

STANDARD BID CONDITIONS

H-15-307R

1. **ACCEPTANCE AND REJECTION:** The Arkansas State Highway and Transportation Department (AHTD) reserves the right to reject any or all bids, to accept bids in whole or in part (unless otherwise indicated by bidder), to waive any informalities in bids received, to accept bids on materials or equipment with variations from specifications where efficiency of operation will not be impaired, and to award bids to best serve the interest of the State.
2. **PRICES:** Unless otherwise stated in the Bid Invitation, the following will apply: (1) unit prices shall be bid, (2) prices should be stated in units of quantity specified (feet, each, lbs., etc.), (3) prices must be F.O.B. destination specified in bid, (4) prices must be firm and not subject to escalation, (5) bid must be firm for acceptance for 30 days from bid opening date. In case of errors in extension, unit prices shall govern. Discounts from bid price will not be considered in making awards.
3. **BID BONDS AND PERFORMANCE BONDS:** If required, a **Bid Bond** in the form of a cashier's check, certified check, or surety bond issued by a surety company, in an amount stated in the Bid Invitation, must accompany bid. **Personal and company checks are not acceptable as Bid Bonds.** Failure to submit a Bid Bond as required will cause a bid to be rejected. The Bid Bond will be forfeited as liquidated damages if the successful bidder fails to provide a required Performance Bond within the period stipulated by AHTD or fails to honor their bid. When a bidder claims and can show clear and convincing evidence that a material mistake was made in the bid and was not the bid intended, the bidder may be permitted to withdraw their bid prior to award without forfeiture of bid bond. Cashier's checks and certified checks submitted as Bid Bonds will be returned to unsuccessful bidders; surety bonds will be retained. The successful bidder will be required to furnish a **Performance Bond** in an amount stated in the Bid Invitation and in the form of a cashier's check, certified check, or surety bond issued by a surety company, unless otherwise stated in the Bid Invitation, as a guarantee of delivery of goods/services in accordance with the specifications and within the time established in the bid. **Personal and company checks are not acceptable as Performance Bonds.** In some cases, a cashier's check or certified check submitted as a Bid Bond will be held as the Performance Bond of the successful bidder. Cashier's checks or certified checks submitted as Performance Bonds will be refunded shortly after payment has been made to the successful bidder for completion of all terms of the bid; surety bonds will be retained. Surety bonds must be issued by a surety company authorized to do business in Arkansas, and must be signed by a Resident Local Agent licensed by the Arkansas State Insurance Commissioner to represent that surety company. Resident Agent's Power-of-Attorney must accompany the surety bond. Certain bids involving labor will require Performance Bonds in the form of surety bonds only (no checks of any kind allowed). These bonds shall not only serve to guarantee the completion of the work, but also to guarantee the excellence of both workmanship and material until the work is finally accepted and the provisions of the Plans, Specifications, and Special Provisions fulfilled. In such cases, the company issuing the surety bond must comply with all stipulations herein and must be named in the U. S. Treasury listing of companies holding Certificates of Authority as acceptable sureties on Federal Bonds and as acceptable reinsuring companies. Any excess between the face amount of the bond and the underwriting limitation of the bonding company shall be protected by reinsurance provided by an acceptable reinsuring company. Annual Bid and Performance Bonds on file with E & P Division must have sufficient unencumbered funds to meet current bonding requirements, or the bid will be rejected, unless the balance is submitted as set forth above, prior to bid opening.
4. **TAXES:** The AHTD is not exempt from Arkansas State Sales and Use Taxes, or local option city/county sales taxes, when applicable, and bidders are responsible to the State Revenue Department for such taxes. These taxes should not be included in bid prices, but where required by law, will be paid by the AHTD as an addition thereto, and should be added to the billing to the AHTD. The AHTD is exempt from Federal Excise Taxes on all commodities except motor fuels; and excise taxes should not be included in bid prices except for motor fuels. Where applicable, tax exemption certificates will be furnished by the AHTD.
5. **"ALL OR NONE" BIDS:** Bidders who wish to bid "All or None" on two or more items shall so stipulate on the face of bid sheet; otherwise, bid may be awarded on an individual item basis.
6. **SPECIFICATIONS:** Complete specifications should be attached for any substitution or alternate offered, or where amplification is necessary. Bidder's name must be placed on all attachments to the bid.
7. **EXCEPTIONS TO SPECIFICATIONS:** Any exceptions to the bid specifications must be stated in the bid. Any exceptions to manufacturer's published literature must be stated in the bid, or it will be assumed that bidder is bidding exactly as stated in the literature.
8. **BRAND NAME REFERENCES:** All brand name references in bid specifications refer to that commodity or its equivalent, unless otherwise stated in Bid Invitation. Bidder should state brand or trade name of item being bid, if such name exists.
9. **FREIGHT:** All freight charges should be included in bid price. Any change in common carrier rates authorized by the Interstate Commerce Commission will be adjusted if such change occurs after the bid opening date. Receipted common carrier bills that reflect ICC authorized rate changes must be furnished.
10. **SAMPLES, LITERATURE, DEMONSTRATIONS:** Samples and technical literature must be provided free of any charge within 14 days of AHTD request, and free demonstrations within 30 days, unless AHTD extends time. Failure to provide as requested within this period may cause bid to be rejected. Samples, literature and demonstrations must be substantially the same as the item(s) being bid, unless otherwise agreed to by AHTD. Samples that are not destroyed will be returned upon request at bidders expense. Samples from successful bidders may be retained for comparison with items actually furnished.
11. **GUARANTY:** Unless otherwise indicated in Bid Invitation, it is understood and agreed that any item offered or shipped on this bid shall be newly manufactured, latest model and design, and in first class condition; and that all containers shall be new, suitable for storage or shipment and in compliance with all applicable laws relating to construction, packaging, labeling and registration.
12. **BACKORDERS OR DELAY IN DELIVERY:** Backorders or failure to deliver within the time required may constitute default. Vendor must give written notice to the AHTD, as soon as possible, of the reason for any delay and the expected delivery date. The AHTD has the right to extend delivery if reasons appear valid. If reason or delivery date is not acceptable, vendor is in default.
13. **DEFAULT:** All commodities furnished will be subject to inspection and acceptance by AHTD after delivery. Default in promised delivery or failure to meet specifications authorizes the AHTD to cancel award or any portion of same, to reasonably purchase commodities or services elsewhere and to charge full increase, if any, in cost and handling to defaulting vendor. Applicable bonds may be forfeited.
14. **ETHICS:** *"It shall be a breach of ethical standards for a person to be retained, or to retain a person, to solicit or secure a State contract upon an agreement of understanding for a commission, percentage, brokerage, or contingent fee, except for retention of bona fide employees or bona fide established commercial selling agencies maintained by the contractor for the purpose of securing business."* (Arkansas Code, Annotated, Section 19-11-708).

