



State of West Virginia
 Department of Administration
 Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

Request for Quotation

RFQ NUMBER
7011EC10

PAGE
1

ADDRESS CORRESPONDENCE TO ATTENTION OF
**BUYER 33
 304-558-2402**

RFQ COPY
 TYPE NAME/ADDRESS HERE

VENDOR

SHIP TO

**DIVISION OF HIGHWAYS
 EQUIPMENT DIVISION
 ROUTE 33
 BRUSHY FORK ROAD
 BUCKHANNON, WV
 26201 304-472-1750**

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
12/09/2010				

BID OPENING DATE: **01/20/2011** BID OPENING TIME **01:30PM**

LINE	QUANTITY	UCP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
0001	1	EA		065-30		
<p>64,000 GVW CAB, CHASSIS, DUMP BODY, HYDRAULIC SYSTEM</p> <p>REQUEST FOR QUOTATION (RFQ) OPEN END CONTRACT</p> <p>THE WEST VIRGINIA STATE PURCHASING DIVISION FOR THE AGENCY, THE WEST VIRGINIA DIVISION OF HIGHWAYS, IS SOLICITING BIDS FOR AN OPEN END CONTRACT TO PROVIDE 64,000 GVW CAB AND CHASSIS, DUMP BODY, AND HYDRAULIC SYSTEM, PER THE ATTACHED SPECIFICATIONS.</p> <p>A MANDATORY PRE-BID WILL BE HELD ON 01/06/11 AT 10:00 AM, BRUSHY FORK RD IN BUCKHANNON, WV 26201. ALL INTERESTED PARTIES ARE REQUIRED TO ATTEND THIS MEETING. FAILURE TO ATTEND THE MANDATORY PRE-BID SHALL RESULT IN DISQUALIFICATION OF THE BID. NO ONE PERSON MAY REPRESENT MORE THAN ONE BIDDER.</p> <p>AN ATTENDANCE SHEET WILL BE MADE AVAILABLE FOR ALL POTENTIAL BIDDERS TO COMPLETE. THIS WILL SERVE AS THE OFFICIAL DOCUMENT VERIFYING ATTENDANCE AT THE MANDATORY PRE-BID. FAILURE TO PROVIDE YOUR COMPANY AND REPRESENTATIVE NAME ON THE ATTENDANCE SHEET WILL RESULT IN DISQUALIFICATION OF THE BID. THE STATE WILL NOT ACCEPT ANY OTHER DOCUMENTATION TO VERIFY ATTENDANCE. THE BIDDER IS RESPONSIBLE FOR ENSURING THEY HAVE COMPLETED THE INFORMATION REQUIRED ON THE ATTENDANCE SHEET. THE PURCHASING DIVISION AND THE STATE AGENCY</p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE	TELEPHONE	DATE
TITLE	FEIN	ADDRESS CHANGES TO BE NOTED ABOVE

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'

GENERAL TERMS & CONDITIONS REQUEST FOR QUOTATION (RFQ) AND REQUEST FOR PROPOSAL (RFP)

1. Awards will be made in the best interest of the State of West Virginia.
2. The State may accept or reject in part, or in whole, any bid.
3. Prior to any award, the apparent successful vendor must be properly registered with the Purchasing Division and have paid the required \$125 fee.
4. All services performed or goods delivered under State Purchase Order/Contracts are to be continued for the term of the Purchase Order/Contracts, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise available for these services or goods this Purchase Order/Contract becomes void and of no effect after June 30.
5. Payment may only be made after the delivery and acceptance of goods or services.
6. Interest may be paid for late payment in accordance with the *West Virginia Code*.
7. Vendor preference will be granted upon written request in accordance with the *West Virginia Code*.
8. The State of West Virginia is exempt from federal and state taxes and will not pay or reimburse such taxes.
9. The Director of Purchasing may cancel any Purchase Order/Contract upon 30 days written notice to the seller.
10. The laws of the State of West Virginia and the *Legislative Rules* of the Purchasing Division shall govern the purchasing process.
11. Any reference to automatic renewal is hereby deleted. The Contract may be renewed only upon mutual written agreement of the parties.
12. **BANKRUPTCY:** In the event the vendor/contractor files for bankruptcy protection, the State may deem this contract null and void, and terminate such contract without further order.
13. **HIPAA BUSINESS ASSOCIATE ADDENDUM:** The West Virginia State Government HIPAA Business Associate Addendum (BAA), approved by the Attorney General, is available online at www.state.wv.us/admin/purchase/vrc/hipaa.htm and is hereby made part of the agreement. Provided that the Agency meets the definition of a Cover Entity (45 CFR §160.103) and will be disclosing Protected Health Information (45 CFR §160.103) to the vendor.
14. **CONFIDENTIALITY:** The vendor agrees that he or she will not disclose to anyone, directly or indirectly, any such personally identifiable information or other confidential information gained from the agency, unless the individual who is the subject of the information consents to the disclosure in writing or the disclosure is made pursuant to the agency's policies, procedures, and rules. Vendor further agrees to comply with the Confidentiality Policies and Information Security Accountability Requirements, set forth in <http://www.state.wv.us/admin/purchase/privacy/noticeConfidentiality.pdf>.
15. **LICENSING:** Vendors must be licensed and in good standing in accordance with any and all state and local laws and requirements by any state or local agency of West Virginia, including, but not limited to, the West Virginia Secretary of State's Office, the West Virginia Tax Department, and the West Virginia Insurance Commission. The vendor must provide all necessary releases to obtain information to enable the director or spending unit to verify that the vendor is licensed and in good standing with the above entities.
16. **ANTITRUST:** In submitting a bid to any agency for the State of West Virginia, the bidder offers and agrees that if the bid is accepted the bidder will convey, sell, assign or transfer to the State of West Virginia all rights, title and interest in and to all causes of action it may now or hereafter acquire under the antitrust laws of the United States and the State of West Virginia for price fixing and/or unreasonable restraints of trade relating to the particular commodities or services purchased or acquired by the State of West Virginia. Such assignment shall be made and become effective at the time the purchasing agency tenders the initial payment to the bidder.

I certify that this bid is made without prior understanding, agreement, or connection with any corporation, firm, limited liability company, partnership, or person or entity submitting a bid for the same material, supplies, equipment or services and is in all respects fair and without collusion or fraud. I further certify that I am authorized to sign the certification on behalf of the bidder or this bid.

INSTRUCTIONS TO BIDDERS

1. Use the quotation forms provided by the Purchasing Division. Complete all sections of the quotation form.
2. Items offered must be in compliance with the specifications. Any deviation from the specifications must be clearly indicated by the bidder. Alternates offered by the bidder as **EQUAL** to the specifications must be clearly defined. A bidder offering an alternate should attach complete specifications and literature to the bid. The Purchasing Division may waive minor deviations to specifications.
3. Unit prices shall prevail in case of discrepancy. All quotations are considered F.O.B. destination unless alternate shipping terms are clearly identified in the quotation.
4. All quotations must be delivered by the bidder to the office listed below prior to the date and time of the bid opening. Failure of the bidder to deliver the quotations on time will result in bid disqualifications: Department of Administration, Purchasing Division, 2019 Washington Street East, P.O. Box 50130, Charleston, WV 25305-0130
5. Communication during the solicitation, bid, evaluation or award periods, except through the Purchasing Division, is strictly prohibited (W.Va. C.S.R. §148-1-6.6).



State of West Virginia
 Department of Administration
 Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

Request for Quotation

RFQ NUMBER:
7011EC10

PAGE:
2

ADDRESS CORRESPONDENCE TO ATTENTION OF:
**BUYER 33
 304-558-2402**

RFQ COPY
 TYPE NAME/ADDRESS HERE

VENDOR

SHIP TO

DIVISION OF HIGHWAYS
 EQUIPMENT DIVISION
 ROUTE 33
 BRUSHY FORK ROAD
 BUCKHANNON, WV
 26201 304-472-1750

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
12/09/2010				

BID OPENING DATE: **01/20/2011** BID OPENING TIME **01:30PM**

LINE	QUANTITY	UOP	CAT NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
<p>WILL NOT ASSUME ANY RESPONSIBILITY FOR A BIDDER-S FAILURE TO COMPLETE THE PRE-BID ATTENDANCE SHEET. IN ADDITION, WE REQUEST THAT ALL POTENTIAL BIDDERS INCLUDE THEIR E-MAIL ADDRESS AND FAX NUMBER.</p> <p>ALL POTENTIAL BIDDERS ARE REQUESTED TO ARRIVE PRIOR TO THE STARTING TIME FOR THE PRE-BID. BIDDERS WHO ARRIVE LATE, BUT PRIOR TO THE DISMISSAL OF THE TECHNICAL PORTION OF THE PRE-BID WILL BE PERMITTED TO SIGN IN. BIDDERS WHO ARRIVE AFTER CONCLUSION OF THE TECHNICAL PORTION OF THE PRE-BID, BUT DURING ANY SUBSEQUENT PART OF THE PRE-BID WILL NOT BE PERMITTED TO SIGN THE ATTENDANCE SHEET.</p> <p>TECHNICAL QUESTIONS CONCERNING THIS SOLICITATION MUST BE SUBMITTED IN WRITING TO SHERI SLONE IN THE WEST VIRGINIA STATE PURCHASING DIVISION VIA MAIL AT THE ADDRESS SHOWN IN THE BODY OF THIS RFQ, VIA FAX 304-558-2596, OR VIA EMAIL AT SHERI.D.SLONE@WV.GOV. DEADLINE FOR ALL TECHNICAL QUESTIONS IS 12/28/2010 AT THE CLOSE OF BUSINESS. ANY TECHNICAL QUESTIONS RECEIVED WILL BE ANSWERED BY FORMAL ADDENDUM TO BE ISSUED BY THE PURCHASING DIVISION AFTER THE DEADLINE HAS LAPSED.</p> <p>EXHIBIT 2</p> <p>LIFE OF CONTRACT: THIS CONTRACT BECOMES EFFECTIVE ON ----- AND EXTENDS FOR A PERIOD OF ONE (1) YEAR OR UNTIL SUCH "REASONABLE TIME" THEREAFTER AS IS NECESSARY TO OBTAIN A NEW CONTRACT OR RENEW THE ORIGINAL CONTRACT. THE "REASONABLE TIME" PERIOD SHALL NOT EXCEED TWELVE (12) MONTHS. DURING THIS "REASONABLE TIME" THE VENDOR MAY TERMINATE THIS CONTRACT FOR</p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE	TELEPHONE	DATE
-----------	-----------	------

TITLE	FEIN	ADDRESS CHANGES TO BE NOTED ABOVE
-------	------	-----------------------------------

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'



State of West Virginia
 Department of Administration
 Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

Request for Quotation

RFQ NUMBER
7011EC10

PAGE
3

ADDRESS CORRESPONDENCE TO ATTENTION OF:
**BUYER 33
 304-558-2402**

**RFQ COPY
 TYPE NAME/ADDRESS HERE**

VENDOR

SHIP TO

**DIVISION OF HIGHWAYS
 EQUIPMENT DIVISION
 ROUTE 33
 BRUSHY FORK ROAD
 BUCKHANNON, WV
 26201 304-472-1750**

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
12/09/2010				

BID OPENING DATE: **01/20/2011** BID OPENING TIME **01:30PM**

LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
<p>ANY REASON UPON GIVING THE DIRECTOR OF PURCHASING THIRTY (30) DAYS WRITTEN NOTICE.</p> <p>UNLESS SPECIFIC PROVISIONS ARE STIPULATED IN THIS CONTRACT DOCUMENT, THE TERMS, CONDITIONS, AND PRICING SET HEREIN ARE FIRM FOR THE LIFE OF THE CONTRACT.</p> <p>RENEWAL: THIS CONTRACT MAY BE RENEWED UPON THE MUTUAL WRITTEN CONSENT OF THE SPENDING UNIT AND VENDOR, SUBMITTED TO THE DIRECTOR OF PURCHASING THIRTY (30) DAYS PRIOR TO THE EXPIRATION DATE. SUCH RENEWAL SHALL BE IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF THE ORIGINAL CONTRACT AND SHALL BE LIMITED TO TWO (2) ONE (1) YEAR PERIODS.</p> <p>CANCELLATION: THE DIRECTOR OF PURCHASING RESERVES THE RIGHT TO CANCEL THIS CONTRACT IMMEDIATELY UPON WRITTEN NOTICE TO THE VENDOR IF THE COMMODITIES AND/OR SERVICE SUPPLIED ARE OF AN INFERIOR QUALITY OR DO NOT CONFORM WITH THE SPECIFICATIONS OF THE BID AND CONTRACT HEREIN.</p> <p>OPEN MARKET CLAUSE: THE DIRECTOR OF PURCHASING MAY AUTHORIZE A SPENDING UNIT TO PURCHASE ON THE OPEN MARKET, WITHOUT THE FILING OF A REQUISITION OR COST ESTIMATE, ITEMS SPECIFIED ON THIS CONTRACT FOR IMMEDIATE DELIVERY IN EMERGENCIES DUE TO UNFORESEEN CAUSES (INCLUDING BUT NOT LIMITED TO DELAYS IN TRANSPORTATION OR AN UNANTICIPATED INCREASE IN THE VOLUME OF WORK).</p> <p>QUANTITIES: QUANTITIES LISTED IN THE REQUISITION ARE APPROXIMATIONS ONLY, BASED ON ESTIMATES SUPPLIES BY THE STATE SPENDING UNIT. IT IS UNDERSTOOD AND AGREED THAT THE CONTRACT SHALL COVER THE QUANTITIES ACTUALLY ORDERED FOR DELIVERY DURING THE TERM OF CONTRACT, WHETHER MORE OR LESS THAN THE QUANTITIES SHOWN.</p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE	TELEPHONE	DATE
TITLE	FEIN	ADDRESS CHANGES TO BE NOTED ABOVE

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'



State of West Virginia
 Department of Administration
 Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

Request for Quotation

RFQ NUMBER
7011EC10

PAGE
4

ADDRESS CORRESPONDENCE TO ATTENTION OF:
**BUYER 33
 304-558-2402**

VENDOR

RFQ COPY
 TYPE NAME/ADDRESS HERE

SHIP TO

DIVISION OF HIGHWAYS
 EQUIPMENT DIVISION
 ROUTE 33
 BRUSHY FORK ROAD
 BUCKHANNON, WV
 26201 304-472-1750

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
12/09/2010				

BID OPENING DATE: **01/20/2011** BID OPENING TIME **01:30PM**

LINE	QUANTITY	UOP	CAT NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
<p>ORDERING PROCEDURE: SPENDING UNIT(S) SHALL ISSUE A WRITTEN EQUIPMENT CONTRACT ORDER (FORM NUMBER WV-35) FOR COMMODITIES COVERED BY THIS CONTRACT. THE ORIGINAL WV-35 MUST BE SENT TO THE PURCHASING DIVISION OF THE DEPARTMENT OF ADMINISTRATION. AFTER APPROVAL AND ENCUMBRANCE, ONE COPY OF THE PURCHASE ORDER WILL BE RETURNED TO THE SPENDING UNIT AND ONE COPY FORWARDED TO THE VENDOR AS AUTHORIZATION FOR SHIPMENT. NO ORDER IS VALID UNLESS APPROVED AND ENCUMBERED BY THE PURCHASING DIVISION.</p> <p>BANKRUPTCY: IN THE EVENT THE VENDOR/CONTRACTOR FILES FOR BANKRUPTCY PROTECTION, THE STATE MAY DEEM THE CONTRACT NULL AND VOID, AND TERMINATE SUCH CONTRACT WITHOUT FUTHER ORDER.</p> <p>REV. 5/2009</p> <p>EXHIBIT 10</p> <p style="text-align: center;">REQUISITION NO.:</p> <p>ADDENDUM ACKNOWLEDGEMENT</p> <p>I HEREBY ACKNOWLEDGE RECEIPT OF THE FOLLOWING CHECKED ADDENDUM(S) AND HAVE MADE THE NECESSARY REVISIONS TO MY PROPOSAL, PLANS AND/OR SPECIFICATION, ETC.</p> <p>ADDENDUM NO.'S:</p> <p>NO. 1</p> <p>NO. 2</p> <p>NO. 3</p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE		TELEPHONE	DATE
TITLE	FEIN	ADDRESS CHANGES TO BE NOTED ABOVE	

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'



State of West Virginia
 Department of Administration
 Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

Request for Quotation

RFQ NUMBER
7011EC10

PAGE
5

ADDRESS CORRESPONDENCE TO ATTENTION OF:
BUYER 33
304-558-2402

VENDOR

RFQ COPY
 TYPE NAME/ADDRESS HERE

BUYER

DIVISION OF HIGHWAYS
 EQUIPMENT DIVISION
 ROUTE 33
 BRUSHY FORK ROAD
 BUCKHANNON, WV
 26201 304-472-1750

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
12/09/2010				

BID OPENING DATE: **01/20/2011** BID OPENING TIME **01:30PM**

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
	NO. 4					
	NO. 5					
<p>I UNDERSTAND THAT FAILURE TO CONFIRM THE RECEIPT OF TH ADDENDUM(S) MAY BE CAUSE FOR REJECTION OF BIDS.</p> <p>VENDOR MUST CLEARLY UNDERSTAND THAT ANY VERBAL REPRESENTATION MADE OR ASSUMED TO BE MADE DURING ANY ORAL DISCUSSION HELD BETWEEN VENDOR'S REPRESENTATIVES AND ANY STATE PERSONNEL IS NOT BINDING. ONLY THE INFORMATION ISSUED IN WRITING AND ADDED TO THE SPECIFICATIONS BY AN OFFICIAL ADDENDUM IS BINDING.</p> <p>..... SIGNATURE</p> <p>..... COMPANY</p> <p>..... DATE</p> <p>NOTE: THIS ADDENDUM ACKNOWLEDGEMENT SHOULD BE SUBMITTED WITH THE BID.</p> <p>REV. 09/21/2009</p> <p>EXHIBIT 4</p> <p>LOCAL GOVERNMENT BODIES: UNLESS THE VENDOR INDICATES IN THE BID HIS REFUSAL TO EXTEND THE PRICES, TERMS,</p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE		TELEPHONE		DATE
TITLE	FEIN	ADDRESS CHANGES TO BE NOTED ABOVE		

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'



State of West Virginia
 Department of Administration
 Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

Request for Quotation

RFQ NUMBER:
7011EC10

PAGE:
6

ADDRESS CORRESPONDENCE TO ATTENTION OF:
**BUYER 33
 304-558-2402**

VENDOR

**RFQ COPY
 TYPE NAME/ADDRESS HERE**

SHIP TO

**DIVISION OF HIGHWAYS
 EQUIPMENT DIVISION
 ROUTE 33
 BRUSHY FORK ROAD
 BUCKHANNON, WV
 26201 304-472-1750**

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
12/09/2010				

BID OPENING DATE: **01/20/2011** BID OPENING TIME **01:30PM**

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
<p>AND CONDITIONS OF THE BID TO COUNTY, SCHOOL, MUNICIPAL AND OTHER LOCAL GOVERNMENT BODIES, THE BID SHALL EXTEND TO POLITICAL SUBDIVISIONS OF THE STATE OF WEST VIRGINIA. IF THE VENDOR DOES NOT WISH TO EXTEND THE PRICES, TERMS, AND CONDITIONS OF THE BID TO ALL POLITICAL SUBDIVISIONS OF THE STATE, THE VENDOR MUST CLEARLY INDICATE SUCH REFUSAL IN HIS BID. SUCH REFUSAL SHALL NOT PREJUDICE THE AWARD OF THIS CONTRACT IN ANY MANNER.</p> <p>REV. 3/88</p> <p style="text-align: center;">NOTICE</p> <p>A SIGNED BID MUST BE SUBMITTED TO:</p> <p style="text-align: center;">DEPARTMENT OF ADMINISTRATION PURCHASING DIVISION BUILDING 15 2019 WASHINGTON STREET, EAST CHARLESTON, WV 25305-0130</p> <p>THE BID SHOULD CONTAIN THIS INFORMATION ON THE FACE OF THE ENVELOPE OR THE BID MAY NOT BE CONSIDERED:</p> <p>SEALED BID</p> <p>BUYER: SHERI SLONE - FILE 33 RFQ. NO.: 7011EC10 BID OPENING DATE: 01/20/2011</p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE	TELEPHONE	DATE
TITLE	F.E.N.	ADDRESS CHANGES TO BE NOTED ABOVE

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'



State of West Virginia
 Department of Administration
 Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

Request for Quotation

RFQ NUMBER
7011EC10

PAGE
7

ADDRESS CORRESPONDENCE TO ATTENTION OF:
BUYER 33
304-558-2402

RFQ COPY
 TYPE NAME/ADDRESS HERE

V
E
N
D
O
R

S
H
I
P
T
O

DIVISION OF HIGHWAYS
 EQUIPMENT DIVISION
 ROUTE 33
 BRUSHY FORK ROAD
 BUCKHANNON, WV
 26201 304-472-1750

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
12/09/2010				

BID OPENING DATE: **01/20/2011** BID OPENING TIME **01:30PM**

LINE	QUANTITY	UOP	CAT NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
BID OPENING TIME:				1:30 PM		
PLEASE PROVIDE A FAX NUMBER IN CASE IT IS NECESSARY TO CONTACT YOU REGARDING YOUR BID:						

CONTACT PERSON (PLEASE PRINT CLEARLY):						

***** THIS IS THE END OF RFQ 7011EC10 ***** TOTAL:						_____

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE		TELEPHONE	DATE
TITLE	FEIN	ADDRESS CHANGES TO BE NOTED ABOVE	

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
EQUIPMENT DIVISION

PROCUREMENT SPECIFICATIONS
NO. 377-2-G
NOVEMBER 2010

OPEN END CONTRACT
64,000 GVW CAB AND CHASSIS, DUMP BODY, AND HYDRAULIC SYSTEM

1.0 PURPOSE

It is the purpose of these specifications to describe a 64,000 GVW Cab and Chassis, Dump Body, and Hydraulic System (hereinafter referred to as a "dump truck" or a "unit") to be purchased for use by the West Virginia Division of Highways (DOH) on an Open End Contract basis.

