



Form GSOP 1-PIN (04/98)

STATE OF CALIFORNIA
Department of General Services - Office of Procurement

PURCHASE ORDER

Purchase Order No.	Rev.	Date
62163		6/30/2008

Supplier No.	Solicitation No.	Delivery Date	FOB Point	Invoice Terms
39567	56977	210 Days ARO	Destination	

HOLT OF CALIFORNIA 7310 PACIFIC AVE PLEASANT GROVE, CA 95668 Attn: ROD MCNABB Phone: 916-991-8305	S DEPT PARKS & RECREATION h T MOBILE EQUIPMENT WAREHSE i o 3930 SEAPORT BLVD p WEST SACRAMENTO, CA 95691 Attn: C. BELLTAWN (916)375-6828	C PARKS & RECREATION h a T 1416 9TH STREET, RM 1052 r o SACRAMENTO, CA 94296 g e ATTN: AMANDA MIRANDA		
	Agency Billing	Agency Purchase Estimate	Purchase Estimate	Revision
	53635	E07K0003	67194	0
Agency Contact		Phone	Date Received	
CASE BELLTAWN		916-870-9121		

Item No.	Quantity	Unit	Commodity Code	Description	Unit Price	Extension
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THE GENERAL PROVISIONS FOR NON-IT COMMODITIES ARE HEREBY INCORPORATED BY REFERENCE. THESE GENERAL PROVISIONS CAN BE OBTAINED BY PHONING (916) 375-4400 OR BY ACCESSING OUR WEBSITE AT: www.documents.dgs.ca.gov/pd/modelLang/GPhonIT0407.pdf

THE FOLLOWING INFORMATION IS PROVIDED FOR AGENCY USE ONLY:

PRIME CONTRACTOR: NS
FISCAL YEAR: 2007/2008

1	1	EA	3805-380-0400-8	GRADER ARTICULATED FRAME (AS DESCRIBED) "GRADER" 165 HP, SIX WHEEL ALL WHEEL DRIVE(AWD), W/12FT MOLDBOARD: IN ACCORDANCE WITH SPECIFICATION # 3805-0097 OF SIXTEEN (16) PAGES DATED JUNE 5, 2008.	192,506.9200	192,506.92
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Brand: CATERPILLAR
Model: 120M AWD

Total Value: 192,506.92

ATTACHMENTS

THE FOLLOWING ATTACHED DOCUMENTS ARE PART OF THIS PURCHASE PRDER.
SPECIFICATIONS # 3805-0097 OF SIXTEEN (16) PAGES DATED JUNE 5, 2008.

F.O.B. DESTINATION

For the purpose of this order only F.O.B. Destination will be accepted.

DELIVERY REQUIREMENTS

Delivery shall be 210 days after receipt of order(ARO).

Sales and/or use tax to be extra unless noted above

Buyer LONNIE WILLIAMS	Phone 916-375-4586	BOC Number
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STATE OF CALIFORNIA

Department of General Services - Office of Procurement

PURCHASE ORDER CONTINUATION

Form GSOP 2-PIN (04/98)

<i>Purchase Order No.</i> 62163	<i>Revision</i>	<i>Date</i> 6/30/2008	<i>Supplier No.</i> 39567	<i>Supplier Name</i> HOLT OF CALIFORNIA
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<i>Item No.</i>	<i>Quantity</i>	<i>Unit</i>	<i>Commodity Code</i>	<i>Description</i>	<i>Unit Price</i>	<i>Extension</i>
<p>Preparation for Delivery: The completed vehicle as presented for the "final" acceptance shall be cleaned, internally and externally (freshly washed and chamois) and with a full charge to the battery system.</p> <p>The Grader shall be fully functional when delivered.</p> <p>ALL DELIVERIES SHALL BE MADE DURING NORMAL BUSINESS HOURS, MONDAY THROUGH FRIDAY, 8:00 AM TO 4:00 PM EXCEPT STATE HOLIDAYS.</p> <p>SUPPLIER MUST PROVIDE 72 HOURS NOTIFICATION OF DELIVERY TO THE CONTACT PERSON AT THE LOCATION.</p> <p>DELIVER TO:</p> <p>Department of Parks & Recreation Mobil Equipment Warehouse 3930 Seaport Blvd. West Sacramento, CA 95691 Attn: Case Belltawn Phone: (916) 375-6828</p> <p><u>INCREASING PURCHASE QUANTITIES:</u> The State reserves the right to increase the purchase quantity up to 25% more units within 180 days of bid award date for State Agencies and California Local Government Agencies. The increased quantity shall be at the awarded bid price.</p> <p><u>FEDERAL CERTIFICATION:</u> Final stage manufacturers shall be certified by National Highway Traffic Safety Administration and be registered to manufacture or alter vehicles in accordance with the Code of Federal Regulation, Title 49, parts 567-568.</p> <p><u>MANUALS, TRAINING, WARRANTY</u> SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE ATTACHED SPECIFICATION # 3805-0097. VENDOR SHALL FURNISH A MINIMUM OF ONE SET OF OPERATION MANUALS. ONE COMPLETE LINE SHEET LISTING OF ALL FILTERS, BELTS AND CONSUMABLE PARTS. (ADDITIONAL SOFT COPY ON HARD MEDIA), IF AVAILABLE.</p> <p><u>AWARD DATE</u> This purchase order is being awarded on September 15, 2008 pursuant to Government Code Section 13332.17. Any encumbrances made pursuant to this purchase order shall be construed to have been made on the last day of the preceding fiscal year.</p> <p><u>SCPRS REGISTRATION</u> This Purchase order has been registered into the state contact and procurement registration system (https://www.scprs.dgs.ca.gov/). The registration number is 37900908332926.</p> <p><u>CHANGE ORDERS</u> This Purchase Order may be amended, modified, or terminated at any time by mutual agreement of the parties in writing. Change orders amending, modifying or terminating the Purchase Order, including any modifications of the compensation payable may be issued only by the State Procurement Officer. All such change orders shall be in writing and issued only upon written concurrence of the supplier. Termination, as that term is used in this section, does not include termination for default of the supplier.</p>						

