

**REQUEST FOR PROPOSAL**  
**RFP #DPL-CL-1809**

**Bookmobile for Detroit Public Library's Library on  
Wheels**

**Issued: March 5, 2018**  
**Due Date: March 29, 2018 at 2:00 p.m.**

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## **RFP #DPL-CL-1809**

### **Bookmobile for Detroit Public Library**

#### **I. INTRODUCTION**

The Detroit Public Library (hence forth noted as DPL) is seeking sealed written proposals from qualified firms to provide a Bookmobile for the Library on Wheels Program.

This Request for Proposal, and any subsequent addenda, is being issued by the Purchasing Department and this department is the sole point of contact regarding all procurement and contractual matters relating to the requirements described in the RFP. The Procurement Department is the only office authorized to modify, change, and clarify the requirements of this RFP and any contract awarded as a result.

#### **II. INSTRUCTIONS**

1. Firms responding to this Request for Proposal shall submit their proposals in the overall format as outlined.
2. All questions shall be submitted, in writing, as follows:

Christina Ladson, Purchasing Manager  
[cladson@detroitpubliclibrary.org](mailto:cladson@detroitpubliclibrary.org)

Questions are due on or before 4:00 p.m. on March 8, 2018. Responses to the questions submitted by the deadline will be distributed at the pre-proposal conference as well as posted on the DPL and MITN website.

3. There will be a Pre-Proposal conference held at 10:00 a.m. on March 13, 2018 at:

Detroit Public Library  
5201 Woodward Avenue  
Administrative Offices-2<sup>nd</sup> Floor  
Detroit, MI 48202

All firms are strongly encouraged to attend the pre-proposal conference. Non-local companies may participate via a tele-conference line. Please complete the RSVP form and email it to: [cladson@detroitpubliclibrary.org](mailto:cladson@detroitpubliclibrary.org). The teleconferencing instructions will be provided to the contact person indicated prior to the Pre-Proposal conference date.

4. Firms shall submit one original and three (3) copies in a sealed package or envelope to the following address:

Detroit Public Library  
Purchasing Department  
5201 Woodward Avenue  
Detroit, MI 48202

Bid Due Date/Time: March 29, 2018  
2:00 p.m., Local Time

No telephone, electronic, or facsimile proposals will be considered.

**Please note:** The Library is closed to patrons on Monday however, the business offices are open. Access to the building on Monday is through the Staff Entrance on Putnam Street.

To facilitate distribution and evaluation, the proposals shall be single-sided black and white copies. The response shall include all information specified and required pricing sheets.

5. Proposals shall be submitted in a sealed package, clearly listing the following information on the outside:
  - Title: RFP #DPL-CL-1809 – Bookmobile for Detroit Public Library's Library on Wheels Service
  - Due Date: March 29, 2018
  - Company's Name And Address
6. **Late Proposals will not be accepted or considered.** It is the responsibility of the proposer to ensure that the proposal arrives at the Detroit Public Library's Purchasing Department prior to the date and time indicated. Telephone quotes will not be accepted and proposals submitted electronically are not acceptable. Proposals must be sent by mail or hand delivered, allowing sufficient delivery time to ensure receipt in the Purchasing Department by the deadline specified. Time and date validation shall occur in the Purchasing Department. All proposals received after the deadline will not be accepted and will be returned to the proposer unopened.
7. **SUPPLIER CHANGES OR ALTERATIONS TO PROPOSAL DOCUMENTS INCLUDING SCOPE OF WORK MAY RESULT IN A PROPOSAL BEING CONSIDERED NON-RESPONSIVE.** The only authorized supplier changes to a proposal document will be in the areas provided for a proposer's response, including the "Exceptions" section of the proposal. If a change or alteration to the documents is undetected and the proposer is awarded a contract, the original terms, conditions, and specifications in the Authorized Version of the proposal document will be applicable during the term of the contract. The Detroit Public Library shall accept NO CHANGES



to the proposal document made by the Supplier unless those changes are set out in the “Exceptions” provision of the Authorized Version of the proposal document. It is the Supplier’s responsibility to acquire knowledge of any changes, modifications or additions to the ~~Authorized Version of the proposal document. Any Supplier who~~ submits a proposal and later claims it had no knowledge of any changes, modifications or additions made by the Detroit Public Library to the Authorized Version of the proposal document, shall be bound by the proposal, including any changes, modifications or additions to the Authorized Version. If a proposal is awarded to a Supplier who claims that it had no knowledge of the changes, modifications or additions made by the Detroit Public Library to the Authorized Version of the proposal, and that Supplier fails to accept the proposal award, the Detroit Public Library may pursue costs and expenses to re-solicit the requirements.

The Authorized Version of the proposal document shall be that proposal document appearing on the Detroit Public Library or MITN website with any amendments and updates. The official proposal documents may be obtained from the Detroit Public Library’s website, [www.Detroitpubliclibrary.org](http://www.Detroitpubliclibrary.org) or through the Michigan Intergovernmental Trade Network (MITN) website, [www.bidnetdirect.com/MITN](http://www.bidnetdirect.com/MITN). Copies of proposal documents obtained from any other source are not considered official copies. Only those suppliers who obtain proposal documents from either the Library’s website or the MITN website are guaranteed access to receive any addenda, if such information is issued. If you obtained this document from a source other than the sources indicated, it is recommended that you register on the MITN website, [www.bidnetdirect.com](http://www.bidnetdirect.com).

8. Proposals shall be dated and signed by a duly authorized partner or corporate officer, with that person’s name and title clearly identified. No proposal shall be withdrawn for ninety (90) days from submission deadline unless otherwise stated in the proposal document.
9. The Detroit Public Library reserves the right to:
  - Reject any and all proposals received as a result of this RFP
  - Waive or decline to waive any informalities and any irregularities in any proposal received

This RFP does not commit DPL to award a contract. DPL will not pay proposers for any costs associated with preparing responses to this RFP. DPL reserves the right to accept or reject any or all Proposals received as a result of this request, to negotiate with qualified proposers, to award a contract without discussions/interviews or to cancel in part or in its entirety this RFP if it is in the best interests of DPL to do so.

10. The selected supplier will be required to assume responsibility for all goods and services offered in the proposal, whether or not the proposer produces them. Further, the selected supplier shall be the sole point of contact and responsibility with regard to all matters, including payment of any and all charges resulting from the contract.
11. All proposals and other materials submitted shall become the property of the Detroit Public Library.
12. All changes in the RFP documents shall be through written addendum and furnished to all proposers. Verbal information obtained otherwise will not be considered in awarding of the proposal. Addenda and updates will **NOT** be sent directly to suppliers. It is recommended that participating suppliers check the websites (www.Detroitpubliclibrary.org and www.bidnetdirect.com) daily for addenda and updates after release date. Suppliers shall print out, sign, and return addenda acknowledgement(s) with their proposal response. Failure to do so may be grounds for rejection.
13. Any questions concerning this RFP shall be submitted, in writing to:

Christina Ladson, Purchasing Manager  
Detroit Public Library  
5201 Woodward Avenue  
Detroit, MI 48202  
Email: [Cladson@detroitpubliclibrary.org](mailto:Cladson@detroitpubliclibrary.org)

### **III. QUALIFICATIONS**

This is a Request for Proposal (RFP) issued by the Detroit Public Library seeking qualified firms to provide a Bookmobile for the Library on Wheels service. DPL wants to provide a uniform distribution of information to firms and conduct a fair selection process. We ask that you please follow these instructions carefully. Any submittal that does not meet the requirements set forth in this document and any addenda will not be considered by the Selection Committee.

The Detroit Public Library reserves the right to reject any or all proposals and to waive irregularities or informalities as may be deemed in the best interest of the Library. It is the intent to award this RFP to the highest ranked proposal, meeting the outlined Specifications and the following minimum qualifications:

1. Proposer shall have a minimum of five (5) years' experience providing and retro-fitting vehicles of similar size and scope as the Bookmobile.
2. Proposers shall provide five (5) references for providing the type of vehicle specified in this RFP. It is desirable that the successful proposer has provided a vehicle of this type within the past five (5) years.



REFERENCE #1	
COMPANY NAME	
CONTACT PERSON	
ADDRESS	
PHONE NUMBER	
EMAIL	
YEARS OF EXPERIENCE	

REFERENCE #2	
COMPANY NAME	
CONTACT PERSON	
ADDRESS	
PHONE NUMBER	
EMAIL ADDRESS	
YEARS OF SERVICE	

REFERENCE #3	
COMPANY NAME	
CONTACT PERSON	
ADDRESS	
PHONE NUMBER	
EMAIL ADDRESS	
YEARS OF SERVICE	

REFERENCE #4	
COMPANY NAME	
CONTACT PERSON	
ADDRESS	
PHONE NUMBER	
EMAIL ADDRESS	
YEARS OF SERVICE	

REFERENCE #5	
COMPANY NAME	
CONTACT PERSON	
ADDRESS	
PHONE NUMBER	
EMAIL ADDRESS	
YEARS OF SERVICE	



#### **IV. SCOPE OF SERVICES**

The Proposer is to furnish a Bookmobile, in accordance with Bookmobile Specifications and Floor Plan 1.2 (see attached).

##### ***Pricing***

Bookmobile, One (1) Each, as specified:

Total Bid: \$ \_\_\_\_\_/Each  
(Numerically)

Total Bid: \$ \_\_\_\_\_/Each  
(Written)

Quoting on: \_\_\_\_\_ Manufacturer

Exceptions are as noted: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Options shall be priced separately and submitted on a separate sheet.

Prices quoted for the Bookmobile and the optional equipment and accessories are firm, as quoted in the proposal. However, the final price of the Bookmobile may vary based upon options and final configuration as determined by the Library's Administration.

##### ***Guarantees and Warranty***

The successful proposer shall furnish the maximum warranty, as provided by the manufacturer. The minimum warranty is one (1) year, as indicated in the Specifications (page 4). The warranty period shall begin on the date the equipment is put into service by the Detroit Public Library.

Proposers shall indicate the warranty service provider with their bid. Warranty service shall be provided by:



Company Name: \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_

Phone: \_\_\_\_\_

All guarantees and warranties shall be furnished by the successful proposer and shall be delivered to the Library before the final payment is authorized.

### ***Manuals***

The successful proposer shall provide all manuals, as specified, to the Detroit Public Library upon delivery of the equipment. The manuals shall include complete operational instructions and equipment safety guidelines.

### ***Delivery***

All equipment is to be F.O.B. delivered freight paid to:

Detroit Public Library  
5201 Woodward Avenue  
Detroit, Michigan, 48202

All necessary transportation, shipping, handling and delivery charges are to be included in the bid price.

Delivery will be a factor in the award of this contract. Please indicate your delivery terms below:

Delivery of the Bookmobile shall be made within \_\_\_\_\_ after receipt of an approved contract.

### ***Invoice and Payment***

The Detroit Public Library's payment terms are Net 45 Days. Payment will not be authorized until a final inspection of the Bookmobile has been completed. Additionally, payment will be based on any invoice used in the bidder's normal course of business. However, payment will not be made unless the invoice is clearly legible, and contains at a minimum all of the following information:

1. Accurate Item Description
2. Quantity
3. Unit Price
4. Net total cost, after any applied discount
5. Purchase Order Number
6. Date and Location of Delivery

It is the responsibility of the successful bidder to submit a properly completed invoice. Failure to submit a properly completed invoice will result in delay of payment.

