

**CERTIFICATION AND SIGNATURE PAGE**

By signing below, I certify that I have reviewed this Solicitation in its entirety; understand the requirements, terms and conditions, and other information contained herein; that I am submitting this bid or proposal for review and consideration; that I am authorized by the bidder to execute this bid or any documents related thereto on bidder's behalf; that I am authorized to bind the bidder in a contractual relationship; and that to the best of my knowledge, the bidder has properly registered with any State agency that may require registration.

**Sonny Merryman Inc.**

(Company)



(Authorized Signature)

**C. Chad Seals - Commercial Sales**

(Representative Name, Title)

**(800)533-1006**

(Phone Number)

**(434) 821-8203**

(Fax Number)

**8/5/14**

(Date)

08/21/14 12:58:03PM  
West Virginia Purchasing Division

August 5 , 2014

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

Dear Mrs. Collins:

Thanks you for the opportunity to submit this bid in response to your Request for Quotation # PTR14046. We are offering the Starcraft Allstar .

Should we receive an award for this solicitation, we will provide the material as outlined. The Starcraft Allstar will be constructed in Goshen, Indiana.

Also addressed and included in the proposal are curb weights and warranty locations to be used to maintain vehicles.

We meet the warranty requirements specified within PTR14046.

We are if full understanding of training and will provide personnel to conduct training if we are the successful bidder. We have included "as-built" wiring schematics in our bid price. Also, as requested, we are offering schemes to match your existing fleets. The prices for the paint and graphics are included in our pricing.

Thank you again for this opportunity. Please call if you have questions.

Sincerely,



Chad Seals  
Account Manager  
West Virginia Public Transit Providers  
800-533-1006 x352  
434-821-4456  
[chad@sonnymerryman.com](mailto:chad@sonnymerryman.com)



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

# Solicitation

NUMBER
PTR14046

PAGE
1

ADDRESS CORRESPONDENCE TO ATTENTION OF:
BETH COLLINS
304-558-2157

RFQ COPY

TYPE NAME/ADDRESS HERE

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DIVISION OF PUBLIC TRANSIT

BUILDING 5, ROOM 906  
1900 KANAWHA BOULEVARD, EAST  
CHARLESTON, WV  
25305-0432 304-558-0428

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DATE PRINTED

06/23/2014

BID OPENING DATE: 08/05/2014

BID OPENING TIME 1:30PM

LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
0001	1	EA		557-05		\$2,035,362.00
CONTRACT TO PROVIDE 158" WHEELBASE TRANSIT BUSES						
REQUEST FOR QUOTATION (RFQ)						
THE WEST VIRGINIA PURCHASING DIVISION FOR THE AGENCY, THE WEST VIRGINIA DIVISION OF PUBLIC TRANSIT, IS SOLICITING BIDS FOR AN OPEN END CONTRACT FOR ONE (1) TO THIRTY-SIX (36) WHEELBASE CUTAWAY BUSES WITH AIR CONDITIONING, ADA COMPLIANT LIFTS, AND WHEELCHAIR SECUREMENT SYSTEMS, PER THE ATTACHED SPECIFICATIONS.						
***** THIS IS THE END OF RFQ PTR14046 ***** TOTAL:						\$2,035,362.00

SIGNATURE

TELEPHONE

1-800-533-1006

DATE

8/5/14

TITLE

Commercial Sales

FEIN

540806-176

ADDRESS CHANGES TO BE NOTED ABOVE

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

# REQUEST FOR QUOTATION

Exhibit A

## PTR14046 158" Wheelbase Transit Vehicles

Option	Item Description	Unit Price Per Vehicle	Estimated Quantity	Extended Price
A	Non-Accessible Bus	\$51,082.00	2	102164
B	Non-Accessible Bus, child restraint	\$51,749.00	2	103498
C	Non-Accessible Bus, security camera system with playback	\$53,090.00	2	106180
D	Non-Accessible Bus, cameras	\$52,843.00	2	105686
E	Non-Accessible Bus, security camera system with playback, child restraint	\$53,708.00	2	107416
F	Non-Accessible Bus, security cameras, child restraint	\$53,708.00	2	107416
G	Bus with one wheelchair (W/C) position	\$56,611.00	2	113222
H	Bus, 1 W/C position, child restraint	\$57,253.00	2	114506
I	Bus, 1 W/C position, security camera system with playback	\$58,600.00	2	117200
J	Bus, 1 W/C position, cameras	\$58,600.00	2	117200
K	Bus, 1 W/C position, security camera system with playback, child restraint	\$59,237.00	2	118474
L	Bus, 1 W/C position, security cameras, child restraint	\$59,237.00	2	118474
M	Bus with two wheelchair (W/C) positions	\$57,016.00	2	114032
N	Bus, 2 W/C positions, child restraint	\$57,653.00	2	115306
O	Bus, 2 W/C positions, security camera system with playback	\$59,010.00	2	118020
P	Bus, 2 W/C positions, cameras	\$59,010.00	2	118020
Q	Bus, 2 W/C positions, security camera system with playback, child restraint	\$59,637.00	2	119274
R	Bus, 2 W/C positions, security cameras, child restraint	\$59,637.00	2	119274
<b>Total Bid For Evaluation:</b>				2035362
*Complete form provided. *Please note these are only estimated quantities and do not reflect any guarantee of purchase. *The Agency may purchase more or less as needed. *The awards may be made to multiple vendors. *Please do not alter pricing page.				





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

# Solicitation

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PTR14046

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ADDRESS CORRESPONDENCE TO ATTENTION OF:
BETH COLLINS 304-558-2157

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TYPE NAME/ADDRESS HERE

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DIVISION OF PUBLIC TRANSIT

BUILDING 5, ROOM 906  
1900 KANAWHA BOULEVARD, EAST  
CHARLESTON, WV  
25305-0432 304-558-0428

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DATE PRINTED
07/31/2014

BID OPENING DATE: 08/21/2014

BID OPENING TIME 1:30PM

LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
ADDENDUM NO.01						
THIS ADDENDUM IS ISSUED TO MODIFY THE ORIGINAL SOLICITATION PER THE ATTACHED DOCUMENTATION.						
0001	1	EA		557-05		\$2,035,362.00
CONTRACT TO PROVIDE 158" WHEELBASE TRANSIT BUSES						
***** THIS IS THE END OF RFQ PTR14046 ***** TOTAL:						\$2,035,362.00

SIGNATURE

TELEPHONE

1-800-533-1006

DATE

8/21/2014

TITLE

Commercial Sales

FEIN

540806-176

ADDRESS CHANGES TO BE NOTED ABOVE

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

SOLICITATION NUMBER: PTR14046

Addendum Number: 01

---

The purpose of this addendum is to modify the solicitation identified as ("Solicitation") to reflect the change(s) identified and described below.

**Applicable Addendum Category:**

- ☒ | Modify bid opening date and time
- ☐ | Modify specifications of product or service being sought
- ☒ | Attachment of vendor questions and responses
- ☐ | Attachment of pre-bid sign-in sheet
- ☐ | Correction of error
- ☐ | Other

**Description of Modification to Solicitation:**

This addendum is issued for the following reasons:

- \*To provide answers to vendor submitted questions.
- \*To change the bid opening to August 21, 2014 at 1:30 PM, EST.

**Additional Documentation:** Documentation related to this Addendum (if any) has been included herewith as Attachment A and is specifically incorporated herein by reference.

**Terms and Conditions:**

1. All provisions of the Solicitation and other addenda not modified herein shall remain in full force and effect.
2. Vendor should acknowledge receipt of all addenda issued for this Solicitation by completing an Addendum Acknowledgment, a copy of which is included herewith. Failure to acknowledge addenda may result in bid disqualification. The addendum acknowledgement should be submitted with the bid to expedite document processing.

## ATTACHMENT A

## DIVISION OF PUBLIC TRANSIT RESPONSES TO TECHNICAL QUESTIONS

### PTR14046 – 158" wheelbase cutaway vehicles with 0-2 wheelchair spaces

#### TECHNICAL QUESTIONS FROM NATIONAL BUS SALES & LEASING

1. Request Request approval for a 30" entry door to be used for Classes G, H, I, J, K, & L in order to remain under 22' overall length.  
Response Accepted
2. Request Request to decrease Ambulatory Passenger capacity to 10 for Classes G, H, I, J, K, & L.  
Response Denied; end users request 12 ambulatory passenger seats.

#### TECHNICAL QUESTIONS FROM TESCO

1. Request Referencing page 21, Section 3.5, Please accept the bus being offered has been STURRA tested for 7 years and not 4 years.  
Response Accepted
2. Request Referencing page 28, Section 3.10, Please accept that the bus body windows will be all applicable aspects of FMVSS 217. However, the web site listed in the specification did not work.  
Response Accepted; apologies about the website.
3. Request Referencing page 30, Section 3.12.b, Please accept manufactures standard primer as equal to anti-corrosion specified.  
Response Accepted
4. Request Referencing page 32, Section 3.13.4, Please accept the tread depth for the ambulatory entry will be 8.5" for raised floor bus.  
Response Accepted
5. Request Referencing page 33, Section 3.13.5, Please accept that the rubber flooring will be smooth under the seats and ribbed in the tie down area, aisle, and steps.  
Response Accepted

6. Request Referencing page 45, Section 4.1, Please accept that the rear A/C equipment specified (TA73 evaporator, SMC3L condenser, dual compressors) will provide 70K BTU when combined with the front system.

Response Accepted

7. Request Referencing page 46, Section 4.7.1, Please accept that any bus over 22' long is required by ADA to have (2) wheelchair tie down positions. The class G-L bus must be over 22' to accommodate a lift and 12 passengers, so a second wheelchair tie down position will have to be added. That will then make these classes identical to classes M-R.

Response Denied; please see question 1 from National Bus Sales & Leasing technical questions.

**ADDENDUM ACKNOWLEDGEMENT FORM**  
**SOLICITATION NO.: 01**

**Instructions:** Please acknowledge receipt of all addenda issued with this solicitation by completing this addendum acknowledgment form. Check the box next to each addendum received and sign below. Failure to acknowledge addenda may result in bid disqualification.

**Acknowledgment:** I hereby acknowledge receipt of the following addenda and have made the necessary revisions to my proposal, plans and/or specification, etc.

**Addendum Numbers Received:**

(Check the box next to each addendum received)

<input checked="" type="checkbox"/> Addendum No. 1	<input type="checkbox"/> Addendum No. 6
<input type="checkbox"/> Addendum No. 2	<input type="checkbox"/> Addendum No. 7
<input type="checkbox"/> Addendum No. 3	<input type="checkbox"/> Addendum No. 8
<input type="checkbox"/> Addendum No. 4	<input type="checkbox"/> Addendum No. 9
<input type="checkbox"/> Addendum No. 5	<input type="checkbox"/> Addendum No. 10

I understand that failure to confirm the receipt of addenda may be cause for rejection of this bid. I further understand that any verbal representation made or assumed to be made during any oral discussion held between Vendor's representatives and any state personnel is not binding. Only the information issued in writing and added to the specifications by an official addendum is binding.

Sonny Merryman Inc.

Company



Authorized Signature

8/21/2014

Date

NOTE: This addendum acknowledgment should be submitted with the bid to expedite document processing.  
 Revised 6/8/2012

REQUEST FOR QUOTATION PTR14046  
158" Wheelbase Transit Vehicles

**REQUIRED BID DOCUMENTATION CHECKLIST**

Model Year: 2 0 1 5 Model: A l l s t a r \_ \_ \_ \_ \_

Manufacturer: S t a r c r a f t \_ \_ \_ \_ \_

**Mandatory Bid Forms-must be submitted with bid**

- x   Bid form 1 LOCATION(S) OF THE TECHNICAL SERVICE REPRESENTATIVE(S)
- x   Bid form 2 CERTIFICATION FOR AIR POLLUTION
- x   Bid form 3 DISADVANTAGED BUSINESS ENTERPRISE VENDORS/MANUFACTURERS CERTIFICATION
- x   Bid form 4 BUY AMERICA CERTIFICATION ROLLING STOCK
- x   Bid form 5 FEDERAL MOTOR VEHICLE SAFETY STANDARDS CERTIFICATION
- x   Bid form 6 U.S. COMPTROLLER'S DEPARTMENT LIST CERTIFICATION
- x   Bid form 6A CERTIFICATION OF PRIMARY PARTICIPANT REGARDING DEBARMENT, SUSPENSION, AND OTHER RESPONSIBILITY MATTERS
- x   Bid form 7 VENDOR'S CERTIFICATION OF UNDERSTANDING AND ACCEPTANCE
- x   Bid form 8 CERTIFICATION OF COMPLIANCE WITH FTA'S BUS TESTING REQUIREMENTS
- x   COPY OF RELEVANT BUS TESTING REPORT- 3.4 STURAA TEST- 4 Years;  
3.12.1g Water Testing- details of process; 3.14 Seating Diagram- provide proposed seating diagram
- x   Bid form 9 CERTIFICATION OF RESTRICTIONS ON LOBBYING
- x   Pricing page

**Mandatory Documentation-must be submitted within 48 hours of request**

**Section**

**Referenced**

- x   3.5 Engine: V-10 heavy duty gasoline engine- provide description, warranty, and literature
- x   3.5g Engine cooling system- provide description, warranty, and Literature
- x   3.5h High Idle System- provide description, warranty, and literature
- x   3.6 Transmission- provide description, warranty, and literature

REQUEST FOR QUOTATION PTR14046  
158" Wheelbase Transit Vehicles

- x   3.6d                   Transmission Cooling System- provide description, warranty, and literature
- x   3.7.1                   Heavy Duty Brakes- provide description, warranty, and literature
- x   3.7.3                   Suspension System- provide description, warranty, and literature
- x   3.7.3                   MOR/Ryde Suspension System- provide description, warranty, and literature
- x   3.7.a                   Tire Information- provide description, warranty, and literature
- x   3.8                     Electrical System- provide description, warranty, and literature
- x   3.8.1                   Alternator- specify the rectifier, method of installation, provide warranty and literature
- x   3.8.2                   Batteries- specify type and capacity
- x   3.8.3                   Exterior Lights -LED Lights- provide description, warranty, and literature
- x   3.8.4                   Interior Lights- provide description/details
- x   3.8.5                   Rear Alarm- provide description, warranty, and literature
- x   3.8.6                   Backup camera- provide description, warranty, and literature
- x   3.8.7                   Fuse box panel- provide description/details
- x   3.9.1                   Heating System- provide description, warranty and literature
- x   3.9.1b                  Stepwell Heater- provide description, warranty and literature
- x   3.9.1c                  Auxiliary Heaters- provide description, warranty and literature
- x   3.9.2a                  A/C Cooling System- provide description, warranty and literature
- x   3.9.6a                  A/C Compressor- provide description, warranty and literature
- x   3.9.2b                  A/C Condenser Information- provide description, warranty and literature
- x   3.9.2d                  Evaporator- provide description, warranty and literature
- x   3.9.2                  A/C Hose System- provide description, warranty and literature
- x   3.10                   Roof Hatch- provide description, warranty and literature
- x   3.11.1                  Control Panel Location- submit details
- x   3.11.1                  Circulation Fan- provide description, warranty and literature
- x   3.12.1                  Body Construction- provide description of body construction including materials, methods of joining and assembling components or subassemblies and method of attachment of the body to the chassis, warranty and literature



