



MONROE COUNTY
R O A D
COMMISSION

840 S. Telegraph Road • Monroe, Michigan 48161 • Phone: (734) 240-5102 • Fax: (734) 240-5101

PROPOSAL

FOR

THREE (3) 2017 TANDEM AXLE TRUCKS

BID OPENING:

Wednesday, December 14, 2016 at 10:00 a.m.

BOARD OF COUNTY ROAD
COMMISSIONERS OF THE COUNTY OF
MONROE

Paul Iacoangeli, Chairman
Dan Minton, Vice Chairman
Bruce R. Stammer, Jr., Member
Stephen J. Pace, Member
Charles A. Londo, Member

**MONROE COUNTY ROAD COMMISSION
INVITATION TO BID**

Sealed bids will be received by the Board of County Road Commissioners of the County of Monroe until **10:00 a.m.** local time on **Wednesday, December 14, 2016** at their office located at 840 South Telegraph Road, Monroe, Michigan, 48161 for the following:

- Three (3) 2017 Tandem Axle Trucks

Bids will be publicly opened and read aloud by the Bid Committee at 10:00 a.m. Proposals may be downloaded from the Road Commission's website at www.mcrc-mi.org/bids.html. Proposals will only be accepted on the Road Commission's bid form(s) and must be returned in a sealed envelope with the contents plainly marked on the outside of the envelope.

BOARD OF COUNTY ROAD
COMMISSIONERS
OF THE COUNTY OF MONROE, MICHIGAN

BOARD OF COUNTY ROAD COMMISSIONERS
OF THE COUNTY OF MONROE, MICHIGAN

**MONROE COUNTY ROAD COMMISSION
PROPOSAL
THREE (3) 2017 TANDEM AXLE TRUCKS AND EQUIPMENT**

TO: The Board of County Road Commissioners of the County of Monroe, Michigan

FOR: Three (3) 2017 Tandem Axle Trucks and Equipment

Ladies and Gentlemen:

The undersigned bidder hereby affirms that:

1. The proposal is in all respects fair and without any collusion or fraud.
2. The undersigned agrees to furnish materials at the unit prices stated on the attached bid forms.

Company: _____

Address: _____

City, State, ZIP: _____

Telephone: _____

By: _____

Title: _____

Date: _____

INSTRUCTIONS TO BIDDERS
and
GENERAL CONDITIONS

It is the intent of the Monroe County Road Commission to acquire up to three (3) new tandem-axle trucks, model year 2017 and equipment for each truck. By signing each bid, the bidder will deliver all bid equipment to the Monroe County Road Commission complete and ready to operate. This will be a two part bid document. Part A for the truck and chassis and Part B for the truck equipment. Bidder may bid on either part A or B or both.

OWNER

The owner of the project is the Board of County Road Commissioners of the County of Monroe, also referred to as the "Board."

BIDDER

The Bidder is one who submits a signed bid with the required documentation directly to the Board at the time and place specified.

BID FORMS

Sealed proposals must be submitted on the bid forms furnished by the Board. The proposal shall be submitted in its entirety with no modifications or changes except as authorized by an addendum and with no pages removed. All proposals must be filled out in ink or typewritten and shall be legibly signed, giving the complete name and address of the Bidder.

All bids must be in a sealed envelope and clearly marked "**Bid for 2017 Tandem Axle Trucks.**"

OPENING OF BIDS

Bids will be received by the Board at 840 S. Telegraph Road, Monroe, Michigan, 48161 until **10:00 a.m.** local time on **Wednesday, December 14, 2016** at which time they will be publicly opened and read aloud.

ACCEPTANCE AND/OR REJECTION OF BIDS

The Board reserves the right to accept, reject and/or modify any or all bids, to waive irregularities therein, and to make the award in any manner deemed to be in the best interest of the Monroe County Road Commission. The Board reserves the right to award Part A and Part B together or separately.

TITLE VI NON-DISCRIMINATION PLAN

The Monroe County Road Commission, in accordance with Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 USC 2000d-4) and as amended, and the Civil Rights Restoration Act of 1987 (P.L. 100.259) and Title 49, Code of Federal Regulations, Department of federally-assisted programs of the Department of Transportation issues pursuant to such Act, hereby notifies all bidders that it assures that in any contract entered into pursuant to this advertisement, no person shall on the grounds of race, color, religion, national origin, gender, disability, or age be excluded from participation in, be denied benefits of, or otherwise be subjected to discrimination under any program receiving Federal Financial assistance. Additionally, minority business enterprises will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on grounds of race, color, religion, national origin, gender, disability, or age in consideration for an award.

TAXES

The Monroe County Road Commission is not subject to the Federal Excise Tax or the Michigan State Sales Tax. The Bidder shall not include these taxes in the unit prices quoted.

SPECIFICATIONS

Where specified, the truck, chassis and equipment shall meet the Monroe County Road Commission's Specifications as described in the bid document.

WARRANTIES, GUARANTEES, SERVICE CONTRACT (S)

Please provide **full** description of manufacturer and/or dealer warranties and guarantees.

SERVICE MANUALS

Upon delivery of bid equipment, all service and parts manuals must be provided. This includes printed manuals and CD ROM manuals.

SPECIAL EQUIPMENT

The bidder will also include, with the total cost of this bid, all diagnostic software that is available.

ORIENTATION AND TRAINING

Provide complete description for orientation and training to MCRC employees for the operation of the bid equipment. This orientation and training should be complete enough to enable the purchaser to immediately and productively utilize and care for the equipment. Also, please provide an hourly quote for additional post-sale training.

MEETINGS

The Road Commission reserves the right to include pre-build, mid-build and pre-paint inspection meetings at the installers' location. The Road Commission reserves the right to make minor changes for the build/installation of truck equipment.