2.0 BIDDING PROCEDURES

The current purchasing procedures regarding bidding as established by the Department of Administration, Purchasing Division, shall apply. Failure to submit the "Request for Quotation" forms, complete in its entirety and according to directions indicated, may subject the bidder to disqualification. **Each bid submitted shall also be accompanied by a Bidder's Evaluation Report completed in detail.** Addendums in order, along with exception sheets, should be with Bidder's Evaluation Report. **FAILURE TO SUBMIT THE BIDDER'S EVALUATION REPORT, COMPLETE IN ITS ENTIRETY, WILL RESULT IN AUTOMATIC DISQUALIFICATION.**

3.0 SPECIFICATIONS

The specifications named herein, mandatory and non-mandatory, establish the acceptable level of quality only and are not intended to reflect a preference or favor any particular brand or vendor.

3.1 EXCEPTIONS TO NON-MANDATORY SPECIFICATIONS

Exception to a non-mandatory unit specification may be made by the bidder, providing the exception is not available from the manufacturer. **Any such exception must be noted on the bidder's evaluation report and should be accompanied by supporting documentation/literature from the manufacturer. Any exception must be indicated on a separate attachment to the bidder's evaluation report and labeled as "Exception to Specifications".** The state reserves the right to waive minor irregularities in bids or specifications in accordance with §148-1-4(f) of the WV Legislative Rules and Regulations.

3.2 MANDATORY SPECIFICATIONS

All specifications preceded by "shall, will, and/or must" or are stated as a "minimum and/or maximum" are mandatory as stated in Purchasing Divisions Policies and Procedures. Any bid failing to meet any mandatory item shall be immediately disqualified. Failure to respond in the appropriate evaluation section will also be grounds for immediate disqualification at the discretion of the State.

A mandatory pre-bid conference is scheduled for this equipment purchase as stated in the RFQ. Vendors having products with variations or exceptions in specified mandatory items are expected to address any such variations or exceptions during the pre-bid conference. **The State shall review and consider any such variation or exception, and may at its sole discretion, issue an addendum to change mandatory specifications deemed to be in the State's best interest. Bids from any vendor failing to attend the mandatory pre-bid shall be disqualified. Bids containing any variation or exception to a mandatory specification that was not addressed during the pre-bid conference and accepted by the issuance of an Addendum shall be disqualified.**

4.0 REPRESENTATIVE UNIT FOR TEST

The successful vendor must (if specified) provide DOH one (1) completed representative unit to be observed and evaluated on each order to insure compliance with specification. If requested, the time period for testing and evaluation shall be seven (7) working days following receipt of the unit. DOH will incur no obligation for deterioration of surfaces, finishes, seals, and mechanical or electrical parts on the unit resulting from operation and testing within the limits of these specifications; nor will DOH incur obligation for damage to the unit resulting from failure to meet specifications when due care and attention is given by DOH and testing is done within the limits of these specifications. Failure of the pilot unit to satisfactorily meet specifications as bid may be cause for cancellation of the purchase order, and return of the delivered unit along with all associated equipment to the vendor at the vendor's expense.

4.1 CONDITION OF UNIT(S) UPON DELIVERY

All units must arrive at the prescribed delivery point having been completely preserviced with oil, lubricants, and coolant. All prescribed precautions pertaining to first operations and break-in of the unit are to be posted conspicuously on the unit for ready observance by the operator.

4.2 DELIVERY

Delivery point of the completely assembled representative unit will be the DOH, Equipment Division, Route 33 at Brushy Fork Road, Buckhannon, West Virginia (26201).

The vendor is responsible for guaranteeing delivery of the completed units within the time specified and agreed to by the State. Delivery is preferred within 180 calendar days after receipt of purchase agreement. The vendor is responsible for establishing and coordinating delivery terms with allied manufacturers or suppliers. Delivery terms should be stated in the bid and the State reserves the right to accept or reject such terms. Failure to reach an agreement may result in rejection of the bid. **The successful bidder shall provide their manufacturer's confirmation of the order to the WVDOH contact person within seven (7) working days after receiving the approved purchase order.**

A completed pilot model for inspection must be provided within 90 calendar days after receipt of the purchase agreement by the successful vendor.

Delivery is an integral part of this specification and failure to comply will be cause to initiate a D.O.T. Administrative Form WV-82, Vendor Performance Form. The WV-82 Form will provide a means of officially notifying the Purchasing Division and the vendor of unsatisfactory performance; such as late deliveries, poor service, inadequate parts supplies, etc.

The decision to initiate subject Form will be at the sole discretion of the D.O.H. Commissioner's established Equipment Review Board.

Issuance of the WV-82 Vendor Complaint Form on unsatisfactory delivery against any vendor will be cause to refuse to consider similar items from those vendors on future Request For Quotations.

(NOTE: Delivery time could be altered due to labor strikes, severe inclement weather conditions, etc.)

5.0 AWARD CRITERIA

- 5.1 DOH will recommend the award in accordance with the RFQ evaluation criteria described in the requisition. **The award shall be made to the lowest unit cost vendor that meets or exceeds the specifications.** DOH reserves the right to place multiple orders in any quantity.

6.0 SPECIFICATIONS AND GUIDELINES - GENERAL

6.1 IDENTIFICATION OF THE UNIT BEING PROPOSED

The bidder must identify the unit by manufacturer, model, series, and year of manufacture, to enable identification by DOH in the manufacturer's specifications of the proposed unit. The bidder will submit complete descriptive literature of the proposed unit, to establish that the bid is the manufacturer's most current model, including latest engineering improvements, which have been, or will imminently be,

regularly advertised and sold on the open market. The unit specified herein and offered to be manufactured after January 1, 2011 and be clearly identified and marked with date of manufacture.

6.2 OPERATING AND SERVICE MANUALS AND PARTS LISTS

An operator's manual must be included with each unit upon delivery. A "line sheet" (if applicable) and Equipment Preventative Maintenance Questionnaire (as shown in X6.2 of the Bidder's Evaluation Report) must be with pilot unit upon delivery. In addition, there must be 12 service, shop, or maintenance manuals; ten (10) to be distributed to the Districts and two (2) for the Equipment Division. Also, there must be 14 parts manuals; ten (10) to be distributed to the Districts and four (4) for Equipment Division use. CD ROM is preferred in lieu of parts or service manuals.

*** NOTE: MANUALS SHALL BE DELIVERED UPON COMPLETION OF DELIVERY OF TOTAL UNITS. FAILURE TO DO SO WILL DELAY PAYMENT.**

6.3 TRAINING:

Manufacturers and/or dealers will be required to stage a thorough seminar on the subjects of Preventative Maintenance, Operator and Mechanic Training. **In order to keep the operators and mechanics updated, the successful vendor shall conduct training with each purchase order against this open end contract.** Training is preferred within 2 working days after delivery of the pilot unit on the individual purchase order.

Manufacturers and/or dealers shall be required to furnish the Training Academy with one (1) Operator's Manual to be shipped direct to WVDOH Training Academy, Post Office Box 610, Buckhannon, West Virginia 26201 prior to delivery of the pilot.

The seminar to be held at the W. Va. Division of Highways, Equipment Division, Buckhannon, West Virginia.

6.4 PREVENTIVE MAINTENANCE AND OPERATOR PROCEDURES:

Manufacturers and/or dealers will be required to submit to the Equipment Division, in addition to the operating and service manuals, booklets and pamphlets explaining the Preventive Maintenance and Operator Procedures to be used by the operators of this equipment, and must include such things as daily prestart inspection procedure, service schedule, and routine maintenance required, safety precautions, etc.

The successful vendor shall furnish all training aids; i.e., videos, projectors, etc. required in conducting the training.

6.5 WARRANTY AND SERVICE POLICY

The Manufacturers warranty or service policy is to apply to the unit. Such warranty or service policy is to be recognized at any authorized unit dealer, representing manufacturer of proposed unit throughout the State of West Virginia. The applicable warranty or service policy will not be contingent upon obtaining routine service, lubrication, and servicing of the unit from factory authorized agencies. It will be the responsibility of the bidder to have available labor to repair or replace any defective replacement parts, components and materials, and to have available those replacement parts, components, and/or materials found to be defective during the terms of the warranty period. The bidder should state the labor rates, locations where parts will be stocked, availability of parts, and discounts offered for parts, when terms of the warranty offer a pro-rated cost for parts and labor. In addition, the successful bidder should offer field work to repair or replace defective parts, components, and materials found to be defective during the terms of the warranty and should provide mechanic's travel rates, mileage charges, field mechanic rates, and any surcharge for miscellaneous items, if applicable, for field work during the warranty period. Submit to Division of Highways any technical or engineering improvements during the term of the warranty. **The unit must be accompanied upon delivery by the unit's manufacturer's executed warranty or service policy.**

A mandatory minimum two (2) year bumper to bumper basic parts and labor warranty excluding abuse and normal wear items is required for this unit.

Engine: 3 years/100,000 mile 100% parts and labor

THE "WARRANTY AND SERVICE POLICY QUESTIONNAIRE" ATTACHED IN THE BIDDER'S EVALUATION REPORT MUST BE COMPLETED IN ITS ENTIRETY BY THE SUCCESSFUL BIDDER OR MANUFACTURER PRIOR TO DELIVERY OF THE PILOT MODEL. (SEE SECTION X6.5 OF BIDDER'S EVALUATION REPORT).

6.6 EVALUATION COMMITTEE REQUIREMENTS

Detailed component specifications, product literature, component models, required for specification compliance determination by the Evaluation Committee should be provided with each bid. Any information supplied that is contrary to/or conflicting with the specifications and/or attached Bidders Evaluation Report may be sufficient cause for rejection of bid.

6.7 UNSPECIFIED ACCESSORIES & FEATURES

All parts, equipment, accessories, material, design and performance characteristics not specified herein, but which are necessary to provide a complete unit, must be furnished with each unit and required to conform to strength, quality of material, and quality of workmanship to those which are advertised and provided to the market in general by the unit industry.

All parts and accessories advertised and regularly supplied as standard shall be included, except those which would represent duplication of these specified, and except those which, by specification, are not to be furnished. All standard safety features, required by Federal and State Law, shall be included.

7.0 SPECIFICATIONS OF THE QUOTED UNIT ARE AS FOLLOWS:

Any bid that fails to meet the mandatory features shall be immediately rejected.

8.0 SPECIFICATIONS - CAB & CHASSIS

8.1 The GVWR rating shall be 64,000 Lbs. minimum rating

8.2 Cab to Axle Dimension: Approximately 124 Inches usable

8.2.1 After frame length shall be no less than 60 inches minimum

8.3 Wheelbase: Approximately 202 Inches – Must be set forward axle design for snowplow applications for various plows.

8.3.1 Wheel base and CA dimension may be adjusted to provide the optimum legal weight distribution.

8.3.2 BBC (Bumper to Back of Cab) 111 inch minimum to 120 inch maximum dimension excluding frame extension.

8.4 Frame: The manufacturer shall provide a frame that meets or exceeds all Federal requirements for G.V.W.R. specified that extends forward beyond the grille a minimum of 14 inches. Frame shall conform to the following:

8.4.1 Frame material to be minimum 110,000 PSI yield strength. Frame extension to be “parent rail” material.

- 8.4.2 R.B.M.: Minimum 2.6 million Ins./Lb. Per rail (Approximate Ratings)
Bidder to submit shop drawings pertaining to frame construction and frame extension. An integral frame and frame extension is preferred**
- 8.4.2.1 Where engine and radiator adjustments are required, a minimum of 1.4 million in lb. per rail (RBM) will be accepted.**
- 8.4.3 Main frame and any required liners to be either straight channel or offset channel, full length.
- 8.4.4 Minimum frame RBM to be approved by manufacturers Engineering Department. Bolt-on or welded extension will not be accepted.**
- 8.4.5 Front frame shall accommodate the Department's standard hydraulic PTO shaft and pump, and the plow frame. It shall provide easy service accessibility.**
- 8.5 Cab: The cab to be the manufacturer's standard steel, aluminum, and/or fiberglass. Hood to be tilt hood and fenders either steel and/or fiberglass and **shall be provided with rear air bag suspension**
- 8.5.1 Cab Door Locks, Both Doors, keyed alike
- 8.5.2 Dual Sun Visors
- 8.5.3 Arm Rests, Both Sides
- 8.5.4 Seats: Fully adjustable air ride high back with head rest, cloth covered both left hand and right hand sides. **Minimum of 12 inch clearance between seats.**
- 8.5.5 Floor Mats: Rubber floor mats throughout cab area with non-absorbent backing under the mats.
- 8.5.6 Turn Signals: Manufacturers Standard with hazard warning switch.
- 8.5.7 Heater and Defroster: Fresh Air Type, Heaviest Duty
- 8.5.8 Windshield Wipers and Washers: Must be manufacturer's heaviest duty "artic type" with intermittent feature with manufacturers largest reservoir filled with antifreeze type solvent
- 8.5.9 Instruments:
- All instruments dash-mounted except where specified otherwise.
All standard instruments to be supplied, including but not limited to the following:

- 8.5.9.1 Coolant, oil pressure gauges, to have both dial type readout and either an audible or visual alarm to warn operator when safe operating conditions are exceeded.
- 8.5.9.2 Voltmeter or Ammeter
- 8.5.9.3 Engine RPM Tachometer
- 8.5.9.4 Speedometer with Odometer
- 8.5.9.4.1 Provisions for dual speedometer leads shall be made available.**
- 8.5.9.5 Primary Air Pressure Gauge
- 8.5.9.6 Auxiliary Air Pressure Gauge (may be combined with 8.5.9.5)
- 8.5.9.7 Air filter manufacturers heaviest duty dual element type that meets all requirements of extended engine warranty.
- 8.5.9.8 If unit is equipped with front air intake, a cable control valve to enable operator to divert air intake to engine compartment during plowing application to be provided**
- 8.5.9.9 Air Filter Restriction Indicator gauge shall be dash mounted**
- 8.5.9.10 Engine Hourmeter (Controlled by engine operation, not by key switch).
- 8.5.9.11 Fuel level reading.
- 8.5.9.12 Parking brake to be dash controlled with indicator light
- 8.5.9.13 Manufacturers best sound/weather insulation package for proposed cab
- 8.5.9.14 Outside temperature control with in cab digital read out shall be accomplished without the use of mirrors**
- 8.5.10 Rearview Mirrors:
 - 8.5.10.1 Mirrors to be West Coast Type, approximately 7" x 16" power adjustable with convex spot mirror.
 - 8.5.10.2 Both mirrors to be heated type with stainless steel, composite, or aluminum hardware, heads, and fasteners.