REQUEST FOR QUOTATION PTR14046  
158" Wheelbase Transit Vehicles

- ☒ 3.12.1 Provide proof that skirt panel seams below floorline will be placed only above wheel wells or adjacent to A/C skirt condenser
- ☒ 3.12.4c Door Operating Mechanism- provide description/details
- ☒ 3.12.5b Sample of Flooring- provide colors per specifications, warranty and literature
- ☒ 3.12.6 Insulation- provide proof of insulation requirement per spec.
- ☒ 3.12.7 Bumpers- provide description, warranty and literature
- ☒ 3.13 Lift- provide details, model #, warranty and literature. Provide information and literature that lift will meet the NHTSA platform lift requirements.
- ☒ 3.13g Interlock System- provide description, warranty and literature
- ☒ 3.14a Passenger Seats- provide details for all proposed including flip up seats and ABS Knee Saver backs
- ☒ 3.14b Under Seat Retractor System- provide description, warranty, literature and FMVSS 210 Report Certification
- ☒ 3.14i Driver's Seat- provide description, warranty and literature
- ☒ 3.15 Mobility Aid Securement- provide details of proposed system, warranty, and literature
- ☒ 3.19a Exterior Mirrors- provide description, warranty and literature
- ☒ 3.21 Radio/CD Stereo- provide description, provide warranty and literature
- ☒ 3.24 Undercoating/Rust proofing- provide description, warranty, literature and application process
- ☒ 3.25 Interior and Exterior Color Schemes- provide details of schemes available
- Upon Request** 3.25.2b Paint Scheme- provide sample of vinyl chart to be used
- ☒ 4.2.1 Child Restraint Seat- provide description, warranty and literature
- ☒ 4.3.1 Security Cameras- provide description, warranty and literature
- ☒ 4.4.1 Security Cameras- provide description, warranty and literature
- ☒ 5.2 Items in sections a-1 provide proof of compliance
- ☒ 5.11 Warranty per specs on subsystems and components
- ☒ 5.11.1 Warranty on completed vehicle

REQUEST FOR QUOTATION PTR14046  
158" Wheelbase Transit Vehicles

- X   5.11.2                      Warranty on Basic Vehicle Structure
- X   5.11.3 & 4.40e            Warranty Locations- A description of how and by whom warranty service will be provided in four (4) areas of WV to cover both Mechanical and body work. Provide vendor who will do warranty of both chassis and body, including bus body, air conditioning and wheelchair lifts. Four areas of WV include: Northern Panhandle, Eastern Panhandle Central WV and Southern WV
- X   6.1.2                        Complete (2) bids in binder form-(1) Marked for WVDPT
- X   9.3a                         Training- submit letter of understanding to the terms in this section
- X   9.3a                        Complete Mechanical Description of Vehicle, its construction and equipment including manufacturer's model, model name and/or number and model year Include Warranty Information
- X   9.3b                        Proposed Floorplans
- X   9.3c                        Curb Weight (empty weight and Gross Vehicle Weight Rating (GVWR) of vehicle
- X   9.3f                        Location of nearest depot which will furnish a complete supply of parts and components for the repair and maintenance of the vehicle to be supplied
- X   9.3g                        Description of the undercoating/rust proofing system, including warranty to be provided
- X   9.3h                        Location of assembly
- X   9.3i                        List of five users names, addresses and telephone numbers to whom your company has provided similar equipment
- X                                No Debt Affidavit
- X                                Pricing Page

REQUEST FOR QUOTATION PTR14046  
158" Wheelbase Transit Vehicles

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**BID FORM #1: LOCATION(S) OF THE TECHNICAL SERVICE REPRESENTATIVE(S)**  
**MANDATORY BID FORM-MUST BE SUBMITTED WITH BID**

Location(s) of the Technical Service Representative(s) and parts distribution center(s) closest to the State of West Virginia.

Name: Brady Childress

Name: Gerald Layne

Address: 5120 Wards Road

Address: 5120 Wards Road

Evington, VA. 24550

Evington, VA. 24550

Telephone: (434) 821-1000

Telephone: (434) 821-1000

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

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

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

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

Telephone: \_\_\_\_\_

Telephone: \_\_\_\_\_

REQUEST FOR QUOTATION PTR14046  
158" Wheelbase Transit Vehicles

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BID FORM #2: CERTIFICATION FOR AIR POLLUTION  
MANDATORY BID FORM-MUST BE SUBMITTED WITH BID

Pursuant to Section 8.4 of Part I of the Procurement, the Vendor certifies that the vehicles proposed:


☒ ARE or

☐ ARE NOT (specify one)

in compliance with the regulations in 40 CFR Part 85, 40 CFR Part 86, 40 CFR Part 600 and the air pollution criteria established by the Environmental Protection Agency of the United States Government.

8/5/14

Date

  
Authorized Signature

Commercial Sales

Title

Sonny Merryman Inc.

Company Name

REQUEST FOR QUOTATION PTR14046  
158" Wheelbase Transit Vehicles

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**BID FORM #3: DISADVANTAGED BUSINESS ENTERPRISE VENDORS/  
MANUFACTURERS CERTIFICATION-- MANDATORY BID FORM-- MUST BE  
SUBMITTED WITH BID**

**(Check appropriate statement)**

\_\_\_\_\_ The Vendor, if a transit vehicle manufacturer, hereby certifies that it has complied with the requirements of 49 CFR Section 26.49 by submitting an annual DBE goal to the Federal Transit Administration (FTA). The goal has either been approved or not disapproved by FTA.

☒ The Vendor, if a non-manufacturing supplier, hereby certifies that the manufacturer of the transit vehicle to be supplied has complied with the above-referenced requirement of 49 CFR Section 26.49.

8/5/14

Date



Authorized Signature

Commercial Sales

Title

Sonny Merryman Inc.

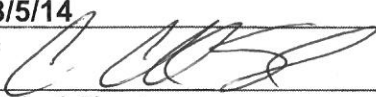
Company Name

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**BID FORM #4: BUY AMERICA CERTIFICATION ROLLING STOCK  
MANDATORY BID FORM-MUST BE SUBMITTED WITH BID**

**Certificate of Compliance**

The bidder or offeror hereby certifies that it will comply with the requirements of section 165(b)(3), of the Surface Transportation Assistance Act of 1982, as amended, and the applicable regulations of 49 CFR 661.11:

8/5/14  
Date   
Authorized Signature  
Sonny Merryman Inc.  
Company Name  
C.Chad Seals  
Name  
Commercial Sales  
Title

**Certificate for Non-Compliance**

The bidder or offeror hereby certifies that it cannot comply with the requirements of section 165(b)(3) of the Surface Transportation Assistance Act of 1982, as amended, but may qualify for an exception to the requirement consistent with section 165(b)(2) or (b)(4) of the Surface Transportation Assistance Act, as amended, and the applicable regulations in 49 CFR 661.7.

\_\_\_\_\_  
Date  
\_\_\_\_\_  
Authorized Signature  
\_\_\_\_\_  
Company Name  
\_\_\_\_\_  
Name  
\_\_\_\_\_  
Title

REQUEST FOR QUOTATION PTR14046  
158" Wheelbase Transit Vehicles


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**BID FORM #5: FEDERAL MOTOR VEHICLE SAFETY STANDARDS CERTIFICATION**  
**MANDATORY BID FORM-MUST BE SUBMITTED WITH BID**

The vendor hereby certifies that it shall submit, as required by Title 49 of the CFR, Part 663-Subpart D, its self certification information stating that the vehicle(s) will comply with the relevant Federal Motor Vehicle Safety Standards issued by the National Highway Traffic Safety Administration in Title 49 of the Code of Federal Regulations, Part 571.

**8/5/14**

Date

  
Authorized Signature

**Commercial Sales**

Title

**Sonny Merryman Inc.**

Company Name

REQUEST FOR QUOTATION PTR14046  
158" Wheelbase Transit Vehicles

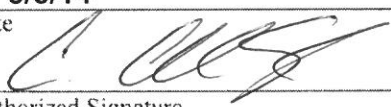
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**BID FORM #6--U.S. COMPTROLLER'S DEBARMENT LIST CERTIFICATION**  
**MANDATORY BID FORM-MUST BE SUBMITTED WITH BID**

**Sonny Merryman Inc.** hereby certifies that it

       IS or

**X** IS NOT (specify one) included on the U.S. GSA's debarment and suspension listing at  
<https://www.sam.gov>.

**8/5/14**  
Date 

Authorized Signature

**Commercial Sales**  
Title

**Sonny Merryman Inc.**  
Company Name



REQUEST FOR QUOTATION PTR14046  
158" Wheelbase Transit Vehicles

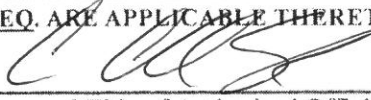
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**BID FORM #6-A: CERTIFICATION OF PRIMARY PARTICIPANT  
REGARDING DEBARMENT, SUSPENSION, AND OTHER RESPONSIBILITY  
MATTERS MANDATORY BID FORM-MUST BE SUBMITTED WITH BID**

The Primary Participant (applicant for an FTA grant or cooperative agreement, or potential contractor for a major third party contract) **Sonny Merryman Inc.**  
(COMPANY NAME) certifies to the best of its knowledge and belief, that it and its principals:

1. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
2. Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
3. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (2) of this certification; and
4. Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.
5. If the primary participant (applicant for an FTA grant, or cooperative agreement, or potential third party contractor) is unable to certify to any of the statements in this certification, the participant shall attach an explanation to this certification.)

THE PRIMARY PARTICIPANT (APPLICANT FOR AN FTA GRANT OR COOPERATIVE AGREEMENT, OR POTENTIAL CONTRACTOR FOR A MAJOR THIRD PARTY CONTRACT),  
**Sonny Merryman Inc.**, CERTIFIES OR AFFIRMS THE  
TRUTHFULNESS AND ACCURACY OF THE CONTENTS OF THE STATEMENTS  
SUBMITTED ON OR WITH THIS CERTIFICATION AND UNDERSTANDS THAT THE  
PROVISIONS OF 31 U.S.C. SECTIONS 3801 ET SEQ. ARE APPLICABLE THERETO.

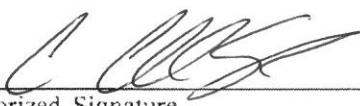
  
\_\_\_\_\_  
Signature and Title of Authorized Official

REQUEST FOR QUOTATION PTR14046  
158" Wheelbase Transit Vehicles

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**BID FORM #7: VENDOR'S CERTIFICATION OF  
UNDERSTANDING AND ACCEPTANCE  
MANDATORY BID FORM-MUST BE SUBMITTED WITH BID**

The Vendor hereby certifies that all Technical Specifications and Contract Terms and Conditions have been carefully reviewed, are fully understood and shall be adhered to in performance and completion of any contract resulting from this bid.

8/5/14  
Date  
  
Authorized Signature

Commercial Sales  
Title  
Sonny Merryman Inc.  
Company Name

**SPECIFICATION COMPLIANCE**

NOTE: Please check if what is offered is in exact compliance with specifications. **Any discrepancies must be listed as an attachment to the bid proposal. Exact dimensions and/or descriptions must be provided as a part of the Vendor's bid proposal when submitted.**

**X** Bid proposal submitted meets and/or exceeds all specification requirements.

           Bid proposal submitted contains deviations from specification requirements. Detailed descriptions of these deviations have been provided with this bid proposal.

REQUEST FOR QUOTATION PTR14046  
158" Wheelbase Transit Vehicles

**BID FORM #8: CERTIFICATION OF COMPLIANCE  
WITH FTA'S BUSTESTING REQUIREMENTS  
MANDATORY BID FORM-MUST BE SUBMITTED WITH BID**

The undersigned (Vendor/Manufacturer) certifies that the vehicle offered in this procurement complies with 49 U.S.C. 5318, as amended by MAP-21, and FTA regulations, "Bus Testing," 49 CFR Part 665.

The undersigned understands that misrepresenting the testing status of a vehicle acquired with Federal financial assistance may subject the undersigned to civil penalties as outlined in the Department of Transportation's regulation on Program Fraud Civil Remedies, 49 CFR Part 31. In addition, the undersigned understands that FTA may suspend or debar a manufacturer under the procedures in 2 CFR Part 1200.

**8/5/14**

Date

Authorized Signature

**Commercial Sales**

Title

**Sonny Merryman Inc.**

Company Name

REQUEST FOR QUOTATION PTR14046  
158" Wheelbase Transit Vehicles

**BID FORM #9: CERTIFICATION OF RESTRICTIONS ON LOBBYING  
MANDATORY BID FORM-MUST BE SUBMITTED WITH BID**

The undersigned (Vendor, Contractor) certifies, to the best of his or her knowledge and belief, that:

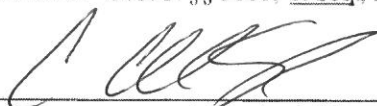
- a. No Federal appropriated funds have been paid or will be paid by or on behalf of the undersigned, to any person for influence or attempt to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress regarding the award of a Federal grant, loan (including a line of credit), cooperative agreement, loan guarantee, or loan insurance, or the extension, continuation, renewal, amendment, or modification of any Federal grant, loan (including a line of credit), cooperative agreement, loan guarantee, or loan insurance.
- b. If any funds other than Federal appropriated funds have been or will be paid to any person to influence or attempt to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or any employee of a Member of Congress in connection with any application for a Federal grant, loan (including a line of credit), cooperative agreement, loan guarantee, or loan insurance, the undersigned assures that it will complete and submit Standard Form-LLL, "Disclosure of Lobbying Activities," Rev. 7-97; and
- c. The undersigned understands that the language of this certification shall be included in the award documents for all subawards at all tiers (including subcontracts, sub grants, sub agreements, and contracts under grants, loans (including a line of credit), cooperative agreements, loan guarantees, and loan insurance.

Undersigned understands that this certification is a material representation of fact upon which reliance is placed by the Federal government and that submission of this certification is a prerequisite for providing a Federal grant, loan (including a line of credit), cooperative agreement, loan guarantee, or loan insurance for a transaction covered by 31 U.S.C. 1352. The undersigned also understands that any person who fails to file a required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

The (Vendor, Contractor) **Sonny Merryman Inc.**, certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the (Vendor, Contractor) understands and agrees that the provisions of 31 U.S.C. §§ 3801, et seq., apply to this certification and disclosure.

8/5/14

Date

  
Authorized Signature

**Commercial Sales**

Title

STATE OF WEST VIRGINIA  
Purchasing Division

## PURCHASING AFFIDAVIT

**MANDATE:** Under W. Va. Code §5A-3-10a, no contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and: (1) the debt owed is an amount greater than one thousand dollars in the aggregate; or (2) the debtor is in employer default.

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

**DEFINITIONS:**

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

**"Employer default"** means having an outstanding balance or liability to the old fund or to the uninsured employers' fund or being in policy default, as defined in W. Va. Code § 23-2c-2, failure to maintain mandatory workers' compensation coverage, or failure to fully meet its obligations as a workers' compensation self-insured employer. An employer is not in employer default if it has entered into a repayment agreement with the Insurance Commissioner and remains in compliance with the obligations under the repayment agreement.

**"Related party"** means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceeds five percent of the total contract amount.

**AFFIRMATION:** By signing this form, the vendor's authorized signer affirms and acknowledges under penalty of law for false swearing (W. Va. Code §61-5-3) that neither vendor nor any related party owe a debt as defined above and that neither vendor nor any related party are in employer default as defined above, unless the debt or employer default is permitted under the exception above.