REFERENCES

Please attach a separate sheet showing the names of at least three companies and/or agencies, which have purchased the bid/specified equipment from your company, along with the address and phone number, and a contact person who utilizes or is knowledgeable about the equipment.

COMMUNICATIONS

Any questions regarding this bid shall be directed to the Monroe County Road Commission's purchasing agent listed below:

Name: Christine Herron
Phone: 734-240-5109
Email: CHerron@mcrc-mi.org

**MONROE COUNTY ROAD COMMISSION
UNIT PRICE CONTRACT
2017 TANDEM AXLE TRUCKS
PART A and PART B**

TO: Board of County Road Commissioners of Monroe County, Michigan

The undersigned, having full knowledge of the proposal (Part A and Part B) and specifications for up to three (3) **2017 Tandem Axle Trucks and Equipment** including Bidders' Addenda _____ and the conditions of these Contract Documents, hereby agrees to furnish materials at the unit prices named below:

Company: _____

Address: _____

Phone #: _____

Email: _____

PART A: TRUCK AND CHASSIS SPECIFICATIONS

Item 1.

- Gross vehicle weight rating (GVWR) _____
- Front axle weight rating (FAWR) _____
- Rear axle weight rating (RAWR) _____
- Cab-to-axle distance (CA) _____
- Grill to back of cab (BBC) _____
- Wheel base (WB) _____
- Distance from tandem center to end of frame (AF) _____
- Distance from tandem center to rear of last cross member _____
- Set back steering axle location from face of grill to center of axle (SA) _____
- 24" minimum ground clearance under frame between steering axle and front drive. If different, specify clearance _____.

Complies: _____ yes _____ no, please describe: _____

Front Axle

- Front axle shall be factory lined.
- 20,000 lb. front axle with vented oil bath hubs.
- Non-asbestos double anchor fabricated brake shoes.
- Vented oil bath hubs.

Complies: _____ yes _____ no, please describe: _____

Rear Axle

- 46,000 lbs. tandem rear axle.
- Inter-axle lock switch and light shall be inside cab.
- Tandems shall be factory-aligned axles.
- Specify axle ratio (4.89 Ratio Minimum) _____.
- Both rear axles shall be traction controlled by driver.
- Must have a 3-year warranty on the driveline, minimum.
- Non-asbestos double anchor fabricated brake shoes.
- Specify if front drive has oil pump _____ yes _____ no.

Complies: _____ yes _____ no, please describe: _____

Suspension

Front

- Must have 23,000 lb. springs with heavy-duty gas charged shocks.

Rear

- 46,000 lbs, heavy-duty air ride, and certified for off road use. If not, specify _____ lbs.
- Must have leveling valve with a manual dump system from inside the cab with an indicator light.
- Shocks shall be four (4) heavy-duty, gas-mounted; specify locations _____.
- Air bag pedestal (bottom) shall be at least 12" from the ground to allow for pushing of the paver against the tires.

Complies: _____ yes _____ no, please describe: _____

Engine

- Wet sleeved, minimum 350 hp with low oil pressure and high water temperature protection.
- Must have engine brake.
- Warranty shall be 3 yrs/150,000, minimum.
- Electronic controlled hand throttle.
- Must have a 120 volt / 1500 watt plug-in, with easy access.
- All fuel, oil, and water filters shall be spin-on.
- Must meet current production year emissions.
- Must be able to check oil at ground level
- No filters shall be located between the bumper and front axle.
- Must have a Delco MT starter.
- All radiator hoses will be silicone with heater hose shut-offs.
- Fan shall be operated with an override switch from inside the cab.
- Delco alternator must be 160 amps, minimum.
- Crankshaft pulley must be adaptable for 1310 series flange yoke.
- Indicate engine make _____.

- Specify engine horsepower _____ at _____ rpm.

- Specify engine torque _____ ft/lbs. at _____ rpm.

Complies: _____ yes _____ no, please describe: _____

Transmission:

- Allison automatic 4000 RDS six speed transmission; indicate price _____.
- Push button electronic shift control
- All transmission modules will be inside the cab with only a harness going to the transmission
- All transmission connections will be sealed in silicone or o-ring: specify _____.
- Shall have water to oil cooler for transmission.

- Fuller RTO1608LL standard shift, indicate price _____
(Looking at the difference in price between the two transmissions)

- The speed sensor shall be internal with four (4) wires or two 2-wires for salt equipment capabilities.
- Speed sensors shall be protected from the elements by a seal or equivalent.
- Both drivelines shall be rated for GVW with half-round, quick disconnect u-joints.

Complies: _____ yes _____ no, please describe: _____

Frame

- Shall be full-framed with cross members and gussets.
- Must have 3/8" minimum thickness frame rails with a 1/4" steel liner.
- Frame shall meet requirements of 110,000 PSI and a 2,900,000 RBM bending resistance; movement with internal frame rail extensions continuing 20" in front of the grill; 60" rear overhang.
- If different, specify _____ PSI and _____ RBM
- Shall be painted black.

Complies: _____ yes _____ no, please describe: _____

Clutch

- Must be Eaton or Spicer 15 1/2" two-plate manual adjustment, easy pedal pull-type clutch with brake. (For pricing of the standard transmission)
- Torque rating _____ lbs.
- Clutch face must be **non-asbestos** type.

Complies: _____ yes _____ no, please describe: _____

Steering

- Must have dual-power steering gears (no slave cylinders).
- Specify make of gearboxes _____.
- Shall have oil/air power steering cooler
- Shall have a minimum 4 quart power steering reservoir.

