

OFFICE OF THE SULLIVAN COUNTY PURCHASING AGENT

3411 HIGHWAY 126 – SUITE 201  
BLOUNTVILLE, TN 37617-0569

PHONE 423/323-6400

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**REQUEST FOR PROPOSAL**

**MUST INCLUDE RFP# ON OUTSIDE OF ENVELOPE**

**RFP Name / Number** TRACTOR WITH BOOM MOWER / #G36650(DB)  
**Due Date / Time** Tuesday, April 7, 2015 / 2:00 p.m.  
**Bid Location / Mail Address** Sullivan County Purchasing Department, Kristinia Davis, Purchasing Agent  
3411 Hwy 126-Suite 201, Blountville, TN 37617  
**Bid Contact / Telephone** Debbie Burleson (423) 323-6402; [Debbie.burleson@sullivancountyttn.gov](mailto:Debbie.burleson@sullivancountyttn.gov)  
**User Department** Highway Department

**THIS REQUEST FOR PROPOSAL (RFP) MUST BE RETURNED IN A SEALED ENVELOPE VIA MAIL, COURIER OR IN PERSON. PHONE, FAX OR ELECTRONIC RESPONSES ARE NOT ACCEPTABLE!** RESPONSES WILL BE ACCEPTED BY THE PURCHASING AGENT ONLY UNTIL THE DAY/TIME DESIGNATED ABOVE, AT WHICH TIME THEY WILL BE PUBLICLY OPENED. RESPONSES MUST CLEARLY IDENTIFY THE RFP # ON THE OUTSIDE OF THE ENVELOPE, BE PRESENTED IN ORIGINAL FORMAT, BE COMPLETED IN TOTALITY AND BEAR THE HANDWRITTEN SIGNATURE OF A DULY AUTHORIZED COMPANY REPRESENTATIVE. **LATE RESPONSES WILL NOT BE ACCEPTABLE!**

SUBMISSION OF THIS RFP VERIFIES VENDOR'S ACCEPTANCE OF THE RFPs LANGUAGE, REQUIREMENTS AND THE GENERAL PROCUREMENT TERMS AND CONDITIONS [FORM #GPTC1004-14](#).

*NOTE: IF FORM #GPTC1004-14 IS OMITTED FROM THIS RFP SOLICITATION, WE HAVE THE APPROPRIATE SIGNED DOCUMENTS FROM YOUR COMPANY. IF FORM #GPTC1004-14 IS ENCLOSED WITH THIS RFP SOLICITATION, PLEASE SIGN AND RETURN THE APPROPRIATE PAGES WITH YOUR RFP REPOSENSE. By submission of this RFP/RFQ, the responding firm certifies compliance with Title VI and Title VII of the Civil Rights of 1964, as amended, and all regulations promulgated thereof.*

ALL RFPs MUST BE OFFERED IN STRICT CONFORMANCE TO ALL LANGUAGE, REQUIREMENTS, TERMS AND CONDITIONS AND SPECIFICATIONS AS SOLICITED. FAILURE TO COMPLY WITH THE RFP PREREQUISITE WILL BE CAUSE TO DISQUALIFY SAME.

UNLESS OTHERWISE DESIGNATED, ALL PRICES OFFERED SHALL BE GUARANTEED FOR A MINIMUM OF SIXTY (60) DAYS FROM OPENING DATE. UNIT PRICES FOR GOODS/SERVICES SHALL BE QUOTED **"NET 30 DAYS". EACH LINE ITEM PRICE MUST INCLUDE ALL CHARGES, INCLUDING SHIPPING, HANDLING, FREIGHT OR ANY OTHER COSTS ASSOCIATED TO THE DELIVERY TO THE DESIGNATED SULLIVAN COUNTY LOCATION. SULLIVAN COUNTY WILL NOT ACCEPT** ADDITIONAL DELIVERY CHARGES AS A SEPARATE LINE ITEM. AWARDS MAY BE DETERMINED PER UNIT (LINE ITEM) AND/OR AS A TOTAL (WHOLE) AWARD; WHICHEVER IS IN THE BEST INTEREST OF SULLIVAN COUNTY. ALL GOODS PROVIDED TO SULLIVAN COUNTY SHALL BE FREE FROM DAMAGE/DEFECTS. GOODS DAMAGED IN TRANSIT BY COMMON CARRIER ARE THE SOLE RESPONSIBILITY OF THE VENDOR, INCLUDING ALL COMMUNICATIONS AND REPLACEMENT ARRANGEMENTS.

