FOR HYDRAULIC HAMMER

1. Model/Year: Tramac SC50, RJB HK60, Gorilla GXS90 or equal, 2023 or latest production.
2. Impact Class: 1,500 ft. lbs.
3. Striking Rate: 450 minimum to 1025 maximum (BPM).
4. Flow Range: 21 to 33 gpm.
5. Maximum operating pressure of 1,740 psi.
6. Tool diameter: 95 mm (3.74 in.).
7. Shall be capable of quick attaching to the Kauai District Hydraulic Excavator. Vendor shall furnish all necessary components for quick connection to the Hydraulic Excavator.
8. Other:
    a. Shall have automatic lubrication system.
    b. Shall have attachment and necessary components for use in installing guardrail posts.
    c. Shall be equipped with noise dampener.
    d. Shall be fully hydraulic operated.
    e. Shall have hose and swivel connection protection.
9. Training:

    Upon request by receiving agency, contractor shall provide proper and safe operation and maintenance of equipment. This training shall include a minimum of one (1)

hour classroom and one (1) hour per operator hands on training. This service shall be provided at no additional cost to the State. Contractor shall provide classroom site. This training shall be consistent to OSHA requirements.

Copy of attendance record showing class date, location, class type, instructors name and attendees shall be submitted to:

State of Hawaii Highways
Construction and Maintenance Branch
Attn: Equipment Superintendent/Safety Coordinator
869 Punchbowl Street, Room 404
Honolulu, Hawaii 96813

SECTION 37 – FRONT-END WHEEL LOADER, 20,000 LBS OPERATING WEIGHT

37.1 SCOPE OF WORK - The work consists of furnishing and delivering one (1) only, Front-End Wheel Loader, one to the island of Oahu. The Contractor shall present the Front-End Wheel Loader complete, ready to use, and fully operational.

37.2 FRONT-END WHEEL LOADER – 20,000 LBS OPERATING WEIGHT – The Specifications contained herein establish minimum standards for the Front-End Wheel Loader. Equipment offered shall include any other standard features not listed but detailed in manufacturer's brochures and deemed necessary for proper and safe operation of equipment.

1. Model/Year: CAT 926E, John Deer 544E, Komatsu WAI80-3, 2023 or latest production or equal.

2. Weight: Operating weight to be not less than 9,072 kg (20,000 lbs.).

3. Engine:

   a. Shall be 6 cylinder 4-cycle diesel powered, water-cooled, not less than 110 net horsepower at flywheel.

   b. Heavy duty 50 amp alternator, minimum.

   c. Hour meter.

   d. Pre-cleaner, plus dual stage-dry type air cleaner.

   e. Direct starting or glow plug starting will be acceptable.

   f. Engine shall be equipped with a high temperature, low lube oil pressure alarm system.

   g. Separate oil cover.

4. Transmission:

   Shall be full power shift type with torque converter/high pressure closed loop hydrostatic having not less than three (3) speeds forward and three (3) speeds reverse.

5. Brakes:

   Service brakes shall be power actuated 4-wheel, wet disc or air/hydraulic disc. If service brakes are air actuated, an automatic moisture injector is required.

a. Parking or emergency brakes may be connected to the transmission output shaft or operated independently on the drive shaft.

b. A red warning light shall be installed on the instrument panel in full view of the operator to indicate when the parking or hand brake is applied while the engine is running.

c. The service and parking brakes shall meet all SAE J473 requirements.

6. Steering:

Center-point full power steering, frame articulation not less than 40 degree turn in either direction and actuated by the steering wheel.

a. The Loader must have the capacity of being steered off the road in case of engine failure.

b. Unit must have an articulation transport lock for safety purposes while servicing the Loader.

7. Axles: Four-wheel drive system.

8. Differential:

Inboard or outboard planetary final drive assemblies; torque proportioning or conventional; limited slip.

9. Wheels/Tires:

Five (5) each, 17.5 x 25, 12-ply Rock Type (L-3) tread tires, pneumatic type, on all five wheels, spare included.

10. Cab: Enclosed cab with integrated ROPS meeting OSHA requirements.

a. Heater, defroster fans.

b. Inside rearview mirror.

c. Outside left and right side rearview mirrors.

d. Wiper/washer, front and rear.

e. Deluxe suspension seat, ful1 foam, adjustable, backrest, armrests and seat belts

f. Factory air condition.

g. Sun visor.

h. Floor mat.

i. Fixed ladder with access rails (3-point contact).

11. Electrical:

Shall have a direct 12 or 24 volt electric starting system.

a. Four (4) front and two (2) rear work lights; two (2) front headlights, rear combination tail and brake lights, tum signals and 4-way flashing warning lights. Working lights shall be spotlights (halogen type) with separate switch in cab.

b. Batteries shall be maintenance free heavy duty type with a cold-cranking capacity of 0ºF at 600 amps.

c. The unit shall be equipped with a horn and reverse warning alarm.

d. Back-up lights.

12. Bucket:

2.0 cubic yard multi-purpose bucket (4-in-l) equipped with bolt-on teeth and a bolt-on cutting edge (auxiliary).

a. All operating controls shall be in easy reach of the operator and shall include a float position for greater versatility.

b. Quick coupler.

13. Miscellaneous Features: Shall have:

a. Complete vandalism protection package at all service points and to be keyed alike.

b. Toolbox lockable.

c. SMV emblem.

d. Fixed drawbar hitch, with pin.

e. Rear bottom guards at crankcase and power train.

f. Front and rear fenders.

g. Rotating strobe light, 12-volt, amber dome (Whelen Model HELS or equal) including limb guard, mounted on top of cab. Wire to model LSK lighted switch kit or equal. Shall include spare lamps.

h. One (1) 4.4 kg (10 lbs.) ABC dry chemical fire extiguisher (metal nozzle type), mounted on bracket in cab.

i. Dome light.

j. Electric starter (heavy duty).

k. Tool kit; 10-ton hydraulic jack.

l. First Service Kit to include all manufacturer required filters (oil, fuel, air, breather, transmission, etc.).

m. Hydraulic oil cooler.

n. Hydraulic with quick connect/disconnect for use of other tool attachments.

o. Additional counterweight for use with other attachments.

p. Manufacturer's training video for safe operation of equipment and attachments.

q. First Aid Kit OSHA/ANSI recommended.

14. Color/Paint:

The Loader and any attachments shall be painted with Federal Safety School Bus Yellow or manufacturer's standard yellow.

15. Training:

Contractor shall provide proper and safe operation, maintenance of equipment. This training shall include a minimum of one (1) hour classroom and one (1) hour per operator hands on training. Training shall be provided at no additional cost to the State. Contractor shall provide classroom site. This training shall be consistent with OSHA requirements.

Copy of attendance record showing class date, time, location, class type, instructor's name and attendees shall be submitted to:

State of Hawaii
Highways
Construction and Maintenance Branch
Attn: Equip. Superintendent/Safety Coordinator
869 Punchbowl Street, Room 404
Honolulu, Hawaii 96813

SECTION 38 - FRONT-END WHEEL LOADER - 34,500 LBS. OPERATING WEIGHT

38.1 SCOPE OF WORK: The work consists of furnishing and delivering one (1) each, Front End Wheel Loader, to the island of Maui. The Contractor shall present the Front End Wheel Loader complete, ready to use and fully operational.

38.2 FRONT END WHEEL LOADER, 34,500 LBS. OPERATING WEIGHT: The specifications contained herein establish minimum standards for the Front End Wheel Loader (unless stated differently). Equipment offered shall include any other standard feathers not listed but detailed in manufacture's brochures and deemed necessary for proper and safe operations of equipment.

DETAILED SPECIFICATIONS FOR FRONT-END LOADER, 34,500 LBS. OPERATING WEIGHT

1. Model/Year: Komatsu WA320-8 4x4 or equal. New or current 2023 standard production.

2. Wheelbase: Not to exceed 9'11"

3. Maximum Height (Top of Canopy): Not exceed 10'6"

4. Maximum Operating Weight: Not to exceed 34,500 LBS

5. Engine:

   a. Shall be 6 cylinders, 170 HP Tier 4 final emissions diesel powered, turbocharged with foot throttle control or approved equal. Shall have capability of operating on a 820 Blend of Bio-Diesel with no adverse effects.

   b. Cooling fan-Hydraulic driven forward/reverse.

   c. Air Cleaner-Dual dry type with restriction indicator.

   d. Exhaust System-Manufactures standard muffler with vertical stack.

   e. Horsepower-170 HP gross, 165 HP net no less, rated manufactures rated.

6. Transmission: Auto Shift Hydrostatic transmission 4 forward/reverse, counter shaft type, top travel speed of no less than 23 MPH.

7. Reverse Alarm: Electric Type

8. Tires: All Four tires 20.S-R25 Radials (L3), lug type industrial.

9. Differential: Limited slip front and rear axles.

10. Axles-Front and Rear: Front fixed, semi floating, rear 24 degrees, front tire shall be inside of loader bucket side cutting edge.

11. Steering System: Hydraulic power assist, adjustable tilt steering wheel with horn.

    a. Steering Angle: 40 degrees

    b. Steering Radius: No more 17’8” of center of outside tire

12. Electrical System: Manufacturer's standard 24 volts heavy duty system, lockable battery box.

13. Starting System: Electric ignition key start switch.

14. Fuel Tank Capacity: No less 64.7 gallons

15. Lights: 4 each, front and rear working floodlights, independently switched: 2 rear combination stoplights and taillights, front and rear turn signals and 4-way flasher.

16. Beacon Light: Standard amber strobe light with cage.

17. Wiring Method: All electrical conductors shall be installed in wire looms, concealed and secured with clamps or straps for maximum protection against physical damages. Grommets shall be installed where conductors are routed through metal framework.

18. Electrical Connections: All electrical connectors shall be moisture proof and of sufficient mechanical strength to ascertain electrical conductivity equal to or exceeding the conductor current carrying capacity.

19. Brakes: Manufactures standard, factory installed

    a. Service: Manufactures standard, power assisted.

    b. Parking: Manufactures standard parking system.

20. ROP's/Cab: Manufactures standard enclosed cab, low noise design, enter from left and right side of cab, steps on left and right sides, safety rails behind of cab on left and right side of cab, door activated light dome, front and rear windshield wipers, sliding windows on left and right doors. 2 outside left and right, 2 inside mirrors, rear view monitoring system, front sun visor, all weather floor mats, manufactures standard ROP's canopy that meets all safety requirements.

21. Gauges and Instruments: Converter oil temperature, engine coolant temperature, speedometer/tachometer, fuel level, engine oil pressure warning light, hour meter, alternator warning light, panel lights.

22. Audible Warning Alarm: Audible alarm for low engine oil pressure, high coolant temperature and parking brakes engaged.

23. Seats: Air suspension, adjusts up/down, forward/backward, adjustable back rest flip up arm rest and head rest.

24. Seatbelt: One (1) seatbelt that meet Federal safety standards, metal to metal buckle type as specified in section 2 of minimum specifications.

25. Air Conditioning: Manufactures original and factory installed, CPC-free and EPA approved refrigerant system.

26. Fenders: Front and rear full fenders.

27. Hydraulic System: Load Sensing, pressure compensating system with return to dig, positive hold float position system. Hydraulic system must have anti-cavitation valves and loader circuit to prevent sudden drops, independent hydraulic cooler.

28. Hydraulic Control: 3 spool valve, mano lever (loader control up, down, dump and curl), forward/reverse, aux. control.

29. Loader Attachments: 4-in-1 Loader bucket, hydraulic quick coupler, fork attachment.

    a. Loader Bucket: 4-in-1 loader bucket (3.00 Cubic Yard Capacity), bolt on cutting edge.

    b. Hydraulic Coupler: Hydraulic release from cab.

    c. Fork Attachment: 96-inch-long forks wit carriage.

    d. Breakout Force: 36,310 LBS. or more

    e. Tipping Load: 24,800 LBS or more

    f. Bucket Dump Angle: 45 degrees

    g. Bucket Dump Clearance Height: No less than 9'0" at 45 degrees. Equipment with less dump clearance shall be rejected.

30. Paint: Manufacturer’s standard yellow

31. Service/Maintenance: Dealer shall provide service for the first 2000 HRS or 3 years whichever comes first.

    a. 500, 1000, 1,500 and 2000 HRS intervals.

    b. DEF breather filter replacement at 1000 HRS

c. DEF and CCV filter replacement at 2000HRS

d. 50-point inspection.

e. Filters and oils as required by manufacturer.

f. To be done at State of Hawaii DOT Kahului Baseyard.

g. Plus, two (2) complimentary scheduled KOPF exchanges and SCR system service for 5 years no hours limited.

32. Other

a. Safety Requirements: The equipment shall meet all applicable Federal, Hawaii State and County safety Requirements.

b. Operating Manuals: Two (2) sets must be provided.

c. OEM Parts Manual: One set must be provided, books or CD

d. OEM Shop Service and Repair Manual: One set must be provided, book or CD.

e. Keys: Three sets

33. Contractor Training:

The contractor shall include in the bid price the cost for a factory authorized representative to conduct two (2) 1-hour onsite training sessions, covering training in the proper handling, safe operation and servicing of the equipment to the satisfaction of the officer in charge or an authorized representative in charged. Training shall be consistent to OSHA requirements. This service shall be provided at no additional cost to the State.

Copy of attendance record showing class date, time, location, class type, instructor's name and attendees shall be submitted to:

State of Hawaii Highways
Construction and Maintenance Branch
Attn: Equip. Superintendent/Safety Coordinator
869 Punchbowl Street, Room 404
Honolulu, Hawaii 96813

SECTION 39 - FRONT-END WHEEL LOADER – 42,000 LBS. OPERATING WEIGHT

39.1 SCOPE OF WORK - The work consists of furnishing and delivering one (1) each, Front End Wheel Loader, to the island of Maui. The Contractor shall present the Front End Wheel Loader complete, ready to use and fully operational.

39.2 FRONT-END WHEEL LOADER – 42,000 LBS. OPERATING WEIGHT - The specifications contained herein establish minimum standards for the Front End Wheel Loader. Equipment offered shall include any other standard feathers not listed but detailed in manufacture's brochures and deemed necessary for proper and safe operations of equipment.