### ***Award***

The Detroit Public Library anticipates one award of this contract to the highest ranked proposal. The recommended contract will be submitted to the Detroit Public Library Commission for approval. It is anticipated that the services will begin upon Commission approval and after receipt of correct insurance and bonds.

If awarded a contract, the supplier agrees to fully complete the work in accordance with the Scope of Work. Past performance and experience may be factors in making this award.

### ***Performance Bond***

The successful proposer shall furnish a corporate surety bond in an amount equal to 100% of the Contract payment amount, as security for the faithful performance of the Contract upon receipt of Detroit Public Library Purchase Order.

## **VI. REQUIRED PROPOSAL CONTENT**

All proposals received must consist of the items referenced below:

1. Company Experience – Number of years in the industry. Please include key personnel and the name and resume of the proposed project manager for this contract.
2. Price Sheet/Breakdown



3. References – A minimum of five references which shall include a name, address and telephone number.
4. Signed Signature Page VIII (Complete all required information).

Proposals will be analyzed for conformance with the instructions and requirements of the RFP. Proposals that do not comply with these instructions and do not include the required information may be rejected as insufficient or may not be considered for further consideration.

## **VII. EVALUATION CRITERIA**

- A.** Responsiveness to Specifications
- B.** Cost/Price
- C.** Delivery Date
- D.** Warranty
- E.** References

## **VIII. SELECTION PROCESS**

Proposals will be evaluated by the Selection Committee based upon the evaluation criteria stated above. DPL will select for any award the highest ranked proposal from a responsible proposer, which does not result in a financially infeasible procurement and is judged to be the most advantageous to DPL based upon consideration of the scope of services and the evaluation criteria.

The evaluation committee will review the proposals for the following:

- A proposer has followed the instructions of the RFP and included sufficient detailed information to allow for evaluation
- Proposed price does not result in financially infeasible procurement
- Proof of required experience, favorable references

Please note that no information, financial or otherwise, will be provided to any proposer about any of the proposals from other proposers during the evaluation period.

DPL reserves the right to select proposals that fall into the competitive range. Further, DPL reserves the right to award a contract(s) without conducting further interview or negotiations.

The Evaluation Committee will recommend contract award/acceptance of a proposal to the Detroit Public Library Commission. Upon acceptance of a recommendation, contract awards will be made by the Detroit Public Library Commission.

## SIGNATURE PAGE

Prices quoted shall remain firm for 90 days or bid award whichever comes first, except the successful bidder(s), whose prices shall remain firm for the entire contract period. The contract shall commence on date of award.

NOTE: The undersigned has checked the bid figures carefully and understands that he/she shall be responsible for any error or omission in this bid offer and is in receipt of all addenda as issued.

COMPANY NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_  
*City State Zip*

TAX ID: \_\_\_\_\_

TELEPHONE NUMBER: (\_\_\_\_) \_\_\_\_\_ FAX NUMBER: (\_\_\_\_) \_\_\_\_\_

E-MAIL ADDRESS: \_\_\_\_\_

PAYMENT TERMS: \_\_\_\_\_

**ACKNOWLEDGEMENT:**

I, \_\_\_\_\_, certify that I have read the INSTRUCTION TO BIDDERS and that the bid proposal documents contained herein were obtained directly from the Detroit Public Library or MITN website, [www.bidnetdirect.com](http://www.bidnetdirect.com), and is an official copy of the Authorized Version.

COMPANY REPRESENTATIVE'S NAME:

\_\_\_\_\_  
*(Print)*

SIGNATURE OF AUTHORIZED COMPANY REPRESENTATIVE:

\_\_\_\_\_  
*(Signature)*

\_\_\_\_\_  
*(Date)*

## APPENDIX A

### Certificate of Insurance

- I. The Detroit Public Library has specific certificate of insurance requirements. The Contractor shall maintain at its expense during the term of this contract, the following insurance:
  - A. Worker's Compensation insurance with Michigan statutory limits and Employer's Liability insurance with minimum limits of \$500,000.00 each accident, \$500,000.00 each disease, \$500,000.00 each disease/each employee.
  - B. Commercial General Liability insurance with a combined single limits of \$1,000,000.00 per occurrence subject to a minimum aggregate limit of \$2,000,000.00
  - C. Automobile Liability insurance covering all owned, hired and non-owned vehicles with personal protection insurance and property protection insurance to comply with the provisions of the Michigan No-Fault Insurance Act, including residual liability insurance with a minimum combined single limit of \$1,000,000.00. Include MCS90 endorsement (if hazardous waste will be transported by supplier's auto) with minimum property damage limits of \$1,000,000.00 each occurrence.
- II. If during the term of this contract, changed conditions or other pertinent factors, should in the reasonable judgment of the Detroit Public Library, render inadequate the insurance limits, the Contractor will furnish on demand such additional coverage as may reasonably be required under the circumstances. All such insurance shall be affected at the contractor's expense, under valid and enforceable policies.
- III. All policies shall name the Contractor as the insured and shall be accompanied by a commitment from the insurer that such policies shall not be canceled or reduced without at least thirty (30) days prior notice to the Detroit Public Library. The Commercial General Liability insurance policy shall name the Detroit Public Library as an additional insured. Certificates of insurance evidencing such coverage shall be submitted to the Business Office, Purchasing Department, prior to the commencement of performance under this contract and at least fifteen (15) days prior to the expiration dates.



**APPENDIX B**  
**NON-COLLUSION AFFIDAVIT**

RFP Number: \_\_\_\_\_ RFP Description: \_\_\_\_\_

I state that I am \_\_\_\_\_ of \_\_\_\_\_  
(Title) (Name of Firm)

and that I am authorized to make this affidavit on behalf of my Firm, its Owner, Directors, and Officers.  
I am the person responsible in my firm for the price(s) and the amount of the bid.

I state that:

1. The price(s) and the amounts of this bid have been arrived at independently and without consultation, communication or agreement with any other contractor, bidder or potential bidder.
2. Neither the price(s) nor the amount of the bid, and either the approximate price(s) or the approximate amount of the bid, have been disclosed to any other firm or person who is a bidder or potential bidder, and they will not be disclosed before the bid opening.
3. No attempt has been made or will be made to induce any firm or person to refrain from bidding on this contract, or to submit a bid higher than this bid, or to submit any intentionally high or noncompetitive or other form of complementary bid.
4. The bid of my firm is made in good faith and not pursuant to any agreement or discussion with, or inducement from, any firm or person to submit a complementary or noncompetitive bid.
5. \_\_\_\_\_, its affiliates, subsidiaries, officers, directors and employees are not currently under investigation by any governmental agency and have not in the last four years been convicted or found liable for any act prohibited by State or Federal law in any jurisdiction, involving conspiracy or collusion with respect to bidding on any public contract, except as follows:

\_\_\_\_\_  
SIGNATURE OF PERSON SUBMITTING BID

\_\_\_\_\_  
BID NOTARY'S SIGNATURE

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_ in and for  
\_\_\_\_\_ County.

My commission expires: \_\_\_\_\_



*"Your partner for the road ahead!"*

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# Detroit Public Library

## Bookmobile Project Specifications

Version 1.2

Released: 30-Jan-2018

Project #: SVS00373

Prepared for: Margaret Bruni  
Detroit Public Library  
3666 Grand River  
Detroit, MI 48208

w196 s8406 plum creek boulevard  
muskego, wisconsin 53150-8170 usa  
PHONE: 262.679.9096  
FACSIMILE: 262.457.4924  
VEHICLESUCCESS.com

## 1. GENERAL SPECIFICATIONS

### 1.1 Scope

- 1.1.1. The intent of this specification is to describe the construction of one (1) 34-foot (approximate) long front-engine forward control "cab chassis" style truck into a Bookmobile for use by the Detroit Public Library ("Library"). The unit shall be built on a 26,000 lb. GVWR (maximum) chassis for adequate support of the van body, conversion, and diversified collection of approximately 3,500 items.
- 1.1.2. The vehicle described herein is intended to provide contemporary mobile library services in an operationally efficient manner. The unit will operate within a suburban environment in eastern Michigan and shall be designed and equipped to safely operate in an environment of relatively flat, paved roadways. The unit will be kept outside the library when not in service. The approximate temperature range of this area is 30°F to 80°F, with occasional winter temperatures falling to -10°F and occasional summer temperatures reaching 100°F.
- 1.1.3. It is the Library's utmost goal to ensure that the Bookmobile is well-equipped to operate efficiently and safely in this environment.
- 1.1.4. Weight loading shall be of significant concern during the conversion of this vehicle for efficiency reasons. Substantial effort has been put into the interior design with this factor in mind. Vendor is cautioned to use the lightest materials and construction methods available that will meet all specifications as described herein and make recommendations as appropriate for lightening the static load of the conversion.
- 1.1.5. Renewable and/or recycled materials shall be used as practical during the conversion of this vehicle.
- 1.1.6. The successful vendor shall furnish all materials not specifically denoted as "customer supplied", as well as the labor to complete the conversion of the Bookmobile specified herein, as shown on the attached drawings, or as required to complete and/or exceed the general intent of these specifications.
- 1.1.7. These specifications have been developed by Specialty Vehicle Services, LLC. ("SVS") under contract with the Library.
- 1.1.8. Any reference to a specific manufacturer or make or model of product not followed by "or equivalent" or "or equal" may not be substituted.



## 1.2. Manuals and Documentation

1.2.1. The following shall be provided for each unit at the time the equipment is delivered:

- 1.2.1.1. One (1) technical service manual set for the chassis, body, generator, and each component installed. Vendor shall include all manufacturer updates for the first year of service.
- 1.2.1.2. One (1) visual parts book or one (1) CD ROM set if books are not available for the body, chassis, and generator.
- 1.2.1.3. One (1) line set for chassis.
- 1.2.1.4. One (1) certified MI weight ticket listing front axle, rear axle and total weights.
- 1.2.1.5. Three (3) complete key sets (ignition, doors, auxiliary locks, compartments, fuel); maximum keys per set shall be five (5).
- 1.2.1.6. One (1) complete dimensional layout drawing of interior front, rear, and both sides.

## 1.3. New Equipment

- 1.3.1. Equipment shall be new (unused), and of manufacturer's current model year production and shall comply with all applicable Federal environmental, motor vehicle, and safety regulations. The conversion shall be equipped with all features and accessories considered standard for the make and model vehicle/equipment provided as well as those specifically detailed within this specification.

## 1.4. Quality & Standards

- 1.4.1. Brand names and model numbers are used throughout this document to convey desired quality levels, with the option for "equivalents" or "equals". The library and/or its authorized agents shall be the sole judge of whether a manufacturer's offerings are deemed "equivalent" or "equal" for the purpose of this project.
- 1.4.2. Conversion accessories shall be built and assembled in accordance with the specifications and shall conform to the best standard practices in the industry at the time of construction. All dimensions, weight, and performance values shall be in accordance to SAE J732c and J742b, as last revised. The vendor will provide all systems integration and testing. All electronics will be installed, fully operational, and tested by the vendor. The vehicle shall be equipped with all features and accessories considered standard for the make and model vehicle/equipment provided.