**ARKANSAS STATE HIGHWAY
AND TRANSPORTATION DEPARTMENT**

NOTICE OF NONDISCRIMINATION

The Arkansas State Highway and Transportation (Department) complies with all civil rights provisions of federal statutes and related authorities that prohibit discrimination in programs and activities receiving federal financial assistance. Therefore the Department does not discriminate on the basis of race, sex, color, age, national origin, religion or disability, in the admission, access to and treatment in the Department's programs and activities, as well as the Department's hiring or employment practices. Complaints of alleged discrimination and inquiries regarding the Department's nondiscrimination policies may be directed to Joanna P. McFadden Section Head - EEO/DBE (ADA/504/Title VI Coordinator), P. O. Box 2261, Little Rock, AR 72203, (501) 569-2298, (Voice/TTY 711), or the following email address: joanna.mcfadden@arkansashighways.com.

Free language assistance for Limited English Proficient individuals is available upon request.

This notice is available from the ADA/504/Title VI Coordinator in large print, on audiotape and in Braille.

**ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
LITTLE ROCK, ARKANSAS
EQUIPMENT AND PROCUREMENT DIVISION**

BID SHEET

Contract No.: H-15-307R

BIDDER: _____

1. **1** – Cab & Chassis, 58,000 GVWR, Tandem Axle With Flat Bed Body, Aerial Lift and Crane, Hydraulic Digger Attachment, Underbody Air Compressor and Welder/Generator, to meet AHTD Spec. **15-86-069**.