Complies: _____ yes _____ no, please describe: _____

Air System

- Air Compressor, Bendix or equivalent; water-cooled with 19.0 CFM minimum.
- Air tanks shall **not** be mounted below frame rails; specify location _____.
- All air tanks shall have manual pull cords.
- Air dryer AD-9 or equivalent with heater that shall be mounted in a protective place (not ahead of the steering axle) with easy access and not to interfere with underbody. Specify make: _____

Complies: _____ yes _____ no, please describe: _____

Radiator

- Shall meet engine manufacture's requirements and have adequate clearance under the radiator for the PTO shaft.
- Radiator shall be copper/brass: if not specify _____.
- All hoses shall be gates blue stripe or equivalent.
- Engine mounted DDC coolant filter.
- Antifreeze shall be a global with at least a -34F.
- Surge tank shall be mounted on the firewall if not specify _____.

Complies: _____ yes _____ no, please describe: _____

Air Cleaner

- Shall be a dual-stage dry cartridge, mounted under the hood.

Complies: _____ yes _____ no, please describe: _____

Electrical System

- Must be a 12-volt system with a master disconnect switch (Flaming River part #FR1005 or equivalent)
- All connections shall be weather packed.
- All wiring shall be either numbered every 6 inches or color-coded.
- The fuse panel shall have plug in auto-reset breakers (no fuses).

Complies: _____ yes _____ no, please describe: _____

Exhaust System

- Vertical with stainless steel safety shields over piping with cab-entry handles.
- There shall be a minimum of 24" ground clearance maintained (not to interfere with the underbody).
- A 90-degree turnout at the top of the exhaust stack is required to deflect the exhaust away from the cab.
- Exhaust shall be plumbed between cab and transmission. If cannot meet specification, indicate location _____.
- Exhaust stacks(s) shall be curved 18" chrome coming out of muffler.
- Muffler(s) must be vertical either up the back of the cab or on the side of the cab.
- Diesel exhaust fluid tank: specify location _____ and size in Gallons _____.

Complies: _____ yes _____ no, please describe: _____

Fuel Tank

- Fuel tank shall be no less than 80 gallons; mounted with a top draw.
- Tank can be either aluminum with stainless steel straps, or steel with steel straps.
- There shall be 24" ground clearance from the lowest point when fully loaded.
- For cab entry a grating step system shall be used or a non-slip style that meets all federal safety requirements.

Complies: _____ yes _____ no, please describe: _____

Battery

- Four (4) 1000 CCA (4000) threaded stud type batteries shall be contained in an approved adequate box.
- Location of battery box must meet approval if located other than on the side of frame.
- The battery box shall be mounted at least 24" from the ground at the lowest point at the GVW.
- For cab entry a grating step system shall be used or a non-slip style that meets all federal safety requirements.

Complies: _____ yes _____ no, please describe: _____

Auxiliary Box

- A heavy-duty aluminum box shall be located on the frame; indicate location _____.
- Specify size of box (W x L x H) _____.
- A ground clearance of at least 30" shall be maintained
- For cab entry a grating step system shall be used or a non-slip style that meets all federal safety requirements.

Complies: _____ yes _____ no, please describe: _____

Tires & Wheels

- Ten (10) tires on white uni-mount rims.
- Steering tires - 315/80R22.5 (XZY-2) - on white 22.5 x 8.25 wheels.
- Drive tires - 11R22.5 (XDY-2) - on white 22.5 x 8.25 wheels.
- Must come with one (1) spare 11R22.5 tires mounted on white 22.5 x 8.25 uni-mount wheels

Complies: _____ yes _____ no, please describe: _____

Cab

- Must be aluminum or steel air ride cab with air bag(s) shocks, leveling valve and tracking rod.

Complies: _____ yes _____ no, please describe: _____

Cab Dimensions

- The drivers' seat in the furthest rear position shall not contact the back of the cab (seat back cannot be straight up to obtain this requirement).
- A cab that limits leg or headroom will not be considered.
- Specify straight across dash or winged dash _____.

Complies: _____ yes _____ no, please describe: _____

Cab Features

- Standard hood with no butterfly openings.
- Hood must be able to fully tilt with the snowplow hitch attached (34 inch opening).
- A tilt/telescopic steering wheel column with a steering wheel no less than 18" diameter.
- Ignition and doors shall be keyed alike.
- Driver's seat shall be a fabric high-back air ride with lumbar support.
- Passenger seat shall be fabric low back or bench type non-air; specify seat type _____.
- Seat belts shall meet all safety requirements.
- No carpeting
- Must come with Weather Tech floor mats.
- Windows shall be tinted glass.
- Must have air conditioning and heater.
- Must have inside sun visors; right and left sides.
- Must come with an interior noise-reduction package.
- Must have thermal insulation package.
- West coast lighted heated stainless steel mirrors with 102" brackets.
- Passenger side mirror shall be remote controlled.

Scraper Mounting Clearance

- Between the rear edge of the front fender and the first drive axle, there shall be 120" with a 24" minimum ground clearance with the vehicle at maximum GVW, **no exceptions**.

Complies: _____ yes _____ no, please describe: _____

Miscellaneous

Please provide all specifications and literature regarding the bid equipment.

Delivery FOB: Monroe County Road Commission, 840 S. Telegraph Road, Monroe, MI 48161

PART B: TRUCK EQUIPMENT WITH DUMP BODY SPECIFICATIONS

The truck equipment package shall include; stainless steel dump body, central hydraulic system, front plow hitch, underbody scraper, patrol wings, V box Insert, front plows and other related accessories as detailed within. All exceptions to the specifications must be noted in areas provided. Equipment prices must be written in the spaces provided. Descriptive literature, detailed quotation for all equipment including make and model numbers and comprehensive warranty statements shall be included and shall be considered part of the quotation. If vendor checks comply it is understood that the specification as written will be provided. These specifications are meant to provide a minimum performance and quality standard acceptable to the Road Commission.