- 1.4.3. All equipment and construction methods shall meet all applicable regulations of the Occupational Safety and Health Act (OSHA), Federal Motor Vehicle Safety Standards (FMVSS), Department of Transportation (DOT), National Electrical Code (NEC), Federal and State noise and pollution control restrictions, and all other applicable local, state and/or federal regulations in effect at the time of execution.
- 1.4.4. All workmanship, welding, and construction shall be in the best manner of the trade. Workmanship shall be subject to inspection and approval by the Library and/or its authorized representatives.
- 1.4.5. Welding fillets shall have good penetration, good fusion, good appearance, and shall show no cracks or undercutting.

#### 1.5. Guarantee

- 1.5.1. The successful vendor shall furnish a warranty stating that the equipment is suitable for the service intended in accordance with the specifications. The vendor shall also furnish the Library with a minimum FULL ONE (1) YEAR BUMPER-TO-BUMPER WARRANTY and shall agree to replace and install without charge, within the warranty, any defective part or parts not suitable for the service intended or found to be defective due to poor workmanship. The proposal will be weighted toward longer warranties and vendor is encouraged to offer, as an option, any available extended warranties with related literature and their costs. Warranty period shall start on the date the unit is put into service by the Library.
- 1.5.2. All warranty work shall be completed by the vendor within a reasonable time, or repaired by the vendor at the Library facility. The Library reserves the right to schedule and complete warranty work at a local facility of its choice if requests for resolution are not satisfied in a reasonable time frame. Vendor shall be given proper notice of such intent prior to execution and an invoice shall be forwarded to the vendor for payment.
- 1.5.3. That the Library may be assured of being able to maintain and repair equipment purchased, there shall be a local service facility with a stock of repair parts identified with the vendor's proposal. These specifications also require that common wear parts such as filters and hoses be available within 24 hours and all other parts within 48 hours.
- 1.5.4. Proposal shall list names, locations, and contact information for the nearest authorized service, parts, and warranty facilities. This list shall include facilities related to chassis, body, generator, conversion, etc.
- 1.5.5. All extended warranty options applicable to this vehicle and its components shall be listed within vendor's proposal with associated costs.

## 1.6. Inspections

- 1.6.1. The Library may make inspection visits during the vehicle conversion to help ensure specification compliance and trouble-free delivery. If the equipment/vehicle(s) is inspected after delivery and rejected because of deficiencies, it shall be the vendor's responsibility to make the necessary corrections and re-deliver the vehicle for inspection and acceptance. Payment and/or the commencement of a discount period (if applicable) will not be made until the defects are corrected.
- 1.6.2. Library will make every endeavor to note deficiencies. However, if a variation or an omission between the vehicle and the written specifications is discovered, the contract's written specifications will prevail.
- 1.6.3. Equipment/vehicle(s) may be inspected at vendor's place of business at any time during the conversion process by authorized representatives of the Library. The cost of these trips shall be the responsibility of the Library.
- 1.6.4. Equipment/vehicle(s) may be inspected at vendor's place of business at least once before delivery by an authorized representative of SVS for workmanship, appearance, proper functioning of all equipment and systems, and conformance to all other requirements of this specification. The costs of these trip(s) shall be the responsibility of SVS. If deficiencies are detected, the vehicle may be rejected, and the vendor will be required to make the necessary repairs, adjustments, or replacements.
  - 1.6.4.1. *Dependent on the severity of inspection discrepancies and/or the vehicle is not deemed adequately complete at the time of final (pre-delivery) inspection; vendor shall be responsible for all SVS costs and fees related to a re-inspection. The Library shall have the final decision regarding the need for a re-inspection.*

## 1.7. Training

- 1.7.1. Vendor shall provide in service training and familiarization for operators and maintenance personnel. Training shall be conducted by factory-trained personnel and shall be comprehensive enough to allow Library staff to operate and maintain the equipment provided with maximum safety and design efficiencies.
  - 1.7.1.1. Training shall occur at the library at delivery and last approximately 6 hours.



## 2. VEHICLE SPECIFICATIONS

### 2.1. Intent

- 2.1.1. It is the intent of the following section to describe the type of vehicle that shall be used for the Bookmobile. Accessories and construction techniques not specifically mentioned herein, but necessary to furnish a complete unit ready for immediate use shall also be included.

### 2.2. Type

- 2.2.1. The cab chassis shall be a 2018 or current model year Freightliner M2 106 low-profile day cab or equivalent, equipped with a 24' long aluminum dry freight van body with 44" cab-over and full height walk-through modification. The cab chassis, body and accessories shall be built and assembled in accordance with the specifications and shall conform to the best standard practices in the industry at the time of construction.

### 2.3. Capacities/Dimensions

2.3.1.	Overall exterior length:	34.0' (approximate)
2.3.2.	Overall exterior width:	102" (excluding mirrors)
2.3.3.	Overall exterior height:	12' -0"
2.3.4.	Interior length:	279" (load space)
2.3.5.	Interior height:	84"
2.3.6.	Floor height from ground:	39" (maximum)
2.3.7.	Interior width:	98"
2.3.8.	Wheelbase:	262" (approximate)
2.3.9.	Ground Clearance:	12"
2.3.10.	Fuel tank capacity:	40.00 gallons
2.3.11.	GVWR:	26,000 lbs (maximum)*

\*Must not exceed 26,000lbs for non-CDL operation

### 2.4. Cab Chassis

- 2.4.1. Freightliner M2 106 low profile day cab chassis with setback axle and straight truck provisions, LH primary steering location, and low-profile wheels and tires.
- 2.4.1.1. Chassis engine, transmission and rear axle ratio configuration shall allow a 4% grade ability at 55 MPH

2.4.1.2. Chassis shall be fully capable of an approved walk-through conversion by the manufacturer.

2.4.2. Engine

- 2.4.2.1. Cummins L9 diesel or equivalent, 260-hp minimum with 720 lb-ft torque
- 2.4.2.2. Engine shall be capable of running on ultra-low sulfur diesel or bio-diesel fuel (B20) at user's discretion with no modifications.
- 2.4.2.3. Current model year EPA emission certification
- 2.4.2.4. Engine after treatment device, automatic over the road regeneration and dash-mounted regeneration switch Engine idle shutdown system
- 2.4.2.5. Cold starting assistance system
- 2.4.2.6. Electronic cruise control
- 2.4.2.7. Engine oil drain plug, magnetic
- 2.4.2.8. Engine shutdown electric, key operated
- 2.4.2.9. Fuel/water separator with thermostatic fuel temperature controlled electric heater and filter restriction/change indicator. Shall include equipment water-in-fuel sensor.
- 2.4.2.10. Air cleaner restriction indicator, air cleaner mounted
- 2.4.2.11. Electronic road speed governor; set to 70MPH max.
- 2.4.2.12. Cummins or equivalent exhaust brake integral with variable geometry turbo and on/off dash switch.
- 2.4.2.13. Engine oil filter, spin-on type
- 2.4.2.14. Direct drive type fan drive, 2-speed with residual torque device for disengaged fan speed
- 2.4.2.15. Aluminum radiator; 2-row, cross flow, over under system with charge air cooler. Includes low coolant audible indicator alarm
- 2.4.2.16. Single element air cleaner
- 2.4.2.17. Starting motor without thermal over crank protection.
- 2.4.2.18. Gates Blue Stripe or equivalent hoses with constant-torque stainless steel hose clamps.
- 2.4.2.19. Switchback horizontal after-treatment device, frame-mounted under cab. Shall include horizontal tailpipe exiting forward of the LH rear tire.
- 2.4.2.20. Block heater, 120VAC, 750 watt, wired to main generator/shoreline electrical system

2.4.3. Transmission and Equipment

- 2.4.3.1. Allison 2500 series or equivalent transmission with oil level sensor.
- 2.4.3.2. 6-speed, non-fire emergency, with overdrive
- 2.4.3.3. No PTO provisions
- 2.4.3.4. No retarder
- 2.4.3.5. Synthetic transmission oil
- 2.4.3.6. Transmission-mounted oil filter and magnet in oil pan
- 2.4.3.7. T-handle type shift control, dash-mounted
- 2.4.4. Front Axle, Suspension and Equipment
  - 2.4.4.1. 10,000lb capacity minimum single front axle, non-driving
  - 2.4.4.2. Taper leaf, parabolic spring front suspension, 10,000lb. minimum capacity
  - 2.4.4.3. Spring pins with rubber bushings, maintenance free
  - 2.4.4.4. Two (2) front shock absorbers.
  - 2.4.4.5. Tilt and telescoping steering column
  - 2.4.4.6. 2-spoke, 18" diameter, black steering wheel
  - 2.4.4.7. Power steering gear
- 2.4.5. Rear Axle, Suspension and equipment
  - 2.4.5.1. Single reduction rear axle, 16,000lb. minimum capacity
  - 2.4.5.2. Gear ratio to meet performance requirements.
  - 2.4.5.3. Rear axle drain plug; magnetic
  - 2.4.5.4. Freightliner AirLiner or equivalent air suspension; 17,500lb. (approximate) capacity, set to "mid" ride-height, with shock absorbers
  - 2.4.5.5. Synthetic rear axle lube
  - 2.4.5.6. Heavy-duty driveshaft
- 2.4.6. Brake System
  - 2.A.1.1. Dual air system, with automatic slack adjustment, dust shields and four channel ABS
  - 2.A.1.2. Front – Air cam S-cam, including 20 sq. in. long stroke brake chambers
  - 2.A.1.3. Rear – Air cam S-cam, including 24/30 spring long stroke brake chambers and spring actuated parking brake
  - 2.A.1.4. Bendix AD-9 or equivalent air dryer
- 2.4.7. Frame and Equipment



- 2.4.7.1. High strength low alloy steel frame rails (80,000 PSI yield)
- 2.4.7.2. Maximum OAL; for LP chassis
- 2.4.7.3. Rear cross member, AF
- 2.4.7.4. Full width aerodynamic painted front bumper, with license plate mount
- 2.4.7.5. Rear tow hooks, frame-mounted
- 2.4.8. Fuel Tank and Equipment
  - 2.4.8.1. 40-gallon (minimum), aluminum construction
  - 2.4.8.2. Fuel filter/water separator with temperature controlled electric heater and filter restriction/change indicator
  - 2.4.8.3. Reinforced nylon fuel hose throughout
  - 2.4.8.4. DEF tank, frame mounted, 6-gallon (approximate)
- 2.4.9. Front Tires, Hubs & Wheels
  - 2.4.9.1. Two (2) 19.5" painted steel, 8-stud, hub-piloted, flanged nut, metric mount, 7.50DC rims
  - 2.4.9.2. Two (2) low-profile 245/70R19.5 steering tread, load range G, 14 ply tires
  - 2.4.9.3. Oil-lubricated wheel bearings and seals.
  - 2.4.9.4. 50W synthetic front lube oil
- 2.4.10. Rear Tires, Hubs & Wheels
  - 2.4.10.1. 19.5" painted steel outer wheels and 7.50DC rim and steel inner wheel with 7.50DC rim, 8-stud, hub-piloted, flanged nut, metric mount.
  - 2.4.10.2. Four (4) low-profile 245/70R19.5, mud and snow tread, load range G, 14-ply tires.
  - 2.4.10.3. Oil lubricated rear seals and wheel bearings.
- 2.4.11. Spare Tire
  - 2.4.11.1. One (1) 19.5" steel rim with mounted 245/70R19.5 G647 RSS tire. Ship loose with completed vehicle.
- 2.4.12. Electrical System
  - 2.4.12.1. 12-volt, negative grounded
  - 2.4.12.2. 240A minimum, self-excited, pad mounted alternator
  - 2.4.12.3. Two (2) maintenance free 12-volt batteries, 1300 CCA approximate
  - 2.4.12.4. Battery box, steel with aluminum cover, easily serviceable
  - 2.4.12.5. Data link connector for vehicle programming and diagnostics in cab