**1. SCOPE**

It is the intent of these specifications to describe the minimum requirements for a six wheel, front wheel and articulated steer, all wheel drive motor grader equipped with rear rippers and 12 foot (ft.) blade. These specifications are written in accordance with SAE J1057, J870, and J1234 standards referencing identification terminology, component nomenclature, and specification definitions for graders.

Only technical changes authorized by the Chief Mobile Equipment in writing will be accepted. Technical changes made by any other employee will not be accepted or paid for.

2. TECHNICAL SPECIFICATIONS

Agency Specification #: 1635-07-12299-01

Agency Purchase Estimate #: PE07K003

2.1 Weight: The SAE operating weight of the base unit with standard equipment, fully enclosed ROPS cab, and equipped with 14.00 24, 12PR, tires, less optional counterweights, shall not be less than 33,000 pounds.

2.2 Dimensions: The following vehicle dimensions are given to insure proper vehicle configuration, use, transport, and storage. All dimensional requirements shall be applicable to the grader equipped with the specified tires and wheels outlined in Tires and Wheels section of these specifications.

2.2.1 ≤ 29 ft. of Vehicle Length

2.2.2 ≤ 11 ft. of Overall Vehicle Height

2.2.3 ≤ 102 in. of Overall Vehicle Width (without blade)

2.2.4 ≥ 6 ft. of Tread Width

2.2.5 ≥ 235 in. of Wheelbase

2.2.6 ≥ 5 ft. of Tandem Center Distance

2.2.7 ≥ 18 in. of Ground Clearance @ front axle

2.3 Engine: The engine shall be a variable horsepower, turbo charged diesel engine with a minimum SAE J1349 net brake power rating of ≥165 horsepower (hp) and net torque rating of ≥540 ft.-lbs. The turbo charged engine shall maintain the manufactures specified power and torque ratings to ≥7,000 ft above sea level. An altitude compensated diesel engine will not be acceptable. The engine shall be CARB certified not to exceed the following emission levels:

If Engine ≥175 HP -NMHC + NOx = 3.0 g/bhp-hr; CO = 2.6 g/bhp-hr; PM = 0.15 g/bhp-hr.

If Engine ≤175 HP -NMHC + NOx = 3.0 g/bhp-hr; CO = 3.7 g/bhp-hr; PM = 0.22 g/bhp-hr.

Emissions equipment shall be warranted by the grader manufacturer for ≥5 years.

The engine shall be equipped with, but not limited to, the following accessories:

- 2.3.1 Hand throttle control or electric throttle with toggle switch adjustment.
- 2.3.2 Decelerator pedal or a throttle resume feature:
- 2.3.3 Starting aid: A cold weather starting aid as recommended by the engine manufacturer, such as a pre-heat air chamber or ether injection.
- 2.3.4 Electric start and shutoff; key type.
- 2.3.5 Engine hood and side panels with locking capability.

The grader's operating station shall be equipped with, but not limited to, the following engine monitoring instrumentation:

- 2.3.6 Transmission oil temperature gauge
- 2.3.7 Engine coolant temperature gauge
- 2.3.8 Engine oil pressure gauge
- 2.3.9 Hydraulic oil temperature gauge or high temperature indicator
- 2.3.10 Voltmeter.

The grader may be equipped with an electronic monitor and alarm system in lieu of the previously mentioned analog gauges (items 2.3.6 to 2.3.10). If an electronic monitor and alarm system is supplied, the electronic monitor system shall monitor, as a minimum, the following engine and equipment conditions:

- 2.3.11 Engine oil pressure
- 2.3.12 Engine coolant temperature
- 2.3.13 Transmission oil temperature
- 2.3.14 Hydraulic oil temperature
- 2.3.15 Alternator voltage
- 2.3.16 Transmission oil filter
- 2.3.17 Hydraulic oil filter.

The grader shall also be equipped with visual and auditory warning devices to alert the operator of conditions critical to engine and equipment operation. These warning lights and sounding devices shall have their own source for actuation, rather than being dependent on another instrument. Warning lights shall be bright enough to stand out during all operating conditions and audible signals shall be distinguishable from the operating noises of the vehicle.

Critical engine and equipment operation conditions for which visual and auditory warning devices are required shall include the following:

- 2.3.18 Low engine oil pressure
- 2.3.19 High engine coolant temperature
- 2.3.20 High transmission oil temperature.

NOTE: A gauge is not an acceptable visual warning device unless it is accompanied by a red light which illuminates or flashes upon reaching a critical engine condition.

