

Roane County is inviting sealed bids for the good(s) and/or service(s) listed below, subject to the terms and conditions of the Invitation to Bid (ITB), the accompanying specifications, and the Roane County Purchasing Manual.

At the appointed time bids will be publicly opened in the office of the Roane County Purchasing Agent at the above address. Bids arriving in the Purchasing Department past the appointed date and time will be considered late and will not be opened.

<p style="text-align: center;"><b><u>Deliver Bids To:</u></b> ROANE COUNTY PURCHASING DEPARTMENT 200 EAST RACE STREET, SUITE #3 KINGSTON, TENNESSEE 37763</p> <p style="text-align: center;"><b>Bid Number: 2022-08-2021</b> <b>SCHOOL BUSES</b></p> <p style="text-align: center;"><b>Open Date &amp; Time: DECEMBER 21, 2021 at 2:00 p.m. (Eastern Time Zone)</b></p> <p style="text-align: center;">The Bid Envelope must show the Bid Number, Name &amp; Opening Date.</p>
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**PURCHASING CONTACT INFORMATION**

**Lynn Farnham, CPPO, CPPB**  
**Purchasing Agent**  
**Phone: 865-376-4317**  
**Fax: 865-376-4318**  
**Email: [lynn.farnham@roanecountytn.gov](mailto:lynn.farnham@roanecountytn.gov)**

**GENERAL TERMS & CONDITIONS**

1. Attached are instructions and conditions for submitting a bid for Roane County Government. The objective of this bid is to select suppliers in such a manner as to provide for open and free competition and comparability.
2. Vendors are to provide one original and one copy of the bid being submitted. Any costs associated with the preparation or delivery of the bid is at the Vendor's cost with no cost to Roane County.

**BID PREPARATION & SUBMISSION**

1. Bidders are expected to examine any drawings, specifications, terms and conditions, general or special conditions, schedules and all instructions for the purpose of this bid. Failure to do so will be at the bidder's risk.
2. The total bottom-line cost will be determined by multiplying each item bid price times the quantity requested and adding the extended dollar figures.
3. All bids shall be in accordance with the instructions to bidders and specifications included in this ITB. Specifications are intended to be open and non-restrictive.
4. All columns of the bid document must be completed in ink or typewritten. The bottom line total (sum of extended prices) must also be printed in ink or typewritten on the proposal form. No erasures shall be permitted. Errors may be crossed out and corrections printed in ink or typewritten and must be initialed in ink by the person signing the bid.

5. All bids must meet or exceed the enclosed specifications. Bidder must indicate the manufacturer's name and model number offered. If bidder fails to provide this information, and an award is made, then the bidder shall supply the item(s) as specified. All items supplied by the successful bidder shall be new and unused and meet all OSHA standards. Items delivered not meeting these requirements shall be subject to return and replaced at no additional cost to Roane County. Any exceptions to the specifications must be clearly noted, documented and have prior approval to be submitted as an approved alternate.
6. The use of the name of a manufacturer, brand, model or make used in describing an item does not restrict the bidder to that manufacturer. Others will be considered if they meet or exceed the items specified. When an alternate manufacturer, brand, model or make will be bid, five (5) days prior to the bid the bidder must submit documents to the Purchasing Agent, for evaluation of the product. Roane County will determine if the item does meet or exceed the item as specified.
7. It shall be the sole responsibility of the bidder to make certain that all bids in proper form are submitted to the Purchasing Department as described below.
8. Delivery charges are to be prepaid and included in the bid pricing.
9. All original forms must be signed by a person with authority to bind the bid. The bid must be sealed in an envelope that is labeled according to the directions stated below.
10. On the outside of the envelope/package mark the bid as follows:
  - Vendor Name & Address
  - Bid Number
  - Bid Date & Time
11. The bid must then be in a sealed envelope/package mailed or delivered to the following address:

Roane County Purchasing Department  
200 East Race Street, Suite #3  
Kingston, Tennessee 37763

**Please note that Roane County does not receive a guaranteed delivery time for express mail and/or packages. Please mail accordingly.**

12. Sealed written bids will be received at the time and place specified on the Invitation to Bid. Postmark on the Bid by this date will not suffice. Bid must be received on or before the date and time stated. Faxed bid documents will not be accepted.

**LATE RECEIPT OF THE BID**

1. The bid and modifications or withdrawals thereof received after the time set for opening will not be considered, unless they are received before the award is made and it is determined by Roane County that failure to arrive on time was due solely to a delay in delivery for which the bidder has no responsibility. Roane County does not receive a guaranteed delivery time for express mail and/or packages. Please mail accordingly.
2. Bids must be in the Purchasing Department prior to or at 2:00 p.m. sharp on the appointed date. No bids will be accepted past 2:00 p.m. (02:00:01 is considered late) Time will be determined by the official NIST US time.

**BID PERIOD**

1. Unless otherwise noted in the bid specifications, the contract will be awarded for the period of one (1) year from the date of bid opening. Roane County reserves the right to purchase additional items against this bid on an "as needed" basis if pricing remains the same. This does not apply to bids with options of renewal.

## **RESTRICTIVE OR AMBIGUOUS SPECIFICATIONS**

1. It is the responsibility of the bidder to review the entire Invitation to Bid document and to notify the Purchasing Agent if the Invitation to Bid is formulated in a manner that would unnecessarily restrict competition or if it is ambiguous in what is being requested.
2. Pursuant to TCA §12-4-126, questions regarding the specifications or bid procedures must be received by the Purchasing Agent and/or designer no less than ninety-six (96) hours before the bid opening date. No addenda will be issued within less than forty-eight (48) hours of the bid opening day, excluding weekends and legal holidays designated in §15-1-101 unless the bid opening is extended for a reasonable time as determined by the purchasing agent, which shall not be less than forty-eight (48) hours excluding weekends and legal holidays designated in §15-1-101, to allow for any necessary changes to the Invitation to Bid documents and to allow responders to resubmit their responses accordingly.
3. Any questions concerning this Invitation to Bid are to be faxed to the Purchasing Department. Questions will be answered via addenda. Information obtained from any office other than the Purchasing Office is not to be considered binding.

## **BID OPENING & AWARD**

1. Only the bottom-line figure will be read at the bid opening. Bids will also be examined for compliance with specification and conditions outlined in the bid document.
2. Consideration will be given to all bids properly submitted. Bids will receive appropriate confidentiality before awarding. Upon award, bid documents and tabulations will be available for review. Errors discovered after public opening may not be corrected, and the bidder may be bound to honor bid as submitted. After investigation of the nature of the mistake, the Purchasing Agent may allow the bid to be withdrawn.
3. The contract will be awarded in writing to the most responsive bidder whose bid conforms best to the Invitation to Bid will be most advantageous to Roane County. It is the intent of Roane County to involve and utilize the best product/services at the best prices and provide small and minority firms, women's business enterprises and labor surplus area firms with increased opportunity to do business with the county. However, currently there are no set asides for small or minority firms.
4. Roane County reserves the right to accept or reject any or all bids and to waive informalities and minor irregularities in the bids received.
5. Roane County reserves the right to award the bid in its entirety or to divide the award in any way that will be more advantageous to the county.
6. Bid results will be posted on the County's website along with the bid tabulation.

## **PROTEST PROCEDURE**

1. If a prospective vendor does not agree with the bid award, they have the right to protest. Disputes arising from the award of this bid must be submitted in writing to the Roane County Purchasing Department no later than seven (7) days from date of bid award. The steps for dispute resolution may include:
  - A meeting with the Purchasing Agent, the requisitioning department's manager and representatives from the disputing party to discuss and resolve the complaint.
  - Information from the aforementioned meeting will be forwarded to the County Attorney for review.
  - A written decision letter stating the reasons for the decision will be prepared by the Purchasing Agent and submitted in writing to the protestor and all parties involved.
  - Purchases will not be allowed under this procurement until a final decision is rendered.
  - In the event that purchases must be made before a final decision is rendered, the emergency purchase procedures will be used.

## **FUTURE PURCHASES – BID RENEWAL**

1. Unless otherwise noted, Roane County reserves the right to purchase goods or services for one year from the date of the award of the contract at the same price and terms and conditions. Further, Roane County reserves the right to renew all aspects of the bid one (1) year at a time for and additional one (1) year based on the same price and terms and conditions unless otherwise noted. There is no guarantee that that this contract will be considered for renewal.

## **APPROPRIATION**

1. In the event no funds are appropriated by Roane County for the goods or services in any fiscal year or insufficient funds exist to purchase the goods or services, then the contract shall expire upon the expenditure of previously appropriated funds or the end of the current fiscal year, whichever occurs first, with no further obligations owed to or by either party.

## **VENDOR QUALIFICATION**

1. Potential bidders must meet the following criteria:
  - Be able to provide a quality product as specified
  - Offer reasonable pricing
  - Provide dependable delivery of items ordered
  - Meet specifications and bid conditions
  - Demonstrate successful past performance
2. A potential bidder may be rejected for one or more of the following reason:
  - Inadequate or unacceptable product lines
  - Bidding remanufactured or reconditioned items
  - Bidding alternate to approved item without notice prior to bid opening
  - Documented unacceptable product

## **INSURANCE**

1. The contractor will maintain, at their expense adequate insurance coverage to protect them from claims arising under the Worker's Compensation Act, from claims for damages resulting from bodily injuries and damage to their property, for Bodily Injury and Property Damage Liability in the amount of no less than \$1,000,000, for Products and Completed Operations Liability of no less than \$1,000,000 and from claims for damage to any Roane County property. Additional insurance requirements may be listed any Special Terms & Conditions or in the Bid Specifications. This insurance company shall have a Best's rating of A or better. Any deviations from the above requirements must be disclosed in the bid submission.
2. The successful bidder shall furnish a Certificate of Insurance issued by their insurance company showing that Roane County as an additional insured. Carrier will assume full common liability of all shipments.

## **COMPLIANCE WITH ALL LAWS**

1. Contractor is assumed to be familiar with and agrees to observe and comply with all federal, state, and local laws, statutes, ordinances, and regulations in any manner affecting the provision of goods and/or services, and all instructions and prohibitive orders issued regarding this work and shall obtain all necessary permits.

## **GOVERNING LAW**

1. This contract shall be governed by the laws of the State of Tennessee, and all obligations of the parties are performable in Roane County, Tennessee. The Courts in Roane County shall have exclusive and concurrent jurisdiction of any disputes which arise hereunder.

## **BUSINESS LICENSES**

1. Bidders located in Tennessee are required to have a current business license issued by the State of Tennessee at the time the bids are submitted. Vendors located outside Tennessee are required to obtain a business license issued by the State of Tennessee in Roane County if the project is over \$50,000.

## **INDEMNIFICATION/HOLD HARMLESS**

1. Contractor shall indemnify, defend, save and hold harmless all departments of Roane County Government and/or the Roane County Board of Education, its officers, agents and employees from all suits, claims, actions or damages of any nature brought because of, arising out of, or due to breach of the agreement by Contractor, its subcontractors, supplier, agents or employees or due to any negligent act or occurrence or any omission or commission of the contractor, its subcontractors, suppliers, agents or employees until the contract terminates.

## **VENDOR PERFORMANCE**

1. If the contractor fails in full or part to perform or comply with any provision of this Contract or the terms or conditions of any documents referenced and made a part hereof, Roane County may terminate this contract, in whole or in part, and may consider such failure or noncompliance a Breach of Contract. Contractors with poor performance will be notified at the time of such performance and be given opportunity to correct the problems. Documentation will be kept on file. Any contractor with continued poor performance will be removed from the potential vendor list for one year.
2. Roane County expressly retains all its rights and remedies provided by law in case of such breach, and no action by Roane County shall constitute a waiver of any such rights or remedies. In the event of termination for default, Roane County reserves the right to purchase its requirements elsewhere, with or without competitive bid.
3. Failure to deliver within the time specified or within a reasonable amount of time, or failure to make replacements of a rejected item immediately will constitute authority to purchase on the open market so as to replace the item(s) rejected and/or not received. On all such purchases, the Vendor agrees to promptly reimburse the county for excess costs incurred by such a purchase.
4. Reasons for product rejection may be any one of the following:
  - Quality
  - Price
  - Serviceability of item (damage)
  - Product does not meet bid specifications

## **BREACH OF CONTRACT**

1. A party shall be deemed to have breached the contract if any of the following occurs:
  - Failure to provide products or services that conform to contract requirements.
  - Failure to maintain/submit any report required hereunder.
  - Failure to perform in full or in part any of the other conditions of the contract.
  - Violation of any warranty.

## **CONTRACT TERMINATION FOR CAUSE**

1. If the contractor fails to properly perform its obligations under this contract in a timely or proper manner, or if the contractor violates any terms of this contract, the county shall have the right to terminate the contract and withhold payments in excess of fair compensation for completed services.
2. In the event the contract is terminated for due cause by the county, the county shall have the option of awarding the contract to the next lowest bidder or bidding again.

## **CONTRACT TERMINATION FOR CONVENIENCE**

1. The county may, by written notice to the contractor, terminate this contract without cause for any reason. Said termination shall not be deemed a Breach of Contract by the county. The county must give notice of termination to the vendor at least thirty (30) days prior to the effective date of termination. The contractor shall be entitled to receive compensation for satisfactory, authorized service completed as of the termination date, but in no event shall the county be liable to the contractor for compensation for any service which has not been rendered. Upon such termination, the vendor shall have no right to any actual general, special, incidental, consequential, or any other damages whatsoever of any description or amount.