- 2.4.12.6. SAE blade type electrical fuses
- 2.4.12.7. Headlight dimmer switch integral with turn signal switch
- 2.4.12.8. Single electric horn
- 2.4.12.9. Air horn, single trumpet, air solenoid operated, mounted below cab
- 2.4.12.10. Master battery shutoff switch mounted outside battery box
- 2.4.12.11. Parking light integral with front turn signal and rear tail light
- 2.4.12.12. Halogen headlights, composite aero design for two-light system, including daytime running lights
- 2.4.12.13. Electric starter switch, key-operated
- 2.4.12.14. LED chassis lighting to meet FMVSS regulations
- 2.4.12.15. Five (5) amber LED lights mounted on sun visor
- 2.4.12.16. Dome light, door activated with timed dimming
- 2.4.12.17. Self-cancelling turn signal switch with headlight dimmer
- 2.4.12.18. 2-speed windshield wiper switch with wash and intermittent feature, integral to turn signal switch
- 2.4.12.19. Single motor windshield wipers, cowl mounted
- 2.4.12.20. One (1) 12V power receptacle
- 2.4.12.21. Back up alarm, electric, 102 dBA
- 2.4.12.22. Body builder wiring, including sealed connectors for tail, turn, backup, accessory power, and ground
- 2.4.12.23. Manual reset SAE type III circuit breakers with trip indicators
- 2.4.12.24. Chassis wiring shall be color coded and continuously numbered
- 2.4.13. Cab Exterior
  - 2.4.13.1. Day cab
  - 2.4.13.2. Argent silver grill
  - 2.4.13.3. Under hood insulation for sound abatement
  - 2.4.13.4. Splash panel insulation for sound abatement
  - 2.4.13.5. Fiberglass, tilting front end, with 3-piece construction
  - 2.4.13.6. Dual, motorized, heated, side-mounted, West-Coast style rearview mirrors with integral convex spot mirrors and LED clearance lights
  - 2.4.13.7. Auxiliary 7.5" sq. (approx.) hood-mounted cross view convex mirror, right hand side, to see ground area directly in front of bumper.

- 2.4.13.8. Composite exterior sun visor
- 2.4.13.9. Tinted door glass LH & RH
- 2.4.13.10. Tinted windshield
- 2.4.13.11. Eight (8) liter windshield washer reservoir
- 2.4.13.12. Air-ride cab suspension
- 2.4.13.13. Fog lights, mounted in front bumper, with dash-mounted switch and indicator light
- 2.4.14. Cab Interior
  - 2.4.14.1. Deluxe interior trim package.
  - 2.4.14.2. Two (2) molded armrests, on each door
  - 2.4.14.3. "A" pillar molded plastic cover
  - 2.4.14.4. Interior grab handles, pillar mounted, one each side
  - 2.4.14.5. Interior trim panels, molded plastic, full height; all interior sheet metal covered
  - 2.4.14.6. Overhead console with dual storage pockets and retainer nets
  - 2.4.14.7. Interior door trim panels, molded plastic, driver and passenger doors
  - 2.4.14.8. Driver door map pocket
  - 2.4.14.9. Cloth headliner
  - 2.4.14.10. Rubber floor covering with insulation
  - 2.4.14.11. Instrument panel trim, molded plastic with center section
  - 2.4.14.12. Two (2) cup holders shall be provided
  - 2.4.14.13. Two (2) padded vinyl sun visors with DS toll ticket strap, integral to console
  - 2.4.14.14. Interior color scheme to be determined
  - 2.4.14.15. Air conditioning with integral heater and defroster, HFC-134A hydrofluorocarbon refrigerant
  - 2.4.14.16. Triangular reflectors without flares
  - 2.4.14.17. 5lb. ABC fire extinguisher with mount
  - 2.4.14.18. High-back air-ride driver seat, faux leather, with integral headrest, 2-position front cushion adjustment, -3 to +14 degree seat back adjustment, arm rest and single chamber air lumbar support.
  - 2.4.14.19. High-back air-ride single person passenger seat, faux leather, with integral headrest, seat back adjustment and arm rest

2.4.14.20. Both seats to include 3-point, lap and shoulder type seatbelts

2.4.14.21. Power window and door locks, including express down feature.

#### 2.4.15. Instruments and Controls

2.4.15.1. Key switch ignition keyed alike to cab door locks (with 3 sets of keys)

2.4.15.2. Gauge cluster (English)

2.4.15.3. Electronic speedometer

2.4.15.4. Electronic engine oil pressure

2.4.15.5. Electronic water temperature

2.4.15.6. Electronic fuel

2.4.15.7. Electronic tachometer

2.4.15.8. Voltmeter

2.4.15.9. Odometer display; miles, trip miles, engine hours, trip hours, fault code readout

2.4.15.10. Warning system; low fuel, low oil pressure, high engine coolant temperature, low battery voltage (visual and audible)

2.4.15.11. Allison transmission oil temperature gauge

2.4.15.12. Air cleaner restriction indicator, with black bezel mounted in instrument panel.

2.4.15.13. DEF fluid level gauge.

2.4.15.14. On-board diagnostics display of fault coded in gauge cluster

2.4.15.15. AM/FM/WB radio with auxiliary input, and Bluetooth capabilities

2.4.15.15.1. Radio shall include two (2) deluxe commercial quality coaxial radio speakers in the cab.

#### 2.4.16. Color

2.4.16.1. Cab color: White

2.4.16.1.1. Base coat/clear coat type, 1 tone.

2.4.16.2. Interior color: Gray

### 2.5. Body

2.5.1. 24' trade length aluminum dry freight truck body, 102" exterior width with 84" interior height and 44" forward "kick-over" section.

- 2.5.2. Body shall be connected to the cab roof and rear wall with a weatherproof boot, to allow standing height, walk-through capabilities
  - 2.5.2.1. Walk-through transition boot shall allow cab to "float" on its air-ride suspension
- 2.5.3. ¾" (minimum) exterior plywood or approved equivalent floor
- 2.5.4. No wheel wells; flat floor.
  - 2.5.4.1. Long sill height shall be selected to provide minimum allowable manufacturer specified "jounce" dimension over rear tires.
  - 2.5.4.2. Floor height must not be more than 39" maximum height measured from ground.
- 2.5.5. 3" (maximum) I-beam cross-members; 12" OC
  - 2.5.5.1. Spacing exception may be allowed over the rear wheels if necessary to obtain required floor height. Heavy gauge plate steel is one exception in these areas.
- 2.5.6. 1/2" core FRP front wall or approved equivalent
- 2.5.7. Composite front corner
- 2.5.8. Side wall Z-posts; 16" OC
- 2.5.9. .050" (minimum) pre-painted aluminum side sheeting
- 2.5.10. .090" (minimum) aluminum side deep skirting
- 2.5.11. Skirting shall be full perimeter of body, with 12" minimum ground clearance
- 2.5.12. One-piece .032" (minimum) aluminum roof
- 2.5.13. Anti-snag galvanized roof bows; 16" OC
- 2.5.14. Roof reinforcement for A/C units
- 2.5.15. FMVSS 108 lights and reflectors, LED at all locations
  - 2.5.15.1. Rear lighting shall be flush-mounted below floor line, in the aluminum skirting.
- 2.5.16. Painted stainless steel rear structure
- 2.5.17. 12-volt back-up alarm
- 2.5.18. Rear mud flaps; no logos or advertising
- 2.5.19. Two (2) 32" x 80" (approximate) passenger side "sedan type" mid entry (patron) doors placed per drawings. Door shall be of double-wall commercial quality aluminum construction and internally insulated between inner and outer skins.
  - 2.5.19.1. Step wells shall be a three-step configuration with 10" - 12" deep treads and 7" - 9" high risers. Each step shall incorporate heavy-duty, slip



resistant commercial rubber step tread reinforced with aluminum back. The front edge of each tread shall incorporate a 2" safety yellow or white edge. Step wells shall contain 12VDC LED lighting to assist with entry/egress.

- 2.5.19.2. Doors shall have dark tinted safety glass upper horizontal ¼ sliding window with fiberglass screen and dark tinted safety lower fixed-pane window.
- 2.5.19.3. Doors shall utilize continuous stainless steel, aluminum or similar non-corrosive type vertically-mounted, recess-mounted hinges, adequately sized for the anticipated weight and duty cycle of this door.
- 2.5.19.4. Doors shall include an exterior stainless-steel or aluminum drip rail mounted above the door.
- 2.5.20. One (1) of 42" x 79" (minimum width) single door mounted off-center on the rear wall per drawings. Door shall be of double-wall commercial quality aluminum construction and internally insulated between inner and outer skins.
  - 2.5.20.1. Door shall be set at floor height (no step well).
  - 2.5.20.2. Door shall have one fixed radius window, high-mounted, dark tinted.
  - 2.5.20.3. Door shall utilize stainless steel, aluminum or similar non-corrosive type vertically-mounted hinges, adequately sized for the anticipated weight and duty cycle of these doors.
  - 2.5.20.4. Doors shall include an exterior stainless-steel or aluminum drip rail mounted above the door.

### 3. CONVERSION SPECIFICATIONS

#### 3.1. Exterior

- 3.1.1. The 32" patron doors shall be configured with the following:
  - 3.1.1.1. Doors shall be fitted with one (1) Yale 5100 series or equivalent door closer each to control the movement of the door.
  - 3.1.1.2. Doors shall be equipped with one (1) heavy-duty, cast aluminum, positive hold-open device. Device shall be attached to the vehicle in a manner consistent with the intended use and lifetime of the vehicle.
  - 3.1.1.3. Door interiors shall be finished to compliment interior and include an interior pull handle to assist in closing the door.
  - 3.1.1.4. One (1) Yale push-bar "classroom" or equivalent entrance latch shall be installed on each door, keyed alike. Latch shall include provisions to temporarily compress the bar for "free swing" (non-latching) operation at stops.