In addition to all of the above, the grader shall also be equipped with the following engine monitoring instrumentation:

2.3.21 Engine tachometer

2.3.22 Fuel level gauge

2.3.23 Engine hourmeter, electronic solid state (Hobbs model 23651 3 or comparable).

All engine monitoring instrumentation and warning devices shall be permanently labeled to identify their functions with a simple and readable lettering style or equivalent international symbols.

Instrument arrangement should consist of subgroups monitoring the engine, operational, and power train performance. Grouped gauges shall be consistent in size, color scheme, pointer design, and label style and size. All gauges and instrumentation shall be back lighted or adequately illuminated for nighttime operation.

2.4 Transmission: The transmission shall be;

2.4.1 A power shift type

2.4.2 With ≥ 8 forward speeds

2.4.3 With ≥ 6 reverse speeds

2.4.4 Driven by either a torque converter, or direct drive coupling with an inching control. If the transmission is driven by a torque converter, the engine power rating shall be increased to a minimum SAE J1349 net brake power rating of 175 hp to compensate for the power loss inherent with fluid power transmission.

2.4.5 Equipped with electronically controlled shifting.

2.4.6 Have neutral locking capability that will in the event the transmission is engaged prevent the engine from starting, or prevent the machine from moving if the engine is started.

The grader shall be capable of traveling at ≥ 24 mph when in the highest forward gear.

2.5 Axles and Drives: The rear axles shall be tandem drive axles. The tandem axles shall be driven by roller chains and sprockets enclosed within a housing partially filled with lubricating oil. The drive to the tandem axles shall be through a differential assembly with no spin or lockup capability. A torque proportioning differential will not be acceptable.

The grader shall be equipped with front wheel drive. The front wheel drive shall have controls to allow the operator to engage and disengage the front wheel drive from inside the cab.

A hydrostatic front wheel drive system shall be capable of providing torque on the front wheels at ground speeds up to 12 mph. The hydrostatic drive shall be capable of changing operational modes of traction from a normal traction mode to an aggressive traction mode. The aggressive operational mode of traction shall provide adequate torque to stabilize the steering of the front wheels while operating the grader under extremely poor traction or sloped conditions.

The front axle shall be capable of leaning the front wheels, from their vertical center line, a minimum of 15° to either side for a total wheel lean of 30°. The front axle shall also be capable of oscillating from its horizontal center line, a minimum of 15° in either direction (up or down) for a total front axle oscillation angle of not less than 30°.

- 2.6 **Steering:** The grader shall employ front wheel steering and vehicle articulation as a means of steering. Front wheel steering shall be controlled using an electric over hydraulic joystick or a steering wheel with tilt and shall provide hydraulic power assist or full hydraulic steering. Vehicle articulation shall be hydraulically actuated which may be accomplished through electric over hydraulic means such as a joystick.

The front wheels shall have a minimum steering angle of 36° to either side for a total steering angle of not less than 72°. The grader shall articulate a minimum of 20° in either direction for a total articulation angle of not less than 40°. An articulation indicator shall be installed with appropriate markings to indicate the level of articulation. The indicator shall be readily visible to the operator while seated in the operator's seat. The grader shall provide a minimum turning radius of not greater than 26 ft.

An emergency (auxiliary) steering system shall be provided to allow the operator to continue maintaining steering control in the event of an engine or steering power source failure. The emergency steering system shall meet the performance requirements as established by SAE J1511, "Steering of Off-Road, Rubber-Tired Machines".

The steering system shall be equipped with an articulated steering frame lock to prevent accidental machine articulation during shipment or maintenance.

- 2.7 **Brakes:** The service brakes shall be power assisted or power actuated and installed to apply braking force on all four rear wheels. The service brakes shall be foot operated and shall be effective on each of the tandem drive wheels. Power assisted hydraulic brakes may be equipped with either air or hydraulic type booster system. A power actuated braking system may be either hydraulically or air actuated with approved air dryer.

The service brakes shall be self adjusting, sealed and immersed in oil to protect against the influence of dust, mud, water, or snow (e.g., wet disk brakes). All external brake lines shall be protected / shielded from external impacts or pinching caused by tire chains, pry bars, rocks, etc.

A service braking system utilizing stored energy shall be equipped with a dash mounted gauge and a warning device which actuates before system energy drops below 50% of the manufacturers specified maximum operating energy level. The warning device shall be readily visible and audible to the operator, and provide continuous warning. A gauge is not an acceptable visual warning device.

An emergency (auxiliary) braking system shall be installed to allow the operator to stop the machine in the event of any single failure in the service braking system. The emergency system shall be capable of being applied by a person seated in the operator's seat. In addition to the manual control, the emergency stopping system may also be applied automatically. If an automatic emergency stopping system is used, the automatic application shall occur only after a warning device is actuated.

Hydraulically boosted or hydraulically actuated braking systems shall incorporate an emergency hydraulic power braking source (e.g., auxiliary pump) that is automatically activated in the event of an engine failure. Hydraulic accumulators in conformance with SAE J1473 Braking Performance requirements will be an acceptable emergency power braking source.

A parking brake shall be installed and may be connected to the service brakes or operated independently on the drive shaft or transmission output shaft. A red warning light shall be installed on the instrument panel, in full view of the operator, to indicate when the parking brake is applied while the engine is running.

The service brakes, emergency brakes, and parking brake shall conform with the braking performance requirements as established by SAE J1473 Standard "Braking Performance Rubber Tired Earthmoving Machines".