FOB: **AHTD – Equipment & Procurement, 11302 West Baseline Road, Little Rock, AR 72209**

Bid Price (Do not include any Local, State or Federal Taxes) Each \$ _____

Total for **1** Cab & Chassis \$ _____

Equipment proposed as meeting Specifications:

Cab & Chassis:

Make _____ Model _____ Warranty _____

Aerial Lift & Crane:

Make _____ Model _____ Warranty _____

Air Compressor:

Make _____ Model _____ Warranty _____

Welder/Generator:

Make _____ Model _____ Warranty _____

Guaranteed Delivery Date _____

Additional Units may be purchased at the same pricing and
Conditions through _____
(Date)

BID TOTAL \$ _____

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

SPECIFICATION 15-86-069

FOR

**TRUCK MOUNTED AERIAL LIFT AND CRANE
WITH HYDRAULIC DIGGER ATTACHMENT
AND WELDER/GENERATOR**

A. General Conditions:

1. **Current Model:** Units furnished under this specification shall be the latest improved model in current production, as offered to commercial trade, built for the U.S. market, and shall be of quality workmanship and material. Machines manufactured for foreign markets will not be accepted. All equipment offered under this specification shall be new. Used, reconditioned, shopworn, demonstrator, prototype or discontinued models are not acceptable. Manufacturers of the units supplied must have been in the business of producing operational units for at least two years and must have recently sold similar units to domestic governmental agencies. The model furnished must have been in production for a minimum of one year, or be the latest version of a previous model. Bidder/s may be required to submit documentation substantiating the aforementioned requirements. A list of user references may also be required.
2. **Literature:** Manufacturers literature, verifying adherence of proposed unit to each line item addressed in this specification, shall be submitted with the bid. If any literature and/or specifications of items conflict with AHTD specifications, the conflict(s) shall be specifically noted, corrected and submitted with the bid.
3. Any deviations from specifications and requirements herein must be clearly pointed out by bidder. Otherwise it will be considered that equipment offered is in strict compliance with these specifications and requirements, and successful bidder will be held responsible therefor. Deviations must be explained in detail on an attached sheet. However, no implication is made by the Arkansas State Highway and Transportation Department that deviations will be acceptable.
4. **Delivery Requirements:** It will be the responsibility of the Successful Bidder to guarantee delivery of the cab & chassis as specified, including items or equipment installed by a third party contractor, within the quoted time. The Arkansas State Highway and Transportation Department will not accept delivery of decked cab & chassis.
5. **Training:** The successful bidder shall furnish qualified personnel to instruct AHTD operators and service technicians on operation and maintenance of machine.

In addition, the successful bidder shall furnish information on any factory service schools which would be available for AHTD service technicians.
6. Shall be assembled, adjusted and made ready for continuous operation at time of delivery.
7. All parts, accessories and tools necessary for satisfactory operation of this unit shall be furnished whether or not they are specifically mentioned in this specification (including standard equipment as regularly furnished by manufacturer as shown on printed literature and specifications - unless specifically excluded by this specification).
8. **Parts Inventory & Service Facilities:** The successful bidder shall maintain a representative inventory of replacement parts and service facilities for servicing equipment bid on.
9. **Demonstration:** The Arkansas State Highway & Transportation Department reserves the right to require a demonstration, under actual working conditions, of equipment bid under this specification before award is made. The demonstration would be performed (free of any charge) by the bidder or an authorized representative at a mutually acceptable location. If requested, the bidder should be prepared to demonstrate the equipment within thirty (30) days after notification. Failure of the bidder to perform a satisfactory demonstration within the specified time may be grounds for rejection of the bid.
10. **Cooperative Purchasing:** Other tax-supported entities* in Arkansas (cities, counties, state agencies, school districts, etc.) may purchase from this Contract on an individual basis under the same specifications and conditions, and at the pricing set forth by each vendor, all at the discretion of each vendor in each case. Prices could be reduced by a vendor for minor alterations in conditions (changing order quantities, deleting options, etc.) as agreed by both parties, but could not be raised above the contract bid price except for any additional freight charges. Vendors would not be required to sell to any such entity under this contract, and those entities would not be obligated to purchase from the contract.

Each entity wishing to purchase from the contract must make contact directly with the appropriate vendor(s). The Highway Department shall remain "out of the loop" for such transactions: all contact, orders, invoices, payments, etc.

regarding such transactions must take place exclusively between the tax-supported entity and the vendor. The Department shall be held harmless of any and all liability arising from such transactions.

* Tax-supported entities are defined as those receiving more than half of total funding from appropriated tax funds.