- 3.1.1.5. One (1) Yale 112 series or equivalent heavy-duty "deadbolt" latch shall be installed, in addition to the main latch, on each door, keyed alike to the latches.
- 3.1.1.6. Door/step well area shall be outfitted with a total of four (4) 1.25" diameter stainless steel handrails each to provide solid entry/egress assistance.
  - 3.1.1.6.1. One (1) 36" approximate length handrail shall be installed vertically on the exterior, just aft of the door.
  - 3.1.1.6.2. Two (2) angle-mounted handrails shall be installed one each side of the step well.
  - 3.1.1.6.3. One (1) angle-mounted handrail shall be installed to the interior of the door below the upper window.
- 3.1.1.7. One (1) electric-operated, single auxiliary step or approved equal shall be installed beneath each of these step wells. Steps shall be finished with a non-skid surface. Steps shall include a dash-mounted switch.
  - 3.1.1.7.1. Height of deployed step shall be consistent with the overall staircase run - for smooth patron entry/egress.
  - 3.1.1.7.2. Height of retracted steps shall impede clearance requirements of section 2.3.9.
  - 3.1.1.7.3. Step shall be finished with a non-skid surface and a safety yellow, non-skid front strip.
  - 3.1.1.7.4. Step shall include an audible/visual indicator system to warn the driver that the step is extended when the ignition key is activated.
- 3.1.2. The 42" rear wheelchair door shall be configured with the following:
  - 3.1.2.1. Door shall be equipped with one (1) heavy-duty, cast aluminum, positive hold-open device.
  - 3.1.2.2. Door interior shall be finished to compliment interior.
  - 3.1.2.3. One (1) standard entrance latch with interior handle shall be installed.
  - 3.1.2.4. One (1) Yale 112 series or equivalent heavy-duty "deadbolt" latch shall be installed, in addition to the main latch, keyed alike to patron doors.
- 3.1.3. Four (4) 14" x 22" single dome translucent white acrylic skylights shall be installed with white PVC interior trim.
  - 3.1.3.1. Skylights and installation shall be consistent with the intended lifecycle of this vehicle and be warranted against leaking for a minimum of 5 years.
- 3.1.4. One (1) generator compartment shall be installed street side to mount and enclose the generator. Generator mounting shall be configured to allow easy access to the unit for service, as well as easy removal of the unit for overhauls.

This compartment shall be located on the driver's side, fully beneath the floor (no interior protrusion).

- 3.1.4.1. This compartment MUST maintain a minimum 12" ground clearance, but cannot go through the cabin floor.
- 3.1.4.2. Compartment structure shall be designed of adequate strength to hold the weight of the generator, and have superior corrosion protected for longevity.
- 3.1.4.3. Door(s) shall be constructed of aluminum and hinged with ¼" pin stainless steel continuous hinges.
- 3.1.4.4. Doors shall have positive "compression" style, "slam latch", or approved equal latches and a door hold-back device.
- 3.1.4.5. Doors shall be keyed-alike with other exterior compartments.
- 3.1.4.6. Compartment shall be insulated with Glacier Bay Barrier Ultra dB Flex and Panel or equivalent acoustical insulation.
- 3.1.4.7. Compartment shall be ventilated to allow ambient heat escape, but adequately sealed to protect the generator from road debris and dust.
- 3.1.5. One (1) general storage compartment shall be installed. Compartment shall be of maximum size available and located based on final design.
  - 3.1.5.1. This compartment shall be installed fully beneath the floor (no interior protrusion).
  - 3.1.5.2. This compartment shall be sealed to prevent moisture penetration.
  - 3.1.5.3. Compartment shall be constructed of aluminum or equivalent materials.
  - 3.1.5.4. Door(s) shall be constructed of aluminum and vertically hinged with ¼" pin stainless steel continuous hinges.
  - 3.1.5.5. Door(s) shall have positive "compression" style, "slam latch", or equivalent locking latches
- 3.1.6. One (1) auxiliary battery compartment shall be installed curbside to house the auxiliary battery bank. Compartment shall contain a slide tray with positive latch and hold downs for ease of battery maintenance. Tray shall be lined with an isolation material to help prevent battery corrosion.
  - 3.1.6.1. Compartment shall be constructed of aluminum or equivalent materials.
  - 3.1.6.2. Door shall be constructed of aluminum and vertically hinged with ¼" pin stainless steel continuous hinges.
  - 3.1.6.3. Door shall have positive "compression" style, "slam latch", or equivalent latches

- 3.1.7. One (1) recessed monitor compartment shall be installed curbside to house the exterior 70" monitor. Compartment shall include a back panel for monitor mounting, and a 72"W x 50"H (approximate) top-hinged door that acts as a sun and weather shield when open.
  - 3.1.7.1. Compartment shall be constructed of aluminum or equivalent materials.
  - 3.1.7.2. Compartment shall have space and provisions below the screen for powering and connecting a video game console to the screen.
  - 3.1.7.3. Door shall be constructed of aluminum and horizontally hinged with ¼" pin stainless steel continuous hinge.
  - 3.1.7.4. Door shall have positive "compression" style, "slam latch", or equivalent latches
  - 3.1.7.5. Door shall have pneumatic lift assist struts to support the door horizontally when open.
  - 3.1.7.6. Door shall have a nylon pull strap attached to assist in reaching the door for closing.
- 3.1.8. Vehicle underbody shall be fully undercoated with rubberized spray to provide additional sound resonance dampening and underbody insulation protection.
- 3.1.9. Two (2) 26"T x 24"W (approximate) half-slide windows with screens shall be installed in the side wall as depicted in the concept drawing(s).
  - 3.1.9.1. Windows shall be dark tinted.
  - 3.1.9.2. All glass furnished shall be automotive approved safety type. All glass shall be safety glazed and meet DOT GMVSS 205, SAE recommended practice J673b and J674a, and ANSI "Safety Code for Safety Glazing Materials" Z26.1-1977 as supplemented by Z26.1a-1980.
- 3.1.10. Compartments, doors and appropriate added components shall be finished to match the body exterior.
  - 3.1.10.1. Additionally, where the vehicle is cut or modified, or additional fabricated components are added to the exterior, exposed metal shall be properly prepared and painted to match vehicle exterior color.
  - 3.1.10.2. Panels shall be properly cleaned and prepared for paint application in accordance with standard commercial practice and to requirements of the construction materials involved. Surfaces shall be properly cleaned and inspected before cover materials are applied.
  - 3.1.10.3. The prepared surfaces shall be spray primed with synthetic base primer, which contains corrosion resistant pigments and resins. Extra coats shall be applied around moisture catching moldings, etc. All hidden areas such as overlapping metal, underside of moldings, underside or rubber



extrusions at windows shall be cleaned and primed and where necessary and caulked with sealing compound during construction.

- 3.1.10.4. DuPont or equivalent paint shall be applied to all areas of the metal. Each coat shall be properly dried and evenly sanded before the following coat is applied. "Orange peel" surfacing will not be acceptable.

### 3.2. Interior

- 3.2.1. The Bookmobile interior shall be designed to accommodate a collection of approximately 3,500 items, which includes but is not limited to: books of various sizes, DVDs, CDs, oversized materials of odd shapes, magazines, etc.
- 3.2.2. Since a bookmobile is a mobile library, and a quiet environment is most important in the successful operation of any library, all interior finishes shall contribute to absorbing ambient sounds. Appropriate panels, ceiling and flooring shall have superior acoustic qualities in addition to durability and aesthetics. Sound control measures shall comply with the Occupational Safety and Health Act (OSHA) sound level (dba) requirement in effect at time of award of contract, for an eight (8) hour maximum operator exposure time; measured at operator's ear with engine at governed RPM.
- 3.2.3. Completed unit shall utilize environmentally conscious "green" elements wherever practical, including, but not limited to: energy efficient technologies, and recycled and/or sustainable construction materials.
- 3.2.4. Weight loading shall be of significant concern during the conversion of this vehicle for efficiency reasons. Substantial effort has been put into the interior design with this factor in mind. Vendor is cautioned to use the lightest materials available that will meet all specifications as described herein and make recommendations as appropriate for lightening the static load of the conversion.
- 3.2.5. Vehicle ceiling, walls, wheel wells (if applicable) and underbody shall be insulated with 1.5" (minimum) nominal thickness (3" nominal thickness underbody) sprayed-in urethane foam insulation or approved equivalent.
  - 3.2.5.1. Underbody foam insulation shall be protected from road spray and elements by an additional layer of rubberized automotive undercoating.
  - 3.2.5.2. Foam shall be compliant with all applicable FMVSS regulations including flammability.
- 3.2.6. Floor covering shall be commercial-grade vinyl flooring.
  - 3.2.6.1. Covering shall have a 10-year minimum wear warranty.
  - 3.2.6.2. Sub-flooring shall be properly prepared prior to installation of the floor covering.

- 3.2.6.3. Flooring shall be installed in a manner consistent with the manufacturer's recommendations.
- 3.2.6.4. Any flooring remnants remaining from the installation shall be shipped loose with the completed vehicle.
- 3.2.6.5. The library will select the exact color and pattern of vinyl from vendor's selections based on other interior color choices.
- 3.2.7. Two (2) 84" x 36" (approx.) commercial carpet runners shall be provided and shipped loose with the completed vehicle.
  - 3.2.7.1. Runner finish shall be selected by the library from manufacturer's standard selections.
- 3.2.8. Interior walls outside of shelving areas shall have a ½" plywood substrate adhered to the body structure and finished with materials selected by the Library from manufacturer's standard offerings.
  - 3.2.8.1. Wall areas adjacent to the staff desk locations shall have additional reinforcements or backing plates to allow for post-delivery installation of wall-mount laptop computer arms.
- 3.2.9. Interior walls in shelving areas shall be finished with easily removable panels installed between shelving uprights to provide a pleasing, flexible and durable finish.
  - 3.2.9.1. The panels shall first be covered with a 1/8" layer of cork, and then covered again with tight woven or Velcro friendly fabric. The finish of these panels shall be chosen by the Library from manufacturer's standard selections.
  - 3.2.9.2. All removable panels shall finish to a depth equivalent to the mounting face of the shelving uprights, providing a recessed, "built-in" appearance to the entire system.
- 3.2.10. Ceiling shall be finished with eco-friendly, soft, sound absorbent materials chosen by the Library from manufacturer's selections.
- 3.2.11. Cork bulletin board strips shall be installed throughout the vehicle, including, but not limited to, all overhead cabinet doors. Number and size of bulletin boards furnished shall be determined by the exact configuration of interior. Bulletin board strips shall be as long as possible and installed where space is available inside the coach.
- 3.2.12. One lockable, sliding door shall be fabricated and installed to separate the rear cabin from the cab at the staff's discretion. Door shall utilize heavy-duty hardware and be finished in materials to compliment the interior.
  - 3.2.12.1. Hardware shall include provisions for positively latching the door in the both the open and closed positions.
  - 3.2.12.2. Latch shall key lock from the rear cabin.

- 3.2.13. The cab-over area of the body shall be configured with mechanical items located on the driver's side and general staff storage on the passenger side.
  - 3.2.13.1. A raised "keeper" edge shall be installed in the storage area(s) to help keep items from falling into the walkway.
- 3.2.14. Two (2) high quality, adjustable height rolling task chairs with arms shall be supplied for the staff work stations.
  - 3.2.14.1. Chairs shall compliment the overall interior, with fabric color chosen by the Library from the manufacturer's standard selections.
  - 3.2.14.2. Chairs shall include a method to secure it during transit.
- 3.2.15. Two (2) 12" deep floor-to-ceiling wood bulkheads shall be fabricated and installed per the preliminary drawing. Bulkheads should be finished to match the fixed staff desk.
- 3.2.16. Two (2) 2-tier brochure racks with clear Lexan faces and removable dividers shall be fabricated and installed on the bulkheads. Design of the racks shall be approved by the library prior to fabrication.
  - 3.2.16.1. An Acore Shelving & Products, Inc. aluminum shelving system or equivalent shall be supplied and installed. Shelving components shall be powder coated after assembly where possible using coatings containing no lead or lead products. All components shall be constructed from superior grade lightweight materials and be built to withstand the unique stresses imposed by a mobile environment. The shelving layout shall be designed to accommodate approximately 3,000 items, which includes but is not limited to: books of various sizes, DVDs, CDs, videos, books on CD, oversized materials of odd shapes, magazines, etc. All shelving running along the sidewalls of the vehicle shall tilt back 15 degrees. The completed modular shelving system shall include the following components:
    - 3.2.16.2. Nineteen (19) one-piece aluminum slotted shelving uprights.
      - 3.2.16.2.1. Uprights shall be secured to sidewalls in a manner consistent with the anticipated stresses that will be imposed and expected lifecycle of this vehicle.
      - 3.2.16.2.2. Uprights shall be properly installed per manufacturer's instruction, including but not limited to ensuring centerlines are accurate (36" +/- 1/16" typical), uprights are plumb, and lateral alignment is true the entire length of each section.
  - 3.2.16.3. Fifty (50) 7" deep wall shelves with integral 15° slope. Lengths to be determined by finalized upright positions, but should be set at 36" wherever feasible, with a maximum length variation of two (2) for interchangeability.