IF INFORMATION (SPECIFICATIONS, DATA SHEETS, ANALYSIS, DRAWINGS, ETC.) OR PRODUCT SAMPLES ARE REQUESTED IN THIS RFP, RESPONDING VENDOR MUST ENCLOSE/SUPPLY SAME. FAILURE TO COMPLY WILL BE CAUSE TO DISQUALIFY THE VENDOR FROM AWARD CONSIDERATION.

**THE SULLIVAN COUNTY PURCHASING AGENT HAS THE RIGHT TO ACCEPT, REJECT, AWARD OR CANCEL ANY/ALL QUOTES AND TO WAIVE ANY INFORMALITIES OR IRREGULARITIES, IF SAME IS DEEMED IN THE BEST INTEREST OF SULLIVAN COUNTY. SULLIVAN COUNTY DOES NOT OBLIGATE ITSELF TO ACCEPT THE LOWEST AND/OR ANY QUOTE OFFERED.**

Completion Time \_\_\_\_\_ TERMS: NET 30 DAYS  
(NOTE: DELIVERY TIME (DAYS/WEEKS/MONTHS) MUST BE INDICATED ... ASAP IS NOT ACCEPTABLE)

VENDOR: \_\_\_\_\_ REPRESENTATIVE: \_\_\_\_\_  
PLEASE PRINT  
PHONE: \_\_\_\_\_ FAX: \_\_\_\_\_ E-MAIL: \_\_\_\_\_  
SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_

## TRACTOR SPECIFICATIONS

### **Mower is to be mounted and ready for operation.**

Engine: 274 Cubic inch turbocharges with 90 PTO HP In-Line 4-Cylinder Diesel Engine, Turbocharged & Intercooled

Two Wheel Drive

Unit Type: Wide front utility type

Transmission: 8 forward, 8 reverse power hydro shuttle

Clutch: Wet, multi disk

Hydraulic Pump & Drive: Dual pump, open center hydraulic system with 13 GPM implement pump & 9 GPM steering pump

Tires: 18.4 x 34 Rear tires  
10.00 x 16 Front tires

Alternator: 120 Amp heavy duty

Steering: hydro power

Brakes: sealed wet disc

Lights: head lights, tail lights, flashing warning lights, brake lights, turn signals

Fenders: rear

Muffler: vertical type

Filters: fuel and dry type air cleaner

Steering Wheel: tilt

Equipped with: Cab heater, defroster, air conditioning, dome lights, heavy duty deluxe foam backed interior, dash mounted instrumentation, cable controls for remote valve operations, front windshield wipers and washer, sunscreen, visor, horn

It is the purpose of the following specifications to describe a **hydraulic driven boom mower**. Mowing is forward and right of the right rear tire and extended by means of an articulated two section boom with hydraulic break away. This unit shall be constructed to interchange with any of the following: 50" rotary cutting head, 60" rotary cutting head, 63" flail cutting head, 50" flail cutting head, 48" saw blade, 50" wetcut sprayer, boom snow blower, 22" rotary ditcher, 60" side rotary mower or 75" side flail mower. The unit will be the manufacture's current production model with a minimum of (1) one year previous production, meeting or exceeding the terms of these specifications. Unit shall be manufacturer's heaviest duty model available. For any offer to be considered, all items must be of a standard production model, not modified for bid purposes.

### BOOM MOWER SPECIFICATIONS

SPECIFICATIONS REQUIRED	COMPLY YES/NO	EXCEPTIONS, DEVIATIONS, and ANSWERS
<b>SAFETY AND TESTING</b>		
Shall meet the following industry standards: SAE: J232 (Rotary), J1001(Flail), J284, J990, J1065. ANSI/SAE-201.4, S203.13, S205.2, S279.12, S350, EP363.1, S483, S493. ASTM: A370. Submit compliance report signed by a registered Professional Engineer (PE).		
Unit shall be equipped with a 7 second brake valve on the cutting assembly.		
Electric Solenoid control transport lock to be integrated into the mower control box.		
<b>MAIN FRAME</b>		
Main frame shall be constructed to be supported on the front tractor bolster, center of tractor and rear axle housing, to absorb side torque and impact of severe applications.		
Boom mower to be mounted structurally to the tractor. Mower mounting and support system shall not be lower than the boom mounting bracket to provide optimum ground clearance.		
<b>BOOM SWIVEL BRACKET</b>		
Boom shall be supported by a swivel bracket with a single 100,000 PSI, vertical tang, and shall contain a spherical bearing (attached to primary boom lift cylinder). Boom shall swivel fore and aft with a 3"OD x 1 3/4"ID vertical boss, with a high-strength, Teflon, composite reinforced bearing installed. Vertical pin shall be a 105,800 PSI yield, hardened, nitride surface pin.		
The swivel bracket weldment shall be completely boxed in and continuously welded.		