## **BOOKS AND RECORDS**

1. The contractor shall maintain all books, documents, accounting records and other evidence pertaining to the goods and services provided under this contract and make such materials available at its offices at all reasonable times during the contract period and for three (3) years from the date of the final payment under this agreement for inspection by county or by any other governmental entity or agency participating in the funding of this agreement, or any authorized agents thereof; copies of said records to be furnished if requested. Such records shall include those books, documents and accounting records that represent the vendor's costs of manufacturing, acquiring or delivering the products and services governed by this agreement.

## **DELIVERY**

1. All items included in this Invitation to Bid is to be delivered with no evidence of damage. The successful bidder agrees to be responsible for damaged packaging and to replace any damaged components or equipment at no charge.
2. Roane County shall retain the right to reject any or all of a delivery that does not meet product specifications. Rejected items are to be picked up at the supplier's expense.

## **INSPECTION AND ACCEPTANCE**

1. Warranty periods shall not commence until Roane County inspects and formally accepts the goods and/or services. The terms, conditions and timing of acceptance shall be determined by Roane County. Roane County reserves the right to reject any or all items or services not in conformance with applicable specifications, and contractor assumes the costs associated with such nonconformance. Acceptance of goods or services does not constitute a waiver of latent or hidden defects or defects not readily detectable by a reasonable person under the circumstances.

## **INVOICES AND PAYMENTS**

1. Payment will be made within 30 days after receipt of invoice and/or delivery of items included in this Invitation to Bid, whichever is later.
2. Roane County Government is not subject to taxation. A tax exemption certificate will be provided upon request.

## **NONDISCRIMINATION AND NON-CONFLICT STATEMENT**

1. Contractor agrees that no person on the grounds of handicap, age, race, color, religion, sex or national origin, shall be excluded from participation in, or be denied benefits of, or be otherwise subjected to discrimination in the performance of this agreement, or in the employment practices of vendor. Contractor shall upon request show proof of such non-discrimination and shall post in conspicuous places available to all employees and applicants notices of non-discrimination. Contractor covenants that it complies with the Fair Wage and Hour Laws, the National Labor Relations Act, and other federal and state employment laws as applicable. Contractor covenants that it does not engage in any illegal employment practices.
2. Contractor covenants that it has no public or private interest and shall not acquire directly or indirectly any interest; that would conflict in any manner with the provision of its goods or performance of its services. The contractor warrants that no part of the total contract amount provided herein shall be paid directly or indirectly to any officer or employee of Roane County as wages, compensation, or gifts in exchange for acting as officer, agent, employee,

subcontractor or consultant to contractor in connection with any goods provided or work contemplated or performed relative to the agreement.

3. No employee or member of the Roane County's governing bodies shall participate in the selection or award of a contract if a conflict of interest, real or apparent, would be involved.
4. Officers, employees or officials of the Roane County Government shall neither solicit nor accept gratuities, favors or anything of more than nominal monetary value from vendors or parties to subcontracts.

**IRAN DIVESTMENT ACT**

1. By submission of this bid, each bidder and each person signing on behalf of any bidder certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that to the best of its knowledge and belief that each bidder is not on the list created pursuant to Tennessee Code Annotated § 12-12-106.

## **REGULATION COMPLIANCE**

### **Contract Provisions for Non-Federal Entity Contracts Under Federal Awards**

In addition to other provisions required by the Federal agency or non-Federal entity, all contracts made by the non-Federal entity under the Federal award must contain provisions covering the following, as applicable. All contracts in excess of \$10,000 must address termination for cause and for convenience by the non-Federal entity including the manner by which it will be affected and the basis for settlement.

**Equal Employment Opportunity.** Except as otherwise provided under [41 CFR Part 60](#), all contracts that meet the definition of “federally assisted construction contract” in [41 CFR Part 60-1.360-1.3](#) must include the equal opportunity clause provided under [41 CFR 60-1.4\(b\)](#), in accordance with [Executive Order 11246](#), “Equal Employment Opportunity” ( [30 FR 12319](#), 12935, 3 CFR Part, 1964-1965 Comp., p. 339), as amended by [Executive Order 11375](#), “Amending [Executive Order 11246](#) Relating to Equal Employment Opportunity,” and implementing regulations at [41 CFR part 60](#), “Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor.”

**Rights to Inventions Made Under a Contract or Agreement.** If the Federal award meets the definition of “funding agreement” under [37 CFR § 401.2 \(a\)](#) and the recipient or subrecipient wishes to enter into a contract with a small business firm or nonprofit organization regarding the substitution of parties, assignment or performance of experimental, developmental, or research work under that “funding agreement,” the recipient or subrecipient must comply with the requirements of [37 CFR Part 401](#), “Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements,” and any implementing regulations issued by the awarding agency.

**Clean Air Act ( [42 U.S.C. 7401- 7671q](#) [7401-7671q](#).)** and the Federal Water Pollution Control Act ( [33 U.S.C. 1251- 1387](#) [1251-1387](#)), as amended - Contracts and subgrants of amounts in excess of \$150,000 must contain a provision that requires the non-Federal award to agree to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act ( [42 U.S.C. 7401- 7671q](#) [7401-7671q](#)) and the Federal Water Pollution Control Act as amended ( [33 U.S.C. 1251- 1387](#) [1251-1387](#)). Violations must be reported to the Federal awarding agency and the Regional Office of the Environmental Protection Agency (EPA).

**Copeland Anti-Kickback Act – [40 U.S.C. 3145](#)** The Copeland (Anti-Kickback) Act ([18 U.S.C. 874](#) and [40 U.S.C. 3145](#)) makes it unlawful to induce, by force, intimidation, threat of procuring dismissal from employment, or otherwise, any person employed in the construction or repair of public buildings or public works, financed in whole or in part by the United States, to give up any part of the compensation to which that person is entitled under a contract of employment.

Mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the **Energy Policy and Conservation Act ([42 U.S.C. 6201](#))**.

**Debarment and Suspension (Executive Orders 12549 and 12689)** - A contract award (see [2 CFR 180.220](#)) must not be made to parties listed on the governmentwide exclusions in the System for Award Management (SAM), in accordance with the OMB guidelines at [2 CFR 180](#) that implement Executive Orders 12549 ( [3 CFR part 1986](#) Comp., p. 189) and 12689 ( [3 CFR part 1989](#) Comp., p. 235), “Debarment and Suspension.” SAM Exclusions contains the names of parties debarred, suspended, or otherwise excluded by agencies, as well as parties declared ineligible under statutory or regulatory authority other than [Executive Order 12549](#).

**Byrd Anti-Lobbying Amendment ([31 U.S.C. 1352](#))**. If this Subcontract is for \$100,000 or more, Subcontractor affirms and certifies that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any federal or state agency, a member of Congress, officer of employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal or State contract, grant or any other award covered by [31 U.S.C. 1352](#).

**EPA’s Solid Waste Disposal Act ([2 C.F.R. § 200.323](#))** Procurement of recovered materials (pursuant to section 6002).

Prohibition on certain telecommunications and video surveillance services or equipment ([2 C.F.R. § 200.216](#)).

Domestic preferences for procurements ([2 C.F.R. § 200.322](#)).

It is the intent of Roane County to involve and provide small and minority firms, women’s business enterprises and labor surplus area firms with increased opportunities to do business with the county. However, currently there are no set asides for small or minority firms.



**2022-08-177 – SCHOOL BUSES  
VENDOR INFORMATION SHEET**  
(Please fill out completely)

By completing and signing this form you certify that you are an authorized representative of the company for which you are submitting a bid/proposal and that you have the authority to legally bind your company. Further, by completing and signing this form you certify that you agree to all the terms and conditions of this bid/proposal document and that your company is in compliance with all federal, state, and/or local regulations including but not limited to those contained herein.

1. Vendor Name \_\_\_\_\_

2. Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_

3. Contact Person (Please Print) \_\_\_\_\_

4. Telephone Number \_\_\_\_\_ Fax Number \_\_\_\_\_

5. Vendor's e-mail address \_\_\_\_\_

6. Authorizing Signature \_\_\_\_\_

7. Title of Person Signing Bid \_\_\_\_\_

8. If addenda were issued, please acknowledge the receipt of: (please write "yes" if you received one)  
Addendum 1 \_\_\_\_\_ Addendum 2 \_\_\_\_\_ Addendum 3 \_\_\_\_\_ Addendum 4 \_\_\_\_\_

9. If applicable, please indicate below if discounts will be allowed for prompt payment or if there is not discount offered:  
\_\_\_\_\_ % Net 10 Days; \_\_\_\_\_ % Net 20 Days; \_\_\_\_\_ % Net 30 Days; \_\_\_\_\_ No Discount

**SCHOOL CONTRACTS ONLY**

**CRIMINAL HISTORY RECORDS CHECK** – Do you agree to comply with Public Chapter 587 of 2007 which requires all contractors to facilitate a criminal history check, including fingerprinting, conducted by the Tennessee Bureau of Investigation and the Federal Bureau of Investigation for each employee or subcontractor personnel before permitting the employee or subcontractor personnel to have contact with students or enter school grounds?

\_\_\_\_\_ Yes \_\_\_\_\_ No

**THIS FORM MUST BE COMPLETELY FILLED OUT, SIGNED, & RETURNED IN YOUR BID.**

**2022-08-177 – SCHOOL BUSES  
NON –COLLUSION, INDEPENDENT PRICE DETERMINATION,  
NON-DISCRIMINATION, NON-DEBARMENT & LOBBYING AFFIDAVIT**

I do hereby certify that this bid is made without prior understanding, agreement, or connection with any corporation, firm, or person submitting a bid for the same materials, supplies, or equipment, and is in all respects fair and without collusion or fraud.

I understand that collusive pricing is a violation of State and Federal law and can result in fines, prison sentences, and civil damage awards and that no collusion with another firm was used in preparation of this bid.

I also certify that this firm does not discriminate against any employee or applicant for employment on the grounds of race, color, national origin or sex; and does not and will not maintain or provide for his employees any segregated facilities at any of its establishments, and further, that the firm does not and will not permit their employees to perform their services at any location under this contract where segregated facilities are maintained.

By submission of this bid, the bidder certifies that neither it or its principals is presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from participation in this transaction by any Federal or State department or agency.

I further certify that during the Invitation to Bid solicitation and/or during the performance of this contract that neither it nor its principals will participate in lobbying activities in conjunction with this project.

I agree to abide by all terms and conditions of this Invitation to Bid and certify that I am authorized to sign this affidavit for the vendor.

Please indicate which of the following apply to your company. This information is requested for information purposes only. Roane County currently has no policy that allows for set asides or preferences for woman owned or minority owned businesses.

- |   |   |
|---|---|
| <input type="checkbox"/> African American Owned | <input type="checkbox"/> Asian Owned    |
| <input type="checkbox"/> Caucasian Owned        | <input type="checkbox"/> Hispanic Owned |
| <input type="checkbox"/> Native American Owned  | <input type="checkbox"/> Woman Owned    |
| <input type="checkbox"/> Other Owned            |   |

\_\_\_\_\_  
Vendor Name

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

**THIS FORM MUST BE COMPLETELY FILLED OUT, SIGNED, & RETURNED IN YOUR BID.**

**2022-08-177 – SCHOOL BUSES  
IRAN DIVESTMENT ACT COMPLIANCE**

The Iran Divestment Act of 2016, effective on July 1, 2016, is codified in Tennessee Code Annotated §12-12-101 *et seq.* The Iran Divestment Act, with certain exceptions, prohibits local governments from entering into contracts with persons or entities engaged in investment activities in the energy sector of Iran. Pursuant to the terms set forth in Tennessee Code Annotated §12-12-105, a person engages in investment activities in the energy sector of Iran if:

- 1) The person provides goods or services of twenty million dollars (\$20,000,000) or more in the energy sector of Iran, including a person that provides oil or liquified natural gas tankers, or products used to construct or maintain pipelines used to transport oil or liquified natural gas, for the energy sector of Iran; or
- 2) The person is a financial institution that extends twenty million dollars (\$20,000,000) or more in credit to another person, for forty-five (45) days or more, if that person will use the credit to provide goods or services in the energy sector in Iran and is identified on a list, created pursuant to §12-12-106, as a person engaging in investment activities in Iran as described in this section.

This Act requires the State of Tennessee’s chief procurement officer to publish on the State’s website a list of persons it determines engaged in investments activities in Iran (the “Prohibited Entities List”).

Any BIDDER that is on the Prohibited Entities List will be ineligible to contract with the COUNTY.

Pursuant to the Act, any BIDDER that attempts to contract with the COUNTY must certify, at the time the bid is submitted, that the BIDDER is not identified on the Prohibited Entities List. A bid shall not be considered for award, nor shall any award be made where the BIDDER fails to submit a signed and verified compliance certification form.

**CERTIFICATION OF COMPLIANCE  
IRAN DIVESTMENT ACT**

The undersigned states that he/she has legal authority to swear this on behalf of \_\_\_\_\_

(Vendor); and that the Vendor is not in any manner in violation of *Tennessee Code Annotated §12-12-101 to §12-12-106.*

By submission of this bid, each bidder and each person signing on behalf of any bidder certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury that to the best of its knowledge and belief that each bidder is not on the list created pursuant to the Iran Divestment Act, Tennessee Code Annotated §12-12-106.

By: \_\_\_\_\_

Title: \_\_\_\_\_

Sworn to and subscribed before me, a Notary Public, this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_.