- 3.2.16.4. Seven (7) 7" deep wall shelves with integral 20° slope, for use on the rear wall of the vehicle.
- 3.2.16.5. One (1) magazine rack module shall be provided to hold approximately 20 titles in an overlapping fashion (top 2" of magazine showing with the exception the very front position).
- 3.2.16.6. Five (5) 36" wall hugger, single-sided book trucks with 3 shelves each.
- 3.2.16.7. One (1) 36" enclosed book return truck, with face-mounted book return slot, and locking access doors.
  - 3.2.16.7.1. Interior shall contain a foam pad in the bottom to protect materials from excessive damage.
- 3.2.16.8. Six (6) wall security devices, for locking the on-board book (and book return) trucks into the upright system.
- 3.2.16.9. Two (2) modular staff workstations shall be fabricated and installed per finalized plans. Workstations shall be designed to last the lifetime of the vehicle but constructed of lightweight materials for ease of adjustment. Work surface shall be finished in high-impact laminate or equivalent.
  - 3.2.16.9.1. Rear workstation shall be sized (with collapsed extension) to allow a 32" wide minimum passage from the wheelchair lift platform to the main browsing area onboard.
  - 3.2.16.9.2. Workstations shall be appropriately configured for installation of technologies by the Library, including cable pass-through grommets as designated.
  - 3.2.16.9.3. Workstations shall utilize the wall-mounted Acore uprights and appropriate brackets for main support, but also include an outboard mounted adjustable height support leg to allow staff to adjust height at the same increments as the Acore uprights.
  - 3.2.16.9.4. Workstations shall include a lightweight positive latch pencil drawer mounted beneath the work surface.
  - 3.2.16.9.5. Workstations shall include a 12" drop-down surface extension for improved efficiencies.
    - 3.2.16.9.5.1. Extensions shall utilize heavy-duty support hardware and include provisions to secure the extension for transport if collapsed.
  - 3.2.16.9.6. One (1) drop-in flush-mounted, removable cup holder shall be installed in each work surface.
  - 3.2.16.9.7. Surfaces shall mount to the shelving uprights using heavy-duty brackets designed for this purpose.



- 3.2.16.9.8. The finalized design shall be approved by the Library prior to fabrication and installation.
- 3.2.16.10. Two (2) modular overhead storage cabinets shall be provided as depicted in the preliminary drawing(s).
  - 3.2.16.10.1. Cabinets shall be designed to last the lifetime of the vehicle but constructed of lightweight materials for ease of adjustment.
  - 3.2.16.10.2. Cabinets shall include lockable, top hinged bulletin board type doors, with mechanical stays, per final design.
  - 3.2.16.10.3. Cabinets shall include one (1) interior adjustable shelf and cable grommets in the base panel for future wiring.
  - 3.2.16.10.4. Cabinets shall have a lower, open shelf for placement of printers and other peripherals. These shelves shall contain cable grommets for easy technology connection.
  - 3.2.16.10.5. Cabinets shall mount to the shelving uprights using heavy-duty brackets designed for this purpose.
- 3.2.16.11. Vehicle shall be configured as depicted in the finalized drawing upon delivery. Any remaining components (extras) of this system shall be shipped loose with each vehicle.
- 3.2.16.12. System shall include shelf label color strips, colors to be determined.
- 3.2.16.13. System shall be powder coated for maximum durability; color to be chosen by the Library from vendor's standard color selections.
- 3.2.17. Final configuration and colors of the interior shelving and cabinetry shall be subject to approval of the Library prior to installation.
- 3.2.18. Finish, cabinetry and shelving installation shall provide an approximate 76" aisle width.
- 3.2.19. Final configuration of the interior shelving and cabinetry shall be subject to approval of the Library prior to installation.

### 3.3. Electrical System – AC

- 3.3.1. System shall be a 120/240-volt rated, single-phase type system designed to provide and distribute electrical power at a level of performance that meets the requirements of all components and/or accessories utilizing such power throughout the vehicle.
  - 3.3.1.1. System furnished shall be designed and installed to meet all requirements of the National Electrical Code (NEC), with all system components, accessories, plugs, receptacles, switches and circuit breakers being Underwriter's Laboratories (UL) listed and approved.

- 3.3.1.2. System furnished shall also meet any and all applicable state code requirements and regulations pertaining to the design and installation of AC electrical systems.
- 3.3.2. All AC wiring shall be installed using multi-stranded, multi-conductor flexible armored, THHN (in non-metallic conduit), or boat rated cable; 600 volt rated, UL approved or equivalent. All wire shall be color-coded and grounded throughout the system. Aluminum wire is not acceptable due to its history of involvement in electrical system fires. Since the body and chassis of a motor vehicle is constantly flexing in torsion when in use, fixed type conduit is not acceptable due to the long-term potential electrical shorting and the resulting potential of fire hazard.
  - 3.3.2.1. Wiring and harnesses shall be installed in easily accessible locations to aid long-term serviceability and maintain a minimum 2" air-insulated clearance from parallel low-voltage wiring harnesses per NEMA standards.
  - 3.3.2.2. All wiring shall be sized using NEMA ratings to 125% of anticipated load.
- 3.3.3. One (1) Onan 8 HDKAU/41934, 8.0KW or equivalent, 120VAC quiet diesel generator set shall be installed. Unit shall be certified by the Environmental Protection Agency (EPA) to conform to Tier 4 emissions regulations, and feature Advanced Control.
  - 3.3.3.1. Unit shall contain integral shut-down protection system to protect against high engine temperature, low oil pressure, loss of coolant, over crank safety, over speed, over/under voltage, over/under frequency and auxiliary fault.
  - 3.3.3.2. Unit shall draw its fuel from the main vehicle fuel tank through a separate tap that does not allow the generator to draw the fuel level below 1/8 tank.
  - 3.3.3.3. Unit shall be capable of running on ultra-low sulfur B20 fuel in addition to ultra-low sulfur diesel with no modification necessary.
  - 3.3.3.4. Unit shall utilize the auxiliary battery bank for starting/re-charging.
  - 3.3.3.5. Unit exhaust shall exit on the driver's side.
  - 3.3.3.6. Installation shall include an interior-mounted remote-control panel, located in the cab-over mechanical area; driver's side.
  - 3.3.3.7. Unit shall be mounted in an underbody compartment with an exterior access, ventilated aluminum door. Generator mounting compartment shall maintain a minimum 12" ground clearance.
- 3.3.4. One (1) 125/250VAC, 50A rated, 3-pole 4-wire twist-lock water-proof inlet shall be installed on the driver's side of the vehicle.

- 3.3.5. One (1) 25' long, 125/250VAC, 50A rated, 3-pole 4-wire shore cord shall be provided to connect the vehicle to shore power.
  - 3.3.5.1. One (1) 50A to 20A adaptor shall be provided to allow connection of standard extension cords (for limited power options). Power distribution shall be designed so the 20A adaptor (if used) powers at least the inverter and one (1) air conditioner unit.
- 3.3.6. One (1) 25' long, 125/250VAC, 50A rated, 3-pole 4-wire extension cord shall also be provided, to extend the reach of the shore cord when required.
- 3.3.7. One (1) ATS3W50 or equivalent automatic transfer switch shall be installed to provide automatic switching between generator and shoreline power sources. Unit shall have a 24kW maximum rating and mechanical interlock to prevent any possibility of electrical feedback.
- 3.3.8. One (1) 100A (minimum) rated Square D or equivalent distribution panel(s) shall be installed in the kick-over mechanical area; per finalized design.
  - 3.3.8.1. All AC electrical circuits shall be safety protected from short circuits and current overloading by UL approved resetting type circuit breakers, each properly capacity sized to the circuit they serve. A master circuit breaker that controls all AC electrical system circuits shall also be furnished.
  - 3.3.8.2. Panel(s) shall be readily accessible, yet out of view of the general public.
- 3.3.9. One (1) Xantrex Freedom SW 3012 or equivalent, 3000w inverter/charger shall be installed to back-up the onboard "orange" receptacles and recharge the auxiliary battery bank whenever there is shore or generator power available.
  - 3.3.9.1. Unit shall feature pure sine wave output and battery over-voltage and under-voltage protection.
  - 3.3.9.2. Unit shall include a 150A, 3-stage battery charger with manual equalize connected to the auxiliary battery bank.
  - 3.3.9.3. Unit shall be controlled with a Xantrex Freedom SCP or equivalent system control panel, mounted near the front workstation.
  - 3.3.9.4. System shunt shall be wired to include all auxiliary power loads being drawn from the auxiliary batteries (not just the inverter) for accurate system monitoring.
  - 3.3.9.5. Unit shall be mounted in the cab-over mechanical area; driver's side.
  - 3.3.9.6. A second distribution panel may be necessary (dependent on final electrical configuration) as a "sub-panel" for inverter power distribution.
- 3.3.10. Install one (1) Xantrex Freedom SW Xanbus 809-0915 or equivalent automatic generator start shall be mounted in the cab-over mechanical area; driver's side.

- 3.3.10.1. System shall automatically activate the generator upon low battery voltage, battery state of charge, over-current or air conditioner operation.
- 3.3.11. A minimum of fifteen (15) 15A-rated, UL listed, NEMA 5-15, three-hole grounded duplex receptacles shall be furnished inside the vehicle for general and specific uses. Inverter backed receptacles shall have an orange face for ease of identification.
  - 3.3.11.1. One (1) receptacle shall be weatherproof and installed on the curbside exterior for use under the awning.
- 3.3.12. Two (2) 13,500 BTU low-profile air conditioner shall be installed per drawings.
  - 3.3.12.1. Units shall provide 13,500 BTUs of cooling each.
  - 3.3.12.2. Units shall include self-contained, low-profile ceiling assembly with remote controls.
  - 3.3.12.3. Unit shall stand a maximum of 10" above the roof, and be included in the overall height measurement (reference 2.3.3).
  - 3.3.12.4. Units shall include provisions for triggering the automatic generator start (reference 3.3.10)
- 3.3.13. One (1) 70" high-resolution LCD monitor shall be installed in the monitor compartment on the curb side of the vehicle.
  - 3.3.13.1. Unit shall be shock-mounted, but easily removable for service and/or replacement.
  - 3.3.13.2. Unit shall be capable of playing content via USB and include one (1) HDMI cable run from the front desk.
  - 3.3.13.3. Unit shall be powered through the inverter.
- 3.3.14. One (1) Bose Solo 5 or equivalent sound bar shall be provided and mounted below the screen.
- 3.3.15. One (1) 32" high-resolution LCD monitor shall be installed on a drop-down ceiling mount above the wheelchair lift.
  - 3.3.15.1. Installation shall capable of playing content via USB and include one (1) HDMI cable run from the front workstation.
  - 3.3.15.2. Interior installation shall include a MORryde TV1-080H or equivalent drop-down TV ceiling mount.
  - 3.3.15.3. Unit shall be powered through the inverter.
- 3.3.16. One (1) 22" high-resolution LCD monitor shall be recess-mounted in the wall behind the front staff work station.