- 8.5.11 Grab Handle: Right Hand and Left Hand Sides of cab, internal or external mounting to rear of door opening. **If inside handles are featured, one (1) outside, left mounted grab handle with non-slip insert for bed aggregate inspection must be furnished.**
- 8.5.12 Air horns, with snow shields, cab mounted with adequate clearance for future installation of body cab shield.
- 8.5.13 Unit to include lockable hand operated throttle control or electronic control for idle up and idle down for hydraulic flow rate.
- 8.5.14 Manufacturer should provide for stationary grille or grille with cutout area to allow tilt hood to clear snow plow mount. Stone/gravel guard to be provided.
- 8.5.15 Air Conditioning: Manufacturers standard package for model bid. "APADS" to specified air condition system
- 8.5.16 Radio: AM/FM stereo with weatherband radio feature
- 8.5.17 Glass: Manufacturers tinted safety glass (all locations)
 - 8.5.17.1 Dual power windows
- 8.5.18 Manufacturers engine cover or dash mounted extended two (2) cup drink holder.
- 8.5.19 Front mudflaps to be manufacturers standard for unit bid.
- 8.5.20 Emergency triangle warning kit, with hold down (KD610-464S, KD Lamp Co. or equal, stowed (fastened) in the cab. (Check with DOH representative before mounting.)
- 8.5.21 Manufacturers tilt steering column with cruise control feature or provide locking hand operated throttle, steering wheel approximately 18 inches diameter
- 8.5.22 Fire extinguisher - rechargeable with vehicle mount. Mounted in the cab for easy and quick access. 2A-10B-C or equal
- 8.5.23 **Accessories not indicated above but are included in the manufacturer's standard cab shall be provided.**
- 8.5.24 **Successful vendor shall provide WVDOH with complete list of all filters required for normal maintenance on proposed unit.**

- 8.6 Engine: Engine manufacturer to make provisions for front mounted hydraulic pump to crankshaft pulley.
- 8.6.1 The engine shall be diesel powered 10.8 Liter minimum, Peak HP, 395@1100-1300 RPM, Electronic Minimum, torque, 1450 lbs. Ft @1200 RPM. Engine must be compliant and certified to meet U.S. EPA 2010 Emissions Standards without using Federal EPA credits.**
- 8.6.1.2 The electrical cable from the heater to plug to be one piece and waterproof, location - left side under driver door.
- 8.6.1.3 In line fuel heater with thermostatically controlled by-pass maintain #2 diesel fuel temperature above cloud point before diesel fuel passes through the filter. Zero Start Model 820-8751 and thermostat Model 820-8786 as manufactured by Phillips Tenro Company or approved equal.
- 8.6.1.3.1 Engine fuel system to be equipped with primer pump
- 8.6.1.4 Exhaust:
- 8.6.1.4.1 A single vertical exhaust pipe with underbody muffler that will meet all Federal noise abatement requirements. Exhaust to the passenger (right) side of unit.
- 8.6.1.4.2 The tail pipe must be shielded or insulated to protect personnel from burns when entering or exiting the cab. The shield to be 180 degrees to 360 degrees and shall be of non-rustable material such as stainless steel or aluminum. Riker or equal.**
- 8.6.1.4.3 Exhaust pipe with rain cap or exhaust turn out
- 8.6.2 Jacob's Engine Brake Model #411 or equivalent shall be provided.**
- 8.6.3 The engine components facing wheel areas, on both sides, and the areas to the rear of wheels to be shielded by means of rubber skirts supported by easily removable steel rods.
- 8.7 Cooling System: The cooling system must be capable of maintaining engine temperature within the manufacturer's recommended range during continuous operation.**
- 8.7.1 The system shall incorporate a thermostat and bypass for warm up and shall be filled with permanent type extended life antifreeze or equal rated to a-30°F or lower. Low silicate type antifreeze for diesel engine only.**

- 8.7.2 The largest factory available engine cooling capacity compatible with engines and transmission referenced and for continuous high engine output under extreme temperatures and/or operating conditions due to prolonged snow plowing operations in low gears.
- 8.7.3 Unit to be fitted with provisions for visually monitoring coolant without necessitating removal of the cap from the radiator or expansion tank.
- 8.7.4 **The radiator mounting shall provide adequate clearance to facilitate the installation of a crankshaft driven PTO drive shaft.**
- 8.7.5 **The distance between the extreme tip of the radiator fan blade and the centerline of the crankshaft to be a minimum of three inches (3") to insure adequate clearance for PTO drive shaft.**
- 8.7.6 Radiator screen guard to protect radiator from foreign objects
- 8.8 Fuel Tanks:
 - 8.8.1 Safety type fuel tank as per the requirements of FMVSS.
 - 8.8.2 Single aluminum 100 US gallon (usable) **minimum total capacity**, frame mounted.
 - 8.8.3 Driver and passenger entrance steps - grated self cleaning safety step
 - 8.8.3.1 All edges to be banded (skirting) on the outer perimeter.
 - 8.8.3.2 Top of the first step approximately 21 inches above ground.
 - 8.8.4 System to be a top draw and top return line.
- 8.9 Electrical System:
 - 8.9.1 Type: Manufacturer's 12 volt negative ground system with manufacturers radio interference suppression.
 - 8.9.1.1 Circuit breaker equipped, in easily accessible location, weatherproof.
 - 8.9.2 **There shall be no less than three (3) 2500 CCA heavy duty maintenance free batteries provided with a reserve of 640 minutes.**
 - 8.9.3 **Alternator Capacity: 110 AMPS minimum with internal regulator.**
 - 8.9.4 Wiring: To be heavy duty hypalon type or equal in heavy duty sheathing, bundled with lacing cords or non-metallic tie straps

- 8.9.5 Lighting: Provisions shall be made available for all required lighting on completed unit (number, location, and color) to conform to the West Virginia Motor Vehicle Code.**
- 8.9.6 Auxiliary snow plow/salt spreader lighting package:
- 8.9.6.1 Successful vendor shall be required to make provisions in the left rear corner of the cab for manufacturers approved wiring and weather proof disconnect plug (Cole Hersee No. 12081 or equal) to operate the following lights on truck mounted chemical spreader (NOT TO BE PROVIDED):**
1. One sealed beam flood lamp
 2. Left and right combination brake/turn and tail lights
 3. One strobe warning light
- 8.9.7 Manufacturer or successful vendor shall be required to make provisions for manufacture approved wiring and weatherproof disconnect plug (Weather Pac in line six (6) pin connector - Part Number 12010975) with approximately three (3) foot "pigtail" to operate combination left and right turn/park lights/auxiliary headlights.**
- 8.9.7.1 Provisions for weatherproof disconnect plug should be located at lower left front grille-bumper area. All wiring connections to be weatherproof with wiring encased in wire looms. Exact location should be discussed with WVDOH representative before pilot review.
- 8.9.7.2 A 7-way trailer connection light socket to be mounted at rear of truck frame. Plug to be Cole Hersee Part No. 12081 or approved equal.
- 8.10 Power Train Overview:
- Lubricants for front axle hubs and differentials, automatic transmission, transfer cases, and all rear differentials shall meet or exceed all appropriate MIL and SAE specifications for synthetic lubricants and should have all plugs identified as synthetic or painted red.**
- 8.10.1 Transmission: **Allison 4500RDS 6 speed or equal shall be provided with manufacturer transmission oil cooler**
- 8.10.1.1 Transmission torque capacity shall meet or exceed specified engine torque**
- 8.11 Driveline:
- 8.11.1 Should be Spicer 1810 series main/1710 Interaxle Model J400S driveline or equal.

8.12 Rear Axle:

8.12.1 To be:

Eaton DS462P or equal
Rockwell RT46-160-P
Mack S440 (46,000 lb. with pump)

8.12.2 Four (4) wheel dual reduction carriers equipped with driver controlled main locking differential in forward and rear axle that is manually controlled and **shall have traction control device via ABS system, ATC or equal**. Equipped with all wheel lock up 0-25 MPH, driver controlled (above 25 MPH, ATC will control).

8.12.3 Ratio: Gear ratio to be determined by bidder; however, these vehicles to be capable of a top speed of approximately 70 MPH

8.12.4 Aluminum or lightweight housing is not acceptable.

8.12.5 Stemco Guardian rear wheel seals or equal

8.12.6 Drain plug, magnetic

8.13 Front Suspension:

8.13.1 10,000 lb. capacity at ground each front spring, total spring capacity 20,000 lb.

8.13.2 The front spring pins or bearings/bushing to be furnished with 360 degree grease grooves to insure adequate lubricant penetration. (Rubber is unacceptable)

8.13.3 Spring hangers to be heavy castings with sufficient pin and bearing surface to render trouble free service.

8.14 Rear Suspension: Hendrickson RT463 or equal

8.15 Front Axle should be:

8.15.1 Capacity: 18,000 lbs. minimum

8.15.1.1 The front axle, drag links, and tie rods to have grease zerks installed.

8.15.2 Heavy Duty Shock Absorbers

8.15.3 Front Wheel Seals to be oil lubricated type. (Stemco or equal)

8.15.4 Proposed unit must provide adequate tire clearance at maximum turning angles.

- 8.16 Brakes should be:
- 8.16.1 Type: Full Air, with manufacturers ABS in compliance with the most current FMVSS requirements.
- 8.16.2 Compressor: Manufacturer's selected model. 15.5 cu. ft. minimum**
- 8.16.3 Service Brake Size: (Approximate)
- 8.16.3.1 Front: 16 ½ inch x 5 inch or 16 ½ inch x 6 inch "S" cam or a power front disc brake system providing equal performance.
- 8.16.3.2 Quick change type single or double anchor pin if drum type brakes are furnished.
- 8.16.3.3 Rear: 16 ½ inch x 7 inch "S" cam with quick change type single or double pin.
- 8.16.4 Drum brakes to have automatic slack adjusters and be clearance sensing type only, with adjustment on application of the brake
- 8.16.5 Parking Brake: Rear wheel spring type, MGM TR-TS Series or equal – severe service spring brakes
- 8.16.5.1 Parking brake to provide modulated emergency braking via the foot valve in the event of a rear service system failure.
- 8.16.6 Air dryer with heater **minimum 20 inches above road surface**. Bendix AD-9 or equal with spin on desiccant cartridge or equivalent. Installation made in concurrence with the air compressor manufacturer's recommendations.
- 8.16.6.1 All electrical connectors for drain valve and air dryer to be covered with heat shrink material or have sealed connections.
- 8.16.7 Manufacturer's standard air tanks for service brakes; auxiliary tank for parking brake.
- 8.16.8 Low air pressure warning light and buzzer
- 8.16.9 Rear service brake chambers and spring brake chambers mounted to provide adequate clearance for tire chains and backing into bituminous paving machines. Factory installation, only.
- 8.16.10 Brake dust covers to be installed on all wheels
- 8.16.11 Unit to be equipped with hand control valve, tractor protection valve, with provisions for installation of glad hands at rear of truck to enable unit to pull air brake operated equipment trailer

8.17 Tires and Wheels:

8.17.1 **The truck shall be equipped with hub piloted steel disc wheels for tubeless tires.**

8.17.2 The wheel end to be equipped with outboard cast brake drums, and 15 degree tubeless steel wheels, hub piloted, 10 hole - 285.75mm bolt circle with 22mm two-piece flange nuts.

8.17.3 Front:

8.17.3.1 Wheels:

22.5 x 9.0, 10 hole - 285.75mm bolt circle with 220mm bore, tubeless steel disc wheel rated at 10,000 lbs. **at a maximum inflation pressure of 130 PSIG.**
Accuride part number 29039 or equivalent

8.17.3.2 Tires: 31580R22.5 - 20 ply – (10,200 weight rating)

8.17.4 Rear:

8.17.4.1 Wheels:

22.5 x 8.25, 10 hole - 285.75mm bolt circle with 220mm bore, tubeless steel disc wheel rated at 7,500 lbs. **at a maximum inflation pressure of 130 PSIG.**
Accuride part number 28828.

8.17.4.2 Tires: 11R22.5H

8.17.4.3 **The dual rear wheel/tire assembly shall have clearance between the tires, which permits the use of dual tire chains.**

8.17.5 Wheel-Guard Separators

8.17.6 Tires (No substitute. **All tires shall be radials.**)

<u>Manufacturer</u>	<u>Front Tire</u>	<u>Rear Tire</u>
Goodyear	G-291	G-244 MSD or G282
Michelin	PILOT XZY-1	XDY-1

8.18 Steering:

8.18.1 Power steering: Dual integral or single integral type hydraulic power steering with right wheel power-assist cylinder.

8.18.2 Steering system: (flow, pressure, relief valve, etc.) To be selected considering the full front -GVWR axle loading. Ross or Sheppard gear assembly.

8.18.3 Hydraulic supply pump: Vane type or roller type with sufficient oil flow to permit one (1) steering wheel revolution per second with front axle loaded to rated capacity, with plow on, in a "park" condition. Vickers V-20, Eaton or Borg Warner.

- 8.18.4 The pump should not be the integral filter type unit.
- 8.18.5 Power steering reservoir: "Remote mounted", **minimum 2 quart capacity**, incorporating a filter which is easy to remove and replace.
- 8.18.6 The remote filter referenced above to be factory mounted, certified, and engineering approved in conjunction with the appropriate pump.
- 8.19 Unit shall include all other features considered as standard equipment but not specifically addressed above.**
- 8.20 Paint: (See enclosed diagram for color reference) - The unit should be painted as described:
- 8.20.1 Cab exterior and interior: Manufacturers standard white
- 8.20.2 Grille: Manufacturer's standard grille paint similar to silver or aluminum in color. Grilles made from bright finish or bright plated material do not require painting.
- 8.20.3. Wheel paint shall be topcoat painted with TGIC Polyester Powder Paint MSD-82008 High Gloss Gray or equal applied over Cathodic Electro-Disposition Gray Primer or equal. (Preferred to be powder coated but shall be gray top coat)**
- 8.20.4 Manufacturer's standard plant procedures for cleaning, degreasing, preparing, priming and painting are sufficient to meet the requirements for painting of cab (white). **Cab will not be painted white over top another finish color.**
- 8.20.5 The Department reserves the right to view larger paint samples after award of contract and the right to require subtle color changes in both the blue and white paint. Such changes, if any, **will only be used for selecting a suitable paint color to match the WVDOH logo.**
- 8.20.6 In order to test the adhesive quality of the paint, the DOH may, at its option, require that the vendor measure adhesion by the criteria set forth in ASTM D3359-74, Method B. A rating of less than 4 on this test would be deemed unacceptable.
- 8.21 Detail/Decorative Stripes with Logo:
- 8.21.1 Width: to be 4 inches
- 8.21.2 WVDOH logo (to be supplied by WVDOH) is attached (black and white copy) and is approximately 7 inches tall by 7 inches wide. Area behind logo and within ½ inches

of logo is not to be striped. Stripes should be cut to follow contour of logo, in lieu of straight cut.

- 8.21.3 Striping material to meet the requirements of ASTM D4956-91 Type V sheeting, a super high-intensity retroreflective sheeting consisting of microprismatic retroreflective elements. **The conspicuity sheeting must meet the requirement of NHSTA, DOT, 49CFR, Part 571 Federal Motor Vehicle safety standards for conspicuity sheeting and be "DOT approved".**
- 8.21.4 The sheeting for both applications above should not be more than .0008 inch thick having approximately 47,000 microprisms per square inch and shall come with an aggressive high tack pressure sensitive adhesive, reflexite or equal.
- 8.21.5 Upper stripe color: Dark Blue
- 8.21.6 Lower stripe color: Light Gold
- 8.21.7 Bidder should consult with the WVDOH on proposal for striping before inspection of pilot model.
- 8.21.8 Bidder should attach proposed paint plan with this bid. It should include chips or samples of proposed paints as well as a proposed striping detail on a cab silhouette sheet. Bidder may modify attached striping plan to fit his particular cab shape.
- 8.22 Vendor must certify that the unit offered will meet or exceed the "Occupational Safety and Health Act of 1970" and subsequent amendments.**
- 8.23 Advertising: No visible decals or nameplates or painted on names representing the manufacturer or model number or trademark should appear on the exterior of the unit. Logos created through the stamping or casting process of manufacture are acceptable.
- 8.24 Preventive Maintenance and Operator's Training School
- 8.24.1 Manufacturers and/or dealers will be required to stage a thorough seminar on the subjects Preventive Maintenance and Operator Training. The seminar should be held at the Equipment Division.
- 8.24.2 To make the program complete, we need, in addition to the operating and service manuals, booklets and pamphlets explaining the Preventive Maintenance and Operator Training procedures to be used by the operators of this equipment. Must include such things as daily pre-start, inspection procedure, service schedule and routine maintenance required, safety precautions, etc.
- 8.24.3 The successful vendor shall furnish all training aids; i.e. videos, projectors, etc., required in conducting the training.**

9.0 SPECIFICATIONS - Dump Body

The dump body shall have a minimum two (2) year basic bumper to bumper parts and labor warranty included.

- 9.0.1 **Dump body capacity to be minimum of 13 cu. yd. water level**
- 9.0.2 Sideboard pockets and tailgate height should provide additional capacities of 2 - 5 cu. yd.
- 9.0.3 Front body bulkhead to be 3/16 inch AR 400 steel with **minimum 190,000 PSI yield strength**
- 9.0.4 Rear corner post to be full depth one-piece construction from top of tailgate to bottom of rear bolster.
- 9.0.5 Rear bolster to be one piece, full width
- 9.0.6 Four (4) spreader strap retainers to be welded to both sides of body inside for spreader mounting.
- 9.0.7 Cab shield full width of body and have sufficient clearance to ensure shield will not hit exhaust when dumping on uneven terrain. Stack clearance on chassis to be chassis supplier responsibility.
- 9.0.8 Two (2) front frame mounted tow hooks or eyes.
- 9.1 Dimensions:
 - 9.1.1 Inside length of body not to exceed 174 inches
 - 9.1.2 **Inside width: 86 inches minimum**
 - 9.1.3 **Outside width: 96 inches maximum at rub rail**
 - 9.1.4 Basic side height: 42 inches (measure from floor to top rail)
 - 9.1.5 Tailgate height: 54 inches (measure from floor to top of tailgate)
 - 9.1.6 Body overhang: 10 inches - 18 inches (measure from center of hinge pin)
 - 9.1.7 Cab protector: 24 inches approximate with adequate clearance for cab mounted air horns
 - 9.1.8 Cab protector to be sloped rearward for drainage purposes

9.2 Construction of the dump bed sides, front, head, and tailgate shall conform to the following minimum specifications:

9.2.1 Floor: 1/4 inch minimum AR400 190,000 PSI yield strength steel with 45 degree knee brace welded to floor. The body shall be crossmemberless type (no crossmembers)

9.2.2 Sides: 10 Gauge minimum AR400 190,000 PSI yield strength steel thickness

9.2.3 Tailgate Plate: 3/16 inch minimum AR400 190,000 PSI yield strength steel

9.2.4 Top Rail: 3/16 inch thickness

9.2.5 Bottom Rail: 3/16 inch thickness

9.2.6 Cab Protector: 10 Gauge

9.2.7 Longitudinal: 8 inch x 13 lb, ft, I-beams

9.3 All welding inside the dump body should be continuous, not skip welded. All rails and posts to be continuous welded and completely closed.

9.3.1 Seven (7) gauge Grade 50, 4 3/4 inch x 12 inch full depth rear corner posts are tied to an eight (8) inch formed channel rear apron. This joint is further reinforced with a 1/4 inch plate which helps prevent flexing in this critical area and strengthens latch assembly.

9.3.2 Cab protector sides, formed with gussets, should extend forward approximately 24 inches. Clearance above highest point of cab should be three (3) inches minimum.

9.3.3 One (1) horizontal side brace, weld on, dirt shedding sloped side brace connected to front and rear corner posts.

9.3.4 All seams welded solid.

9.4 Hydraulic Hoist: Shall be Telescopic Hoist with internal dog house of 13 inches maximum.

9.4.1 Shall be Trunnion Mount to bottom of dump body, not at top of doghouse

9.4.2 Telescopic hoist shall be no less than N.T.E.A. Class 90 double acting with 26 ton capacity

9.4.3 Single hoist cylinder to be trunnion mount

- 9.4.4 Hoist cylinder shall have three (3) stages with approximately 140 inches of stroke with a five (5) inch diameter first stage at bottom. No inverted cylinder permitted - Part number MALHOIT CS-140-5.5-3 or equal.
- 9.4.5 The cylinder shall have wear and corrosion resistant nitrided cylinder tubes.
- 9.4.6 There shall be a minimum two (2) year cylinder warranty.
- 9.4.7 A five (5) degree oscillating cylinder collar shall protect the cylinder against inside stress with replaceable greaseless composite bushings at collar pivots.
- 9.4.8 The body shall have 6 inch x 8 inch x 1/2 inch formed angle rear hinge assembly installed in the truck chassis frame (no hoist subframe).
- 9.4.9 Two (2) inch 303 stainless steel hinge pins connecting to 2 1/2 inch hinge blocks using replaceable greaseless composite bushings for a minimal pin-to-bushing clearance.
- 9.5 The following features shall be included:
- 9.5.1 Warning light (bed raised) dash or console mounted.
- 9.5.2 Hydraulic oil level reading
- 9.5.3 Safety decals as required.
- 9.5.4 Mud guards, 10 gauge x 24 inches x 30 inches permanently attached in front of rear wheels.
NOTE: Rear mud flaps will be furnished by the DOH. Dump body vendor to align exhaust stack for bed clearance.
- 9.5.5 Shovel bracket (front of bed behind driver)
- 9.5.6 Gussets for 4 inch x 6 inch lumber (rough) located at front and rear posts and mid-rail 4 inch x 6 inch (rough) oak sideboards supplied and bolted through gussets.
- 9.5.7 Air operated tailgate shall be "pancake-type" tailgate release valve. The air chamber shall be Anchor Lock Model #24LS or equal with a spring-over-center latch. Pivot points include stainless steel bushings to reduce seizing.
- 9.5.8 Self cleaning safety platform to be non-skid material located on both sides of the dump body, consisting of 1 1/2 inch Bustin hole grip strut installed at bottom of body sides.