DETAILED SPECIFICATIONS FOR FRONT END LOADER–42,000 LBS. OPERATING WEIGHT

1. Model/Year: Komatsu WA380-8 4x4 or equal. New or current 2023 standard production.

2. Wheelbase: Not to exceed 10’10”

3. Maximum Height (Top of Canopy): Not exceed 11’11”

4. Maximum Operating Weight: Not to exceed 42,000 LBS.

5. Engine:

    a. Shall be 6 cylinders, 191 HP Tier 4 final emissions diesel powered, turbocharged with foot throttle control or approved equal. Shall have capability of operating on a 820 Blend of Bio-Diesel with no adverse effects.

    b. Cooling fan-Hydraulic driven forward/reverse.

    c. Air Cleaner-Dual dry type with restriction indicator.

    d. Exhaust System-Manufactures standard muffler with vertical stack.

    e. Horsepower-192 HP gross, 191 HP net no less, rated manufactures rated.

6. Transmission: Auto Shift Hydrostatic transmission 4 forward/reverse, counter shaft type, top travel speed of no less than 23 MPH.

7. Reverse Alarm: Electric Type

8. Tires: All Four tires 23.S-R25 Radials (L3), lug type industrial.

9. Differential: Limited slip front and rear axles.

10. Axles-Front and Rear: Front fixed, semi floating, rear 24 degrees, front tire shall be inside of loader bucket side cutting edge.

11. Steering System: Hydraulic power assist, adjustable tilt steering wheel with horn.

a. Steering Angle: 40 degrees

b. Steering Radius: No more 20’9” of center of outside tire

12. Electrical System: Manufacturer's standard 24 volts heavy duty system, lockable battery box.

13. Starting System: Electric ignition key start switch.

14. Fuel Tank Capacity: No less 79 gallons

15. Lights: 4 each, front and rear working floodlights, independently switched: 2 rear combination stoplights and taillights, front and rear turn signals and 4-way flasher.

16. Beacon light: Standard amber strobe light with cage.

17. Wiring Method: All electrical conductors shall be installed in wire looms, concealed, and secured with clamps or straps for maximum protection against physical damages. Grommets shall be installed where conductors are routed through metal framework.

18. Electrical Connections: All electrical connectors shall be moisture proof and of sufficient mechanical strength to ascertain electrical conductivity equal to or exceeding the conductor current carrying capacity.

19. Brakes: Manufactures standard, factory installed

a. Service: Manufactures standard, power assisted.

b. Parking: Manufactures standard parking system.

20. ROP's/Cab: Manufactures standard enclosed cab, low noise design, enter from left and right side of cab, steps on left and right sides, safety rails behind of cab on left and right side of cab, door activated light dome, front and rear windshield wipers, sliding windows on left and right doors. 2 outside left and right, 2 inside mirrors, rear view monitoring system, front sun visor, all weather floor mats, Manufactures standard ROP's canopy that meets all safety requirements.

21. Gauges and Instruments: Converter oil temperature, engine coolant temperature, speedometer/tachometer, fuel level, engine oil pressure warning light, hour meter, alternator warning light, panel lights.

22. Audible Warning Alarm: Audible alarm for low engine oil pressure, high coolant temperature and parking brakes engaged.

23. Seats: Air suspension, adjusts up/down, forward/backward, adjustable back rest flip up arm rest and head rest.

24. Seatbelt: One (1) seatbelt that meet Federal safety standards, metal to metal buckle type as specified in section 2 of minimum specifications.

25. Air Conditioning: Manufacturers original and factory installed, CPC-free and EPA approved refrigerant system.

26. Fenders: Front and rear full fenders.

27. Hydraulic System: Load Sensing, pressure compensating system with return to dig, positive hold float position system. Hydraulic system must have anti-cavitation valves and loader circuit to prevent sudden drops, independent hydraulic cooler.

28. Hydraulic Control: 3 spool valve, mano lever (loader control up, down, dump and curl), forward/reverse, aux. control.

29. Loader Attachments: 4-in-1 loader bucket, hydraulic quick coupler, fork attachment.

    a. Loader Bucket: 4-in-1 loader bucket (3.75 Cubic Yard Capacity), bolt on cutting edge.

    b. Hydraulic Coupler: Hydraulic release from cab.

    c. Fork Attachment: 96-inch-long forks wit carriage.

    d. Breakout Force: 39,000 LBS. or more

    e. Tipping Load: 29,600 LBS or more

    f. Bucket Dump Angle: 45 degrees

    g. Bucket Dump Clearance Height: No less than 9'8" at 45 degrees. Equipment with less dump clearance shall be rejected.

30. Paint: Manufacturer’s standard yellow

31. Service/Maintenance: Dealer shall provide service for the first 2000 HRS or 3 years whichever comes first.

    a. 500, 1000, 1,500 and 2000 HRS intervals.

    b. DEF breather filter replacement at 1000 HRS

    c. DEF and CCV filter replacement at 2000 HRS

    d. 50 point inspection.

    e. Filters and oils as required by manufacturer.

f. To be done at State of Hawaii DOT Kahului Baseyard.

g. Plus, two (2) complimentary scheduled KDPF exchanges and SCR system service for 5 years no hours limited.

32. Other

a. Safety Requirements: The equipment shall meet all applicable Federal, Hawaii State and County safety Requirements.

b. Operating Manuals: Two (2) sets must be provided.

c. OEM Parts Manual: One set must be provided, books or CD

d. OEM Shop Service and Repair Manual: One set must be provided, book or CD.

e. Keys: Three sets

33. Contractor Training:

The contractor shall include in the bid price the cost for a factory authorized representative to conduct two (2) 1-hour onsite training sessions, covering training in the proper handling, safe operation and servicing of the equipment to the satisfaction of the officer in charge or an authorized representative in charged. Training shall be consistent to OSHA requirements. This service shall be provided at no additional cost to the State.

Copy of attendance record showing class date, time, location, class type, instructor's name and attendees shall be submitted to:

State of Hawaii
Highways
Construction and Maintenance Branch
Attn: Equip. Superintendent/Safety Coordinator
869 Punchbowl Street Room 404
Honolulu, Hawaii 96813

SECTION 40 – BACKHOE LOADER

40.1 SCOPE OF WORK – The work consists of furnishing and delivering one (1) each Backhoe Loader, to the island of Kauai. The Contractor shall present the Backhoe Loader complete, ready to use and fully operational.

40.2 BACKHOE LOADER – The specifications contained herein establish minimum standards (unless stated differently). Equipment offered shall include any other standard features not listed but detailed in manufacturer's brochures and deemed necessary for proper and safe operation of equipment.

DETAILED SPECIFICATIONS FOR BACKHOE LOADER

1. Model/Year: John Deere 310SL, Case 590 Super N WT, CAT 420XE, New Holland B95 or equal; 2023 or latest production

2. Weight: Operating weight minimum: 18,000 lbs.

3. Engine:

    a. Minimum four-cylinder EPA tier 4 diesel powered, turbocharged, liquid cooled. Shall be capable of operating on a B20 blend of biodiesel with no adverse effects.

    b. Minimum net horsepower: 105 HP

    c. Twelve (12) volt starting system with a 95-amp (minimum) alternator.

    d. Pre-cleaner plus dual stage dry type air cleaner with service indicator.

    e. Heavy-duty pressure lubricating system with full flow oil filters, audible alarm.

    f. High-capacity radiator; audible alarm.

    g. Fuel/water separator. Fuel filter in-line strainer.

    h. Spark arresting muffler with a 45-degree stack pipe, above top of cab height.

4. Transmission:

    a. Fully Synchronized 5-speed forward w/ hydraulic reverser, minimum.

    b. Hydraulically actuated clutches with de-clutch button.

    c. 4-wheel drive (4WD).

    d. Single stage torque converter.

5. Differential/Final Drive:

   a. Manufacturer's standard differential shall incorporate a mechanical differential lock that can be engaged on the go in either forward or reverse.

   b. The final drives to be either full-gear or planetary design located inboard next to the differential housing.

6. Steering: Hydrostatic powered by main hydraulic pump.

7. Brakes:

   a. Wet disc and facings, fully enclosed and self-adjusting.,

   b. Independent parking brake system; audible alarm.

8. Wheels and Tires: Manufacturer's recommended size, front and rear. To include one (1) each spare.

9. Axles and Tread width:

   a. The minimum wheelbase that will be accepted is 84 in.

   b. Front Axle - Oscillating with outboard planetary drives.

   c. Rear Axle - Heavy-duty; differential lock.

   d. Axles shall meet or exceed SAE J43 standards for load rating.

10. Loader:

   a. Fully hydraulic.

   b. Multipurpose 4-in-1 bucket 1.25 cu. yd. minimum capacity. Consisting of rear bulldozer section with cutting edge (bolt on) and front bottom section with bolt on cutting edge.

   c. Single handle loader control.

   d. Bucket position indicator.

   e. Shall have quick coupler for attachment changes.

   f. Shall be equipped with auxiliary hydraulics for other attachments (quick disconnect type); shall include shock dampener in hydraulic circuit; hose guards; swivel connectors.

   g. Fully hydraulic. Extendible (Extend-a-hoe) with hydraulic thumb attachment.

11. Backhoe

    a. Factory installed 2-lever backhoe controls. 4-lever shall not be accepted.

    b. One (1) heavy-duty 24 in. bucket with cutting edge and replaceable teeth (detachable).

    c. One (1) heavy-duty 18 in. bucket with cutting edge and replaceable teeth (detachable).

    d. Shall have quick coupler for attachment changes.

    e. Shall be sufficiently equipped with auxiliary hydraulics for other attachments (quick disconnect type).

12. Outriggers: Individually controlled with lockout valve to prevent drift and combination pads.

13. Color: Federal Safety School Bus Yellow.

14. Other:

    a. Operator's Seat- air ride suspension type full cushion with high back, (adjustable height, forward, backward) with retractable seat belt.

    b. Fully enclosed cab with ROPS (rollover protection) meeting OSHA requirements and conforming to SAE J1040; windshield electric two speed wiper and washers (front and back). Factory air condition. Sun visor. Tinted glass. Maximum interior noise level shall be 75 decibels as per SAE J88.

    c. Anti-vandalism cover for dash and cab/all service points. Vandalism protection all keyed alike. Anti-theft device.

    d. Super LED Mini Light Bar, twelve (12) volt clear dome, Class I (Whelen MC11PCA or equal) Mounted on top of cab.

    e. Six (6) working LED lights. Front - 2 each mounted on cab roof and 2 each mounted at lower windshield area. Rear - 2 each mounted to rear top of the cab, to include limb guard. Traveling lights, hazardous flashing lights, directional turn signals, combination stop and taillights (all LED type to include limb guards).

    f. Interior mirror and two (2) exterior rear view mirrors mounted at left and right sides of cab.

    g. Hydraulic thumb with support lock.

    h. Gauges/warning lights - fuel gauge, AMP meter, hour meter, tachometer, coolant temperature, engine oil pressure, rear axle oil temperature, converter oil pressure,

hydraulic system filter, alternator, air cleaner, parking brake, transmission temperature.

i. One (1) 10 lbs. ABC dry chemical fire extinguisher mounted on brackets in cab.

j. Manufacturer recommended counterweights for proper balance with all attachments.

k. Dual heavy-duty batteries (360-minute reserve capacity).

l. Horn and back up alarm.

m. SMV (Slow Moving Vehicle) emblem.

n. Fenders on all wheels (if available from manufacturer).

o. Gauges for hoses, boom base, boom cylinders, stabilizer and stabilizer cylinders.

p. Toolbox - minimum 10 in. x 10 in. x 20 in. with accessory tray, mounted and lockable (coordinate installation with user).

q. Operator's Manual, Service and Repair Manual, Parts Catalog, on book format or memory stick.

r. List of factory trained and authorized personnel who will provide service.

s. First service kit to include all manufacturer required filters (oil, fuel, air, breather, etc.).

t. Warranty, to include all attachments. Complete power train warranty for a period of five (5) years.

u. Manufacturer "training video for safe operation of equipment and attachments".

15. Training:

Contractor shall provide proper and safe operation and maintenance training of equipment. This training shall include a minimum of (1) hour class and one (1) hour per operator hands on training on the island of Kauai. Contractor shall provide this training at no additional cost to the State. Training shall be consistent with OSHA requirements.

Copy of attendance record showing class date, time, location, class type, instructors name and attendees shall be submitted to:

State of Hawaii Highways
Construction and Maintenance Branch
Attn: Equipment Superintendent/Safety Coordinator
869 Punchbowl Street, Room 404
Honolulu, Hl 96813

SECTION 41 – LOADER/BACKHOE WITH ATTACHMENT

41.1 SCOPE OF WORK -The work consists of furnishing and delivering one (1) only, Loader/Backhoe with attachment to the island of Oahu. The Contractor shall present the equipment complete, ready to use and fully operational.

41.2 LOADER/BACKHOE WITH ATTACHMENT – The specifications contained herein establish minimum standards (unless stated differently). Equipment offered shall include any other standard features not listed but detailed in manufacturer's brochures and deemed necessary for proper and safe operation of the equipment.

DETAILED SPECIFICATIONS FOR LOADER/BACKHOE WITH ATTACHMENT

1. Model/Year: Case 590 Super M, New Holland LB110, John Deere, Cat. or equal, 2023 or latest production.

2. Weight: Operating weight minimum 16,455 lbs.

3. Engine:

    a. Four cycle, diesel powered, turbo charged, liquid cooled.

    b. Minimum net kW (HP) not less than 73.82 kW (99 HP).

    c. Twelve (12) volt starting system with a 65 AMP (minimum) alternator.

    d. Pre-cleaner, plus dual stage dry type air cleaner with service indicator.

    e. Heavy duty pressure lubricating system with full flow oil filters, audible alarm

    f. High capacity radiator; audible alarm

    g. Fuel/water separator. Fuel filter in-line strainer.

    h. Spark arresting muffler with a 45-degree stack pipe, above top of cab height.

4. Transmission:

    a. Fully Synchronized 4-speed forward/reverse, minimum.

    b. Hydraulically actuated clutches with clutch disconnect button. Non asbestos material.

    c. Four-wheel drive (4WD).

    d. Torque converter

5. Differential/Final Drive:

   a. Manufacturer's standard differential shall incorporate a mechanical differential lock that can be engaged on the go in either forward or reverse.

   b. The final drives to be either full-gear or planetary design located inboard next to the differential housing.

6. Steering: Hydrostatic powered by main hydraulic pump.

7. Brakes:

   a. Wet disc and facings, fully enclosed and self adjusting. Non-asbestos material.

   b. Independent parking brake system; audible alarm.