**WITNESS THE FOLLOWING SIGNATURE:**

Vendor's Name: Sonny Merryman Inc.

Authorized Signature: [Signature] Date: 7/29/14

State of Virginia

County of Campbell, to-wit:

Taken, subscribed, and sworn to before me this 29 day of July, 2014.

My Commission expires April 30, 2016.



NOTARY PUBLIC

Vicki M Overstreet  
Registration # 110524

Purchasing Affidavit (Revised 07/01/2012)



**Virginia's Bus Company**

## **IMPORTANT CONTACT INFORMATION**

**Mailing Address: P.O. Box 495, Rustburg, VA 24588**

**Shipping: 5120 Wards Road, Evington, VA 24550**

**• MAIN OFFICE:**

**TOLL FREE: (800) 533-1006**

(434) 821-1000

FAX: (434) 821-8203

WEB: [www.sonnymerryman.com](http://www.sonnymerryman.com)

**• SERVICE DEPARTMENT:**

**TOLL FREE (800) 533-1006**

FAX: (434) 821-2131

Brady Childress, Director Customer Support

Ext. 332, [brady@sonnymerryman.com](mailto:brady@sonnymerryman.com)

Pam Lawhorn, Service Administrator

Ext. 341, [pam@sonnymerryman.com](mailto:pam@sonnymerryman.com)

Tim George, Service Team Leader

Ext. 353, [tim@sonnymerryman.com](mailto:tim@sonnymerryman.com)

**• WARRANTY:**

Patty Webb, Warranty Administrator

Ext. 323, [patty@sonnymerryman.com](mailto:patty@sonnymerryman.com)

**• PARTS:**

**TOLL FREE: (800) 386-7278**

FAX: (434) 821-2621

Gerald Layne, Parts Team Leader

Ext. 318, [gerald@sonnymerryman.com](mailto:gerald@sonnymerryman.com)

**• BUSINESS:**

June Wooten, Accounts Payable

Ext. 327, [june@sonnymerryman.com](mailto:june@sonnymerryman.com)

**Hampton Roads Sales & Service Center**

610 Woodlake Drive

Chesapeake, VA 23320

**TOLL FREE: (866) 481-7211**

(757) 361-9070, FAX (757) 361-9072

Reggie Lewis, Customer Support Manager

[reggie@sonnymerryman.com](mailto:reggie@sonnymerryman.com)

**Northern Virginia Sales & Service Center**

10149 Piper Lane

Bristow, VA 20136

**TOLL FREE: (866) 470-0305**

(703) 331-5516 – (703) 331-5517

FAX (703) 331-5518

Ken Lewis, Customer Support Manager

[Kenlewis@sonnymerryman.com](mailto:Kenlewis@sonnymerryman.com)

## **Service Locations**

- **Mathney Motor Truck Company**  
**4125 1<sup>st</sup> Ave.**  
**Nitro, WV 25143**  
**(304)769-5860**
- **Matheny Motor Truck Company**  
**50 Matheny Lane**  
**Mineral Wells, WV 26150**  
**(304)485-4418**
- **Sonny Merryman Inc.**  
**10149 Piper Lane**  
**Bristow, VA 20136**  
**(703)331-5516**
- **Sonny Merryman Inc.**  
**5120 Wards Road**  
**Lynchburg, VA 24550**  
**1-800-533-1006**
- **Nearest Ford dealer that is truck certified (E450)**

## STARCRAFT COMMERCIAL BUS WARRANTY

### NOTICE

Please return the warranty registration card to register the warranty with STARCRAFT BUS so that Starcraft Bus may record your rights under this limited warranty and to assure prompt assistance. Your dealer will provide the warranty card for you to sign. If you do not remember signing a STARCRAFT BUS warranty card at the time of delivery, please contact your dealer.

### 1. Who Warrants the product

The product, as described and limited here, is warranted by the manufacturer and installer of the body: STARCRAFT BUS, Division of Forest River, Inc., hereinafter referred to as STARCRAFT BUS, 2367 Century Drive, Goshen, IN; an Indiana Corporation; and is administered by the STARCRAFT BUS Customer Service Dept., Goshen, Indiana 46528.

### 2. Who Is Covered

STARCRAFT BUS, the warrantor, extends this limited warranty to the original owner of the vehicle during the WARRANTY PERIOD.

### 3. What Is Covered

STARCRAFT BUS, your warrantor, extends the following limited warranty to you, which limited warranty covers your conversion only as to material defects in all materials and workmanship supplied by or performed by STARCRAFT BUS.

### 4. Warranty Period

The STARCRAFT BUS limited warranty is for a period of one (1) year from the date of first delivery or 12,000 miles for the Xpress; Starquest; Starlite; Allstar; Allstar XL; MVP; Ultrastar, and the XLT, whichever occurs first, except for other coverages listed under "Other Warranties that may Apply" and items listed under "Exclusions and Limitations" and "Limits of the Warranty."

### 5. Extended Warranty on Structural Items

Warrantor warrants to the original purchaser for a period of five (5) years from the date of first delivery or 100,000 miles, whichever comes first, that this produce shall be free of SUBSTANTIAL DEFECTS arising out of or relating to the structural portion of the product. THIS STRUCTURAL WARRANTY IS INTENDED TO COVER ONLY THE PERFORMANCE OF THE STEEL CAGE STRUCTURE OF THE BUS BODY for the Xpress; Starquest; Starlite; Allstar; Allstar XL; MVP; Ultrastar, and the XLT.

Custom paint and/or tape application, if performed by STARCRAFT BUS, is warranted to be free of substantial defects in workmanship and materials provided by STARCRAFT BUS for one (1) year (12 months) from date of original purchase.

### 6. Other Warranties That May Apply

STARCRAFT BUS does not warrant the base vehicle itself. The vehicle engine, chassis, drive train, suspension system, battery, and other chassis components are covered by a separate warranty offered by the manufacturer of the vehicle and administered by the manufacturer's authorized dealers. The tire manufacturer separately warrants tires. Examples of other manufacturer warranties, which may include the following, but not limited to:

- Electrical Components
- Air Conditioning and Heater(s)
- Wheelchair Restraints and Wheelchair Lifts

For a complete list of items and their respective warrantor, please contact Starcraft Bus Customer Service Department.

### 7. Owner's Responsibility

Proper maintenance and cleaning of the exterior and interior of the vehicle is the responsibility of the owner. See the owner's manual for proper care instructions. Defects or damage as a result of improper care or maintenance are not covered by the warranty.

### 8. Exclusions and Limitations

Damage caused by abuse, misuse, neglect, failure to observe reasonable and required maintenance practices, acid rain, accidents, natural disasters, acts of war and normal wear and tear and facing of fabrics, carpeting and/or fiberglass are not covered. Light bulbs and fuses are not covered.

Damage or deterioration to the physical appearance of the unit if such damage is the result of normal use, wear and tear, or exposure to the elements.

Damages that may occur to the chassis, frame, other parts or components that occur due to overloading will not be covered and may invalidate portions of the STARCRAFT BUS warranty.

Cosmetic or surface corrosion resulting from stone chips or scratches in paint are not covered.

STARCRAFT BUS does not cover accessories covered by their own manufacturer's warranties. Those items listed in paragraph 6 above are not covered or warranted by STARCRAFT BUS.



Replacement parts provided under terms of the warranty will whenever possible, match original equipment. When necessary, STARCRAFT BUS will substitute parts of comparable function and value. Defective items may be replaced with new, remanufactured, reconditioned or repaired components.

Modifications, alterations or repairs performed by unauthorized personnel may invalidate portions of the STARCRAFT BUS warranty. In addition, USING THIS VEHICLE TO TOW ANOTHER VEHICLE IS PROHIBITED AND MAY VOID WARRANTY. Contact STARCRAFT BUS Customer Service before you make any changes.

#### **9. Recovery Limitations**

NO PERSON SHALL BE ENTITLED TO RECOVER FROM WARRANTOR FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGES ARISING OUT OF OR RELATING TO ANY DEFECT IN THE PRODUCT. These limitations include, but are not limited to, loss of time; loss of use; loss of revenues, salaries or commissions; towing charges; bus fares; car rentals; gasoline expenses; telephone charges; inconvenience or other incidental damages.

#### **10. How to get warranty service**

To obtain warranty service, contact or visit the dealership where you originally purchased your vehicle or another warranty service facility designated by STARCRAFT BUS. Have the dealership contact Starcraft bus Customer Service Department for authorization to have a warranty claim submitted. If you or your dealer has moved, or if your dealer is no longer in business, contact STARCRAFT BUS Customer Service Department (see address and telephone numbers below) for the name of a STARCRAFT BUS dealer nearest you. Your claim must be made within 30 days of the discovery of the defect. Based on the determination of STARCRAFT BUS, and subject to the terms of the warranty, the warranty repair work will be authorized by STARCRAFT BUS.

All warranty claims must be reported within the warranty period. Warranty personnel must authorize all warranty service prior to performance. Warranty service may be reported directly to the warrantor or to one of their authorized dealers. If warranty personnel approve warranty service, you must leave the unit at the appropriate warranty service location for a sufficient time to perform service.

#### **11. Who Performs Warranty Service**

The best place to obtain warranty service is at the dealership where you originally purchased your bus. If the dealership cannot perform the service work, they should call STARCRAFT BUS Customer Service Department for assistance (see number below). If you are unable to visit your original dealer, contact STARCRAFT BUS Customer Service Department (address below) for the name and location of a STARCRAFT BUS dealer near you.

#### **12. Dispute Resolution**

Should you be unable to resolve a disagreement with your dealer regarding your right to pursue warranty coverage for a needed repair, contact the STARCRAFT BUS Customer Service Department (see address below). If a dispute about warranty service arises between STARCRAFT BUS and you, the owner, the disagreement will be resolved in accordance with the customary procedures of the American Arbitration Association relating to commercial transactions, or the dispute will be submitted to a panel of three (3) arbitrators for decision. The panel will be made up of one member appointed by STARCRAFT BUS, one member appointed by the complainant/owner, and one member from the arbitrators group mentioned above. Any and all legal remedies shall be available to the owner after pursuing this informal dispute resolution if a ruling is entered against STARCRAFT BUS and STARCRAFT BUS fails to abide by the ruling. The expenses of arbitration will be paid by the party against whom the arbitrator(s) rule.

#### **13. Limits Of Warranty**

This written statement of limited warranty represents the entire warranty authorized and offered by STARCRAFT BUS. There are no warranties or representations beyond those expressed in this written document. Any dealership, salesperson or agent cannot amend it. It expressly limits all warranties, including, but not limited to, by way of specification, both express and implied warranties, including warranties or merchantability and fitness for a particular purpose along with all other liabilities or obligations of STARCRAFT BUS.

#### **FEDERAL COMPLIANCE**

THE TERMS OF THE WARRANTOR'S UNDERTAKING EXPRESSED IN THIS LIMITED WARRANTY ARE DRAFTED TO COMPLY WITH THE MAGNUSON MOSS WARRANTY LEGISLATION, P.L. 93-637 OF 1974, AND OTHER APPLICABLE LAW. ANY WARRANTY PROVISIONS PROMULGATED BY THE FEDERAL TRADE COMMISSION PURSUANT TO RULES OR ANY OTHER LAW RELATIVE THERETO ARE EXPRESSLY INCORPORATED HEREIN. TO THE EXTENT ANY PROVISIONS OF THIS LIMITED WARRANTY ARE INCONSISTENT WITH STATE LAWS, ONLY THOSE PARTS INCONSISTENT ARE VOID.

STARCRAFT BUS  
Division of Forest River, Inc.  
CUSTOMER SERVICE DEPT.  
2367 Century Drive  
Goshen, IN 46528  
Phone: 800.348.7440  
Fax: 574.642.4853

## INTRODUCTION

From humble beginnings in 1998, Starcraft Bus has risen to a prominent position in the manufacture of small and mid-size buses. Purchased by Forest River, Inc. in 2001, Starcraft has consistently grown based on a philosophy of providing high value products to our customers. July of 2005 saw us move into newly constructed facilities that include the main manufacturing plant, a new paint building with state of the art booths, and an industry best water leak test facility at our PDI building.

Our goal continues to be that of providing our customers with the very best in delivery, quality and price. We continue to pursue ways to shorten our throughput times, raise our quality and to be very competitive in the price area. It is this three-pronged approach that enables us to provide the extremely high value products our customers have come to expect.

The following document is intended to provide information regarding body construction, applicable regulatory compliance, dimensions, and chassis information for our ALLSTAR and STARLITE as constructed on a Ford cutaway E-350 or E-450 dual rear wheel chassis.



Starcraft Bus Allstar

## **Body Construction – General Frame Construction**

Manufactured from all steel products, the floor, roof, side walls, rear wall, driver halo assembly and entry door assembly are all wire welded (MIG) together to form an integral steel frame that is thoroughly coated in our primer paint shop, then mounted with specified hardware to the rubber body mount points (pucks) specified by Ford. Once joined to the chassis, the bus finishing process begins.

### **Floor frame construction and assembly**

- Cross Members -- The floor cross members form the base structural support for the rest of the frame components. Our cross members are constructed of 14 gauge mild steel, formed to a capital "C", with pre-punched holes to accept steel tube that runs the length of the body floor and are wire welded in a jig fixture, providing rigidity and flexural strength.
- Steel Tubing – 1"x3" and 1"x1.5" 16 gauge steel tubing runs down the length of the floor, is welded at each cross member, and provides a mounting point for the floor mounted seat track.
- Seat Track – 12 gauge roll formed high strength/low alloy steel is wire welded in place for seat mounting down each side of the bus, with lengths predicated on the floor plan chosen. This is yet another stiffener in our extensive construction process.
- Wheel Wells -- Constructed of 14 gauge steel, wheel wells are also welded in during the floor construction process. All seams in the wheel well are welded to create a one piece water resistant wheel housing structure. The wheel wells also provide additional strength to the body assembly, when welded in place.
- Structural Steel Angle – 1/8" thick 1.5" x 1.5" structural steel angle is used the full perimeter length of each floor assembly, welded to the ends of all floor cross members. This provides not only a flat plane for joining the sidewall assembly, but also gives one additional stiffening operation to the entire floor assembly.
- Additional structure – When adding vertical stanchions, wheel chair lifts and/or tie down options, additional structure is welded into the floor at locations specified by our engineering department on CAD drawings.

### **Sidewall Construction**

- Sidewall vertical member – The heart of our sidewall is the vertical structure, a roll formed 18 gauge steel capital "C" channel with 8 bends that create extreme strength and rigidity. The vertical member is installed in full lengths and in shorter sections above and below window frames. Additional vertical structure is used at both ends of the sidewall enabling the structure to withstand the forces applied by the vehicle when in motion. Using the open C member also enables a thorough primer application.
- Steel Tubing – 1"x1" 16 gauge steel tubing is welded in horizontally between vertical members to frame in window openings. This adds front to rear reinforcement.
- Seat Track – 12 gauge high strength low alloy roll formed steel track is welded down each sidewall below the window frame. While serving as a seat attaching device, it adds excellent structure to the sidewall and also aids in side impact resistance.