- 2.8 **Tires and Wheels:** The grader shall be equipped with 14.00R24, tubeless radial tires on all wheels. (Ref. : G2 GP Radial, other tires may be acceptable based upon industry availability and approval of the Chief Mobile Equipment.) The rim shall be as recommended by the tire manufacturer, all rims shall be the same size. All six tires and wheels shall mount to the axles with a minimum 3.0 inch side and 4.0 inch circumference tire clearance to allow for the installation and use of tire chains. All dimensional requirements shall be applicable to the grader equipped with these specified tires and wheels when inflated to the tire manufacturer's recommended pressure for grader applications.
- 2.9 **Air and Oil Filtration:** The engine air filtration system shall be a 2 stage unit consisting of a centrifugal pre-cleaner stage and two replaceable, dry element type, final stage filters. The centrifuging action pre-cleaner shall be capable of removing coarse dust and moisture. The air cleaner assembly shall also be equipped with a dust and water evacuator. The two replaceable, dry element type, final stage filters shall consist of an

outer primary filter and an inner safety element of the correct capacity as indicated in the engine manufacturer's published instructions.

An engine air intake restriction gauge shall be located either in the cab and mounted in the instrument panel or be visible during operator's pre-operational check. The gauge shall be marked to indicate maximum restriction in accordance with the engine manufacturer's published instructions. The restriction gauge shall maintain the last highest vacuum reading when the engine is turned off and, upon air filter replacement, will reset to zero (Ref., Filter Minder Dash Mount Air Restriction Gauge, Model 3781 325 or comparable). The air cleaner/gauge connections shall be dustproof and waterproof, either tubing or hose routed, as to withstand abrasion, wear, and vibration. The gauge suction line shall incorporate an in line filter to protect against dust intake due to a cracked or broken connection.

The engine oil filtration system shall utilize full flow filtration with a replaceable element, spin on type filter of the correct capacity as indicated in the engine manufacturer's published instructions.

2.10 Exhaust System: The exhaust system shall utilize a vertical exhaust stack. A rain cap may be provided if it is compatible with the required emission devices provided. The exhaust stack shall be constructed so as to restrict rain from entering the exhaust system and wind from turning the turbo charger. This can be through use of a rain cap if compatible with the exhaust system or through an after treatment device (muffler) that restricts air flow back through the system in conjunction with a drain. Other methods maybe acceptable with prior approval from the Chief Mobile Equipment. A simple elbow in the system does not perform the required function and will not be acceptable. The exhaust system shall comply with applicable California Vehicle Code and State fire regulations. Exhaust emitted by each unit shall comply with California emission requirements at the time of purchase.

2.11 Electrical System: The grader shall be equipped with the following minimum electrical components:

- 2.11.1 Two multiple beam front driving lights (halogen)
- 2.11.2 Two each front and rear work lights (halogen)
- 2.11.3 Two blade lights - one on each end of blade
- 2.11.4 Rear tail and stop lights
- 2.11.5 Front and rear mounted turn signals
- 2.11.6 License plate lamp with bracket
- 2.11.7 Cab dome light
- 2.11.8 Electronic backup alarm (Shall sound whenever gear selector is in reverse.)
- 2.11.9 Horn
- 2.11.10 Backup light
- 2.11.11 Master battery shut-off switch (either keyed or inside a lockable compartment.

Minimum electrical equipment shall comply with all Federal and State regulations. The tail, stop, and directional signal lamps may be in combination. The wires to these lamps shall be in a loom, conduit, or wrapped with electrical tape. Adequate size gauge of wire to the lights shall be used in accordance with SAE standards for distance from power source and load demand. Wiring color code for lights shall comply with SAE standard J560(b). The ends of all stranded conductors cut shall be mechanically stripped and fitted with insulated type terminals. The terminals shall be mechanically crimped securely with appropriate tool(s). All splices shall be sealed against moisture. Scotch Lock wire type piercing devices shall not be used.

In addition to the mentioned lighting system, the unit shall be equipped with side and rear reflectors or reflector tape in accordance with FMVSS requirements.

The battery system shall be made up of one or two (2) heavy duty, sealed 12-volt batteries (Ref. Delco's Heavy Duty "freedom" 1110 series, Champion's Heavy Duty PC series, or comparable). (The following requirements shall be doubled if only one battery is used.) Each battery shall be ≥ 700 CCA (cold cranking amps) at 0° F. and a reserve capacity of ≥ 160 minutes at 25 amps and 80° F. The battery system ratings shall be as established by the BCI (Battery Council International) and SAE. Side terminal batteries are not acceptable.

A 24 V system for starting and operating the engine and equipment may be supplied if necessary. A minimum 90 amp alternator with a matching regulator shall be furnished with a 12 volt operating system. A minimum 45 amp alternator with a matching regulator shall be furnished with a 24 volt operating system.

2.12 Hydraulics: The hydraulic system shall incorporate full flow filtration, utilizing a replaceable element, spin on type filter(s) with filtering capability of ≤ 25 microns. The hydraulic pump shall be of sufficient capacity to permit the simultaneous operation of at least two controls. All hydraulic hoses, lines, and fittings shall be SAE compatible. All hoses shall be the high pressure, crimp type and shall be properly protected and routed to eliminate failure due to abrasion, cutting, kinking, etc. Black pipe, galvanized pipe and pipe fittings shall not be used in the hydraulic system. Fittings and valves shall be of the proper size to match the hydraulic line to which they are attached. Compression fittings shall not be used. All threads shall be North American or metric type threads. Threads shall be of one type and not be mixed, British, etc. threads are not acceptable.