8. Wheels and Tires: Manufacturer's recommended size, front and rear. To include (1) each spare.

9. Axles and Tread width:

   a. The minimum wheelbase that will be accepted is 2,146.3mm (84.5 in.).

   b. Front Axle - Oscillating with outboard planetary drives.

   c. Rear Axle - Heavy duty; differential lock.

   d. Axles shall meet or exceed SAE J43 standards for load rating.

10. Loader:

   a. Full hydraulic operation.

   b. Multipurpose 4-in-1 bucket 0.99m^3 (1.3 cu. Yd.) minimum capacity. Consisting of rear bulldozer section with cutting edge (bolt on) and front bottom section with bolt on cutting edge.

   c. Single handle loader control.

   d. Bucket position indicator.

   e. Shall have quick coupler for attachment changes.

   f. Shall be equipped with auxiliary hydraulics for other attachments (quick disconnect type); shall include shock dampener in hydraulic circuit; hose guards; swivel connectors.

11. Backhoe:

    a. Full hydraulic operation.

    b. Factory installed 2-lever backhoe controls. 4-lever shall not be accepted.

    c. One (1) heavy duty 610mm (24 in.) bucket with cutting edge and replaceable teeth (detachable).

    d. One (1) heavy duty 457mm (18 in.) bucket with cutting edge and replaceable teeth (detachable).

    e. Shall have quick coupler for attachment changes.

    f. Shall be sufficiently equipped with auxiliary hydraulics for other attachments (quick disconnect type).

    g. **NPK C-4C Compact-Driver attachment, with swivel top** (quick coupler type, to include any necessary attachments for the installation of guard rail posts).

12. Outriggers: Individually controlled with lockout valve to prevent drift and combination pads.

13. Color: Federal Safety School Bus Yellow

14. Other:

    a. Operator's Seat – deluxe suspension type full cushion with high back, (adjustable height, forward, backward) with seat belt.

    b. Fully enclosed cab with raps (rollover protection) meeting OSHA requirements and conforming to SAE J1040l; windshield, electric two speed wiper and washers (front and back). Factory air condition. Maximum interior noise level shall be 75 dBA as per SAE J88.

    c. Anti-vandalism cover for dash and cab/all service points. Vandalism protection all keyed alike.

    d. Rotating strobe light, 12 volt, amber dome (Whelen Model HELS or equal), including limb guard mounted on top of cab.

    e. Six (6) working lights. Front - 2 each mounted on cab roof and 2 each mounted at lower windshield area. Rear - 2 each mounted to rear top of the cab, to include limb guard. Traveling lights, hazardous flashing lights, directional tum signals, combination stop and tail lights (all to include limb guards).

    f. Interior mirror and two (2) exterior rear view mirrors mounted at left and right

sides of cab.

g. Horn.

h. Gauges/warning lights - fuel gauge, AMP meter, hour meter, tachometer, coolant temperature, engine oil pressure, rear axle oil temperature, converter oil pressure, hydraulic system filter, alternator, air cleaner, parking brake, transmission temperature.

i. One (1) 4.4kg (10 lbs.) ABC dry chemical fire extinguisher mounted on brackets in cab.

j. Manufacturer recommended counter weights for proper balance with all attachments.

k. Dual heavy duty batteries (360 minute reserve capacity).

l. Back up alarm.

m. SMV (Slow Moving Vehicle) emblem.

n. Fenders on all wheels (if available from manufacturer).

o. Gauges for hoses, boom base, boom cylinders, stabilizer and stabilizer cylinders.

p. Tool box - minimum 254mm x 254mm x 508mm (10 in. x 10 in. x 20 in.) with accessory tray, mounted and lockable (coordinate installation with user).

q. Two (2) copies each of owner/operator manual, service/repair manual, and parts manual (to include attachments). List of factory trained and authorized personnel who will provide service.

r. First service kit to include all manufacturer required filters (oil, fuel, air, breather, etc.).

s. First Aid Kit OSHA/ANSI recommended.

t. Warranty, to include all attachments.

u. Manufacturer "training video for safe operation of equipment and attachments".

15. Training:

Contractor shall provide proper and safe operation and maintenance training of equipment. This training shall include a minimum of (1) hour class and one (1) hour per operator hands on training. Contractor shall provide this training at no additional cost to the State. Training shall be consistent with OSHA requirements.

Copy of attendance record showing class da attendee shall be submitted to:

State of Hawaii
Highways
Construction and Maintenance Branch
Attn: Equip. Superintendent/Safety Coordinator
869 Punchbowl Street, Room 404
Honolulu, Hawaii 96813

SECTION 42 - AIR COMPRESSOR, TRAILER MOUNTED

42.1 SCOPE OF WORK- The work consists of furnishing and delivering one (1) only, Portable Air Compressor, trailer mounted, to the island of Oahu. The Contractor shall present the equipment complete, ready to use, and fully operational.

42.2 PORTABLE AIR COMPRESSOR, TRAILER MOUNTED - The Specifications contained herein establish minimum standards (unless stated differently) for the Portable Air Compressor, trailer mounted. Equipment offered shall include any other standard features not listed but detailed in manufacturer's brochures and deemed necessary for proper and safe operation of equipment.

DETAILED SPECIFICATIONS FOR PORTABLE AIR COMPRESSOR, TRAILER MOUNTED

1. Model/Year: Atlas-Copco XAS185JDU7, Ingersoll-Rand P185WJD, Doosan P185WYM, Airman PDS185S, or equal. 2023 or latest production.

2. Type: Portable and trailer mounted.

3. Engine: Diesel powered, liquid cooled, 4 cylinder, 48 Bhp at rated RPM, minimum.

4. Electrical System: 12 volt with maintenance free battery, alternator, complete with key starting assembly.

5. Compressor: Single or double stage, oil flooded, rotary screw type.

    a. Air Delivery - 185 cfm at rated engine rpm.

    b. Operating Pressure: 100 PSI.

    c. Operating Pressure Range - 70 to 125 PSI.

    d. Air Service Connections - Two (2) 19.0mm (3/4 in.) service valves.

    e. Air Intake System - Single or double stage.

    f. Noise Control - To conform to EPA/OSHA standards.

6. Chassis: Heavy duty steel frame construction with springs and axle of sufficient size and capacity to sustain and operate equipment.

7. Housing: Entire unit to be totally enclosed in a heavy-duty steel housing with lockable side panels. Shall be after factory rust proof with seven (7) year unlimited warranty, applied in accordance with Federal Specifications 297A at its latest

revision.

8. Tires/Wheels:

   a. Rear - Manufacturer's standard size, highway tread.

   b. Front - Swivel, retractable type pneumatic tire and manually operated, screw type jack stand.

9. Tow Bar: Heavy duty, steel construction; single pole, "V" type or similar design with heavy duty tow eye. Tow safety chains with hooks.

10. Others:

   a. Hour meter; complete diagnostic panel; complete gauge package.

   b. High temperature and low oil pressure cutoff switches.

   c. LED lighting for trailer tum signals, stop lights, running lights, and hazard lights.

   d. Fuel/water separator.

   e. Air filter valves (OSHA approved), shall be installed before the service valves.

   f. Polyethylene fuel tank/manufacturer recommended. 27 gallon minimum.

   g. First service kit to include all necessary filters as required, (oil, fuel, air, etc.).

   h. Two (2) copies operators manual, one (1) copy each repair manual and parts manual. Book format/CD/DVD.

   i. Unit shall be outlined with conspicuity material, red/white reflexite or equal.

11. Color: Manufacturer's standard paint and standard color.

12. Training:

   Contractor shall provide proper and safe operation, maintenance of equipment. This training shall be provided at no additional cost to the State. Training shall be consistent to OSHA requirements.

   Copy of attendance record showing class date, time, location, class type, instructor's name, and attendees shall be submitted to:

State of Hawaii Highways
Construction and Maintenance Branch
Attn: Equipment Superintendent/Safety Coordinator
869 Punchbowl Street, Room 404
Honolulu, Hawaii 96813

SECTION 43 - PORTABLE GENERATOR

43.1 SCOPE OF WORK -The work consists of furnishing and delivering one (1) only, Portable Generator, to the island of Kauai. The Contractor shall present the equipment complete, ready to use, and fully operational.

43.2 PORTABLE GENERATOR - The Specifications contained herein establish minimum standards (unless stated differently). Equipment offered shall include any other standard features not listed but detailed in manufacturer's brochures and deemed necessary for proper and safe operation of equipment.

DETAILED SPECIFICATION FOR A PORTABLE GENERATOR

1. Model/Year: Honda EM6500SX, Multiquip GAHR6000, or equal. 2023 or latest production.
2. Type: Portable, inverter power; mounted on 2-wheel transport cart.
3. Engine:
    a. 9.6 kW (13 HP) minimum.
    b. Overhead valve with oil protection system.
    c. Air cooled.
    d. Electronic ignition. Electronic circuit breakers.
4. Output:
    a. Selector Switch - 120/240 volts.
    b. 120/240 volts - 6500 watts maximum, 5,500 watts rated.
    c. 6,500 watts of portable inverter power.
5. Receptacles:
    a. Duplex, 20 amps 125 volts, NEMA plug.
    b. Locking, 30 amps 125 volts, NEMA plug.
    c. Locking, 30 amps 125/250 volts NEMA plug.
    d. Shall be GFCI/Neutral Bond protected.

e. One (1) each 7.6m (25 ft.) cord set for above Sa, Sb, and Sc with male and female ends.

6. Fuel Tank:

a. 17.03 L (4.5 gal.) capacity, minimum.

b. 14 hours minimum run time on one tank full.

7. Color: Manufacturer's standard

8. Other:

a. Fuel gauge.

b. Hour meter.

c. Spark arrestor muffler.

d. Storage cover.

e. One (1) copy each, Owner's Manual, Service and Parts Manual. Book format/CD/DVD.

f. Hanger/lift kit.

9. Training:

Contractor shall provide operator and maintenance training to demonstrate proper and safe operation of equipment. This training shall include a minimum of one (1) hour classroom and one (1) hour hands on training. This training shall be at no additional cost to the State.

Copy of attendance record showing class date, time, location, class type, instructor's name and attendees shall be submitted to:

State of Hawaii Highways
Construction and Maintenance Branch
Attention: Equipment Superintendent/Safety Coordinator
869 Punchbowl Street, Room 404
Honolulu, Hawaii 96813

SECTION 44 – MESSAGE BOARD, TRAILER MOUNTED

44.1 SCOPE OF WORK – The work consists of furnishing and delivering two (2) Message Boards, Trailer Mounted, to the island of Kauai. The Contractor shall present the equipment complete, ready to use, and fully operational.

44.2 MESSAGE BOARD, TRAILER MOUNTED – The Specifications contained herein establish minimum standards (unless stated differently). Equipment offered shall include any other standard features not listed but detailed in manufacturer's brochures and deemed necessary for proper and safe operation of equipment.

DETAILED SPECIFICATIONS FOR MESSAGE BOARD, TRAILER MOUNTED

1. Model/Year: Silent Messenger III, Wanco WVTMM-L or equal, 2023 or latest production year.

2. Message Board: Compact

   The message board shall be a solar powered portable message sign. The message board shall consist of a sign display panel, a supporting structure for the display panel, a photovoltaic array, a battery power supply and an electronic control console, all mounted on a heavy-duty trailer frame.

3. Design Objectives:

   a. Maximize reliability by using generally accepted design techniques for outdoor-use of electrical and electronic equipment.

   b. Minimize operating cost by using a renewable energy source, requiring minimal maintenance.

   c. Maximize safety and effectiveness by using a non-glare, high contrast display panel with long-life expectancy, high-reliability display technology.

   d. Satisfy the requirements for Portable Changeable Message Signs as listed in Part 6F.52 of the Federal Highway Administration's Manual on Uniform Traffic Control Devices (MUTCD).

4. Performance Objectives:

   a. Shall be visible up to one (1) mile.

   b. Shall be legible up to one-half (1/2) mile.

   c. Shall have minimal glare from sunlight and headlights.

   d. Shall have a continuous, uninterrupted operation on solar power.

e. Maintenance interval shall be once a month minimum, three month typical.

5. Physical Dimensions:

a. Maximum overall length 284 cm (112 in.).

b. Maximum overall width 190 cm (75 in.) maximum.

c. Width across fenders 190 cm (75 in.) maximum.

d. Height of sign in transport position, 234 cm (92 in.), maximum.

e. Height of sign in operating position, 234 cm (92 in.), minimum.

f. Minimum ground clearance, 33 cm (13 in.).

g. Approximate weight, 708 kg (1,560 lbs.).

6. Environmental Conditions:

a. Temperature of operating and storage range should be between -40 to +185°F (-40 to +85°C).

b. Relative humidity range 20% to 98%, non-condensing.

c. Shall be able to withstand winds up to 112 KPH (70 MPH) in the transport position, at maximum trailer speed.

d. Shall be able to withstand sustained winds at 128KPH (80 MPH) in the operating position at max height and outriggers in place.

e. Shall be unaffected by RFI (Radio Frequency Interference) and EMI (Electro-Magnetic Interference).