Notary \_\_\_\_\_ My Commission Expires \_\_\_\_\_

Vendor Name \_\_\_\_\_

**THIS FORM MUST BE COMPLETELY FILLED OUT, SIGNED & NOTARIZED, & RETURNED IN YOUR BID.**

**2022-08-177 – SCHOOL BUSES  
BID SPECIFICATIONS**

This is an Invitation to Bid for school buses as per the enclosed specifications. All buses are to be new and 2022-year model or newer. Roane County will be purchasing four (4) to six (6) buses depending upon price and available funds.

**PRICING**

DESCRIPTION	PRICE
PRICE FOR ONE (1) TYPE D 84 PASSENGER BUS AS SPECIFIED	
OPTIONAL PRICE-SEVEN YEAR EXTENDED CHASSIS WARRANTY (+ PER BUS) TYPE D 84 PASSENGER BUS	
DESCRIPTION OF BUS BEING BID	

PRICE FOR ONE (1) TYPE C 78 PASSENGER BUS AS SPECIFIED	
OPTIONAL PRICE-SEVEN YEAR EXTENDED CHASSIS WARRANTY (+ PER BUS) TYPE C 78 PASSENGER BUS	
DESCRIPTION OF BUS BEING BID	

PRICE FOR CONVENTIONAL SPECIAL NEEDS BUS	
OPTIONAL PRICE – SEVEN YEAR EXTENDED CHASSIS WARRANTY (+ PER BUS)	
DESCRIPTION OF BUS BEING BID	

PRICE FOR TYPE A MINI-BUS	
OPTIONAL PRICE – SEVEN YEAR EXTENDED CHASSIS WARRANTY (+ PER BUS)	
DESCRIPTION OF BUS BEING BID	

**ROANE COUNTY SCHOOLS  
TYPE C CONVENTIONAL - 78 PASSENGER**

**Specifications**

The school bus body (or bodies) furnished shall comply with all current Tennessee state and Federal Motor Vehicle Safety Standards in effect at time of bid. Additionally, Roane County Board of Education is requiring the following supplementary specifications. Any exceptions to these specifications should be concisely noted in the space provided. Equivalency of any exceptions to the items requested will be solely at the discretion of Roane County Board of Education.

Bidder's Name \_\_\_\_\_

Address \_\_\_\_\_

Make and Model of Bus Body \_\_\_\_\_

Passenger Capacity \_\_\_\_\_ Knee Room \_\_\_\_\_

**Specifications Furnished. Fill in all spaces. Note and explain equivalents or exceptions.**

**TYPE C CONVENTIONAL**

Bus type C capable of transporting 78 passengers with a GVWR not less than 30,000 lbs.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**ACCELERATOR CONTROLS**

Accelerator to be suspended from the firewall electrically operated and shall include a dash-mounted fast idle switch which automatically disengages when the transmission is shifted into neutral. Accelerator and brake pedal are to be adjustable, electrically activated, with a minimum 3" of fore & aft adjustment.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**AIR CLEANER**

Heavy-duty type air cleaner, cowl mounted for maximum protection. **Engine air filtration system must have integrated hood plenum with two (2) expulsion valves to remove moisture and large contaminants.** Restriction indicator to measure filter condition with indicator and/or light in dash.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**ALTERNATOR**

Shall be Leece Neville 4962PGH 12-volt of not less than 320 amps and provide at least 50% of the rated charge at engine idle. Mounting shall be heavy duty 2-leg type as specified in SAE-J-180.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**AXLE FRONT**

Shall be heavy-duty "I" beam design. Minimum 10,000 lb. axle capacity with reverse Elliott steering knuckles, grease able tie rod ends, and 80" nominal track turning angle shall be minimum 55° to allow maximum maneuverability. King pins shall be minimum 1.794" diameter with sealed bushings and tapered roller thrust bearings. Gross axle weight rating dependent on optional equipment selected up to maximum allowable. Oil lube seals are required. Synthetic Lube.

Please state turning angle: \_\_\_\_\_.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**AXLE REAR**

Shall be a full-floating type and have a minimum gross weight capacity of 21,000 lbs. Axle shall be equipped with oil lubricated wheel bearings and include a magnetic drain plug. Ratio to be determined for desired performance dependent on bus application and operating conditions. Synthetic Lube.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**BATTERIES**

Provide three (3) group 31 12-volt low maintenance, lead antimony type batteries with a minimum of 925 cold cranking amps each (2775 total) with 170 minutes reserve capacity at 80 degrees F. **Batteries to be mounted on roller bearing slide out tray. Battery tray to have (2) two positive, spring- loaded pins to hold the tray in the closed position. Polyethylene battery cover to be provided. Battery box to be chassis frame rail mounted. A master battery cut off switch provided.**

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**ELECTRONIC STABILITY CONTROL**

Electronic stability control that intervenes automatically when it senses instability that could lead to loss of control or rollover.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**BRAKES**

Service brake dual full air brake system designed to meet all requirements of FMVSS-121 in effect at time of manufacture with full ABS. Service lining no less than 820 square inch in area. Brake components including lining to be extended service type.

TYPE: Drum; FRONT: 16.5" X 5"; REAR: 16.5" X 7" Brake Size. **Must include Bendix AD-IP air dryer.**

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**AIR BRAKE SYSTEM**

Brake system shall include a gear driven air compressor with a minimum output of 18.7 CFM, and a minimum of four air reservoirs with a total of 4160 cu. in. of capacity. . One optional air reservoir is to be designed entirely for air operated accessories. All air lines are to be color coded for ease of identification and service. The air lines shall be made of nylon or equal to withstand vibration. The air system shall include dual air pressure gauge and alarm system which will automatically activate when the air pressure reaches 60 psi or less. System shall be S-cam design with 24 sq. in. front brake chambers, 30 sq. in. rear brake chambers and automatic slack adjusters.

TYPE: Drum; FRONT: 16.5" X 5"; REAR: 16.5" X 7" Brake Size. **Must include Bendix AD-IP air dryer.**

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**PARKING BRAKE**

Parking brake shall be minimum 30 sq. in. spring type with dash-mounted control valve.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**COOLING SYSTEM**

750 square inch minimum aluminum core radiator  
Coolant must be identified at inlet with permanent label and shall be red or orange in color.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**COOLANT SYSTEM**

Coolant is to be heavy duty premium grad antifreeze only. "No extended life".

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**DESIGN**

Type C bus body and chassis shall be manufactured and warranted by the same manufacturer.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**DRIVE LINE**

Spicer Life SPL 1710 series minimum, (with engines of less than 660 ft.lb torque) with coated slip section, with safety guard to prevent damage to under carriage of bus in the event of failure

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**ENGINE**

Cummins® ISB 6.7L with SCR technology Minimum 260HP and a Minimum 660 ft. Torque at 1600 RPM

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**EXHAUST SYSTEM**

2017 Emissions achieved by utilizing exhaust mitigator and Diesel Exhaust Fluid or DEF

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**FAN DRIVE**

Cooling fan shall be 10-blade electronically and thermostatically controlled.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**FIREWALL**

The front fascia of the body and the chassis to be integrated through a firewall design This firewall is to be accessible through a latch able tilt hood to provide access to the wiper motors, air brake plumbing, steering column shaft, washer-bottle, horns, brake pressure switches, and main electrical connections. This firewall design shall provide additional structural strength to the body/chassis interface, provide additional driver protection, and increase sealing to prevent air, dust, and water from entering the interior of the bus body.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**FRAME**

All welded and bolted construction with grade 8 flange head bolts and nuts. The main frame shall be a continuous section from the front of the vehicle to aft of the rear axle. Dimensions shall be not less than 10" x 3" X ¼" with a minimum 50,000 PSI yield strength. Frame rails shall not be notched, tapered, or cutout to provide clearance for engine or step well installation. Engine shall be installed on bolted modular rails to provide a full-width clearance of not less than 34" between the rails. This allows for easy engine component accessibility and routine maintenance Front and Rear tow hooks are required.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**FUEL TANK**

100-gallon capacity minimum meeting all requirements of FMVSS 301 The tank to be located between the frame rails and immediately aft of the front axle this location will provide an increased level of safety and will provide optimum weight distribution. The bus floor shall include an access plate for servicing the sending unit of the fuel tank. An outside fuel filler door with latch to be provided

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**FUEL TANK OPENING**

Exterior: The exterior fuel fill opening shall be covered with a hinged metal door which contains a positive latch **KEY LOCK COVER.**

Interior: The interior fuel tank opening shall contain an access plate in the floor located above the fuel tank for servicing the fuel tank sender and connections.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**DEF TANK OPENING**

Exterior: The exterior DEF fill opening shall be covered with a hinged metal door which contains a positive latch **KEYED LOCK COVER.**

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**HOOD**

Hood shall be equipped with fiberglass tilt hood with easy opening hood for 15# maximum pull effort. Engine splash shield must tilt out of way with the hood needed to gain access for fluid check. Must have removable grill for easy serviceability. Grill should be black in color. Hood must include rubber lined hood pull for driver's comfort. Left side hood, engine air intake with integrated air intake plenum.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**INSTRUMENTS/PANEL**

- Speedometer/7-digit odometer (including tenths)
- Tachometer/Hour meter
- Oil Pressure Gauge
- Water Temperature Gauge
- Fuel Gauge
- Voltmeter
- Dual Air Pressure Gauge
- Combination directional signal/headlight dimmer switch on steering columns
- Warning lights and buzzers for oil pressure, water temperature, and air pressure
- Hazard warning switch on the steering column
- Electronic fast idle control
- Key type starter and engine stop switch
- One (1) Aux Outlet for accessories to be installed in the driver compartment

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**RUSTPROOFING**

All chassis framing, fasteners, and suspension systems are to be painted with a rust inhibiting paint after assembly and before body mounting.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_



**SHOCK ABSORBERS**

Heavy duty direct acting double action piston type, 2 fronts and 2 rears.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**SPRINGS/SUSPENSION**

Three (3) taper leaf type (parabolic) springs, with a minimum capacity of 10000 lbs, each side front. Springs to be mounted inboard to provide at least a 55 degree turn angle Heavy duty radius leaf varied-rate type springs rated at 8500 lbs. each side rear to provide optimum comfort at no load or at full load.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**STEERING**

Integral full power Ross TAS-65 or Sheppard M-100 with a tilt and telescoping 20" four spoke padded steering wheel.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**TIRES**

Single tire front axle and dual tire rear axle. To be Hankook AH 37 11R22.5 minimum 16 ply (H) rated minimum steel radial tubeless type tires.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**TIRE PRESSURE MONITOR**

A system to monitor tire air pressure,

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**TRANSMISSION**

Six speed PTS3000 Allison automatic. Shift control shall be mounted to the right of the steering column. The transmission shall include an external filter and oil to coolant transmission cooler to be mounted in the radiator to provide maximum efficiency and fewest connections and fittings. The transmission fluid fill and check shall be located on the left side of the engine opposite the exhaust manifold. Audible Back up alarm is required

**Must use Transynd automatic transmission fluid or synthetic equivalent**

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**WHEELBASE**

Shall be 279 inches to minimize rear body sweep. The rear overhang measured from the centerline of the rear axle to the rear bumper shall not exceed 159 inches

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**WHEELS**

Seven (7) minimum wheels ten-hole hub piloted dual-mounting, double cap nut 8.25" X 22.5 All wheels to be interchangeable. Brakes and wheels shall be outboard mounted so that brakes can be inspected without disturbing the axle or wheel seal. Color BLACK

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**WIRING**

All chassis wiring to be color coded numbered, and shall be routed through convoluted tubing for protection. The wiring shall be protected by a manual reset circuit breaker. A master 150-amp circuit breaker and battery cut-off switch shall be provided.

A customer access fuse panel shall be provided to allow additional customer installed accessories to be added. Switches shall be rocker type design and provide "smart switch" technology offering switches that can be repositioned without rewiring or reprogramming of system.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**RADIO**

AM/FM radio with a minimum of six (6) speakers installed. With integrated P. A. system, J1939 messaging, weather band, reverse mute, speed compensated volume installed.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**AISLES**

There shall be a minimum 12" aisle from the entrance door to all emergency doors.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**BUMPER**

Front and Rear: shall be one-piece, formed from 3/16" plate steel. The bumpers shall be a minimum of 9 1/2" high after forming with a minimum section modulus of .5369 for added strength.

Front bumper to be equipped with an electric **Crossing Control Arm.**

The rear bumper shall wrap around back corners extending forward at least 12" fitting snugly to the body to prevent hand holds.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**COLOR**

Exterior: Shall be National School Bus Yellow. This paint shall be baked-on, high solids polyurethane. The roof is to be painted white. Trim, including rub rails, window pilasters, and door handles shall be black.

Interior: Shall be light gray baked on enamel. Area from the bottom of the side windows to the seat rail shall be Galvalume steel.

All seat frames shall be a baked-on black powder coating for scratch resistance.

All metal panels on the bus to be painted and shall be primed on both sides prior to assembly.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**CONSTRUCTION**

The bus body shall be constructed to meet or exceed all Tennessee state and federal school bus requirements in effect at the time of manufacture.

*Roof Bows* – The roof bow frame assembly shall consist of continuous, one-piece, 14 gauge rolled channel hat sections, stretch formed and mounted on 30" centers to provide a roll bar type protection. Roof bows shall be 3 1/16" wide with a cross section modulus of .22<sup>3</sup>.

*Roof Crash Rails* – two continuous, one-piece 16 gauges rolled channel roof crash rails extending from first to last roof bow shall be applied internally between interior and exterior sheets.