B. Unit Specifications:

1. General: This specification is intended to cover an aerial lift and crane unit with hydraulic digger attachment, PTO driven rotary screw air compressor and a diesel engine driven welder/generator unit, all completely mounted on a tandem axle cab and chassis and ready for operation. Aerial lift, accessory equipment, and Cab and Chassis shall meet the following minimum specifications.
2. Aerial Lift And Crane:
 - A. Type: Hydraulic Truck Crane with telescoping boom, work platform and hydraulic digger attachment installed on truck chassis between cab and truck bed. Shall be approved and recommended by manufacturer for installation on 56,000 pound GVWR tandem axle truck with a minimum CA of 168".
 - B. Height: The unit provided shall have sufficient pedestal height to allow rotation over the front of the truck at a boom angle of no less than 10° below horizontal without contacting the cab of the truck. Overall travel height shall not exceed 13' 6".
 - C. Boom: Shall have a minimum of three (3) sections and telescope hydraulically under full load regardless of boom angle. Total elevation range of boom shall be from no less than 20° below horizontal to no less than 80° above horizontal. Shall provide a maximum sheave height from ground of no less than 59' 6". Maximum reach from center line of rotation at 0° boom angle without work platform shall be no less than 49' 6". Maximum digging radius with hydraulic digger attachment shall be no less than 33'.
 - D. Rotation: 360 degrees continuous.
 - E. Lifting Capacity: Minimum specified lifting capacities are for a machine without the work platform or hydraulic digger attachment. Shall have the following capacities based on not more than 85% of tipping capacity with load over outrigger or to rear of truck and with boom retracted: no less than 5,500 pounds at 0° boom angle, no less than 7,500 pounds at 30° boom angle, no less than 9,000 pounds at 45° boom angle and no less than 29,500 pounds at 80° boom angle. Lifting capacity at maximum reach at 0° boom angle shall be no less than 2,000 pounds.
 - F. Winch: Winch shall be mounted at the base of the boom. Shall be hydraulically driven with a minimum bare drum pull rating of 12,000 pounds and be equipped with a minimum of 250' of no less than 9/16" diameter 6 x 37 improved plow steel IWRC wire rope. Downhaul weight and hook shall be furnished with crane.
 - G. Work Platform: Hydraulically rotating platform no less than 36" x 72". Platform to be all steel construction, or aluminum base with tubular steel side rails and an accessible entryway. Shall be mounted on an inverted "A" subframe with hydraulic self-leveling system. Platform shall rotate hydraulically 90° either direction of centerline of boom. The rotation gears and mechanism shall not intrude into the platform work area allowing the platform floor to be all one level without tripping hazards. The platform leveling system shall have remote releveling controls provided at the platform and at the ground controls. The rated capacity of the platform shall be no less than 600 pounds in any boom position. Air and 110 volt AC electric lines to the work platform shall be provided.
 - H. Upper Controls: Shall have either full pressure multiple lever controls or electronic proportional controls at the platform for controlling boom operation, winch operation and platform rotation. The controls shall be permanently mounted. Engine start, stop and throttle controls shall also be included at the platform.
 - I. Lower Controls: In addition to the controls located at the platform, there shall be two (2) sets of lower controls at the turret base accessible from ground level - one (1) set mounted streetside and one (1) set mounted curbside. The lower control stations shall have the capability of over-riding the controls located at the platform, if necessary. The upper/lower selector control shall be accessible from either of the two (2) lower control stations. The lower control stations shall also include controls for operation of the winch, auger, auger storage functions, remote leveling controls and rotation controls.
 - J. Hydraulic System: Shall have boom tilt cylinders, cylinder for telescoping boom, leveling cylinders, hydraulic motor for winch, outrigger cylinders and hydraulically actuated boom rotation. All cylinders shall be double acting. Hydraulic system shall have bypass valve to prevent overloading and shall have safety device whereby load will remain suspended in case of power or pressure failure.