7. Trailer Chassis:

a. Trailer Chassis Minimum Requirements:

i. Trailer frame shall be constructed of welded 7 Gauge (3/16 inch) CNC formed steel plate and structural steel tubing with 3 in. x 3 in. x 3/16 in. structural steel tubing receiver for the tongue, reinforced and welded to the front cross member.

ii. Trailer shall be equipped with a 2 ½ inch x 2 ½ inch x $^{3}/_{16}$ inch structural steel tubing receiver capable of accepting a standard Class 2 draw bar and hitch pin to accommodate tandem towing. The rear hitch receiver shall be reinforced and welded to a 7 Gauge (3/i6 inch) CNC formed steel plate

rear cross member. Tandem trailer towing using rear hitch receiver is intended for off road use only and is subject to local laws and regulations.

iii. The trailer tongue shall consist of 2½ inch x 2 ½ inch x $^{3}/_{16}$ inch structural steel tubing minimum. The tongue shall bolt into the tongue receiver to facilitate easy removal of the tongue for repair, transportation, or security purposes. The trailer tongue shall be equipped with a 907 kg (2,000 pound) capacity swivel-type top wind screw jack with a formed steel footpad.

iv. Trailer shall be equipped with tie down points to facilitate securing unit to utility trailer or truck deck for transport.

v. Trailer shall be equipped with an independent suspension, torsion- type axle with 998 kg (2,200 pound) overall capacity. Axle load capacity shall be set at 726 kg (1,600 pounds).

vi. Axle wheel spindles shall be equipped with spindle bearing caps with grease fittings to accommodate bearing lubrication.

vii. Trailer tongue shall be capable of accepting a 2-inch ball coupler or a 2 ½ inch pintle ring, adjustable height/combination coupler.

viii. Trailer shall be equipped with ¼ inch safety chains with snap-type hooks for secure attachment to tow vehicle hitch.

ix. All coupler and safety chain configurations shall comply with SAE J684 standards for Class II trailers.

b. Surface Preparation and Finishing:

i. Trailer chassis and superstructure shall be completely cleaned and de-burred prior to finishing. All metal surfaces shall be prepared for finishing using an iron phosphate wash-down process.

ii. A polyamide epoxy primer shall be applied to a dry film thickness of 2.5 mils.

iii. A high gloss federal safety orange aliphatic acrylic urethane finish shall be applied to a dry film thickness of 2.5 mils. Trailer shall be outlined with conspicuity material (reflexite or equal) red/white.

c. Lighting:

i. Trailer shall be equipped with sealed flush-mounted combination stop, tail, and turn and emergency flasher lights.

ii. Trailer wiring harness shall be completely sealed and water resistant.

d. Fenders:

i. Trailer shall be equipped with unbreakable, molded, solid color, UV-stabilized HDPE (High Density Polyethylene) fenders, completely closed on the inside.

ii. Fenders shall be secured to trailer frame with zinc-plated steel thread forming screws and fender washers so as to facilitate easy repair or replacement.

e. Leveling Jacks:

i. Trailer shall be equipped with four telescoping jacks consisting of 2 inch x 2 inch x 12 Gauge perforated galvanized steel tubing equipped with a 3 inch x 3 inch x 6 inch wide steel foot plate.

ii. Jack stands shall be inserted into 2 ¼ inch x 2 ¼ inch x 12 Gauge galvanized steel tubing, welded to the trailer frame at an 45 degree angle.

iii. Jack stands shall be locked into position by 3/8 inch zinc-pleated steel tab lock pins secured to trailer frame by nylon lanyards.

iv. Jack stands and tongue jack shall be configured such that the unit can be set up on jack stands, level, in operating position, with the trailer wheels raised completely off the ground, permitting removal of wheels and tires for additional security.

v. Jack stands shall be configured such that, when in the operating position, they create a footprint of at least 93 inches, front to rear, and 56 inches, side to side, to provide adequate stability of unit in high winds.

f. Tires and Wheels:

i. Tires shall be B78-13 Load Range C, minimum.

ii. Wheels shall be 13-inch x 4 ½ -inch, 5-lug pattern (4 ½-inch bolt circle), white spoke steel wheel.

iii. Wheels and tires shall be sized in accordance with load requirements of trailer and axle.

iv. Shall include spare tire and wheel.

8. Sign Panel Support:

a. Trailer superstructure shall provide complete support of the sign panel in the transport (down) position. Cantilevered support of sign panel is <u>not acceptable</u>.

b. Trailer superstructure shall be completely assembled with removable fasteners to accommodate quick, easy maintenance and repair.

c. All fasteners shall be rust resistant and equipped with all metal lock nuts to prevent loosening of fasteners during normal transportation and operation.

d. All aluminum to steel attachments shall be made with stainless steel hardware and stainless steel or nylon spacers so as to minimize galvanic corrosion.

e. Sign panel lifting mechanism shall consist of a 454 kg (1,000 pound) capacity, automatic brake type winch with 0.6 cm (¼ inch) wire rope capable of holding the sign panel in any position from full upright to the travel (down) position.

f. Lifting mechanism, through a series of pulleys, shall provide for balanced pull on both sides of sign panel support frame during lift of sign panel into the operate position.

g. Winch shall be zinc-plated, to minimize rust and corrosion.

h. Winch shall be designed such that the handle can be removed, for added security, without interfering with the operation of the automatic brake.

i. Sign panel shall be secured in the operating (up) position by dual stainless steel, spring-loaded locking pins.

j. Trailer superstructure shall provide for support and operation of solar array, with solar array positioned to accommodate charging in both the operating and the traveling positions.

k. Solar array shall fold flat and flush onto back of sign panel when sign panel is in the transport (down) position so as to minimize wind resistance without the need for an air deflector or spoiler.

l. Trailer superstructure shall be equipped with a formed steel upper rear cross member and formed steel side member to reinforce the sign panel and solar array support frame.

m. Trailer superstructure shall be equipped with an integral sighting device, welded in place, to accommodate proper alignment of the sign panel with oncoming traffic, during setup.

9. Message Display Panel:

a. Dimensions:

i. Overall width shall be a maximum of234 cm (92 in.).

ii. Overall height 137 cm (54 in.), minimum

iii. Overall depth 15 cm (6 in.), minimum.

b. Construction of Display Panel:

i. The message display panel case shall be constructed of heavy-duty aluminum extrusion secured at each comer by a molded, fiberglass-reinforced plastic comet and stainless steel torx head screws and nylon insert locknuts.

ii. The back of the message display panel case shall be constructed of aluminum sheet bonded and riveted to the case frame.

iii. Interior of message display panel case shall be equipped with formed aluminum channels to reinforce the display case and to support internal wiring and cables.

iv. The display panel door shall be constructed of heavy-duty extruded aluminum secured at the comers with glass fiber reinforced molded plastic inserts and stainless steel torx head screws and nylon insert locknuts.

v. The door shall fit within a flange around the perimeter of the message display panel case frame to provide for a secure weatherproof enclosure.

vi. A rubber seal shall be located inside of the flange on the case frame to provide for a water tight, and dust tight enclosure.

vii. The message display panel shall be enclosed over the display area by a .5 cm (3/16 in.) thick clear UV resistant, scratch resistant, acrylic coated polycarbonate material with a non-glare outer surface to reduce reflection of ambient light and oncoming vehicle headlamps.

viii. The polycarbonate material shall be secured in the door frame with an extruded rubber channel to provide a cushioned and weatherproof seal.

ix. The message display panel door shall be secured in the open position for servicing by a pair of zinc-plated steel telescoping lid supports equipped with automatic latches. The door supports shall be located completely inside of the display panel housing, protected from weather.

x. The display panel door shall be secured in the closed position with adjustable, positive locking, stainless steel draw latches.

xi. The message display panel door and case shall be equipped with stainless steel locking hasps capable of accepting standard padlocks to secure the door in the closed position. Tamper proof padlocks shall be supplied, all locks to be keyed alike.

c. Surface Preparation and Finishing:

i. Message display panel case and door shall be completely cleaned and de-burred prior to finishing. All metal surfaces shall be prepared for finishing using an iron phosphate wash-down process.

ii. A wash primer shall be applied to all prepared metal surfaces prior to applying final finish.

iii. A matte black acrylic urethane finish shall be applied to dry film thickness of 2.5 mils.

d. Display Characteristics:

i. The message display area shall be approximately 213 cm (84 inches) in width 122 cm (48 inches) in height.

ii. The display area shall consist of a continuous (full) matrix of 48 pixels or dots in width by 27 pixels in height.

iii. The pixels or dots shall consist of a minimum three (3) LEDs (Light Emitting Diodes) arranged in a triangular pattern so as to produce the appearance of a round image or dot at normal viewing distance.

iv. The display color shall be amber (minimum - 592 nanometer wavelength).

v. The display shall produce brightness greater than 10,000 candela per square meter at.maximum intensity.

vi. The display shall produce a minimum viewing angle of 24 degrees, with consistent intensity and color across the entire display panel.

vii. The message display shall be capable of displaying one, two, or three lines of alphanumeric characters or text with a nominal character height ranging from a minimum of30.5 cm (12 in.) to a maximum 97 cm (38 in.).

viii. The message display panel shall be capable of displaying three lines of text with a minimum of three pixels 15 cm (6 in.) between lines.

ix. The message display shall also be capable of displaying graphic images and symbols using the full 48 pixel width and 27 pixel height.

e. Display Modules:

i. Display modules shall be mounted in the sign panel using captive 1/4 -tum wing-head fasteners to permit quick, easy module replacement without the need for any tools.

ii. Display modules shall be mounted on rubber cushions to provide shock absorption during transport and to accommodate thermally- induced expansion and contraction of message display panel during operation.

iii. Display module control circuitry shall include a fail-safe device, to automatically monitor the performance of the display module and provide a reset/restart command to the on-board microcomputer in the event of any disruption of normal operation.

iv. Display module control circuitry shall be designed to accommodate an exchange of display modules while sign is operating.

v. The message display shall consist of an array of identical display modules capable of functioning in any position without the need for a switch or jumper setup or special programming.

vi. Display modules and message display panel shall accommodate complete service and exchange of display modules **without the need for any tools**.

vii. Display modules shall be equipped with locking-type electrical/electronic connectors to provide for secure, reliable operation while permitting for quick, easy service and repair of message display.

f. Cables and Wiring:

i. All message display panel wiring and cables shall be equipped with modular power and signal connectors to permit repairs **without the need for any tools.**

ii. All power circuit connectors shall use tin or silver plated contacts.

iii. All signal circuit connectors shall use gold plated or gold flashed contacts.

iv. All system wiring, power and signal, shall consist of marine grade wire and cable, with multi-strand, tin-plated conductors.

v. All power and sign panel signal wiring and cables shall be installed in nonmetallic, flexible, liquid-tight conduits. All conduit fittings shall be installed with rubber sealing rings to maintain liquid-tight characteristics.

10. Main Control Console Requirements:

a. Physical Features:

i. Control console shall be enclosed in a weather resistant, lockable, (tamper proof locks to be furnished, all locks to be keyed alike), molded HDPE (High Density Polyethylene) enclosure secured to the trailer chassis.

ii. Control console shall be completely sealed to accommodate operation in all types of weather.

iii. Control console shall be mounted on heavy-duty drawer slides, which allow the control console to slide up and pivot into a position convenient to the operator. Drawer slides shall permit quick, and easy removal of control console **without the need for any tools.**

iv. Control console power and control cables shall include sealed locking-type connectors to permit quick, easy removal of control console **without the need for any tools.**

v. Control console front panel shall include a full alphanumeric (QWERTY), 84-key, sealed, waterproof keyboard and a sealed, 40-character by 8-line, graphics capable LCD (Liquid Crystal Display) to provide a reliable, user-friendly interface for the operator under any weather conditions.

b. General Operation:

i. Control console shall provide for the complete control of the message sign, including remote control and radar speed monitoring, without the need for additional external computers or hand-held control devices.

ii. Control console shall include all necessary components/accessories to operate the message sign, including remote control and radar speed monitoring.

iii. Control console, in conjunction with the message display panel, shall have the capability of monitoring and detecting sign panel communication loop failure. In the event of a sign panel communication loop failure, the control console, in the case of temporary disruption of message display, shall have the ability to correct the failure immediately and in the case of hardware failure, shall have the ability to completely blank the sign panel so as to prevent the display of incorrect, potentially misleading messages.

iv. Control console shall be IBM PC compatible to insure future component/accessory compatibility.

v. Control console shall be capable of connection to an IBM or compatible desktop or portable (laptop) computer via a standard serial interface (COM) port to facilitate routine service or repair, extensive diagnostics, and the updating of user files or operating programs.

vi. Control console operating components/accessories shall be field upgradeable.

vii. Both the keyboard and the display shall be equipped with backlighting to accommodate low ambient light level and night- time operation.

Backlighting shall activate upon any keyboard activity and remain on for five minutes following the last keyboard key press.

viii. Main power to the sign panel and the control console shall be by a combination switch through circuit breaker(s) to provide electrical protection. Fuse type systems shall not be acceptable.

11. Function(s):

a. Control console shall provide visible step by instructions to the operator, via the front panel display as the various programming functions are performed.

b. Control console shall be capable of storing all messages and sequences in alphabetical order by the first letter of the first word in the message, graphic image name, or sequence to permit quick recall of messages and sequences without the need for maintaining a numeric listing of messages and sequences. Messages and sequences shall be automatically sorted any time messages are added to or delete from the message or sequence files.

c. Control console shall be capable of providing four levels of password protection, to allow access to only the functions required for each level of message sign operation. The four levels of access are as follows.

i. Create and display messages and sequences. No access to data files.

ii. Create, display, and save messages and sequences. Access message and sequence data files.

iii. Create, display, and save messages and sequences. Access message and sequence date files. Create and delete users and passwords. Set system operating parameters.

iv. Create, display, and save messages and sequences. Access message and sequence date files. Create and delete users and passwords. Set system operating parameters. Create and delete supervisors and passwords. Examine and control running time meter.

d. Control console shall be capable of monitoring ambient light conditions and making appropriate adjustments to the intensity of the sign panel display to maintain acceptable display contrast throughout changing ambient lighting conditions. The control console shall provide a minimum often (10) intensity levels between minimum and maximum display brightness.

e. Control console shall be equipped with a real time clock and calendar feature to accommodate automatic, unattended changing of messages and sequences at predetermined days and times.

f. Control console shall provide a function to provide access to common user functions with a single keystroke.

g. Control console shall be capable of storing up to 200 messages. Control console shall be capable of storing up to 200 sequences of up to 16 messages each.

h. Control console shall be capable of message display times from 0.1 seconds to 99 seconds in 0.1 second increments.

i. Control console shall be capable of displaying messages, during message creation, editing or selection, exactly as they will appear on the message display panel.

j. Control console shall be capable of editing messages that are currently being displayed, and to show the revised message as soon as message editing has been completed.

k. Control console shall accommodate the creation and editing of graphic images, the addition of graphics to existing text messages, and the modification of existing graphic images to be saved under a new graphic image name.

l. Control console shall have a selection of standard highway work zone sign graphic images, fixed left and right arrow images, moving or sequential left and right arrow images, and moving or sequential left and right chevrons.

m. Control console shall provide the capability to display battery bank voltage and automatic display shutdown voltage setting to 0.1 Volt, accuracy on the control console screen.

n. Control console shall provide for a low-battery-voltage caution message when battery voltage drops to a level of 0.2 Volts above the low-battery automatic shut down voltage.

12. Power System:

a. Operating Voltage - 12 Volts DC nominal.

b. Operating Energy Requirement - 60 Amp Hours per day nominal (i.e. 12 hours of daylight, 12 hours of darkness).

c. Main power switch shall be a combination switch and electromagnetic, thermal circuit breaker to provide complete electrical system protection (fuse type system shall not be acceptable). Main power switch shall be splash proof and weather resistant.