*Floor* – Shall be constructed of 14-gauge Galvalume steel formed with overlapping joints on 30" centers. Floor will be further reinforced with 11-gauge Z-channel cross members installed on 10" centers and shall extend the full width of the floor except in wheelhouse area. All floor cross members shall be welded to 14-gauge steel floor panels, which extend the full length of the body floor on each side. An interior impact panel shall be one piece continuous welded to floor and

welded at each intersection with body bow. There shall be an 11-gauge floor X-brace reinforcement added to wheelhouse area. Wheelhouse shall be stamped 16-gauge one-piece design.

*Vertical Headers* – Shall be installed at each roof bow extending from upper side sheet to exterior structural header creating closed box type reinforcement at each roof bow.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**DOORS**

The service door shall be an air-operated, outward opening, two-panel door. The door panel shall be a bolted frame construction and made of anodized extruded aluminum. Each door panel shall have one-piece glass to provide maximum visibility to the loading area. Each panel shall be attached to pivot points at the top and bottom of the panel with greaseless self-cleaning bearings. The door control mechanism shall be located to the left of the driver on the switch cabinet to prevent accidental opening by students. An emergency opening control valve shall be located above the windshield adjacent to the door. The control mechanism of the door shall be located above the door and concealed behind a hinged panel for ease of service. Vandalocks shall be provided on front door and rear door.

A nylon assist handle shall be mounted to the exterior of front leaf of entrance door. Door shall include a three-position switch.

The door shall seal against the bottom step edge and a stationary rubber gasket mounted to the door. No part of the door shall ride in the stepwell when closed. Vertical closing edges of the door shall be equipped with flexible material to protect passengers.

All entrance and exit doors shall be equipped with a full-width 1" x 3" padding located above the door opening. The service door and side emergency doors shall contain drainage holes in the bottom of the door to allow for drainage of condensation and to deter corrosion.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**EMERGENCY EXITS**

All emergency exits shall conform to FMVSS 217.

Two roof hatches required. Transpec 1970 Series LoPro (**NO EXCEPTIONS**)

Emergency Door: There shall be an emergency door located in the center rear of the bus. Door shall be constructed using self-piercing rivet technology to prevent any leak path and shall have a **minimum of 38" horizontal opening and a 61" vertical opening**. Door to be equipped with an audible buzzer that will sound at the exit and in the driver's area when the release mechanism is moved toward the open position and shall have upper and lower glass. **Door hinges shall be stainless steel**. There shall be a device installed on the top of the emergency door that will automatically hold the door in the open position during emergencies and evacuation drills.

Emergency Door Clear Opening \_\_\_\_\_

All emergency doors and windows shall be equipped with a system of audible buzzers which will sound at the exit and in the driver's area when the release mechanism is moved toward the open position. Two push out windows (per side) and two Transpec roof hatches shall be provided.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**ELECTRICAL**

Shall be equipped with fully integrated multiplex electrical system for both body and chassis. ECMs to be chassis frame mounted for ease of access. The electrical system shall be 12 volts. The wiring shall be color and number coded and a wiring diagram shall be furnished with each bus. A master battery cut off switch shall be provided and installed near the battery compartment.

Interior body wiring shall be routed down the left side of the bus, above the side windows, behind a completely removable cover. The cover shall be removable without loosening the side windows. All wires shall be insulated and protected from

external damage. The body wires shall be securely fastened to a metal stringer which runs from the front of the compartment to the back, behind the wiring cover. The wires shall be fastened at intervals of not more than 24".

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**FENDERETTES**

The rear wheel openings shall be equipped with metal fenderettes that stand off the body side approximately one and one-half inches for added protection.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**EXTERIOR PANELING**

Front Hood: Shall be constructed of high strength composite material. Hood shall incorporate a recessed area for installation of warning lights. The hood shall be bonded in place over a tubular steel support structure for additional strength.

Roof: The roof panels shall be double-lapped, 16-gauge, zinc-coated steel, riveted to each flange of the body bow frame.

The roof sheets shall be one section. All roof sheets shall be sealed to prevent leaks. The roof shall be reinforced with two 16-gauge roof crash rails applied internally, riveted through the roof panels and into the roof bows to provide an extra measure of strength in the overhead areas. Exterior panels shall be primed both sides before assembly for rust prevention.

The exterior side panels shall be at least 20-gauge sheet steel, riveted to both flanges of the roof bows. The side sheets shall extend below the center line of the rear axle. The side panels shall be primed on both sides before assembly.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**FIRE EXTINGUISHER**

Each bus shall be equipped with one dry type chemical fire extinguisher to meet state standards. The fire extinguisher shall be mounted on the floor in the vestibule area.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**FIRST AID KIT**

Each bus shall be equipped with a metal type first aid kit to meet state standards. The first aid kit shall be mounted on the floor in the vestibule area.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**TRIANGLE FLARES**

Each bus shall be equipped with a set of triangle flares in accordance with FMVSS and be mounted on the floor in the vestibule area.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**DOCUMENT CONTAINER**

Must include a document pouch visible from the driver seat.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**FLOOR COVERING**

Floor covering shall be heavy duty RCA rubber or equal, gray with white marble. The floor under the seats, over the wheelhouse and in the driver's, compartment shall be covered with .125" thick smooth rubber.

The aisle and entrance steps shall be covered with slip resistant .1875" thick ribbed rubber. All floor seams must be sealed with a waterproof sealer and covered with a 1" wide 16-gauge rustproof metal stripping or molding. The floor covering along the wide walls shall be covered with metal molding so that dirt cannot readily work underneath the edges. Step treads shall be gray pebble grain material.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**DEFROSTER**

*Driver's Heater* - Heater shall be installed at front center of vehicle. The **heater to be 4-speed, fresh air type**. Heater controls shall be electronic, automotive style. A defroster channel shall run the full length of the windshield for maximum defrosting. Heater ducting shall be distributed at floor and dash level. Defroster system shall direct air to Saf-T-Vision™ side windows.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**HEATERS**

- All heaters shall be of the copper coil design type with aluminum fins. Heaters shall be plumbed in parallel to obtain the maximum heater output. Rear heater to be one 84,000 BTU minimum unit. One unit to be installed between the lift and wall right side.
- All heaters are to be easily serviceable with cleanable air filters. All heater hoses shall be covered with metal and use constant torque clamps
- Front heater shall have a minimum rating of 91,000 BTU's with ducting for driver's heat. Heater ratings shall be based on testing as outlined by SBMI.
- Step well heater minimum 30,600 BTU
- The heater fans shall blow air toward the front and rear. Heater cutoff valves (2) shall be located in the engine compartment.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**HANDRAILS**

There shall be two stainless steel handrails one on each side of the entrance door, mounted near the midpoint of the step well and extending to near the top of the seat barrier. Handrails shall be securely attached and designed so as to reduce the likelihood of snagging clothing or other articles.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**IDENTIFICATION**

The bus shall be lettered in accordance with all Roane County Schools requirements and applicable federal and Tennessee state requirements.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**INSTRUMENTS, GAUGES, AND SWITCHES**

The chassis instruments and gauges shall be located within easy view of the seated driver. (Also see "instruments" in chassis section.) Two aux. outlets for accessories to be installed in the driver compartment.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**INSULATION**

Ceiling, side and rear panels shall be insulated with a minimum 2" thick blanket type polyester insulation to properly deaden sound, reduce vibration, and provide a thermal barrier. The insulation shall be fire resistance of type approved by

Underwriters Labs, Inc. with an R value of 6.

1/2" sound absorbing foam rubber padding with black vinyl pebble grain surface shall be installed on the toe Board/firewall area to reduce noise and heat in the driver's area. The insulation shall include full acoustical headlining.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

### **INTERIOR**

The interior of the bus shall be free of all unnecessary projections likely to cause injury. All interior panels shall have lapped edges. Interior headroom shall be a minimum of 77".

Dual cupholders shall be provided center of dash below HVAC controls.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

### **LAMPS & SIGNALS**

All lamps shall conform to all current FMVSS and Tennessee state laws in effect at time of manufacture. Lights to include:

- **Headlights:** Extended life halogen headlights with amber daytime running lights **W/lights on audible alarm reminder.**
- **Marker:** All LED (3) three amber front flush mounted pin type LED, (3) three red rear flush mounted pin type LED, (2) two front corners amber flush mounted pin type LED, (2) two rear corners red flush mounted pin type LED, and (2) two side roof midway amber flush mounted pin type LED
- **Stop/Tail:** All LED (1) one right rear, (1) one left rear - 7-inch minimum LED and (1) one right rear, (1) one left rear 4-inch LED to meet FMVSS and Tennessee State requirements
- **Back-up Lamps:** All LED two (2) 7-inch LED Assy. with clear lens and two (2) two four-inch round LED auxiliary reverse lamps. Shall include one LED light mounted on crossmember behind rear axle to illuminate area around rear tires.
- **Step well:** All LED (1) one minimum operating with dome light switch
- **Door-Entrance:** Shall include one LED exterior light at skirt that illuminates with interior LED stepwell light.
- **Door-Rear:** Shall include a driver alert sign that alternately flashes "caution" and "stopping" when amber warning lights are activated and alternately flashes "stop" and "do not pass" when red warning lights are activated.
- **Dome:** All LED Maximum Lightning (14) fourteen lights minimum, (7) seven rows of (2) two, (2) two dome switches (front half-rear half), Individual dome light and switch for driver's area.
- **Directional Front:** (2) two amber integrated into headlight assembly
- **Directional Sides:** LED (2) two amber, (1) one located behind entrance door below window rail; (1) one located left side similar position
- **Directional Rear:** LED (2) two to meet current FMVSS and Tennessee State requirements
- **Hazard Lights:** LED Must meet or exceed current Tennessee State and Federal Motor Vehicle Safety Standards
- **Reflectors:** (4) four on each side of bus (2) two amber to be located center of the bus and (2) two red to be located at the rear of the bus, (2) two red on rear school bus. All reflectors must meet or exceed all current Tennessee State and Federal Motor Vehicle Safety Standards
- **Stop Arms:** (2) two to meet or exceed all current Tennessee State and Federal Motor Vehicle Safety Standards, shall be Specialty L.E.D. front and rear.
- **Crossing Arm:** Crossing control arm to be installed. *See front bumper section.*
- **Roof:** LED 4.5" roof mounted strobe light with guard.
- **Backing Alarm:** The bus shall be equipped with an automatic back-up alarm installed behind the rear axle. This audible alarm shall be rated at 112 dba in accordance with SAE-J-994b.
- **Passenger Advisory System:** This system shall be armed by the operation of the eight-way light system. When the key is placed in the off position the dome lights shall be activated. The driver will be required to walk to the rear of the bus and deactivate the system by pressing a button on the rear bulkhead. The system will confirm the system deactivation flashing the dome lights. If the driver fails to deactivate the system the head lights will flash and the horn will sound.
- **Light Monitor:** LED type monitor shall be installed in driver area.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**BACK-UP CAMERA**

Roscoe 6"x30" interior mirror which includes a 7" diagonal full color integrated backing monitor. Camera to be mounted immediately over rear emergency door to provide rear viewing when transmission is placed in reverse.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**ZONAR**

ZONAR V3 advanced telematics system installed.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**VIDEO/AUDIO SURVEILLANCE**

- Perimeter view 360 camera system to be activated when the ignition is on with right or left turn signals, reverse signal/rear door opened, or red overhead warning lights are activated.
- REI HD5-1200W-9-500 5 head system with sensors, GPS, and event marker.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**COLLISION AVOIDANCE**

A warning system to help prevent forward collision, pedestrian collision, lane departure, and speeding. All warnings shall be indicated in driver seat haptics, audible, or visual means.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**MIRRORS**

- Interior - Interior mirror to be a minimum 6" X 30" safety glass with protected edges
- Exterior - The ROSCO AccuStyle Mirror with black finish frame. The AccuStyle® mirror head can be mounted on mirror arms which are 3/4" O.D. tube up through 1-1/8" O.D. tube via the removable clamp cover on the back of the mirror shell – making OEM installation as well as aftermarket retrofit simple Exterior rearview and cross view mirrors are to be heated and remote controlled from the driver's seat.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**MOUNTING**

Bus body shall be mounted to chassis frame in such a manner as to prevent shifting. Two bolts are required on each mounting bracket. Rubber mounting pads reinforced with fiber shall be used to cushion body on chassis at every floor crossing.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**MUD FLAPS**

There shall be mud flaps mounted on the rear side of the front and rear wheels.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**REFLECTIVE MATERIAL**

School bus front and rear, 1" wide rear body, and around all emergency exits and doors 2" Band length of body

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**RUB RAILS**

Minimum exterior rub rails to be supplied:

- (1) 4 1/4" located below windows
- (1) 4 1/4" located at seat cushion level
- (1) 4 1/4" located at floor level
- (1) 4 1/4" located at skirt level
- (1) 1/8" thick angle located interior of skirt bottom, welded to bottom of bow frames.

Meets or Exceeds \_\_\_Yes \_\_\_No – Exceptions\_\_\_\_\_

**SEATS**

**Passenger Seats:** All seats to be designed and installed to meet FMVSS. All seats are to be 45" High off the floor. Seats are to be gray fireblock upholstery. Seat frames shall be powder coated non-reflective black. Cushions to be attached so as to prevent detachment from frame in collisions yet allowing for cleaning by pivoting upright. All passenger seats shall include three points restraints for each occupant. Barriers are to be covered in gray fireblock material.