- Wheelchair Options – Add another layer of metal. Depending on track locations, another structure of steel is welded in place between each vertical member for attaching a shoulder belt mount. Also, additional structure is added to accommodate wheelchair door frames.
- Full length steel tubing – 1"x1" 16 gauge steel tubing is stitch welded to the sidewall bottom and top at each vertical member for attaching to the floor and roof sections, respectively.

### **Rear Wall Construction**

- Rear wall vertical member – The vertical sidewall capital "C" channel with 8 bends is also used in the rear wall assembly. Full length structure is used at varying places, depending on choice of rear window, or rear door. Shorter cut pieces are used above windows and doors. Additional side windows used with the rear door also change the configuration.
- Steel Tubing – 1"x1" 16 gauge steel tubing is welded horizontally between vertical members to provide a window frame in the standard product, and used as an upper door frame in the optional rear assembly.
- Full length steel tubing – 1"x1" 16 gauge steel tubing is stitch welded to the rear wall top and bottom as in the sidewall assembly.

### **Roof Construction**

- Roof Bows – Radius formed one-piece 18 gauge steel roof bows with eight bends for exceptional strength, including 4 bends in the web similar to our vertical sidewall steel provide a roof structure capable of taking severe loads. They are then capped with top flat pieces from flange to flange to provide abundant surface area for securing our one-piece FRP outside roof.
- Steel Tubing – 1"x1" 16 gauge steel tubing is welded in horizontally to frame all window openings required. A full perimeter is also welded on to mate the roof to the sidewall and rear wall, with short vertical pieces providing support on the front and rear ends.
- 14 Gauge steel strips are welded between bow structures to allow secure fastening of vertical stanchions, overhead grab rails, etc.

### **Driver Compartment Overhead Halo**

- Steel Tubing – 1"x1" 16 gauge steel tubing is cut and jig welded into an integrated one piece structure spanning from the front roof bow of the body to the newly cut roof line of the cab. Also created during the structure manufacture is the housing for mounting the electronic circuit board.
- 11 Gauge Steel – formed to make brackets used to mount to the chassis roof.

### **False Floor (Cab to body transition)**

- Steel Tubing – 2" x2" 16 gauge steel tubing is welded together forming a flat body floor transition from the step area back to the actual body area. An overhang on the curbside provides a secure attach point frontally for the entry door frame added later.
- Structural steel angle – 11 gauge 1.5"x1.5" structural angle is added in short lengths five places to provide attachment points to the chassis floor.

### **Interior Vertical Transition Frames**

- Steel Tubing – 1"x1" 16 gauge steel tubing is used vertically and a ladder type assembly is made welding the 1x1 tube to .75"x.75" 11 gauge steel tube that is used horizontally in the assemblies. These pieces transition from the body fronts on each side to the driver halo side assembly and the entry door frame assembly on the curbside.

### **Entry Door & Step Assembly Frame**

- Steel Tubing – 1"x1" 16 gauge and .75"x.75" 11 gauge steel tube is cut to length and welded together in a ladder type construction forming a rigid frame for attaching the entry door/step assembly.

### **Entry Door/Step Assembly**

- 11 Gauge Steel – Formed step riser/tread piece is manufactured from 11 gauge mild steel. By utilizing acute bends to maximize toe space area, an extremely strong base for the assembly is provided, and it also features two 90° bends at the bottom of the piece (one down and one return bend) to eliminate sharp edges and to give added strength. An 11 gauge flat plate with holes is also used to bridge the lower and upper side pieces, then is stitch welded and plug welded to form a strong one piece assembly.
- 14 Gauge Steel – Used to manufacture both the upper and lower left and right hand side panels, both of which are side reinforced by welding them to .75"x.75" 11 gauge tube.
- 16 Gauge Steel – Used to make the door entry header. This false header ties the sides together, and serves as a mount point for the door opening gear header assembly, which is mounted on a 3/16" thick steel fabrication.

### **Drive Shaft Guards**

- 11 Gauge Steel – Formed into a U channel with flanges to bolt through, there is also a short piece of 1/4" steel welded to our frame steel for bolting the drive shaft guard on.

### **Insulation**

- **Sidewalls/Rear Wall** – 1" thick rigid expanded polystyrene is installed between all vertical members. This provides an R value of 4.17, is non-hygroscopic, and serves as a noise insulator as well. Further R values provided by plywood (.209) used for lamination



of interior sidewall coverings, the coverings themselves (.70) and the exterior skin raise the total sidewall R value to 5.079.

- **Roof** – 1.5" thick rigid expanded polystyrene is installed between the roof bow structure, sandwiched between plywood inside and outside that serves as lamination substrate for exterior one piece FRP roof, and interior ceiling material (carpet is standard). The factors add as:  $\text{EPS} - 4.55 + \text{Wood} - .209 \times 2 = .418 + \text{carpet} - .70 = \text{R value of } 5.877$ .

## Exterior Body Materials

- **Sidewall and Rear Wall Metal** – .063" pre-painted aluminum is applied to each sidewall. All metal is installed from the bottom up in an overlapping fashion to facilitate water shedding without requiring caulks as the sole inhibitor of water ingress. Caulking is later applied as an aesthetic enhancement.

A full-length aluminum extruded drip rail is installed above the windows at the point where the roof material and upper sidewall material meet. Attached with mechanical fasteners, it is then caulked and a decorative UV resistant vinyl trim is inserted in a channel designed to accept it. Drip rail is also installed above the entry door in the same fashion to minimize water dropping on entering and exiting passengers.

**FRP Roofing Material** – A one-piece seamless FRP panel is laminated to 5.4mm luan using a solvent free spray adhesive on both surfaces that offers exceptional tack and shear resistance, as well as water resistance, after the luan is securely screwed to the roof bows in our frame shop.

**Front Cap & Rear Cap** – The front cap and rear cap is a one piece open chop mold fiberglass reinforced polyester resin product covered with approximately 18-20 wet mils of polyester gel coat offering UV resistance, colored Ford white. Attachment to the cab, roof and vertical road side cab to body transition piece is accomplished with both mechanical fasteners, and through the use of a Sikaflex 252 adhesive/sealant specifically designed for transportation use.

**Vertical Road side Transition** – This decorative transition piece is constructed like the front cap, attached both with mechanical fasteners and the previously mentioned adhesive/sealant. Once this panel is in place, both the vertical panel and the front cap are securely attached to the body frame using aluminum extrusion that is pre-punched every few inches, screwed down and trimmed with a molded UV resistant vinyl trim designed to cover the extrusion. The entire trim piece is then caulked, resulting in a leak resistant structure.

**Vertical Curb side Body to Entry Door Transition** – Is another open chop mold fiberglass reinforced polyester resin product, also covered on the exterior with the same 18-20 mils of polyester gelcote that offers superior UV resistance, colored Ford white. This is a multiple piece part that is molded together by the vendor and is grey on the interior to match the cab interior. The part also has mounting provisions for sealing to the chassis door opening and the installation of the driver side view window.

## Windows and Glass

- **Passenger Windows** – Standard passenger windows on the ALLSTAR are upper Double T-slide windows with upper screen, utilizing 3mm thick GL20 safety tempered glass with a light transmission of 26%. 36"x36" is standard, with 24"x36" used where necessary as body lengths change.
- **Rear Egress Window** – Standard 30"x48" rear egress window uses 3mm GL20 safety tempered glass with a light transmission of 26%. Window is deleted when the optional rear emergency exit door is ordered.
- **Passenger Entry Door Glass** – AS2 green tint safety tempered glass is used in passenger entry door leafs to comply with federal standards. Both leafs utilize a one-piece glass for maximum driver visibility.
- **Driver Side View Curbside Window** – Clear glass, safety-tempered 3mm thick is used for the driver curbside viewing window, offering the maximum in visibility and clarity.
- **Rear Emergency Exit Door Glass and Rear Wall Fixed Window Glass** – AS3 safety tempered glass 3mm thick is used in all rear emergency door and rear wall fixed windows. The emergency door uses a 22"x24" glass, the rear wall glass is 12"x36".
- **Wheel Chair Door Glass** – 12"x36" AS3 safety tempered glass 3mm thick is used in each door.

## Doors

- **Passenger Entry Door (Dual Leaf)** – Clear opening 80" x 32" with dual 79" tall leaf doors constructed of corrosion resistant .125" wall extruded satin anodized, 204R1 rated aluminum, stainless steel and zinc plated steel. Doors feature a unique torque arm on the upper stile and rail hinge side, an overlapping rubber seal that exceeds 5" wide when both leafs are combined, and are mounted to a stainless steel bottom pivot block using a permanently lubricated cast bronze bushing for trouble-free operation. Doors are opened and closed by either an electric or manual low profile, gear-driven door header that mates to a hexagonal rod welded in the upper door and are designed to open to a fully perpendicular position. Full width brush seals are mounted to each leaf bottom inhibit rain and snow ingress. The door leaf top and sides seal to the inside bus body when closed by compressing a bulb type rubber seal mounted on an aluminum angle.
- **Double Wheel Chair Doors** – Clear opening 70.5" x 42.25" with dual 72" tall doors that are welded from lengths of .125" wall aluminum 1"x1" and 1"x2" extruded tube with vertical and horizontal reinforcements welded in at all attachment and/or stress points to form the door leaf frame. Expanded polystyrene foam is inserted in all gaps for insulation, pre-painted aluminum is installed on both sides, windows are installed, and a u-channel pre-painted extrusion trim is installed on the sides, top and bottom. Stainless steel continuous piano style hinges attach the doors to the mounting frame that is made from aluminum extruded Z channel extrusion that is welded together forming a continuous exterior frame that attaches to the body. A three-point cam latch mechanism using .187" diameter rod that slides inside top and bottom retainer assemblies is installed to secure the door in a closed position. Four-inch rubber seals on each leaf door overlap to form a weather proof seal when closed. Doors are securely held open by a gas strut designed to

hold 24 pounds of pressure that is mounted to pivot blocks. A magnetic switch is installed to activate a buzzer, light or both as a driver warning of door opening. The switch also works in conjunction with the FMVSS 403/404 compliant system.

- **Rear Emergency Exit Door** – Clear opening 57" x 35.5" the door blank frame consists of welded .125" thick 1"x1" and 1"x2" extruded aluminum tube with vertical and horizontal reinforcements in all attachment and/or stress locations that has all voids filled with 1" thick expanded polystyrene insulation. Pre-painted .040 aluminum skin is then applied, a pre-painted trim extrusion applied to the full perimeter for trim, and a three-point cam latch mechanism using .187" diameter rod that slides inside top and bottom retainer assemblies is installed to secure the door in a closed position. A stainless steel continuous piano style hinge is then applied, and the door is hung to the mounting frame made from aluminum Z channel extrusion that is welded together forming a continuous exterior frame that attaches to the body. The door is securely held open by a gas strut designed to hold 24 pounds of pressure that is mounted to pivot blocks.

## ELECTRICAL - LIGHTING

- **Body Power Distribution Center** – Created specifically for the demanding bus industry application, the power distribution center consists of a highly advanced, custom engineered printed circuit board using 3 ounce copper, FR-4 material that is .062 thick, capable of withstanding high current loads. There are suppression diodes installed in all relay coils to protect all sensitive electronic circuits and controls. Each outbound circuit is protected with either field replaceable ATO type automotive fuses (standard) or circuit breakers (optional), with red LED fuse out indicators to provide years of reliable service. Field replaceable high current automotive relays each have a green power out LED indicator, providing visual trouble-shooting ability; in fact, all inputs and outputs are monitored with LEDs for quick visual trouble-shooting. The power center is located above the driver door, sealed from all outside elements, and is accessible through an 18.5" x 18.5" padded door with a thumb latch. It connects to the low current driver area switch panel via a 30-conductor data cable. The power distribution circuit board is covered by a five-year warranty from the manufacturer.
- **Wiring Harnesses** – All harnesses used are constructed from minimum GXL insulated wire, rated at 125°C with circuit identification printed every 6 inches, utilizing machine crimped connectors. All harness fixture breakouts are soldered and heat shrink covered to ensure integrity of connection and weather protection. All interior and marker lamps utilize a mate and lock connector to prevent loose contact, and pullout. Harnesses are enclosed in a protective loom with appropriate temperature rating, secured at multiple points with vinyl or rubber coated clamps to prevent pulling, and routed to avoid all sharp and/or abrasive edges. Grommets are installed where harnesses are routed through holes to prevent chafing. Battery cables are minimum 2 gauge SGX insulated wire, machined crimped and/or soldered with protective heat shrink installed.
- **Master Body Circuit Protection** – Provided by the use of adequately sized breaker/fuse devices, the master circuit disconnects body power in the case of overload. Also available



is a master body power disconnect switch, designed not to affect any chassis wiring, including body marker/turn/stop/backup lighting that is connected to the chassis OEM electrical system.

- **Exterior Lighting** – Standard equipment includes (5) incandescent amber front running lamps attached to the front fiberglass cap and (5) incandescent red rectangular rear marker lamps recessed in the thermoplastic rear trim cap cover. The flush mounted rear stop/turn/backup lights consist of (2) red 4" diameter incandescent directional lamps, (2) red 4" diameter incandescent stop/tail lamps with reflex and (2) white/clear lens 4" diameter incandescent backup lamps, all mounted in rubber grommets. There are also (2) incandescent red rectangular side marker lamps mounted at the rear corners of the bus. A sealant is used on the front, rear and side clearance/marker lamps, while the rubber grommet mount used on all 4" diameter lamps provides a weather resistant seal. A full array of light emitting diode exterior lamps is optionally available, along with combination mid-ship marker/turn lamps and more.
- **Interior Lighting** – Large rectangular incandescent dome lamps are installed in the driver area overhead, and installed securely in the upper transition panels along each interior sidewall in the passenger area, placed to provide even, uniform lighting throughout the body. Lights are activated by opening the passenger entry door, and are driver controlled, as well. Double reading lights, individually controlled are placed over seat areas when optional overhead parcel racks are ordered. Optional interior lighting includes a variety of fluorescent and light emitting diode options.
- **Entry Door Lighting** – Recessed in the lower entry door step sides, one per side, are two rectangular incandescent lights with polycarbonate lenses designed to resist breakage and provide excellent visibility when entering the bus through the passenger door. Also available is an exterior hooded lamp for additional ground lighting at stops and a variety of light emitting diode options.
- **Wheel Chair Door Lighting** – Recessed into the interior padded, angled head impact protector at ceiling level is an incandescent 4" diameter lamp to provide both interior and ramp illumination. Also included are lamps on the wheelchair lift to fully comply with the candlepower standard contained in FMVSS 403.

### **Modesty Panels, Stanchions, Handrails**

- **Passenger Entry Door** – Assembly utilizes 1.25" diameter stainless steel tubing for all vertical stanchions and horizontal support bars. Vertical stanchions are mounted in castings and secured either directly to structural members or additional steel structure added to prevent pull out and provide a solid anchoring point. Horizontal bars are mounted directly into structural tubing. The modesty panel is constructed of two pieces of 14.5" x 27" 5.4mm luan to which gray padded vinyl is glued and the two pieces are folded together, hiding all seams and fasteners. The panel is secured directly to the horizontal bars using stainless steel fasteners covered with protective, decorative snap covers that match the vinyl.
- **Driver** – Is a mirror image of the passenger entry door modesty panel as a standard. Many customers write specifications concerning the driver barrier dimensions and construction,

to which we comply. The driver barrier frequently also has a 3/16" thick plexiglass upper panel installed for additional driver protection.