13. Battery Bank:

a. Eight (8) batteries, 6-Volt, heavy duty, deep cycle.

b. Energy capacity of 1040 Amp Hours nominal. Sufficient energy capacity to operate the message sign; displaying typical three-line normal size character messages for twenty-one (21) days, without any energy input from the solar array.

14. Battery and Equipment Compartments:

a. Battery/Equipment Compartments shall be constructed of molded HMWPE (High Molecular Weight: Polyethylene), color impregnated with Federal Safety Orange with 0.5% UV stabilizer added to prevent fading.

b. Compartments shall be designed to completely contain spills from a failed or damaged battery case.

c. Compartments shall be capable of supporting an operator standing on top to service unit.

d. Compartments shall be designed such that the lid automatically latches in the closed position and holds the batteries in place. Lid shall be equipped with a stainless steel reinforced locking hasp capable of being locked in the closed position with a standard padlock. Tamper proof pad locks shall be supplied, all locks to be keyed alike.

e. Lid shall be secured to compartment by a stainless steel continuous hinge attached with thread forming screws to facilitate easy replacement/repair. Screw heads shall be located on the inside surfaces of the compartment to prevent tampering with lid while in the closed position. Lid shall be automatically supported in the open position by two support springs.

f. Compartments shall be designed to provide adequate ventilation for the batteries during charging yet prevent the ingress of water during use or transport.

g. Compartments shall be capable of housing four (4) BCI Group GC-2 batteries or two (2) BCI Group 8-D batteries.

15. Solar Array:

a. Photovoltaic module type - Single crystal (mono crystalline) silicon.

b. Thirty six (36) solar cells per module.

c. Solar array power output of 150,225, or 300 Watts peak.

d. Trailer shall tilt to the rear, with sign panel in the down or transport position to allow for fast easy cleaning and maintenance of the solar array.

e. Solar array energy output shall be sufficient to operate the changeable message sign, under normal operating conditions, with the solar array in a flat, horizontal

position. It shall not be necessary to tilt or rotate the solar array to provide sufficient energy output to operate the message sign continuously.

f. Photovoltaic module junction boxes shall be equipped with watertight drain relief at all cable entry points.

16. Wiring and Cabling:

a. All power and control wiring and cables shall be in nonmetallic, flexible, liquid tight conduits.

b. All conduit fittings shall be sealed at bulkheads or enclosure entry points.

c. All wiring shall be marine grade, multi-strand, tin-plated copper with PVC insulation rated for outdoor use.

d. All power system wire terminals shall be tin-plated copper to minimize the effects of galvanic corrosion.

e. Main power wiring shall be a minimum of 10 AWG.

17. Charge Controller:

a. Solar power system shall include a solid-state charge controller.

b. Charge controller shall monitor battery voltage and ambient temperature.

c. Charge controller shall regulate energy flow from the solar array into the battery bank so as to avoid over charging of the batteries and minimize the consumption of electrolyte.

18. Other:

a. Two (2) copies each, operation and maintenance manual, which include the setup and operation, programming, maintenance, troubleshooting and repair, assembly diagrams and parts lists, and specifications. Book format/CD/DVD.

b. Two (2) each Control Center Users Manual, which include the installation and setup, and control center operation. Book format/CD/DVD.

c. Minimum warranty to include:

i. Full coverage, parts and labor for three (3) years.

ii. Electrical and electronic components, control console for two (2) years.

iii. Display modules for five (5) years.

iv. Solar panels for ten (10) years.

d. Battery charger minimum requirements:

i. Equipped with switching regulator, constant voltage with automatic switch to maintain or trickle charge.

ii. Charger input voltage - 110 VAC, 50/60 Hz.

iii. Rated at 75 Amp, recharge time of fifteen (15) hours.

iv. Battery charger unit shall install in the field with minimum effort.

e. The remote control shall allow for complete control of all message sign functions.

i. Selectable data rate from 1,200 to 9,600 bps.

ii. Communication protocol, complete with CRC error detection and correction.

iii. Data format shall be encrypted and compressed for added security and reliability.

iv. All operating programming for message sign control console and host computer shall be included with basic message sign package.

v. Remote control system shall install in the field with minimum effort.

vi. Telephone landline operation with automatic error detection and correction; MNP 5 Data Compression.

vii. Cellular transceiver operation; wireless with full 3-Watt cellular transceiver; with automatic error detection and correction; data compression; to include enhanced performance over noisy cellular connections.

f. Radar Speed Monitor:

i. Operating frequency at 24.15 GHz (K-Band).

ii. Antenna beam width at 12° (circular pattern).

iii. Capture angle - 16.5° typical (circular pattern).

iv. Target speed range of 12 to 125 MPH (20 to 200 km/h).

v. Target speed accuracy within one (1) MPH typical.

vi. Detection distance minimum 1,500 feet (automobile-size target).

vii. Radar unit shall install in the field with minimum effort.

viii. Message sign shall be pre-viewed and pre-programmed for radar speed monitor option.

ix. Operating features:

1. The speed of the target can be displayed as part of a message.

2. A sequence can be displayed only when an acquired target exceeds a preset speed threshold. If no target is acquired or if the acquired target is below the preset threshold, the default or continuous sequence will be displayed.

3. Upper and lower speed thresholds can be preset so the special sequence is displayed only when the target speed is above the lower threshold but below the upper threshold. If no target is acquired or if the acquired target is above or below the preset thresholds, the default of continuous sequence will be displayed. Multiple windows can be programmed with a different special event sequence displayed for each different speed window.

4. All necessary programming features shall be included with the basic message sign package.

19. Color: The complete changeable message sign and trailer shall be painted Federal Safety Orange, except the sign case, which shall be painted black.

20. Training:

Contractor shall provide operator and maintenance training to demonstrate proper and safe operation of equipment. This training shall include a minimum of one (I) hour classroom and one (I) hour per operator hands on training. Contractor shall provide classroom site. This training shall be at no additional cost to the State. Training shall be consistent to OSHA requirements.

Copy of attendance record showing class date, time, location, class type, instructor's name and attendees shall be submitted to:

State of Hawaii Highways
Construction and Maintenance Branch
Attention: Equipment Superintendent/Safety Coordinator
869 Punchbowl Street, Room 404
Honolulu, Hawaii 96813

SECTION 45 – LIGHT TOWER TRAILER MOUNTED

45.1 SCOPE OF WORK – The work consists of furnishing and delivering one (1) only, Light Tower, Trailer Mounted, to the island of Kauai. The contractor shall present the equipment complete, ready to use and fully operational.

45.2 LIGHT TOWER TRAILER MOUNTED – The specifications contained herein establish minimum standards (unless stated differently). Equipment offered shall include any other standard features not listed but detailed in manufacturer's brochures, and deemed necessary for proper and safe operation of equipment.

DETAILED SPECIFICATIONS FOR LIGHT TOWER TRAILER MOUNTED

1. Model/Year: Whacker, Ingersoll-Rand, Allmand, Wanco or equal, 2023 or latest Production year.

2. Flood Lights:

   a. Four (4) mounted on mast.

   b. LED 1000 watts equivalent per flood light.

   c. LED light source.

3. Tower:

   a. 8,534.4mm (28 ft.) telescopic three sections.

   b. Must be able to rotate 360 degrees by hand without lowering tower.

   c. Electrical winch for extending tower.

   d. Galvanized steel construction if offered.

4. Control Console: Drip proof steel enclosure easily accessible with light switches, circuit breakers hour meter and convenience outlets (four GFI 120 V.A.C: and one 240 V.A.C.).

5. Power:

   a. Diesel engine, 10.5 BHP of rated speed, 4 cycle. EPA Tier 4 compliant. Shall be capable of operating on a B20 blend of bio-diesel.

   b. Water cooled, with high temperature cut off switch.

   c. 24 hour fuel supply, minimum of 113.51 (30 gal.).

d. Automatic low oil pressure shutdown.

e. Muffled to 82 decibels at 7,620mm (25 ft.).

f. Twelve (12) volt starting system.

g. First service kit.

6. Trailer:

a. Heavy duty welded steel frame.

b. Two (2) heavy walled tubular out riggers.

c. Four (4) swivel type adjustable leveling jacks, with leveling indicator.

d. Tongue jack with caster wheel.

e. Convertible lunette eye/ 2 inch ball hitch with safety chains (2).

f. Minimum 1,510.4 kg (3,330 lbs.) capacity leaf springs and axle.

g. Manufacturer's recommended tires/rims, including spare. Shall meet manufacturer's and Federal GAWR requirement, for GVW submitted.

h. Fenders.

i. Stop, turn, hazard, running lights. LED type.

j. Wire connector Cole Hersee 6-pole plug, Part No. 1236 and 6-pole socket Part No. 1258.

7. Color:

a. Manufacturer's standard.

b. Trailer shall be outlined with conspicuity tape (red/white).

8. Other:

a. Operators manual two (2) each, repair and parts manual one (1) each.

b. Hour meter.

c. 2.2kg (5 lbs.) ABC fire extinguisher mounted

d. Four (4) spare lamps.

9. Training:

Upon request by receiving Agency, Contractor shall schedule operator and maintenance training to demonstrate proper and safe operation of equipment. This training shall include a minimum of one (1) hour classroom and one (1) hour per operator hands on training. Contractor shall provide classroom site. This service shall be provided at no additional cost to the State. Training shall be consistent to OSHA requirements.

Copy of attendance record showing class date, time, location, class type, instructor's name and attendees shall be submitted to:

State of Hawaii Highways
Construction and Maintenance Branch
Attn: Equip. Superintendent/Safety Coordinator
869 Punchbowl Street, Room 404
Honolulu, Hawaii 96813

SECTION 46 - CONCRETE MIXER, 9 CUBIC FEET

46.1 SCOPE OF WORK- The work consists of furnishing and delivering one (1) each, Concrete Mixer, 9 cubic feet to the island of Kauai. The Contractor shall present the equipment complete, ready to use, and fully operational.

46.2 CONCRETE MIXER, 9 CUBIC FEET - The Specifications contained herein establish minimum standards (unless stated differently). Equipment offered shall include any other standard features not listed but detailed in manufacturer's brochures and deemed necessary/required for proper and safe operation of the equipment.

DETAILED SPECIFICATIONS FOR CONCRETE MIXER, 9 CUBIC FEET

1. Model/Year: Muller, MBW, Workman, MQ Whiteman. 2023 or latest production or equal.
2. Capacity: Nine (9) cubic feet minimum.
3. Construction: Heavy duty.
4. Engine:
    a. Gasoline powered.
    b. Electric start.
    c. 5.89 kW (7.9HP) minimum.
    d. Completely covered with ventilation; minimum cover thickness 14 gauge.
5. Other:
    a. Polyethylene Drum.
    b. Drum opening: 584.2 mm (23 in.) minimum.
    c. Drum depth: 787.4mm (31 in.) minimum.
    d. Side dump; manual with oversized dump wheel.
    e. Multi-position dump; non-slip drum lock.
    f. Drive shall be V-Belt; unit shall also have spare V-Belt
    g. Fully lubricated yoke and drum spindle bearings.

h. First Service Kit to include all required filters (oil, fuel, air, etc.).

6. Trailer:

   a. Stop, turn, running lights with 4-wire connector.

   b. Tires shall be minimum B-78xl3 ST; include spare tire and rim, mounted to trailer.

   c. Shall be outlined with red/white conspicuity tape (reflexite or equal).

   d. Wheel hubs shall have bearing buddy and/or be lubricated type hubs.

   e. Axle suspension shall be spring type or torsion bar type.

   f. Two (2) inch ball hitch; safety chains with hooks.

7. Training:

   Contractor shall provide proper and safe operation and maintenance of equipment. This training shall be provided at no additional cost to the State. This training shall be consistent to OSHA requirements.

   Copy of attendance record showing class date, time, location, class type, instructor's name and attendees shall be submitted to:

   State of Hawaii Highways
   Construction and Maintenance Branch
   Attention: Equipment Superintendent/Safety Coordinator
   869 Punchbowl Street, Room 404
   Honolulu, Hawaii 96813

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS
HONOLULU, HAWAII

PROPOSAL

PROPOSAL TO THE STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS

Project:	FURNISHING AND DELIVERING MOTOR VEHICLES AND EQUIPMENT FOR ISLANDS OF OAHU, HAWAII, MAUI, AND KAUAI
PROJECT NO.:	HWY-CM-23-01
CONTRACT TIME:	Delivery of the above Motor Vehicles, Trailers, Utility Tractors, and Equipment to agency indicated shall be completed within ninety (90) calendar days from the date indicated in the Notice to Proceed from the Department.
LIQUIDATED DAMAGES:	Refer to Section 8.2 Liquidated Damages, of the Special Provisions.
NOTE:	**NO BID, PERFORMANCE AND PAYMENT BONDS ARE REQUIRED FOR THIS PROJECT**
ELECTRONIC SUBMITTAL:	**The Proposal and supporting documents shall be uploaded through the State of Hawaii eProcurement System (HIePRO)**

Director of Transportation
Aliiaimoku Hale
869 Punchbowl Street
Honolulu, Hawaii 96813

Dear Sir:

The undersigned bidder declares the following:

1. It has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with this proposal.

2. It has not been assisted or represented on this matter by any individual who has, in a State capacity, been involved in the subject matter of this contract within the past two years.

3. It has not and will not, either directly or indirectly offered or given a gratuity (i.e. an entertainment or gift) to any State or County employee to obtain a contract or favorable treatment under a contract.

The undersigned bidder further agrees to the following:

1. If this proposal is accepted, it shall execute a contract with the Department to provide all necessary labor, machinery, tools, equipment, apparatus and any other means of construction, to do all the work and to furnish all the materials specified in the contract in the manner and within the time therein prescribed in the contract, and that it shall accept in full payment therefore the sum of the unit and/or lump sum prices as set forth in the attached proposal schedule for the actual quantities of work performed and materials furnished and furnish satisfactory security in accordance with Section 103D-324, Hawaii Revised Statutes, within 10 days after the award of the contract or within such time as the Director of Transportation may allow after the undersigned has received the contract documents for execution, and is fully aware that non-compliance with the aforementioned terms will result in the forfeiture of the full amount of the bid guarantee required under Section 103D-323, Hawaii Revised Statutes.

2. That the quantities given in the attached proposal schedule are approximate only and are intended principally to serve as a guide in determining and comparing the bids.