2.13 Equipment: Blade Assembly: The dimension of the moldboard shall be ≥ 144 "x24"x.75" The moldboard cutting edge shall conform to the requirements as established by SAE J739b and SAE J740b Standards. The blade shall be furnished with hydraulically actuated lift, tilt, and side shift capabilities.

The blade sliding side shift and circle centershift shall accommodate a minimum outside reach of 6 ft. beyond the rear tires to either side of the grader with a straight, non

articulated frame. The blade shall have a minimum lift (clearance) of 18 in. and a minimum depth (penetration) of 12 in. for a total vertical travel of ≥ 30 in.

The circle shall be capable of rotating 360° and shall be hydraulically powered. The circle drive shall incorporate a slip clutch to protect against blade impact damage. The circle side shift shall allow the moldboard to be rotated from its normal horizontal position to a vertical, bank cutting position, 90° from ground level, on both the left and right sides of the motor grader.

The blade assembly shall be equipped with accumulators in the hydraulic lift circuit to cushion the blade from minor impacts and absorb any pressure spikes therein created. Figure 1 on page 11 shows typical layout of a unit with blade assembly.

- 2.14 Operator's Compartment:** The operator's compartment shall be fully enclosed and equipped with safety glass windows and key type locking doors. The cab shall be constructed to afford the operator visibility throughout the entire operation. The cab shall be equipped with a fully adjustable (fore and aft), fully padded, suspension seat with backrest and headrest (a highback seat is acceptable), an industrial type seat belt, and a recirculating type heater with front and rear window defrosters. The cab shall be furnished with a headliner, floor mat, and front and rear exterior windshield wipers and washers which can be independently operated.

In addition to the fully enclosed cab, the operator shall also be protected by a Rollover Protective Structure (ROPS) in accordance with the State of California, Division of Industrial Safety, Construction Safety Orders, Title 8, Section 1596. A combination cab and safety guard approved by the Division of Industrial Safety will be acceptable. In general, the cab shall provide maximum operator protection and comfort.

- 2.15 Controls:** Placement of hand and foot operator controls shall be conveniently located as to provide the operator maximum comfort and control during operation. The equipment controls shall have lock valves in each implement circuit to prevent cylinder drift. Controls to lift the blade shall be equipped with a float position. Factory installed electric over hydraulic joystick type controls may be provided in lieu of the conventional type grader controls (to include steering).

- 2.16 Ripper:** The grader shall be equipped with the manufacturer's standard multi shank, parallelogram type, rear mounted ripper, in lieu of the specified drawbar, to fit the model grader being supplied. The ripper shall be hydraulically raised and lowered, having a minimum penetration depth of 16 inches below ground level. Ripper shall be equipped with a ≥ 3 removable shanks capable of being locked into working position. Each shank shall be supplied with the necessary locking devices and replaceable shank tips. Figure 1 on page 11 shows typical location of Ripper as installed.

- 2.17 Air Conditioner:** An air conditioning system shall be installed with adequate capacity to reduce the operator environment temperature a minimum of 45°F below the ambient for

ambient temperatures of 86°F to the highest ambient temperature at which the machine is designed to operate. The air conditioning system should not allow the operator environment humidity to exceed 70%. In addition to the air conditioner, the cab shall also be fully sealed and equipped with a pressurization and filtration system to prevent dust and other airborne particulate from entering the cab.

2.18 Miscellaneous: Miscellaneous components to be supplied and installed shall include, but not limited to the following:

2.18.1 Vandal protection package: The grader shall provide keyed protection from vandalism and theft. Vandal protection shall include operator's compartment, engine compartment, battery compartment, and all exposed fluid ports.

2.18.2 Transmission bottom guard.

2.18.3 Mirrors: An OEM right and left exterior rear view mirrors shall be installed.

2.18.4 Tie downs: The grader shall provide tie down capability at or near each of the outside four corners of the machine. Tie downs shall be compatible for use with ½ inch welded chain. Circular type tie downs shall have a minimum 3 inch diameter hole, however, "D" ring type tie downs are preferred. The tie downs shall be appropriately secured to and located on the grader to provide adequate holding strength during trailer transport of the machine.

2.18.5 Interior rear view mirror: An OEM interior rearview mirror(s) shall be installed.

2.18.6 Slow moving vehicle sign: Capable of being removed without tools (i.e. wing nuts, slotted post, etc.)

2.19 Material: Construction shall be of all new material free of rust and any defects. All components in the assembly shall be fabricated from a single piece of material. Material which is joined by welding or other means to form a single piece of stock is not acceptable. The finished product shall be free of dents and warpage. The use of any type of body filler is unacceptable. All bolts shall be Grade 5 or better and conform to SAE and ASTM standards. Bolt lengths shall be such that a minimum of two threads shall extend beyond the nut. Critical items shall have either torque specified or locking Nuts. Nuts and washers shall be compatible with the bolt(s) to which they are attached, as recommended by the fastener manufacturer and in accordance with SAE and ASTM standards. If requested, the supplier shall submit proof of fastener strengths.