**Driver's seat:** Air ride seat shall be high back with adjustable seat back. Seat back to recline 15° and include adjustable lumbar support. Seat cushion width shall be minimum 20" and offer forward cushion tilt for optimum driver comfort. Seat slide shall have minimum 7" adjustment by finger tip control. Vertical movement to be air controlled. Two folding arm rests required. Upholstery to be black fabric inserts. Seat to meet FMVSS 202 and 222 Driver's seat storage pouch to be included.

**Driver's seat belt:** Shall be orange in color and shall be a Type II, 3-point belt with an adjustable "D" loop for driver comfort. The belt shall be ELR design with a push button release.

Meets or Exceeds \_\_\_Yes \_\_\_No – Exceptions\_\_\_\_\_

**SOUND ABATEMENT PACKAGE**

To include one half inch sound abatement material in step well on fire wall. All ceiling panels shall be acoustic perforated headlining.

Meets or Exceeds \_\_\_Yes \_\_\_No – Exceptions\_\_\_\_\_

**STEPWELL**

Three-step entrance covered with gray pebble grain material with white nosing. Diamonette trim on floor edge to prevent wear. Entrance grab handle to be provided. Aluminized steel step well liners.

Meets or Exceeds \_\_\_Yes \_\_\_No – Exceptions\_\_\_\_\_

**SUN VISOR**

Visor to be a minimum 6" X 30" dark Plexiglas and fully adjustable

Meets or Exceeds \_\_\_Yes \_\_\_No – Exceptions\_\_\_\_\_

**SWITCH PANEL**

Panel shall be mounted to the left of the driver with switches for the electrical components. Control panel indirectly illuminated and controlled by the headlamp switch rheostat. Each switch shall be individually backlit, provide international symbols, labeling and be controlled by the headlamp switch. Switches to be mounted at a 45-degree angle for driver comfort and better visibility. The side of the switch panel shall include a storage area for driver's maps and papers. One **(1) Aux Outlet for accessories to be installed in the driver compartment shall be provided.**

Meets or Exceeds \_\_\_Yes \_\_\_No – Exceptions\_\_\_\_\_



**UNDERCOATING**

Entire underbody to be completely undercoated with wax base undercoating material or equivalent

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**VENTILATION**

Body shall be equipped with a static type, non-adjustable exhaust ventilator located in low pressure area of front roof. A driver controlled fresh air vent shall be supplied.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**VISIBILITY**

The design of this bus shall be such that the seated driver shall be able to view the ground by direct visibility along with a parallel line 10' forward of the front bumper the entire width of the bus. For the purpose of complying with this requirement, test to be conducted in accordance with SALE J-941 utilizing the dimensions of a 95th percentile adult male.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**WINDOWS**

Two-piece side windows to be of safety tinted tempered glass mounted in flat black power coated aluminum frames. The top portion of the side windows shall be capable of being lowered to a position that provides an opening at least 12" X 22". All latches shall be removable and replaceable without removing the window.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**WINDSHIELD**

Windshield shall be one-piece bonded and curved, slanted to reduce glare and breakage and provide maximum vision. The tinted safety plate laminated glass shall provide minimum 3,000 square inches of windshield glass area and include a shaded band.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**WINDSHIELD WIPERS**

Bus to be equipped with two heavy-duty electrically operated wet arm type bottom mounted wipers. Wipers to be variable speed Access to wiper motors through exterior panels.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**WINDSHIELD WASHER**

Dual electric wet arm type windshield washers are required. Washer bottle to be accessible through front service panel

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**WARRANTY**

SCHOOL BUS BODY WARRANTY: A copy of the body manufacturer's warranty shall be included with and become a part of any bid which shall receive consideration by the purchaser. No warranty other than manufacturer's five-year limited warranty will be accepted. Such warranties shall speak specifically to the following:

Within the **first five years/unlimited mileage** following delivery to the purchaser's location:

- Failure in major structural components including those caused by deterioration due to rust.
- Rust performance of sheet metal surfaces and paint adhesion.
- Failure in seat frames and barrier frames.

Within the **first three years/50,000 miles** following delivery to the purchaser's location:

- Failure of any components manufactured by outside suppliers and included as original equipment by the body manufacturer. Where the outside supplier's warranty exceeds that of the body manufacturer then such warranty shall be stated and shall apply.

**SCHOOL BUS CHASSIS WARRANTY:**

- A copy of the chassis manufacturer's warranty shall be included with and become a part of any bid which shall receive consideration by the purchaser. No warranty other than manufacturer's five-year warranties shall speak specifically to the following:
  - Within the **first five years/unlimited mileage following delivery** to the purchaser's location:
    1. Failure of the chassis frame including crossmembers.
  - Within the **first three years/50,000 miles following delivery** to the purchaser's location:
    1. Failure of any other components manufactured by outside suppliers and included as original equipment by the chassis manufacturer then such warranty shall be stated and shall apply.

ENGINE WARRANTY Max offered or 5yr. minimum

TRANSMISSION WARRANTY Max offered or 5yr. minimum

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**BID REQUIREMENTS**

All bidders must include a copy of the proposed floor plan showing knee room spacing.

Buses are to be thoroughly cleaned before delivery.

Delivery desired as soon as possible. Please state earliest delivery date: \_\_\_\_\_

**TRAINING**

The successful bidder shall include factory training at the OEM's facility for two system employees, including nine core sessions of specialized classroom instruction and a comprehensive plant tour. Registration shall be part of the selling dealer's bid.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**TECH SUPPORT**

Dealer Owned Mobile Tech Support

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**LITERATURE**

A parts manual for each unit is to be included.

Broadcast sheets or access to build list for each unit to be included.

OPTIONS: Please list separately from bid price.

- Any extended engine, transmission, body, and chassis warranties which are available.
- Air Conditioning: 126,000 BTU's with front and rear in-wall evaporators, dash vents and defroster tie-in, and dual TM-21 compressors.

**ROANE COUNTY SCHOOLS – 84 PASSENGER SCHOOL BUSES  
SPECIFICATIONS**

The school bus body (or bodies) furnished shall comply with all current Tennessee state and Federal Motor Vehicle Safety Standards in effect at time of bid. Additionally, Roane County Board of Education is requiring the following supplementary specifications. Any exceptions to these specifications should be concisely noted in the space provided. Equivalency of any exceptions to the items requested will be solely at the discretion of Roane County Board of Education. Buses are to be new.

Bidder's Name \_\_\_\_\_

Address \_\_\_\_\_

Make and Model of Bus Body \_\_\_\_\_

Passenger Capacity \_\_\_\_\_

Knee room \_\_\_\_\_

**Specifications Furnished. Fill in all spaces. Note and explain equivalents or exceptions.**

**TYPE D TRANSIT** Bus type D capable of transporting 78 or 84 passengers with a GVWR not less than 33,000 lbs.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**ACCELERATOR CONTROLS** Accelerator to be suspended from the firewall electrically operated and shall include a dash-mounted fast idle switch which automatically disengages when the transmission is shifted into neutral. Accelerator and brake pedal are to be adjustable, electrically activated, with a minimum 3" of fore & aft adjustment.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**AIR CLEANER** Shall be Donaldson heavy duty replacement type shall be mounted outside the passenger compartment with proper ducting to provide adequate engine aspiration. Location of the air intake shall be above the radiator for cleanest possible air. The air cleaner shall be readily accessible for servicing. The air cleaner shall include an air restriction indicator located on inside dash panel. Indicator on filter.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**ALTERNATOR** Shall be a Delco 28SI alternator minimum 12-volt of not less than 200 amps and provide at least 50% of the rated charge at engine idle. Mounting shall be heavy duty 2-leg type as specified in SAE-J-180.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**AXLE FRONT** Shall be heavy-duty "I" beam design. Minimum 13,200 lb. axle capacity with reverse Elliott steering knuckles grease-able tie rod ends and 80" nominal track. Turning angle shall be minimum 45 degrees to allow maximum maneuverability. Kingpins shall be minimum 1.794" diameter with sealed bushings and tapered roller thrust bearings. Gross axle weight rating dependent on optional equipment selected up to maximum allowable. Oil lube seals are required. Please state turning angle: \_\_\_\_\_.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**AXLE REAR** Shall be a full-floating type and have a minimum gross weight capacity of 23,000 lbs. Axle shall equipped with oil lubricated wheel bearings and include a magnetic drain plug. Ratio to be determined for desired performance dependent on bus application and operating conditions.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**BATTERIES** Provide three (3) group 31 12-volt low maintenance, lead antimony type batteries with a minimum of 1125 cold cranking amps each (3375 total) with 170 minutes re-service capacity at 80 degrees F equipped with a cut-off switch.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**BRAKES** Service brake dual full air brake system designed to meet all requirements of FMVSS-121 in effect at time of manufacture with full ABS. Service lining no less than 920 square inch in area. Brake components including lining to be extended service type. TYPE: Drum; FRONT: 16.5" X 7"; REAR: 16.5" X 8-5/8" Brake Size.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**AIR BRAKE SYSTEM** Brake system shall include a gear driven air compressor with a minimum output of 18.7 CFM, and a minimum of four air reservoirs with a total of 6,470 cu. in. of capacity. One optional air reservoir is to be designed entirely for air operated accessories. All air lines are to be color coded for ease of identification and service. The airlines shall be made of nylon or equal to withstand vibration. The air system shall include dual air pressure gauge and alarm system which will automatically activate when the air pressure reaches 60 psi or less. System shall be S-cam design with 24 sq. in. front brake chambers, 30 sq. in. rear brake chambers and automatic slack adjusters. TYPE: Drum; FRONT: 16.5" X 6"; REAR: 16.5" X 8-5/8" Brake Size. Must include Bendix AD-IP air dryer.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**PARKING BRAKE** Parking brake shall be minimum 30 sq. in. spring type with dash-mounted control valve.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**COOLING SYSTEM** Radiator to be heavy-duty brazed aluminum tube and fin construction to achieve maximum corrosion protection Radiator and charge air cooler to be mounted over and under, (stacked) to prevent clogging and provide ease of cleaning. Coolant must be identified at inlet with permanent label.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**COOLANT SYSTEM** Coolant is to be heavy duty premium grade antifreeze only. "No extended life".

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**DESIGN** Type D bus with rear mounted engine. Body and chassis shall be manufactured and warranted by the same manufacturer.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**DRIVE LINE** Spicer Life SPL 100 series minimum, (with engines of less than 720 ft.lb torque) with coated slip section, with safety guard to prevent damage to under carriage of bus in the event of failure.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**ENGINE** Shall be a Cummins ISL 9 with a 260 Horsepower minimum 720 ft. lbs. torque minimum electronically controlled in-line 6-cylinder engine. Engine shall provide electronic monitoring system for water temperature, unaided cold starts to zero degrees F, engine diagnostic data and data logging capabilities. Maximum speed shall be limited to 70 mph. Engine shall include an engine turbo brake.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**EXHAUST SYSTEM** 2017 Emissions achieved by utilizing exhaust mitigator and Diesel Exhaust Fluid or DEF

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**FAN DRIVE** Shall be a thermostatically controlled mechanical operated fan drive system and a 24" diameter 10-blade fan shall be incorporated.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**FIREWALL** The front fascia of the body and the chassis to be integrated through a firewall design This firewall is to be accessible through a lockable, hinged access panel and is to provide access to the front header system, wiper motors, air brake plumbing, steering column shaft, washer-bottle, horns, brake pressure switches, and main electrical connections. This firewall design shall provide additional structural strength to the body/chassis interface, provide additional driver protection, and increase sealing to prevent air, dust, and water from entering the interior of the bus body.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**FRAME** All welded and bolted construction with grade 8 flange head bolts and nuts. The main frame shall be a continuous section from the front of the vehicle to aft of the rear axle. Dimensions shall be not less than 10" x 3" X 1/4" with a minimum 50,000 PSI yield strength. Frame rails shall not be notched, tapered, or cutout to provide clearance for engine or step well installation. Engine shall be installed on bolted modular rails to provide a full-width clearance of not less than 34" between the rails. This allows for easy engine component accessibility and routine maintenance Front tow hooks are required.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**FUEL TANK** 100 gallons capacity minimum meeting all requirements of FMVSS 30 The tank to be located between the frame rails and immediately aft of the front axle This location will provide an increased level of safety and will provide optimum weight distribution. The bus floor shall include an access plate for servicing the sending unit of the fuel tank. An outside fuel filler door with latch to be provided.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**INSTRUMENTS/PANEL** (\*All gauges shall be individually serviceable and replaceable)

- Speedometer/7 digits odometer (including tenths)
- Tachometer/Hour meter
- Oil Pressure Gauge
- Water Temperature Gauge
- Fuel Gauge
- Voltmeter
- Dual Air Pressure Gauge
- Combination directional signal/headlight dimmer switch on steering columns
- Warning lights and buzzers for oil pressure, water temperature, and air pressure

- Hazard warning switch on the steering column
- Electronic fast idle control
- Key type starter and engine stop switch
- One (1) Aux outlet for accessories to be installed in the driver compartment

Meets or Exceeds \_\_\_Yes \_\_\_No – Exceptions\_\_\_\_\_

**RUSTPROOFING** All chassis framing, fasteners, and suspension systems are to be painted with a rust inhibiting paint after assembly and before body mounting.