- Wheel Chair Door – Mounted rear of the lift station when a front of the axle lift is specified and front of the lift station when a rear lift is specified, the panel consists of a taller, 12" x 48" barrier with 6" of clearance from the floor that mounts to stanchions and horizontal supports running 18" wide and full height. The vertical stanchions, as with the entry and driver barrier, are attached by mounting into castings with rubber bushings that are securely mounted to either structural members or additional steel structure welded in, providing ambulatory passengers adjacent to the lift mechanism with pinch point protection.

#### **Stanchions, Handrails**

- Material – 180 Grit, 304 Stainless steel, 1.25" outside diameter, 18 gauge wall tubing is used for our vertical stanchions, horizontal supports and handrails, as well as any fabricated connectors and other fittings that may be required. Stanchions are available with either a gray or yellow padding, or with a powder coat finish. All cast connecting brackets are constructed of heavy die cast aluminum with a durable gray finish.
- Stanchion/Handrail Attachment – All vertical stanchions, horizontal supports, handrails and ceiling grab rail mounts are attached to either body structural members such as floor cross members, sidewall posts, roof bows, or to extra steel structure welded in place to accept fasteners that secure the assembly in place. No use of self tapping of screws solely into plywood decking, or ceiling and sidewall trim backing is permissible as an approved mounting process.

### **Interior Flooring, Sidewall, Rear Wall and Ceiling Materials**

#### **Floor Covering and Decking**

- Floor Rubber – The standard ribbed rubber aisle is 4.3mm thick, with a .187" tall and .312" wide ridge. Optional smooth rubber flooring is 3mm thick. Both have a very high .83 coefficient of friction to prevent slipping. The material consists of over 75 percent natural and synthetic rubber enabling it to perform better in temperature extremes, resist scarring, and offer ease of installation. An optional cove molding is available to radius the floor rubber up to the seat track.
- Floor Carpeting – Gray, 24-ounce cut-pile nylon carpeting with a mildew resistant backer is standard under the seats on both sides of the bus, fully FMVSS 302 compliant.
- Floor Decking – Standard decking is a 5/8" thick plywood underlayment. It is secured to body frame members with counter sunk screws, then all screw heads and seams are filled and sanded to enhance the appearance of the floor covering material. Optional floor decking includes 3/4" thick plywood, and both 5/8" and 3/4" thick 7 ply Marine plywood.

#### **Sidewall Decorative Covering and Substrate**

- Standard Sidewall Carpet – A non-directional, needle punched fabric that is solution dyed, will not fray or unravel, is easily cleanable with soap and water and resistant to mold and mildew is glued to 5.4mm thick luan and secured to the sidewall structural

members above the seat track is standard. A complimentary contrasting darker gray material of the same construction is used between the floor surface and the bottom of the seat track.

- Optional Sidewall Coverings – Gray FRP, gray padded auto-cloth or gray padded vinyl is available in lieu of standard carpet. They are also glued to a 5.4mm thick luan substrate then secured to the sidewall structure above the seat track.

#### **Rear Wall Decorative Covering and Substrate**

- 10.0.3.1 Standard Rear Wall Carpet – A non-directional, needle punched fabric that is solution dyed, will not fray or unravel, is easily cleanable with soap and water and resistant to mold and mildew is glued to 5.4mm thick luan and secured to the rear wall structural members is standard.
- 10.0.3.2 Optional Rear Wall Coverings – Gray FRP, gray padded auto-cloth or gray padded vinyl is available in lieu of standard carpet. They are also glued to a 5.4mm thick luan substrate then secured to the rear wall structure.

#### **Ceiling Decorative Covering and Substrate**

- Standard Ceiling Carpet – A non-directional, needle punched fabric that is solution dyed, will not fray or unravel, is easily cleanable with soap and water and resistant to mold and mildew is glued to 5.4mm thick luan and secured to the ceiling cross bows is standard.
- Optional Ceiling Coverings – Gray FRP, gray auto-cloth or gray vinyl is available in lieu of standard carpet. They are also glued to a 5.4mm thick luan substrate then secured to the ceiling roof bows.
- 

### **Mirrors, Exterior and Interior**

#### **Exterior Mirrors**

- Rear View Mirrors – Standard exterior rearview mirrors feature a manually operated combination head containing a flat glass top measuring 7" x 9.5", and a bottom convex measuring 7" x 4", both using breakaway mounts to minimize body damage and help with safety. The roadside mirror is designed to attach to the Ford OEM mount area on the driver door. The curbside mirror mount is a casting designed to securely attach to the fender and allow interference free viewing through the windshield. Available options include heated, remote and combination heated/remote mirrors.
- Cross Over Mirrors – Optionally available cross over mirrors can be ordered as a front or rear mount. Consult your sales representative for additional information.

#### **Interior Mirrors**

- Convex Interior Mirrors – Optional interior convex mirrors are available in either a standard 6" x 9", or a special order 6" x 16", offering the driver excellent viewing of the bus interior from the driver seat.
- Flat Interior Mirror – An optional 6" x 16" flat interior mirror is available, mounted above the driver area.

### **3.0 Coatings, Undercoat, Primer Paint, Finish Paint, Miscellaneous Paint**

- **Undercoat** – The undercoating applied consists of a quality, durable thixotropic rust preventing sealant. The sealant is a blend of petroleum base materials and organometallic complex products, that, when applied to metal surfaces forms a barrier film, thereby extending the useful life of the treated material. The undercoat passes ASTM B117, a salt spray test using a 5% solution at 1,000 hours, and has a 5A or better Gravelometer rating using method ASTM D3170 at 0°F. The benefits of the undercoat include a high film build capability (no sag at 20-30 mils wet film), high temperature flow resistance (will not flow below 450°F), suitability for severe atmospheric corrosion protection, offers superior seam penetration, thereby protecting all joints of products, and it meets military standards MIL C 62218B and 16173.
- **Primer Paint** – Two-part epoxy, high solids paint is thoroughly applied as a primer.
- **Finish Paint** – Dupont Series Finish Paints are used by STARCRAFT Bus.
- **Pre-painted aluminum skin** – The coating is “Ford White” acrylic paint, copper and wax free, .7 - .8 mil dry film thickness, applied using a reverse roll process.



**Modify the state and bid number to fit the requested approved equal. Also investigate the wording on the supplied states for modification.**

The following information is submitted for all Starcraft Bus products proposed on West Virginia PTR-14046 as supporting documentation of the structural soundness and impact resistance of the bodies manufactured. All vehicles are built using virtually the same materials with some minor differences in the height of cross members due to entry floor heights.

### **3.0 Body Construction – General Frame Construction**

Manufactured from all steel products, the floor, roof, side walls, rear wall, driver halo assembly and entry door assembly are all wire welded (MIG) together to form an integral steel frame that is thoroughly coated in our primer paint shop, then mounted with specified hardware to the rubber body mount points (pucks) specified by Ford. Once joined to the chassis, the bus finishing process begins.

#### **3.0.1 Floor frame construction and assembly – See photographs in appendix A**

- 3.0.1.1 Cross Members -- The floor cross members form the base structural support for the rest of the frame components. Our cross members are constructed of 14 gauge mild steel, formed to a capital "C", with pre-punched holes to accept steel tube that runs the length of the body floor and are wire welded in a jig fixture, providing rigidity and flexural strength.
- 3.0.1.2 Steel Tubing – 1"x3" and 1"x1.5" 16 gauge steel tubing runs down the length of the floor, is welded at each cross member, and provides a mounting point for the floor mounted seat track.
- 3.0.1.3 Seat Track – 12 gauge roll formed high strength/low alloy steel is wire welded in place for seat mounting down each side of the bus, with lengths predicated on the floor plan chosen. This is yet another stiffener in our extensive construction process.
- 3.0.1.4 Wheel Wells -- Constructed of 14 gauge steel, wheel wells are also welded in during the floor construction process. All seams in the wheel well are welded to create a one piece water resistant wheel housing structure. The wheel wells also provide additional strength to the body assembly, when welded in place.
- 3.0.1.5 Structural Steel Angle – 1/8" thick 1.5" x 2.5" structural steel angle is used the full perimeter length of each floor assembly, welded to the ends of all floor cross members. This provides not only a flat plane for joining the sidewall assembly, but also gives ties all cross members together and provides side impact resistance.
- 3.0.1.6 Additional structure – When adding vertical stanchions, wheel chair lifts and/or tie down options, additional structure is welded into the floor at locations specified by our engineering department on CAD drawings.





### **3.0.2 Sidewall Construction –**

- 3.0.2.1 Sidewall vertical member – The heart of our sidewall is the vertical structure, a roll formed 18 gauge steel capital “C” channel with 8 bends that create extreme strength and rigidity. The vertical member is installed in full lengths and in shorter sections above and below window frames. Additional vertical structure is used at both ends of the sidewall enabling the structure to withstand the forces applied by the vehicle when in motion. Using the open C member also enables a thorough primer application.
- 3.0.2.2 Steel Tubing – 1”x1” 16 gauge steel tubing is welded in horizontally between vertical members to frame in window openings. This adds front to rear reinforcement.
- 3.0.2.3 Seat Track – 11 gauge high strength low alloy roll formed steel track is welded down each sidewall below the window frame. While serving as a seat attaching device, it adds excellent structure to the sidewall and also adds excellent side impact resistance.
- 3.0.2.4 Wheelchair Options – Add another layer of metal. Depending on track locations, another structure of steel is welded in place between each vertical member for attaching a shoulder belt mount. Also, additional structure is added to accommodate wheelchair door frames.
- 3.0.2.5 Full length steel tubing – 1”x1” 16 gauge steel tubing is stitch welded to the sidewall bottom and top at each vertical member for attaching to the floor and roof sections, respectively.

### **3.0.3 Rear Wall Construction –**

- 3.0.3.1 Rear wall vertical member – The vertical sidewall capital “C” channel with 8 bends is also used in the rear wall assembly. Full length structure is used at varying places, depending on choice of rear window, or rear door. Shorter cut pieces are used above windows and doors. Additional side windows used with the rear door also change the configuration.
- 3.0.3.2 Steel Tubing – 1”x1” 16 gauge steel tubing is welded horizontally between vertical members to provide a window frame in the standard product, and used as an upper door frame in the optional rear assembly.
- 3.0.3.3 Full length steel tubing – 1”x1” 16 gauge steel tubing is stitch welded to the rear wall top and bottom as in the sidewall assembly.

### **3.0.4 Roof Construction –**

- 3.0.4.1 Roof Bows – Radius formed one-piece 16 gauge steel roof bows formed as a modified hat post design with eight bends for exceptional strength, including 4 bends in the web similar to our vertical sidewall steel provide a roof structure capable of taking severe loads. They are then capped with top flat pieces from flange to flange to provide abundant surface area for securing our one-piece FRP outside roof.



3.0.4.2 Steel Tubing – 1"x1" 16 gauge steel tubing is welded in horizontally to frame all lower window openings and 1" x 3" 16 gauge steel tubing to all upper window openings as required. A full perimeter is also welded on to mate the roof to the sidewall and rear wall, with short vertical pieces providing support on the front and rear ends. The 3" wide steel tube supplies a structural mounting surface for shoulder belt attachment and has been pull tested to federal standards.

### **3.0.5 Driver Compartment Overhead Halo –**

3.0.5.1 Steel Tubing – 1"x1" 16 gauge steel tubing is cut and jig welded into an integrated one piece structure spanning from the front roof bow of the body to the newly cut roof line of the cab. Also created during the structure manufacture is the housing for mounting the electronic circuit board.

3.0.5.2 11 Gauge Steel – formed to make brackets used to mount to the chassis roof.

### **3.0.6 False Floor (Cab to body transition) –**

3.0.6.1 Steel Tubing – 2" x2" 16 gauge steel tubing is welded together forming a flat body floor transition from the step area back to the actual body area. An overhang on the curbside provides a secure attach point frontally for the entry door frame added later.

3.0.6.2 Structural steel angle – 11 gauge 1.5"x1.5" structural angle is added in short lengths five places to provide attachment points to the chassis floor.

### **3.0.7 Interior Vertical Transition Frames –**

3.0.7.1 Steel Tubing – 1"x1" 16 gauge steel tubing is used vertically and a ladder type assembly is made welding the 1x 1 tube to .75"x.75" 11 gauge steel tube that is used horizontally in the assemblies. These pieces transition from the body fronts on each side to the driver halo side assembly and the entry door frame assembly on the curbside.

### **3.0.8 Entry Door & Step Assembly Frame –**

3.0.8.1 Steel Tubing – 1"x1" 16 gauge and .75"x.75" 11 gauge steel tube is cut to length and welded together in a ladder type construction forming a rigid frame for attaching the entry door/step assembly.

### **3.0.9 Entry Door/Step Assembly –**

3.0.9.1 11 Gauge Steel – Formed step riser/tread piece is manufactured from 11 gauge mild steel. By utilizing acute bends to maximize toe space area, an extremely strong base for the assembly is provided, and it also features two 90° bends at the bottom of the piece (one down and one return bend) to eliminate sharp edges and to give added strength. An 11 gauge flat plate with holes is also used to bridge the lower and upper side pieces, then is stitch welded and plug welded to form a strong one piece assembly.



### APPLICATION OF EXTERIOR SIDEWALL MATERIAL

Composite FRP exterior sidewall panels are installed using Sika Flex 252 Structural Urethane adhesive. The adhesive is applied to the vertical and horizontal frame members in the sidewall structure, then the one piece panel is set into place and clamped until the adhesive reaches initial “green” strength that gives it the ability to support the weight of the sidewall panel without additional aid.

Sika Flex 252 is used due to the excellent adhesion, yield strength and elongation percentage of the product once cured. Designed as a replacement for mechanical fasteners, the adhesive also allows the material to expand and contract without undue stress since the elongation of the product at break is greater than 300%. Faster curing adhesives can be used but their lack of elongation can lead to cracking of the skin due to stresses applied by typical heat/cold cycles encountered.

Sika 252 is also the adhesive used by Starcraft to ensure permanent bonding of the plywood floor substrate to the coated steel frame members.

A product data sheet for Sika Flex 252 Urethane Structural Adhesive is attached for further information.

Should any further questions arise, please contact your Starcraft Bus representative.



# ► The Allstar Series

**STARCRAFT BUS**   
*a division of Forest River, Inc.*



► **Safety. Performance. Durability.**

# ► The **Allstar Series**

**Safety. Performance. Durability.**



## ► **Allstar Features**

## **Features to Meet Your Specific Needs**



Optional high-back seats, upholstery, padded cloth walls and ceiling, and overhead luggage racks



Driver's switch panel conveniently located within view of the road and not on the engine cover



Optional double wheelchair door with top mounted gas shocks to hold door open in windy conditions





# STARCRAFT BUS

a division of Forest River, Inc.



► **Safety** is our primary focus at Starcraft Bus, from the 3,000 lbs. seat-pull test to the rigorous 7-year/200,000 mile Altoona testing, passengers can be assured that the Allstar surpasses the most stringent testing. Bus operators can relax knowing that the fully welded steel cage construction offers the best passenger protection.

**Performance** is not measured by how fast the bus will go, but rather by passenger comfort. The Allstar features straight side wall construction that maximizes passenger shoulder space and the widest aisle in the industry.

**Durability** does not come easily or quickly. The Allstar has been time tested for close to a decade. The 22,000-plus Starcraft buses on North America's roads offer a billion reasons why the Allstar has become a favorite, and those reasons are called miles. The Allstar is engineered to accommodate a variety of seating arrangements including wheelchair accessibility and various storage options for luggage.