- (1) Tool Circuit: Shall have an open center type hydraulic tool circuit with outlets at the right (curbside) rear corner of truck bed for operation of hydraulic drills, sign post drivers, etc. Outlets shall be equipped with quick couplers. Circuit shall supply 10 - 12 gpm at 1,800 – 2,000 psi.
 - (2) Auger Circuit: Shall be equipped with hydraulic lines to end of the second stage boom for operating a hydraulic driven auger attachment. Shall be complete with all necessary hoses, valves and controls for operation of auger. Quick couplers shall be provided at boom tip for the auger attachment hydraulic lines. Hydraulic pump shall have capacity to supply a minimum of 40 GPM to boom tip for operating auger.
 - (3) Reservoir: Shall be of sufficient size to keep hydraulic oil at a safe temperature while using auger and any other functions of the hydraulic system.
- K. Hydraulic Pump: Pump shall be dual section type with one section providing a minimum of 15 GPM and one section providing a minimum of 25 GPM to operate all functions of the aerial lift including the hydraulic tool circuits and auger circuit specified above. It is preferred that the hydraulic pump furnished be designed for direct mounting to the PTO. If space limitations require the use of a drive shaft, the shaft length shall be as short as possible.
- L. Power Take-Off: Shall be “hot shift”, multi-gear type mounted on truck transmission (Allison 4500 RDS).
- M. Emergency Lowering: Unit shall be equipped with a 12 volt DC emergency lowering system. Switches shall be provided at the lower control stations.
- N. Outriggers: Shall have front and rear hydraulically powered outriggers equipped with pivoting pads. A throttle control or high idle switch shall be provided at the outrigger controls.
- (1) Front Outriggers: Individually controlled “A” type.
 - (2) Rear Outriggers: “Modified A” type with individual or common controls, mounted behind rear wheels on truck chassis.
 - (3) If the manufacturer recommends the use of additional outriggers or stabilizers mounted at the front bumper, they shall also be furnished.
- O. Color: Aerial lift and crane unit shall be painted Sherwin Williams F8W2030 Frost White Acrylic Enamel, or equal.
3. Hydraulic Digger Attachment: The digger drive shall consist of a two-speed hydraulic motor directly coupled to a planetary gear box. The gear box shall be rated for a minimum of 14,000 ft.-lbs. output torque.
- A. Auger Drive: Shall be 2-1/2” hex drive. A 2-1/2” hex drive extension shaft no less than 48” in length shall also be provided.
 - B. Auger: One (1) 24” diameter auger shall be furnished.
 - C. Auger Storage: The auger assembly shall be stored on the main boom section with a hydraulically latching mechanism. The operator shall be able to unlatch, lower, telescope and operate the auger and two-speed shift from the controls without attaching hoses, removing pins, clamps or straps of any kind. The operator shall also be able to re-store the auger assembly from the control station hydraulically. The auger storage holster shall be equipped with a valve to stop the auger to prevent damage when the auger reaches the stowed position.
 - D. Digging Range: The digger, when lowered from the storage bracket, shall automatically lock onto and telescope with the second stage section of the boom. Digging radius shall range from a minimum of not more than 24’ from centerline of rotation with boom retracted to a maximum of no less than 33’ from centerline of rotation with the second stage of the boom extended.
4. PTO Driven Air Compressor: A PTO driven air compressor with a minimum output rating of 70 cfm shall be provided. Unit shall be completely installed and ready for operation. The air compressor and all necessary incidentals shall be mounted below the truck bed.
- A. Compressor: Positive displacement, single stage, oil flooded rotary screw type with a minimum capacity of 70 cubic feet of free air per minute at no less than 100 psi.
 - (1) Input Speed: The air compressor furnished shall produce 70 cfm at a maximum input speed from the PTO of 1,500 RPM.
 - (2) Power Take-Off: Compressor shall be driven by means of a “hot shift” type power take-off mounted on the truck transmission. (This is in addition to the PTO specified in Paragraph 2L and is to be mounted at the second location available on the Allison 4500 RDS transmission.) PTO furnished shall operate at no less than 123% or

more than 126% of engine speed allowing compressor to provide specified air delivery at same engine speed required to operate the aerial lift functions (approximately 1,200 RPM engine speed). (If an alternate PTO speed is required to accomplish the target input speed, or if an alternate PTO drive location is required, it must be approved by AHTD prior to delivery.)