Meets or Exceeds \_\_\_Yes \_\_\_No – Exceptions\_\_\_\_\_

**SHOCK ABSORBERS** Heavy duty direct acting double action piston type, 2 fronts and 2 rears.

Meets or Exceeds \_\_\_Yes \_\_\_No – Exceptions\_\_\_\_\_

**SPRINGS/SUSPENSION** Three (3) taper leaf type (parabolic) springs, with a minimum capacity of 6600 lbs., each side front. Springs to be mounted inboard to provide at least a 45 degree turn angle Heavy duty radius leaf varied-rate type springs rated at 8500 lbs. each side rear to provide optimum comfort at no load or at full load.

Meets or Exceeds \_\_\_Yes \_\_\_No – Exceptions\_\_\_\_\_

**STEERING** Integral full power Ross TAS-65 or Sheppard M-I 00 with a tilt and telescoping 20" three spoke padded steering wheel. Adjustable brake and accelerator at end of driver's seat.

Meets or Exceeds \_\_\_Yes \_\_\_No – Exceptions\_\_\_\_\_

**STEP GUARD** A steel step guard or skid plate is to be installed under the front entrance step to protect the steps and entrance door from damage. (Area behind step well must be insulated.)

Meets or Exceeds \_\_\_Yes \_\_\_No – Exceptions\_\_\_\_\_

**TIRES** Single tire front axle and dual tire rear axle. Minimum 11R22.5 16 ply steel radial tubeless type tires.

Meets or Exceeds \_\_\_Yes \_\_\_No – Exceptions\_\_\_\_\_

**TRANSMISSION** PTS3000 Allison automatic. Shift control shall be mounted to the right of the steering column. The transmission shall include an external filter and oil to coolant transmission cooler to be mounted in the radiator to provide maximum efficiency and fewest connections and fittings. The transmission fluid fill and check shall be located on the left side of the engine opposite the exhaust manifold. Back up alarm buzzer is required. Must use Transynd automatic transmission fluid or synthetic equivalent.

Meets or Exceeds \_\_\_Yes \_\_\_No – Exceptions\_\_\_\_\_

**WHEELBASE** Shall be 238 inches for a 78 passenger or 267 inches for a 84 passenger to minimize rear body sweep The rear overhang measured from the centerline of the rear axle to the rear bumper shall not exceed 117".

Meets or Exceeds \_\_\_Yes \_\_\_No – Exceptions\_\_\_\_\_

**WHEELS** Seven (7) minimum wheels, ten hole, stud piloted dual-mounting, double cap nut 8.25" X 22.5 All wheels to be interchangeable. Brakes and wheels shall be outboard mounted so that brakes can be inspected without disturbing the axle or wheel seal. Color BLACK.

Meets or Exceeds \_\_\_Yes \_\_\_No – Exceptions\_\_\_\_\_

**WIRING** All chassis wiring to be color coded numbered, and shall be routed through convoluted tubing for protection. The wiring shall be protected by a manual reset circuit breaker. A master 150 amp circuit breaker and battery cut-off switch shall be provided.

Meets or Exceeds \_\_\_Yes \_\_\_No – Exceptions\_\_\_\_\_

**RADIO AM/FM** radio with a minimum of eight (8) speakers installed. With integrated P. A. system installed. To include J1939 messaging, reverse mute, speed compensated volume, and weather band.

Meets or Exceeds \_\_\_Yes \_\_\_No – Exceptions\_\_\_\_\_

**AISLES** There shall be a minimum 12" aisle from the entrance door to all emergency doors.

Meets or Exceeds \_\_\_Yes \_\_\_No – Exceptions\_\_\_\_\_

**BUMPER** Front and Rear: shall be one-piece, formed from 3/16" plate steel. The bumpers shall be a minimum of 9 1/2" high after forming with a minimum section modulus of .5369 for added strength.  
Front bumper to be equipped with Crossing Control Arm.  
The rear bumper shall wrap around back comers extending forward at least 12" fitting snugly to the body to prevent hand holds.

Meets or Exceeds \_\_\_Yes \_\_\_No – Exceptions\_\_\_\_\_

**COLOR** Exterior: Shall be National School Bus Yellow. This paint shall be baked-on, high solids polyurethane. The roof is to be painted white. Trim, including rub rails, warning light visors, and door handles shall be black.  
Interior: Shall be light gray baked on enamel. Area from the bottom of the side windows to the seat rail shall be Galvalume steel. All seat frames, dash, heater and defroster ducts shall be a baked-on black powder coating for scratch resistance. All metal panels on the bus to be painted shall be primed on both sides prior to assembly.

Meets or Exceeds \_\_\_Yes \_\_\_No – Exceptions\_\_\_\_\_

**CONSTRUCTION** The bus body shall be constructed of prime, commercial quality steel or other material with strength at least equal to steel. The bus body shall be constructed to meet or exceed all state and federal school bus requirements in effect at the time of manufacture. Internal skeletal structure shall be welded. Screws, rivets, or huck bolts are not acceptable.

*Roof Bows:* The roof bow frame assembly shall consist of 14 gauge hat section bows extending from the bottom of skirting on the one side to the bottom of skirting on the other side. Bow frames shall be continuous, one-piece, 14-gauge rolled channel hat section 1-7/8" deep, mounted on 28 3/4" centers to provide a roll bar type protection. Roof bows must be tied together with two external crash rails. (Internal crash rails.)

*Floor:* The floor shall be constructed of 14-gauge Galvalume "C" channels forming an "I" beam crossmember at approximately 9'. These "I" beam crossmember shall be equal to a 9 gauge thickness and shall extend the full width of the floor except in the wheelhouse area and shall be designed so as not to trap moisture. Floor coloring to be gray marble.

Must include aisle strips. (With plywood flooring over steel flooring)

All floor crossmembers shall be welded to 14-gauge steel floor channel bumpers which extend the entire length of the body floor on each side. This floor bumper shall also serve as the interior seat rail, to be used for mounting seats. This floor bumper shall be welded at each point of intersection with the body bows.

There shall be a 2 1/4" X 2 1/4" tubing reinforcement added to the front and rear of the wheelhouse area. Reinforcements in these areas increase the durability and longevity of the bus body.

Meets or Exceeds \_\_\_\_ Yes \_\_\_\_ No – Exceptions \_\_\_\_\_

**DOORS** The service door shall be an air-operated, outward opening, two-panel door. The door panel shall be a bolted frame construction and made of anodized extruded aluminum. Each door panel shall have one-piece glass to provide maximum visibility to the loading area and the right side door leaf shall include an exterior mounted nylon handle. Each panel shall be attached to pivot points at the top and bottom of the panel with greaseless self-cleaning bearings. The door control mechanism shall be located to the left of the driver on the switch cabinet to prevent accidental opening by students. An emergency opening control valve shall be located above the windshield adjacent to the door. The door control shall be located above the door and concealed behind a hinged panel for ease of service. Vandalocks shall be provided on front door, side door, and rear push out window.

The service door shall be located forward of the front wheels on the right side of the bus. The door shall seal against the bottom step edge and a stationary rubber gasket mounted to the door. No part of the door shall ride in the stepwell when closed. Vertical closing edges of the door shall be equipped with flexible material to protect passengers.

All entrance and exit doors shall be equipped with a full-width 1" x 3" padding located above the door opening. The service door and side emergency doors shall contain drainage holes in the bottom of the door to allow for drainage of condensation and to deter corrosion.

**Door-Entrance:** Shall include one LED exterior light at skirt that illuminates with interior LED stepwell light.

Meets or Exceeds \_\_\_\_ Yes \_\_\_\_ No – Exceptions \_\_\_\_\_

**EMERGENCY EXITS** All emergency exits shall conform to FMVSS 217.

Two roof hatches required. Transpec (NO EXCEPTIONS)

Emergency Door: There shall be an emergency door located on the left side of the bus. This door shall have a minimum of 24" x 58" clear opening and be equipped with a piano type hinge with brass pin. The door hinges shall be so designed to allow lubrication to be channeled to the center 75% of each hinge loop. There shall be a device installed on the top of the emergency door that will automatically hold the door in the open position during emergencies and evacuation drills. The left side emergency door and the rear push out emergency window shall be equipped with a system of audible buzzers which will sound at the exit and in the driver's area when the release mechanism is moved toward the open position. Rear push out emergency window shall provide a clear opening of 22" x 57". Two push out windows (per side) and two Transpec roof hatches shall be provided.

Meets or Exceeds \_\_\_\_ Yes \_\_\_\_ No – Exceptions \_\_\_\_\_

**ELECTRICAL** Shall be an equipped system for both body and chassis ECMs to be chassis frame mounted for ease of access. The electrical system shall be 12 volts. The wiring shall be color and number coded and a wiring diagram shall be furnished with each bus. A master battery cut off switch shall be provided and installed near the battery compartment.



Interior body wiring shall be routed down the left side of the bus, above the side windows, behind a completely removable cover. The cover shall be removable without loosening the side windows.  
All wires shall be insulated and protected from external damage. The body wires shall be securely fastened to a metal stringer which runs from the front of the compartment to the back, behind the wiring cover. The wires shall be fastened at intervals of not more than 24".

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**ENGINE COMPARTMENT** The rear engine compartment shall be fully insulated with thermal and sound insulation sandwiched between the interior davenport seat panels and Galvalume or aluminized steel engine compartment panels. This insulation shall provide protection from heat, fumes and excessive noise from entering the passenger compartment. The engine compartment shall be capable of withstanding detergents and high-pressure wash. A dustpan is to be installed on the curb side to prevent debris from entering the engine compartment. The engine door shall provide access to the engine compartment and related components. The door shall open to a minimum 115° and incorporate an interlock in the starting circuit to prevent starting the engine from the driver's area when the door is open. The opening shall be a minimum 84" x 31"

The engine compartment shall be equipped with side engine doors, one each side. The doors shall be:

- Secured by a flush-mounted adjustable lever latch.
- Hinged vertically for swing-out operation.
- Designed with hinges that have removable pins for
- Greater access for service.
- Designed to allow adequate air flow to the engine.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**FENDERETTES** The front and rear wheel openings shall be equipped with rubber fenderettes that stand off the body side approximately one and one half inches for added protection.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**EXTERIOR PANELING**

- Front Hood: Shall be constructed of high strength composite material. Hood shall incorporate a recessed area for installation of warning lights. The hood shall be bonded in place over a tubular steel support structure for additional strength.
- Front Access Panel: A full width lockable panel located below the windshield shall be constructed of high strength composite material. The panel shall be hinged and open downward to allow access to the front heater system, wiper motors, air brake plumbing, washer bottle & horns mounted on the firewall. Panel shall have a recessed area for mounting 7" front turn signals.
- Bottom Front Fascia/Cowl: Shall be full width mechanically fastened panel constructed of high strength composite material. Panel shall house recessed single round headlights and amber daytime running lights.
- Roof: The roof panels shall be double-lapped, 20 gauge, zinc-coated steel, riveted to each flange of the body bow frame.
- The roof sheets shall be one section. All roof sheets shall be sealed to prevent leaks. The roof shall be reinforced with two 16 gauge roof crash rails applied internally, riveted through the roof panels and into the roof bows to provide an extra measure of strength in the overhead areas. Exterior panels shall be primed both sides before assembly for rust prevention.
- The exterior side panels shall be at least 20 gauge sheet steel, riveted to both flanges of the roof bows. The side sheets shall extend below the center line of the rear axle. The side sheets shall have corrugation between the seat level guard rail and the floor line guard rail. The side panels shall be primed on both sides before assembly.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**FIRE EXTINGUISHER** Each bus shall be equipped with one dry type chemical fire extinguisher to meet state standards. The fire extinguisher shall be mounted in the accessory compartment located above the windshield. This compartment shall contain a glass in the door so that equipment may be seen and it must be lettered "Safety Equipment Inside" and ALL emergency equipment must be stored in this compartment.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**FIRST AID KIT** Each bus shall be equipped with a metal enclosed first aid kit box meeting state standards. The first aid kit shall be mounted in the accessory compartment located above the windshield. This compartment shall contain a glass in the door so that equipment may be seen.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**TRIANGLE FLARES** Each bus shall be equipped with a set of triangle flares in accordance with FMVSS. The triangle flares shall be mounted in the accessory compartment located above windshield. The compartment shall contain glass in the door so that equipment may be seen.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**DOCUMENT CONTAINER** Must include a document pouch visible from the driver seat.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

Waste Basket A 13 quart black polypropylene trash receptacle installed by the bus manufacturer shall be securely mounted in the driver's area

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**FLOOR COVERING** Floor covering shall be heavy duty RCA rubber or equal, gray with white marble. The floor under the seats, over the wheelhouse and in the drivers' compartment shall be covered with .125" thick smooth rubber. The aisle and entrance steps shall be covered with slip resistant .1875" thick ribbed rubber. All floor seams must be sealed with a waterproof sealer and covered with a 1" wide 16-gauge rustproof metal stripping or molding. The floor covering along the wide walls shall be covered with metal molding so that dirt cannot readily work underneath the edges.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**FUEL TANK OPENING** Exterior: The exterior fuel fill opening shall be covered with a hinged metal door which contains a positive latch KEY LOCK COVER.

Interior: The interior fuel tank opening shall contain an access plate in the floor located above the fuel tank for servicing the fuel tank sender and connections.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**DEFROSTER** Defroster shall be of sufficient capacity to keep windshield clear of fog, snow, and ice. The defroster shall include full length windshield defroster channel for even distribution of heated area to the windshield. To include two (2) 6" fresh air type defroster fan mounted over center of windshield.