3. That the Department does not either expressly or by implication, agree that the actual amount of work will correspond therewith, but reserves the right to increase or decrease the amount of any class or portion of the work, or to omit portions of the work, as may be deemed necessary or advisable by the Director of Transportation, and that all increased or decreased quantities of work shall be performed at the unit prices set forth in the attached proposal schedule except as provided for in the specifications.

4. In case of a discrepancy between unit prices and the totals in said Proposal Schedule, the unit prices shall prevail.

5. Agrees to begin work within 10 working days after the date of notification to commence with the work, which date is in the notice to proceed, and shall finish the entire project within the time prescribed.

6. The Director of Transportation reserves the right to reject any or all bids and to waive any defects when in the Director's opinion such rejections or waiver will be for the best interest of the public.

Receipt is hereby acknowledged and complete examination is hereby expressly guaranteed of the following listed items: the specifications, the notice to bidders, the special provisions, if any, the proposal, the plans, if any, and the contract form.

The undersigned acknowledges receipt of any addendum, issued by recording in the space below the date of receipt.

Addendum No. 1_____ Addendum No. 3_____

Addendum No. 2_____ Addendum No. 4_____

The undersigned hereby certifies that the bid prices contained in the attached proposal schedule have been carefully checked and are submitted as correct, final and are net prices.

_____
Bidder (Company Name)

By_____
Authorized Signature

_____
Print Name and Title

_____

_____
Business Address

_____
Business Telephone

_____
Date

_____
Contact Person (If different from above)

Phone:_____ Email:_____

*Hawaii General Excise Tax License No. _____

**State License (Automotive Dealer) No. _____

Matls. & Serv.
r12/2020

NOTE:

If bidder is a CORPORATION, the legal name of the corporation shall be set forth above, the corporate seal affixed, together with the signature(s) of the officer(s) authorized to sign contracts on behalf of the corporation. Please attach to this page current (not more than six months old) evidence of the authority of the officer(s) to sign on behalf of the corporation.

If bidder is a PARTNERSHIP, the true name of the partnership shall be set forth above with the signature(s) of the general partner(s) authorized to sign contracts on behalf of the partnership. Please attach to this page current (not more than six months old) evidence of the authority of the partner(s) to sign on behalf of the partnership.

If bidder is an INDIVIDUAL, the bidder's signature shall be placed in the space provided therefore on page PF-4.

If signature is by an agent, other than an officer of a corporation or a partner of a partnership, a POWER OF ATTORNEY must be on file with the Department prior to the opening of bids or submitted with the bid; otherwise, the bid may be rejected as irregular and unauthorized.

*Bidder will be considered an out-of-state vendor if Hawaii General Excise Tax License No. is not indicated. See Section 2.8 Out-of-State Bidders of the Specifications.

**See Special Provisions Section 2.11 State License on page SP-2.

FURNISHING AND DELIVERING MOTOR VEHICLES AND EQUIPMENT
PROJECT NO. HWY-CM-23-01

PROPOSAL SCHEDULE

HWY-CM-23-01 Equipment Summary					
ITEM NO.	**ISLAND**	**QTY**	**SPEC SECTION**	**ITEM**	**PAGE NO.**
1	OAHU	1	Section 11	Full Size Van, Alternative Fuel	PF-7
2	OAHU	1	Section 12	One Ton Pick-Up Truck	PF-8
3	OAHU	1	Section 13	One Ton Pick-Up Truck with Lift Gate	PF-9
4	OAHU	5	Section 14	One Ton Crew Cab, Pick-Up Truck with Lift Gate and Arrow Board	PF-10
5	HAWAII	2	Section 15	Six Man Crew Cab Four Wheel Drive One Ton Dump with Lift Gate	PF-11
6	HAWAII	6	Section 16	Six Man Crew Cab Four Wheel Drive One Ton with Utility Box and Lift Gate	PF-12
7	OAHU	1	Section 17	Cab/Chassis with Utility Body	PF-13
8	OAHU	1	Section 18	Cab/Chassis with Aerial and Utility Body	PF-14
9	OAHU	1	Section 19	Cab/Chassis with Scissors Lift	PF-15
10	OAHU	1	Section 20	Cab/Chassis Stake Truck with Lift Gate	PF-16
11	KAUAI	1	Section 21	Cab/Chassis with Flat Bed Dump Body	PF-17
12	OAHU	1	Section 22	Cab/Chassis with Solid Side Panel Dump	PF-18
13	OAHU	1	Section 23	Cab/Chassis with 2.5 cubic yard dump body	PF-19
14	OAHU	1	Section 24	Cab/Chassis with 7 cubic yard dump body	PF-20
15	MAUI	1	Section 25	Cab/Chassis with 10.8 Cubic Yard Dump	PF-21
16	OAHU	1	Section 26	Trailer Tandem, with 5,000 Gallon Tank	PF-22
17	KAUAI	1	Section 27	Transport Trailer	PF-23
18	OAHU	3	Section 28	Equipment Trailer, Deck-Over Tilt	PF-24
19	KAUAI	1	Section 29	Equipment Trailer, Ramp	PF-25
20	OAHU	1	Section 30	Drop-Deck & Dump Trailer	PF-26
21	HAWAII	1	Section 31	Utility Tractor with Rear Mounted Ditch Bank Flail Mower	PF-27
22	HAWAII	1	Section 32	Utility Tractor with Extended Side and Rear Mounted Ditch Bank Flail Mower	PF-28
23	KAUAI	1	Section 33	Zero Turn Mower	PF-29
24	HAWAII	1	Section 34	Vibratory Roller, 8 to 10 Ton	PF-30
25	KAUAI	1	Section 35	Hydraulic Excavator with Attachments	PF-31
26	KAUAI	1	Section 36	Hydraulic Hammer	PF-32
27	OAHU	1	Section 37	Front End Wheel Loader, 20,000 Operating Weight	PF-33
28	MAUI	1	Section 38	Front End Wheel Loader, 34,500 Operating Weight	PF-34
29	MAUI	1	Section 39	Front End Wheel Loader, 42,000 Operating Weight	PF-35
30	KAUAI	1	Section 40	Backhoe/Loader	PF-36
31	OAHU	1	Section 41	Loader/Backhoe with Attachment	PF-37
32	OAHU	1	Section 42	Air Compressor, Trailer Mounted	PF-38
33	KAUAI	1	Section 43	Portable Generator	PF-39
34	KAUAI	2	Section 44	Message Board, Trailer Mounted	PF-40
35	KAUAI	1	Section 45	Light Tower Trailer Mounted	PF-41
36	KAUAI	1	Section 46	Concrete Mixer, 9 Cubic Feet	PF-42

FURNISHING AND DELIVERING MOTOR VEHICLES AND EQUIPMENT
PROJECT NO. HWY-CM-23-01

PROPOSAL SCHEDULE

ITEM NO. 1 - Oahu

DESCRIPTION

One (1) FULL SIZE VAN, ALTERNATIVE FUEL as described in SECTION 11

Make _____ Year _____Model No. _____

Manufacturer _____Model Name _____

Transmission _____Motor Size _____

UNIT BID PRICE (Total Price for One) $_____

TOTAL BID PRICE FOR QUANTITY OF ONE $_____

(Minus) For Trade-In

Trade in: 2007 Van Ford E150 9181-708 $_____

TOTAL BID PRICE - ITEM NO. 1 $_____

BIDDER CONTACT PERSON (Print Name) _____

CONTACT PHONE NUMBER _____

CONTACT EMAIL _____

FURNISHING AND DELIVERING MOTOR VEHICLES AND EQUIPMENT
PROJECT NO. HWY-CM-23-01

PROPOSAL SCHEDULE

ITEM NO. 2 - Oahu

DESCRIPTION

One (1) ONE TON PICK-UP TRUCK as described in SECTION 12

Make _____ Year _____Model No. _____

Manufacturer _____Model Name _____

Transmission _____Motor Size _____

UNIT BID PRICE (Total Price for One) $_____

TOTAL BID PRICE FOR QUANTITY OF ONE $_____

(Minus) For Trade-In

Trade in: 2004 Ford F350 Pickup 9181-646 $_____

TOTAL BID PRICE - ITEM NO. 2 $_____

BIDDER CONTACT PERSON (Print Name) _____

CONTACT PHONE NUMBER _____

CONTACT EMAIL _____

FURNISHING AND DELIVERING MOTOR VEHICLES AND EQUIPMENT
PROJECT NO. HWY-CM-23-01

PROPOSAL SCHEDULE

ITEM NO. 3 - Oahu

DESCRIPTION

One (1) ONE TON PICK-UP TRUCK WITH LIFT GATE as described in SECTION 13

Make _____ Year _____Model No. _____

Manufacturer _____Model Name _____

Transmission _____Motor Size _____

UNIT BID PRICE (Total Price for One) $_____

TOTAL BID PRICE FOR QUANTITY OF ONE $_____

(Minus) For Trade-In

Trade in: 2008 Ford 4 x 4 Pickup 9181-727 $_____

TOTAL BID PRICE - ITEM NO. 3 $_____

BIDDER CONTACT PERSON (Print Name) _____

CONTACT PHONE NUMBER _____

CONTACT EMAIL _____

FURNISHING AND DELIVERING MOTOR VEHICLES AND EQUIPMENT
PROJECT NO. HWY-CM-23-01

PROPOSAL SCHEDULE

ITEM NO. 4 - Oahu

DESCRIPTION

Five (5) ONE TON CREW CABM PICK-UP TRUCK WITH LIFT GATE AND ARROW BOARD as described in SECTION 14

Make _____ Year _____Model No. _____

Manufacturer _____Model Name _____

Transmission _____Motor Size _____

UNIT BID PRICE (Total Price for One) $_____

TOTAL BID PRICE FOR QUANTITY OF FIVE $_____

(Minus) For Trade-In

Trade in:	2008 Ford F350 Crew Cab	9181-731	$_____
	2008 Ford F350 Crew Cab	9181-732	$_____
	2008 Ford F350 Crew Cab	9181-733	$_____
	2008 Ford F350 Crew Cab	9181-735	$_____
	2008 Ford F350 Crew Cab	9181-736	$_____

TOTAL BID PRICE - ITEM NO. 4 $_____

BIDDER CONTACT PERSON (Print Name) _____

CONTACT PHONE NUMBER _____

CONTACT EMAIL _____

FURNISHING AND DELIVERING MOTOR VEHICLES AND EQUIPMENT
PROJECT NO. HWY-CM-23-01

PROPOSAL SCHEDULE

ITEM NO. 5 - Hawaii

DESCRIPTION

Two (2) SIX MAN CREW CAB FOUR WHEEL DRIVE ONE TON DUMP WITH LIFT GATE as described in SECTION 15