Specification is to describe a 14'-stainless dump body and hoist

14' Tandem Dump Body and Hoist

Dump body

- Dump body dimensions shall be 14' long, 87" inside width, 96" outside width. Dump body shall have one piece sides with a side height of 36" high. The tailgate shall be 42" high. The front shall be 58" high. The body shall be constructed of all 201 stainless steel.

Meets Specifications: yes _____ no _____

- Body will be provided with bare stainless steel exterior, understructure primed at the factory and undercoated with an approved rust prohibitor. All hardware above the floor shall be 201 stainless steel.

Meets Specifications: yes _____ no _____

- The sides, front and doghouse shall be fabricated from 7ga 201 stainless steel, 35,000 PSI yield strength, 85,000 PSI tensile strength. Sides shall have one piece reverse bend side construction with no external horizontal welds.

Meets Specifications: yes _____ no _____

- Side rub rail shall have 45 degree slope. There shall be two intermediate horizontal pressed-in “V” side braces on each side.

Meets Specifications: yes _____ no _____

- The top rail shall be a boxed section integral to the side, not welded on tube. It shall be dirt shedding. All welds shall be continuous. The front shall have a pressed in brace for added strength.

Meets Specifications: yes _____ no _____

- The tailgate shall be 9 panel construction and shall be totally constructed of 7ga. Type 201 stainless steel. The design of the tailgate shall include a boxed perimeter, with two intermediate horizontal braces and two intermediate vertical braces. All horizontal surfaces shall be a 45-degree dirt shedding design.

Meets Specifications: yes _____ no _____

- The body shall have sloped top rear corner pillars, 18” wide, full depth. The understructure shall be a Western (crossmemberless) design. There shall be 10”I beam longitudinal

Meets Specifications: yes _____ no _____

- There shall be a small doghouse in the front of the body to accommodate a telescopic hoist. The lights and reflectors shall meet Federal FMVSS108. The cab shield shall be 10 ga. 201 stainless steel 24” deep by 88 ½” wide. The cab shield shall be welded 100% continuous to the body with stainless steel welding wire. The horizontal portion shall have a 9-degree slope.

Meets Specifications: yes _____ no _____

Hoist and Warranty:

- There shall be a Mailhot Model CS130-5.5-3 front telescopic, trunnion mounted hoist. The hoist has 3 stages, all of which are double acting. Cylinder walls shall be hard chrome plated. There shall be 130” of stroke. Rear body hinge is to be greaseable and removable. There shall be two approved body props to support empty body weight.

Meets Specifications: yes _____ no _____

Miscellaneous items:

- Install stainless steel fold down ladder location TBD.

Meets Specifications: yes _____ no _____

- Install mud flaps both fore and aft of rear tires.

Meets Specifications: yes _____ no _____

- Paint: All stainless steel components are not painted – all carbon steel components shall be primed and painted – color to be determined at installation.

Meets Specifications: yes _____ no _____

- Install GPS leads to monitor the blade and auger.

Meets Specifications: yes _____ no _____

All exceptions and deviations from listed specifications above must be clearly identified. Details regarding said exceptions or deviations can be spelled out below:

Specification is to describe an underbody scraper

Monroe MS4500-12 or approved equal:

- **HANGERBOARD:** Designed and engineered for optimum strength. 1/2" formed plate reinforced by 1/2" X 7-1/2" flat plate to make full 1" thickness. 3.25"X .344" mechanical tube outer hinge tubes. 3/4" bar reinforced full length of the hinge. 3/4" thick trunnion arms. Outer trunnion arms shall be bolted to hangerboard. Welded on is unacceptable. Shall include a Manifold bracket for the grease line kit, one installed each side of the hangerboard.

Meets Specifications: yes _____ no _____

- **HINGE SHAFT:** 2-1/2" OD X 96" long with (4) grease points and (3) hinge points. The two (2) outer hinges are 3-1/4" OD X 6" long with .344 wall thickness. Each outer hinge has (1) 1/2" wrap – around gusset, center hinge shall be 3 1/4" OD X 10 3/4" long with .344 wall and have (2) 1/2" thick wrap – around gussets, including thrust bearing wear plates to prevent side to side shifting of moldboard.

Meets Specifications: yes _____ no _____

- **MOLDBOARD:** 1" thick X 20" high X 12' long moldboard. Heat treated 1045 steel, 185 Brinnell hardness, 89 psi tensile. Integral pressed in lower offset. Rolled formed or fabricated moldboards will not be considered where the cutting edge bolts to the moldboard. 1/2" X 6" double beveled cutting edge with standard highway punched.

Meets Specifications: yes _____ no _____

- **SHOCKS & HOUSINGS:** Cushioned by two (2) heavy duty spring housings. Two (2) 1/2" thick flange retaining plates held by (4) 5/8" bolts with prevailing lock nuts. Housings to be slotted to relieve contaminates. Grease-able trunnion mount bushings are 2-3/4" OD with a .344" wall mechanical tube trunnion mount pins are 2" solid rod, bolt in removable and replaceable design.

Meets Specifications: yes _____ no _____

- **ACTUATING CYLINDERS:** Shall be 3-1/2" bore X 10" stroke with 2" Socatri piston rods, with poly pac seals and cast steel heads, 1/2" hoses and piping (supported with poly clamps) to be externally mounted for easy access. Prince in-line relief valve shall be supplied.