Meets or Exceeds \_\_\_\_ Yes \_\_\_\_ No – Exceptions \_\_\_\_\_

**HEATERS** All heaters shall be of the copper coil design type with aluminum fins. Heaters shall be plumbed in parallel to obtain the maximum heater output. Rear heater to be two 84,000 BTU minimum units. One unit to be installed midway right side rear. One to be installed left side rear.

All heaters are to be easily serviceable with cleanable air filters. All heater hoses shall be covered with metal. Front heater shall have a minimum rating of 91,000 BTU's with ducting for driver's heat. Heater ratings shall be based on testing as outlined by SBMI.

Driver's heater required minimum 15,000 BTU's to be located behind driver's seat. The heater fans shall blow air toward the front and rear. Heater cutoff valves (2) shall be located in the engine compartment.

Meets or Exceeds \_\_\_\_ Yes \_\_\_\_ No – Exceptions \_\_\_\_\_

**HANDRAILS** There shall be two stainless steel handrails on each side of the entrance door, mounted near the midpoint of the step well and extending to near the top of the seat barrier. Handrails shall be securely attached and designed so as to reduce the likelihood of snagging clothing or other articles.

Meets or Exceeds \_\_\_\_ Yes \_\_\_\_ No – Exceptions \_\_\_\_\_

**IDENTIFICATION** The bus shall be lettered in accordance with all applicable federal and state requirements. Must include a document pouch.

Meets or Exceeds \_\_\_\_ Yes \_\_\_\_ No – Exceptions \_\_\_\_\_

**INSTRUMENTS, GAUGES, AND SWITCHES** The chassis instruments and gauges shall be located within easy view of the seated driver. (Also see "instruments" in chassis section.) Two aux. outlets for accessories to be installed in the driver compartment.

Meets or Exceeds \_\_\_\_ Yes \_\_\_\_ No – Exceptions \_\_\_\_\_

**INSULATION** Ceiling, side and rear panels shall be insulated with a minimum 1 1/2" thick blanket type fiberglass insulation to properly deaden sound, reduce vibration, and provide a thermal barrier. The insulation shall be fire resistance of type approved by Underwriters Labs, Inc. 1/2" sound absorbing foam rubber padding with black vinyl pebble grain surface shall be installed on the toe Board/firewall area to reduce noise and heat in the driver's area. The insulation shall include full acoustical headlining.

Meets or Exceeds \_\_\_\_ Yes \_\_\_\_ No – Exceptions \_\_\_\_\_

**INTERIOR** The interior of the bus shall be free of all unnecessary projections likely to cause injury. All interior panels shall have lapped edges. Interior headroom shall be a minimum of 79". (77" over plywood)

Meets or Exceeds \_\_\_\_ Yes \_\_\_\_ No – Exceptions \_\_\_\_\_

**LAMPS & SIGNALS** All lamps shall conform to all FMVSS and state laws in effect at time of manufacture. Lights to include:

- Headlights: Single sealed beam halogen (42 watt Lo beam/65 watt Hi beam) With lights on audible alarm reminder.
- Cluster: (3) amber front, (3) red rear, LED pin type.
- Marker: (2) front comers, (2) rear comers, and (2) side roof, LED pin type.

- Stop/Tail: (1) right rear, (1) left rear -7" minimum, LED with additional 4" LED
- Back-up Lamps: (2) 6" LED Assy. with clear lens and additional 4" LED
- Step well: (1) LED minimum operating with dome light switch
- Dome: (14) LED minimum, (7) rows of (2), two dome switches (front half-rear half), Individual LED light and switch for driver's area.
- Directional Front: (2) rectangular amber, LED
- Directional Sides: (4) plain amber/red, (1) located behind entrance door below window rail; (1) located left side similar position, (1) located near right rear wheel house, and (1) located left side similar position, LED pin type.
- Directional Rear: (2) LED rectangular amber
- Warning Light: 8-way warning light, LED
- Reflectors: (2) on each side of bus, (2) on rear school bus alternately flashing warning lights shall be provided to meet latest state and Federal Motor Vehicle Safety Standards.
- Stop Arm: (Two) to meet FMVSS and state specifications, shall be Specialty L.E.D. front and rear.
- Crossing Arm: Crossing control arm to be installed. See front bumper section.
- Electrical Comp.: (2) clear LED lens for illuminating the electrical control panel (exterior panel)
- Roof: LED roof mounted strobe light with guard.
- Backing Alarm: The bus shall be equipped with an automatic back-up alarm installed behind the rear axle. This audible alarm shall be rated at 112 dba in accordance with SAE-J-994b.
- Passenger Advisory System: CRS Electronics CR2B to be required.
- Driver Alert Electronic Sign: An electronic sign shall be located on the rear of the bus alternately displaying CAUTION and STOPPING when the overhead amber warning lights are activated. STOP & DO NOT PASS shall alternately flash when the overhead red warning lights are in use. In addition, CAUTION STOPPING shall be displayed anytime the four-way flashers are activated.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**MIRRORS** Interior mirror to be a minimum 6" X 30" safety glass with protected edges  
 Exterior rearview and cross view mirrors are to be contained in a single assembly. Mirror assemblies to be mounted from a single point on overhang arms. The flat mirror to be 8" x 9.5", convex rear view to be 8.5" x 3", and a convex cross view 9.25" x 9.25". Mirrors arms to have a breakaway feature. Shall be heated and remote controlled.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**MOUNTING** Bus body shall be mounted to chassis frame in such a manner as to prevent shifting. Two bolts are required on each mounting bracket. Rubber mounting pads reinforced with fiber shall be used to cushion body on chassis at every floor crossing.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**MUD FLAPS** There shall be mud flaps mounted on the rear side of the front and rear wheels.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**REFLECTIVE MATERIAL** School bus front and rear, 1" wide rear body, and around all emergency exits and doors. 2" Band length of body.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**RUB RAILS** Minimum exterior rub rails to be supplied: (1) 4 1/4" located below windows (1) 4 1/4" located at seat cushion level (1) 4 1/4" located at floor level (1) 4 1/4" located at skirt level (1) 1/8" thick angle located interior of skirt bottom, welded to bottom of bow frames. (2) 2-15/16" applied at roof extending the length of the passenger compartment internally

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**SEATS** Passenger Seats: All seats to be designed and installed to meet FMVSS. All seats are to be 45" High off the floor. Seats to be gray upholstery Fireblock. Seat frames shall be powder coated non-reflective black. Cushions to be attached so as to prevent detachment from frame in collisions yet allowing for cleaning by pivoting upright. All seats shall be equipped with THREE POINT RESTRAINTS FOR PASSENGER CAPACITY SPECIFIED. **(THIS ITEM SHOULD BE BILLED AS ITS' OWN LINE ITEM FOR BILLING PURPOSES.)**

Barriers are to be covered in Fireblock material.

At all side emergency doors there shall be an automatic flip-up seat. The seat cushion shall be designed to rise to a vertical position automatically when not occupied. Flip seat back shall be recessed to allow for seat cushion to fit into back when in the upright position.

Driver's seat: Air ride seat shall be high back with adjustable seat back. Seat back to recline 15° and include adjustable lumbar support. Seat cushion width shall be minimum 20" and offer forward cushion tilt for optimum driver comfort. Seat slide shall have minimum 7" adjustment by finger-tip control. Vertical movement to be air controlled. Two folding arm rests required. Upholstery to be black fabric inserts. Seat to meet FMVSS 202 and 222. Driver's seat storage pouch to be included.

Driver's seat belt: Shall be a Type II, 3-point belt with an adjustable "D" loop for driver comfort. The belt shall be ELR design with a push button release. Color: Orange

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**SOUND ABATEMENT PACKAGE** To include one half inch sound abatement material in step well on fire wall. All ceiling panels to be perforated headliner.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**STEPWELL** Three-step entrance covered with black slip resistant ribbed rubber with an abrasive strip. Diamonette trim on floor edge to prevent wear. Entrance grab handle, right side, to be provided. Galvalume steel step risers are required. Each step shall have extra sealing around the edges to prevent moisture build up. There shall be a guard for the entrance door step well that will protect the front corner of entrance door step.

- **Door-Entrance:** Shall include one LED exterior light at skirt that illuminates with interior LED stepwell light.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**SUNVISOR** Visor to be a minimum 6" X 30" dark Plexiglas and fully adjustable

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**SWITCH PANEL** Panel shall be mounted to the left of the driver with switches for the electrical components. Control panel indirectly illuminated and controlled by the headlamp switch rheostat. Each switch shall be individually backlit, provide international symbols, labeling and be controlled by the headlamp switch. Switches to be mounted at a 45 degree

angle for driver comfort and better visibility. The side of the switch panel shall include a storage area for driver's maps and papers. One (1) aux outlet for accessories to be installed in the driver compartment.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**UNDERCOATING** Entire underbody to be completely undercoated with wax base undercoating material or equivalent.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**VENTILATION** Body shall be equipped with a static type, non-adjustable exhaust ventilator located in low pressure area of front roof. A driver controlled fresh air vent shall be supplied.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**VISIBILITY** The design of this bus shall be such that the seated driver shall be able to view the ground by direct visibility along with a parallel line 10' forward of the front bumper the entire width of the bus. For the purpose of complying with this requirement, test to be conducted in accordance with SALE J-941 utilizing the dimensions of a 95th percentile adult male.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**WINDOWS** Two-piece side windows to be of safety tinted tempered glass mounted in flat black power coated aluminum frames. The top portion of the side windows shall be capable of being lowered to a position that provides an opening at least 12" X 22". All latches shall be removable and replaceable without removing the window.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**WINDSHIELD** Two-piece flat safety plate laminated glass, set in rubber, slanted to reduce glare and provide maximum vision. Shall be tinted. 3,462 sq. in. clear opening minimum, with a 5" glare resistant band at top. The windshield area and window posts shall be painted with glare resistance flat black.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**WINDSHIELD WIPERS** Bus to be equipped with two heavy duty electrically operated wet arm type bottom mounted wipers. Wipers to be variable speed. Access to wiper motors through exterior panels.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**WINDSHIELD WASHER** Dual electric wet arm type windshield washers are required. Washer bottle to be accessible through front service panel.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**REAR ACCESS PANEL** There shall be a removable panel, meeting 60% joint strength, located in the center of the rear Davenport seat allowing access to the top of the engine. The panel shall be screwed in place and include insulation with a sealant that will prevent heat and fumes entering the passenger compartment.

Meets or Exceeds \_\_\_ Yes \_\_\_ No – Exceptions \_\_\_\_\_

**WARRANTY**

**SCHOOL BUS BODY WARRANTY** A copy of the body manufacturer's warranty shall be included with and become a part of any bid which shall receive consideration by the purchaser. No warranty other than manufacturer's five year limited warranty will be accepted. Such warranties shall speak specifically to the following:

**Within the first five years/unlimited mileage following delivery to the purchaser's location:**

- Failure in major structural components including those caused by deterioration due to rust.
- Rust performance of sheet metal surfaces and paint adhesion.
- Failure in seat frames and barrier frames.

**Within the first two years/unlimited mileage following delivery to the purchaser's location:**

- Failure of any components manufactured by outside suppliers and included as original equipment by the body manufacturer. Where the outside supplier's warranty exceeds that of the body manufacturer then such warranty shall be stated and shall apply.
- Within the first year following delivery to the purchaser's location.
- Failure of any components manufactured by outside suppliers and included as original equipment by the body manufacturer. Where the outside supplier's warranty exceeds that of the body manufacturer then such warranty shall be stated and shall apply.

**SCHOOL BUS CHASSIS WARRANTY**

A copy of the chassis manufacturer's warranty shall be included with and become a part of any bid which shall receive consideration by the purchaser. No warranty other than manufacturer's five year warranties shall speak specifically to the following:

**Within the first five years/unlimited mileage following delivery to the purchaser's location:**

- Failure of the chassis frame including cross members.
- 

**Within the first two years/unlimited mileage following delivery to the purchaser's location:**

- Failure of any other components manufactured by outside suppliers and included as original equipment by the chassis manufacturer then such warranty shall be stated and shall apply.

Meets or Exceeds \_\_\_Yes \_\_\_No – Exceptions\_\_\_\_\_

**BID REQUIREMENTS**

All bidders must include a copy of the proposed floor plan showing knee room spacing. Buses are to be thoroughly cleaned before delivery. Delivery desired as soon as possible.

Please state earliest delivery date: \_\_\_\_\_

**TRAINING** The successful bidder must provide a minimum of 16 hours of training for the mechanical staff: It will be necessary to have this training at the Roane County Schools Transportation Facility. This must be done by the manufacturer providing a mobile training classroom. All training will be at the successful bidder's expense. No traveling by school employees will be allowed for this training.

Meets or Exceeds \_\_\_Yes \_\_\_No – Exceptions\_\_\_\_\_

**LITERATURE** A parts manual for each unit is to be included. Broadcast sheets or access to build list for each unit to be included.