- 3.3.16.1. Installation shall capable of playing content via USB and include one (1) HDMI cable run from the front workstation.
- 3.3.16.2. Unit shall be powered through the inverter.
- 3.3.17. One (1) 1.3 cubic foot (approximate) refrigerator shall be installed in the cabover area.
  - 3.3.17.1. Refrigerator shall operate on 120VAC only and powered through the inverter.
  - 3.3.17.2. Refrigerator shall have provisions to keep the door closed during transit.

#### 3.4. Electrical System – DC/Other

- 3.4.1. Shall be a 12-volt, negative ground type system designed to provide and distribute electrical power at a level of performance that meets the requirements of all components and/or accessories utilizing such power throughout the vehicle.
- 3.4.2. Design emphasis of system furnished shall be on both reliability and serviceability. System furnished shall be a modular type design, modular being defined as a system where major power train, chassis, body component assemblies, including lighting, wiring and switch harnesses, and heater harnesses are easily separable for purposes of repair or replacement, using either simple hand tool or automotive type plug-in connectors. Special emphasis shall be made on accessibility to all wiring harnesses in all locations. Wiring shall not be rendered un-accessible behind permanently installed panels or appointments.
- 3.4.3. The power source for all body electrical equipment furnished shall be taken from a single point on the power train specifically designed for this purpose.
- 3.4.4. The main ground wire grounding the body to the chassis shall be minimum 8-gauge size; all ground wires furnished for insulated-return type systems shall be equal in size to the feed wire in the respective circuit. Redundant grounds shall be used if required to attain a satisfactory level of system performance desired. For maximum system reliability, all serrated eyelets and screws or bolts utilized at points of ground shall be either coated or plated with an electrical conductive type material to improve their resistance to corrosion.
- 3.4.5. All electromagnetic type switches, relays and solenoids furnished shall be suppressed to protect the entire electrical system from major damage from the large negative voltage spikes these devices can produce.
- 3.4.6. All auxiliary electrical circuits shall be safety protected from current overloading by automatic resetting type heavy-duty automotive circuit breakers, each



properly capacity sized to the circuit they serve. A master circuit breaker, minimum 150-amp shall also be furnished.

- 3.4.7. All terminals and connectors furnished shall be designed and approved by their manufacturer for heavy-duty automotive vocational application; material shall be a corrosion-resistant type. To eliminate disconnects; all terminals furnished shall incorporate a positive locking, seated type design to assure terminal position. Socket (female side of connectors shall be wired to electrical source side of circuit and plug (male) side of connector shall be wired to electrical load side of the circuit to help prevent a short circuit when disconnected. All connections made on the vehicle underbody shall be adequately protected against moisture and corrosion with dielectric grease, heat shrink tubing, or other similar techniques.
- 3.4.8. All insulated cable furnished shall comply with SAE Standards J1127 and J1128. All wiring furnished in the engine compartment area, where extreme heat and fire are of concern, shall be multi-stranded, low-voltage insulated automotive type cross-linked polyethylene fire-retardant SAE approved SXL type. All wiring furnished in the body portion of the coach shall be multi-stranded, low-voltage insulated automotive type; either SAE approved SXL or GXL types are acceptable. All wiring in each circuit shall be of sufficient size, and with 125% capacity rating of anticipated load to transmit the electrical current load of the circuit. Sizing shall take into account the length of the circuit and the voltage drop occurring in the circuit. Voltage at the load shall be +/- 5% of rated voltage when measured in a normal operating state.
- 3.4.9. All wiring shall be routed meeting the following minimum requirements:
  - 3.4.9.1. No contact with sharp or puncturing edges.
  - 3.4.9.2. No tension or strain between fixed points.
  - 3.4.9.3. Adequate and safe clearance of moving parts.
  - 3.4.9.4. 5-inch clearance from radiant heat sources.
  - 3.4.9.5. Adequately secured to prevent pinching.
  - 3.4.9.6. Wiring to be color-coded and numbered, grease-, oil- and moisture-resistant and securely fastened.
- 3.4.10. All wiring furnished shall be routed in protective harnesses, either woven vinyl or corrugated vinyl or nylon types acceptable. When harnesses go through metal structure, rubber grommets shall be used to further protect the integrity of the harnesses.
- 3.4.11. Six (6) Trojan L16P-AC or equivalent, group 903, 6V deep-cycle, batteries shall be provided as an auxiliary battery bank for stationary 12VDC component power.

- 3.4.11.1. Each battery shall have 420 Ah capacity (@20hr), for a total bank capacity of 1,260 Ah. Batteries shall be connected in a "series/parallel" manner to provide a 12VDC reference.
- 3.4.11.2. Batteries shall be installed within the underbody battery compartment with a positive hold-down system.
- 3.4.11.3. Batteries shall power installed auxiliary systems only.
- 3.4.11.4. The vehicle alternator, inverter/charger, and the solar panels shall charge these batteries.
- 3.4.12. One (1) Blue Sea ML-ACR or equivalent heavy-duty battery isolation/merge system shall be installed to allow charging of both the main and auxiliary battery banks from the vehicle alternator, isolation during stationary operations, and merging of the battery banks for emergency starting.
  - 3.4.12.1. System shall include dash-mounted control switch with indicator lights.
  - 3.4.12.2. Battery connection cables associated with this system shall be protected on both sides with a 150A minimum, high amp, resettable circuit breaker.
- 3.4.13. A 12VDC, LED main cabin lighting system shall be installed to provide interior lighting meeting library minimum stack ratings.
  - 3.4.13.1. Lighting fixtures shall be alternately configured on two (2) switches to allow a "zig-zag" lighting option at the user's discretion.
  - 3.4.13.2. Lighting level should be 6 foot-candles (ft-c) minimum measured on the stack face (vertically) at a height of 12", and 35 ft-c maximum at any height to achieve no more than a 6-to-1 maximum-to-minimum ratio across the entire stack face.
  - 3.4.13.3. Light output temperature shall be a "warm" white between 3800K – 4400K.
  - 3.4.13.4. Lighting system design shall be approved by the Library prior to installation.
- 3.4.14. LED stepwell lighting (12VDC) shall be provided at the side entry.
  - 3.4.14.1. Shall be wired to operate in conjunction with the condition of the door.
- 3.4.15. Four (4) Whelen 600 series or equivalent, LED weatherproof "scene" lights shall be installed; two (2) on the exterior curbside, and two (2) on the exterior rear.
  - 3.4.15.1. Lights shall be switched in the driver's area.
  - 3.4.15.2. Rear mounted lights shall also be engaged by putting the vehicle in reverse.
- 3.4.16. Six (6) 12VDC receptacles with standard and USB charge ports shall be installed.

- 3.4.16.1. Receptacles shall be independently fused and powered by the auxiliary batteries.
- 3.4.16.2. Locations shall be chosen during the pre-build engineering phase.
- 3.4.17. One (1) Ricon or equivalent, in-body hydraulic wheelchair lift shall be installed inside the rear doors per manufacturer specification.
  - 3.4.17.1. Lift shall have a 33"W x 51"L (approximate) platform.
  - 3.4.17.2. Lift shall have an 800 lb. (approximate) lifting capacity.
  - 3.4.17.3. Installation shall include all vehicle interlocks and safety systems offered by the manufacturer, and have a manual backup system.
  - 3.4.17.4. System and installation shall adhere to ADA and FMVSS regulations.
- 3.4.18. Two (2) Fantastic Vent 6000RBTA or equivalent, 3-speed, reversible roof vents shall be installed. Vents shall include thermostatic control, automatic opening dome, and automatic rain sensors.
- 3.4.19. Two (2) Espar AIRTRONIC D4 Plus or equivalent diesel fueled air heaters shall be installed below floor to heat the main interior cabin. Heating system shall include integrated ducting and rotatable/closable vents to help ensure even distribution of the heat and further ensure that the areas beneath the staff desks are not cold.
  - 3.4.19.1. Units shall produce 13,650 btu/hr each.
  - 3.4.19.2. Units shall vent combustion air to the exterior of the body.
  - 3.4.19.3. Heating output shall be integrated throughout the interior for even heating in two (2) zones per finalized design.
  - 3.4.19.4. Units shall be controlled by the central thermostat.
  - 3.4.19.5. Units shall be fueled from the main vehicle diesel fuel tank.
  - 3.4.19.6. System shall be installed in compliance with ANSI A-119.2 and NFPA regulations.
- 3.4.20. One (1) Duo Therm Comfort Control Center 2 or equivalent, thermostat shall be installed near the front desk. Unit shall utilize a series of advanced heat sensing devices to track temperatures and activate heat or air conditioning as needed to maintain selected temperature in each zone.
  - 3.4.20.1. Unit shall be a full digital system creating two (2) zones from one centralized location.
  - 3.4.20.2. Unit shall utilize a LCD readout and Intellisist technology to allow easy setting changes.
  - 3.4.20.3. Unit shall interconnect with the hybrid power system to provide "HVAC request" auto start signal.

- 3.4.20.4. Unit shall be mounted near the front workstation.
- 3.4.21. One (1) twenty-two foot (22') long Dometic 9100 Weatherpro or equivalent 12VDC power awning shall be installed on the curbside of the vehicle.
  - 3.4.21.1. Awning shall include a wind sensor to close the awning when it detects high sustained winds.
  - 3.4.21.2. Awning shall include a knee action design to allow flex in moderate wind and automatically release any accumulated water away from the door.
  - 3.4.21.3. Awning shall include a hard-wired switch mounted high inside the main patron door, as well as a hand-held wireless remote control.
  - 3.4.21.4. Color of awning shall be chosen post-award by the Library from manufacturer's standard selections.
  - 3.4.21.5. Awning shall have the library logo screen printed or equivalent on the bottom of the fabric.
- 3.4.22. One (1) AM/FM/CD/Bluetooth stereo with auxiliary input and public address (PA) capabilities shall be installed near the staff work station.
  - 3.4.22.1. System shall include four (4) high-quality interior speakers mounted in the ceiling and two (2) performance quality, flush-mounted exterior speakers mounted on the curbside.
- 3.4.23. One (1) parking sensor system with 4 front and 4 rear in-bumper sensors shall be installed. System shall detect obstacles using ultrasonic wave (sonar) echolocation technology, and include a wired LED digital display with audible alert mounted in the dash area.
- 3.4.24. Two (2) Elmech Q-scan Uniplex, or equivalent, people counters shall be installed; one (1) in each doorway.
  - 3.4.24.1. Systems shall include magnetically activated, 4-digit 12mm high LED displays.
  - 3.4.24.2. Systems shall count each person crossing the beam, regardless of the direction of approach.
  - 3.4.24.3. Systems shall include non-volatile memories to protect against power failure.
  - 3.4.24.4. Reference: <http://www.q-scan.co.uk/uniplex.htm>
- 3.4.25. One (1) Safety Vision or equivalent video surveillance, GPS and remote monitoring system shall be installed with all triggers/features connected. System shall be mounted in a location out of general view, but still readily accessible for staff. System shall include, but not be limited to the following components. Additional accessories (cables, power/sensor harness, antennas, interconnects, etc.) may be necessary to fulfill the general intent of the system,

and vendors are urged to consult with system manufacturer to complete system operability.