- 9.5.9 **OSHA approved backup alarm, electronic ambient, adjusts to background noise, 112 dba shock mounted at rear**
- 9.5.9.1 **OSHA approved body support, both sides**
- 9.5.10 **Slope outside of bottom bed rail**
- 9.5.11 **Unit to be equipped with 49,000 lb. capacity pintle hook (Holland PH760 or approved equal) centered between rear frame rails. Height from ground level to center line of pintle "eye" to be 32 inches.**
- 9.5.12 **Air Deflector: Hood mounted, blue or smoke. Deflector manufacturers standard width for the truck mode. Access to front end hood tilt handle to be avoided. Extra handle acceptable.**
- 9.6 **Lighting: Weather/shock resistant lights LED type with average amp draw between .045-.72. Grote/Truck Light or equal. All connections to have sure snap plug assemblies and epoxy sealed electronics to protect against shock and vibration.**
- 9.6.1 **All marker lights 2 ½ inch diameter flush mount sealed beam lights with integral reflector mounted in rubber base.**
- 9.6.2 **All lights shall be connected to chassis through a waterproof junction box located at rear of truck.**
- 9.6.3 **Rear lights to be shock mounted, recessed oval stop, tail, turn, and recessed oval back up lights to be mounted in back post. Strobe lights to be marked and switched from dash board location**
- 9.6.4 **Center rear I.D. lights three (3) located in truck chassis.**
- 9.6.5 **Two (2) amber oval LED strobe lights to be mounted at the front corners of the cab protector and two (2) amber oval LED strobe lights mounted at each outside corner of the cab protector. Strobe lights to be marked and switched at dash board location. Oval cutouts shall be precut by dump body manufacturer.**
- 9.6.6 **Auxiliary headlights (Signal Stat 640 wk or equal) for snowplowing application to be shock mounted on fender of unit. The successful vendor to consult DOH for mounting position and bracket dimensions.**
- 9.6.7 **Two (2) oval amber LED strobe lights mounted at top of rear corner posts right and left sides and to be switched in combination with cab protector strobe. (PSE amber, Model oulxslsih or equal). Oval cutouts shall be precut by dump body manufacturer.**

- 9.6.8 Angled hydraulic fittings to be mounted above the lights, and the vertical apron to be cut out above the frame to facilitate their placement.
- 9.6.9 Two (2) front frame mounted tow hooks
- 9.6.10 Lighted license plate bracket
- 9.7 A full length dirt shedding rub rail should extend along each side of the body, sufficient to cover the rear wheels.
- 9.8 There should be the following at the front of both sides of the body on posts:
 - 9.8.1 Full height fold down style ladder with 1 ½ inch Bustin style 16 inch rungs installed front of body, both sides.
- 9.9 Tailgate:
 - 9.9.1 The tailgate to be hinged at top with flush mount, 1/2 inch flame cut tailgate pivots, one (1) inch pork chop type off-set hardware to achieve maximum opening of tailgate, **but shall have provision for pivoting at bottom.**
 - 9.9.2 Top hinge channel should have removable, chain tethered keeper pins.
 - 9.9.3 Latching action at bottom of gate should be 3/4 inch latch hooks with 3/8 inch latch plates operable by the truck driver without leaving the truck cab.
 - 9.9.4 Gate to be self aligning
 - 9.9.5 Tailgate upper and lower latch pins should be 1 1/4 inch diameter hot rolled.
- 9.10 The design and strength characteristics of the entire dump unit to be such that the unit structural members and the hoisting system will not suffer any deformation, damage, or structural failure resulting from raising a distributed full payload.
- 9.11 The location of the dump box pivot point in relation to the rear end of the truck frame and in relation to the rear lip of the box floor **shall be such that the horizontal distance from floor lip to the rear end of frame to be approximately 18 inches.**
- 9.12 Bumper:
 - 9.12.1 The bumper to be formed out of 1/4 inch roll steel and weight approximately 10.20 lbs. per square foot
 - 9.12.2 Bumper face to cover all of truck frame (approximately 12 inches) with two (2) flanges of approximately 2.25 inches top and bottom.

- 9.12.3 Bumper to be approximately 94 inches overall width.
- 9.12.4 Bumper to be straight across front from centerline of truck chassis approximately 21 inches each side of centerline, making bumper straight approximately 42 inches long in center with ends swept back approximately 30 degrees and approximately 27 inches each side.
- 9.12.5 Upper and lower flanges to be cut and welded solid at point where bumper is bent and ground off smooth.
- 9.12.6 Bumper to be mounted by two (2) mounting angles bolted to front of truck frame with two (2) 5/8 inch bolts each side.
- 9.12.7 Mount angle to be approximately 1/4 inch x 3 inches x 8 inches long with four (4) 5/8 inch holes
- 9.12.8 Front bumper to be painted Martin Senour Dark Blue #82-5802 or similar
- 9.13 Under Body Tool Box:
 - 9.13.1 One (1) tool box to be mounted under body on right side frame rail.
 - 9.13.2 Tool box to be 18 inches high, 24 inches wide, 18 inches deep cradled by a heavy steel angle frame attached to the truck frame
 - 9.13.3 Construction should be of 14 gauge minimum A-60 galvanneal steel with all seams welded**
 - 9.13.4 Tool box to have a horizontal hinged fold down door
 - 9.13.5 Tool box door should have cable or chain to hold the door in a horizontal position.
 - 9.13.6 Tool box to have keyed latch of corrosion resistant hardware, automotive style weather stripping, and a drip rail over the door opening.
- 9.14 Load covering system to be electrically controlled:
 - 9.14.1 Electirc motor assembly to include 12 volt direct drive motor with forward and reverse action, cab mounted control switch, resettable circuit breaker..
 - 9.14.2 Pivot arm assembly should be constructed in a two (2) piece bent arm configuration of approximately 1 1/4 inch 14 gauge steel tubing.
 - 9.14.3 Bent arm extensions to be constructed of minimum of one (1) inch 14 gauge steel tubing.**

- 9.14.4 Rear cross to be constructed of approximately 1 1/4 inch 14 gauge steel tubing.
- 9.14.5 Pivot arm rests to be included.
- 9.14.6 Underbody spring to be extension spring approximately 12 inches in length attached to base of pivot arm and of body with articulating spring mounting bracket.
- 9.14.7 All steel components to be finished with manufacturer's recommended rust preventative system to include a **minimum of adequate primer and paint.**
- 9.14.8 Load covering system to be provided with **minimum of 18 oz. black vinyl tarp to fit dump body.**
- 9.14.9 Load covering system shall be supplied with all necessary hardware and delivered to the West Virginia Division of Highways as a complete and operational unit.**
- 9.15 Paint:
- 9.15.1 Dump body to be sandblasted and thoroughly degreased and cleaned prior to painting.
- 9.15.2 The dump body to be painted with one (1) coat of primer and two (2) coats of finish paint. Finish paint to be Martin Senour Dark Blue #82-5802 or similar. Dump box interior (payload area below rail height) need not be painted.
- 9.15.2.1 Front bumper: Martin Senour Dark Blue #82-5802 or similar (See drawing)
- 9.16 Detail/Decorative Stripes with Logo:
- 9.16.1 Tailgate and dump body sides to be outlined with red/silver pre-stripped conspicuity retroreflective weather resistant striping as specified at Sections 9.19.4 and 9.19.5. **Successful bidder shall consult with the WVDOH of proposed striping before review of pilot model.**
- 9.16.2 Bidder to describe proposed method of painting in the compliance report. Dump body, for specification location of handrails and handle, grip strut safety platforms, step and overall body characteristics.
- 9.16.3 WVDOH logo (to be supplied by WVDOH) is attached (black and white copy) and is approximately 7" tall by 7" wide. Area behind logo and within 1/2" of logo is not to be striped. Stripes should be cut to follow contour of logo, in lieu of straight cut. Striping shall be installed.

- 9.16.4 Striping material to meet the requirements of ASTM D4956-91 Type V sheeting, a super high-intensity retroreflective sheeting consisting of microprismatic retroreflective elements. **The conspicuity sheeting must meet the requirement of NHSTA, DOT, 49CFR, PART 571 Federal Motor Vehicle safety standards for conspicuity sheeting and be "DOT approved".**
- 9.16.5 The sheeting for both applications above should not exceed more than .0008 inch thick having approximately 47,000 microprisms per square inch and shall come with an aggressive high tack pressure sensitive adhesive, Reflexite or equivalent.
- 9.16.6 Bidder should attach his proposed paint plan with this bid. It should include chips or samples of proposed paints as well as a proposed striping detail on a cab silhouette sheet. Bidder may modify attached striping plan to fit his particular hood or cab shape.
- 9.16.7 Striping as specified shall be installed by successful bidder.** Bidder should consult with the WVDOH representative on proposal for striping before pilot review.
- 9.17 Dump body shall include all other features considered as standard, but not specifically addressed above.**
- 9.18 Vendor must certify that unit offered will meet or exceed the "Occupational Safety and Health Act of 1970" and subsequent amendments.**

10.0 SPECIFICATIONS – CENTRAL HYDRAULIC SYSTEM

The central hydraulic system described herein is to be designed to operate the following: A front mounted telescopic dump body hoist cylinder, a hydraulically driven integrated salt and abrasive spreader system requiring the simultaneous operation of two (2) hydraulic motors in two (2) different modes with conveyor reverse, a double acting snowplow lifting cylinder, a snowplow power angle system, plow balance system, and an auxiliary equipment drive circuit. **Provisions shall be made for a future add-on hydraulic driven pre-wet system.**

Pre-wet system:

Supplied spreader control must contain the ability to control a closed loop pre-wet system. System must operate using a flow meter feedback circuit. Controller software must allow for adjustability of pre-wet output by the operator, represented in gallons per ton. Information related to pre-wet application rate and total flow in gallons must be displayed on the screen while the pre-wet system is active. (A second control unit in the cab dedicated to pre-wet operation is not acceptable.)

The central hydraulic system shall have a minimum two (2) year basic bumper to bumper parts and labor warranty included.

10.1 Pump System:

- 10.1.1 Pump: Variable volume pressure compensated load sensing axial piston type.
- 10.1.2 Front mounting flange and main housing/case to be of cast iron construction. Inlet and outlet port section to be of high strength ductile iron with SAE split flange or orb type porting.
- 10.1.3 Suction port and associated plumbing shall be sized to allow for minimum inlet restriction between the pump and the suction port on the reservoir. Installation must comply with pump manufacturers allowable inlet condition specifications.**
***Suction plumbing shall be equal to or greater than pump inlet or suction size. Example: 32 size equals 2 inch fitting to the industry.**
- 10.1.4 Pressure port to be of the SAE split flange or ORB type side mounted for direct bolt mounting of solenoid shut down valve assembly.
- 10.1.5 Case drain and load sense signal ports to be of the SAE O-ring type. Case drain line taken directly to tank without passing through the return line filter.
- 10.1.6 Input shaft to have a minimum continuous torque rating equal to 200% of the imposed load when pump is operated at maximum engine rpm, maximum displacement and system pressure. Minimum SAE "C" keyed.**
- 10.1.7 Front-input shaft bearing of the heavy duty ball or roller type designed for high axial and radial loading. Rear shaft bearing of the high speed and load sleeve type design. Bearings to be fully lubricated by flooded case oil.
- 10.1.8 Ramp/swashplate supported by pressure lubricated bearings of the rocker cam or saddle type for high piston load support. Ramp angle positioning by means of dual servo control cylinders for rapid pump response and precise pump output control.
- 10.1.9 Adjustable load sense and high pressure compensator control valve assembly of the full cartridge or of bolt-on housing design for ease of replacement and repair.
- 10.1.9.1 System design and components to provide flow, pressure and performance requirements stated herein with a **maximum operating load sense differential pressure of 300 PSI and a maximum standby pressure of 350 PSI for maximum efficiency.** If pilot control shifted

valving is utilized in the system they are to be designed to be fully functional within this pressure range.

- 10.1.9.2 **High pressure compensator valve to be preset to limit the maximum pump output pressure to the maximum required operating pressure plus load sense differential and margin pressure to prevent premature de-stroking of ramp resulting in reduced or insufficient pump output.**
- 10.1.10 Pump Output: **Minimum 71cc/Revolution**
Shall be capable of providing hoist cylinder extension required
 Part number MALHOIT CS-130-5.5-3 or equal – 9.9 gallons to fully extend
 5 GPM flow rate – 120 seconds to raise
 10 GPM flow rate – 60 seconds to raise
 15 GPM flow rate – 40 seconds to raise
 20 GPM flow rate – 30 seconds to raise
 25 GPM flow rate – 24 seconds to raise
 30 GPM flow rate – 20 seconds to raise
 40 GPM flow rate – 15 seconds to raise
- 10.1.11 Reference Models: Rexroth A10VO Series 31, Parker P2 Series, Vickers PVH800 Discovery Series. These references are given to represent the overall quality of construction, design and performance of the pump to be supplied. It is the responsibility of the bidder to assure compliance with the written specifications herein.
- 10.1.12 **Name of manufacture and model number of proposed pump shall be submitted with bid documents.**
- 10.1.13 **Pump supplied shall be of a manufacture's standard product release and design.** Pump models proprietary to a specific bidder and/or OEM are not acceptable.
- 10.1.14 Pump driveline assembly to be of the keyed shaft design utilizing a 4 bolt driveshaft flange and matching drive yoke on the pump.
- 10.1.14.1 **Driveline to have a minimum continuous torque rating equal to 200% of the imposed load when pump is operating at maximum system requirements. Minimum Spicer 1310 series or equal.**

10.1.14.2 Dual journals and yokes to be incorporated to connect the pump shaft and engine drive flange with an angular misalignment no greater than six (6) degrees and not less than two (2) degrees.

10.2 Pump Shutdown System:

10.2.1 Normally closed, energize to open, solenoid operated control valve of the cartridge and manifold design to be directly bolted to pump pressure port. Solenoid electrical connection of the Packard "Weatherpack" type with "SO" cable wiring.

10.2.2 Valve controlled by a console mounted "Master On" switch with pilot lamp for normal system operation and by a float switch located in hydraulic reservoir to automatically shut off pump pressure port flow to all down stream functions in the event of low hydraulic oil level.

10.2.3 Pressure drop across valve not to exceed 40 PSI at 40 GPM flow when in the switched open position. Nominal valve rating of 50 GPM @ 3,500PSI.

10.2.4 SAE #6 gauge port equipped with Parker Hannifin Model PD361 diagnostic coupling nipple and protective cap provided for pump output pressure testing to be installed in valve manifold and within an easily accessible mounting position.

10.2.5 Valve to be designed to protect the pump from damage when the system is shut down at high pressure and flow operation.

10.2.6 Name of manufacture and model number of proposed valve shall be submitted with bid documents.

10.2.7 Central control console mounted audio alarm and warning lamp indicating pump pressure/flow shutdown to be provided.

10.2.8 The warning lamp to be a press-to-test light and incorporate a switching system into the automatic shutdown assembly to simulate low oil level, shut off pump output flow and test float switch wiring and connections.

10.2.9 A console mounted electrical override function switch to be provided to allow momentary operation of hydraulic functions in emergency situations.

10.3 Directional Control Valve Assembly:

10.3.1 Valve to be of the stacked section type and of closed center circuit design.

- 10.3.2 Each work section to be pressure and flow compensated with fully integrated load sense network. Flow output to be relative to spool travel with **preset maximum flow rate obtained at maximum spool stroke to provide feathering control of operated function.**
- 10.3.3 Dump body, snowplow lift and snowplow power angle sections to be of the manual cable shift type. Auxiliary circuit section to be of the electric solenoid shift type. Both ends of each section valve spool to be sealed with weather resistant caps or cable entry bonnets.
- 10.3.4 **Valve assembly flow capacity rating and pressure drop characteristics shall be sufficient to provide for the required pump output and circuit flow rates at the specified maximum load sense differential pressure settings.**
- 10.3.5 All valve ports to be of the SAE O-ring seal type and be of sufficient size to handle required section flow rates at stated load sense differential pressure.
- 10.3.6 **If valve supplied is pre-compensated design, a priority section shall be provided to allow flow raise in an over demand situation.** If system is post compensated, priority section is not required due to flow being divided across all operating valve sections.
- 10.3.7 Main pressure inlet relief valve provided to reduce system pressure shock loads. To be preset at pressure so as not to interfere with pump pressure compensator and to prevent premature relief opening at system high demand operation.
- 10.3.8 **If pilot pressure reducing valve is required for solenoid section control, design shall meet operating requirements as set forth in section 10.1.9.1. Pilot supply and tank venting to be internal within the valve assembly sections.**
- 10.3.9 Load sense network high pressure relief provided and preset to limit system maximum operating pressure. Set point to provide proper pressure margin to pump pressure compensator and high pressure relief valve as to prevent premature loss of required flow rates and pressure capability.
- 10.3.10 SAE #6 gauge port equipped with Parker Hannifin PD361 diagnostic coupling nipple with protective cap for load sense testing to be installed in an easily accessible location.
- 10.3.11 Dump body control section to be 4-way three position spring centered cylinder spool for operation of a double acting hoist cylinder.