2.20 Metal Shaping: All breaks shall be free of cracks. Radii shall be at least twice the thickness of the material or in accordance with the requirements established by ASTM for the particular material being formed, whichever is greater. All holes shall be round, of the proper dimension, perpendicular to the material they are produced in, and finished smooth. Oblong holes or holes drilled, bored, etc. at angles are not acceptable. Holes and slots shall be drilled, punched, saw cut, plasma cut, or milled; torch cut is

unacceptable. Sharp corners on all material shall be radiused to prevent personnel injury.

- 2.21 Welding:** All welding shall comply with the requirements as represented in American Welding Society (AWS), D14.3 82, and American National Standard entitled "Specification for Welding Earthmoving and Construction Equipment."

All welds shall be continuous except as noted. Intermittent or spot welds shall be spaced and proportioned to provide ample strength for the material being welded. Weld sizes not indicated shall be equal to the thickness of the least of the joined plates.

All welds shall be properly fused, displaying proper penetration and a professional finish, and must meet the qualification requirements of applicable AWS specifications. Examples of unacceptable weldments are:

- | | |
|-------------|-----------------------|
| a. Cracks | d. Excessive Splatter |
| b. Undercut | e. Blow Holes |
| c. Overlap | f. Slag Entrapment |

Any weld failing to comply with the AWS specification or failing to pass a quality assurance inspection performed by the State, will be corrected by the manufacturer, at their expense, and be corrected off State property. The State shall determine if a weld is acceptable or deficient.

Any deficient weld shall be corrected by a welder who is certified in accordance with the requirements as established by the American Welding Society (AWS). The welder shall have the proper certification documents indicating that he/she is qualified to perform the type, size, and position of the weld performed, with the welding process utilized, and on the material being welded. The supplier will be required to supply proof of current welding certifications for personnel performing any re-welding on the unit, upon request of the State whether written or verbal.

GRINDING OF WELDS must have prior approval of the Parks. Welds which have been ground without approval shall be subject to complete re-welding upon request, at no additional cost to the State.

All assembly dimensions and tolerances on drawings apply after welding. Excessive warpage of assembled parts is not acceptable. Weld symbols on drawings shall be interpreted per American National Standard Welding Symbols. In the event of the lack of a weld symbol, the best commercial practice shall prevail. The covering of welds with body fillers or similar materials is unacceptable.

- 2.22 Paint:** The basic unit and the primary finish surfaces of any optional equipment shall be finish coated with lead-free paint in factory standard colors. The finish coat shall be free from runs, drips, sags, etc., and shall be evenly applied to provide a gloss finish. All paint and primer shall be lead free (300 ppm lead max).

- 2.23 **Noise:** Noise emitted by each unit delivered in compliance with these specifications shall comply with all California and Federal laws or regulations pertaining to maximum allowable emission of noise inside the operator's cab. The Time Weighted Average (TWA) noise dose shall not exceed 85 dB (A) inside the cab as measured according to SAE J 1116 "Sound Measurement – Off Road Self Propelled Work Machines Operator Work Cycle." The supplier may submit documentation to demonstrate compliance with this requirement.
- 2.24 **Lubrication:** The equipment shall be certified by the manufacturer for use with re-refined lubrication products. The re-refined lubrication products used by the State will meet or exceed all SAE, API, and NLGI specifications as required by the manufacturer. Lubrication products used in each unit shall be compatible for top-off and refill with one of the following State contracted lubrication products:
- 2.24.1 SAE 15W-40 motor oil.
 - 2.24.2 Dexron-III or Mercon automatic transmission fluid.
 - 2.24.3 Tractor hydraulic fluid.
 - 2.24.4 SAE 50 motor oil.
 - 2.24.5 SAE 85W-140 gear lube.
 - 2.24.6 NLGI #2 multipurpose grease.
 - 2.24.7 DOT 3 brake fluid.
- 2.25 **Safety:** The entire unit and accessories shall comply with the applicable provisions of the California Vehicle Code, the Safety Orders of the Division of Industrial Relations, and all Federal regulations in effect at the time of manufacture. The Specification Engineer shall make determinations were safety compliance is an issue.

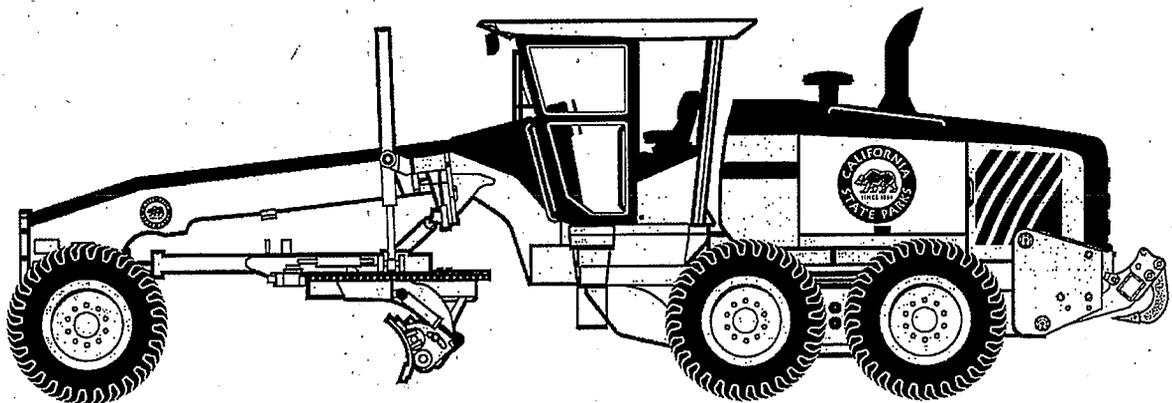


Figure 1. Typical Layout of a unit.