- 3.4.25.1. One (1) Safety Vision Observer 4112 HVR, with 12 camera capability, integrated Wi-Fi and external Wi-Fi capability. SD card storage for mirror recording. Recorder must have eight (8) threaded aviation style camera inputs. Molex & BNC style camera inputs are not acceptable.
- 3.4.25.2. One (1) Safety Vision 4112-1TB HDD hard drive, 1TB SATA, for DVR.
- 3.4.25.3. 3-Axis accelerometer embedded in the recorder.
- 3.4.25.4. One (1) Safety Vision 41-GPS antenna w/ 16' cable.
- 3.4.25.5. One (1) Safety Vision 4108-USB hard drive reader cable.
- 3.4.25.6. One (1) Safety Vision 41-PANIC, panic button/event marker mounted near the front staff workstation in an easy to reach, but out of direct view location.
- 3.4.25.7. One (1) Safety Vision AHD-2.8MIR-WT, Hi-Definition dome camera, mounted high in the vehicle cab area.
- 3.4.25.8. One (1) Safety Vision AHD-2.8MIR-WT, Hi-Definition dome camera, mounted above the sliding door in the main cabin area, facing the rear.
- 3.4.25.9. One (1) Safety Vision SV-EXTCAM-WHITE, side mount camera, for exterior right (curb side) application. Must automatically trigger from the vehicle's right turn signal.
- 3.4.25.10. One (1) Safety Vision SV-630A-KIT, box camera, mounted on the exterior rear, for back-up/rear vision application. This camera must show as a reverse image, and automatically trigger from the vehicle's reverse circuit, for rear view requirements
- 3.4.25.11. One (1) Safety Vision SV-CP4-HYB-KIT, 7" touch screen monitor w/ direct connect to recorder. Monitor must allow single/dual/quad view, with ability to display up to nine cameras at the same time. Monitor shall be mounted in the cab to act as a back-up (and general) monitor, and include full screen reverse gear (automatic), turn signal (automatic) and manual activation. Additional panic button integrated into monitor. Monitor must allow viewing of all four (4) cameras at user discretion.
- 3.4.25.12. Reference: <http://www.safetyvision.com/products/observer-4112-hvr>
- 3.4.26. One (1) Aqualarm 20446 or equivalent 12VDC powered security system with cell and email alert shall be installed. System shall include the following features:
  - 3.4.26.1. Keypad activation/deactivation.
  - 3.4.26.2. IR remote
  - 3.4.26.3. Motion detector

- 3.4.26.4. Door contacts for all doors
- 3.4.26.5. One (1) Aqualarm 20421 solar powered exterior siren/strobe light.
- 3.4.27. One (1) Cradlepoint IBR1100 series or equivalent, wireless LTE advanced ruggedized modem shall be provided.
  - 3.4.27.1. Modem shall be powered by the 12VDC system and connect to the front and rear desk areas via CAT6, 10/100 Mbps RJ-45 cabling.
  - 3.4.27.2. Modem shall support LTE advanced with SIM-based auto-carrier selection, and have the ability to easily add a second modem at a later time to increase bandwidth as necessary
  - 3.4.27.3. Modem shall include 802.11 a/b/g/n/ac WiFi to provide a hotspot in and around the vehicle.
  - 3.4.27.4. Modem shall include the ability to configure a virtual private network (VPN).
  - 3.4.27.5. Modem shall include one (1) Cradlepoint 170654-000 or equivalent 5-in-1 GPS, modem & WiFi antenna, mounted to the exterior roof of the vehicle.
  - 3.4.27.6. Installation shall include a second Cradlepoint 170653-000 or equivalent 3-in-1 modem antenna, for addition of second modem at a later time.
  - 3.4.27.7. Unit shall be installed in the cab-over mechanical area.

### 3.5. Miscellaneous Components

- 3.5.1. One (1) SkyScan or equivalent atomic clock shall be furnished, with a minimum 2-inch main character size. Unit shall include readouts for interior and exterior temperature (via wireless remote sensor), day and date, and receive its synchronization signal from NIST.
- 3.5.2. One (1) battery-operated Carbon Monoxide (CO) detector shall be installed on the interior ceiling.
- 3.5.3. One (1) battery-operated smoke detector shall be installed on the interior ceiling.
- 3.5.4. Two (2) 5 lb. ABC fire extinguishers shall be installed in the interior, one front and one rear.
- 3.5.5. One (1) MI State DOT approved first aid kit shall be supplied and installed within the completed vehicle.
- 3.5.6. One (1) set of three (3) red emergency reflective triangles with dedicated ABS plastic enclosure shall be provided and installed.

#### **4. OPTIONAL ITEMS** (please quote these items separately)

##### **4.1. Chrome Chassis Features**

- 4.1.1. Add chrome front bumper and grill upgrades to chassis

##### **4.2. Polished Aluminum Wheels**

- 4.2.1. Replace painted steel outboard wheels with polished aluminum.

##### **4.3. Additional Book Carts**

- 4.3.1. One (1) Acore or equivalent 36" wall hugger, single-sided book truck with 3 shelves each. Please quote price per each.

##### **4.4. Workstation Module**

- 4.4.1. One (1) removable patron work surface module shall be fabricated and provided. Surface shall utilize Acore support brackets to attach to uprights at user discretion, and be finished with the same high-impact material as the staff work surfaces. Please quote price per each.

##### **4.5. Bench Seat Module**

- 4.5.1. One (1) bench seat module shall be fabricated and provided. Seat shall have 2" minimum foam covered with durable fabric chosen by Library from manufacturer's selections, and use Acore support brackets to attached to uprights at user discretion. Please quote per each.

##### **4.6. Touch Screen Functionality**

- 4.6.1. Add touch screen functionality to 70" exterior monitor (reference 3.3.13).
  - 4.6.1.1. Additional shall include power, cabling and space provisions for a small form factor computer in the exterior compartment, including network cabling from the front staff workstation.

##### **4.7. Solar Panel System**

- 4.7.1. One (1) AM Solar SunRunner or equivalent, solar panel system shall be provided and installed.

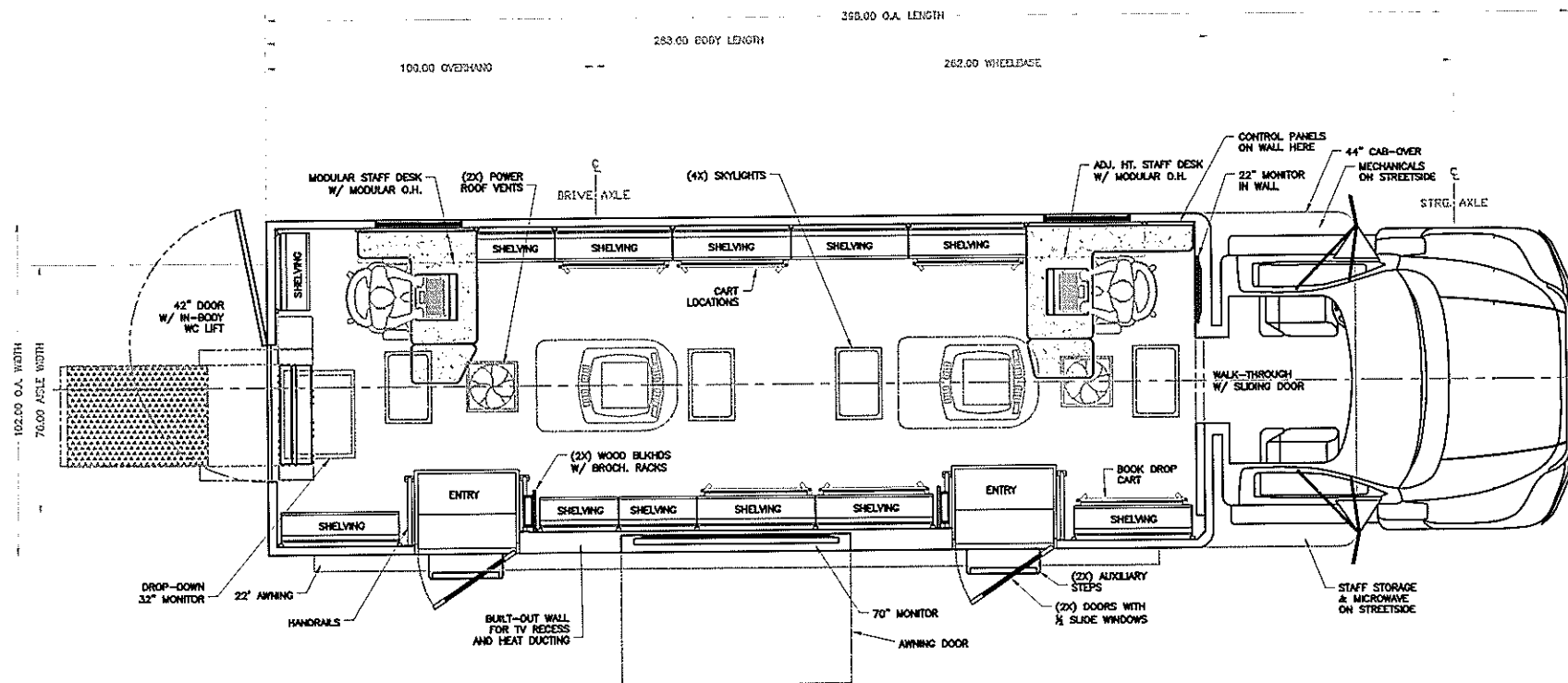




- 4.7.1.1. System shall include four (4) GO160 solar panels, one (1) SunRunner Gold 30MPPT/8 system core, and one (1) roof C-box.
  - 4.7.1.1.1. Controller interface shall be mounted in the kick-over mechanical area.
  - 4.7.1.2. System shall charge both the main and auxiliary battery banks with a potential total of 640 watts.
  - 4.7.1.3. The design of this system is subject to approval by the Library prior to installation.

-----END OF SPECIFICATIONS-----

RevNo	Revision note	Date	Signature	Checked
11	Rear desk orientation	14-NOV-17		
12	Remove (optional) workstations and bench seats	31-JAN-18		




#### GENERAL INFORMATION

- MEDIUM-DUTY CAB CHASSIS
- 262 INCH WHEELBASE
- 34.0' OVERALL LENGTH
- 25,900LB GVWR
- 2,391 LINEAR INCHES SHELVING

#### FLOOR PLAN

PRELIMINARY ONLY – NOT INTENDED FOR CONSTRUCTION

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## RSVP FORM

The Pre-Proposal Conference is scheduled for Tuesday, March 13, 2018 @ 10:00 a.m.

Please complete the following information to ensure your participation in the conference:

Company: \_\_\_\_\_

Contact: \_\_\_\_\_

Email Address: \_\_\_\_\_

Phone Number: \_\_\_\_\_

Please return the form via email to: [cladson@detroitpubliclibrary.org](mailto:cladson@detroitpubliclibrary.org)