- 10.3.11.1 Full flow workport relief valve installed in power up port. Set point to prevent operating pressure from exceeding hoist cylinder normal operating pressure rating.
- 10.3.11.2 Full flow workport relief valve installed in the power down port, set at 500 PSI to prevent full system pressure on down stroke.
- 10.3.12 Snowplow lift control section to be 4-way three position spring centered cylinder spool for operation of a double acting lift cylinder. (Thus, eliminating skip plowing.)
- 10.3.12.1 Adjustable flow control installed to limit downward speed of snowplow. Flow limiting control system preset for proper plow lift speed to be supplied to reduce over demand operation and to increase system efficiency. Flow limit to be determined at time of pilot model review.
- 10.3.13 Snowplow power angle control section to be 4-way three (3) position spring centered motor spool for operation of worm gear driven type reversing system.
- 10.3.13.1 Flow limiting control system preset for proper plow reversing speed to be supplied to reduce over demand operation and to increase system efficiency. Flow limit to be determined at time of pilot model review.
- 10.3.14 Plow Balance Valve:
- 10.3.14.1 **The hydraulic system shall be supplied with a plow balance valve**
- 10.3.14.2 **Valve shall be designed to offset a specific (adjustable) plow weight when activated.**
- 10.3.14.3 **Plow balance system must not alter the operation of any other hydraulic function** or have an adverse effect on the performance of other hydraulically operated equipment including:
- Wing Plow
 - Body Hoist
 - Plow Hoist or Angle
 - Spreader functions
- All normal operations of the plow lift/lower functions shall be maintained without additional tasks.**
- 10.3.14.4 **To guarantee safe operation of the vehicle, plow lift must be immediate.**

- 10.3.14.5 **If solenoid valve coils are used, then they shall have manual override capabilities if needed for continued use when coils fail.**
- 10.3.14.6 **Manifold valve shall include a pressure test point for use when checking balance pressures.**
- 10.3.14.7 **Pressure test point must be capable of tapping into the system at pressures of 5000 PSI.**
- 10.3.15 Auxiliary equipment drive circuit control section to be 3-way three position spring centered solenoid operated motor spool. This circuit to be separate and distinct from the spreader control system.
- 10.3.15.1 **Flow limiting control system preset to provide a maximum of 22 GPM at a system load pressure of 2200 PSI. Pump shall be capable of supplying this flow rate with engine speed of 1400 RPM.**
- 10.3.15.2 An inline mounted control valve may be supplied for this operation in place of directional control valve section. **If supplied, proper interconnections and venting of load sense network system shall be provided.**
- 10.3.15.3 Pressure line to be ¾" SAE 100R2 hose and manifold mounted at rear of chassis and equipped with Parker Hannifin SH6-62 quick disconnect coupler and protective metal plug. Mating nipple SH6-63 with protective cap to be supplied. Mounting location to be determined at time of pilot model review.
- 10.3.15.4 **Name of manufacture and model number of proposed directional and auxiliary circuit valves shall be submitted with bid documents.**
- 10.3.16 **Directional control valve assembly must be located in a combination tank/valve enclosure assembly to protect the hydraulic tank/valve from the elements.**
Reservoir (tank) to be approximately 40 gallon capacity.
- 10.3.17 Pre-Wet Circuit:
- 10.3.17.1 **A separate circuit shall be provided to control an add-on pre-wet system**
- 10.3.17.2 Hydraulic valve may be of the sectional type or of the cartridge style contained in a manifold.

- 10.3.17.3 **If a manifold type valve is to be supplied, it must be attached to the main valve assembly (not separate or “power beyond”).**
- 10.3.17.4 **All wiring to the pre-wet hydraulic circuit shall be provided as part of the system contained in this bid.**
- 10.3.17.5 **Wiring to the control console related to the rest of the pre-wet system (low level float, flow meter connection, etc.) shall be provided as part of the pre-wet package at the time of pre-wet system install (not as part of this bid).**
- 10.4 **Spreader Control Valve Assembly:**
- 10.4.1 Spinner and conveyor solenoid flow controls to be of the PWM proportional solenoid type and equipped with manual overrides. Overrides to be manually adjustable over operating flow range in the event of electrical system failure.
- 10.4.2 Flow control circuits to be pressure compensated and provide a spinner and pre-wet flow rate of 0-7 GPM and a conveyor flow rate of 0-15 GPM. **Pressure relief valve system shall limit circuits to a maximum of 2200 PSI.**
- 10.4.3 Load sense circuits to be connected to directional control valve network for proper pump control. **Design shall prevent improper high pressure load sense signal and pressure line loading when spreader valve is not in use and when spreader quick disconnects are uncoupled.**
- 10.4.4 PWM solenoid control supplied by microprocessor spreader control system. Solenoids to be capable of 100% PWM signal without failure.
- 10.4.5 Solenoid operated directional control valve and in-cab mounted electrical switch to operate spreader conveyor reverse required for front or rear material discharge selection to be provided.
- 10.4.6 Electrical switching and indicator light for spreader clogged indication to be provided.
- 10.4.7 **Name of manufacture and model number of proposed valve shall be submitted with bid documents.**
- 10.5 **Spreader Control System:**
- 10.5.1 Dual flow, ground speed oriented spreader control system to be of the closed loop microprocessor based type with nonvolatile control memory.

- 10.5.2 Automatic calibration and flexibility of programming are required.
- 10.5.3 **System must be capable of operation in ground speed oriented closed loop conveyor feed back, open loop, manual set, blast and unload modes.**
- 10.5.4 Automatic switchover with display indication from closed loop to open loop operation in the event of loss of feed rate sensor signal to be provided.
- 10.5.5 Control console digital readouts to be capable of displaying actual application rate, vehicle ground speed, distance of spread route driven and total quantity of material spread.
- 10.5.6 Programming and output cable connection for material and trip information printer and program uploading to be provided.
- 10.5.7 Control unit to be capable of accumulating such display information up to 999,999 miles and 999,999 tons of discharged material.
- 10.5.8 Console programming to be capable of selection, calibration and display of four (4) separate spread materials with independent application rates of each material capable of being set to fixed rates or **to rate increments of a preset maximum application rate.**
- 10.5.9 A variable digital access code lockout for application rate selection and for system operating parameters to be provided. A key switch will be acceptable.
- 10.5.10 **Backlighted switches and LCD screen shall be utilized for on-board programming and for display readout and application rate selection.**
- 10.5.11 **Material spread width to be selectable by no less than a ten (10) position switch with minimum and maximum spinner speed totally programmable through entire flow range. Spinner speed shall be capable of linking to ground speed for on-off control.**
- 10.5.12 **Display must enunciate error message and sound audio alarm when microprocessor system detects any loss of control or accuracy.**
- 10.5.13 **System shall be fully functional at time of delivery.**
- 10.5.14 Truck speed sensor to be compatible with type of speedometer drive system \ supplied on chassis.
- 10.5.15 A built-in ground speed simulator to be provided either internal to the control or located in the control console.

- 10.5.16 **All components required for proper installation and operation of control system onto truck and spreader units must be supplied.**
- 10.5.17 **Name of manufacture and model number of proposed control system shall be submitted with bid documents.**
- 10.6 Central Control Console:
- 10.6.1 To be mounted between seats within easy access of the driver.
- 10.6.1.1 Warning light (bed raised) to be control console mounted
- 10.6.2 **All wiring, valve control cables and electrical harness entry into cab and console shall be sealed with grommets.**
- 10.6.3 Remote control valve levers to be console mounted. All levers to be clearly marked as to their function and operation.
- 10.6.3.1 Remote control levers to operate push-pull type cables with .250" diameter stainless steel rod ends.
- 10.6.3.2 Inner cable member to be 18-8 stainless steel armor wrapped construction with a low resistance nylon liner and polyethylene covered tempered steel wire conduit.
- 10.6.3.3 **Cable to valve connection shall be of the weather resistant bonneted type.**
- 10.6.3.4 **Hoist control lever must be OSHA 1926.601(b)(11) compliant (Hoist interlock).**
- 10.6.4 Central control console or dash mounted rocker switches with indicator lamps to be provided for strobe lights, spreader light and plow lights isolated from all hydraulic system control circuits.
- 10.6.4.1 All interconnections and cables to be installed and ready for operation.
- 10.6.4.2 Hydraulic system automatic shutdown system and control switching to be relay controlled.
- 10.6.4.3 Relay(s) to be mounted within the cab.
- 10.6.4.4 An access plate to internal wiring to be provided.

10.7 Hydraulic Reservoir and Valve Enclosure Assembly

- 10.7.1 Tank/valve enclosure to be flex mounted to the chassis frame rail.
 - 10.7.2 **Tank to be constructed of seven (7) gauge 304 stainless steel minimum.**
 - 10.7.3 Tank equipped with a combination oil level sight glass and thermometer.
 - 10.7.4 Tank to be equipped with a ten (10) micron filler/breather cap with removable five hundred (500) micron strainer.
 - 10.7.5 An internal steel baffle to be provided within the tank.
 - 10.7.6 **Tank to be stenciled (letters minimum 1 ½ " high) "Hydraulic Oil"**
 - 10.7.7 Tank level switch connection to be "SO" type wiring and mounted within the tank/valve enclosure to protect it from the elements.
 - 10.7.8 **Pump supply suction port to be minimum 2" NPT and system return port a minimum 1 ¼" NPT.**
- 10.8 Filtration:
- 10.8.1 Manufacturers standard filtration to adequately protect the hydraulic system from damage
 - 10.8.2 Return line filter to be isolated from reservoir by a full flow non-restrictive type quarter turn brass ball valve if filter is not installed in the reservoir.
 - 10.8.3 Each filter to be equipped with a differential pressure switch to indicate filter clogged condition by means of a console mounted indicator lamp.
 - 10.8.4 **One (1) extra replacement filter for each assembly shall be provided for each truck.**
 - 10.8.5 Filter assemblies to be positioned as close to reservoir as possible and in an easily accessible service location.
- 10.9 Hoses and Fittings:
- 10.9.1 Each hose assembly (hose with hose ends), except for suction hose, to be fitted with JIC swivel connections on ends where connection to system component is made.
 - 10.9.2 All pressure line hoses are to meet or exceed SAE Specification 100R2 and to be equal to Gates high pressure hose, type C2AT for sizes up to and including 1" ID.

- 10.9.3 Suction hose to be 2" nominal ID and meet SAE Specification 100R4, braided fiber, spiral wire reinforced, rubber covered hose with replaceable bolt-on type fittings.
- 10.9.4 All hydraulic hoses to be fully cleaned on interior, installed and ready for operation.
- 10.9.5 Grommets to be used when routing hoses through steel bracketing or frame members. (Refer 10.9.6)
- 10.9.6 **Snap-Tite quick disconnects (manifold mounted) shall be supplied for the spinner 1/2 inch pressure and return lines.** Use of iron or galvanized iron pipe for fittings and connectors is not acceptable.
- 10.9.7 All fittings and connectors to be of the steel type designed for high pressure hydraulic system use.
- 10.9.8 Pipe thread ported components and connectors to be used only when the specific component is not available with SAE or JIC porting.
- 10.9.9 All pipe thread connectors used are to be coated with liquid Teflon pipe sealer prior to assembly. Use of Teflon tape is not acceptable.
- 10.9.10 Hoses run to the front of truck chassis for snowplow functions to be manifold mounted behind the front bumper with sufficient access for pump service and snowplow hitch installation. Successful vendor should contact WVDOH representative for location prior to pilot model review.
- 10.9.11 Snowplow lines to equipped with complete 1/2 inch "VH" series Snap-tite quick disconnects (coupler and nipple to be supplied) and metal caps and plugs.
- 10.10 **Any items not specifically stated herein but necessary for proper system installation and operation shall be supplied and shall comply with recommended hydraulic industry standards.**
- 10.11 **Vendor shall be responsible for initial servicing and pre-testing of hydraulic system which includes the following:**
- 10.11.1 Initial fill of reservoir with a high grade 32AW hydraulic fluid to approximately forty (40) gallon level, to be marked on sight glass.
- 10.11.2 Start-up and initial run of hydraulic system, checking for leaks, excessive heat, system efficiency, etc. Vendor will be responsible for replacing any defective component. Vendor will not be responsible for initial test of

plow circuits if equipment is not available to do so; however, vendor will be responsible for any defects discovered at time of plow installation.

- 10.11.3 Refill reservoir to the forty (40) gallon operating level.
- 10.12 Any hydraulic lines located within 10" of exhaust system to be metal lines and insulated.
- 10.13 **Detailed component specifications, product literature, system component layout drawing with bill of materials and full functional hydraulic system schematics, in accordance with JIC and ANSI-Y32 format, shall be submitted with bid documents.**
- 10.14 **Successful vendor shall provide WVDOH with complete list of all filters required for normal maintenance on proposed unit.**
- 10.15 **With each purchase order, a minimum of three (3) one (1) day training sessions covering the operation, maintenance, trouble shooting and calibration/programming of the hydraulic system and spreader controls to be provided by the successful bidder at an Equipment Division facility.**

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
EQUIPMENT DIVISION

BIDDER'S EVALUATION REPORT

PROCUREMENT SPECIFICATIONS FOR OPEN END CONTRACT
NO. 377-2-G
NOVEMBER 2010

64,000 GVW CAB AND CHASSIS, DUMP BODY, AND HYDRAULIC SYSTEM

NOTE TO BIDDER: Procurement Specification No. 377-2-G, Paragraph 2.0 recommends the completion and submittal of this Report with your bid. Purpose of this Report is to enable the West Virginia Division of Highways Evaluation Committee to make full and fair evaluation of the bid. Addendums in order, along with a summary of exception as a separate attachment, should be with Bidder's Evaluation Report. FAILURE TO SUBMIT THIS REPORT, COMPLETE IN ITS ENTIRETY, MAY SUBJECT THE BIDDER TO DISQUALIFICATION.

Reference Requisition No.: _____

Bidder's Name: _____

Address: _____

Telephone Number: _____

Years Bidder has been registered to do business with the State of West Virginia: _____ YRS.

Years Company has been an authorized dealer for proposed unit: _____ YRS.

X3.2 Have you complied with all mandatory specifications? _____ YES _____ NO.

X4.2 DELIVERY:

X4.2.1 Delivery date of completed representative unit: _____ Calendar Days After
Receipt of Purchase Agreement

X4.2.2 Delivery date of balance of completed units: _____ Calendar Days After Receipt of
Purchase Agreement

X5.0 AWARD CRITERIA;

X5.1 Price per unit:

_____ per unit

X6.0 SPECIFICATIONS - GENERAL

X6.1 Manufacturer, model, series, and date of manufacture of proposed unit:

Is descriptive literature, fully describing proposed unit attached to your bid? _____ YES _____ NO

If not, why? _____

X6.2 Will the required number of service manuals, and complete parts list be delivered to the Equipment Division at Buckhannon upon completion of delivery of total units?

_____ YES _____ NO

Will the required Equipment Preventive Maintenance Form (Section X6.2 of Bidders Evaluation Report) be provided upon inspection of the pilot unit?

_____ YES _____ NO

X6.2
2-10-00

EQUIPMENT PREVENTATIVE MAINTENANCE QUESTIONNAIRE

THIS FORM MUST BE COMPLETED IN ITS ENTIRETY BY SUCCESSFUL BIDDER OR MANUFACTURER'S TECHNICAL REPRESENTATIVE PRIOR TO DELIVERY OF PILOT MODEL TO THE WVDOH.

DESCRIPTION: _____ MAKE: _____

MODEL: _____ YEAR: _____ PURCHASE AMOUNT: _____

ENGINE: MAKE: _____ MODEL: _____ FUEL TYPE: _____

HORSEPOWER: _____ CYLINDER: _____ ENGINE SERIAL: _____

COOLING SYSTEM CAPACITY: _____

BELTS: DESCRIPTION: _____ PART NUMBERS: _____

GVW: _____ AXLE CAPACITY: FRONT: _____ REAR: _____

TIRES: FRONT MAKE & SIZE: _____

REAR MAKE & SIZE: _____

DIMENSIONS OF UNIT: LENGTH: _____ WIDTH: _____ LENGTH: _____

VENDOR CONTACT PERSON: _____ PHONE: _____

PARTS:

BATTERY MAKE: _____ MODEL: _____ CCA: _____

TOP OR SIDE POST: _____ DIMENSIONS: LENGTH _____ WIDTH _____ HEIGHT _____

SPARK PLUGS OR FUEL INJECTORS MAKE: _____ PART #: _____

FUEL PUMP OR INJECTION PUMP MAKE: _____ MODEL: _____

ALTERNATOR MAKE: _____ PART #: _____

STARTER MAKE: _____ PART #: _____

TURBO CHARGER MAKE: _____ PART #: _____

TRANS. MAKE: _____ MODEL: _____ AUTO/MANUAL: _____

HYDRAULIC PUMP MAKE: _____ MODEL: _____

FILTERS	MAKE	PART NO.	LUBRICANT	MANUFACTURER TYPE
OIL	_____	_____	ENGINE	_____
AIR INNER	_____	_____	TRANSMISSION	_____
AIR OUTER	_____	_____	POWER STEERING	_____
FUEL PRIMARY	_____	_____	HYDRAULIC	_____
FUEL SECONDARY	_____	_____	DIFFERENTIALS	_____
COOLANT	_____	_____	BRAKE FLUID	_____
HYDRAULIC	_____	_____	COOLANT	_____
OTHER	_____	_____	OTHER	_____

X6.3 TRAINING:

Will training seminar be conducted on Preventive Maintenance, Operator and Mechanic Training
_____ YES _____ NO

Will you conduct training with each purchase order against this open end contract?
_____ YES _____ NO

Will training be conducted within 2 working days from the delivery of the pilot unit on the individual purchase order?
_____ YES _____ NO

If NO, explain time frame _____

Will an Operator's Manual be furnished directly to Training Academy prior to the delivery of the pilot?
_____ YES _____ NO

X6.4 If you are the successful vendor, will you furnish all training aids, i.e., videos, projectors, required in conducting the training?
_____ YES _____ NO

X6.4.1 Will all manuals, booklets, etc. explaining preventive maintenance, operator procedures, and service schedule be delivered with each unit?
_____ YES _____ NO
If NO, explain _____

X6.5 WARRANTY AND SERVICE POLICY

Will the warranty and service you provide comply with all areas as stated in Section 6.5 of specifications
_____ YES _____ NO

Is warranty literature attached? _____ YES _____ NO

Is a minimum two (2) year bumper to bumper basic parts and labor warranty excluding abuse and normal wear items included?
_____ YES _____ NO

Describe:

X6.6 EVALUATION COMMITTEE REQUIREMENTS

Is all component specifications, product literature, component models provided for Evaluation Committee bid determination? YES NO

X6.7 Will all parts, equipment, accessories, material, design and performance characteristics not specified herein, but which are necessary to provide a complete unit, be furnished with the unit and conform in strength, quality of material, and quality of workmanship to those which are advertised and provided to the market in general by the unit industry?
 YES NO

X6.7.1 Are all parts and accessories adequate and regularly supplied as standard to be included except those which may be duplications of specifications herein, and except these by specification are not to be furnished?
 YES NO

X6.7.2 Are all standard safety features that are required by Federal and State statutes of law included?
 YES NO

X7.0 SPECIFICATIONS OF THE QUOTED UNIT

The bidder should complete the following schedule in order for the Division to compare the actual bid unit to the specifications. Should the bidder except a requirement, then such exception may be only on the basis that such feature is not offered by the manufacturer. The Division will have the sole discretion as to whether the bidder's substitution meets the requirements of the specifications.

X8.0 SPECIFICATIONS - CAB & CHASSIS

Manufacturer: _____ Model: _____

X8.1 GVWR rating: _____ lbs.