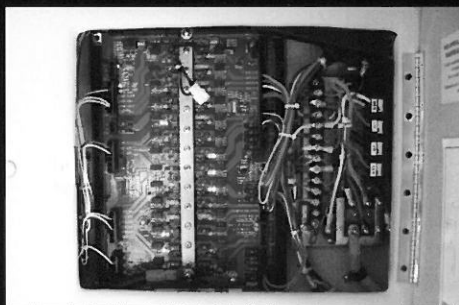
Starcraft Bus, a division of Forest River, Inc. is owned by Berkshire Hathaway, one of the most respected and secure companies in the industry. We continue to be the leader by providing value-packed performance, durability and safe transportation.



Allstar can also be equipped with optional rear wheelchair accessibility



Optional mid-back seats, padded vinyl walls and ceiling, and wheelchair accessible



Printed electrical circuit board with LED trouble-shooting lights



Optional fiberglass rear cap



# ► The Allstar Series

**STARCRAFT BUS** 

a division of Forest River, Inc.

## ► Standard Exterior Feature Highlights

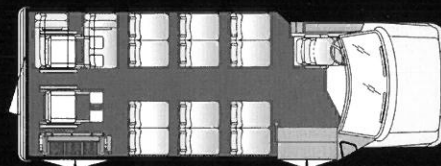
- Fully welded steel cage construction meeting all applicable FMVSS requirements
- "Starview" drivers visibility window in front of entry door
- Electric actuated passenger entry door with full length glass
- 36" wide x 36" high upper double T-Slider tempered safety glass windows with climate control tint
- Black powder coated steel rear bumper
- Rear mud flaps
- Pre-painted white aluminum side, rear walls, skirts
- One-piece seamless FRP (fiberglass reinforced plastic) roof
- Breakaway rearview mirrors with built-in convex
- Sealed LED stop, tail, and turn signal lights with incandescent reverse lights
- Exterior graphics package available in three colors (blue, green or burgundy)

## ► Standard Interior Feature Highlights

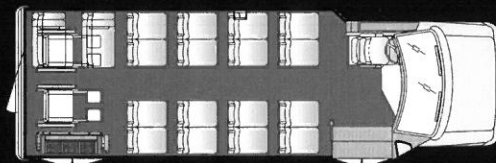
- 93" interior width
- 80" interior floor to ceiling height with standard floor (raised floor is 75")
- Floor and wall seat track for flexible seating
- Black ribbed rubber aisle with gray carpet under the seats
- 5/8" exterior grade plywood flooring
- Ceiling and rear wall fabric for sound abatement
- FRP (fiberglass reinforced plastic) sidewalls for ease of cleaning
- White step nosing
- 1.25" left hand vertical passenger assist rail at entry door
- Printed circuit board with automotive type fuses and LED trouble shooting lights
- Entry door step well lights
- Incandescent driver and passenger area lighting

## ► Popular Option Highlights

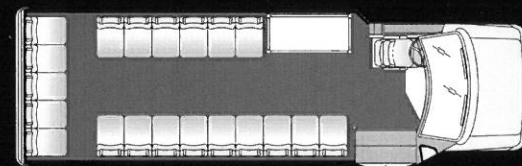
- Stainless steel wheel inserts
- Interior and exterior LED lighting
- Luggage Storage areas (overhead luggage racks with reading lights, interior luggage racks, rear storage area)
- Rear emergency door with window(s)
- Passenger area rear heat and air conditioning
- Complete rubber flooring
- Passenger grab rails
- Padded vinyl or cloth walls and ceiling
- Audio and video systems
- Mid back or high back seating
- ADA and FMVSS compliant wheel chair lifts and securement systems
- Fiberglass side walls, skirts, and rear cap
- Seat belts



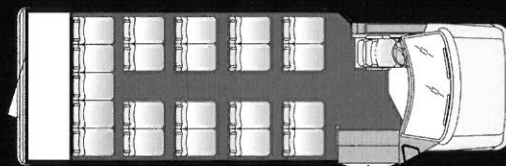
**12 Passenger 2 Wheelchair  
4 Passenger Foldaway Seats Plus Driver**



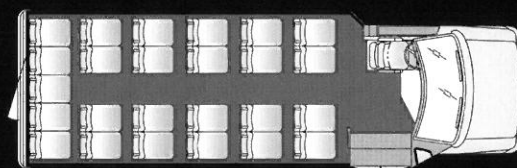
**16 Passenger 2 Wheelchair  
4 Passenger Foldaway Seats Plus Driver**



**20 Passenger with Interior Luggage Plus Driver**



**21 Passenger with Rear Luggage Plus Driver**



**25 Passenger Plus Driver**

Due to our commitment to product quality, specifications and options are subject to change without notice in the interest of product improvement and market changes.



Altoona Tested • 7 Year/200,000 Miles

**STARCRAFT BUS**   
a division of Forest River, Inc.

2367 Century Drive • Goshen, IN 46528 • Lit. No. SCB-09/093010  
1.800.348.7440 • Fax: 574.642.3301 • [www.starcraftbus.com](http://www.starcraftbus.com)

## **References**

- 1) VDRPT – Neil Sherman (Transit Engineer) (804) 786-1154**
- 2) VRTA – Mark McGreger (President/CEO) (877) 777-2708**
- 3) RADAR – Curtis Andrews (President/CEO) (540) 343-1721**
- 4) City of Danville – Mark Adleman (Transit Manager) (434) 799-5110**
- 5) Radford Transit – Josh Baker (Transit Manager) (540) 961-8363**

# Listing of Customer References

**STARCRAFT BUS**  
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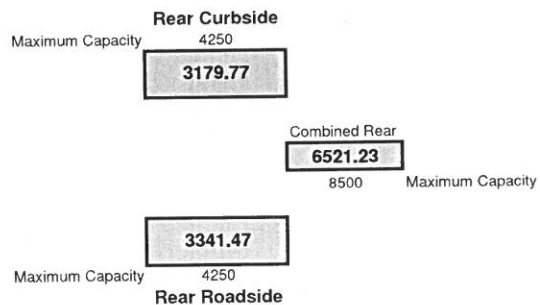


AGENCY NAME	ADDRESS	CITY	ST	ZIP	CONTACT	PHONE	EMAIL	# UNITS	YEAR SOLD
ALDOT	1100 John Overton Drive	Montgomery	AL	36110	Joe Nix or Robert Echols	334-353-6421	<a href="mailto:nixj@dot.state.al.us">nixj@dot.state.al.us</a> <a href="mailto:echolsr@dot.state.al.us">s / echolsr@dot.state.al.us</a>	250+	Since 2010
Regional Public Transportation Authority	101 N. First Ave Suite 1100	Phoenix	AZ	85003	Dave Hyink	480-924-6653 X243	<a href="mailto:dhyink@valleymetro.org">dhyink@valleymetro.org</a>	100+	Since 2012
Missouri DOT	105 West Capitol Ave	Jefferson City	MO	65101	Steve Billings	573-751-2523	<a href="mailto:steven.billings@mo.gov">steven.billings@mo.gov</a>	200+	Since 2005
Montana DOT Transit Section	2960 Prospect Ave PO Box 201001	Helena	MT	59620-1001	Adam Kraft	406-444-6120	<a href="mailto:akraft@mt.gov">akraft@mt.gov</a>	50+	Since 2005
Utah DOT	4501 S 2600 W 3rd Floor	Salt Lake City	UT	84114-3600	Tracy Young	801-965-4360	<a href="mailto:tracyyoung@utah.gov">tracyyoung@utah.gov</a>	125+	Since 2006
Wisconsin DOT Bureau of Transit	4802 Sheboygan Ave PO Box 7913	Madison	WI	53707	Tom Robinson	608-266-0658	<a href="mailto:thomas.robinson@dot.wi.gov">thomas.robinson@dot.wi.gov</a>	200+	Since 2005
City of Phoenix Transit	302 N First Ave S700	Phoenix	AZ	85003	Gabe Peiz	802-495-7133	<a href="mailto:gabriel.peiz@phoenix.gov">gabriel.peiz@phoenix.gov</a>	100+	Since 2012
TDOT	505 Deaderick St	Nashville	TN	37243	Jerry Roache	615-741-2781	<a href="mailto:jerry.roache@state.tn.us">jerry.roache@state.tn.us</a>	80	Since 2012
KPTA	100 Main St	Mount Vernon	KY	40456	Shirley Cummins	606-256-9835	<a href="mailto:shirley@4rtec.com">shirley@4rtec.com</a>	200+	Since 2009
South Carolina Department of Transportation								150+	Since 2007
City of Tempe Arizona	2050 W. Rio Salado Parkway	Tempe	AZ	85281	Jason Hartong	480-350-2747	<a href="mailto:Jason_Hartong@tempe.gov">Jason_Hartong@tempe.gov</a>	29	2012



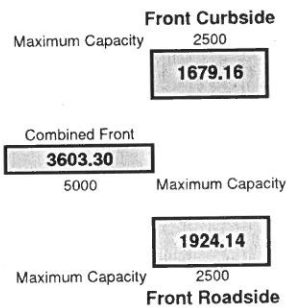
7/29/2014 13 158 150 WA EST USA

Actual weights from order 32248B
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7/29/2014 12 1 WC 158 163-3 USA

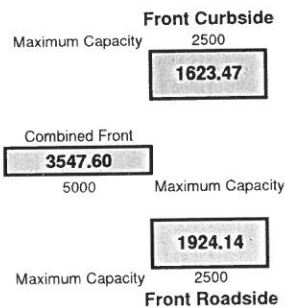
Actual weights from order 31247B	
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7/29/2014 12 2 WC 158 163-3 USA

Actual weights from order 31247B	
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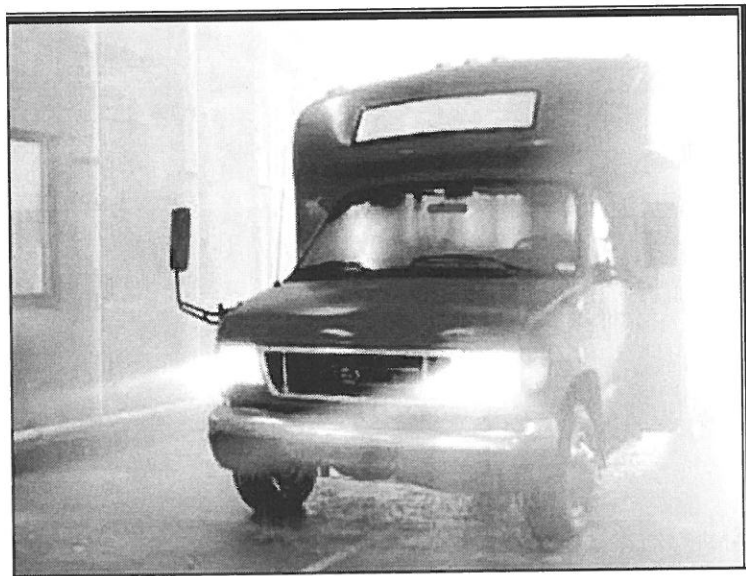
## **RAIN BOOTH INFORMATION**

Constructed as part of a corporate-wide pre-delivery inspection facility, the Forest River 20' x 50' motorized vehicle rain booth utilized by Starcraft and Startrans Bus offers exceptional performance in the area of water leak detection.



The motorized vehicle rain booth adds front wall nozzles to the design of the towable rain booth, simulating the pelting of oncoming rain at highway speeds. Both booths include two 1200 gallon recycling tanks and utilize a 12Horsepower pump with multi-bank filters capable of delivering 40 – 60 p.s.i. That equates to 300 gallons per minute pushed through the spray heads, or the equivalent of a 24 inch-per-hour downpour!

With nozzles directed at the roof, sidewalls, front and undercarriage, nothing goes untouched in our quest for leak elimination. Using both velocity and volume in our test procedure ensures our valuable customers that we are doing the utmost to deliver a leak-free product to them.



Visitors are always welcome to witness the test booths whenever they are in operation.



U.S. Department  
of Transportation  
**Federal Transit  
Administration**

Headquarters

East Building, 5<sup>th</sup> Floor – TCR  
1200 New Jersey Avenue, SE  
Washington, DC 20590

October 31, 2013

Starcraft Bus  
2367 Century Drive  
Goshen, IN 46528

Attn: David Wright, President  
Jerry Cavanah, General Manager  
Joe Geoglien, DBELO

Re: TVM DBE Goal Concurrence – Fiscal Year 2014

Dear Mr. Wright:

This letter is to inform you that the Federal Transit Administration's (FTA) Office of Civil Rights has received the Starcraft Bus's Disadvantaged Business Enterprise (DBE) goal and methodology for FY 2014 for the period of October 1, 2013–September 30, 2014. This goal submission is required by the U.S. Department of Transportation's DBE regulations at 49 CFR Part 26 and must be implemented in good faith.

We have reviewed your FY 2014 DBE goal and determined that it is compliant with DOT's DBE regulations. You are now eligible to bid on FTA funded transit contracts. This letter or a copy of the TVM listing on FTA's website is documentation that may be used to demonstrate your compliance with DBE requirements when bidding on future contracts.

FTA reserves the right to remove/suspend this concurrence if your DBE program or FY 2014 DBE goal is not implemented in good faith. In accordance with this good faith requirement, you must submit your DBE Uniform Report in the DOORS system by December 1, 2013. This report should reflect all FTA funded contracting activity for the second period of FY 2013 (i.e., from April 1 to September 30).

Please also be mindful that your FY 2015 DBE goal methodology must be submitted to FTA by August 1, 2014. Therefore, you should publish your goal on or before June 17, 2014. Thank you for your cooperation. If you have any questions regarding this approval, please contact Britney Berry at (202) 366-1065 or via e-mail [britney.berry@dot.gov](mailto:britney.berry@dot.gov).

Sincerely,

Dawn Sweet  
Acting Title VI/DBE Team Leader  
Office of Civil Rights



U.S. Department  
of Transportation  
Federal Transit  
Administration

400 Seventh St., S.W.  
Washington, D.C. 20590

## Office of Research Demonstration and Innovation

### TELEFAX COVER SHEET

**DATE:** 11/14/2002

**TO:** Art Henderson, Starcraft

**FAX/Phone:** (574) 533-6850 / (574) 320-3079

**FROM:** Marcel Belanger

**Phone:** (202) 366-0725

**FAX:** (202) 366-3765

**Room:** 9401

### MESSAGE:

Art,

Here is a copy of our response to your inquiry on testing requirements for the Starlite. Feel free to call if you have any questions.

Marcel

**Number of Pages:** Cover + 2

If you did not receive all of the pages, please contact Marcel Belanger, or my assistant at (202) 366-4035.



U.S. Department  
of Transportation  
Federal Transit  
Administration

400 Seventh St., S.W.  
Washington, D.C. 20590

November 14, 2002

Mr. Arthur Henderson  
National Sales Manager  
Starcraft Bus & Mobility  
P.O. Box 1903  
2703 College Avenue  
Goshen, IN 46526

Dear Mr. Henderson:

This is in response to your letter dated October 31, 2002, in which you requested assistance from the Federal Transit Administration (FTA) concerning the applicability of the Bus Testing Regulation (49 CFR Part 665) to the Starlite bus model manufactured by Starcraft. Your letter states that the Starlite is the "same" as the previously tested Allstar model, "except for the width," and you submitted a package of specifications and drawings in support of that assertion.