Meets Specifications: yes _____ no _____

- **CIRCLE:** Shall be 1" solid one piece with infinite plowing positions (no notches), minimum cut out for power reverse cylinder travel and full front circle ears as to have clamps in full contact of circle at 45 degree angle for maximum circle bearing surface. 5" ID X 6.5" OD X 1" hardened center pin bushing.

Meets Specifications: yes _____ no _____

- CENTER PIN: Heavy Duty 5" diameter, hardened center pin, zinc coated. Grease-able with 3 port grease journal and 5/16" wide X 3/16" deep grease groove around pin. Center pin is piloted into the hangerboard.

Meets Specifications: yes _____ no _____

- CLAMPS: 20.5 long X 7" deep X 1" thick. Shaped to follow the contour of the circle. 3/8" UHMW wear pads. Entire clamps must remain fully on the circle throughout the entire rotation of the scraper.

Meets Specifications: yes _____ no _____

- REVERSE CYLINDERS AND HARDWARE: (2) 4" Dual – acting cylinders containing 1/2" #8 SAE ports, 2" hard Socatri rods, poly pac seals, and cast steel heads. 3" OD – 2" ID anchor pivots, 2" hardened zinc coated with spiraled grease groove removable pivot pins (grease-able at each end). Prince Cross over relief valve set at 2000 PSI to protect reversing cylinders from shock impacts.

Meets Specifications: yes _____ no _____

- MOUNTING PLATES: 3/4" thick full plate steel construction. With 7" X 7" cut out for ease of cleaning. Attached to the truck using 3/4" grade 8 bolts, SAE washers and prevailing lock nuts that are electronically plated for corrosion resistance.

Meets Specifications: yes _____ no _____

- PAINT: Shot-blasted, washed and powder coat paint TGIC polyester black. All parts are powder coated prior to assembly of scraper. Outer 12" of moldboard ends painted high visibility yellow.

Meets Specifications: yes _____ no _____

- SERRATED GRADE SAFETY STEP: 12" x 12" welded to outer end of the moldboard on driver's side, optional 45 degree angle cut passenger side end of moldboard.

Meets Specifications: yes _____ no _____

- GREASE LINE KIT: Remote grease kit that allows grease to be applied at centralized locations outside of the chassis frame. Grease hoses shall be SAE 107 Hytron hose rated at 3000 psi. Grease line kit will incorporate all 15 grease point on the scraper.

Meets Specifications: yes _____ no _____

All exceptions and deviations from listed specifications above must be clearly identified. Details regarding said exceptions or deviations can be spelled out below:

Specification is to describe a V Box Granular Applicator & V Box Spreader

V Box Granular Applicator

Provide and deliver manufacturer's new current model year hydraulic driven, ice control V Box to be dump box mounted. Unit must meet or exceed all state and federal regulations applicable at the time of delivery and shall comply with all welding requirements as detailed herein.

V-box Spreader

- Specification shall describe a V-box material spreader capable of hauling and spreading free flowing granular materials from a minimum width of (4) four feet to a maximum of (40) forty feet. Unit shall consist of a stainless steel body, conveyor chain, Y chute spinner assembly, power drive system and all components necessary to make a complete operating unit.

The spreader hopper shall be constructed of 10 gauge stainless steel with a 2" double crimped top edge formed for greater rigidity.

Meets Specifications: yes _____ no _____

- The hopper **body** length shall be 14 feet with longitudinals overhung for supporting the spinner assembly. Hopper shall be designed to accommodate the dog house within the dump body. The hopper shall not be more than 84" outside width. The hopper height shall be 56" with a cubic yard capacity of 9.2 water level full. The rear panel shall be reinforced and supported to give it maximum strength.

Meets Specifications: yes _____ no _____

- The body longitudinals shall be manufactured of 7 gauge stainless steel.

Meets Specifications: yes _____ no _____

- The channel cross sills shall be 7 gauge stainless steel that tie the lower edge of the longitudinals to each side support.

These cross supports shall be wide enough to allow to slide into a dump body.

The body and conveyor longitudinal shall be electrically welded into a rugged solid unit with 100% continuous weld inside the hopper. .

There shall be twelve 10 gauge stainless steel formed side supports that extend the full side angle height spaced on approximately (2) two foot centers with a (3) three foot spacing on the center two ribs for installation of saddle tanks. The vertical ribs of the V-box shall allow the tanks to fit around them.

Meets Specifications: yes _____ no _____

- A heavy-duty, bolt on, stainless steel 5/8" lift loop shall be provided at each corner.

Meets Specifications: yes _____ no _____

- The 12" x 18" 10 gauge feedgate and ruler shall be provided at the rear of the hopper to allow for accurate discharge. There shall be 10 gauge formed side supports that extend the full side angle height spaced on approximately (2) two foot centers. A heavy duty lift loop shall be provided at each corner. The rear endplate shall be reinforced inside and supported to give it maximum strength. Conveyor system shall be of chain barflight type running longitudinally with the body feeding material to the feedgate opening. The overall conveyor width shall be not less than 24".

To protect the chain link strands, a 10 gauge replaceable chain shield shall cover the strands exposing only the drag bar to the material. The conveyor floor shall be of flat design and manufactured of replaceable 3/16" steel and rolled over edges.

Meets Specifications: yes _____ no _____

- The conveyor chain shall be driven through the worm drive gearbox by a low speed/high-torque "orbital type" hydraulic motor. This motor shall be directly coupled to the gearbox and protected from the elements by a cast housing. The worm gear drive shaft shall have provision for a servo sensor, integral with the driveshaft. The cast iron gearbox shall have hardened and ground bronze gears mounted on a 2" diameter drive shaft and supported on tapered roller bearings. The gears shall be machine cut and mounted in antifricition sealed bearings and running in oil. The

gearbox ratio shall be 50:1. The drive and idler sprockets shall be 8 tooth cast grey iron sprockets keyed to the 2" diameter drive shaft and 2" idler shaft. Both conveyor shafts shall have heavy duty, dust sealed self-aligning four bolt flange bearings equipped with grease fittings. The conveyor shall have an internal front wiper and an external rear wiper.