X8.2 Cab to axle dimension: _____ inches usable

X8.2.1 After frame length _____ inches

X8.3 Wheelbase: _____ inches
Is it a set forward axle design for snowplow application for various plows
 YES NO

X8.3.1 Are the wheelbase and CA dimensions adjusted to provide optimum legal weight distribution
 YES NO

- X8.3.2 Bumper to back of cab: _____ inches dimension excluding frame extension
- X8.4 Frame: Will the manufacturer provide a frame that meets or exceeds all Federal requirements for GVWR specified that extends forward beyond the grille a minimum of 14 inches.
_____ YES _____ NO
- X8.4.1 Frame material: _____ PSI yield strength
Is frame extension "parent rail" material _____ YES _____ NO
- X8.4.2 R.B.M. _____ Ins./Lb. Per rail
Have you submitted shop drawings pertaining to frame construction and frame extension
_____ YES _____ NO
- X8.4.2.1 Where engine and radiator adjustments are required _____ in lb. per rail
(RBM)
- X8.4.3 Main frame and any required liners straight channel _____ YES _____ NO
Or offset channel _____ YES _____ NO full length
- X8.4.4 Is minimum frame RBM approved by manufacturers Engineering Department
_____ YES _____ NO
- X8.4.5 Does front frame accommodate the Department's standard hydraulic PTO shaft and pump, and the plow frame
_____ YES _____ NO
- X8.4.5.1 Easy service accessibility _____ YES _____ NO
- X8.5 Cab: Is cab manufacturers standard steel, aluminum, and/or fiberglass _____ YES _____ NO
Is hood tilt hood and fenders either steel and/or fiberglass and provided with rear air bag suspension
_____ YES _____ NO
- X8.5.1 Cab door locks, both doors, keyed alike _____ YES _____ NO
- X8.5.2 Dual sun visors _____ YES _____ NO
- X8.5.3 Arm rests, both sides _____ YES _____ NO
- X8.5.4 Seats: Fully adjustable air ride high back with head rest, cloth covered both left hand and right hand sides
_____ YES _____ NO
- Clearance between seats: _____ inches
- X8.5.5 Floor Mats: Rubber floor mats throughout cab area with non-absorbent backing under the mats
_____ YES _____ NO
- X8.5.6 Turn Signals: Manufacturers standard with hazard warning switch
_____ YES _____ NO
- X8.5.7 Heater and defroster: Fresh air type, heaviest duty _____ YES _____ NO

- X8.5.8 Windshield wipers and washers: Manufacturer's heaviest duty "artic type" with intermittent feature with manufacturers largest reservoir filled with antifreeze type solvent
 _____ YES _____ NO
- X8.5.9 Instruments: All instruments dash mounted except where specified
 _____ YES _____ NO
- X8.5.9.1 Coolant, oil pressure gauges, to have both dial type readout and either an audible or visual alarm to warn operator when safe operating conditions are exceeded
 _____ YES _____ NO
- X8.5.9.2 Voltmeter or ammeter _____ YES _____ NO
- X8.5.9.3 Engine RPM tachometer _____ YES _____ NO
- X8.5.9.4 Speedometer with odometer _____ YES _____ NO
- X8.5.9.4.1 Provisions for dual speedometer leads made available**
 _____ YES _____ NO
- X8.5.9.5 Primary air pressure gauge _____ YES _____ NO
- X8.5.9.6 Auxiliary air pressure gauge _____ YES _____ NO
- X8.5.9.7 Air filter manufacturers heaviest duty dual element type that meets all requirements of extended engine warranty
 _____ YES _____ NO
- X8.5.9.8 If unit is equipped with front air intake, is a cable control valve to enable operator to divert air intake to engine compartment during plowing application provided**
 _____ YES _____ NO
- X8.5.9.9 Air filter restriction indicator gauge dash mounted** _____ YES _____ NO
- X8.5.9.10 Engine hourmeter (controlled by engine operation, not by key switch)
 _____ YES _____ NO
- X8.5.9.11 Fuel level reading _____ YES _____ NO
- X8.5.9.12 Parking brake to be dash controlled with indicator light _____ YES _____ NO
- X8.5.9.13 Is the sound/weather insulation package the manufacturer's best for proposed cab
 _____ YES _____ NO
- X8.5.9.14 Outside temperature control with in cab digital read out and accomplished without use of mirrors**
 _____ YES _____ NO
- X8.5.10 Rearview Mirrors:
- X8.5.10.1 Mirrors are West Coast type power adjustable with convex spot mirror
 _____ YES _____ NO
- Size: _____

- X8.5.10.2 Both mirrors heated type with stainless steel YES NO or Composite YES NO or aluminum YES NO hardware, heads, and fasteners
- X8.5.11 Grab Handle: Right hand and left hand sides, internal of external mounting to rear of door opening YES NO
- If inside handles are featured, one (1) outside, left mounted grab handle with non-slip insert for bed aggregate inspection is furnished YES NO**
- X8.5.12 Air horns, with snow shields, cab mounted with adequate clearance for future installation of body cab shield YES NO
- X8.5.13 Unit includes lockable hand operated throttle control or electronic control for idle up and idle down for hydraulic flow rate YES NO
- X8.5.14 Manufacturer will provide for stationary grille or grille with cutout area to allow tilt hood to clear snow plow mount YES NO
- Stone/gravel guard provided YES NO
- X8.5.15 Air conditioning: Manufacturers standard package for model bid. "APADS" to specified air condition system YES NO
- X8.5.16 Radio: AM/FM stereo with weatherband radio feature YES NO
- X8.5.17 Glass: Manufacturers tinted safety glass (all locations) YES NO
- X8.5.17.1 Dual power windows YES NO
- X8.5.18 Manufacturers engine cover or dash mounted extended two (2) cup drink holder YES NO
- X8.5.19 Front mudflaps manufacturers standard for unit YES NO
- X8.5.20 Emergency triangle warning kit, with hold down fastened in cab YES NO
Manufacturers: _____ Part No. _____
- X8.5.21 Manufacturers tilt steering column with cruise control feature or provide locking hand operated throttle steering wheel _____ inches diameter YES NO
- X8.5.22 Fire extinguisher - rechargeable with vehicle mount. Mounted in cab for easy and quick access YES NO
Manufacturer: _____ Part No. _____
- X8.5.23 **Accessories not indicated above but advertised as standard equipment provided YES NO**

X8.5.24 If successful vendor, will you provide complete list of all filters required for normal maintenance _____ YES _____ NO

X8.6 Engine: Has engine manufacturer made provisions for front mounted hydraulic pump to crankshaft _____ YES _____ NO

X8.6.1 Is engine diesel powered _____ YES _____ NO _____ Liter

Peak HP _____ @ _____ RPM Electronic Torque _____ lb. ft at _____ RPM

Is engine compliant and certified to meet the US EPA 2010 Emissions Standards without using Federal EPA credits _____ YES _____ NO

X8.6.1.2 One piece and waterproof electrical cable from heater to plug, location - left side under driver door _____ YES _____ NO

X8.6.1.3 In line fuel heater with thermostatically controlled by pass maintain #2 diesel fuel temperature above cloud point before diesel fuel passes through the filter _____ YES _____ NO

Manufacturer: _____ Model: _____

X8.6.1.3.1 Is engine fuel system equipped with primer pump _____ YES _____ NO

X8.6.1.4 Exhaust:
X8.6.1.4.1 Single vertical exhaust pipe with underbody muffler that will meet all Federal noise abatement requirements; exhaust to the passenger (right) side of unit _____ YES _____ NO

X8.6.1.4.2 Tail pipe shielded or insulated to protect personnel from burns when entering or exiting the cab _____ YES _____ NO

Shield 180 degrees to 360 degrees **and of non-rustable material such as stainless steel or aluminum** _____ YES _____ NO

Manufacturer: _____

X8.6.1.4.3 Exhaust pipe with rain cap or exhaust turn out _____ YES _____ NO

X8.6.2 Engine Brake:
Manufacturer: _____ Model: _____

X8.6.3 Engine components facing wheel areas, on both sides, and areas to the rear of wheels shielded by means of rubber skirts supported by easily removable steel rods _____ YES _____ NO

X8.7 Cooling System: The cooling system capable of maintaining engine temperature within the manufacturer's recommended range during continuous operation _____ YES _____ NO

- X8.7.1** The system incorporates a thermostat and bypass for warm up and filled with permanent type extended life or equal antifreeze rated to a -30 degree F or lower
 _____ YES _____ NO
- X8.7.2 Is the largest factory available engine cooling capacity compatible with engines and transmission referenced and for continuous high engine output under extreme temperatures and/or operating conditions due to prolonged snow plowing operations in low gears _____ YES _____ NO
- X8.7.3 Unit is fitted with provisions for visually monitoring coolant with necessitating removal of the cap from the radiator or expansion tank _____ YES _____ NO
- X8.7.4** Radiator mounting provides adequate clearance to facilitate the installation of a crankshaft driven PTO drive shaft _____ YES _____ NO
- X8.7.5** The distance between the extreme tip of the radiator fan blade and the centerline of the crankshaft _____ inches to insure adequate clearance for PTO drive shaft
- X8.7.6 Radiator screen guard to protect radiator from foreign objects _____ YES _____ NO
- X8.8 Fuel Tank:
- X8.8.1 Safety type aluminum fuel tanks per requirements of FMVSS _____ YES _____ NO
- X8.8.2 Single aluminum fuel tanks: _____ YES _____ NO Capacity (usable) _____ US gallons
 Frame mounted _____ YES _____ NO
- X8.8.3 Driver and passenger entrance steps - grated self cleaning safety step
 _____ YES _____ NO
- X8.8.3.1 All edges banded on the outer perimeter _____ YES _____ NO
- X8.8.3.2 Top of first step _____ inches above ground
- X8.8.4 System top draw and top return line _____ YES _____ NO
- X8.8.5** Does fuel system meet all 2010 emission standards _____ YES _____ NO
- X8.9 Electrical System:
- X8.9.1 Type: Manufacturer's 12 volt negative ground system with manufacturers radio interference suppression _____ YES _____ NO
- X8.9.1.1 Circuit breaker equipped in easily accessible location, weatherproof
 _____ YES _____ NO
- X8.9.2** Number of batteries: _____
- 2500 CCA heavy duty maintenance free batteries _____ YES _____ NO
- Reserve capacity: _____ minutes

- X8.9.3 Alternator capacity:** _____ AMP with internal regulator _____ YES _____ NO
- X8.9.4 Wiring:** Heavy duty hypalon type in heavy duty sheathing, bundled with lacing cords or non metallic tie straps _____ YES _____ NO
- X8.9.5 Lighting: Provisions made available for all required lighting on completed unit (Number, location, and color) to conform to WVMV Code** _____ YES _____ NO
- X8.9.6 Auxiliary snow plow/salt spreader lighting package:**
- X8.9.6.1 Provisions in left rear corner of cab for manufacturers approved wiring and weather proof disconnect plug to operate the following lights on truck mounted chemical spreader** _____ YES _____ NO
- Manufacturer and model:** _____
1. One sealed beam flood lamp _____ YES _____ NO
2. Left and right combination brake/turn and tail lights _____ YES _____ NO
3. One strobe warning light _____ YES _____ NO
- X8.9.7 Provisions are made for manufacture approved wiring and weatherproof disconnect plug in line six (6) pin connector with approximately three (3) foot "pigtail" to operate combination left and right turn/park lights/auxiliary headlights** _____ YES _____ NO
- Manufacturer and model:** _____
- X8.9.7.1 Provisions for weatherproof disconnect plug located at lower left front grille-bumper area** _____ YES _____ NO
- All wiring connections weatherproof with wiring encased in wire looms _____ YES _____ NO
- X8.9.7.2 7-way trailer connection light socket mounted at rear of truck frame** _____ YES _____ NO
- Manufacturer and model:** _____
- X8.10 Power Train Overview:**
Lubricants for front axle hubs and differentials, automatic transmission, transfer cases, and all rear differentials meet or exceed all appropriate MIL and SAE specifications for synthetic lubricants and have all plugs identified as synthetic or painted red _____ YES _____ NO
- X8.10.1 Transmission:** _____
Manufacturer transmission oil cooler _____ YES _____ NO
- X8.10.1.1 Does transmission torque capacity meet specified engine torque** _____ YES _____ NO

X8.11 Driveline:

X8.11.1 Manufacturer: _____ Model: _____

X8.12 Rear Axle:

X8.12.1 Manufacturer: _____ Model: _____

X8.12.2 Unit equipped with four (4) wheel dual reduction carriers equipped with driver controlled main locking differential in forward and rear axle that is manually controlled and **have traction control device via ABS system, ATC or equal** _____ YES _____ NO

Equipped with all wheel lock up 0-25 MPH driver controlled and above 25 MPH ATC will control _____ YES _____ NO

X8.12.3 Ratio: Does gear ratio allow vehicles to be capable of a top speed of 70 MPH _____ YES _____ NO

X8.12.4 Specify housing type _____

X8.12.5 Rear wheel seals: _____

X8.12.6 Drain plug, magnetic _____ YES _____ NO

X8.13 Front Suspension:

X8.13.1 Capacity at ground each front spring: _____ lbs.; total spring capacity _____ lbs.

X8.13.2 Front spring pins or bearings/bushing furnished with 360 degree grease grooves to insure adequate lubricant penetration _____ YES _____ NO

X8.13.3 Spring hangers heavy castings with sufficient pin and bearing surface to render trouble free service _____ YES _____ NO

X8.14 Rear Suspension:

Manufacturer: _____ Model: _____

X8.15 Front Axle:

X8.15.1 Capacity: _____ lbs.

X8.15.1.1 Front axle, drag links, and tie rods have grease zerks installed _____ YES _____ NO

X8.15.2 Heavy duty shock absorbers _____ YES _____ NO

X8.15.3 Front wheel seals oil lubricated type _____ YES _____ NO
Manufacturers: _____

X8.15.4 Adequate tire clearance at maximum turning angles _____ YES _____ NO

X8.16 Brakes:

X8.16.1 Type: Full air, with manufacturers ABS in compliance with most current FMVSS requirements

_____ YES _____ NO

X8.16.2 Compressor:

Manufacturer: _____ **Model:** _____ **Cubic ft.** _____

X8.16.3 Service Brake Size:

X8.16.3.1 Front: _____ inch x _____ inch

S Cam _____ YES _____ NO or power front disc brake system _____ YES _____ NO

X8.16.3.2 Quick change type single _____ YES _____ NO or

double anchor pin if drum type brakes are furnished _____ YES _____ NO

X8.16.3.3 Rear: _____ inch x _____ inch

S cam with quick change type single _____ YES _____ NO or
double pin _____ YES _____ NO

X8.16.4 Drum brakes have automatic slack adjusters and clearance sensing type only, with adjustment on application of brake _____ YES _____ NO

X8.16.5 Parking Brake: Rear wheel spring type _____ YES _____ NO

Manufacturer: _____ Model: _____ - severe service spring brakes

X8.16.5.1 Parking brake provides modulated emergency braking via the foot valve in the event of a rear service system failure _____ YES _____ NO

X8.16.6 Air dryer with heater above road surface: _____ inches

Manufacturer: _____ Model: _____ with spin on desiccant cartridge
_____ YES _____ NO

X8.16.6.1 All electrical connectors for drain valve and air dryer covered with heat shrink material or have sealed connections _____ YES _____ NO

X8.16.7 Manufacturer's standard air tanks for service brakes; auxiliary tank for parking brake
_____ YES _____ NO

X8.16.8 Low air pressure warning light and buzzer _____ YES _____ NO

X8.16.9 Rear service brake chambers and spring brake chambers mounted to provide adequate clearance for tire chains and backing into bituminous paving machines
_____ YES _____ NO

X8.16.10 Brake dust covers installed on all wheels _____ YES _____ NO

X8.16.11 Unit equipped with hand control valve, tractor protection valve, with provisions for installation of glad hands at rear of truck to enable unit to pull air brake operated equipment trailer
 _____ YES _____ NO

X8.17 Tires and Wheels:

X8.17.1 Is truck equipped with hub piloted steel disc wheels for tubeless tires
 _____ YES _____ NO

X8.17.2 Wheel end equipped with outboard cast brake drums, and 15 degree tubeless steel wheels, hub piloted, 10 hole - 285.75mm bolt circle with 22mm two piece flange nuts
 _____ YES _____ NO

X8.17.3 Front:

X8.17.3.1 Wheels:
 Size: _____
 10 hole - 285.75mm bolt circle with 220mm bore _____ YES _____ NO
 Tubeless steel disc wheel rated at 10,000 lbs. at a **maximum inflation pressure of 130 PSIG**
 _____ YES _____ NO

Manufacturer: _____ Part No. _____

X8.17.3.2 Tires:
 Size: _____ Ply: _____

X8.17.4 Rear:

X8.17.4.1 Wheels:
 Size: _____
 10 hole - 285.75mm bolt circle with 220mm bore _____ YES _____ NO
 Tubeless steel disc wheel rated at 7500 lbs. at a **maximum inflation pressure of 120 PSIG**
 _____ YES _____ NO

Manufacturer: _____ Part No. _____

X8.17.4.2 Tires:
 Size: _____

X8.17.4.3 Does the dual rear wheel/tire assembly have clearance between the tires, which permits the use of dual tire chains
 _____ YES _____ NO

X8.17.5 Wheel guard Separators
 _____ YES _____ NO

X8.17.6 Tires: radials _____ YES _____ NO

Manufacturer: _____ Front Tire: _____

Manufacturer: _____ Rear Tire: _____

X8.18 Steering:

X8.18.1 Power steering: Dual integral _____ YES _____ NO or
 single integral type _____ YES _____ NO hydraulic power steering with right wheel power assist
 cylinder _____ YES _____ NO

X8.18.2 Steering system:
Manufacturer: _____ Model: _____

X8.18.3 Hydraulic supply pump:
Vane type _____ YES _____ NO or roller type _____ YES _____ NO with sufficient
oil flow to permit one (1) steering wheel revolution per second with front axle loaded
to rated capacity with plow on, in a "park" condition _____ YES _____ NO

Manufacturer: _____ Model: _____

X8.18.4 Is the pump the integral filter type unit _____ YES _____ NO

X8.18.5 Power steering reservoir: Remote mounted _____ YES _____ NO

Capacity: _____ qt. incorporating a filter which is easy to remove and replace
_____ YES _____ NO

X8.18.6 The remote filter factory mounted, certified, and engineering approved in conjunction with the
appropriate pump _____ YES _____ NO

**X8.19 All features advertised by manufacturer as "standard features" provided if not specifically
addressed within _____ YES _____ NO**

X8.20 Paint:

X8.20.1 Cab exterior and interior color manufacturers standard white _____ YES _____ NO

X8.20.2 Grille: _____

X8.20.3 Wheel paint: _____

Power coated but gray top coat _____ YES _____ NO

X8.20.4 Describe proposed method of painting and prepping:

X8.21 Detail/Decorative Stripes with Logo:

X8.21.1 Width: _____ inches

X8.21.2 Will you comply with WVDOH logo area _____ YES _____ NO

X8.21.3 Does conspicuity striping material provided meet requirements of Section 8.21.3 through 8.21.8 of
specification section? _____ YES _____ NO

**X8.22 Does unit offered meet or exceed "Occupational Safety and Health Act of 1970"
_____ YES _____ NO**

X8.23 Does unit conform to the advertising guidelines _____ YES _____ NO

X8.24 Preventive Maintenance

X8.24.1 Will a preventative maintenance and operator's training seminar be provided
_____ YES _____ NO

X8.24.2 Will booklets and pamphlets be furnished to be used by the operators
_____ YES _____ NO

X8.24.3 Will you furnish all training aids; i.e. videos, projectors, etc. required in conducting the training
_____ YES _____ NO

X9.0 SPECIFICATIONS OF THE DUMP BODY

The bidder should complete the following schedule in order for the Division to compare the actual bid unit to the specifications. Should the bidder except a requirement, then such exception may be only on the basis that such feature is not offered by the manufacturer. The Division will have the sole discretion as to whether the bidder's substitution meets the requirements of the specifications.