You have asked FTA to confirm your interpretation that the Starlite is part of the same family of vehicles as the Allstar, and thus does not require further testing.

FTA has reviewed your request and accompanying documentation and has determined that **no additional testing** will be required for Starcraft to offer the Starlite in the 5-year, 150,000-mile service life category. This determination is based on the following conclusions drawn from information submitted by Starcraft or contained in our files:

- The Starlite is smaller and lighter overall than the Allstar, but otherwise is constructed with substantially the same design, using the same materials, cross sections, support spacing, and construction methods. The method and location of the body-to-chassis attachments are substantially the same.
- Both the Allstar and Starlite are built on mass-produced chassis differing only in the wheelbase.
- The Allstar model has been fully tested at Altoona in the 5-year, 150,000-mile service life category (Report No. 9814-01-99).

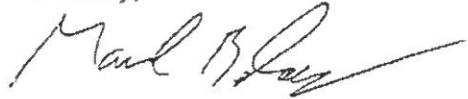
For the reasons stated above, FTA considers the Starlite to be part of the Allstar family of vehicles. Due to the greater size and GVWR of the Allstar, the existing test of the Allstar satisfies testing requirements for smaller vehicles in the Allstar family of vehicles. We would not

- 2 -

expect to obtain substantially different or more adverse data from additional testing of the Starlite.

This determination is based on the changes detailed in your letter or mentioned above. Should you make any other changes to the vehicle, additional testing may be required. If you require any further assistance with this or other matters concerning bus testing, please feel free to contact me at the address above, or by e-mail ([marcel.belanger@fta.dot.gov](mailto:marcel.belanger@fta.dot.gov)), fax (202-366-3765), or telephone (202-366-0725).

Sincerely,

A handwritten signature in black ink, appearing to read "Marcel Belanger", with a long horizontal flourish extending to the right.

Marcel Belanger  
Bus Testing Program Manager  
Office of Technology, TRI-20



	MAXIMUM POINTS	FTQP COMMON
<b>QUALITY PLAN - PROGRAM COMMON</b>		
D0100 Management Commitment	9 *	9.0
D0200 Employee Involvement	2	2.0
D0300 Engineering	11 *	11.0
D0400 Process Control	2 *	2.0
D0500 Quality Control	13 *	13.0
D0600 Completed Vehicle Sign-off	8 *	8.0
D0700 Customer Support	10	10.0
D0800 Manufacturing Environment	4	4.0
Meets Quality Plan Minimum Requirements (Yes/No)	*	Yes
<b>Quality Plan Subtotal</b>	<b>59</b>	<b>59.0</b>

<b>GENERAL CHASSIS - PROGRAM COMMON</b>		
E0100 Heat Management	0 *	0.0
E0200 Climate Control - Heat & Air Cond.	9 *	9.0
E0300 Wheels and Tires	2 *	2.0
E0400 Steering and Suspension	0 *	0.0
E0500 Brakes	0 *	0.0
E0600 Powertrain - Engine/Transmission/Axles	0 *	0.0
E0700 Fuel System	0 *	0.0
E0800 Exhaust System	0 *	0.0
E0900 Frame	2 *	2.0
E1000 Body and Seating	3 *	3.0
E1100 Electrical Systems	9 *	9.0
E1200 Material/General	1	1.0
Meets General Chassis Minimum Requirements (Yes/No)	*	Yes
<b>General Chassis Subtotal</b>	<b>26</b>	<b>26.0</b>
Meets All Common Minimum Requirements (Yes/No)	*	Yes
<b>Common FTQP Program Subtotal</b>	<b>85</b>	<b>85.0</b>

<b>UNIQUE INDUSTRY MODIFICATIONS</b>		
MH- Motor Home and Transit Bus	13 *	13.0
Meets Unique Minimum Requirements (Yes/No)	*	Yes

<b>TOTAL COMMON AND UNIQUE</b>		
Meets All Common & Unique Minimum Requirements (Yes/No)		Yes
Total Score (Maximum Possible):	98	98.0
Minimum Qualifying Score Required: (85% of Maximum Possible)	83.3	100.0%

\* = One or more minimum requirements in this section

COMPANY Forest River, Inc. DATE April 2, 2013

DIVISION Starcraft Bus

LOCATION 2367 Century Drive, Goshen, Indiana 46528-5002

PRODUCTS Mid-Size Buses including School Buses.

CHASSIS USED E-350 and E-450 cutaways, and F-550 and F-650

CONTACT NAME Larry Hall TELEPHONE (574) 642-3112 FAX (574) 642-4835

SIGNATURE \_\_\_\_\_ E-MAIL lhall@forestriverinc.com

QVM REMARKS AND OVERALL ASSESSMENT

Starcraft Bus continues to "fully Meet" the requirements of Ford's QVM Program.

Starcraft has sold the Federal brand to Champion (Thor).

OVERALL ASSESSMENT	CODE	REQUIREMENTS
<div style="border: 1px solid black; padding: 10px; text-align: center;"> <b>FM</b>            FINAL RATING            (FM, P, NQ)         </div>	FM	Fully Meets all the program minimum requirements including minimum qualifying score.
	P	Pending - Program status is pending completion of documentation.
	NQ	Not Qualified - Considered to have major deficiencies in meeting the program requirements. Not considered an active program participant.
INSPECTION LEADER <u>James O. Bartlett</u>		
INSPECTION ENGINEER _____		QVM PROGRAM MANAGER <u>J. R. Murray</u>



# STARCRAFT BUS

a division of Forest River, Inc.

## FMVSS/CMVSS Compliance Summary 2013-2014

## Commercial Only

The following information describes briefly the C/FMVSS standards and the Compliance Action that has been taken by either Starcraft Bus Commercial Division, the chassis manufacturer.

C/FMVSS No.	Standard Description	Compliance Action
101	Control Location, Identification and Illumination	Starcraft does not alter the OEM controls or displays. Any aftermarket seats and/or controls or displays subject to the standard meet this standard. Test data on file.
102	Transmission Shift Lever Sequence, Starter Interlock & Transmission Braking Effect	Compliance is deferred to the chassis manufacturer.
103	Windshield Defrosting & Defogging Systems	Compliance is deferred to the chassis manufacturer.
104	Windshield Wiping & Washing Systems	Compliance is deferred to the chassis manufacturer.
105	Hydraulic Brake Systems	Test data kept on file for vehicles that have had the frame stretched, or have had other system modifications. For Non-stretched vehicles compliance is deferred to the chassis manufacturer.
106	Brake Hoses	Vehicles with stretched frames have additional lines installed by chassis modifiers using OEM components. Other vehicles that have had system modifications use OEM or OEM-approved components and are tested for compliance. For Non-stretched vehicles compliance is deferred to the chassis manufacturer.
108	Lamps, Reflective Devices & Associated Equipment	Starcraft does not alter OEM lighting. Additional lighting to include brake, turn, clearance and reverse lamps meet standard. Data on file.
108.1	Alternative Requirements for Headlamps	Starcraft does not alter OEM lighting. Compliance is deferred to the chassis manufacturer.
110	Tire Selection and Rim for Motor Vehicles with a GVWR of 4,536kg (10,000 lbs.) or Less	Starcraft does not manufacture vehicles with a GVWR of 4,536kg (10,000 lbs.) or Less.
111	Rear View Mirrors	All aftermarket mirrors installed by Starcraft meet this standard and DOT regulations. Data on file.
112	Headlamp Concealment Devices	Starcraft does not manufacture vehicles with headlamp concealment devices.
113	Hood latch systems	Compliance is deferred to the chassis manufacturer.
114	Theft Protection	Compliance is deferred to the chassis manufacturer.
115	Vehicle Identification Number	Compliance is deferred to the chassis manufacturer.
116	Hydraulic Brake Fluids	Starcraft does not alter brake systems. Vehicles with stretched frames have additional fluid added by chassis modifiers using OEM instruction and materials. All other system modifications utilize only OEM-approved fluid. For Non-stretched vehicles compliance is deferred to the chassis manufacturer.
118	Power Operated Window, Partition, and Roof Panel Systems	Compliance is deferred to the chassis manufacturer.
120	Tire Selection and Rim for Motor Vehicles with a GVWR of 4,536kg (10,000 lbs.) or More	Compliance is deferred to the chassis manufacturer.
121	Air Brake Systems	Vehicles with stretched frames have additional lines installed by chassis modifiers using OEM components. Other vehicles that have had system modifications use OEM or OEM-approved components and are tested for compliance. For Non-stretched vehicles compliance is deferred to the chassis manufacturer.
124	Accelerator Control Systems	Starcraft does not alter the OEM accelerator system, with the exception of the addition of aftermarket fast idle systems on some vehicles. These systems meet this standard when installed in accordance with instructions.
125	Warning Devices	All vehicles manufactured by Starcraft that are equipped with aftermarket (3) triangle kit meet this standard.
131	School Bus Pedestrian Safety Devices	All vehicles manufactured by Starcraft are not completed to be used as school buses.
135	Light Vehicle Brake System with a GVWR of 3,500kg (7,716lbs.) or Less	Starcraft does not manufacture vehicles with a GVWR of 3,500kg (7,716 lbs.) or Less.
201	Occupant Protection in Interior Impact	All vehicles applicable to the standard (under 10,000 lbs.) do not have alterations made that affect the compliance to this standard. Compliance is deferred to the chassis manufacturer.
202	Head Restraints	All vehicles applicable to the standard (under 10,000 lbs.) have seating installed that meets this standard. Compliance is deferred to the chassis manufacturer.



**FMVSS/CMVSS Compliance Summary 2013-2014****Commercial Only**

The following information describes briefly the C/FMVSS standards and the Compliance Action that has been taken by either Starcraft Bus Commercial Division, the chassis manufacturer.

<b>203</b>	Impact Protection for the Driver from the Steering Control System	Compliance is deferred to the chassis manufacturer.
<b>204</b>	Steering Control Rearward Displacement	Compliance is deferred to the chassis manufacturer.
<b>205</b>	Glazing Materials	No modifications are made to the OEM Glazing materials. Additional glazing materials meet the standard. Data on file.
<b>206</b>	Door Locks and Door Retention Devices	All vehicles manufactured by Starcraft (non-buses) that are subject to this standard have no modifications made which affect compliance to the standard. Compliance is deferred to the chassis manufacturer.
<b>207</b>	Seating System	All seating installed by Starcraft meets this standard. Test data on file.
<b>208</b>	Occupant Crash Protection	No alterations are made to the OEM seat belts, air bag systems or associated hardware. Any seat belt systems added meet the standard. Test data on file.
<b>209</b>	Seat Belt Assemblies	No alterations are made to the OEM seat belts or associated hardware. Any seat belt systems added meet the standard. Test data on file.
<b>210</b>	Seat Belt Assembly Anchorage	No alterations are made to the OEM seat belts or associated hardware. Seat belt systems and their installation meet the standard. Test data on file.
<b>210.1</b>	User-ready Tether Anchorages for Restraint System	No alterations are made to the OEM seat belts or associated hardware. Seat belt systems and their installation meet the standard. Data on file.
<b>210.2</b>	Lower Universal Anchorage Systems for Restraint Systems and Booster Cushions	No alterations are made to the OEM seat belts or associated hardware. Seat belt systems and their installation meet the standard. Data on file.
<b>212</b>	Windshield Mounting	Compliance is deferred to the chassis manufacturer.
<b>213</b>	Child Restraint Systems	Vehicles manufactured by Starcraft that are subject to this standard (under 10,000 lbs.) have seating installed that meets this standard. Test data on file.
<b>213.4</b>	Built-in Child Restraint Systems and Built-in Booster Cushions	Vehicles manufactured by Starcraft that are subject to this standard (under 10,000 lbs.) have seating installed that meets this standard. Test data on file.
<b>214</b>	Side Impact Protection with a GVWR of 4,536kg (10,000 lbs.) or Less	Starcraft does not manufacture vehicles with a GVWR of 4,536kg (10,000 lbs.) or Less
<b>216</b>	Roof Crush Resistance	Starcraft does not manufacture vehicles that are subject to this standard.
<b>217</b>	Bus Window Retention and Release	No modifications are made to the OEM windows. Additional windows meet the standard. Test data on file.
<b>219</b>	Windshield Zone Intrusion	Compliance is deferred to the chassis manufacturer.
<b>220</b>	School Bus Rollover Testing	All vehicles manufactured by Starcraft are not completed to be used as school buses, however, Starcraft does test vehicles to meet standard.
<b>221</b>	School Bus Body Joint Strength	All vehicles manufactured by Starcraft are not completed to be used as school buses, however, Starcraft does test vehicles to meet standard.
<b>222</b>	School Bus Passenger Seating and Crash Protection	All vehicles manufactured by Starcraft are not completed to be used as school buses.
<b>225</b>	Child Restraint Anchorage Systems	Vehicles manufactured by Starcraft that are subject to this standard (under 10,000 lbs.) have seating installed that meets this standard.
<b>301</b>	Fuel System Integrity	Compliance is deferred to the chassis manufacturer.
<b>301.1</b>	LPG Fuel System Integrity	Compliance is deferred to the chassis manufacturer.
<b>301.2</b>	CNG Fuel System Integrity	Compliance is deferred to the chassis manufacturer.

# STARCRAFT BUS

a division of Forest River, Inc.

## FMVSS/CMVSS Compliance Summary 2013-2014

## Commercial Only

The following information describes briefly the C/FMVSS standards and the Compliance Action that has been taken by either Starcraft Bus Commercial Division, the chassis manufacturer.

302	Flammability of Interior Materials	Materials installed in the interior of Starcraft products meet the standard. Test data on file.
303	Fuel System Integrity of Compressed Natural Gas Systems	Starcraft does not typically produce vehicles with CNG systems. All vehicles equipped with CNG systems exceed the applicability (10,000 lbs. or less) of this standard.
304	Compressed Natural Gas Fuel Container Integrity	Starcraft does not typically produce vehicles with CNG systems. All vehicles equipped with CNG systems exceed the applicability (10,000 lbs. or less) of this standard.
305	Electrolyte Spillage and Electrical Shock Protection	Starcraft does not produce vehicles that use electricity as propulsion power.
403	Platform Lift System for Motor Vehicles	Starcraft does not alter the platform lift system. Starcraft install lift system in strict compliance with the manufacturers installation instructions. Starcraft meets strength requirements. Test data on file.
404	Platform Lift Installation on Motor Vehicles	Compliance is deferred to the lift manufacturer.
1106	Noise Emissions	Starcraft does not alter the OEM Chassis in the area which is stated in the incomplete vehicle documents. Data on file.