Meets Specifications: yes _____ no _____

- A heavy duty spring loaded idler adjustment assembly shall provide 4" of adjustment for proper conveyor chain tension. The bolt adjustment assembly shall be made out of stainless steel. The conveyor chain shall be heat-treated, 2.25 pitch, self-cleaning, pintle type, with 7/16" pins and tensile strength per strand of 21,000 pounds. This chain shall utilize a 3/8" x 1-1/2" x 18-3/4" cross bar welded on both the top and bottom to every other chain link making an overall width of 22-1/4". Cross bars to be positioned on approx. 4.5" centers.

Meets Specifications: yes _____ no _____

- Grease extensions shall be provided to enable the operator to grease the front bearings from the rear of the spreader and there shall also be rear access for front chain slack adjustment also.

Meets Specifications: yes _____ no _____

- An adjustable 10-gauge stainless steel inverted-V shall be installed above the augers. Cross channels for mounting and hopper brackets shall be 10-gauge stainless with stainless mounting hardware.

Meets Specifications: yes _____ no _____

- The rear spinner assembly shall include a 201 stainless steel bolt on MDOT model Y chute with center spinner poly spinner assembly with left and right side drop chutes. An air actuated diverter plate with in cab control to control salt distribution.

Meets Specifications: yes _____ no _____

- All hardware and fasteners (unless noted) shall be stainless steel. Motors, gearboxes and bearings to be painted manufacture standard paint. All welding performed on the spreader must be in compliance with current AWS procedures and guidelines recognized within the State of manufacture.
- Manufacturer shall provide caution labels, decals, and any warning deemed necessary. Manufacturer shall attach their standard warranty statement. All components described herein shall carry minimum one-year warranty.

Meets Specifications: yes _____ no _____

Note: Manufacturer's literature and warranty statement must accompany all bids.

All exceptions and deviations from listed specifications above must be clearly identified. Details regarding said exceptions or deviations can be spelled out below:

Specification is to describe a Wing Plow

Wing Plow

Install 9 ft. rear mounted patrol wing or equivalent. Wing will be installed on the right side of truck chassis.

- Wing shall be designed to mount behind the underbody blade and shall have moldboard length of 113 inches at the top and 108 inches at the bottom .

Meets Specifications: yes _____ no _____

- Moldboard height shall measure 33" inboard and 33" outboard with cutting edge. Moldboard shall be 3/16" A36 steel.

Meets Specifications: yes _____ no _____

- Bottom angle shall be 4" X 4" X 3/4" and reinforced between the cutting edge holes with ten (10) 3" X 3" X 1/2" gussets.

Meets Specifications: yes _____ no _____

- Moldboard shoes on each end of the moldboard.

Meets Specifications: yes _____ no _____

- A reverse mounted curved cutting edge will be installed.

Meets Specifications: yes _____ no _____

- Para-Glide front post. The wing post shall allow the toe of the wing moldboard to float freely over rough roads and road shoulders, thus reducing potential damage to the wing and cab/chassis.

Meets Specifications: yes _____ no _____

- Wing post shall be of a trailing link style with twelve inches of lift and designed to allow the moldboard to float up a minimum of eight to twelve inches when in the plowing position.

Meets Specifications: yes _____ no _____

- Heel Cylinder is 3" x 15" and Toe cylinder is 4" x 12".

Meets Specifications: yes _____ no _____

- Both the toe and heel cylinder shall be plumbed to a sequencing valve in order to assure proper sequencing of the wing in both the up and down functions. The sequencing valve shall include load checks and back flow adjusters as well as sequence adjusters.

Meets Specifications: yes _____ no _____

- Plug in wiring for a LED marker light facing forward and warning light facing rear that will mount in a metal light box.

Meets Specifications: yes _____ no _____

- All hoses will include hydraulic stainless steel disconnects.

Meets Specifications: yes _____ no _____

All exceptions and deviations from listed specifications above must be clearly identified. Details regarding said exceptions or deviations can be spelled out below:

Specification is to describe a hydraulic system

Pump, Valve and Controls

- The central hydraulic system shall be driven by a front crank shaft PTO with a Spicer 1310 series drive line.

Meets Specifications: yes _____ no _____

- Pump shall be a Piston Load Sense type pump A10 VO100DFR Rexroth piston Pump or approved alternate with 12 volt shut off valve near pump at pressure line. Includes an override momentary Switch.

Meets Specifications: yes _____ no _____

- The hydraulic valve shall be of modular manifold design.

Meets Specifications: yes _____ no _____

- The valve sections to operate the conveyor, spinner and future pre-wet. Circuit shall be pulse-width modulated, proportionally controlled, and include stroke limiters.

Meets Specifications: yes _____ no _____

- Each valve segment shall be individually mounted to the manifold base assembly and serviceable without removing any hydraulic hoses or any other hydraulic valve segments.

Meets Specifications: yes _____ no _____

- Valve sections for hoist, scraper, wings and plow functions, must have adjustable flow controls for each function. The scraper down circuit shall include a load sense relief to limit the down pressure in the scraper down and hoist down circuits

Meets Specifications: yes _____ no _____

- Valve functions for the hoist, scraper, wings and front plow shall be air operated by a multi-function, single joystick controller.

Meets Specifications: yes _____ no _____

- The joystick shall be electric/air operated and shall be actuated by an Apsco dual axis air controller mounted in a control console between the seats in the cab.