3. ADMINISTRATIVE REQUIREMENTS

3.1 Vehicle Documentation Required:

- 3.1.1 The original dealer's "Report of Sale" shall be furnished by all California licensed dealers at the time of delivery of each unit or units covered by these specifications.
- 3.1.2 A "Manufacturer's Statement of Origin" and original "Bill of Sale" on the vendor's letterhead may be supplied for each unit in lieu of a dealer's Report of Sale, if the supplier is not a registered California dealer.
- 3.1.3 An original weight certificate from a California Weigh Master must be supplied at the time of delivery of each unit.
- 3.1.4 A Federal Excise Tax Exempt Certificate will be attached to the purchase order.
- 3.1.5 All documentation supplied for registration shall contain the following:
California State Parks
1416 9th Street
Sacramento, CA 94296
- 3.1.6 All required documentation shall be sent to the above address by the time of delivery.
- 3.1.7 NOTE: State shall register/license all vehicles with DMV.

3.2 Books and Manuals: One (1) set of the following shall be supplied with each unit:

- Standard operator's manual, complete lubrication instructions.
- Parts books & shop repair manuals (complete with electrical & hydraulic schematics)

3.3 Qualified Bidder: The successful bidder shall have ≥ 5 factory authorized warranty & service locations throughout California. A warranty service location shall have a physical shop building capable of housing at least 2 units, a staff of at least 3 mechanics trained on this equipment and at least one mobile service truck. At least 2 locations must be in Northern California and at least 2 must be in Southern California. Bidders with bids not having meeting the minimum locations described above will not be considered.

3.4 Warranty: The unit(s), including but not limited to the chassis, engine, drive train, electrical system and all modifications made to the unit prior to delivery, etc., shall be covered (parts and labor) under a factory authorized warranty for one (1) years or 500 engine hours, whichever occurs first, following the date unit is put into service. This warranty does not cover standard wear items which fail due to normal wear. Parks will notify the supplier of the in-service date and keep a record of the in-service date.

If the supplier is not the manufacturer or manufacturer's authorized representative, then a performance bond equal to 50% of the total cost for this order shall be supplied to cover late delivery charges detailed below. A statement agreeing to the warranty

conditions stated herein shall be signed by the supplier and submitted with proof of bondability with the bid. The performance bond shall be submitted prior to Purchase Order award. The balance of any unused portion of the bond will be relinquished at the end of the 3 year in service period.

Late delivery charges shall be assigned as shown for OEM parts and warranty repair services that do not meet the following performance requirements:

- 3.4.1 All OEM parts not available within five (5) working days from the date of order:
- The price shall be reduced 20% for every day after the three (3) working days have passed from the initial parts order. This does not apply to those parts listed as for parks only.
 - Additionally, if parts are not available by the sixth (6) working day, a loaner unit, of equal or greater capacity, shall be made available for use by Parks until the parts have been delivered. Supplying a replacement unit will stop the 20% parts discount from the day the unit is made available.
- 3.4.2 Warranty repair service not performed within 5 working days of entering shop.
- If repairs have not been made by the sixth (6) working day, a loaner unit, of equal or greater capacity, shall be made available for use by Parks until the parts have been delivered.
- 3.4.3 Warranty replacement of engine, transmission or complete axle assemblies not performed within 15 working days of entering the shop:
- If repairs have not been made by the sixteenth (16) working day, a loaner unit, of equal or greater capacity, shall be made available for use by parks until the parts have been delivered.

NOTES:

1. All parts expediting fees required to maintain these performance levels shall be covered by the warranty and not charged to Parks.
2. For those suppliers providing a bond in lieu of a factory authorized warranty, the bond shall be charged for those penalties incurred as detailed above.

The supplier may use a traveling mechanic to perform the warranty work. The supplier will be responsible for all associated costs (travel time, overtime, per diem, etc.). The use and availability of a traveling mechanic does not relieve the supplier from providing a list of five (5) factory authorized warranty service locations throughout California.

Any supplier or manufacturer non-compliant with the warranty provisions set forth herein may be subject by the Procurement Division, Department of General Services, State of California to be removed from any future bidding.

Any non-integral accessory / optional equipment not cataloged as dealer option shall be warranted for a period of one year commencing from the date unit is put into service.