Make _____ Year _____Model No. _____

Manufacturer _____Model Name _____

Transmission _____Motor Size _____

UNIT BID PRICE (Total Price for One) $_____

TOTAL BID PRICE FOR QUANTITY OF TWO $_____

(Minus) For Trade-In

Trade in: 2005 Ford F350 Crew Cab 9682-204 $_____

2005 Ford F350 Crew Cab 9682-206 $_____

TOTAL BID PRICE - ITEM NO. 5 $_____

BIDDER CONTACT PERSON (Print Name) _____

CONTACT PHONE NUMBER _____

CONTACT EMAIL _____

FURNISHING AND DELIVERING MOTOR VEHICLES AND EQUIPMENT
PROJECT NO. HWY-CM-23-01

PROPOSAL SCHEDULE

ITEM NO. 6 - Hawaii

DESCRIPTION

Six (6) SIX MAN CREW CAB FOUR WHEEL DRIVE ONE TON WITH UTILITY BOX AND LIFT GATE as described in SECTION 16

Make _____ Year _____Model No. _____

Manufacturer _____Model Name _____

Transmission _____Motor Size _____

UNIT BID PRICE (Total Price for One) $_____

TOTAL BID PRICE FOR QUANTITY OF SIX $_____

(Minus) For Trade-In

Trade in: 2008 Ford F350 1 Ton Crew Cab 9681-308 $_____

2008 Ford F350 1 Ton Crew Cab 9681-309 $_____

2008 Ford F350 1 Ton Crew Cab 9681-310 $_____

2008 Ford F350 1 Ton Crew Cab 9681-311 $_____

2008 Ford F350 1 Ton Crew Cab 9681-312 $_____

2008 Ford F350 1 Ton Crew Cab 9681-313 $_____

TOTAL BID PRICE - ITEM NO. 6 $_____

BIDDER CONTACT PERSON (Print Name) _____

CONTACT PHONE NUMBER _____

CONTACT EMAIL _____

FURNISHING AND DELIVERING MOTOR VEHICLES AND EQUIPMENT
PROJECT NO. HWY-CM-23-01

PROPOSAL SCHEDULE

ITEM NO. 7 - Oahu

DESCRIPTION

One (1) CAB/CHASSIS WITH UTILITY BODY as described in SECTION 17

Make _____ Year _____Model No. _____

Manufacturer _____Model Name _____

Transmission _____Motor Size _____

UNIT BID PRICE (Total Price for One) $_____

TOTAL BID PRICE FOR QUANTITY OF ONE $_____

(Minus) For Trade-In

Trade in: 2008 GMC w/ Utility Body 9182-271 $_____

TOTAL BID PRICE - ITEM NO. 7 $_____

BIDDER CONTACT PERSON (Print Name) _____

CONTACT PHONE NUMBER _____

CONTACT EMAIL _____

FURNISHING AND DELIVERING MOTOR VEHICLES AND EQUIPMENT
PROJECT NO. HWY-CM-23-01

PROPOSAL SCHEDULE

ITEM NO. 8 - Oahu

DESCRIPTION

One (1) CAB/CHASSIS WITH AERIAL AND UTILITY BODY as described in SECTION 18

Make _____ Year _____Model No. _____

Manufacturer _____Model Name _____

Transmission _____Motor Size _____

UNIT BID PRICE (Total Price for One) $_____

TOTAL BID PRICE FOR QUANTITY OF ONE $_____

(Minus) For Trade-In

Trade in: 2008 GMC C5500 9182-272 $_____

TOTAL BID PRICE - ITEM NO. 8 $_____

BIDDER CONTACT PERSON (Print Name) _____

CONTACT PHONE NUMBER _____

CONTACT EMAIL _____

FURNISHING AND DELIVERING MOTOR VEHICLES AND EQUIPMENT
PROJECT NO. HWY-CM-23-01

PROPOSAL SCHEDULE

ITEM NO. 9 - Oahu

DESCRIPTION

One (1) CAB/CHASSIS WITH SCISSORS LIFT as described in SECTION 19

Make _____ Year _____Model No. _____

Manufacturer _____Model Name _____

Transmission _____Motor Size _____

UNIT BID PRICE (Total Price for One) $_____

TOTAL BID PRICE FOR QUANTITY OF ONE $_____

(Minus) For Trade-In

Trade in: 2008 GMC w/ High Lift 9182-275 $_____

TOTAL BID PRICE - ITEM NO. 9 $_____

BIDDER CONTACT PERSON (Print Name) _____

CONTACT PHONE NUMBER _____

CONTACT EMAIL _____

FURNISHING AND DELIVERING MOTOR VEHICLES AND EQUIPMENT
PROJECT NO. HWY-CM-23-01

PROPOSAL SCHEDULE

ITEM NO. 10 - Oahu

DESCRIPTION

One (1) CAB/CHASSIS STAKE TRUCK WITH LIFT GATE as described in SECTION 20

Make _____ Year _____Model No. _____

Manufacturer _____Model Name _____

Transmission _____Motor Size _____

UNIT BID PRICE (Total Price for One) $_____

TOTAL BID PRICE FOR QUANTITY OF ONE $_____

(Minus) For Trade-In

Trade in: 2013 Peterbilt 330 9182-282 $_____

TOTAL BID PRICE - ITEM NO. 10 $_____

BIDDER CONTACT PERSON (Print Name) _____

CONTACT PHONE NUMBER _____

CONTACT EMAIL _____

FURNISHING AND DELIVERING MOTOR VEHICLES AND EQUIPMENT
PROJECT NO. HWY-CM-23-01

PROPOSAL SCHEDULE

ITEM NO. 11 - Kauai

DESCRIPTION

One (1) CAB/CHASSIS WITH FLAT BED DUMP BODY as described in SECTION 21

Make _____ Year _____Model No. _____

Manufacturer _____Model Name _____

Transmission _____Motor Size _____

UNIT BID PRICE (Total Price for One) $_____

TOTAL BID PRICE FOR QUANTITY OF ONE $_____

(Minus) For Trade-In

Trade in: 2009 GMC Cab/Chassis w/ Flatbed dump 9882-138 $_____

TOTAL BID PRICE - ITEM NO. 11 $_____

BIDDER CONTACT PERSON (Print Name) _____

CONTACT PHONE NUMBER _____

CONTACT EMAIL _____

FURNISHING AND DELIVERING MOTOR VEHICLES AND EQUIPMENT
PROJECT NO. HWY-CM-23-01

PROPOSAL SCHEDULE

ITEM NO. 12 - Oahu

DESCRIPTION

One (1) CAB/CHASSIS WITH SOLID SIDE PANEL DUMP as described in SECTION 22

Make _____ Year _____Model No. _____

Manufacturer _____Model Name _____

Transmission _____Motor Size _____

UNIT BID PRICE (Total Price for One) $_____

TOTAL BID PRICE FOR QUANTITY OF ONE $_____

(Minus) For Trade-In

Trade in: 2009 Peterbilt 9882-278 $_____

TOTAL BID PRICE - ITEM NO. 12 $_____

BIDDER CONTACT PERSON (Print Name) _____

CONTACT PHONE NUMBER _____

CONTACT EMAIL _____

FURNISHING AND DELIVERING MOTOR VEHICLES AND EQUIPMENT
PROJECT NO. HWY-CM-23-01

PROPOSAL SCHEDULE

ITEM NO. 13 - Oahu

DESCRIPTION

One (1) CAB/CHASSIS WITH 2.5 CUBIC YARD DUMP BODY as described in SECTION 23

Make _____ Year _____Model No. _____

Manufacturer _____Model Name _____

Transmission _____Motor Size _____

UNIT BID PRICE (Total Price for One) $_____

TOTAL BID PRICE FOR QUANTITY OF ONE $_____

(Minus) For Trade-In

Trade in: 2008 International Dump 4400 9182-274 $_____

TOTAL BID PRICE - ITEM NO. 13 $_____

BIDDER CONTACT PERSON (Print Name) _____

CONTACT PHONE NUMBER _____

CONTACT EMAIL _____

FURNISHING AND DELIVERING MOTOR VEHICLES AND EQUIPMENT
PROJECT NO. HWY-CM-23-01

PROPOSAL SCHEDULE

ITEM NO. 14 - Oahu

DESCRIPTION

One (1) CAB/CHASSIS WITH 7 CUBIC YARD DUMP BODY as described in SECTION 24

Make _____ Year _____Model No. _____

Manufacturer _____Model Name _____

Transmission _____Motor Size _____

UNIT BID PRICE (Total Price for One) $_____

TOTAL BID PRICE FOR QUANTITY OF ONE $_____

(Minus) For Trade-In

Trade in: 2008 International Dump 7400 9182-273 $_____

TOTAL BID PRICE - ITEM NO. 14 $_____

BIDDER CONTACT PERSON (Print Name) _____

CONTACT PHONE NUMBER _____

CONTACT EMAIL _____

FURNISHING AND DELIVERING MOTOR VEHICLES AND EQUIPMENT
PROJECT NO. HWY-CM-23-01

PROPOSAL SCHEDULE

ITEM NO. 15 - Maui

DESCRIPTION

One (1) CAB/CHASSIS WITH 10.8 CUBIC YARD DUMP BODY as described in SECTION 25

Make _____ Year _____Model No. _____

Manufacturer _____Model Name _____

Transmission _____Motor Size _____

UNIT BID PRICE (Total Price for One) $_____

TOTAL BID PRICE FOR QUANTITY OF ONE $_____

(Minus) For Trade-In

Trade in: $ NO TRADE

TOTAL BID PRICE - ITEM NO. 15 $_____

BIDDER CONTACT PERSON (Print Name) _____

CONTACT PHONE NUMBER _____

CONTACT EMAIL _____

FURNISHING AND DELIVERING MOTOR VEHICLES AND EQUIPMENT
PROJECT NO. HWY-CM-23-01

PROPOSAL SCHEDULE

ITEM NO. 16 - Oahu

DESCRIPTION

One (1) TRAILER TANDEM WITH 5,000 GALLON TANK as described in SECTION 26

Make _____ Year _____Model No. _____

Manufacturer _____Model Name _____

Transmission _____Motor Size _____

UNIT BID PRICE (Total Price for One) $_____

TOTAL BID PRICE FOR QUANTITY OF ONE $_____

(Minus) For Trade-In

Trade in: 2005 OMCO 5,000 Gal Tandem Trailer 9183-158 $_____

TOTAL BID PRICE - ITEM NO. 16 $_____

BIDDER CONTACT PERSON (Print Name) _____

CONTACT PHONE NUMBER _____

CONTACT EMAIL _____

FURNISHING AND DELIVERING MOTOR VEHICLES AND EQUIPMENT
PROJECT NO. HWY-CM-23-01

PROPOSAL SCHEDULE

ITEM NO. 17 - Kauai

DESCRIPTION

One (1) TRANSPORT TRAILER as described in SECTION 27

Make _____ Year _____Model No. _____

Manufacturer _____Model Name _____

Transmission _____Motor Size _____

UNIT BID PRICE (Total Price for One) $_____

TOTAL BID PRICE FOR QUANTITY OF ONE $_____

(Minus) For Trade-In

Trade in: 2007 Zieman Transport Trailer 9883-120 $_____

TOTAL BID PRICE - ITEM NO. 17 $_____

BIDDER CONTACT PERSON (Print Name) _____

CONTACT PHONE NUMBER _____

CONTACT EMAIL _____

FURNISHING AND DELIVERING MOTOR VEHICLES AND EQUIPMENT
PROJECT NO. HWY-CM-23-01

PROPOSAL SCHEDULE

ITEM NO. 18 – Oahu

DESCRIPTION

Three (3) EQUIPMENT TRAILER, DECK-OVER TILT as described in SECTION 28

Make _____ Year _____Model No. _____

Manufacturer _____Model Name _____

Transmission _____Motor Size _____

UNIT BID PRICE (Total Price for One) $_____

TOTAL BID PRICE FOR QUANTITY OF THREE $_____

(Minus) For Trade-In

Trade in: 2012 Trailer Spectrum LS7X12 9183-165 $_____

2012 Trailer Spectrum LS7X12 9183-166 $_____

2012 Trailer Spectrum LS7X12 9183-167 $_____

TOTAL BID PRICE - ITEM NO. 18 $_____

BIDDER CONTACT PERSON (Print Name) _____

CONTACT PHONE NUMBER _____

CONTACT EMAIL _____

FURNISHING AND DELIVERING MOTOR VEHICLES AND EQUIPMENT
PROJECT NO. HWY-CM-23-01

PROPOSAL SCHEDULE

ITEM NO. 19 – Kauai

DESCRIPTION

One (1) EQUIPMENT TRAILER, RAMP as described in SECTION 29

Make _____ Year _____Model No. _____

Manufacturer _____Model Name _____

Transmission _____Motor Size _____

UNIT BID PRICE (Total Price for One) $_____

TOTAL BID PRICE FOR QUANTITY OF ONE $_____

(Minus) For Trade-In

Trade in: 2007 Zieman 14 Ton Transport Trailer 9883-122 $_____

TOTAL BID PRICE - ITEM NO. 19 $_____

BIDDER CONTACT PERSON (Print Name) _____

CONTACT PHONE NUMBER _____

CONTACT EMAIL _____

FURNISHING AND DELIVERING MOTOR VEHICLES AND EQUIPMENT
PROJECT NO. HWY-CM-23-01

PROPOSAL SCHEDULE

ITEM NO. 20 – Oahu

DESCRIPTION

One (1) DROP-DECK AND DUMP TRAILER as described in SECTION 30

Make _____ Year _____Model No. _____

Manufacturer _____Model Name _____

Transmission _____Motor Size _____

UNIT BID PRICE (Total Price for One) $_____

TOTAL BID PRICE FOR QUANTITY OF ONE $_____

(Minus) For Trade-In

Trade in: 2017 Zieman 9183-175 $_____

TOTAL BID PRICE - ITEM NO. 20 $_____

BIDDER CONTACT PERSON (Print Name) _____

CONTACT PHONE NUMBER _____

CONTACT EMAIL _____

FURNISHING AND DELIVERING MOTOR VEHICLES AND EQUIPMENT
PROJECT NO. HWY-CM-23-01

PROPOSAL SCHEDULE

ITEM NO. 21 – Hawaii

DESCRIPTION

One (1) UTILITY TRACTOR WITH REAR MOUNTED DITCH BANK FLAIL MOWER as described in SECTION 31

Make _____ Year _____Model No. _____

Manufacturer _____Model Name _____

Transmission _____Motor Size _____

UNIT BID PRICE (Total Price for One) $_____

TOTAL BID PRICE FOR QUANTITY OF ONE $_____

(Minus) For Trade-In

Trade in: 1996 Kubota Tractor w/ Rear Flail 9684-180 $_____

TOTAL BID PRICE - ITEM NO. 21 $_____

BIDDER CONTACT PERSON (Print Name) _____

CONTACT PHONE NUMBER _____

CONTACT EMAIL _____

FURNISHING AND DELIVERING MOTOR VEHICLES AND EQUIPMENT
PROJECT NO. HWY-CM-23-01

PROPOSAL SCHEDULE

ITEM NO. 22 – Hawaii

DESCRIPTION

One (1) UTILITY TRACTOR WITH EXTENDED SIDE AND REAR MOUNTED DITCH BANK FLAIL MOWER as described in SECTION 32

Make _____ Year _____Model No. _____

Manufacturer _____Model Name _____

Transmission _____Motor Size _____

UNIT BID PRICE (Total Price for One) $_____

TOTAL BID PRICE FOR QUANTITY OF ONE $_____

(Minus) For Trade-In

Trade in: 1997 Case Tract w/ Rear and Side Flail 9684-182 $_____

TOTAL BID PRICE - ITEM NO. 22 $_____

BIDDER CONTACT PERSON (Print Name) _____

CONTACT PHONE NUMBER _____

CONTACT EMAIL _____

FURNISHING AND DELIVERING MOTOR VEHICLES AND EQUIPMENT
PROJECT NO. HWY-CM-23-01

PROPOSAL SCHEDULE

ITEM NO. 23 – Kauai

DESCRIPTION

One (1) ZERO TURN MOWER as described in SECTION 33

Make _____ Year _____Model No. _____

Manufacturer _____Model Name _____

Transmission _____Motor Size _____

UNIT BID PRICE (Total Price for One) $_____

TOTAL BID PRICE FOR QUANTITY OF ONE $_____

(Minus) For Trade-In

Trade in: 2018 Grasshopper Zero Turn Mower 9884-165 $_____

TOTAL BID PRICE - ITEM NO. 23 $_____

BIDDER CONTACT PERSON (Print Name) _____

CONTACT PHONE NUMBER _____

CONTACT EMAIL _____

FURNISHING AND DELIVERING MOTOR VEHICLES AND EQUIPMENT
PROJECT NO. HWY-CM-23-01

PROPOSAL SCHEDULE

ITEM NO. 24 – Hawaii

DESCRIPTION

One (1) VIBRATORY ROLLER, 8 TO 10 TON as described in SECTION 34

Make _____ Year _____Model No. _____

Manufacturer _____Model Name _____

Transmission _____Motor Size _____

UNIT BID PRICE (Total Price for One) $_____

TOTAL BID PRICE FOR QUANTITY OF ONE $_____

(Minus) For Trade-In

Trade in: 2002 Dynapac 5 - 8T Vibratory 9685-158 $_____

TOTAL BID PRICE - ITEM NO. 24 $_____

BIDDER CONTACT PERSON (Print Name) _____

CONTACT PHONE NUMBER _____

CONTACT EMAIL _____

FURNISHING AND DELIVERING MOTOR VEHICLES AND EQUIPMENT
PROJECT NO. HWY-CM-23-01

PROPOSAL SCHEDULE

ITEM NO. 25 – Kauai

DESCRIPTION

One (1) HYDRAULIC EXCAVATOR WITH ATTACHMENTS as described in SECTION 35

Make _____ Year _____Model No. _____

Manufacturer _____Model Name _____

Transmission _____Motor Size _____

UNIT BID PRICE (Total Price for One) $_____

TOTAL BID PRICE FOR QUANTITY OF ONE $_____

(Minus) For Trade-In

Trade in: 2007 Takeuhi Excavator 9885-139 $_____

TOTAL BID PRICE - ITEM NO. 25 $_____

BIDDER CONTACT PERSON (Print Name) _____

CONTACT PHONE NUMBER _____

CONTACT EMAIL _____

FURNISHING AND DELIVERING MOTOR VEHICLES AND EQUIPMENT
PROJECT NO. HWY-CM-23-01

PROPOSAL SCHEDULE

ITEM NO. 26 – Kauai

DESCRIPTION

One (1) HYDRAULIC HAMMER as described in SECTION 36

Make _____ Year _____Model No. _____

Manufacturer _____Model Name _____

Transmission _____Motor Size _____

UNIT BID PRICE (Total Price for One) $_____

TOTAL BID PRICE FOR QUANTITY OF ONE $_____

(Minus) For Trade-In

Trade in: 2008 Tramac Hydraulic Breaker 9884-155 $_____

TOTAL BID PRICE - ITEM NO. 26 $_____

BIDDER CONTACT PERSON (Print Name) _____

CONTACT PHONE NUMBER _____

CONTACT EMAIL _____

FURNISHING AND DELIVERING MOTOR VEHICLES AND EQUIPMENT
PROJECT NO. HWY-CM-23-01

PROPOSAL SCHEDULE

ITEM NO. 27 – Oahu

DESCRIPTION

One (1) FRONT END WHEEL LOADER 20,000 LB OPERATING WEIGHT as described in SECTION 37