Meets Specifications: yes _____ no _____

- The control console shall include a padded arm rest and shall be adjustable for front to rear adjustment, and height adjustable. Functions buttons shall be back lit, and include color designation. Buttons shall include scraper up/down, right/left, dump hoist up/down, front plow up/down, left wing up/down and right wing up/down. The joystick shall also include a safety trigger switch mounted in the handle.

Meets Specifications: yes _____ no _____

- Included with the joystick shall be a dash mounted heads up display. The heads up display shall include led indicators for function activation as well as low oil indicator and a low pre-wet liquid indicator lights. Function indicators shall be color designated. Heads up display shall include back lighting and labels.

Meets Specifications: yes _____ no _____

- Rexroth M4-12 valve or approved alternate with the following:
 - 4 way air control for hoist with relief for down pressure
 - 4 way air control for scraper up/down
 - 4 way air control for scraper swing
 - 4 way air control for front plow up/down
 - 4 way air control for front plow reverse
 - 4 way air control for left wing up/down (includes sequencing valves)
 - 4 way air control for right wing up/down (includes sequencing valves)
 - 3 way EPC section for dual augers rated at 20 GPM
 - 3 way EPC section for spinner(s) rated at 8 GPM.
 - 3 Way EPC section for pre-wet rated at 8 GPM

Meets Specifications: yes _____ no _____

- Above valve assembly will be mounted in a stainless steel frame mounted valve enclosure with safety latched lid.

Meets Specifications: yes _____ no _____

- All necessary hoses and fittings shall be Parker type.

Meets Specifications: yes _____ no _____

- Stainless steel piping will be used to extend the spreader, Spinner and return oil circuits to the rear of chassis.

Meets Specifications: yes _____ no _____

- A sequencing valve shall be provided for each wing to insure the raising and lowering of wings heel and toe is accomplished in the right order.

Meets Specifications: yes _____ no _____

Behind Cab Steel Fuel/Oil Reservoirs

- There shall be a combination fuel tank/hydraulic reservoir mounted between the cab and the dump body above the frame of the truck.

Meets Specifications: yes _____ no _____

- The combination tank/valve shall be constructed of 7 ga. mild steel throughout painted color TBD.

Meets Specifications: yes _____ no _____
- The fuel portion of the tank shall have a 120 gallon capacity. The hydraulic oil portion of the tank shall have a 38 gallon capacity. Both supply and return ports for the fuel go to the bottom of the tank. Both tanks will have bottom drains with magnetic plugs.

Meets Specifications: yes _____ no _____
- There shall be an electronic sending unit for the fuel gauge.

Meets Specifications: yes _____ no _____
- There shall be a 5" sight/temperature gauge mounted on the hydraulic tank.

Meets Specifications: yes _____ no _____
- There shall be a 5 psi pressurized tank cap on the hydraulic tank. There shall be a 3" supply port on the hydraulic tank with a 3" x 2" suction strainer. There shall be a 2" ball valve shut off and a 2" supply line to the tank and a 3/4" case drain port. The system will be full of AW32 hydraulic oil.

Meets Specifications: yes _____ no _____
- There shall be a step mounted on the driver 'side end of the combination unit.

Meets Specifications: yes _____ no _____
- Reservoir shall include a basket type filler breather cap and a 2" NPT suction port with screen filter.

Meets Specifications: yes _____ no _____
- A solid state fuel gauge sending unit shall be installed. Ball valve shut offs shall be installed on both the supply and return fuel lines to facilitate ease of changing fuel filters.

Meets Specifications: yes _____ no _____
- A solid state low oil sender must be mounted in the hydraulic reservoir. A float type sender is not acceptable. Once the oil level drops below a safe operating level, a low oil indicator light shall be energized to alert the driver of a low oil situation and Piston pump shut down valve will be activated. (Override switch included)

Meets Specifications: yes _____ no _____
- An in-tank 10 micron return line filter with shall be mounted in the reservoir. A drop tube shall be installed on the discharge port of the filter.

Meets Specifications: yes _____ no _____
- Mounting feet include rubber spacers with spacer collars in them.

Meets Specifications: yes _____ no _____
- All quick couplers for front plow, wings and V box salt spreader shall be stainless steel.

Meets Specifications: yes _____ no _____

All exceptions and deviations from listed specifications above must be clearly identified. Details regarding said exceptions or deviations can be spelled out below:

Specifications to describe a Granular/pre-wet Controller (Optional)

The Make shall be a Rexroth CS430 Controller or approved equal

- The control is to operate in manual mode, open loop, and closed loop (Automatic), 12V trigger or Ground Speed triggered Manual. The spreader control must have a display screen to show Auger/Conveyor application rates, Spinner set point, Ground Speed in operation mode.

Meets Specifications: yes _____ no _____

- The display will also be used to view accumulated material usage. This information can be stored for season totals or reset through program mode. In program mode the display is used for on screen programming. The control is to be equipped with 9 user programmable rates for each function.

Meets Specifications: yes _____ no _____

- Spread Width”, “Application Rate in Pounds per Mile” and Cross Conveyor percentage settings. Spreader Control must have pause, blast, stationary unload and reverse (if auger/conveyor valve is double acting). The controller must offer Auto-nulling if the system is equipped with auger/conveyor sensor.

Meets Specifications: yes _____ no _____

- The controller must be able to display error code in case of a system fault. Any changes to the programming must be accessed via a lockout key.

Meets Specifications: yes _____ no _____

- The pump, valve and spreader control must be same manufacturer to insure complete system compatibility.

Meets Specifications: yes _____ no _____

All exceptions and deviations from listed specifications above must be clearly identified. Details regarding said exceptions or deviations can be spelled out below:

Specification is to describe lighting and electrical system

- Halogen plow lights shall be mounted on the hood.