- B. Air Intake Filters: Separate two-stage, heavy duty, dry type air filters shall be provided for the air compressor.
 - C. Air Receiver: Shall be ASME approved for no less than 200 psi working pressure and be of adequate capacity for use with 70 cfm minimum compressor. Receiver shall have an ASME approved pressure relief valve and be equipped with a fill cap, an oil level sight gauge, no less than 3/4" service valve, a 25 micron minimum spin-on air compressor oil filter with safety by-pass feature and an air/oil separator. Air receiver shall be designed for under deck remote mounting and be mounted in a location which will allow the oil level sight gauge to be inspected without crawling beneath the truck.
 - D. Heat Exchanger: Compressor cooling system shall allow rated air delivery and pressure operation continuously in ambient temperatures up to no less than 125° F. Cooler shall be mounted in a sheet metal enclosure with a suction type fan assembly. A fan temperature switch shall be provided to regulate compressor cooling.
 - E. Protective Circuit: Compressor shall automatically shut down in case of high compressor temperature or over pressurization. An automatic blow down valve and minimum pressure orifice shall also be provided.
 - F. Control Panel: Shall be mounted in an accessible location and be equipped with a compressor hour meter, air pressure gauge, compressor oil temperature gauge and over-temperature/over-pressure reset switch.
 - G. Inlet Control Valve: Shall automatically modulate output from 0 to 100% in response to air demand.
 - H. Speed Control: Shall be designed to suit engine make/type/model and fuel delivery system. Electronically controlled engine speed controls shall emulate chassis manufacturer foot throttle position and allow modulation of engine speed to match air demand; however, the unit shall also operate in conjunction with and at the engine speeds required by the aerial lift functions to provide smooth operation.
 - I. Drive Line: Minimum 2-1/2" Dana 1310 series, or equal, driveline with universal joint, yoke and companion flange.
 - J. Air Line: A 3/4" air line shall be routed from the air receiver to the right (curbside) rear corner of the truck bed and terminate with a 3/4" NPT ball type valve. An additional air line shall be routed from the air receiver up the boom and terminate at the work platform with a 3/4" NPT ball type valve. This air line shall be capable of providing no less than 40 CFM at the work platform.
5. Welder/Generator: A diesel engine driven AC/DC arc welder and generator unit shall be furnished and mounted on the truck bed in the general area of the turret. Unit provided shall be equivalent to a Miller Bobcat 250 Diesel and meet the following requirements as a minimum.
- A. Engine: Liquid cooled diesel, with no less than three (3) cylinders, developing a minimum of 19 horsepower at rated RPM. Shall have 12 volt electrical system and include starter, alternator and battery. Shall be equipped with electric hourmeter, automatic idle device, dry type air cleaner, oil filter, low oil pressure/high water temperature shutdown, fuel tank and muffler. Fuel for the welder/generator unit shall come from the truck fuel tank.
 - B. Welder/Generator: Shall have a current output rating, at 100% duty cycle, of no less than 250 amps AC and no less than 225 amps DC. Shall have AC amperage range of not more than 50 amps at minimum setting to not less than 250 amps at maximum setting. Shall have DC amperage range of not more than 50 amps at minimum setting to not less than 225 amps at maximum setting. Shall have 120/240 volt, single phase, 60 cycle AC power supply of no less than 9,000 watts when used as a generator. Shall also have power output, while welding, of no less than 3,500 watts at welding output loads of up to 140 amps. Shall be enclosed in a weatherproof cabinet.
 - C. Welding Accessories: A minimum of 50' of No. 1 ground cable, a minimum of 50' of No. 1 electrode cable, one (1) 200 amp electrode holder for 5/32 rod and one (1) 200 amp ground clamp shall be provided. Ground cable and electrode cable shall be complete with terminals.
6. Electric Line to Work Platform: A 110 volt AC electric line shall be routed from the base of the turret up the boom and terminate at the work platform with a 110 volt weatherproof duplex receptacle. AC power will be provided by the welder/generator unit specified above.
7. Bed:
- A. Construction: Shall be steel construction no less than 96" wide and 240" long. Bed length to be measured from rear of crane mounting base. Shall have 3/16" safety tread floor treated with a non-skid material. Shall have two

(2) access steps, mud flaps (without advertising), clearance lights, reflectors, stake pockets along each side of bed, rear bumper meeting D.O.T. specifications and a boom rack for securing boom while transporting.

B. Color: Shall be painted one of the following colors:

- (1) Sherwin-Williams No. F1B 4009 Gloss Black Enamel, or equal.
- (2) Sherwin Williams F8W2030 Frost White Acrylic Enamel, or equal.

8. Cab & Chassis:

A. GVWR: No less than 58,000 pounds.

B. Wheelbase: 230", minimum.

C. Cab to Axle: 168", minimum.

D. Rear Tires And Wheels: Eight (8) no less than 315/80R22.5 - steel belted tubeless radials - load range "J" minimum. Wheels shall be 22.5" diameter ten (10) hole, hub piloted steel disc with a rim section of no less than 9".