Bidder: _____

Address: _____

Telephone Number: _____

Years company has been an authorized dealer for proposed unit: _____ years

Manufacturer, model, series, and date of manufacture of proposed Dump body:

Is descriptive literature full describing proposed dump body attached to your bid proposal? _____ YES _____ NO

If NO, refer to specification statement Section 6.6

When will required number of operating manuals, service manuals, and complete parts list be delivered to the Equipment Division at Buckhannon? _____ prior to deliver of unit or _____

Dump body warranty: _____

X9.0.1 Water Level of dump body: _____ cu yd

X9.0.2 Will side board pockets and tailgate height provide additional capacities of 2-5 cu. yd.
_____ YES _____ NO

- X9.0.3 Front body bulkhead: _____ inch AR400 steel _____ PSI yield strength
- X9.0.4 Are rear corner posts full depth one-piece construction from the top of tailgate to bottom of rear bolster _____ YES _____ NO
- X9.0.5 Is rear bolster one piece full depth and full width _____ YES _____ NO
- X9.0.6 Are four (4) spreader strap retainers adequately welded on both sides of body inside _____ YES _____ NO
- X9.0.7 Is cab shield full width of body and sufficient clearance to ensure shield won't hit exhaust when dumping on uneven terrain _____ YES _____ NO
- X9.0.8 Are there two (2) front frame mounted tow hooks or eyes _____ YES _____ NO
- X9.1 Dimensions:
- X9.1.1 Inside length of body: _____ inches
- X9.1.2 Inside width: _____ inches
- X9.1.3 Outside width: _____ inches at rub rail
- X9.1.4 Basic side height: _____ inches (measure from floor to top rail)
- X9.1.5 Tailgate height: _____ inches (measure from floor to top of tailgate)
- X9.1.6 Body overhang: _____ inches (measure from center of hinge pin)
- X9.1.7 Cab protector: _____ inches with adequate clearance for cab mounted air horns
- X9.1.8 Is cab protector sloped rearward for drainage purposes _____ YES _____ NO
- X9.2 Construction of the dump bed sides, front, head, and tailgate constructed with a the following minimums _____ YES _____ NO
- X9.2.1 Floor: _____ inch AR400 _____ PSI yield strength with _____ degree knee brace welded to floor
- Is body crossmemberless type _____ YES _____ NO
- X9.2.2 Sides: _____ Gauge AR400 _____ PSI yield strength steel thickness
- X9.2.3 Tailgate Plate: _____ inch AR400 _____ PSI yield strength steel
- X9.2.4 Top Rail: _____ inch thickness
- X9.2.5 Bottom Rail: _____ inch thickness
- X9.2.6 Cab Protector: _____ Gauge

X9.2.7 Longitudinal: _____ inch/_____ lb.ft. I beam

X9.3 Are all the weldings inside the dump body continuous _____ YES _____ NO

Are all rails and posts continuous welded and completely closed _____ YES _____ NO

X9.3.1 The corner posts are _____ gauge Grade _____, _____ inch x _____ inch full depth tied to _____ inch formed channel rear apron

Is this joint further reinforced with a 1/4 inch plate that helps prevent flexing and strengthens latch assembly _____ YES _____ NO

X9.3.2 Cab protector sides, formed with gussets extend forward _____ inches.

Clearance above highest point of cab _____ inches

X9.3.3 Is there one (1) horizontal side brace, weld on, dirt shedding sloped side brace connected to front and rear corner posts _____ YES _____ NO

X9.3.4 Are all seams welded solid except crossmembers _____ YES _____ NO

X9.4 Hydraulic hoist :

Telescopic hoist _____ YES _____ NO Internal dog house _____ YES _____ NO
of _____ inches

X9.4.1 **Trunnion mount to bottom of dump body, not top of doghouse**
_____ YES _____ NO

X9.4.2 **NTEA rating: Class _____ double acting with 26 ton capacity**
_____ YES _____ NO

X9.4.2 Is the hoist of the cross head sleeve twin side lift arms and links design for stability
_____ YES _____ NO

X9.4.3 Is the single hoist cylinder trunnion mount _____ YES _____ NO

X9.4.4 **Does the hoist cylinder have three (3) stages _____ YES _____ NO with**
_____ inches of stroke with five (5) inch diameter stage at bottom
_____ YES _____ NO
Manufacturer and part number: _____

X9.4.5 **Does the cylinder have wear and corrosion resistant nitrided cylinder tubes**
_____ YES _____ NO

X9.4.6 **Cylinder warranty _____ year**

X9.4.7 **Does a five (5) degree oscillating cylinder collar protect the cylinder against**
inside stress with replaceable greaseless composite bushings at collar pivots
_____ YES _____ NO

- X9.4.8** Does the body have 6 inch x 8 inch x 1/2 inch formed angle rear hinge assembly installed in the truck chassis frame _____ YES _____ NO
- X9.4.9** Are there two (2) inch 303 stainless steel hinge pins connecting to 2 1/2 inch hinge blocks using replaceable greaseless composite bushings for a minimal pin-to-bushing clearance _____ YES _____ NO
- X9.5** Features shall be included:
- X9.5.1** Warning light (bed raised) dash or console mounted _____ YES _____ NO
- X9.5.2** Hydraulic oil level reading _____ YES _____ NO
- X9.5.3** Safety decals as required _____ YES _____ NO
- X9.5.4** Mud guards permanently attached in front of rear wheels _____ YES _____ NO
 _____ Gauge x _____ inches x _____ inches
 Will you align exhaust stack for bed clearance _____ YES _____ NO
- X9.5.5** Shovel bracket (front of bed behind driver) _____ YES _____ NO
- X9.5.6** Are gussets for 4 inch x 6 inch lumber (rough) located at front and rear posts and mid-rail 42 inch x 6 inch (rough) oak sideboards supplied and bolted through gussets _____ YES _____ NO
- X9.5.7** Air operated tailgate latches are pancake type tailgate release valve _____ YES _____ NO
- Manufacturer and model:** _____
 With spring-over-center latch and pivot points include stainless steel bushings to reduce seizing _____ YES _____ NO
- X9.5.8** Self cleaning safety platform non-skid material located on both sides of dump body, consisting of 1 1/2 inch Bustin hole grip strut installed at bottom of body sides _____ YES _____ NO
- X9.5.9** OSHA approved backup alarm, electronic ambient, adjusts to background noise, 112 dba shock mounted at rear _____ YES _____ NO
- X9.5.9.1** OSHA approved body support, both sides _____ YES _____ NO
- X9.5.10** Slope outside of bottom red rail _____ YES _____ NO

X9.5.11 Is unit equipped with 49,000 lb. capacity pintle hook centered between rear frame rails _____ YES _____ NO

Manufacturer: _____ **Part No.:** _____

Is height from ground level to center line of pintle "eye" 32 inches _____ YES _____ NO

X9.5.12 Is air deflector hood mounted, blue or smoke _____ YES _____ NO

Is deflector manufacturers standard width for truck made _____ YES _____ NO

Is access to front end hood tilt handle avoided _____ YES _____ NO

X9.6 Lighting: Weather/shock resistant marker lights, LED type with average amp draw between .045-.72
_____ YES _____ NO **Manufacturer:** _____

Do all connections have sure snap plug assemblies and epoxy sealed electronics to protect against shock and vibration _____ YES _____ NO

X9.6.1 Are marker lights 2 1/2 inch diameter flush mounted sealed beam lights with integral reflector mounted in rubber base _____ YES _____ NO

X9.6.2 Are all lights connected to chassis through a waterproof junction box located at rear of truck _____ YES _____ NO

X9.6.3 Are rear lights shock mounted, recessed oval stop, tail, turn, and recessed oval backup lights mounted in back post _____ YES _____ NO

Are strobe lights marked and switched from dash board location _____ YES _____ NO

X9.6.4 Are center rear I.D. Lights three (3) located in truck chassis _____ YES _____ NO

X9.6.5 Are there two (2) amber oval L.E.D. strobe lights mounted at front corners of the cab protector _____ YES _____ NO

Are there two (2) amber oval L.E.D. strobe lights mounted at each outside corner of the cab protector _____ YES _____ NO

Are strobe lights marked and switched at dash board location _____ YES _____ NO

Manufacturer: _____ **Part No.** _____

Are oval cutouts precut by dump body manufacturer _____ YES _____ NO

X9.6.6 Auxiliary headlights for snow plowing application shock mounted on fender of unit _____ YES _____ NO

Manufacturer: _____ **Part No.** _____

- X9.6.7 Are there two (2) oval amber L.E.D. strobe lights mounted at top of rear corner posts right and left sides _____ YES _____ NO
- Are they switched in combination with cab protector strobe _____ YES _____ NO
- Manufacturer: _____ Model: _____
- Are oval cutouts precut by dump body manufacturer _____ YES _____ NO**
- X9.6.8 Angled hydraulic fittings are mounted above the lights, and the vertical apron is cut out above the frame to facilitate their placement _____ YES _____ NO
- X9.6.9 Two (2) front frame mounted tow hooks _____ YES _____ NO
- X9.6.10 Lighted license plate bracket _____ YES _____ NO
- X9.7 Does a full length dirt shedding rub rail extend along each side of the body, sufficient to cover the rear wheels _____ YES _____ NO
- X9.8 The following should be at the front of both sides of the body on posts:
- X9.8.2 Is full height fold down style ladder with 1 ½ inch Bustin style 16" rungs installed front of body, both _____ YES _____ NO
- X9.9 Tailgate:
- X9.9.1 Tailgate hinged at top with flush mount, 1/2 inch flame cut pivots, one (1) inch pork chop type off-set hardware to achieve maximum opening of tailgate, **but have provisions for pivoting at bottom** _____ YES _____ NO
- X9.9.2 Top hinge channel with removable, chain tethered keeper pins _____ YES _____ NO
- X9.9.3 Latching action at bottom of gate is 3/4 inch latch hooks with 3/8 inch latch plates operable by the truck driver without leaving the truck cab _____ YES _____ NO
- X9.9.4 Gate self-aligning _____ YES _____ NO
- X9.9.5 Tailgate upper and lower latch pins 1 1/4 inch diameter hot rolled _____ YES _____ NO
- X9.10 The design and strength characteristics of the entire dump such that the unit structural members and the hoisting system suffers no deformation, damage, or structural failure resulting from raising a distributed full payload _____ YES _____ NO
- X9.11 The location of the dump box pivot point in relation to the rear end of the truck frame and in relation to the rear lip of the box floor **such that the horizontal distance from floor lip to the rear end of the frame is 18 inches** _____ YES _____ NO

X9.12 Bumper

- X9.12.1 The bumper is formed out of 1/4 inch roll steel _____ YES _____ NO
 Weight: _____ lbs. per square foot
- X9.12.2 Bumper face to cover all of truck frame (_____ inches) with two (2) flanges
 _____ inches top and bottom _____ YES _____ NO
- X9.12.3 Bumper overall width: _____ inches
- X9.12.4 Bumper is straight across front from centerline of truck chassis _____ inches each side of centerline,
 making bumper straight _____ inches long in center with ends swept back _____ degrees and _____
 inches each side _____ YES _____ NO
- X9.12.5 Upper and lower flanges cut and welded solid at point where bumper is bent and ground off smooth
 _____ YES _____ NO
- X9.12.6 Bumper mounted by two (2) mounting angles bolted to front of truck frame with two (2) 5/8 inch
 bolts each side _____ YES _____ NO
- X9.12.7 Mount angle _____ inches x _____ inches x _____ inches long with four (4) 5/8 inch holes
- X9.12.8 Front bumper paint: _____
- X9.13 Under Body Tool Box:
- X9.13.1 One (1) tool box mounted under body on right side frame rail _____ YES _____ NO
- X9.13.2 Tool box _____ inches high _____ inches wide _____ inches deep cradles by a heavy steel angle
 frame attached to the truck frame _____ YES _____ NO
- X9.13.3 **Construction of _____ gauge A-60 galvaneal steel with all seems welded**
 _____ YES _____ NO
- X9.13.4 Tool box has a horizontal hinged fold down door _____ YES _____ NO
- X9.13.5 Tool box door has cable or chain to hold the door in a horizontal position
 _____ YES _____ NO
- X9.13.6 Tool box has keyed latch of corrosion resistant hardware, automotive style weather stripping, and a
 drip rail over the door opening _____ YES _____ NO
- X9.14 Load covering system electrically controlled: _____ YES _____ NO
- X9.14.1 Does electric motor assembly include 12 volt direct drive motor with forward and reverse action, cab
 mounted control switch, resettable circuit breaker _____ YES _____ NO
- X9.14.2 Pivot arm assembly constructed in a two (2) piece bent arm configuration of _____ inch _____
 gauge steel tubing

X9.14.3 Bent arm extensions constructed of ____ inch ____ gauge steel tubing

X9.14.4 Rear cross constructed of ____ inch ____ gauge steel tubing

X9.14.5 Pivot arm rests included _____ YES _____ NO

X9.14.6 Underbody spring extension spring ____ inches in length attached to base of pivot arm and of body with articulating spring mounting bracket _____ YES _____ NO

X9.14.7 All steel components finished with manufacturer's recommended rust preventative system to include a **minimum of adequate primer and paint** _____ YES _____ NO

X9.14.8 Load covering system provided with ____ oz black vinyl tarp to fit dump body _____ YES _____ NO

X9.14.9 Load covering system supplied with all necessary hardware and delivered to the WVDOH as a complete and operational unit _____ YES _____ NO

X9.15 Paint:

X9.15.1 - 9.15.2.1 Describe proposed method of painting: _____

X9.16 Detail/Decorative Stripes with Logo.

Will striping and detailing you provide comply with requirements of Section 9.16.1 through 9.16.7 _____ YES _____ NO

X9.17 Other standard features:

List other standard features offered and not addressed above:

X9.18 Does the proposed unit meet or exceed the "OSHA OF 1970" and/or subsequent changes _____ YES _____ NO

X10.0 SECTION THREE - CENTRAL HYDRAULIC SYSTEM

Reference Requisition No. on request for proposal:

Bidder's Name: _____

Address: _____

Telephone Number: _____

Years Company has been an authorized dealer for proposed unit: _____ YRS

Manufacturer, model, series, and date of manufacture of proposed Hydraulic System:

Is descriptive literature, fully describing proposed system attached to your bid proposal?
_____ YES _____ NO

If NO, refer to specification statement Section 7.5

When will required number of operating manuals, service manuals, and complete parts list be delivered to the Equipment Division at Buckhannon? _____ prior to delivery of unit
or _____

Will hydraulic system be designed to operate a front mounted telescopic dump body hoist cylinder, a hydraulically driven integrated salt and abrasive spreader requiring the simultaneous operation of 2 hydraulic motors in 2 different modes with conveyor reverse, a double acting snowplow lifting cylinder, a snowplow power angle system, plow balance system, and an auxiliary equipment drive circuit
_____ YES _____ NO

Are provisions made for future add-on hydraulic driven pre-wet system
_____ YES _____ NO

Pre-wet system:

Will supplied spreader control contain the ability to control a closed loop pre-wet system.
_____ YES _____ NO

Will system operate using a flow meter feedback circuit _____ YES _____ NO

Will controller software allow for adjustability of pre-wet output by the operator, represented in gallons per ton _____ YES _____ NO

Will information related to pre-wet application rate and total flow in gallons be displayed on the screen while the pre-wet system is active. _____ YES _____ NO

- X10.1.8 Is ramp/swashplate supported by pressure lubricated bearings of rocker cam ___ or Saddle type ___ for high piston load support ___ YES ___ NO
- Is ramp angle positioning by means of dual servo control cylinders for rapid pump response and precise pump output control ___ YES ___ NO
- X10.1.9 Is adjustable load sense and high pressure compensator control valve assembly of the full cartridge ___ or of bolt-on housing design ___ for ease of replacement and repair ___ YES ___ NO
- X10.1.9.1 System is designed and components to provide flow, pressure, and performance requirements as stated with operating load sense differential pressure of 300 PSI and a maximum standby pressure of 350 PSI for maximum efficiency ___ YES ___ NO
- Is pilot control shifted valving utilized in the system ___ YES ___ NO
Are they designed to be fully functional within this pressure Range ___ YES ___ NO
- X10.1.9.2 **Is high pressure compensator valve preset to limit the maximum pump output pressure to the maximum required operating pressure plus sense differential and margin pressure prevent premature de-stroking of ramp resulting in reduced or insufficient pump output ___ YES ___ NO**
- X10.1.10 **Pump Output: _____ cc/Revolution**
Is it capable of providing hoist cylinder extension required ___ YES ___ NO
- Manufacturer and part number: _____
- _____ gallons to fully extend
- | | | |
|------------------|-------|------------------|
| 5 GPM flow rate | _____ | seconds to raise |
| 10 GPM flow rate | _____ | seconds to raise |
| 15 GPM flow rate | _____ | seconds to raise |
| 20 GPM flow rate | _____ | seconds to raise |
| 25 GPM flow rate | _____ | seconds to raise |
| 30 GPM flow rate | _____ | seconds to raise |
| 40 GPM flow rate | _____ | seconds to raise |
- X10.1.11 Is the pump you are supplying of overall quality of construction, design, and Performance ___ YES ___ NO
- X10.1.12 **Pump Manufacturer and model: _____**
- X10.1.13 **Is pump of a manufacturer's standard product release and design ___ YES ___ NO**
- X10.1.14 Is pump driveline assembly of the keyed shaft design utilizing a 4 bolt driveshaft flange and matching drive yoke on the pump ___ YES ___ NO

X10.1.14.1 Does driveline have a minimum continuous torque rating equal to 200% of the imposed load when pump is operating at maximum system requirements
 _____ YES _____ NO

Manufacturer and model: _____

X10.1.14.2 Are dual journals and yokes incorporated to connect the pump shaft and engine drive flange with an angular misalignment no greater than six (6) degrees and not less than two (2) degrees
 _____ YES _____ NO

X10.2 Pump Shutdown System:

X10.2.1 Is the normally closed, energized to open, solenoid operated control valve of the cartridge and manifold design to be directly bolted to pump pressure port
 _____ YES _____ NO
 Is solenoid electrical connection of the Packard "Weatherpack" type with "SO" cable Wiring
 _____ YES _____ NO

X10.2.2 Is it valve controlled by a console mounted "Master On" switch with pilot lamp for normal system operation and by a float switch located in hydraulic reservoir to automatically shut off pump pressure port flow to all down stream functions in the event of low hydraulic oil level
 _____ YES _____ NO

X10.2.3 Pressure drop across valve _____ PSI at _____ GPM flow when in the switched open position
 Nominal valve rating of _____ GPM @ _____ PSI

X10.2.4 Is SAE #6 gauge port equipped with Parker Hannifin Model PD361 diagnostic coupling nipple and protective cap provided for pump output pressure testing to be installed in valve manifold and within an easily accessible mounting position
 _____ YES _____ NO

X10.2.5 Is valve designed to protect the pump for damage when system is shut down at high pressure and flow operation
 _____ YES _____ NO

X10.2.6 Valve Manufacturer and model: _____

X10.2.7 Is central control console mounted audio alarm and warning lamp indicating pump pressure/flow shutdown provided
 _____ YES _____ NO

X10.2.8 Is warning lamp a press-to-test and incorporate a switching system into the automatic shutdown assembly to simulate low oil level, shut off pump output flow and test float switch wiring and connections
 _____ YES _____ NO