Meets Specifications: yes _____ no _____

- (2) LED Scraper work lights mounted one on each side to illuminate curbside and street side of scraper.
 Meets Specifications: yes _____ no _____
- 1 LED work light for each wing assembly with separate switch.

 Meets Specifications: yes _____ no _____
- (2) LED Spreader work lights one mounted on each side of body to illuminate spread of material at rear.

 Meets Specifications: yes _____ no _____
- Three hole stainless steel rear light boxes mounted on rear corner posts of dump body.

 Meets Specifications: yes _____ no _____
- Two (2) 6" oval LED amber flashing light in each top and bottom hole of the four hole light boxes.

 Meets Specifications: yes _____ no _____
- One (1) 6" oval LED stop/tail/turn light mounted in middle hole light boxes.

 Meets Specifications: yes _____ no _____
- One (1) 6" oval incandescent back up light in bottom hole.

 Meets Specifications: yes _____ no _____
- Two (2) 6" oval LED amber flashing light mounted in front bumper.

 Meets Specifications: yes _____ no _____
- Betts junction box with sealed wiring mounted at back of body driver's side.

 Meets Specifications: yes _____ no _____
- Utilizing (2) electric chassis switches for rear and front warning lights and spreader and scraper work lights. Utilizing (2) air chassis switches for tailgate release and Y chute diverter

 Meets Specifications: yes _____ no _____
- Utilizing a fully CANBUS programmable switch box with control panel to control the following:
 - Tarp system,
 - Low oil override
 - Wing work and warning lights
 Meets Specifications: yes _____ no _____
- LED indicators shall be provided by a heads up display including lights for low oil, body up and joystick functions

 Meets Specifications: yes _____ no _____
- All wiring to be soldered, heat shrunk, and in protective loom.

 Meets Specifications: yes _____ no _____

- Backup up alarm.

Meets Specifications: yes _____ no _____

All exceptions and deviations from listed above specifications must be clearly identified. Details regarding said exceptions or deviations can be spelled out below:

Specification is to describe miscellaneous equipment

- Roll Rite brand heavy duty aluminum construction fully automatic electric tarp system; wind deflector, end plates and Super Duty gear motor; external mount four spring pivot set; Aluminum tarp and tension bow set; asphalt tarp. Location of tarp, and controls shall be approved prior to mounting.

Meets Specifications: yes _____ no _____

- 34" Hustling Front Plow Hitch – Truck Portion Mounted to front frame extension of chassis with 10" structural channel bumper. Bumper to have flared back ends. 3" x 10" double acting lift cylinder with Socatri rod. Front tow hooks mounted to frame. Bar grating over pump. Steel chain box with hinged lid and grated material floor between fender and bumper. Hitch and bumper painted black.

Meets Specifications: yes _____ no _____

- Grip strut step from fender to tank cradle for ease of access to ladder on dump body.

Meets Specifications: yes _____ no _____

- Drivers and passenger side shall provide a three step egress to cab with serrated bar grating.

Meets Specifications: yes _____ no _____

- Install one Shovel Holder driver's side of body front Stainless steel .

Meets Specifications: yes _____ no _____

- Parts and service manuals for all items shall be provided upon delivery of the completed unit.

Meets Specifications: yes _____ no _____

- Equipment installer to provide training on operation of all equipment upon delivery of completed unit.

Meets Specifications: yes _____ no _____

- Minimum full one year warranty on parts and labor on all equipment. 5 years on dump body and 2 years on hoist

Meets Specifications: yes _____ no _____

- Vendor shall provide a detailed quotation of all equipment including manufacturer, model, specifications and installation.

Meets Specifications: yes _____ no _____

All exceptions and deviations from listed above specifications must be clearly identified. Details regarding said exceptions or deviations can be spelled out below:

Price for the above listed Part A Truck and Chassis and Part B stainless steel dump body, Underbody Scraper, patrol wings, V box, hydraulics and miscellaneous equipment. Please provide all specifications and literature regarding the bid equipment.

Part A Truck & Chassis		Unit Price	Total Price
Outright Purchase Price with automatic	Manufacturer	\$	
	Model No.		
Outright Purchase Price with standard shift	Manufacturer	\$	
	Model No.		
Delivery in calendar days from date of purchase order:			
Total Part A all 3 trucks			\$
Part B Truck Equipment with Dump Body			
For complete unit with single wing		\$	
Optional Granular/pre-wet Controller		\$	
Optional - #1 Install 24" Heavy duty Rubber belt side spill shields on V box with stainless Steel fasteners:		\$	
Total for all 3 units complete			\$
TOTAL PRICE PART A and PART B			\$

After the bids have been awarded and prior to order, the successful equipment bidder shall meet at the Road Commission with Monroe County Road Commission officials for a pre-build specifications review in order to verify the compatibility of the truck chassis and the equipment to be installed. This meeting shall take place within a week after bidder is awarded.

The successful equipment bidder will be required to perform training at the Monroe County Road Commission on both maintenance and operation of the truck equipment.

The Board of Monroe County Road Commissioners reserves the right to accept, reject and/or modify any or all bids received, to waive irregularities therein, and to make the award in any manner deemed to be in the best interest of the Monroe County Road Commission.

Delivery FOB: Monroe County Road Commission, 840 S. Telegraph Rd., Monroe, MI 48161

By signing the bid below the bidder agrees to the above conditions.

Communications concerning this Bid shall be addressed to the Bidder's representative.

Name of Representative: _____

Address: _____

City, State, ZIP: _____

Telephone Number: _____

Fax Number: _____

E-Mail Address: _____

Title: _____

Signature: _____