SPECIFICATIONS REQUIRED	COMPLY YES/NO	EXCEPTIONS, DEVIATIONS, and ANSWERS
Base shall have integral swing cylinder attachment clevis with a high-strength, teflon, composite reinforced bearing installed and constructed of a minimum of 3/4" thick 100,000 PSI steel, and supported by a non-metallic, thrust washer.		
Hydraulic hoses shall be routed thru hose clamp/guides with hose guards to prevent chaffing.		
<b>PRIMARY BOOM</b>		
Primary boom shall have a minimum of 70,000 PSI 8"x6" structural tube and reinforcement with 50,000 PSI steel.		
Primary boom shall have a one piece reinforced cylinder attaching rib, with the end welds strategically welded around end of rib to boom upper surface. Inner reinforcement shall be a 1/4" x 5" anchor plate, saddle mounted to the top of boom. Anchor plate shall be structurally welded to main tube and have 2, 1" diameter core welds in the top center of plate. Outer reinforcement shall be 1/4" box sectioned, 100,000 PSI steel with 2, 1"x 6" core weldments on each side, and 1, 1x1 1/4" oblong core welds. Inner end of primary boom shall have a 1 1/2" diameter 105,000 PSI yield, hardened, nitride surface pin, with a high-strength, steel backed, porous bronze inner structure, acetal resin overlay bearing installed. <b>(Vendor must submit a complete description of boom, materials, and boom reinforcements).</b>		
Pressure and return lines will be preformed steel tubes, or hoses, with hoses at pivot points and mounted to back of boom. (Specifically excluding hoses and tubing inside or front of booms)		
Top mounted double acting lift cylinder shall have a nitrogen accumulator.		
Cylinder end attach points shall have replaceable bearings. Primary boom lift cylinder shall not be less than 5" in diameter.		

SPECIFICATIONS REQUIRED	COMPLY YES/NO	EXCEPTIONS, DEVIATIONS, and ANSWERS
<b>SECONDARY BOOM</b>		
Secondary boom shall have a minimum of 50,000 PSI yield 6"x 4" tube and reinforced at all stress points.		
Pressure and return lines are preformed steel tubes and hoses mounted to rear of boom.		
Cylinders shall be welded, double acting and mounted to top of boom. Hydraulic cylinder mounted between primary and secondary boom shall have a spherical bearing rod end.		
Outer end of secondary boom shall have an integrally designed mounting boss, box sectioned into the boom. (Specifically excluding external boom end reinforcements)		
<b>HYDRAULICS</b>		
Pump shall be direct drive from the tractor front crankshaft adapter. (Rubber mounted engine design shall have a double u-joint pump drive shaft) <b>(Vendor must submit type of shaft attachment and number of u-joints supplied).</b>		
Pump driveshaft rated no less than 122 HP.		
Reservoir shall be internally treated against corrosion with industry approved chemical agent at time of manufacture. Reservoir shall have a in tank filter rated at 75 GPM, 10 micron, 200 beta, element with bypass, restriction gauge, minimum (1) one PSI pressure at suction outlet and have ball valve at suction line. Tank pressurized to 3 PSI. <b>(Vendor must submit material used to treat reservoir. Type, design and micron size of filter element and MSDS sheet on product.)</b>		
Reservoir shall be mounted in tractors left hand rear wheel well. Reservoir shall have sufficient clearance for proper cooling and shall be a minimum of 37 gallons of oil in an operating condition. Reservoir shall have a minimum of not less than 5" clearance (oil cold) from top of reservoir for expansion. Hydraulic fluid level and temperature gauge to be built-in reservoir.		
Hydraulic pressure connections shall meet SAE O-ring and JIC standards.		
Pump shall be front mount, cast steel housing, steel gears, rated at 3250 PSI, 45 GPM and 96 HP input. (Specifically excluding piston type pumps and cast aluminum housing pumps)		