Make _____ Year _____Model No. _____

Manufacturer _____Model Name _____

Transmission _____Motor Size _____

UNIT BID PRICE (Total Price for One) $_____

TOTAL BID PRICE FOR QUANTITY OF ONE $_____

(Minus) For Trade-In

Trade in: 2005 Komatsu Loader 9185-182 $_____

TOTAL BID PRICE - ITEM NO. 27 $_____

BIDDER CONTACT PERSON (Print Name) _____

CONTACT PHONE NUMBER _____

CONTACT EMAIL _____

FURNISHING AND DELIVERING MOTOR VEHICLES AND EQUIPMENT
PROJECT NO. HWY-CM-23-01

PROPOSAL SCHEDULE

ITEM NO. 28 – Maui

DESCRIPTION

One (1) FRONT END WHEEL LOADER 34,500 LB OPERATING WEIGHT as described in SECTION 38

Make _____ Year _____Model No. _____

Manufacturer _____Model Name _____

Transmission _____Motor Size _____

UNIT BID PRICE (Total Price for One) $_____

TOTAL BID PRICE FOR QUANTITY OF ONE $_____

(Minus) For Trade-In

Trade in: $_____NO TRADE_____

TOTAL BID PRICE - ITEM NO. 28 $_____

BIDDER CONTACT PERSON (Print Name) _____

CONTACT PHONE NUMBER _____

CONTACT EMAIL _____

FURNISHING AND DELIVERING MOTOR VEHICLES AND EQUIPMENT
PROJECT NO. HWY-CM-23-01

PROPOSAL SCHEDULE

ITEM NO. 29 – Maui

DESCRIPTION

One (1) FRONT END WHEEL LOADER 42,000 LB OPERATING WEIGHT as described in SECTION 39

Make _____ Year _____Model No. _____

Manufacturer _____Model Name _____

Transmission _____Motor Size _____

UNIT BID PRICE (Total Price for One) $_____

TOTAL BID PRICE FOR QUANTITY OF ONE $_____

(Minus) For Trade-In

Trade in: 2002 Case Front End Loader 9585-135 $_____

TOTAL BID PRICE - ITEM NO. 29 $_____

BIDDER CONTACT PERSON (Print Name) _____

CONTACT PHONE NUMBER _____

CONTACT EMAIL _____

FURNISHING AND DELIVERING MOTOR VEHICLES AND EQUIPMENT
PROJECT NO. HWY-CM-23-01

PROPOSAL SCHEDULE

ITEM NO. 30 – Kauai

DESCRIPTION

One (1) BACKHOE LOADER as described in SECTION 40

Make _____ Year _____Model No. _____

Manufacturer _____Model Name _____

Transmission _____Motor Size _____

UNIT BID PRICE (Total Price for One) $_____

TOTAL BID PRICE FOR QUANTITY OF ONE $_____

(Minus) For Trade-In

Trade in: $____NO TRADE_____

TOTAL BID PRICE - ITEM NO. 30 $_____

BIDDER CONTACT PERSON (Print Name) _____

CONTACT PHONE NUMBER _____

CONTACT EMAIL _____

FURNISHING AND DELIVERING MOTOR VEHICLES AND EQUIPMENT
PROJECT NO. HWY-CM-23-01

PROPOSAL SCHEDULE

ITEM NO. 31 – OAHU

DESCRIPTION

One (1) LOADER/BACKHOE WITH ATTACHMENT as described in SECTION 41

Make _____ Year _____Model No. _____

Manufacturer _____Model Name _____

Transmission _____Motor Size _____

UNIT BID PRICE (Total Price for One) $_____

TOTAL BID PRICE FOR QUANTITY OF ONE $_____

(Minus) For Trade-In

Trade in: 2005 Loader/Backhoe Case 590SM 9185-183 $_____

TOTAL BID PRICE - ITEM NO. 31 $_____

BIDDER CONTACT PERSON (Print Name) _____

CONTACT PHONE NUMBER _____

CONTACT EMAIL _____

FURNISHING AND DELIVERING MOTOR VEHICLES AND EQUIPMENT
PROJECT NO. HWY-CM-23-01

PROPOSAL SCHEDULE

ITEM NO. 32 – OAHU

DESCRIPTION

One (1) AIR COMPRESSOR, TRAILER MOUNTED as described in SECTION 42

Make _____ Year _____Model No. _____

Manufacturer _____Model Name _____

Transmission _____Motor Size _____

UNIT BID PRICE (Total Price for One) $_____

TOTAL BID PRICE FOR QUANTITY OF ONE $_____

(Minus) For Trade-In

Trade in: 2008 Atlas Copco Compressor 9185-189 $_____

TOTAL BID PRICE - ITEM NO. 32 $_____

BIDDER CONTACT PERSON (Print Name) _____

CONTACT PHONE NUMBER _____

CONTACT EMAIL _____

FURNISHING AND DELIVERING MOTOR VEHICLES AND EQUIPMENT
PROJECT NO. HWY-CM-23-01

PROPOSAL SCHEDULE

ITEM NO. 33 – KAUAI

DESCRIPTION

One (1) PORTABLE GENERATOR as described in SECTION 43

Make _____ Year _____Model No. _____

Manufacturer _____Model Name _____

Transmission _____Motor Size _____

UNIT BID PRICE (Total Price for One) $_____

TOTAL BID PRICE FOR QUANTITY OF ONE $_____

(Minus) For Trade-In

Trade in: 2006 Yamaha 6KW Generator 9884-142 $_____

TOTAL BID PRICE - ITEM NO. 33 $_____

BIDDER CONTACT PERSON (Print Name) _____

CONTACT PHONE NUMBER _____

CONTACT EMAIL _____

FURNISHING AND DELIVERING MOTOR VEHICLES AND EQUIPMENT
PROJECT NO. HWY-CM-23-01

PROPOSAL SCHEDULE

ITEM NO. 34 – KAUAI

DESCRIPTION

Two (2) MESSAGE BOARD, TRAILER MOUNTED as described in SECTION 44

Make _____ Year _____Model No. _____

Manufacturer _____Model Name _____

Transmission _____Motor Size _____

UNIT BID PRICE (Total Price for One) $_____

TOTAL BID PRICE FOR QUANTITY OF TWO $_____

(Minus) For Trade-In

Trade in: 2006 Solar Tech Mini Message Board 9886-122 $_____

2006 Solar Tech Mini Message Board 9886-123 $_____

TOTAL BID PRICE - ITEM NO. 34 $_____

BIDDER CONTACT PERSON (Print Name) _____

CONTACT PHONE NUMBER _____

CONTACT EMAIL _____

FURNISHING AND DELIVERING MOTOR VEHICLES AND EQUIPMENT
PROJECT NO. HWY-CM-23-01

PROPOSAL SCHEDULE

ITEM NO. 35 – KAUAI

DESCRIPTION

One (1) LIGHT TOWER TRAILER MOUNTED as described in SECTION 45

Make _____ Year _____Model No. _____

Manufacturer _____Model Name _____

Transmission _____Motor Size _____

UNIT BID PRICE (Total Price for One) $_____

TOTAL BID PRICE FOR QUANTITY OF ONE $_____

(Minus) For Trade-In

Trade in: 2003 Allmand Nite Lite Pro 9886-116 $_____

TOTAL BID PRICE - ITEM NO. 35 $_____

BIDDER CONTACT PERSON (Print Name) _____

CONTACT PHONE NUMBER _____

CONTACT EMAIL _____

FURNISHING AND DELIVERING MOTOR VEHICLES AND EQUIPMENT
PROJECT NO. HWY-CM-23-01

PROPOSAL SCHEDULE

ITEM NO. 36 – KAUAI

DESCRIPTION

One (1) CONCRETE MIXER, 9 CUBIC FEET as described in SECTION 46

Make _____ Year _____Model No. _____

Manufacturer _____Model Name _____

Transmission _____Motor Size _____

UNIT BID PRICE (Total Price for One) $_____

TOTAL BID PRICE FOR QUANTITY OF ONE $_____

(Minus) For Trade-In

Trade in: 2007 Multiquip Portable Cement Mixer 9884-146 $_____

TOTAL BID PRICE - ITEM NO. 36 $_____

BIDDER CONTACT PERSON (Print Name) _____

CONTACT PHONE NUMBER _____

CONTACT EMAIL _____

FURNISHING AND DELIVERING MOTOR VEHICLES AND EQUIPMENT
PROJECT NO. HWY-CM-23-01

PROPOSAL SCHEDULE

NOTES:

1. The TOTAL BID PRICE for each bid item will be used to determine the lowest responsible bidder for each bid item.

2. Bidder may bid on any item in this proposal, and the awarding of contract(s) will be made to the responsive and responsible bidder(s) submitting the lowest qualified total bid price per item. See Section 3.1 Award of Contract of the Special Provisions.

3. Bidder(s) shall submit current brochures and Specifications with their bid. See Section 2.11 Bid Preparation of the Special Provisions.

4. The bid prices stated in the Proposal Schedule includes all applicable State, Federal and local taxes and all other incidental costs incurred or to be incurred by the Contractor.

5. Bidder(s) shall comply with all applicable parts of Section 10 "General Specifications for Furnishing and Delivering Motor Vehicles and Equipment"

6. Completed proposal file and supporting documents shall be uploaded into HIePRO prior to the bid opening date and time. All other required confidential or proprietary documents shall be uploaded separately, with "confidential" or similar notation, somewhere in the file name.

7. Prospective Bidder(s) who plan to bid on Section Nos. 17, 18, 19, 20, 21, 22, 23, 24, 25 and 26 shall submit with their bid certified letter(s) from their manufacturer(s) to certify the prospective bidder as their Factory Authorized Warranty Dealer for both the chassis and equipment offered. Failure to submit any of the certified letter(s) shall be sufficient grounds for rejection of bids.

8. The attention of out-of-state bidders is directed to Section 2.8 of the Specifications. An out-of-state bidder is required to answer the following statement:

   State of Hawaii General Excise and Use Taxes are included in all bid prices.

   _____
   Write "Yes" or "No"

   If the above statement is left unanswered, it will be considered a "No" answer by the State."

FURNISHING AND DELIVERING MOTOR VEHICLES AND EQUIPMENT
PROJECT NO. HWY-CM-23-01

PROPOSAL SCHEDULE

Service and Repair Facility on each island:

_____ Phone No.: _____
Oahu

_____ Phone No.: _____
Hawaii

_____ Phone No.: _____
Maui

_____ Phone No.: _____
Molokai

_____ Phone No.: _____
Kauai

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

F O R M S

Contents:

C O N T R A C T

THIS AGREEMENT, made this day _____, by and between the STATE OF HAWAII, by its Director of Transportation, hereinafter referred to as "STATE", and «CONTRACTOR», «STATE_OF_INCORPORATON», whose business and/or mailing address is «ADDRESS», hereinafter referred to as CONTRACTOR";

WITNESSETH: That for and in consideration of the payments hereinafter mentioned, the CONTRACTOR hereby covenants and agrees with the STATE to complete in place, furnish and pay for all labor and materials necessary for "«PROJECT_NAME_AND_NO»", or such a part thereof as shall be required by the STATE, the total amount of which labor, material and construction shall be computed at the unit and/or lump sum prices set forth in the attached proposal schedule and shall be the sum of «BASIC»-----DOLLARS ($«BASIC_NUMERIC») as follows:

TOTAL AMOUNT FOR COMPARISON OF BIDS …….$«BASIC_NUMERIC»

which sum shall be provided from STATE funds, all in accordance with the specifications, the special provisions, if any, the notice to bidders, the instructions to bidders, the proposal and plans for «PROJECT_NO_ONLY» and any supplements thereto, on file in the office of the Director of Transportation. These documents, together with all alterations, amendments, and additions thereto and deductions therefrom, are attached hereto or incorporated herein by reference and made a part of this contract.

The CONTRACTOR hereby covenants and agrees to complete such work from the date indicated in the Notice to Proceed issued by the STATE within «WORKING_DAYS», subject, however, to such extensions as may be provided for in writing under the specifications.

For and in consideration of the covenants, undertakings and agreements of the CONTRACTOR herein set forth and upon the full and faithful performance thereof by the CONTRACTOR, the STATE hereby agrees to pay the CONTRACTOR the sum of «BASIC»-----DOLLARS ($«BASIC_NUMERIC») in lawful money, but not more than such part of the same as is actually earned according to the STATE's determination of the actual quantities of work performed and materials furnished by the CONTRACTOR at the unit or lump sum prices set forth in the attached proposal schedule. Such payment, including any extras, shall be made, subject to such additions or deductions hereto or hereafter made in the manner and at the time prescribed in the specifications and this contract. An additional sum of -----«EXTRAS»----- «STATE_EXTRAS»DOLLARS ($«EXTRA_NUMERIC») is hereby provided for extra work and shall be provided from State funds.

All words used herein in the singular shall extend to and include the plural. All words used in the plural shall extend to and include the singular. The use of any gender shall extend to and include all genders.

IN WITNESS WHEREOF, the parties hereto have caused this instrument to be duly executed the day and year first above written.

STATE OF HAWAII

_____
Director of Transportation

«CONTRACTOR»

_____
Signature

_____
Print name

_____
Print Title

_____
Date