X10.2.9 Is a console mounted electrical override function switch provided to allow momentary operation of hydraulic functions in emergency situations
 _____ YES _____ NO

- X10.3.9 Is load sense network high pressure relief provided and preset to limit system maximum operating pressure _____ YES _____ NO
- Will set point provide proper pressure margin to pump pressure compensator and high pressure relief valve as to prevent premature loss of required flow rates and pressure capability _____ YES _____ NO
- X10.3.10 Is SAE #6 gauge port equipped with Parker Hannifin PD361 diagnostic coupling nipple with protective cap for load sense testing installed in an easily accessible location _____ YES _____ NO
- X10.3.11 Is dump body control section 4-way three position spring centered cylinder spool for operation of a double acting hoist cylinder _____ YES _____ NO
- X10.3.11.1 Is full flow workport relief valve installed in power up port _____ YES _____ NO
- Will set point prevent operating pressure from exceeding hoist cylinder normal operating pressure rating _____ YES _____ NO
- X10.3.11.2 Is full flow workport relief valve installed in the power down port, set at 500 PSI to prevent full system pressure on down stroke _____ YES _____ NO
- X10.3.12 Is snowplow lift control section 4-way three position spring centered cylinder spool for operation of a double acting lift cylinder _____ YES _____ NO
- X10.3.12.1 Is an adjustable flow control installed to limit downward speed of snowplow _____ YES _____ NO
- Is flow limiting control system preset for proper plow lift speed supplied to reduce over demand operation and to increase system efficiency _____ YES _____ NO
- X10.3.13 Is snowplow power angle control section 4-way three (3) position spring centered motor spool for operation of worm gear driven type reversing system _____ YES _____ NO
- X10.3.13.1 Is flow limiting control system preset for proper plow reversing speed supplied to reduce over demand operation and to increase system efficiency _____ YES _____ NO
- X10.3.14 Plow Balance Valve:
- X10.3.14.1 Is hydraulic system supplied with a plow balance valve _____ YES _____ NO
- X10.3.14.2 Is valve designed to offset a specific (adjustable) plow weight when activated _____ YES _____ NO

X10.3.14.3 Does plow balance system alter the operation of any other hydraulic function or have an adverse effect on the performance of other hydraulically operated equipment including:

Wing Plow	_____	YES	_____	NO
Body Hoist	_____	YES	_____	NO
Plow Hoist or Angle	_____	YES	_____	NO
Spreader functions	_____	YES	_____	NO

Will all normal operations of the plow lift/lower functions be maintained without additional tasks _____ YES _____ NO

X10.3.14.4 Is plow lift immediate to guarantee safe operation of vehicle
_____ YES _____ NO

X10.3.14.5 Are solenoid valve coils used _____ YES _____ NO
Do they have manual override capabilities if needed for continued use when coils fail _____ YES _____ NO

X10.3.14.6 Does manifold valve include a pressure test point for use when checking balance pressures _____ YES _____ NO

X10.3.14.7 Is pressure test point capable of tapping into system at pressures of 5000 PSI
_____ YES _____ NO

X10.3.15 Is auxiliary equipment drive circuit control section 3-way three position spring centered solenoid operated motor spool _____ YES _____ NO

Is this circuit separate and distinct from spreader control system _____ YES _____ NO

X10.3.15.1 Is flow limiting control system preset to provide a maximum of 22 GPM at a system load pressure of 2200 PSI _____ YES _____ NO

Is pump capable of supplying this flow rate with engine speed of 1400 RPM
_____ YES _____ NO

X10.3.15.2 Is an inline mounted control valve supplied for this operation in place of directional control valve section _____ YES _____ NO

Is it supplied _____ YES _____ NO
Are proper interconnections and venting of load sense network system Provided _____ YES _____ NO

X10.3.15.3 Is pressure line 3/4" SAE100R2 hose and manifold mounted at rear of chassis and equipped with Parker Hannifin SH6-62 quick disconnect coupler and protective metal plug _____ YES _____ NO

Is mating nipple SH6-63 with protective cap supplied _____ YES _____ NO

X10.3.15.4 Directional and auxiliary circuit valves Manufacturer and model:

X10.3.16 Is directional control valve assembly located in a combination tank/valve enclosure assembly to protect the hydraulic tank/valve from elements

_____ YES _____ NO

Reservoir (tank): _____ gallon capacity

X10.3.17 Pre-Wet Circuit:

X10.3.17.1 Is a separate circuit provided to control an add-on pre-wet system

_____ YES _____ NO

X10.3.17.2 Is a hydraulic valve of the section type ____ or of the cartridge style ____
Contained in a manifold

X10.3.17.3 Is a manifold type valve supplied _____ YES _____ NO
Is it attached to the main valve assembly _____ YES _____ NO

X10.3.17.4 Is all wiring to the pre-wet hydraulic circuit provided as part of the system
_____ YES _____ NO

X10.3.17.5 Is wiring to the control console related to the rest of the pre-wet system provided as part of the pre-wet package at the time of pre-wet system installation
_____ YES _____ NO

X10.4 Spreader Control Valve Assembly:

X10.4.1 Are spinner and conveyor solenoid flow controls of the PWM proportional solenoid type and equipped with manual overrides _____ YES _____ NO

Are overrides manually adjustable over operating flow range in the event of electrical system failure _____ YES _____ NO

X10.4.2 Are flow control circuits pressure compensated and provide a spinner and pre-wet flow rate of 0-7 GPM and a conveyor flow rate of 0-15 GPM
_____ YES _____ NO

Pressure relief valve system limit circuits to _____ PSI

X10.4.3 Are load sense circuits connected to directional control valve network for proper pump control _____ YES _____ NO

Does design prevent improper high pressure load sense signal and pressure line loading when spreader valve is not in use and when spreader quick disconnects are uncoupled
_____ YES _____ NO

- X10.4.4 Is PWM solenoid control supplied by microprocessor spreader control system _____ YES _____ NO
- Are solenoids capable of 100% PWM signal without failure _____ YES _____ NO
- X10.4.5 Is solenoid operated directional control valve and in-cab mounted electrical switch to operate spreader conveyor reverse required for front or rear material discharge selection provided _____ YES _____ NO
- X10.4.6 Are electrical switching and indicator light for spreader clogged indication provided _____ YES _____ NO
- X10.4.7 Proposed valve Manufacturer and model:** _____
- X10.5 Spreader Control System:
- X10.5.1 Is dual flow, ground speed oriented spreader control system of the closed loop microprocessor based type with nonvolatile control memory _____ YES _____ NO
- X10.5.2 Is programming automatic calibration and flexibility _____ YES _____ NO
- X10.5.3 Is system capable of operation in ground speed oriented closed loop conveyor feed back, open loop, manual set, blast and unload modes _____ YES _____ NO**
- X10.5.4 Is automatic switchover with display indication from closed loop to open loop operation in the event of loss of feed rate sensor signal provided _____ YES _____ NO
- X10.5.5 Are control console digital readouts capable of displaying actual application rate, vehicle ground speed, distance of spread route driven and total quantity of material spread _____ YES _____ NO
- X10.5.6 Are programming and output cable connection for material and trip information printer and program uploading provided _____ YES _____ NO
- X10.5.7 Is control unit capable of accumulating such display information up to 999,999 miles and 999,999 tons of discharged material _____ YES _____ NO
- X10.5.8 Is console programming capable of selection, calibration and display of four (4) separate spread materials with independent application rates of each material capable of being set to fixed rates or **to rate increments of a preset maximum application rate** _____ YES _____ NO
- X10.5.9 Is a variable digital access code lockout for application rate selection and for system operating parameters provided _____ YES _____ NO
- X10.5.10 Are backlighted switches and LCD screed utilized for on-board programming and for display readout and application rate selection _____ YES _____ NO**

X10.5.11 Is material spread width selectable by no less than a ten (10) position switch with minimum and maximum spinner speed totally programmable through entire flow range. _____ YES _____ NO

Is spinner speed capable of linking to ground speed for on-off control
_____ YES _____ NO

X10.5.12 Does display enunciate error message and sound audio alarm when microprocessor system detects any loss of control or accuracy
_____ YES _____ NO

X10.5.13 Will system be fully functional at time of delivery _____ YES _____ NO

X10.5.14 Will truck speed sensor be compatible with type of speedometer drive system supplied on chassis _____ YES _____ NO

X10.5.15 Will a built-in ground speed simulator be provided either internal to the control or located in the control console _____ YES _____ NO

X10.5.16 Will all components required for proper installation and operation of control system onto truck and spreader units be supplied _____ YES _____ NO

X10.5.17 Control System Manufacturer and model: _____

X10.6 Central Control Console:

X10.6.1 Mounted between seats within easy access of driver _____ YES _____ NO

X10.6.1.1 Warning light (bed raised) control console mounted _____ YES _____ NO

X10.6.2 Is all wiring, valve control cables, and electrical harness entry into cab and console sealed with grommets _____ YES _____ NO

X10.6.3 Are remote control valve levers console mounted _____ YES _____ NO

Are all levers clearly marked as to their function and operation _____ YES _____ NO

X10.6.3.1 Are remote control levers to operate push-pull type cables with .250" diameter stainless steel rod ends _____ YES _____ NO

X10.6.3.2 Is inner cable member 18-8 stainless steel armor wrapped construction with a low resistance nylon liner and polyethylene covered tempered steel wire conduit
_____ YES _____ NO

X10.6.3.3 Is cable to valve connection of the weather resistant bonneted type
_____ YES _____ NO

- X10.6.3.4 Is the hoist control lever OSHA 1926.601(b)(11) compliant** _____ YES _____ NO
- X10.6.4 Is central control console ___ or dash mounted rocker switches with indicator lamps ___ provided for strobe lights, spreader light, and plow lights isolated from all hydraulic system control circuits _____ YES _____ NO
- X10.6.4.1 Are all interconnections and cables installed and ready for operation _____ YES _____ NO
- X10.6.4.2 Is hydraulic system automatic shutdown system and control switching relay Controlled _____ YES _____ NO
- X10.6.4.3 Are relay(s) mounted within the cab _____ YES _____ NO
- X10.6.4.4 Is an access plate to internal wiring provided _____ YES _____ NO
- X10.7 Hydraulic Reservoir and Valve Enclosure Assembly:
- X10.7.1 Is tank/valve enclosure flex mounted to the chassis frame rail _____ YES _____ NO
- X10.7.2 Tank construction:** _____
- X10.7.3 Is tank equipped with a combination oil level sight glass and thermometer _____ YES _____ NO
- X10.7.4 Is tank equipped with a ten (10) micron filler/breather cap with removable five hundred (500) micron strainer _____ YES _____ NO
- X10.7.5 Is an internal steel baffle provided within tank _____ YES _____ NO
- X10.7.6 Size of stenciling on tank "Hydraulic Oil": _____ inches high**
- X10.7.7 Is tank level switch connection "SO" type wiring and mounted within the tank/valve enclosure to protect it from elements _____ YES _____ NO
- X10.7.8 Pump supply suction port _____ inch NPT and system return port _____ inch NPT**
- X10.8 Filtration:
- X10.8.1 Is filtration manufacturers standard to adequately protect the hydraulic system from Damage _____ YES _____ NO
- X10.8.2 Is return line filter isolated from reservoir by a full flow non-restrictive type quarter turn brass ball valve if filter is not installed in reservoir _____ YES _____ NO
- X10.8.3 Is each filter equipped with a differential pressure switch to indicate filter clogged condition by means of a console mounted indicator lamp _____ YES _____ NO

- X10.8.4 Is one (1) extra replacement filter for each assembly provided for each truck** _____ YES _____ NO
- X10.8.5 Are filter assemblies positioned as close to reservoir as possible and in an easily accessible service location _____ YES _____ NO
- X10.9 Hoses and Fittings:
- X10.9.1 Is each hose assembly, except for suction hose, fitted with JIC swivel connectors on ends where connection to system component is made _____ YES _____ NO
- X10.9.2 Do all pressure line hoses meet or exceed SAE Specification 100R2 and equal to Gates high pressure hose, type C2AT for sizes up to and including 1"ID _____ YES _____ NO
- X10.9.3 Is suction hose 2" nominal ID SAE Specification 100R4, braided fiber, spiral wire reinforced, rubber covered hose with replaceable bolt-on type fittings _____ YES _____ NO
- X10.9.4 Are all hydraulic hoses fully cleaned on interior, installed and ready for operation _____ YES _____ NO
- X10.9.5 Are grommets used when routing hoses through steel bracketing or frame members _____ YES _____ NO
- X10.9.6 Are Snap-Tite quick disconnects (manifold mounted) supplied for the spinner 1/2 inch pressure and return lines** _____ YES _____ NO
- X10.9.7 Are all fittings and connectors steel type designed for high pressure hydraulic system _____ YES _____ NO
- X10.9.8 Were pipe thread ported components and connectors used only when the specific component is not available with SAE or JIC Porting _____ YES _____ NO
- X10.9.9 Were all pipe thread connectors coated with liquid teflon pipe sealer before assembly? _____ YES _____ NO
- X10.9.10 Are the hoses run to the front of truck chassis for snowplow functions manifold mounted behind the front bumper with sufficient access for pump assembly service and snowplow hitch installation _____ YES _____ NO
- X10.9.11 Are lines equipped with complete 1/2"VH" series Snap-Tite quick disconnects, metal caps and plugs _____ YES _____ NO
- X10.10 Other Standard Features:** _____
-

X10.11 Initial servicing and pretesting:

X10.11.1 Initial fill of reservoir with high grade 32AW hydraulic fluid 40 gallon level marked on sight glass _____ YES _____ NO

X10.11.2 Start up and initial run of hydraulic system, checking for leaks, excess heat, system efficiency _____ YES _____ NO

Will you replace any defective component _____ YES _____ NO

You will be responsible for any defects discovered at the time of installation of spreader and plow _____ YES _____ NO

X10.12 Are hydraulic lines located within 10" of exhaust system metal lines _____ YES _____ NO

X10.12 If successful vendor, will you provide WVDOH with complete list of all filters for normal maintenance? _____ YES _____ NO

X10.13 Have you included with your bid detailed component specifications, product literature, system component layout drawing with bill of materials and full functional hydraulic system schematics in accordance with JIC and ANSI-Y32 _____ YES _____ NO

X10.14 If you are the successful vendor, will you provide WVDOH with complete list of all filters required for normal maintenance on unit _____ YES _____ NO

X10.15 Describe your training sessions that will be provided with each order at an Equipment Division facility:

State of West Virginia

VENDOR PREFERENCE CERTIFICATE

Certification and application* is hereby made for Preference in accordance with *West Virginia Code*, §5A-3-37. (Does not apply to construction contracts). *West Virginia Code*, §5A-3-37, provides an opportunity for qualifying vendors to request (at the time of bid) preference for their residency status. Such preference is an evaluation method only and will be applied only to the cost bid in accordance with the *West Virginia Code*. This certificate for application is to be used to request such preference. The Purchasing Division will make the determination of the Resident Vendor Preference, if applicable.

1. **Application is made for 2.5% resident vendor preference for the reason checked:**
 Bidder is an individual resident vendor and has resided continuously in West Virginia for four (4) years immediately preceding the date of this certification; **or**,
 Bidder is a partnership, association or corporation resident vendor and has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification; **or** 80% of the ownership interest of Bidder is held by another individual, partnership, association or corporation resident vendor who has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification; **or**,
 Bidder is a nonresident vendor which has an affiliate or subsidiary which employs a minimum of one hundred state residents and which has maintained its headquarters or principal place of business within West Virginia continuously for the four (4) years immediately preceding the date of this certification; **or**,
2. **Application is made for 2.5% resident vendor preference for the reason checked:**
 Bidder is a resident vendor who certifies that, during the life of the contract, on average at least 75% of the employees working on the project being bid are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; **or**,
3. **Application is made for 2.5% resident vendor preference for the reason checked:**
 Bidder is a nonresident vendor employing a minimum of one hundred state residents or is a nonresident vendor with an affiliate or subsidiary which maintains its headquarters or principal place of business within West Virginia employing a minimum of one hundred state residents who certifies that, during the life of the contract, on average at least 75% of the employees or Bidder's affiliate's or subsidiary's employees are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; **or**,
4. **Application is made for 5% resident vendor preference for the reason checked:**
 Bidder meets either the requirement of both subdivisions (1) and (2) or subdivision (1) and (3) as stated above; **or**,
5. **Application is made for 3.5% resident vendor preference who is a veteran for the reason checked:**
 Bidder is an individual resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard and has resided in West Virginia continuously for the four years immediately preceding the date on which the bid is submitted; **or**,
6. **Application is made for 3.5% resident vendor preference who is a veteran for the reason checked:**
 Bidder is a resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard, if, for purposes of producing or distributing the commodities or completing the project which is the subject of the vendor's bid and continuously over the entire term of the project, on average at least seventy-five percent of the vendor's employees are residents of West Virginia who have resided in the state continuously for the two immediately preceding years.

Bidder understands if the Secretary of Revenue determines that a Bidder receiving preference has failed to continue to meet the requirements for such preference, the Secretary may order the Director of Purchasing to: (a) reject the bid; or (b) assess a penalty against such Bidder in an amount not to exceed 5% of the bid amount and that such penalty will be paid to the contracting agency or deducted from any unpaid balance on the contract or purchase order.

By submission of this certificate, Bidder agrees to disclose any reasonably requested information to the Purchasing Division and authorizes the Department of Revenue to disclose to the Director of Purchasing appropriate information verifying that Bidder has paid the required business taxes, provided that such information does not contain the amounts of taxes paid nor any other information deemed by the Tax Commissioner to be confidential.

Under penalty of law for false swearing (West Virginia Code, §61-5-3), Bidder hereby certifies that this certificate is true and accurate in all respects; and that if a contract is issued to Bidder and if anything contained within this certificate changes during the term of the contract, Bidder will notify the Purchasing Division in writing immediately.

Bidder: _____ Signed: _____

Date: _____ Title: _____

*Check any combination of preference consideration(s) indicated above, which you are entitled to receive.

RFQ No. _____

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

West Virginia Code §5A-3-10a states: No contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and the debt owed is an amount greater than one thousand dollars in the aggregate.

DEFINITIONS:

"Debt" means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

"Debtor" means any individual, corporation, partnership, association, limited liability company or any other form or business association owing a debt to the state or any of its political subdivisions. "Political subdivision" means any county commission; municipality; county board of education; any instrumentality established by a county or municipality; any separate corporation or instrumentality established by one or more counties or municipalities, as permitted by law; or any public body charged by law with the performance of a government function or whose jurisdiction is coextensive with one or more counties or municipalities. "Related party" means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceeds five percent of the total contract amount.

EXCEPTION: The prohibition of this section does not apply where a vendor has contested any tax administered pursuant to chapter eleven of this code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

Under penalty of law for false swearing (*West Virginia Code §61-5-3*), it is hereby certified that the vendor affirms and acknowledges the information in this affidavit and is in compliance with the requirements as stated.

WITNESS THE FOLLOWING SIGNATURE

Vendor's Name: _____

Authorized Signature: _____ Date: _____

State of _____

County of _____, to-wit:

Taken, subscribed, and sworn to before me this ____ day of _____, 20__.

My Commission expires _____, 20__.

AFFIX SEAL HERE

NOTARY PUBLIC _____