SPECIFICATIONS REQUIRED	COMPLY YES/NO	EXCEPTIONS, DEVIATIONS, and ANSWERS
Suction hose shall be unrestricted. (Specifically excluding suction filters and screens)		
Hydraulic oil shall meet a cleanliness standard of ISO 46 rating, and the ISO Code 16/14/11 or better <b>(Vendor must submit report of oil sample)</b>		
Hydraulic hoses and tubes shall be cleaned with pneumatic, triple projectile cleaning, and shall maintain a JDS-G169, class 5.6. ISO cleanliness rating. <b>(Vendor must submit method of cleaning and standard met.)</b>		
Motor shall have cast steel housing with steel gears.		
Mower control valve shall be an electrically controlled, pilot operated. Logic elements shall be used to control pressures and ramp up and down speed to prevent excessive pressure spikes to system. Valve shall stop mower from turning in the off position and will not cause a restriction to generate drift while in the off position.		
Mower control valve shall stop cutter assembly in maximum of 7 seconds from full RPM. <b>(Vendor must state time to stop from full RPM).</b>		
<b>STANDARD LEVER CONTROL VALVES</b>		
Valve Option: Shall be an electro-hydraulic, load sensing valve. Valve shall have interchangeable spools and shall have a manual over-ride for each section, and 12 volt electrical actuation.		
Valve shall have load-independent flow control, oil flow to individual function is independent of the load pressure of the function. Valve shall have built in pressure relief in pump side module (PVP), with system capabilities of pressures of not less than 4,350 PSI continuous, and 4,640 PSI intermittent. PVP shall have a pressure gauge connection for service and have an open center option for fixed displacement pumps.		
Valve body shall have interchangeable spools, integrated pressure compensator, check valves, and different spool variants. Valves shall be configured with manual over-ride levers on one end and an electronic actuation module on the other.		

SPECIFICATIONS REQUIRED	COMPLY YES/NO	EXCEPTIONS, DEVIATIONS, and ANSWERS
<b>COUNTERWEIGHT</b>		
Counter weight, total ballast weight (wheel weigh and Calcium Chloride solution) shall be a minimum of 2,087 lbs. Wheel weight shall be cast steel, mounted flush to outside of wheel, and shall weigh not less than 1,300 lbs. (Specifically excluding flame cut steel and or frame mounted weights) <b>(Vendor to state total ballast weight and describe and list wheel weight).</b>		
<b>OPERATION PROTECTION</b>		
Shall have 3/8" right side, hard surfaced, polycarbonate protection for operator. Installed into the original cab manufactured door and or side window. <b>(Vendor must state thickness, manufacturer, and type of hard surface to polycarbonate).</b>		
<b>STOW SYSTEM</b>		
A single point mounted boom stow system shall be attached directly to tractor with a frame member extending to the right-hand rear axle housing and further extend forward to mower main frame. 3 point hitch system shall function normally.		
Stow system shall consist of an axle brace extending from the mower mainframe running and below and attached to the right rear axle housing. The axle brace shall attach to the upper single post stow assembly which saddles on top of the axle brace and has an adjustable stow plate bolted to the upper single post stow assembly.		
The axle brace shall be of the square tube design. An axle brace shall be provided of not less than A500 material 4"x 4" square tube with a minimum 1/4" wall. The tube shall attach to the mower mainframe and extend below and attach to the right rear axle.		
The upper stow assembly shall be constructed of 1/4"x4" x 4" square tubing saddle mounted to axle brace extending above and behind the right rear axle.		

SPECIFICATIONS REQUIRED	COMPLY YES/NO	EXCEPTIONS, DEVIATIONS, and ANSWERS
The adjustable stow plate shall be attached to upper stow assembly and shall be adjustable up or down and side to side in 3" increments. The stow shall contact the outer boom and shall not be more than 27" above the axle center line and not more than 39" behind the axle center line. <b>(Vendor shall state the stow dimension above and behind axle center line).</b>		
<b>RT 50D</b>		
<b>CUTTING HEAD</b>		
Shall be constructed of 110,000 PSI yield Domex steel 1/8" deck and 1/4" thick side walls and (4) four trapezoidal formed 50,000 PSI Domex steel reinforcements. Top to be continuously welded for strength and eliminate debris from collecting under reinforcements. <b>(Vendor shall indicate manufacturers material, PSI, and type of welding).</b>		
Shall have full length replaceable abrasion resistant skid shoes.		
Rubber safety shield shall be bolted to back side of deck.		
Safety shield shall be operated hydraulically from operators position and shall extend below the cutting plane. Safety door shall be constructed of 100,000 PSI Domex Steel and meet all ANSI/SAE tests for rotary mowers. <b>(Vendor shall indicate door protection type and maximum hydraulic pressure required to maintain door placement).</b>		
Head shall weigh no less than 815 lbs.		
Head shall rotate 180° around outer boom and cutter head shall have 50" of actual cut.		
Cutter head pivot assembly shall be fully welded and integrated into the cutter head design. (Specifically excluding cutter heads that bolt to pivot assembly).		
<b>SPINDLE</b>		
Spindle shall be (1) one piece forged and heat treated with integral 7 1/4" O.D. drive hub. (Specifically excluding multi-piece shafts and direct drive spindle assembly's) <b>(Vendor to provide line drawing of spindles indicating overall length, diameter of cutting assembly attachment, and material used, including material yield strength).</b>		