Signed: \_\_\_\_\_

Date: 2/18/2013

Title: Director Of Engineering

**STARCRAFT BUS**  
a division of Forest River, Inc.



**FEDERAL MOTOR VEHICLE SAFETY STANDARDS  
(Pre Award)**

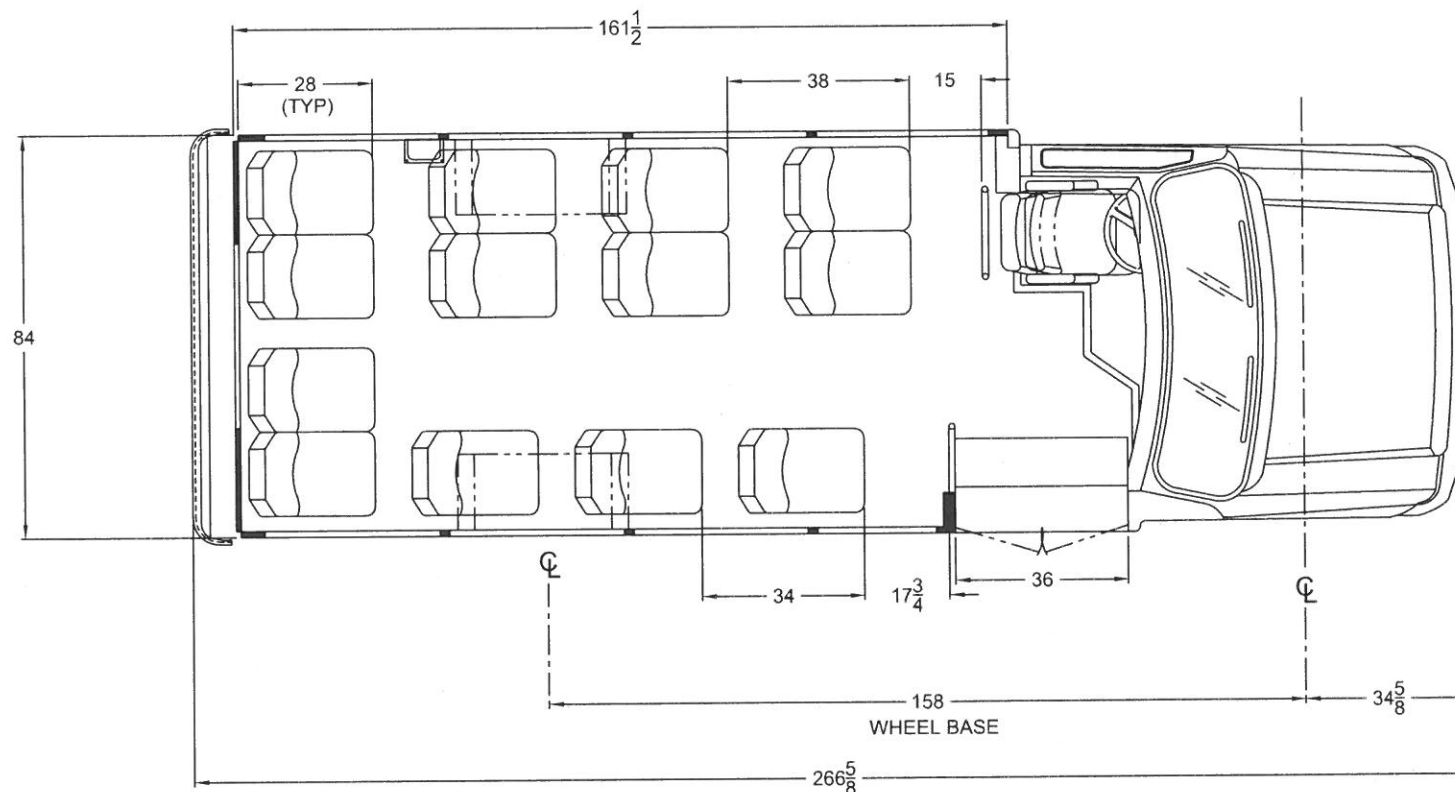
Starcraft Bus certifies that the vehicle being proposed will meet or exceed all applicable Federal Motor Vehicle Safety Standards required at the time of the proposal.

Starcraft Bus div. of Forest River, Inc.

By: *Mark Banczek*

Title: Government Bid Manager

Date: 3/26/14



# DEALER APPROVAL

☐ APPROVED

CUSTOMER SIGNATURE

NOTE: SHOWN WITH MID HI FREEDMAN SEATS  
STARLITE E-350 12,500 GVWR  
THIS FLOOR PLAN IS FOR ILLUSTRATION PURPOSES ONLY.  
A WEIGHT ANALYSIS HAS NOT YET BEEN PERFORMED.  
FINAL APPROVAL WITH A WEIGHT ANALYSIS IS REQUIRED UPON RECEIPT OF A  
COMPLETED ORDER WITH ALL OPTIONS SHOWN.  
OPTIONAL EQUIPMENT MAY BE SHOWN.  
THE SALES ORDER PLACED DICTATES ACTUAL OPTION CONTENT.

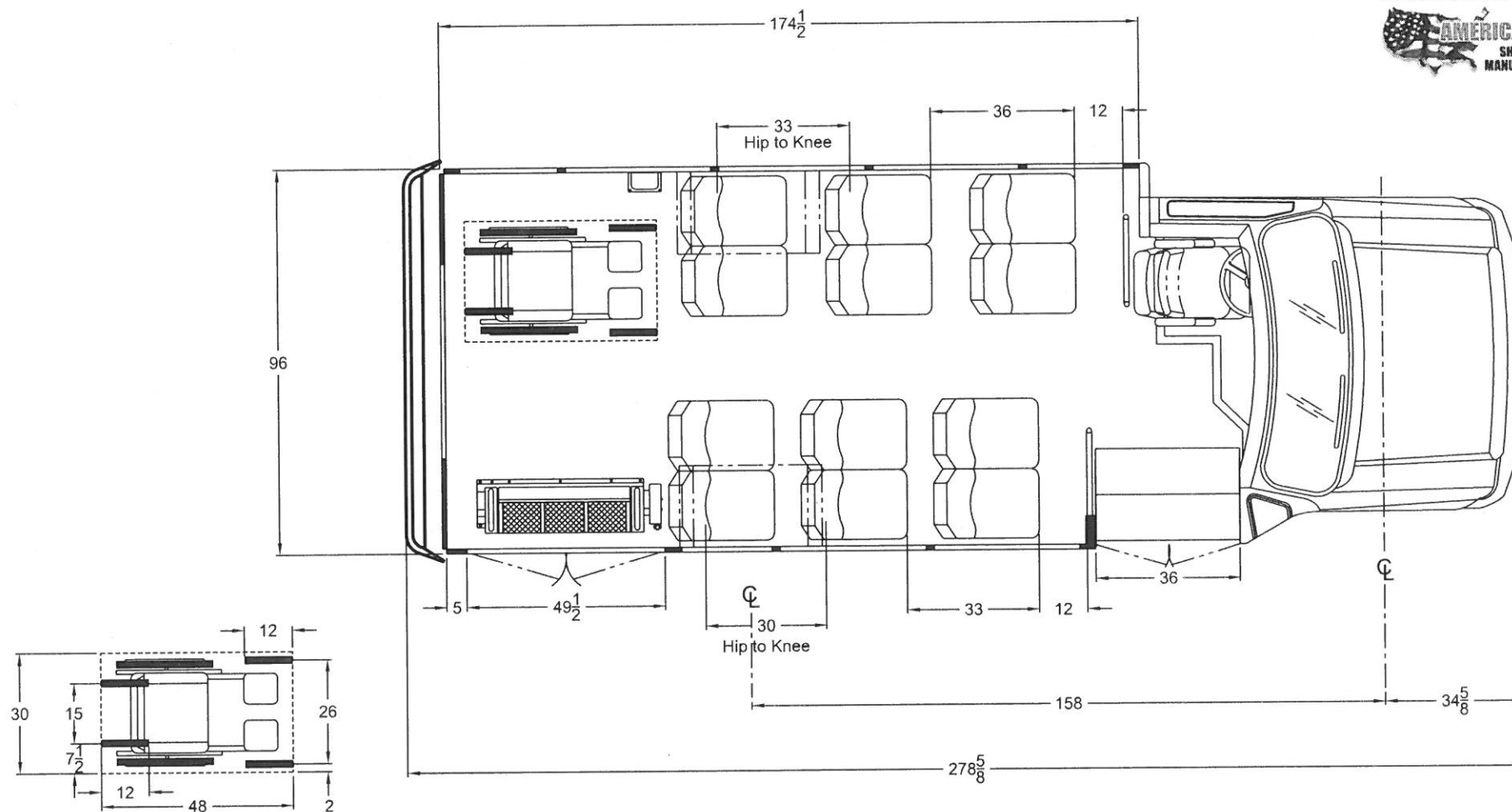
SCALE  
IN INCHES



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REV. LET.	DESCRIPTION OF CHANGE	BY	CHK	DATE	ECN No.

TOLERANCE UNLESS OTHERWISE SPECIFIED		STARLIGHT BUS	
WOOD	OTHER	a division of Forest River, Inc.	
± 1/8"	± 1/16"	DATE: 07/29/14	TITLE: 13 PASS 158" WB STARLITE
± 1°	± 1/2"	NAME: TAS	DWG. No. 13 PASS 158 150 USA



# DEALER APPROVAL

☐ APPROVED

CUSTOMER SIGNATURE

NOTE: SHOWN WITH MID HI FREEDMAN SEATS  
ALLSTAR E-350 12,500 GVWR  
THIS FLOOR PLAN IS FOR ILLUSTRATION PURPOSES ONLY.  
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FINAL APPROVAL WITH A WEIGHT ANALYSIS IS REQUIRED UPON RECEIPT OF A  
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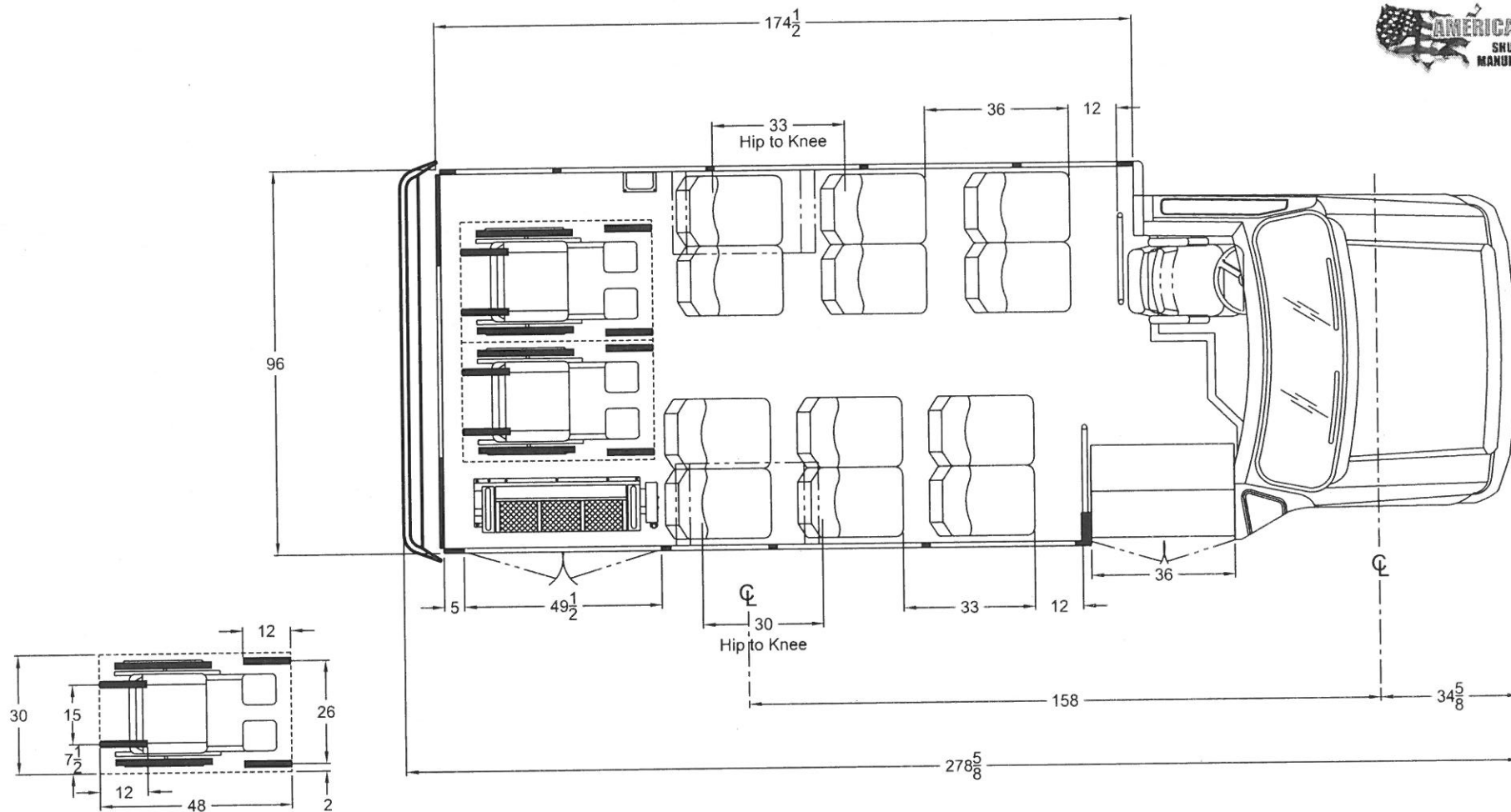
SCALE  
IN INCHES



STARCRAFT BUS  
a division of Forest River, Inc.

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TOLERANCE UNLESS OTHERWISE SPECIFIED				DATE: 07/29/14		TITLE: 12 1 WC 158" WB 163 BDY 22' 2011 ALLSTAR	
WOOD	OTHER	NAME: TAS	DWG. No.	DATE	BY	CHK	ECN No.
± 1/8"	± 1/16"			8/15/13	TAS		
± 1"	± 1/2"						
DESCRIPTION OF CHANGE				REV.	LET.		



### DEALER APPROVAL

☐ APPROVED

CUSTOMER SIGNATURE

NOTE: SHOWN WITH MID HI FREEDMAN SEATS  
ALLSTAR E-350 12,500 GVWR  
THIS FLOOR PLAN IS FOR ILLUSTRATION PURPOSES ONLY.  
A WEIGHT ANALYSIS HAS NOT YET BEEN PERFORMED.  
FINAL APPROVAL WITH A WEIGHT ANALYSIS IS REQUIRED UPON RECEIPT OF A  
COMPLETED ORDER WITH ALL OPTIONS SHOWN.  
OPTIONAL EQUIPMENT MAY BE SHOWN.  
THE SALES ORDER PLACED DICTATES ACTUAL OPTION CONTENT.

SCALE  
IN INCHES



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REV.	DESCRIPTION OF CHANGE	BY	CHK	DATE	ECN No.
LET.					
		TAS		7/29/14	

TOLERANCE UNLESS OTHERWISE SPECIFIED		STARCRAFT BUS	
WOOD	OTHER	a division of Forest River, Inc.	
± 1/8"	± 1/16"	DATE: 07/29/14	TITLE: 12 2 WC 158" WB 163 BODY
± 1°	± 1/2°	NAME: TAS	22' 2011 ALLSTAR
		DWG. No.	12 2 WC 158 163-3 USA

# **Complete Test on Flash Drive**

**STURAA TEST**

**7 YEAR**

**200,000 MILE BUS**

**from**

**STARCRAFT BUS,  
A DIVISION of FOREST RIVER INC.**

**MODEL ALLSTAR -25**

**FEBRUARY 2006**

**PTI-BT-R0518**

PENNSTATE



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## **The Pennsylvania Transportation Institute**

201 Research Office Building (814) 865-1891  
The Pennsylvania State University  
University Park, PA 16802

## **Bus Testing and Research Center**

2237 Old Route 220 N. (814) 695-3404  
Duncansville, PA 16635

Paint Samples  
Available Upon  
Request