E. Front Tires and Wheels: Two (2) 315/80R22.5 steel belted tubeless radials - load range "L" minimum. Shall be mounted on 22.5" diameter ten (10) hole, hub piloted steel disc wheels with a rim section of no less than 9".

F. Spare Wheel and Tire: One (1) 315/80R22.5 steel belted tubeless radial - load range "L" minimum. Shall be mounted on 22.5" diameter ten (10) hole, hub piloted steel disc wheel with a rim section of no less than 9".

G. Engine: Liquid cooled 4 cycle diesel with a minimum piston displacement of 10.5 liters. Shall have an advertised rating of no less than 350 SAE gross horsepower at a governed speed of no less than 2,000 RPM and a minimum of 1,350 lb. ft. SAE gross torque. Shall have full flow oil filter(s), fuel filters, dry type air cleaner, 12 volt electrical equipment with not less than 100 amp alternator and maintenance free batteries as regularly furnished with engine specified.

(1) Exhaust System: Horizontal exhaust. The exhaust shall provide clearance for installation of a PTO at each of the two (2) PTO positions available on an Allison 4500 RDS automatic transmission.

(2) Engine Brake: Jacobs engine brake, or equal. Designed to use engine compression to retard engine speed. Shall be capable of utilizing all engine cylinders for braking effect.

(3) Engine Shutdown: Engine safety shutdown system with manual or automatic override to include the following features: low oil pressure - warning bell/buzzer plus shutdown, high coolant temperature - warning bell/buzzer plus shutdown and low coolant level - warning bell/buzzer plus light or shutdown.

(4) Cooling System: As recommended and regularly furnished by the manufacturer for use with the engine size specified above, and in prime mover for hydraulic crane, with anti-freeze protection to -20° F, or lower.

(5) Block Heater: Engine shall be equipped with a block heater rated at no less than 1,000 watts which will operate on 120 volts AC.

H. Transmission: Allison 4500 RDS automatic with six speed programming and PTO provision. Transmission shall have synthetic lubricant and be equipped with transmission oil cooler.

I. Steering: Hydraulic actuated power steering as regularly offered by manufacturer.

J. Front Axle: I Beam Type with wet seals, outboard mounted drums and a minimum capacity of 18,000 pounds.

K. Front Suspension: Minimum spring capacity of 18,000 pounds.

L. Rear Axle and Suspension: Tandem with power divider, inter-axle differential lock out control and equalizing beam type suspension. Shall be full floating with wet seals, outboard mounted drums and have a minimum capacity of 40,000 pounds. Shall have a ratio of 4.88, 4.89, 5.29 or 5.38 to 1. Alternate ratio may be provided if approved by AHTD prior to delivery. (Axle ratio should provide a maximum theoretical geared speed of no less than 69 MPH and still provide acceptable startability.)

M. Air System: Air compressor shall have a minimum capacity of 13.2 cfm and draw air through the engine air cleaner. Air system shall be equipped with a heated air dryer.

- N. Brakes: Factory installed full air operated two shoe type with automatic slack adjusters and dust shields on front and rear. Rear brakes shall have spring set parking brakes.
- O. Frame: Section modulus and yield strength of frame material shall provide a minimum RBM of 2,500,000. If the aerial lift manufacturer requires a stronger frame or additional frame reinforcement, it shall be provided. It shall be the responsibility of the successful bidder to insure that any additional frame requirements which may be needed for proper installation of the aerial lift are provided (i.e. – after frame length, longer wheelbase, front frame extension, frame reinforcement, clean CA or clear frame rails).
- P. Cab: Conventional cab as regularly furnished by manufacturer, complete with insulation and all interior trim. Cab glass shall include windshield, roll-up windows in doors and rear cab glass as a minimum. Shall have key type lock on right and left doors, factory installed fresh air heater-defroster unit, grab handle on each side, right and left sun shades and fitted rubber floor mats.
- (1) Cab Mounts: Air suspension type rear cab mounts.
 - (2) Instruments: Shall include the following as a minimum:
 - (a) Speedometer/odometer
 - (b) Electric tachometer
 - (c) Electric engine hour meter
 - (d) Ammeter or volt meter
 - (e) Oil pressure gauge
 - (f) Coolant temperature gauge
 - (g) Transmission oil temperature gauge or warning light
 - (h) Air brake pressure gauge
 - (3) Cruise Control: Factory installed electronic cruise control.
 - (4) Air Conditioning: Factory installed air conditioning. Shall include tinted glass all around.
 - (5) Windshield Wipers: Dual electric intermittent windshield wipers with washers.
 - (6) Seats: Air suspension driver's seat and non-suspension passenger's seat. Shall include driver and passenger side seat belts.
 - (7) Radio: Factory installed electronic AM/FM radio.
 - (8) Heated Mirrors: Dual Heated West Coast Sr. type mirrors no less than 7" x 16" with adjustable brackets and auxiliary convex mirrors.
 - (9) Air Horn: Single or dual-trumpet air horn.
- Q. Hood: Tilting fiberglass hood and fenders.
- R. Lights: Shall be equipped with dual beam headlights, parking lights, clearance lights, automatic backup lights, directional turn signals with column mounted switch and hazard flasher switch. Rear signals to be wired for stop and tail lights in addition to directional signals.
- S. Backup Alarm: Shall be equipped with an electric backup alarm meeting the requirements of SAE J994 with a minimum sound level output of 97 decibels.
- T. Fuel Tank: Single fuel tank with instrument panel fuel gauge. Minimum fuel capacity of 80 gallons. (100 gallons preferable)
9. Color: Cab, Hood, Fenders & Wheels shall be Sherwin Williams F8W2030 Frost White Acrylic Enamel, or equal. Grill, bumper and mirrors shall be as regularly furnished by manufacturer.
10. Complete Unit:
- A. Warranty:

- (1) Cab and chassis shall have truck manufacturer's regular warranty. Warranty data shall be furnished with each unit.
- (2) The aerial lift, digger attachment, PTO driven air compressor, welder/generator, and other incidental equipment purchased under this specification shall be warranted against defective material and workmanship for a minimum period of twelve (12) months (365 Days) from date unit is placed in operation by AHTD.
 - (a) Warranty shall include all parts, labor and transportation costs to the location of equipment.
 - (b) If equipment cannot be repaired on location, warranty shall include cost of transport to the facility where the repair work will be done.
 - (c) It will be the responsibility of the successful bidder to insure that repairs are completed in a timely manner.
- (3) If any warranty literature submitted with the bid conflicts with AHTD warranty requirements, the conflict(s) shall be specifically noted, corrected and included with the bid or the conflict(s) will be considered an exception to warranty specifications and the bid rejected.
- (4) Recent prior failure to provide warranty-work, parts, replacement parts or service, in a timely manner, for equipment from the same manufacturer or dealer shall be grounds for the rejection of any submitted bid, or for the denial of any otherwise qualified low bidder, whether such failure is attributable to the manufacturer or the dealer of the equipment. For the purposes of this paragraph "timely manner" means a period of time not exceeding thirty (30) calendar days to provide requested warranty-work, parts, replacement parts, or service. For the purposes of this paragraph "manufacturer" means the original manufacturer of the equipment and its successor or successors, regardless of number, and whether acquired by sale, merger, or otherwise. For the purposes of this paragraph "replacement part" means a part redesigned by a manufacturer to correct a design or engineering defect and which replacement part is capable of providing dependable performance in normal operation conditions for its normal service life without failure. Such bid or bids may be rejected by the Department until such failure or failures have been remedied to the satisfaction of the Department and until such manufacturer or dealer is providing such warranty-work, parts, replacement parts, and service in a timely manner.

B. Manuals, Certificate of Origin and Invoice:

- (1) The successful bidder shall furnish one (1) copy each of Operator's Instruction Manual, Shop Repair Manual and Parts Book for aerial lift and accessories, and one (1) copy each of Shop Repair Manual and Parts Book for truck with each unit delivered including Warranty Data and Operator's Manual for truck. The Warranty Data shall contain all necessary information such as motor and/or serial numbers and shall be signed by the selling dealer at the time vehicle is delivered to the Highway Department.

The successful bidder may provide Shop Repair Manuals and Parts Manuals on computer media (CD, DVD, USB Drive, etc.) in lieu of printed manuals.
- (2) Certificate of Origin, Federal Excise Tax Exemption Certificate, Odometer Disclosure Statement and Five (5) copies of the Invoice to be furnished to Equipment & Procurement Division, P.O. Box 2261, Little Rock, AR 72203 (11302 W. Baseline Road, Little Rock, AR 72209, if shipping UPS, FedEx, etc.).
- (3) The successful bidder may provide Shop Repair Manuals and Parts Manuals on computer media (CD ROM, Floppy Disks, etc.) in lieu of printed manuals.