SPECIFICATIONS REQUIRED	COMPLY YES/NO	EXCEPTIONS, DEVIATIONS, and ANSWERS
Spindle shall be attached to hydraulic motor by a flexible coupler and dust cover. (Specifically excluding direct drive motor/spindle assembly's) <b>(Vendor shall describe spindle motor attachment)</b>		
Spindle assembly shall have minimum torsional shear capacity of 4,174 ft-lb torque, 231,000 PSI yield rotational strength and distribute load over 169 sq. inch area. <b>(Vendor shall provide size of attachment, number, grade, and size of bolts used to attach).</b>		
Spindle shall have stationary wire wrap protection. Wire wraps shall be a minimum of 4 3/8"x 4 3/4", 3/8" thick. The wraps will also act as reinforcements for spindle housing. Wraps shall be not less than 1/16" from the drive spindle. The top of spindle housing shall have 2"x3 1/2", 3/8" thick welded reinforcements. <b>(Vendor shall describe wire wraps).</b>		
Spindle shall be mounted in sealed, double tapered roller bearing, grease reservoir with a O-ring plug and port to drain old grease. Assembly shall be filled with synthetic grease. (Specifically excluding barrel and spherical bearings) <b>(Vendor must indicate manufacture and type of bearing).</b>		
Spindle shall rotate 19,000 RPM blade tip speed at rated (2,300) tractor RPM. <b>(Vendor shall indicate speed).</b>		
Spindle drive area shall be enclosed and fully protected from outside debris entering into the drive coupler.		
<b>KNIFE CARRIER</b>		
Shall be one piece, laser cut dual spin formed, recessed center disc, with a diameter of 31". Dynamically balanced (per ISO quality G2.5 spec), 50,000 PSI yield steel dish, 5/8"x 28 5/8" diameter with a 40° formed outer edge extending out 3 5/8" and attached to spindle with (6) six 5/8"x 1 3/4", grade 8 bolts. US Patents - US D562.3575. <b>(Vendor to indicate type, size and material of disc).</b>		
Knife carrier shall have no structural welds.		
Knife carrier shall accommodate (2) (3) (4) or (6) 5/8" x 5 x 18 3/4", 360° swinging, single edge, flat (no bends), 5/8" brush knives. (Optional) Grass knives shall be available.		
Knives shall be attached by a 1 1/8" x 3 1/4" shouldered and keyed bolt, backed by T-1 spacer and hex lock nut.		
Cutter knives shall be shot peened with a chamfered bolt hole.		

SPECIFICATIONS REQUIRED	COMPLY YES/NO	EXCEPTIONS, DEVIATIONS, and ANSWERS
<b>BOOM DIMENSIONS (Specify Dimensions)</b>		
Reach Out 22.5 feet		
Reach Down 12.8 feet		
Reach Up 18.9 feet		
Reach In 7.2 feet		

**ATTACHMENT TO RFP #G36650(DB)**

**SULLIVAN COUNTY HIGHWAY DEPARTMENT**

**COST ANALYSIS**

<b>ITEM NUMBER</b>	<b>QTY</b>	<b>DESCRIPTION</b>	<b>TOTAL COST</b>
1	1	NEW HOLLAND TS6.110HP 2-WHEEL DRIVE TRACTOR	
2	1	TIGER BENGAL BOOM MOWER LRS-50	
3	1	LABOR AND MATERIALS TO MOUNT THE BOOM MOWER ON TO THE TRACTOR	
4	1	PARTS MANUAL AND SERVICE TECH MANUAL FOR TRACTOR & MOWER	
		DELIVERY: FOB AS COMPLETE UNIT & READY FOR OPERATION TO: SULLIVAN COUNTY HIGHWAY DEPARTMENT, 147 COUNTY HILL ROAD, BLOUNTVILLE, TN 37617	
		<b>TOTAL PRICE MUST INCLUDE ALL CHARGES.</b>	
		<b>TOTAL</b>	
		<b>NOTE: IF DIFFERENT MODEL IS PROPOSED MAKE AND MODEL WITH COMPLETE SPECIFICATIONS MUST BE SUBMITTED WITH BID PROPOSAL.</b>	
		WARRANTY FOR TRACTOR: _____	
		WARRANTY FOR MOWER: _____	
		DELIVERY TIME: _____	