- 3.5 Training:** The supplier, at his expense, shall provide a qualified factory authorized service representative to provide training for operators, mechanics, and parts personnel. This training (not a sales presentation) shall consist of hands on operation, safety, service and adjustments for the operators; mechanical repair and adjustment specifications for the shop and field mechanics; parts manual orientation, nomenclature and ordering procedures for parts personnel. It shall also cover lubrication and servicing. The training shall be provided at the North Coast Redwoods District, at or around Eureka California. This training shall be for one (1) 8 hour day (or longer as the supplier or State deems necessary), and the date(s) of the training will be arranged with Parks. The full cost of this service shall be included in the bid. All training shall be accomplished within 45 days of acceptance and receipt of the unit.
- 3.6 Workmanship:** Equipment / accessories shall be a product of good workmanship and shall be free from any defects that will affect their appearance or serviceability.
- 3.7 In Process Review:** The unit(s) may require an in process review to verify timely progress of construction of the unit(s) and to ascertain compliance with the intent of the specifications and drawings. If there are any questions regarding the intent of the specifications or drawings, call the "Agency Contact" as indicated on the Purchase Order title page. Any in-process review will be at State expense conducted within the State of California only and will not constitute acceptance of the unit(s).
- 3.8 Inspection:** This order will require a single-phase inspection process. For all inspections the unit(s) will be serviced, washed and ready for, as applicable, inspection or delivery. Inspections will begin within five (5) working days from the date of the inspection request by the supplier. It is the supplier's responsibility to contact the DGS Auto Inspector at (916) 654-0727 for inspections.
- 3.9 Delivery:** Inspection, delivery, and final acceptance of all units on the Purchase Order shall be within 210 calendar days after the Purchase Order date.
- Failure of any units to comply with the specifications by the final delivery date may place the supplier in default and may be grounds for the State to invoke Paragraph 26 of the General Provisions, Rights and Remedies of the State for Default. The Department of General Services, Procurement Division will be notified at such time.
- Acceptance of delivery or placement in operation of any equipment shall not release the manufacturer from liability for faulty design, workmanship, or materials appearing even after final payment has been made.
- 3.10 Late Delivery Charges:** The parties to this agreement acknowledge that the State shall incur actual damages should the supplier fail to perform the work as called out in the

contract and specification on the dates set forth herein. The parties, therefore, have agreed to late delivery charges in the amount of \$50.00 per unit per work day.

Workdays are Monday through Friday inclusive, except State holidays observed Monday through Friday inclusive.

Parties also agree that the amount specified is not unreasonable nor punitive in nature because both parties have carefully considered the amount specified and believe it to be a reasonable estimate, and not excessive at the time the purchase order is entered into.

It is, therefore agreed, that the supplier will pay the State of California the sum of \$50.00 per unit per work day (as stated above) for each work day the work remains uncompleted or unaccepted by the State, provided the total late delivery charges assessed against supplier shall in no event exceed twenty-five percent (25%) of the total value of the entire order, and the supplier agrees to pay said damages as herein provided. In the event such damages are not paid, the supplier agrees that the State may deduct the amount thereof from any monies due or that may become due said supplier.

- 3.11 Payment:** Process for payment will be initiated on each unit as units are received and deemed acceptable. The discount period will start after acceptance of each unit on PO.
- 3.12 Questionnaire:** The attached questionnaire shall be filled out and will become a part of each bid submitted. Any portion of the questionnaire which is not applicable to the equipment shall be shown as N/A (not applicable). All questions shall be specifically answered, "per specification" is not an acceptable response.

Unless otherwise stated in the PO, requirements of the written PO specification shall have precedence over the completed questionnaire; and the completed questionnaire shall have precedence over standard factory specifications or literature.

3.13 General:

- Each unit/accessory shall be delivered completely assembled and ready to operate.
- No exceptions to the specifications will be allowed unless the exceptions are listed on the purchase order or subsequent addenda.
- The component parts of the unit shall be new and of proper size and design to safely withstand the maximum stresses imposed.
- The manufacturer's torque rating of each driven part shall be equal to or exceed the torque rating of its driving member.
- Complete printed specifications, published literature, and photos or illustrations of unit or units that the bidder proposes to furnish shall be supplied upon request.
- All equipment and accessories cataloged as standard, unless superseded by these specifications, are to be furnished and included in purchase price of this unit.

- Bids will be considered only on equipment represented by a supplier capable of providing adequate repair parts, warranty, technical assistance, and training in the United States as of the bid opening date. The supplier shall be capable of supplying repair parts to parks within five (5) working days after a purchase order for parts is submitted to the supplier, whether by phone, fax, or mail. Bidders may be required to provide documentation supporting this requirement prior to award of the contract.
- Suppliers shall be the equipment manufacturer, an authorized factory dealer or representative thereof, or shall have authorization from the equipment manufacturer or authorized factory dealer to solicit the equipment bid. The bidder shall be capable of providing parts, service, warranty, and training for the equipment bid as specified herein. If the bidder cannot provide these items for the equipment bid, the equipment manufacturer or an authorized factory dealer may provide these items for the bidder. Upon request, the signed agreement between the bidder and the equipment manufacturer or authorized factory dealer, stating who will be responsible for providing parts, service, warranty, and training for the equipment bid, shall be provided to the State.
- Bids will not be considered if supplier's designated f.o.b. delivery destination is other than the delivery address stated in the invitation to bid.
- Only new models in current production, which are cataloged by the manufacturer and for which manufacturer's published literature and printed specifications are currently available, will be considered. Special options may be included only when recommended by manufacturer of the unit and approved by the engineer in writing.
- All equipment/options are to be factory installed. If the equipment/options are not available factory installed, dealer installed equipment/options may be acceptable. The bidder is to specify those items that will be dealer installed.
- The State reserves the right to amend the contract within the scope of the original bid to cover: unanticipated work or the addition of options priced in the awarded Purchase Order. The bid may be amended for additional labor at the published flat rate where applicable.

3.14 Change Orders: This contract may be amended, modified or terminated at any time by mutual agreement of the parties. Change orders amending, modifying, or terminating the contract including any modification of the compensation payable, may be issued only by the State Procurement Officer and shall be in writing. Termination, as that term is used in this section, does not include termination for default of the supplier.