<b>Roane County Schools Special Needs Conventional School Bus</b>				
<b>Notes to Bidder:</b>	1. Bidder must have a fully licensed in-state sales and service facility. <b>State Dealer License # is</b> _____			
	2. Salesman's dealer license # is _____			<b>Dealer owned mobile technical support vehicle required.</b>
	3. Manufacturer should meet the world-wide quality assurance programs of ISO9001.			
	4. You must return a copy of these specs with your bid response noting all exceptions and deviations.			
	5. Factory direct deliveries are not acceptable. Product must have a pre-delivery inspection at in-state facility.			
	6. Expected delivery date is:			
<b>Equipment</b>	<b>Description</b>	<b>YES</b>	<b>NO</b>	<b>List Exception</b>
ISO Certification	Copy of ISO certification is enclosed			
Bus Type	Type C See enclosed seat plan-must submit proposed plan with bid.			
	Must meet all state and federal school bus requirements.			
Engine location	Front, Tilt Hood			
Year Model	New, model 2022 or newer.			
Seating Capacity	27 ambulatory seats with 3 wheelchair tie downs.			
Delivery	School Transportation Facility			
Manuals	Include owner's manual.			
Service Training	Provide a minimum of 12 hours product service training at no charge for body and chassis components.			
Warranty	36 months/50,000 miles bumper to bumper-body & chassis			



CHASSIS	CHASSIS			
Axle Ratio	70 mph maximum			
Air Compressor	18.7 cfm			
Air dryer	Bendix AD-9 with heater			
Air tanks	3,460 cubic inch capacity			
Alternator	275-amp Delco-no exceptions			
Axle, front	10,000 lbs. with synthetic lube			
Axle, rear	19,000 lbs. with synthetic lube			
Batteries	Three batteries at 2280 CCA's minimum, group 31, cut-off switch			
Block Heater	750-watt			
Brakes	Outboard drum type w/ auto slack adjuster, DV-2 drain valve			
Brakes	ABS with traction control and electronic stability control.			
Brakes, front	15" X 4" Q plus			
Brakes, rear	16.5" X 7" Q plus			
Bumper 3/16" steel, front	12" with crossing control arm and stowage magnet			
Bumper 3/16" steel, rear	Concave design			
Cooling system	Radiator to have 750 square inches			
Coolant System	Coolant is to be heavy duty premium grade antifreeze only. "No extended life."			
Driveline	Guards around each shaft			
Engine Rating	240 HP. Minimum Cummins ISB with turbo brake			
Engine Type	2017 EPA certified Inline 6-cylinder diesel, no exceptions			
Exhaust	Below rear bumper with mitigator			
Frame	50,000 lbs. psi, battery box shall be frame mounted			

Fuel filter	Cummins spin on type at the engine			
Fuel / Water separator	Detroit 10 micron with heater			
Fuel Tank	60-gallon between frame rails behind rear axle			
Fuel Tank	Include fuel fill door & sender access plate at interior floor			
Fuel Tank	Key lock entry door			
High/low Idle switch	Dash mounted			
Instruments	Speedometer, Tachometer, Voltmeter, Oil Pressure, Dual air gauges			
Instruments	Transmission temperature gauge, cruise control			
Instruments	Air filter restriction indicator			
Shocks	Front and air ride rear			
Springs, front	3 leaf parabolic rated at 9,000 lbs.			
Springs, rear air ride	23,000 lbs.			
Starting aid	Grid heater			
Steering wheel	Tilt/telescopic steering column			
Tires	Seven-tubeless radials 255/70R22.5 16ply			
Tow hooks	Front and rear mounted			
Transmission	Allison 2500 Series automatic, Transynd fluid with 7-year warranty			
Wheel Base	199"			
Wheels	Disc hub piloted, 22.5 X 8.25, spare tire and wheel			
Wiring	Multiplex only-Color & number coded-body and chassis			

<b>BODY</b>				
Access Panel	Interior access panel above driver's window with latch			
Access Panels	Located above windshield, accessible without tools			
Body Coolant Heater	Webasto TSL 17, with winter front			
Body Mounts	Two bolts required for each body mount			
Driver's Dome	LED with separate switch			
Defroster fans	Dual 6" dash mounted fans			
Door, emergency	Tinted upper & lower glass, Vandalock			
Door, entrance	Outward opening, air operation, with left and right assist rails, Vandalock <b>Door-Entrance:</b> Shall include one LED exterior light at skirt that illuminates with interior LED stepwell light.			
Directional Front	Turn signals integrated into headlight housing			
Driver Arm Rests	Right and left sides, folding			
Header Storage	Safety Comp.in front header - 10" x 42", storage over driver			
Emergency exits	4 - push out windows w/ buzzers			
Emergency exits	2 - roof hatches, must be Transpec brand			
Flooring	Gray rubber floor covering			
Flooring	Metal aisle trim			
Flooring	No rear wheel housings-flat floor			
Headroom	77 inches, minimum			
Headlining	Acoustic headlining, driver's area			
Heaters	91,000 BTU front w/ removable filter			
Heaters	84,000 BTU rear w/ removable filter behind rear axle			

Heaters	7-day timer for Webasto heater			
Heaters	Dash mounted water regulator valve			
Heaters	Dual heater cut off valves			
Identification	6" Black letters, both sides			
Identification	6" numbers, sides, front, rear			
Insulation	2" thick insulation in roof, front, rear, and side walls R value=6.0			
Insulation	1/2" rubber sound absorbing foam installed under driver toe board			
Lights	Additional dome lights, dual rows-all LED, stepwell light-LED			
Lights	Halogen headlights			
Lights	Eight-way warning lights, stop, tail, reverse lights-LED			
Lights	Clearance & Cluster lights to be flush mounted LED			
Lights	Amber daytime running lights, LED side directional			
Mirrors	Interior - 6" X 30" non-glare			
Mirrors	Exterior - 7" x16"			
Mud Flaps	Front and Rear			
Paint	Yellow with black rub rails, white roof			
Parts Report	Copy of complete Bus Parts printout available on-line at no charge			
Reflective Tape	"SCHOOL BUS" front and rear caps to be reflective			
Reflective Tape	Side pushout windows and rear of bus, 2" sides			
Reflectors	To be mechanically attached			
Roof Bows	One piece			
Rub rails	Provide four rub rails			
Rub rails	Painted black			
Safety	Fire extinguisher, Seat belt cutter, Triangle Flares,			

Safety	First Aid Kit, Body Fluids Clean Up Kit			
Seat Frames	Frames to be powder coated			
Seat Space	26" minimum knee space, precise location when removed/installed			
Seat Barriers	Include kick panel on right side			
Seats / Driver	Air ride with tilt back, fabric insert, adjustable back			
Seats / Driver	Lap and shoulder belt with seat warning belt indicator			
Seats / Passenger	Removeable 39" with three lap/shoulder belts per seat			
Side Panels	Interior - Aluminized steel side walls			
Solenoid	Disconnect all body circuits			
Strobe	LED roof mounted with brush guard			
Stop arm	Include LED strobe lights			
Vents	2 - driver's fresh air & static roof vent			
Windows, Passenger	Black frames with 12" openings, tinted glass			
Windows Driver	Double sliding, aluminum sash, tempered			
Windshield	One piece with tinted band, bonded in place			
Windshield	2 Grip handles beside windshield			
Wipers	Intermittent feature			
Wiring	Multiplex wiring-Color & number coded-body & chassis			
Noise Suppression	Switch to cancel all noise producing accessories			
<b>Child Reminder</b>	To meet State specs			
Alarm	Backing 112 db			
Document Holder	To meet State specs			
Lift	Braun, meeting requirements of FMVSS 403/404			
Air Conditioner	Front "in-wall, dash, and rear "in-wall" 120,000 BTU's total			

Tie Downs	3 Sure-Loc retractable, fully tracked on both sides- full length of body, overhead			
Radio	AM/FM/CD/PA four speakers, J1939, weather band, reverse mute			
Camera System				
Driver Alert Sign	Mounted on rear door, to illuminate "CAUTION" & "STOPPING"			
Stepwell	Galvalume risers, black steps-abraisive strip, extra sealing-steps			
Entrance Door	Nylon handle mounted to exterior door leaf (Vandalock on all doors)			
Option: Brakes-front and rear	Air disc brakes-quote separately			
Option: Headlights	LED headlights-quote separately			

<b>Roane County Schools Type A Mini Bus</b>				
<b>Notes to Bidder:</b>	1. Bidder must have a fully licensed in-state sales and service facility. <b>State Dealer License # is</b> _____			
	2. Salesman's dealer license # is _____			<b>Dealer owned mobile technical support vehicle required.</b>
	3. Manufacturer should meet the world-wide quality assurance programs of ISO9001.			
	4. You must return a copy of these specs with your bid response noting all exceptions and deviations.			
	5. Factory direct deliveries are not acceptable. Product must have a pre-delivery inspection at in-state facility.			
	6. Expected delivery date is:			
<b>Equipment</b>	<b>Description</b>	<b>YES</b>	<b>NO</b>	<b>List Exception</b>
ISO Certification	Copy of ISO certification is enclosed			
Bus Type	Type A			
	Must meet all state and federal school bus requirements.			
Engine location	Front			
Year Model	New, model 2022 or newer.			
Seating Capacity	22 Ambulatory + driver. Submit proposed seat plan.			
Delivery	School Transportation Facility			
Manuals	Include owner's manual.			
Service	Must have a dealer owned technical support vehicle with an OEM factory trained body mechanic.			
Chassis Warranty	36 months/50,000 miles bumper to bumper.			

CHASSIS	CHASSIS			
General Motors	Dual rear wheels, with school bus package			
Alternator	220 Amp minimum			
GVWR	14,200 lbs. rating maximum			
Rear Axle Ratio	Rear end ratio to achieve a minimum of 70 mph.			
Batteries	Dual 770 CCA;s each in side mounted compartment			
Brakes	Hydraulic disc, front & rear			
All Wheel Antilock	Four wheels			
Front Bumper	Chassis standard with polycarbonate crossing arm/magnet			
Rear Bumper	High, bolted to frame, 9.75"			
Driveline	Guards around each shaft			
Engine Type	6.5 Liter GM, gasoline			
Fuel Tank	33 gallon minimum			
Instruments	Speedometer with odometer			
Instruments	Low coolant/high temperature indicator			
Instruments	Voltmeter			
Instruments	Fuel Gauge			
Instruments	Oil Pressure			
Shocks/Suspension	Front & rear shocks, additional leaf spring right rear			
Steering	Tilt steering wheel			
Tires	6- LT225 75R 16E radials			
Transmission	6 Speed automatic with 112 db backing alarm			
Wheel Base	159", include copy of seat plan with bid.			



Wheels	16" disc painted black			
Wiring	Code & number coded			

<b>BODY</b>				
Air Conditioning	Front OEM dash and rear in-wall A/C, dual compressors producing 68,000 BTU's min.			
A/C Warranty	Two years, including compressors, 100% parts & labor			
Body Construction	Exterior & interior panels to be rust free aluminum. One piece roof bows. Document holder required.			
Entrance Door	Outward opening, MANUAL, LED stepwell light, RS Assist rail			
Emergency Door	Upper & lower glass, dark tinted.			
Fenders	Steel or rubber finders around rear wheel openings.			
Flooring	Flat floor with composite aisle trim, pebble step treads.			
Flooring	Black flooring with no interior wheel housings.			
Flooring	5/8" Exterior grade plywood over steel floor.			
Headroom	73", minimum			
Heaters	Front to be chassis standard. One fresh air defroster fan.			
Heaters	Rear heater to be 26,000 BTU's wall mid. w/ removable filter dual heater cut off valves, include hi-miller hose heater bleeder valves installed in heater lines.			
Insulation	2" thick thermal bonded in roof, front & rear bulkheads.			
Insulation	R-value of 6.			
Lights	LED roof strobe light, brush guard, LED 8-way lights with visors.			
Lights	LED side mounted directional, LED pin type marker/cluster.			
Lights	Three interior, one over driver, two over seats, LED domes.			

Lights	LED rear directional, stop, reverse, driver alert sign on rear door.			
Mirrors	Interior - 6" X 16" clear plus OEM windshield mtd. rearview.			
Mirrors	Open view rearview. Hawkeye cross view-all to be heated.			
Mud Flaps	Front and rear full length.			
Paint	Exterior – yellow & black heat cured with white roof.			
Paint	Black trim interior-light gray walls (no exceptions).			
Emergency Exits	Two push out windows with buzzers, one roof hatch			
Emergency Equipment	FAK BFCK, triangle flares, fire extinguisher			
Radio	AM/FM, with 4 speakers, weather band, aux. port.			
Reflective Tape	Diamond grade 'SCHOOL BUS" frt & rr caps			
Reflective Tape	Reflective yellow tape around exits, rear & sides.			
Reflectors	Side reflectors attached with screws.			
Rub rails	Four-applied at window, seat, floor, and skirt.			
Safety	Passenger advisory system-horn activated warning.			
Seat/Driver	Chassis standard with orange seat belt.			
Seating	Eight 39" seats, track mounted, all seats-lap/shoulder belts.			
Seating	First row to have two integrated child seats.			
Seats Belt Cutter	Include seatbelt cutter – Tie Tech only.			
Side Panels	Interior – Aluminized steel side walls.			
Solenoid	Disconnect all body circuits			
Stop arm	Strobe light required with wind guard.			
Undercoating	Complete undercoating.			
Vents	Static roof vent.			
Windows	Side & rear to be dark tinted with black frames.			

Wipers	Intermittent feature			
Wiring	Body wiring color & numbered coded.			
Switch	Noise suppression switch.			
Tow Hooks	Rear mounted.			
Wheelchair Lift	Braun NCL-919 800 lbs. capacity with front mounted pump.			
Wheelchair Tie Downs	Three sets FF612S-4C-6, continuous track-both sides, storage pouches.			
Wheelchair Tie Downs	Provisions for up to five wheelchair positions, track above windows.			
Universal Decals	Two handicapped symbols – rear door, lift door.			
Camera System	REI HD5-1200W 500GB with interior camera heads and one (1) forward facing windshield camera, event marker with triggers & GPS			